



# Witzenberg Spatial Development Framework

Prepared in terms of Section 26(2) of the Local Government: Municipal Systems Act 32 of 2000 & Section 4 of the Land Use Planning Ordinance 15 of 1985



Project No: L3886

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**WITZENBERG SPATIAL DEVELOPMENT FRAMEWORK**  
**FOREWORD AND APPROVAL**

**EXECUTIVE MAYOR OF WITZENBERG MUNICIPALITY**  
**COUNCILOR STEFAN LOUW**

**SEPTEMBER 2012**

It is generally recognized that Witzenberg Municipality is of significant international, national, regional and local value in scientific, economic, recreational, aesthetic and cultural terms. The area has a strong resource base that supports a variety of economic sectors, including agriculture, tourism, manufacturing, etc. Due to its attributes and values, Witzenberg is subject to increasing development demands and pressures, the potential impact of which should be considered in context of the global concern over the world's ability to support its inhabitants under ever-increasing population pressure.

The need to utilise the resource base of the Witzenberg in order to grow both the local and the provincial economy poses a huge challenge to the Witzenberg Municipal Council and our people. The core of the challenge is to implement innovative and best-practice strategies to create a 'developmental state' as is advocated by the South African Constitution whilst, simultaneously, giving effect to our global obligations pertaining to social, economic and environmental sustainability.

The Witzenberg Spatial Development Framework (Witzenberg SDF) presented herewith, and our commitments regarding its implementation, are the response of the Municipal Council to the above challenge. The SDF expresses our core values, principles and strategies in terms of which the challenge will be addressed in the long-term and it confirms our commitment to ensuring productive partnerships with our key partners in this process, namely the private sector.

The SDF is the end-product of a 15-month planning process jointly commissioned by the Witzenberg Municipality and the Department of Rural

Development and Land Reform. The SDF complies with, and responds to, all applicable international agreements, conventions and protocols, and the relevant national and provincial legislation and policy related to sustainable use of resources for the benefit of all.

The Witzenberg SDF will fulfil an immensely important role as a mechanism to help achieve our vision and the supporting goals as it relates to enhancing social equity, environmental integrity and the efficient and just use of our community-supporting resources. The SDF will also fulfil a dynamic role as it relates to directing and facilitating the development of Witzenberg Municipality.

The Municipal Council trusts that our people and all other stakeholders will support the implementation of the SDF in order to ensure that all of us contribute towards creating a place where can live with dignity and pride and that the latent resources in our area are unlocked and used for the benefit of all.

We wish to thank and commend all who contributed to and participated in the preparation of the SDF. Specific reference is made to:

- The Department of Rural Development and Land Reform, which, in a true spirit of partnership and corporate governance, assisted us with the preparation of this document.
- The service provider for the project, Dennis Moss Partnership, which responded, in an exemplary manner, to our need and requirement for a SDF that conforms to international standards for land-use planning and which could be considered a national model in this regard.

In accordance with my mandate vested in the Local Government: Municipal Systems Act 32 of 2000, I hereby approve the Witzenberg Spatial Development Framework in terms of the principles and requirements and for the period stipulated in the document.

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**COUNCILLOR STEFAN LOUW**  
**EXECUTIVE MAYOR**  
**WITZENBERG MUNICIPALITY**

**DATE**

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## LIST OF ACRONYMS AND DEFINITIONS

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

<b>Agenda 21</b>	Agenda 21 is an international program, adopted by more than 178 governments, to put sustainable development into practice around the world. It emerged from the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992.
<b>Agri-village</b>	According to the Western Cape Policy for the Settlement of Farm workers (2000) an agri-village is a private settlement of restricted size established and managed by a legal institution that is situated within an agricultural area and where residence is restricted to bona fide farm workers and their dependants of the farms involved in the development. Security of tenure does not include right of ownership, but can include a Trust, Communal Property Association or Sectional Title. The development of agri-villages represents a partnership between farmer, farm workers and state.
<b>ASGISA</b>	Accelerated and Shared Growth Initiative for South Africa.
<b>BEE</b>	Black Economic Empowerment.
<b>Biodiversity</b>	It is an abbreviation of “biological diversity” which is described as the mix of species in an ecosystem that enables the system both to provide a flow of ecosystem services under given environmental conditions, and to maintain that flow if environmental conditions change. The loss of biodiversity limits the resilience of the affected ecosystem, which in turn, may have direct negative socio-economic implications. Furthermore, biodiversity is the degree of variation of life forms within a given ecosystem, biome, or an entire planet. Biodiversity is one measure of the health of ecosystems, and life on earth today consists of many millions of distinct biological species.
<b>Biological resources</b>	Includes genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual, or potential, value for humanity.
<b>Bioregional planning</b>	Land-use planning and management that promotes sustainable development by recognizing the relationship between, and giving practical effect to, environmental integrity, human well-being and economic efficiency within a defined geographical space, the boundaries of which were determined in accordance with environmental and social criteria.
<b>Biosphere reserve</b>	An area of terrestrial and coastal/marine ecosystems, or a combination thereof, which is internationally recognised within the framework of the UNESCO's MAB Programme. Each biosphere reserve is intended to fulfil three basic functions, which are complementary and mutually reinforcing: <ol style="list-style-type: none"> <li>1. a <b>conservation function</b> - to contribute to the conservation of landscapes, ecosystems, species and genetic variation;</li> <li>2. a <b>development function</b> - to foster economic and human development which is socio-culturally and ecologically sustainable;</li> <li>3. a <b>logistic function</b> - to provide support for research, monitoring, education and information exchange related to local, national and global issues of conservation and development.</li> </ol>
<b>BOCMA</b>	Breede Overberg Catchment Management Agency.



<b>CAPE</b>	Cape Action Plan for the Environment.
<b>CARA</b>	Conservation of Agricultural Resources Act 43 of 1983.
<b>CASIDRA</b>	Cape Agency for Sustainable Integrated Development in Rural Areas.
<b>CASP</b>	Comprehensive Agriculture Support Program.
<b>Catchment or catchment area</b>	The entire drainage area from which water flows into a river or other water body. Generally consisting of various smaller 'quaternary' catchments, or 'sub-catchments'.
<b>CBA</b>	Critical Biodiversity Area.
<b>CBD</b>	Central Business District.
<b>CFR</b>	Cape Floristic Region or Cape Floral Kingdom.
<b>CKDM</b>	Central Karoo District Municipality.
<b>Conservancy</b>	A group of farms, or natural areas, on which the landowners have pooled some, or all, of their resources for the purpose of conserving natural and cultural resources on the combined properties. These resources include wildlife and their habitats, indigenous vegetation, forests, catchments, sites of geological and archaeological importance, and generally undisturbed natural and scenic landscapes.
<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 and cultural environment.
<b>Constitution</b>	Constitution of the Republic of South Africa Act 108 of 1996.
<b>CPPP</b>	Community Public Private Partnerships are defined as a contract between a public sector institution/municipality and a private party, in which the private party assumes substantial financial, technical and operational risk in the design, financing, building and operation of a project.
<b>CRDP</b>	Comprehensive Rural Development Program.
<b>Critical Regionalism</b>	Critical regionalism constitutes a sensory understanding and appreciation of the environment and its component 'things'. Critical regionalism recognises the quality and attributes of regional characteristics and builds upon the development of regional idiosyncrasies and variations. It is based on five basic principles or senses that should guide the planning, design and management of development, namely <u>sense of place</u> , <u>sense of history</u> , <u>sense of craft</u> , <u>sense of nature</u> and <u>sense of limits</u> .
<b>CSIR</b>	Council for Scientific and Industrial Research.
<b>CWDM</b>	Cape Winelands District Municipality.
<b>CWDM EMF</b>	Cape Winelands District Municipality Environmental Management Framework
<b>CWDM SDF</b>	Cape Winelands District Municipality Spatial Development Framework.
<b>DBSA</b>	Development Bank of Southern Africa.

<b>DEAT</b>	Department of Environmental Affairs and Tourism.
<b>DEADP</b>	Department of Environmental Affairs and Development Planning.
<b>Developmental State</b>	A development state tries to balance economic growth and social development. It uses State resources and State influence to attack poverty and expand economic opportunities.
<b>DMA</b>	District Management Area.
<b>DRDLR</b>	Department of Rural Development and Land Reform.
<b>Du/ha</b>	Dwelling units per hectare.
<b>DTI</b>	Department of Trade and Industry.
<b>DWA</b>	Department of Water Affairs.
<b>DWAF</b>	Department of Water Affairs and Forestry.
<b>Ecosystem</b>	A dynamic system of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.
<b>EIA</b>	Environmental Impact Assessment.
<b>EMF</b>	Environmental Management Framework.
<b>EMP</b>	Environmental Management Plan.
<b>EMS</b>	Environmental Management System.
<b>Endemic species</b>	Any plant or animal species confined to, or exclusive to, a particular, specified area.
<b>Environment</b>	The surroundings within which humans exist and that are made up of: <ul style="list-style-type: none"> <li>a) the land, water and atmosphere of the earth;</li> <li>b) micro-organisms, plant and animal life;</li> <li>c) any part or combination of (a) and (b) and the interrelationships among and between them; and</li> <li>d) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.</li> </ul>
<b>ESA</b>	Ecological Support Areas.
<b>ESTA</b>	Extension of Security of Tenure Act (ESTA) 62 of 1997.
<b>Extensive Agriculture</b>	Is an agricultural production system that uses small inputs of labour, fertilizers, and capital, relative to the land area being farmed.
<b>FEPA</b>	Freshwater Ecosystem Priority Area.
<b>GAP Housing</b>	Gap housing is a term that describes the shortfall, or 'gap' in the market between residential units supplied by the State (which cost R100 000 and less) and houses delivered by the private sector (which are not less than R250 000). The gape housing market comprises people who typically earn between R3 500 and R15 000 per month, which is too little to enable them to participate in the private property market, yet too much to qualify for state assistance.

<b>GEF</b>	Global Environmental Facility.
<b>GIS</b>	Geographical Information System or <i>‘a system that captures, stores, analyses, manages and presents data with reference to geographic location data – it is a system of hardware and software used for storage, retrieval, mapping, and analysis of geographic data’</i> .
<b>GCBC</b>	Greater Cederberg Biodiversity Corridor.
<b>HDI</b>	Human Development Index.
<b>HIV</b>	Human Immunodeficiency virus that causes the condition in which progressive failure of the immune system allows life-threatening opportunistic infections and cancers to thrive.
<b>HWC</b>	Heritage Western Cape.
<b>I&amp;AP</b>	Interested and Affected Party.
<b>IDC</b>	Industrial Development Corporation.
<b>IDP</b>	Integrated Development Plan.
<b>IEM</b>	Integrated Environmental Management.
<b>IISD</b>	International Institute for Sustainable Development.
<b>Indigenous</b>	Native to a particular area.
<b>Intensive Agriculture</b>	Is an agricultural production system characterized by the high inputs of capital, labour, or heavy usage of technologies such as pesticides and chemical fertilizers relative to land area.
<b>IRDP</b>	Integrated Residential Development Programme.
<b>LED</b>	Local Economic Development.
<b>LRAD</b>	Land Reform and Agricultural Development.
<b>LUPO</b>	Land Use Planning Ordinance 15 of 1985
<b>Irreplaceability</b>	The potential contribution of a site to a preservation or representation goal. It is a fundamental way of measuring the conservation value of any site. An irreplaceable site will appear in every analysis of alternative combinations of sites. In other words, it is one which must be included in a conservation area because significant options for preservation are lost if the site is excluded.
<b>ISO</b>	The “International Organisation for Standardisation” is an international-standard setting body composed of representatives from various national standard organizations. The organization promulgates worldwide proprietary industrial and commercial standards.
<b>IUCN</b>	International Union for the Conservation of Nature.
<b>LED</b>	Local Economic Development.

<b>MAB</b>	Man and the Biosphere.
<b>MaB Program</b>	Launched in 1971 by UNESCO, it is a global program of international scientific co-operation, dealing with people-environment interactions over the entire realm of bioclimatic 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>MAFISA Fund</b>	Micro-Agricultural Financial Institutions of South Africa extends micro-financial services to economically active poor rural households, small farmers and agribusinesses.
<b>MBTs</b>	Minibus-taxis.
<b>MDGs</b>	Millennium Development Goals.
<b>MEDS</b>	Micro-Economic Development Strategy.
<b>ML</b>	Local Magnitude.
<b>MOSS</b>	Municipal Open Space System.
<b>m/Sm</b>	milli Siemens per meter.
<b>NEMA</b>	National Environmental Management Act 107 of 1998.
<b>NEMPA</b>	National Environmental Management: Protected Areas Act 57 of 2003.
<b>NEPAD</b>	New Partnership for Africa's Development.
<b>NFEPA</b>	National Freshwater Ecosystem Priority Area.
<b>NGO</b>	Non-Governmental Organisation.
<b>NMT</b>	Non-Motorised Transport.
<b>NSDP</b>	National Spatial Development Perspective.
<b>PBO</b>	Public Benefit Organisation.
<b>PGDS</b>	Provincial Growth and Development Strategy.
<b>PGWC</b>	Provincial Government of the Western Cape.
<b>PLTF</b>	Provincial Land Transport Framework
<b>PRASA</b>	Passenger Rail Agency of South Africa
<b>PSDF</b>	Provincial Spatial Development Framework.
<b>Quaternary catchment</b>	Usually the area that feeds a tributary of a river or a part of the main river.
<b>Rehabilitation</b>	To return a degraded ecosystem or population to a safe, stable, predetermined condition.

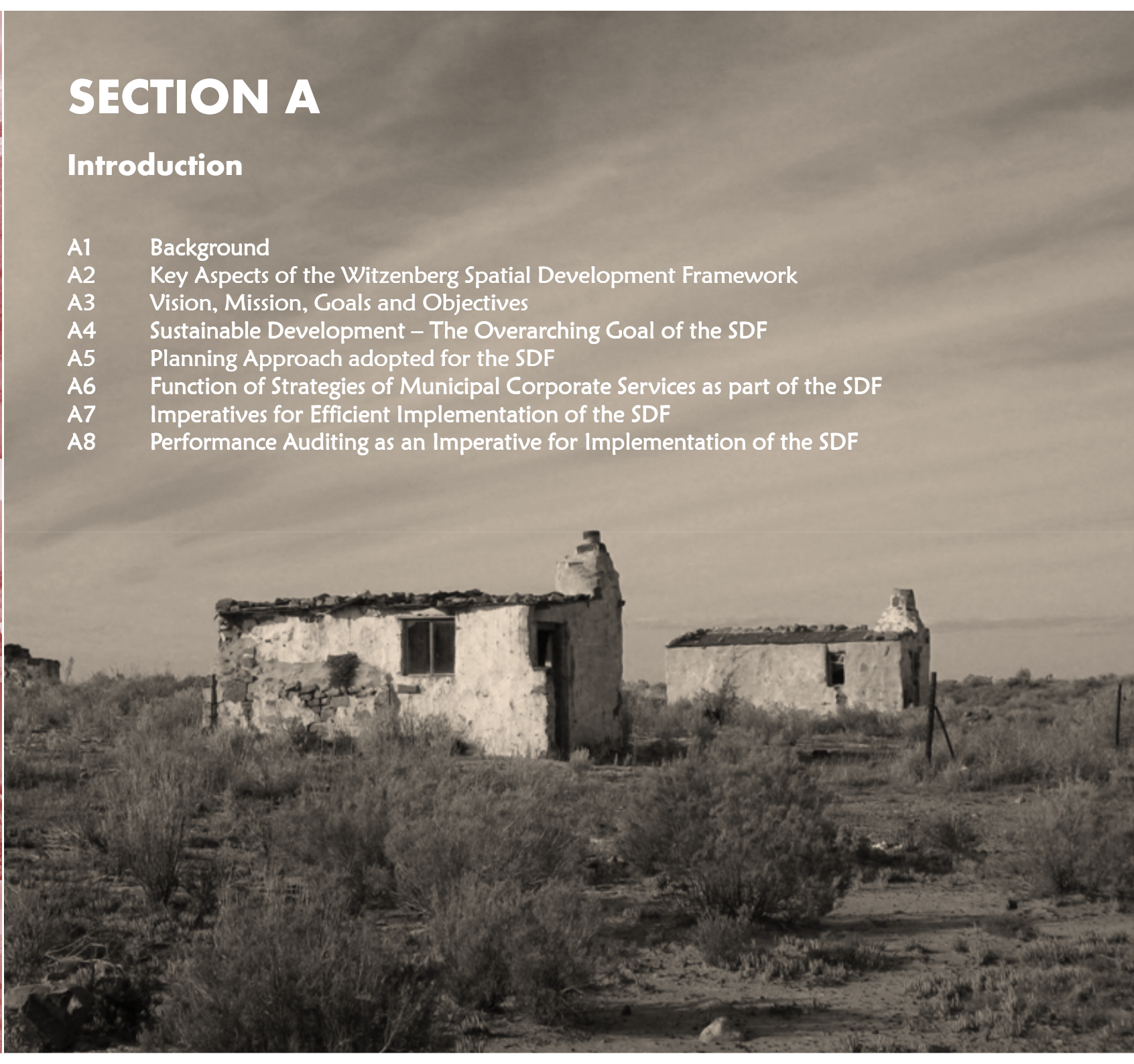
<b>Restoration</b>	To return a degraded ecosystem or place to its original condition.
<b>ROS</b>	Recreation Opportunity Spectrum.
<b>SAHRA</b>	South African Heritage Resources Agency.
<b>SANRAL</b>	South African National Roads Agency Limited.
<b>SDI</b>	Sustainable Development Initiative.
<b>SDF</b>	Spatial Development Framework.
<b>SEA</b>	Strategic Environmental Assessment.
<b>SKEP</b>	Succulent Karoo Ecosystem Plan.
<b>SLAG</b>	Settlement and Land Acquisition Grant (SLAG).
<b>SMA</b>	Special Management Area which is defined as <i>'an area of excellence and good practice, where the ethos sustainable development is served in practice. It is a cadastral geographical unit, which is formally recognised and managed as an area where environmental sustainability is promoted in practise and in accordance with international standards for environmental sustainability.'</i>
<b>SMME</b>	Small Micro Medium Enterprises.
<b>SPC</b>	Spatial Planning Category.
<b>Species</b>	Plants, animals, or other organisms that do not normally interbreed with individuals of another kind, including any sub-species, cultivar, variety, strain, hybrid, or geographically separate population provided they are not part of another species.
<b>SPISYS</b>	Spatial Planning Information System.
<b>SPLUMB</b>	Spatial Planning and Land Use Management Bill 14 of 2012.
<b>STEP</b>	Subtropical Thicket Ecosystem Plan.
<b>Stone Age</b>	The earliest known period of human culture, characterised by the use of stone tools. In South Africa, the stone age is divided into three periods: <ol style="list-style-type: none"> <li>1. Early Stone Age ranges from between 2 million to 250 000 years ago.</li> <li>2. Middle Stone Age ranges from between 300 000 to 20 000 years ago and is associated with early modern humans.</li> <li>3. Late Stone Age dates to the last 20 000 years and is associated with fully modern people.</li> </ol>
<b>Sustainable agriculture</b>	This is refers to agriculture that is socially just, humane, economically viable and environmentally sound. Sustainable agriculture integrates three main goals: environmental stewardship, farm profitability and prosperous farming communities.
<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>TDA</b>	Tourism Development Areas.

<b>UISP</b>	Upgrade of Informal Settlement Programme.
<b>UNCED</b>	United Nations Conference on Environment and Development.
<b>UNDP</b>	United Nations Development Program.
<b>UNEP</b>	United Nations Environmental Program.
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organisation. It is a specialized agency of the United Nations established on 16 November 1945. Its stated purpose is to contribute to peace and security by promoting international collaboration through education, science and culture in order to further universal respect for justice, the rule of law and the human rights along with fundamental freedoms proclaimed in the UN Charter.
<b>Urban edge</b>	Is the demarcated outer boundary of urban areas and marks the transition between urban and rural land-uses.
<b>WCPSTDF</b>	Western Cape Provincial Spatial Development Framework.
<b>WMA</b>	Water Management Area.
<b>World Heritage Site</b>	A World Heritage Site is a place (such as a desert, mountain, building, architectural monument, etc.) that is listed by UNESCO as of special cultural or physical significance. The list is maintained by the International World Heritage Programme administered by the UNESCO World Heritage Committee. Each World Heritage Site belongs to the country in which it is located, but it is conserved for the benefit of the global community and future generations.
<b>WRI</b>	World Resources Institute. The WRI is an environmental think tank that conducts research to find practical ways to protect the earth and improve people's lives. It focuses on four key programs, namely: climate protection, governance, markets and enterprise, and people and ecosystems.
<b>WSA</b>	Water Services Authority.
<b>WSP</b>	Water Services Provider.
<b>WSSD</b>	World Summit on Sustainable Development, Johannesburg, 2002.
<b>WUA</b>	Water User Association.
<b>WWF</b>	World Wide Fund for Nature.
<b>WWTW</b>	Waste Water Treatment Works.

# SECTION A

## Introduction

- A1 Background
- A2 Key Aspects of the Witzenberg Spatial Development Framework
- A3 Vision, Mission, Goals and Objectives
- A4 Sustainable Development – The Overarching Goal of the SDF
- A5 Planning Approach adopted for the SDF
- A6 Function of Strategies of Municipal Corporate Services as part of the SDF
- A7 Imperatives for Efficient Implementation of the SDF
- A8 Performance Auditing as an Imperative for Implementation of the SDF



## SECTION A: INTRODUCTION

### A1 BACKGROUND

The Department of Rural Development and Land Reform (DRDLR), in collaboration with the Witzenberg Municipality (further referred to as the Municipality), appointed Dennis Moss Partnership during April 2011 to draft the Witzenberg Spatial Development Framework (further referred to as the Witzenberg SDF).

The SDF is a legal requirement and an integral part of the Witzenberg Integrated Development Plan (IDP) in terms of Section 26(e) of the Local Government: Municipal Systems Act 32 of 2000. In order to allow for certain land-use decisions to be delegated to the Witzenberg Municipality, the SDF also complies with and is to be approved by the Provincial Government of the Western Cape in terms of the Land Use Planning Ordinance 15 of 1985.

The SDF was completed on 30 September 2012 and will be valid for a 5-year period from the date of approval by the Witzenberg Municipal Council in terms of Section 25(1) of the Municipal Systems Act. The SDF has a 30-year vision. However, in terms of the principles of adaptive management and continual improvement, the SDF is subject to regular supplementation and improvement by the Municipality.

The planning process incorporated a broad stakeholder consultation process which provided all concerned the opportunity to participate in the preparation of the SDF. The latter is therefore effectively an expression of the wishes and aspirations of the people of the Witzenberg as it relates to the spatial pattern in terms of which future development is to unfold throughout the Municipality, and the values, principles and strategies that are to support such development.

#### A1.1 USER'S GUIDE TO THE SDF

The SDF consists of four integrated sections (refer to Figure A1). The sections each has a distinct purpose and constitute the following:

- ❖ Section A addresses all introductory aspects and provides guidelines for the use of the SDF, its status, vision and supporting goals and objectives, and the planning approach adopted.
- ❖ Section B summarises the key environmental, cultural, historical, economic, social, demographic, institutional and infrastructural aspects of the Municipality.
- ❖ Section C is both a spatial framework and a policy, and provides strategic guidelines for future land-use in the municipality. Each chapter includes the following:
  - a) Subject description.
  - b) Subject objectives.
  - c) Subject policy.
  - d) Subject strategy and guidelines.
  - e) Subject spatial vision.



- ❖ Section D comprises a host of users' 'toolkits'. These are to serve as a manual for the interpretation and implementation of key concepts, and proposals put forward in the SDF, and to inform the implementation thereof.

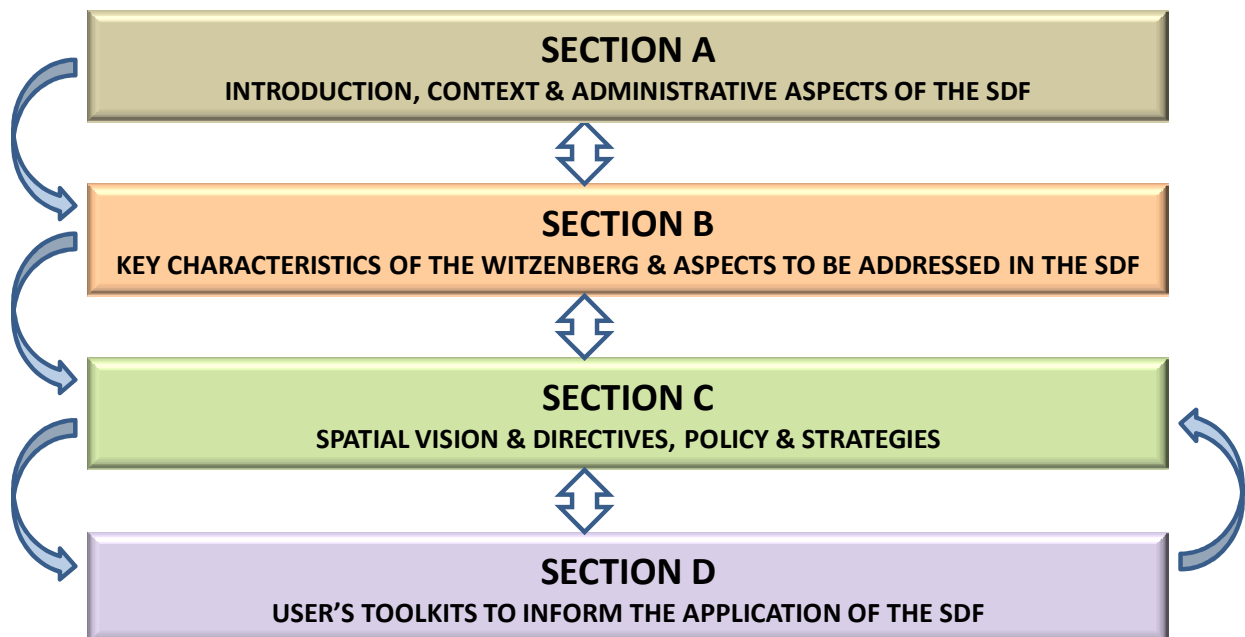


Figure A1: Structure and content of the SDF.

The document includes interpretive boxes that draw attention to pertinent issues. Red boxes comprise key statements, visions, or summaries of the section or chapter whilst green boxes generally comprise a clarification of a key aspect.

## A2 KEY ASPECTS OF THE WITZENBERG SPATIAL DEVELOPMENT FRAMEWORK

### A2.1 LEGISLATIVE AND PLANNING CONTEXT APPLICABLE TO THE SDF

The Witzenberg Municipality recognises that a critical determinant of the success of land-use planning is the extent to which all spheres of government co-operate and co-ordinate their activities. The bioregional planning approach adopted for the drafting of the SDF requires that land-use planning be undertaken with due recognition and incorporation of the relevant protocols, conventions, agreements, legislations and policy at five distinct levels, ranging from the international to the local (refer to Figure A2).

Effective integrated planning at these levels requires innovative forms of institutional integration and social co-operation. Dialogue amongst all stakeholders, participatory planning and institutional flexibility are, therefore, essential to plan and manage effectively. For this co-operation to occur, a concerted effort is necessary to establish lines of communication and co-ordination mechanisms.

Figure A2 summarises the applicable levels and the agreements, protocols, legislation and policy applicable at the various levels as it relates to the drafting and implementation of the Witzenberg SDF. A more comprehensive description of the applicable directives is provided in Toolkit D1 in Section D.

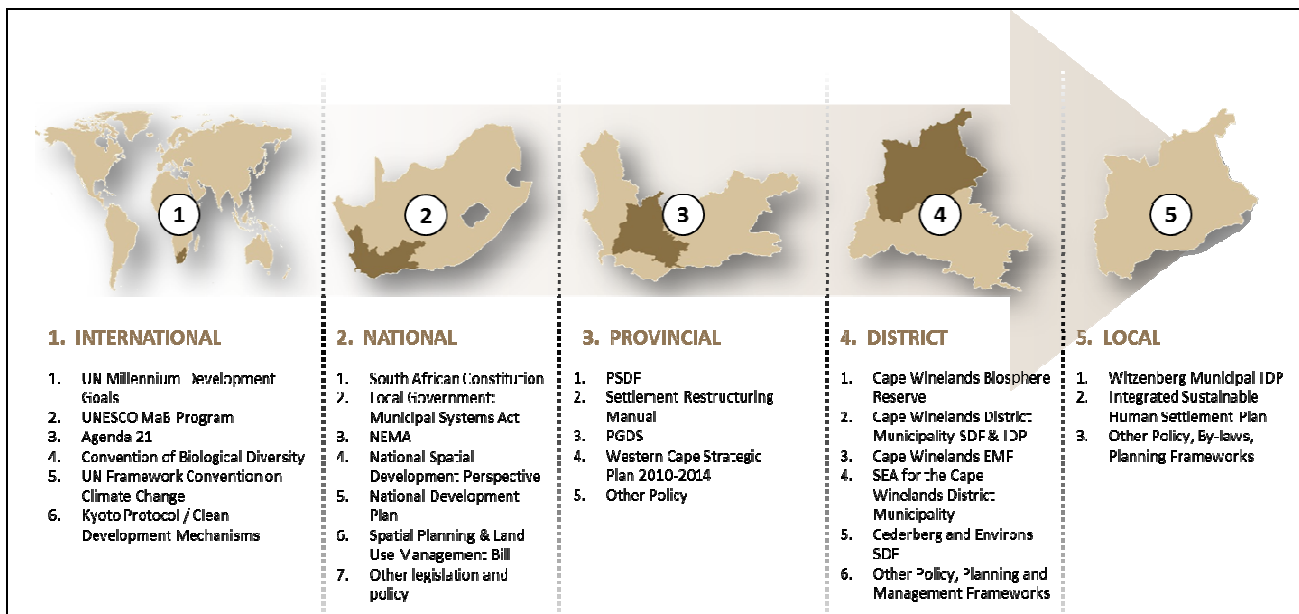


Figure A2: Planning context applicable to the Witzenberg SDF.

The primary contextual directives that guided the drafting of the Witzenberg SDF are as follows:

- a) National Development Plan: Vision for 2030.
- b) National Spatial Development Perspective.
- c) Spatial Planning and Land-Use Management Bill (2012).
- d) Guidelines for the Formulation of Spatial Development Frameworks<sup>1</sup>.
- e) Western Cape Provincial Spatial Development Framework.

The SDF is premised on the principle that the Witzenberg Municipality must be managed as an integral part of the Western Cape, South Africa, and the global biosphere in terms a holistic integrated structure or 'package' of plans that have a common vision of sustainability. In terms of the bioregional planning approach as adopted for the SDF the various 'layers' of the 'package' of plans express the place-specific characteristics and idiosyncrasies of the places to which the relevant layer applies and illustrate land-use proposals for that specific place.

Figure A3 illustrates the integrated structure of plans of which the SDF forms a part. In short, this structure relates to the:

- (i) National sphere, (i.e. the National Development Plan and the NSDP).
- (ii) Provincial sphere (i.e. the Western Cape Provincial Growth and Development Strategy {also referred to as the iKapa GDS) and the Western Cape Provincial Spatial Development Framework (PSDF).
- (iii) District sphere, i.e. the IDP (Integrated Development Plan) and SDF (Spatial Development Framework) of the Cape Winelands District Municipality (further also referred to as the District Municipality).
- (iv) Local sphere (i.e. the Witzenberg IDP). All of these have to comply with the applicable international agreements and conventions and the relevant national and provincial legislation and policy.

<sup>1</sup> Department of Rural Development and Land Reform, 2010.

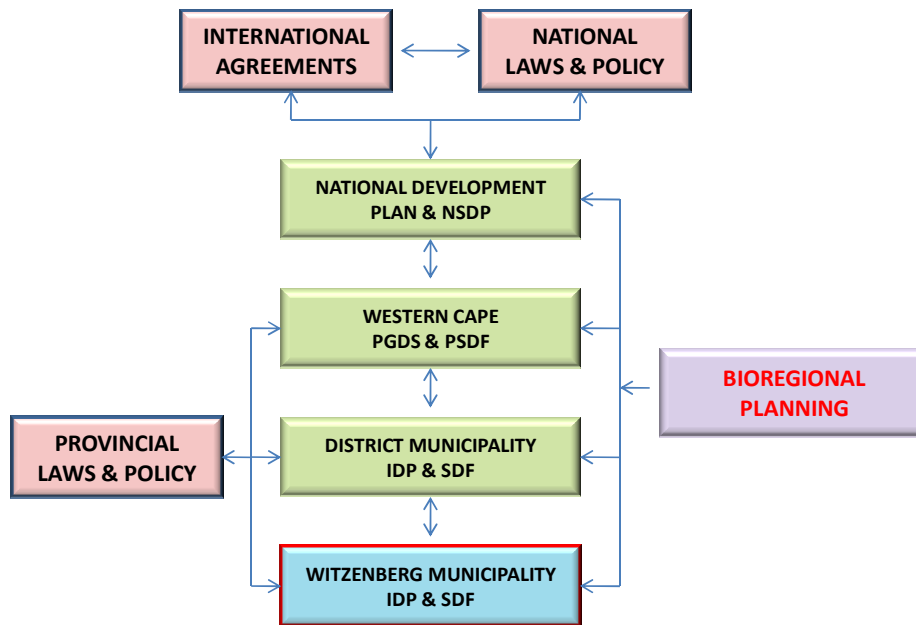


Figure A3: Witzenberg SDF as part of a hierarchy or 'package' of plans.

## A2.2 SPECIFIC FUNCTIONS OF THE WITZENBERG SDF

The Witzenberg SDF aims to promote sustainable development as a strategy to achieve sustainability and prosperity throughout the Municipality. Accordingly, it strives to balance the 'triple bottom line' imperatives of *economic efficiency*, *social equity* and *environmental integrity*.

The SDF is to serve as a -

- a) Spatial land-use directive which promotes environmental, economic, and social sustainability.
- b) Guideline for instilling a developmental state.
- c) Basis for prioritising governmental programmes and projects.
- d) Manual for integrated land-use planning and management.

### A2.2.1 A SPATIAL LAND-USE DIRECTIVE

The SDF provides an appropriate spatial and strategic context for future land-use throughout the Witzenberg Municipality, from a *provincial* perspective. The SDF is an expression of the mental image, vision and aspirations which the people of the Witzenberg have for their area. In essence the SDF indicates **which** type of development should be allowed in the Municipality, **where** it should take place, and **how** such development should be undertaken.

From a spatial planning perspective the key objectives of the SDF are to:

- a) Provide a spatial rationale and directive for development in terms of the principles of sustainability as advocated by the National Framework on Sustainable Development (Department of Environmental Affairs {DEA}, 2008) and the National Strategy for Sustainable Development and Action Plan 2011-2014 (NSSD) (DEA, 2011).
- b) Give effect to the directives of the national government as expressed in *inter alia* the National Spatial Development Perspective (NSDP), the National Framework on Sustainable Development (DEA, 2008), and the National Strategy for Sustainable Development and Action Plan 2011-2014 (NSSD).

- c) Give effect to the directives of the Provincial Government of the Western Cape as expressed in *inter alia* the Western Cape PSDF.
- d) Give spatial effect to the provisions of the Witzenberg IDP and guide implementation of its anchor projects.
- e) Provide guidance to public and private infrastructure investment in the Municipality, taking cognisance of the growth and development potential of the various settlements in the Municipality.
- f) Spatially co-ordinate and direct the activities and resources of the Municipality.
- g) Identify land-use issues deemed to be of provincial and regional significance and put forward strategic intervention proposals.
- h) Providing a standard format for the promotion of sustainable development throughout the Witzenberg Municipality.
- i) Providing a framework that would inform any future municipal demarcation with the aim to reconcile future municipal boundaries with defined bioregional parameters.
- j) Facilitating the land-use classification of the entire land surface of the Municipality in a standard format in accordance with defined *Spatial Planning Categories (SPCs)*, which are based on a broad spectrum of environmental parameters and a system of values and ethics.
- k) Describing the existing and desired future spatial patterns that provide for integrated, efficient and sustainable settlements in the Municipality.
- l) Guiding the investment of public resources (capital) through the following:
  - (i) Providing a credible context for public investments.
  - (ii) Promoting equitable development of areas that have lagged behind.
  - (iii) Providing certainty to all stakeholders regarding spatial and socio-economic implications of future development in the Municipality.
- m) Providing a basis for co-ordinated decision-making and policy-formulation regarding future land-use with specific reference to the following:
  - (i) Serving as a basis for decision-makers in respect of development applications.
  - (ii) Replacing inappropriate existing policy frameworks with a more ambitious forward-moving, integrated approach to planning that will lead to the realisation of common goals of the Municipality.
- n) Facilitating cross-boundary co-operation and co-ordination between the Witzenberg Municipality, the neighbouring municipalities of Laingsburg, Breede Valley, Drakenstein, Bergrivier, Cederberg, and the adjacent Hantam Municipality and Karoo Hoogland Municipality in the Northern Cape in respect of issues that are of mutual interest for their respective areas of jurisdiction (refer to *inter alia* issues pertaining to land-use, biodiversity conservation, and resource utilisation).

### A2.2.2 GUIDELINE FOR INSTILLING A DEVELOPMENTAL STATE

The NSDP encourages spatial development plans and frameworks *to create an environment that promotes a developmental state*<sup>2</sup>. To this end, the SDF is to facilitate the application of the NSDP in the Witzenberg Municipality by defining a common spatial vision and direction around which to align the IDP, urban renewal programmes, and other initiatives.

<sup>2</sup> The essence of a 'developmental state' as advocated by the South African Constitution is to create an enabling, functional and statutory environment to promote sustainable socio-economic development. Such a state incorporates and builds upon principles of empowerment, value addition, rural development and industrialisation, all of which are of specific relevance for the Witzenberg Municipality.

Accordingly, the SDF is an innovative strategy that applies sustainability principles to all spheres of land-use management throughout the Municipality and facilitates practical results as it relates to the eradication of poverty and inequality, and the protection of the integrity of the environment. In short, the SDF is to serve as a mechanism towards enhancing sustainability by ensuring that:

- a) All land-uses enable people to live a dignified life and enhance the integrity of the environment.
- b) Innovative management skills and technologies are employed to bring human demands for resources into balance with the carrying capacity of the environment. In this regard the SDF is premised on the principle that shared resources can only be sustainable if the ethic of environmental care applies at all applicable spheres, ranging from the international to the local.
- c) The comparative and competitive advantages which the Witzenberg Municipality holds over its neighbouring municipalities are developed and utilised in a sustainable manner.

### **A2.2.3 A BASIS FOR PRIORITISING MUNICIPAL PROGRAMMES AND PROJECTS**

The SDF serves as a spatial and strategic policy rationale supportive of the Witzenberg IDP with the objective to provide a basis for the prioritisation of municipal programmes and projects in the IDP in accordance with the following principles:

- a) Defining time-related targets based on projected development needs, which shall, where appropriate, be informed by measurable and quantifiable social and economic development, bulk engineering and social service needs.
- b) Prioritised three- to five-year capital expenditure programmes informing the annual capital and operations budget allocation of the Municipality.
- c) Motivating, leveraging and securing funding from the Provincial Government and National Government.
- d) Motivating, leveraging and securing funding from any other funding-related agencies.
- e) Establishing partnership arrangements with the private sector.

### **A2.2.4 A MANUAL FOR INTEGRATED LAND-USE MANAGEMENT**

Key determinants of successful land-use planning and management is the extent to which all spheres of government co-operate and co-ordinate their activities. Accordingly, the SDF is based upon and gives effect to the concept of integrated development planning, which is understood as *a participatory planning process aimed at integrating sectoral strategies, in order to support the optimal allocation of scarce resources between sectors and geographic areas and across the population in a manner that promotes sustainable growth, equity and the empowerment of the poor and marginalised* (Forum for Effective Planning and Development, 1995).

An integrated and holistic approach to land-use planning and management implies that the interrelationships between economic activities and other development dimensions such as social, financial, demographic, institutional, infrastructural, and environmental aspects are carefully considered in terms of a standard framework and at all applicable spheres of planning ranging from the international to the local level (refer to Chapter A2.1).

## **A2.3 STATUS OF THE SDF**

The approval of the Witzenberg SDF in terms of the Local Government Municipal Systems and the Land Use Planning Ordinance means that the SDF has statutory status as the common spatial

vision and direction around which to align the Witzenberg IDP, urban renewal programmes, integrated sustainable rural development programmes, etc. The SDF places an obligation on all municipal departments and relevant spheres of government to promote sustainable development effectively and concertedly, as envisaged by the Intergovernmental Relations Framework Act 13 of 2005.

The following principles apply to the use of the SDF as a land-use directive:

- a) Any land-use amendment in the Municipality has to conform to the SDF. This means that the relevant organs of state must take account of, and apply relevant provisions of the SDF when making decisions that affect the use of land and other resources.
- b) The SDF does not create, or take away, land-use rights.
- c) The SDF is to be applied in a flexible and pragmatic manner that focuses on promoting a developmental state and sustainability and which takes into account the merits and particular circumstances of each case as required by law, i.e. through an Environmental Impact Assessment (EIA) undertaken in terms of the National Environmental Management Act 107 of 1998 (NEMA).

The planning and implementation of strategies and projects rely on the spatial plans and broad implementation and prioritisation principles provided by the SDF. The assessment of consistency of such strategies with the SDF is an ongoing process to be undertaken by the municipal departments.

The SDF provides guidelines and directives to help decision-makers under the land-use planning statutes to determine the desirability of proposed developments by considering whether or not the proposals are socially, economically and ecologically sustainable. This requires decision-makers to consider which of the policy statements in the SDF are relevant in the circumstances and the weight that should be given to each, in order to secure sustainable development.

#### **A2.4 AMENDMENT AND REVISION OF THE SDF**

Amendments to the SDF will be dealt with in accordance with the applicable stipulations of the Land Use Planning Ordinance. Any interim amendments of the SDF are subject to the findings of a comprehensive Strategic Environmental Assessment (SEA) to be undertaken by an independent practitioner in collaboration with the public and all other stakeholders.

#### **A2.5 GUIDING PRINCIPLES OF THE SDF**

The SDF is based on the following fundamental principles in respect of general land-use management and land development, including decisions pertaining to land development:

- a) Policy and administrative practice should provide for urban and rural land development and should facilitate the development of formal and informal, existing and new settlements.
- b) Policy and administrative practices should discourage the illegal occupation of land, with due recognition of informal land development processes.
- c) Policy and administrative practice should promote efficient and integrated land development in that they-
  - (i) promote the integration of the social, economic, institutional and physical aspects of land development;

- (ii) promote integrated land development in rural and urban areas in support of each other;
  - (iii) promote the availability of residential and employment opportunities in close proximity to or integrated with each other;
  - (iv) optimise the use of existing resources including such resources relating to agriculture, land, minerals, bulk infrastructure, roads, transportation and social facilities;
  - (v) promote a diverse combination of land-uses, also at the level of individual erven or subdivisions of land;
  - (vi) discourage the phenomenon of 'urban sprawl' in urban areas and contribute to the development of more compact towns and cities;
  - (vii) contribute to the correction of the historically distorted spatial patterns of settlement in the Republic and to the optimum use of existing infrastructure in excess of current needs; and
  - (viii) encourage environmentally sustainable land development practices and processes.
- d) Members of communities affected by land development should actively participate in the process of land development.
- e) The skills and capacities of disadvantaged persons involved in land development should be developed.
- f) Policy and administrative practice should encourage and optimise the contributions of all sectors of the economy (government and non-government) to land development so as to maximise the Municipality's capacity to undertake land development.
- g) Administrative practice relating to land development should-
- (i) be clear and generally available to those likely to be affected thereby;
  - (ii) in addition to serving as regulatory measures, also provide guidance and information to those affected thereby;
  - (iii) be calculated to promote trust and acceptance on the part of those likely to be affected thereby; and
  - (iv) give further content to the fundamental rights set out in the Constitution.
- h) Policy and administrative practice should promote sustainable land development at the required scale in that they should-
- (i) promote land development which is within the fiscal, institutional and administrative means of the Municipality;
  - (ii) promote the establishment of sustainable communities;
  - (iii) promote sustained protection of the environment; and
  - (iv) meet the basic needs of all citizens in an affordable way; and
- i) Policy and administrative practice should promote speedy land development.
- j) Each proposed land development area should be judged on its own merits and no particular use of land, such as residential, commercial, conservational, industrial, community facility, mining, agricultural or public use, should in advance or in general be regarded as being less important or desirable than any other use of land.
- k) Land development should result in security of tenure, provide for the widest possible range of tenure alternatives, including individual and communal tenure, and in cases where land development takes the form of upgrading an existing settlement, not deprive beneficial occupiers of homes or land or, where it is necessary for land or homes occupied by them to be utilised for other purposes, their interests in such land or homes should be reasonably accommodated in some other manner.
- l) The Municipality should co-ordinate the interests of the various sectors involved in or affected by land development so as to minimise conflicting demands on scarce resources.

### A3 VISION, MISSION, GOALS AND OBJECTIVES

#### *Box A1 - Witzenberg Municipality Vision & Mission*

##### **VISION**

A Municipality that cares for its community, creating growth and opportunities.

##### **OUR MISSION**

The Witzenberg Municipality is committed to improve the quality of life of its community by:

- Providing and maintaining affordable services.
- Promoting Social and Economic Development.
- The effective and efficient use of available resources.
- Effective Stakeholder and Community participation.

Witzenberg IDP 2012/2017

The SDF is premised on the principle that, in order to achieve the above vision, a holistic and all-embracing approach to the management of the Witzenberg Municipality is required. Such an approach should focus on ensuring the sustainability of the resource base upon which the general well-being of the people of the area depends. Accordingly, the overriding mission of the International Union for Conservation of Nature (IUCN) was adopted as a premise for the SDF, namely *'the maintenance of essential ecological processes, the preservation of genetic diversity and the insurance of the sustainable utilisation of natural resources; and, the management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generations, while maintaining its potential to meet the needs and aspirations of future generations'* (IUCN, 1980).

Additional guidance for the preparation of the SDF was drawn from the National Framework on Sustainable Development's vision of a sustainable South African society, namely: *South Africa aspires to be a sustainable, economically prosperous and self-reliant nation state that safeguards its democracy by meeting the fundamental human needs of its people, by managing its limited ecological resources responsibly for current and future generations, and by advancing efficient and effective integrated planning and governance through national, regional and global collaboration.*

### A4 SUSTAINABLE DEVELOPMENT – THE OVERARCHING GOAL OF THE SDF

The Western Cape's Draft Strategic Plan (PGWC, 2010) envisages an *open opportunity society for all*. *Open*, referring to *transparency and the rule of law*, and *opportunity* referring to *a society where every person is given the change and the wherewithal to improve their own circumstances.*

The SDF gives effect to the above commitment, whilst the current challenges facing the Municipality, namely *the rural predominance of Witzenberg taken together with the great development challenges on the one hand and the resource constraints of the Municipality on the other hand, place great pressure on our capacity to meet service infrastructure needs of all our residents. Consequently, it is essential that inter-governmental engagement in respect of improving municipal financial management, staffing and institutional capacity, systems and service delivery takes place in order to enhance the municipality's ability to deliver a bouquet of*



*quality service* (Witzenberg IDP 2012-2017). The SDF builds on the notion that such a situation requires innovative economic intervention, which can only result from a dynamic development state.

Sustainable development was defined by the 1987 United Nations (UN) World Commission on Environment and Development (referred to as the Brundtland Commission) as *development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs*.

#### **A4.1 IMPERATIVES AND OBJECTIVES FOR SUSTAINABLE DEVELOPMENT IN THE WITZENBERG MUNICIPALITY**

The Western Cape PSDF states that *development is only acceptable and in the public interest if it is environmentally justifiable, socially equitable and economically viable*. This implies that *the development needs of present generations should be met without compromising the ability of future generations to meet their own needs*.

It is accepted that sustainable development includes and integrates the development of people and their situations and standards of living. In this regard, the Rio Declaration (1992), which forms the preamble to Agenda 21, states that *'human beings are at the centre of concern for sustainable development'* (CSIR, 2002). In the South African situation this implies an appropriate investment into human capital.

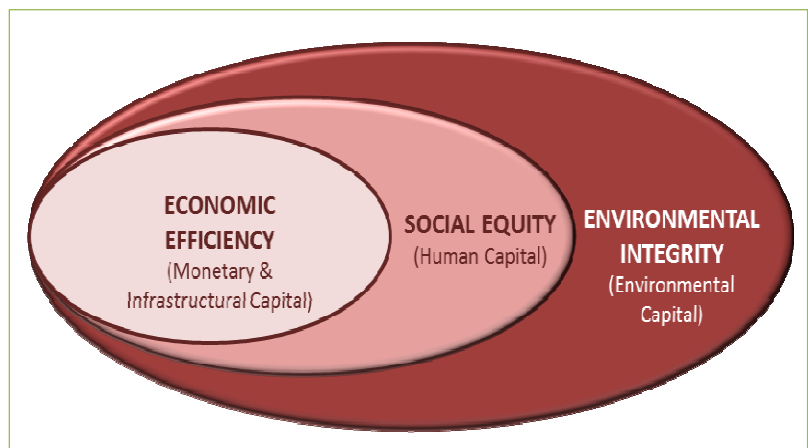


Figure A4: Triple Bottom Line relationship framework.

The Witzenberg SDF builds on the following understanding of the three pillars of sustainability ('triple bottom line') and aims to enhance them in a balanced manner through appropriate spatial planning and innovative empowerment strategies as cited in Section C below:

##### **A4.1.1 SOCIAL EQUITY**

###### *Box A2 - Objectives of Social Equity*

This objective refers to the concept of needs and addresses the following:

- Improve the quality of human life, including the elimination of poverty.
- Recognising the extent of cultural diversity and respond accordingly.
- Protect and promote human health through a healthy environment.
- Implement skills training and capacity enhancement for historically disadvantaged people.

Social equity addresses to both *material* and *spiritual* well-being. Material well-being refers to the absence of poverty. Spiritual well-being *inter alia* refers to the absence of inequality and being in a position to obtain new powers, emotionally, intellectually and physically and to be able to play a meaningful role in promoting and achieving sustainable development.

#### A4.1.2 ENVIRONMENTAL INTEGRITY

This imperative refers to the relative '*wholeness*' of the environment. 'Environment' is defined as the aggregate of all external conditions and influences affecting the life of an organism. Environmental integrity is determined by the *value* of the environment or place (natural or human-made), with specific reference to its intrinsic, systemic, and/or instrumental value. The Witzenberg SDF builds on the recognition that the human-made environment is located within and 'contained' by the natural environment. The manner in which human settlements are developed, therefore, has an immense impact on the quality and integrity of the environment as a totality. It is therefore imperative that the human-made environment is planned, designed and developed in a manner that will ensure the maintenance of the values referred to above (i.e. intrinsic, systemic, and/or instrumental value). From a natural environmental perspective, environmental integrity is a key factor in the sustainable development equation. Environmental integrity *inter alia* requires that biodiversity is protected and essential ecological processes and services (e.g. water yield and quality, soil conservation, decomposition, etc.) are maintained. *Environmental health* is the key to sustainable development. The primary threat to environmental health is fragmentation of community-supporting ecosystems. Fragmentation generally leads to a cycle of environmental degradation, which subsequently influences the well-being of the dependent communities.

#### *Box A3 - Objectives of Environmental Integrity*

There will be a presumption in favour of conservation and a premium will be placed on the conservation of natural resources, wildlife and landscape. Materials for new development should, for example, be obtained from sustainable sources and in the design of buildings, the use of energy should be minimised.

In addition, the following principles will be incorporated into the planning and management of physical development:

- Minimise the use of the four generic resources, namely energy, water, land and materials.
- Maximise the re-use and/or recycling of resources.
- Use renewable resources in preference to non-renewable resources.
- Minimise air, land and water pollution.
- Create a healthy, non-toxic environment.
- Maintain and restore the Earth's vitality and ecological diversity.
- Minimise damage to sensitive landscapes, including scenic, cultural, and historical aspects.

#### A4.1.3 ECONOMIC EFFICIENCY:

This is understood as *the optimisation of benefit at the lowest cost*. It includes the innovative and efficient use of available resources (i.e. the various forms of capital). Adequate funds and the appropriate allocation of such funds in terms of agreed-to priorities are of fundamental importance.

### Box A4 - Objectives of Economic Efficiency

Economic Efficiency: This objective refers to the following:

- Ensure that new development promotes qualitative urban integration, affordable housing, and densification in a financially viable manner, without undermining existing property values.
- Ensure that as a whole, the for- and non-profit projects combine into a financially viable local economy that benefits all stakeholders.
- Promote employment creation.
- Enhance competitiveness within the context of the promotion of policies and practices that advance environmental sustainability.
- Invest a meaningful share of the proceeds from the use of non-renewable resources in social and human-made capital, to maintain the capacity to meet the needs of future generations.
- Protect and enhance the property and investments of all inhabitants.

Technical Sustainability: The primary aim is to create a *qualitative* cultural environment, which is in harmony with the natural environment within which it is located. The following objectives apply in this regard:

- Construct durable, reliable and functional structures.
- Pursue quality in creating the built environment.
- Use serviceability to promote sustainable construction.

### Box A5 - Witzenberg Municipality's Sustainable Development Approach

The sustainable development approach proposed of the Witzenberg Municipality constitutes the enhancement of social equity and environmental integrity through the efficient use of the inherent resources (capital) of the Municipality.

## A4.2 ROLE OF MUNICIPALITY IN PROMOTING SUSTAINABLE DEVELOPMENT

The Municipality has committed itself to the promotion of sustainability through sustainable development. The policies, programmes and practices proposed by the SDF are *inter alia* aimed at:

- enhancing the efficient use of energy, water, sensitive habitats and other environmental capital (resources); and,
- assisting local businesses in reducing costs, generating new business opportunities, creating jobs and increasing economic competitiveness.

The Municipality aims to influence the local communities to adopt more sustainable paths. This involves shifting public resources, services, investments, purchasing power and policies to encourage more economically and environmentally sustainable outcomes. The role of the Municipality in this regard includes the following:

❖ Leading by example:

In this regard, reference is made to the following:

- a) *Purchasing and procurement.* The Municipality is a large consumer of resources. It has adopted sustainable purchasing and procurement procedures that demonstrate leadership and shape energy and resource consumption patterns.
- b) *Public properties, including buildings, parks and open space.* The sustainable use of such properties for the benefit of all will be ensured through efficient planning and management.

- c) *Investment policies.* The Municipality supports sectors, firms or activities that promote sustainability.
- d) *Renewable energy use as well as water and energy conservation.* The Municipality commits to ensuring the efficient use of environmental capital (resources) through international best-practice procedures, including a climate-neutrality strategy to be prepared as a matter of urgency.
- e) *Workforce transit patterns.* The Municipality aims to reduce energy consumption and shift towards renewable energy by managing the transit patterns of employees.
- ❖ Promoting public-private-community partnerships towards sustainable development. The Municipality supports and fosters public-private-community based programmes and partnerships promoting sustainable development at the community level. The main aims of such partnerships are to:
  - a) Unlock and mobilise the capital vested in the resources of the Municipality in order generate meaningful benefit for the affected communities and the receiving environment.
  - b) Enable the Municipality to cross-subsidise much-needed low-cost and medium-cost housing.
  - c) Create opportunities for meaningful community empowerment.
  - d) Promote access to mainstream of the economy for the previously disadvantaged through agriculture, tourism, environmental conservation, utilisation of biodiversity components, etc.
  - e) Engage local communities in on-going assessment of their environmental and economic conditions, trends and risks.
  - f) Establish clear, measurable sustainability goals and targets for Municipality, the private sector and communities.

## A5 PLANNING APPROACH ADOPTED FOR THE SDF

In terms of the *Manual for the application of bioregional planning in the Western Cape* (PGWC, 2003)<sup>3</sup>, the *Bioregional Planning Policy for the Western Cape* (PGWC, 2001) and the Western Cape PSDF, the application of a bioregional approach in the planning and management of municipalities is mandatory. Accordingly, the SDF was prepared in compliance with bioregional planning principles that were adapted to suit the site-specific requirements of the Witzenberg Municipality.

The implementation of bioregional planning approach as promoted by the SDF does not require any major adjustments from an institution or stakeholder - in essence, it merely requires a paradigm shift towards a more sustainable and integrated approach to all aspects of governance, economic growth facilitation and land-use. The bioregional principles do not imply any measure or strategy that has not been provided for by national and provincial legislation and policy.

### A5.1 WHAT IS BIOREGIONAL PLANNING

In the *Manual for the application of bioregional planning in the Western Cape* (PGWC, 2003:86) bioregional planning is defined as '*planning and land management that promote sustainable development by recognising the need for a balanced relationship between environmental integrity,*

<sup>3</sup> PGWC, 2003: *Manual for the application of bioregional planning in the Western Cape.* Department of Environmental Affairs and Development Planning.

*human well-being and economic efficiency, and to give effect and recognition thereto, within a specific geographical area, the boundaries of which are determined in accordance with environmental, social and economic criteria’.*

Miller (1996) describes bioregional planning as ‘*an organised process that enables people to work together, think carefully about the potential and 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’.*

From a philosophical perspective, bioregional planning is concerned with ‘*reconnecting people to place in a sense of mutual care. By coming to know and understand the place in which they live, people not only gain a sense of identity but also a commitment to the preservation of their life-place. Therefore, the concept is highly concerned with collaboration and inclusivity on the part of residents to guide the development and preservation of their life-place. The concept respects scientific knowledge, but also has a deep respect for indigenous cultures, people and thought’.* The concept is not about solving problems for people, but rather creating circumstances for people to solve their own problems in a way that acknowledges the uniqueness and value of each person and place. It recognises that the process of making decisions and solving problems is just as important as the end product itself<sup>4</sup>.

Bioregionalism is a mindfulness of local environment, history, and community aspirations that leads to a sustainable future. It relies on safe and renewable sources of food and energy. It ensures employment by supplying a diversity of services within the community, by recycling resources, and by exchanging prudent surpluses with other regions. Bioregionalism is working to satisfy basic needs locally, such as education, health care and self-governance. The bioregional perspective recreates a widely-shared sense of regional identity founded upon a renewed critical awareness of and respect for the integrity of ecological communities.

The bioregional scale is a meaningful geographic framework for understanding place and designing long-term sustainable communities. Awareness and care for one’s bioregional home and its patterns is fundamental to a place-based understanding and community stewardship of sustainability.

The key spatial dimension of bioregional planning is the bioregion. The latter is a geographical area defined in terms of its unique combination of human activities (including economic, social, and developmental issues), plants, animals, geology and climate – an area defined by natural boundaries and distinct living communities – the whole of which distinguishes it from other bioregions.

A bioregion is a geographical area defined in terms of its unique combination of human activities (including economic, social, and developmental issues), plants, animals, geology and climate – an area defined by natural boundaries and distinct living communities – the whole of which distinguishes it from other bioregions. A bioregion refers to both a geographical terrain and a terrain of consciousness, i.e. a place and the ideas that have developed about how to live in that place. Thus, natural forms and living communities, including human, become the descriptive features of each bioregion – instead of the politically drawn lines used to define municipalities, districts, provinces and the country.

<sup>4</sup> University of Idaho: *Building Sustainable Communities Initiative*. <http://www.bioregionalplanning.uidaho.edu/SPUD/resources/BioregionalPhilosophy.pdf>

According to the provincial bioregional plan (PGWC, 2003) the Witzenberg Municipality incorporates the designated Koue Bokkeveld Bioregion, Ceres Bioregion, Tankwa Karoo Bioregion and a portion of the Breede River Valley Bioregion (refer to Figure A5). This largely corresponds with the administrative boundaries of the Municipality, with only small anomalies that do not affect the bioregional management objectives of the area as stated in the *Bioregional Planning Policy for the Western Cape* (PGWC, 2001).

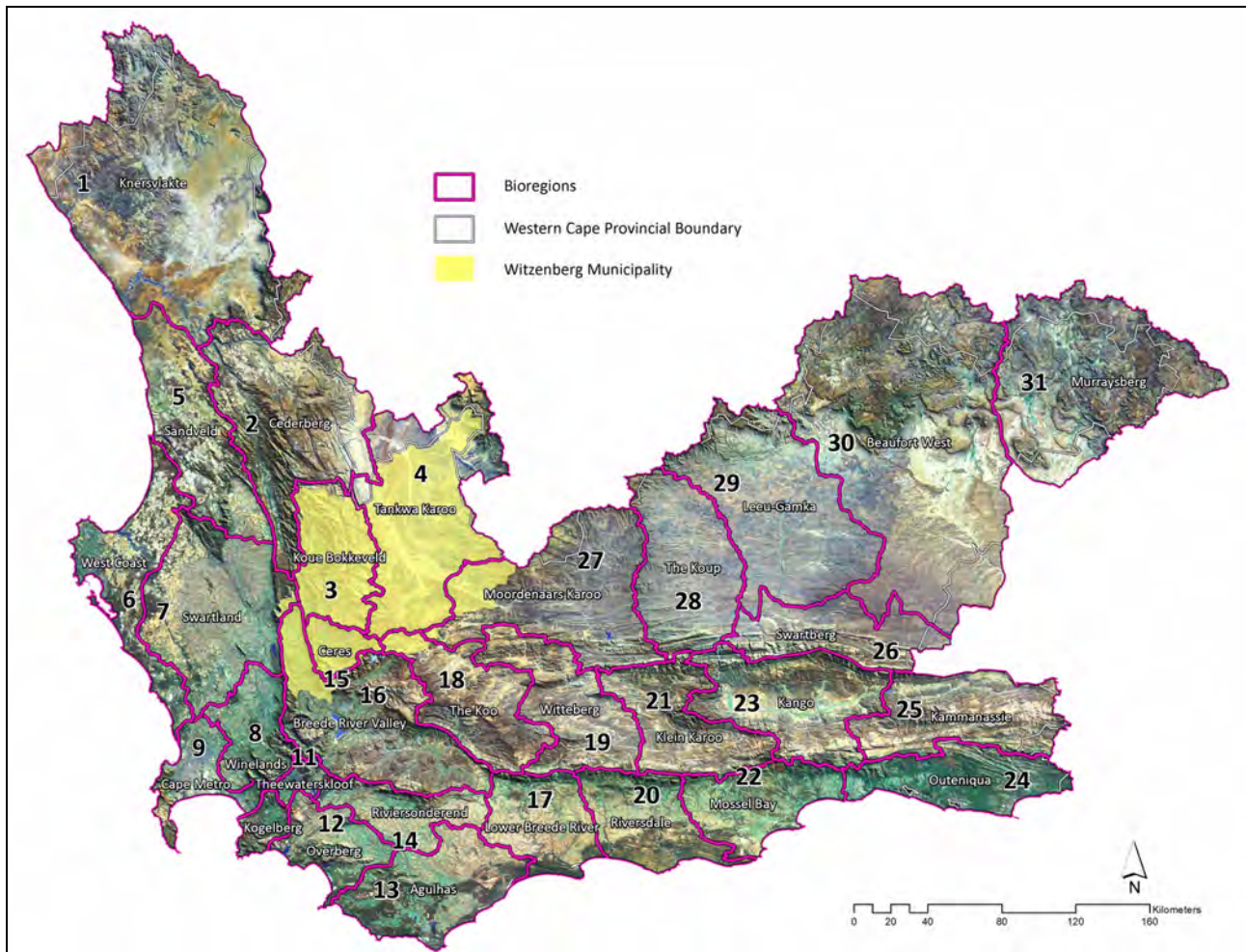


Figure A5: Witzenberg Municipality in context of the provincial bioregional plan (Adapted from PGWC, 2003).

A bioregional planning framework as is provided by the SDF supports the goal of accelerating change towards improved human and environmental well-being for a number of reasons, including the following:

- a) It makes little sense to discuss the topic of sustainability at the global scale if insufficient thought is given to the local places and scales where human life actually occurs. Societal actions that are sustainable for humans, other life-forms, and earthly systems can best be achieved by means of a spatial framework in which people live as rooted, active, participating members of a reasonably-scaled, naturally-bounded, and ecologically-defined 'place.'
- b) Considering problems and solutions from a bioregional perspective offers an opportunity to engage in comprehensive, adaptively managed change improving society's overall opportunity to achieve sustainability at a scale not possible within a single community effort.

- c) Human communities will have to undergo significant adaptive change to deal with a transition from climate change. But large-scale social change will only happen where people share common concerns, goals, and core values. Acknowledging that community-by-community change is too slow, the bioregion offers an example of where communities with common ecology, culture, and economy can converge for a greater good.
- d) Bioregional-based planning and action can help society narrow down problems and solutions, and help participants to acknowledge the limitations of a place and its resources so that they will not continue to overestimate the carrying capacity of the regions they inhabit, and live more sustainably.
- e) For every bioregion, there may be a unique set of practices, tools, models, and successes within individual organisations that support planning, design, and management. Instead of ‘reinventing the wheel’ with each new initiative, project, or campaign, the bioregional scale of sustainability work can enhance a transfer of knowledge and technology for the betterment of the entire region.

## A5.2 GUIDING PRINCIPLES OF BIOREGIONAL PLANNING TO BE APPLIED IN THE MUNICIPALITY

The following principles of bioregional planning as provided for in the relevant provincial policy are to be applied in the management of the Witzenberg:

- a) Efficient Resource Management: The efficient appropriation and use of the various forms of capital of the Witzenberg Municipality is imperative for the achievement of long-term sustainability and the vision set for the area. This is to be achieved through *inter alia* coherent local economic development, efficient economic sectors associated with agriculture, manufacturing, tourism, etc.
- b) Integrated environmental planning and management: This refers to:
  - (i) Appropriate demarcation of administrative units: Municipal wards or other forms of community domains are to be based on a set of applicable economic, social and environmental criteria. The current apathy and inadequate participation of stakeholders in land-use management is largely a result of inappropriate demarcation of the areas that people refer to as ‘home’.
  - (ii) Restoration and long-term conservation of both the cultural environment and the natural environment as the primary resource base for ensuring economic sustainability.
  - (iii) Innovative land-use planning that provides for a structure of interrelated cores, corridors and matrices: Land-use plans should include core nature areas that feature representative samples of the area’s characteristic biodiversity. Ideally such sites should be linked by corridors of natural or restored natural plant cover to permit migration and adaptation to global change. Both the core sites and corridors should be nested within a matrix of mixed land-uses and ownership patterns.
  - (iv) Adaptive management: This implies that land-use management are operated on an experimental basis, from which lessons may be drawn from experience to respond appropriately. The SDF have to respond accordingly.
  - (v) Incorporating biodiversity into the management of all biological resources: Biodiversity conservation is a prerequisite for sustainable development, and for biodiversity conservation to succeed, the maintenance of environmental integrity (as defined by *ecological, economic and social* criteria) must be one of the primary determinants of land-use planning. The mix of species in an ecosystem enables that system both to *provide* a flow of ecosystem services under given environmental conditions, and to *maintain* that flow if environmental conditions

change. The loss of biodiversity therefore limits the resilience of the affected ecosystem, which in turn, may have direct negative economic implications.

- (vi) Supporting conservation initiatives in the private sector: Conservation on private land should become an integral part of the municipal conservation strategy. This, in turn, requires that forward planning must be done on a holistic bioregional basis.
- c) Building human capacity and ability: This includes the following:
- (i) Co-operative skills development: Communities and public and private organisations, together, must locate and mobilise the skills, knowledge, and information needed to ensure sustainability as promoted by the SDF.
  - (ii) Full involvement of stakeholders: All stakeholders, in particular the communities of the Witzenberg Municipality, must be fully involved in its planning and management (governance) of the areas where they live. Of primary importance in this regard, is to build the local capacity to participate in such processes.
  - (iii) Institutional integration and co-operation: This constitutes the following:
    - Inter-municipal co-operation: Ecosystems cross administrative boundaries (e.g. between the Witzenberg and its neighbouring municipalities). Therefore, appropriate co-operation agreements for debate, and mechanisms for joint research, information management and investments must be established.
    - Institutional integration: Alliances between institutions are to be forged to close gaps, minimise overlap and make management and investment in the Municipality more efficient.
- d) Information and performance management: This refers to:
- (i) Reliable and comprehensive information: In order to contribute to continual improvement all stakeholders must have at their disposal the critical information needed to achieve the goal of sustainability. GIS technology is to be used to help stakeholders envision their region and its distinctive features clearly. GIS will help them to model options and scenarios for the future<sup>5</sup>.
  - (ii) Research and monitoring: Research and inquiries should focus on people-environment interactions, the development of innovative methods for managing natural resources, and the long-term monitoring of environmental factors and the impact of management practices.
  - (iii) Use of knowledge: Scientific, local and traditional knowledge should be employed in planning and management activities.
  - (iv) Auditing and measuring performance: The actions of the Municipality, and the agencies and functionaries responsible for economic, social and environmental programmes in the Municipality are periodically measured against defined criteria, and that innovative steps are taken to improve such performance continually.

## A6 FUNCTION OF STRATEGIES OF MUNICIPAL CORPORATE SERVICES AS PART OF THE SDF

The sectoral strategies of the municipal corporate services are integral and dynamic components of the SDF and *vice versa*.

<sup>5</sup> The Provincial Bioregional Planning Policy requires that an efficient *Spatial Planning Information System (SPISYS)* be established for the purposes of managing information. It is important to note that the Western Cape has, in terms of its bioregional planning policy, been a national leader in this regard, but that the execution of this strategy through, for example, the SDFs of all spheres of government has been neglected.



The key governance aspects, objectives, policy and guidelines cited in Section C incorporate and address the sectoral strategies and plans. The latter are to be prepared and implemented in terms of the 'common ground' directives of the SDF and the principles of *institutional integration*, *integrated development planning* and *co-operative governance* summarised in Chapter A7. The following directives apply:

- Sectoral strategies and plans are subject to scheduled revision and continual improvement in terms of the principles of adaptive management.
- Sectoral strategies and plans must be aligned and implemented in accordance with the SDF and with one another.
- The SDF, in turn, is subject to alignment with sectoral strategies and plans as may be required.

The sectoral strategies and plans are to be read and treated as key components of the SDF. To facilitate easy reference, efficient alignment, and coherent application of the SDF and the sectoral strategies, the latter have been numbered as follows:

Sectoral Strategy 1: Technical Services and Community Services: Cape Winelands District Municipality Environmental Management Framework (2012).

Sectoral Strategy 2: Technical Services: Electricity Master Plan: Ceres (October 2011), Wolseley (October 2011) and Tulbagh (September 2011).

Sectoral Strategy 3: Technical Services: Human Settlement Plan (2009): Phase 1: Situational Analysis, Phase 2: Strategy and Policy Framework, and Phase 3: Business Plan. Witzenberg Integrated Sustainable Human Settlement Plan.

Sectoral Strategy 4: Technical Services: Witzenberg Housing Plan and Housing Pipeline.

Sectoral Strategy 5: Technical Services: Witzenberg Municipality: Final Report: Public Land Audit (December 2009).

Sectoral Strategy 6: Technical Services and Community Services: Witzenberg Municipality Local Integrated Transport Plan 2011-2016.

Sectoral Strategy 7: Technical Services: Witzenberg Municipality Integrated Waste Management Plan (December 2010).

Sectoral Strategy 8: Technical Services: Witzenberg Municipality Water Services Development Plan 2006/2007.

Sectoral Strategy 9: Technical Services and Community Services: Witzenberg Municipality Local Economic Development Plan (2005).

#### **A6.1 SECTORAL PLANS AND STRATEGIES TO BE PREPARED**

The following sectoral strategies and plans should be prepared and, upon approval, numbered and applied as part of the SDF:

Sectoral Strategy 10: Municipal agriculture and agro-processing strategy.

Sectoral Strategy 11: Municipal industrial development strategy.

Sectoral Strategy 12: Municipal climate-neutrality strategy.

Sectoral Strategy 13: Municipal renewable energy strategy.

Sectoral Strategy 14: Municipal recycling strategy.

Sectoral Strategy 15: Municipal tourism strategy and plan, including directives for scenic route management.

Sectoral Strategy 16: Municipal cultural resource management strategy and plan.

Sectoral Strategy 17: Municipal biodiversity conservation strategy and plan.

## **A7 IMPERATIVES FOR EFFICIENT IMPLEMENTATION OF THE SDF**

A global stumbling block to efficient implementation of governmental strategies and plans is a lack of co-ordination and co-operation among the relevant institutions. The Witzenberg Municipality is currently no exception in this regard. In order to address this challenge, the SDF requires compliance of all concerned with the following imperatives:

- a) Institutional integration: Alliances between institutions within and outside the Municipality are to be forged to close gaps, minimise overlap and make management and investment in the Municipality more efficient.
- b) Integrated development planning: This is defined as *a participatory approach to integrate economic, sectoral, spatial, social, institutional, environmental and fiscal strategies in order to support the optimal allocation of scarce resources between sectors and geographical areas and across the population in a manner that provides sustainable growth, equity, and the empowerment of the poor and the marginalised.* (Forum for Effective Planning and Development, 1995).
- c) Co-operative governance: 'Inter-governmental relations' refer to the relationships between the three spheres of government, i.e. national, provincial and municipal. The South African Constitution states, 'the three spheres of government are distinctive, interdependent and interrelated'. Local government is a sphere of government in its own right, and is not an administrative implementing arm of national or provincial government. Although the three spheres of government are autonomous, they exist in a unitary South Africa and they have to work together on decision-making and must co-ordinate budgets, policies and activities.

Compliance with the latter is not only a bioregional planning requirement - it is also a legal obligation in terms of the Intergovernmental Relations Framework Act 13 of 2005. The Act aims to *establish a framework for the national government, provincial governments and local governments to promote and facilitate intergovernmental relations; to provide for mechanisms and procedures to facilitate the settlement of intergovernmental disputes; and to provide for matters connected therewith.*

Moreover, the Act seeks to set up mechanisms to coordinate the work of all spheres of government in providing services, alleviating poverty and promoting development. The Act also establishes a line of communication that goes from municipalities to the provinces and directly to

the Presidency. The Act advocates the establishment of intergovernmental forums as well as implementation protocols whereby the participation of organs of state in different governments co-ordinate their activities or actions by entering into such protocols. This may include issues such as the implementation of policies, the exercise of a power, and the performing of a function or the provision of a service.

### **A7.1 DIRECTIVES FOR INSTITUTIONAL INTEGRATION, INTEGRATED DEVELOPMENT PLANNING AND CO-OPERATIVE GOVERNANCE**

The SDF serves as an integrated spatial and policy framework (i.e. 'common ground') within which the imperatives of institutional integration, integrated development planning and co-operative governance can be achieved.

The following directives apply to all sectors and stakeholders with regard to the above imperatives:

- a) *Institutional integration, integrated development planning and co-operative governance* shall be given effect within the Municipality as stipulated by the Intergovernmental Relations Framework Act 13 of 2005.
- b) The Municipal Manager will facilitate *institutional integration, integrated development planning and co-operative governance*.
- c) Compliance with the directives pertaining to *institutional integration, integrated development planning and co-operative governance* is subject to annually auditing by the Municipal Manager.
- d) The Heads of Departments (HODs) will be held accountable for *institutional integration, integrated development planning and co-operative governance*.

## **A8 PERFORMANCE AUDITING AS AN IMPERATIVE FOR IMPLEMENTATION OF THE SDF**

### **A8.1 KEY ASPECTS OF MUNICIPAL ENVIRONMENTAL AUDITING**

#### **A8.1.1 DESCRIPTION AND CHARACTERISTICS**

The concept of continual improvement is embodied in and is a fundamentally important governance intervention advocated by the SDF. Continual improvement is achieved by continually evaluating the relevance and performance of the SDF and the sectoral strategies (refer to Chapter A6) against the Municipality's vision, and goals and objectives for sustainability (refer to Chapters A3 and A4) with the purpose of identifying opportunities for improvement.

The required evaluation is achieved through efficient environmental auditing, which is defined as *a systematic, documented verification process of objectively obtaining and evaluating audit evidence (verifiable information, records or statements of fact) to determine whether specified environmental activities, events, conditions, management systems, or information about these matters conform with audit criteria (policies, practices, procedures or requirements against which the auditor compares collected audit evidence about the subject matter), and communicating the results of this process to the client (organisation commissioning the audit)* (International Standards Organisation {ISO} definition cited in the Integrated Environmental Management Series: IEMS Sub Series No.1.7 (2004a).

Environmental auditing is an essential tool in the governance of the Witzenberg Municipality, in particular, as it relates to the management and monitoring of the performance of the various municipal directorates. The information generated from audit exercises provides important information to many different stakeholders. Although seen primarily as a tool in commerce and industry, creative application of environmental auditing techniques can improve transparency and communication in many areas of society where there is a need for greater understanding of environmental and ecosystem interactions (DEAT, 2004b).

The environmental auditing advocated by the SDF is characterised by the following (DEAT, 2004):

- a) **Systematic:** It is a systematic process that must be carefully planned, structured and organised. As it is part of a long-term process of evaluation and checking, it needs to be a repeatable process which can be readily replicated by (if necessary) different teams of people (also spheres of government) in such a way that the results are comparable and can reflect change in both a quantifiable and quantifiable manner.
- b) **Coherent documentation:** The premise of the audit is that its findings are supported by documents and verifiable information. The audit will seek, on a sampled basis, to track past government actions, activities, events, and procedures to ensure that they are carried out according to systems requirements and in the correct manner.
- c) **Periodic:** The audits of the various spheres of government are individual events. However, the real value of the audits is that they are carried out at defined intervals and their results can illustrate improvement or change over time.
- d) **Objective evaluation:** Although environmental audits are carried out using governmental policies, procedures, documented systems and objectives as a test, there is always an element of subjectivity in an audit. This flexibility reflects the fact that different auditors have different life and professional skills and experience and they may bring different interpretations to site situations and circumstances.
- e) **Governmental performance:** The essence of the audits is to find out how well the relevant sphere of government or institution is performing.
- f) **Facilitating appropriate control of governance practices:** Governance practices can happen with or without direct or specific instructions. The key to good performance is to ensure that these practices happen according to procedure, guidelines, training and systems requirements (e.g. the PSDF).
- g) **Compliance with policies and regulatory requirements:** Compliance with all applicable statutes, policy and other directives (refer to Chapter A2.1 and Toolkit D1) is of fundamental importance.

### **A8.1.2 OBJECTIVES**

The key objectives of the mandatory environmental performance auditing are to:

- a) Demonstrate the commitment of the Municipality to ensuring continual improvement of activities and sustainability programmes to all concerned.
- b) Assess the efficiency and appropriateness of land-use management and provide an objective premise for continual improvement. This *inter alia* means the mandatory revision of the SDF is to be informed by recorded audit results.
- c) Evaluate the extent and implications of institutional integration, integrated development planning and co-operative governance as stipulated in Chapter A7.
- d) Verify and ensure institutional compliance with the applicable legislation, policy and other directives (refer to Chapter A2.1 and Toolkit D1).
- e) Safeguard the environment.

- f) Evaluate the extent to which climate neutrality is achieved and determine and implement mitigatory measures as required.
- g) Indicate current or potential future problems that need to be addressed.
- h) Assess training programmes and provide data to assist in training.
- i) Enable land-users to build on good environmental performance, learn from positive precedents and rectify deficiencies.
- j) Identify potential cost savings, such as from waste minimisation.

### **A8.1.3 POLICY**

The following policy applies as it relates to environmental performance auditing at all spheres of government and in the private sector:

- a) All municipal directorates, and private industries and large-scale land-use enterprises are to develop and implement an efficient environmental performance auditing system.
- b) All of the above institutions are to bi-annually undertake a comprehensive environmental performance audit.
- c) In order to ensure continual improvement, findings of the integrated auditing process and rectification recommendations are to be implemented through the process of adaptive management.

### **A8.1.4 PROCEDURAL ARRANGEMENTS**

The bi-annual audit reports are to be submitted to and assessed as follows:

- a) The private sector institutions and businesses are to submit a bi-annual audit report to the Municipality for adjudication.
- b) The Municipality is to submit a bi-annual audit report to the District Municipality for adjudication.
- c) The District Municipality is to submit a bi-annual composite report to the Department of Environmental Affairs and Development Planning (DEA&DP) for adjudication.
- d) Findings of the integrated auditing process and rectification recommendations will be fed back and implemented through the relevant spheres of government.

## **A8.2 ADAPTIVE MANAGEMENT THROUGH THE IDP AND SDF PROCESS**

Adaptive management<sup>6</sup> is a process that promotes flexible decision-making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood. Careful monitoring and auditing of these outcomes both advances scientific understanding and helps adjust policies or operations as part of an iterative learning process.

Adaptive management also recognises the importance of natural variability in contributing to ecological resilience and productivity. It is not a 'trial and error' process, but rather emphasises learning while doing. Adaptive management does not represent an end in itself, but rather a mechanism towards more effective decisions and enhanced performance. Its true measure is in how well it helps meet environmental, social and economic goals, increases scientific knowledge, and reduces tensions among stakeholders. Adaptive management involves ongoing, real-time learning and knowledge creation, both in a substantive sense and in terms of the adaptive process itself (Williams *et al*, 2009).

<sup>6</sup> For the purposes of the SDF, 'management' includes governance actions and functions of the three spheres of government (i.e. provincial, district and local).

The concept of learning is central to adaptive management, with learning seen as a means to good governance (refer to the principles of bioregional planning and management in Chapter A5). Learning within the context of adaptive management derives from evaluation of previous management actions, the results of which are used to inform subsequent actions (Williams *et al*, 2009).

Adaptive government management procedures and strategies specify what actions are to be taken and how and when they should be adjusted. These strategies are, in turn, based on an explicit articulation of the management problem, what is known (and not known) about the resource system being managed, and the objectives of management (Williams *et al*, 2009). This explicitness makes it possible for stakeholders to focus on the key attributes involved in learning-based resource management, while avoiding the confusion and controversy that typically results when key management elements are not open to discussion and negotiation.

Adaptive management brings resource managers, researchers, and other stakeholders together and encourages long-term collaboration through the development and strengthening of institutional ties. These ties are important in maintaining the level of support needed to successfully implement adaptive management. Through strengthened collaboration, stakeholders can be encouraged to remain involved over the life of an adaptive management project (Williams *et al*, 2009).

Adaptive management fosters the acquisition of new knowledge and understanding by specifying hypotheses and designing management alternatives to test them against the field data. The information accumulated through this process is used to adjust strategy periodically on the basis of what has been learned. In this sense, adaptive management allows decision-makers at each juncture to make the best decisions they can with the information available at that time.

Figure A7 illustrates the steps of the adaptive management process which is to be manifested through the IDP and the SDF of the Municipality and the EMSs of public and private enterprises operational in the Witzenberg. The aim of the process is to serve as a mechanism to give effect to continual improvement of governance and environmental management performance based upon the findings of the auditing process summarised above. In short, adaptive management constitutes the following:

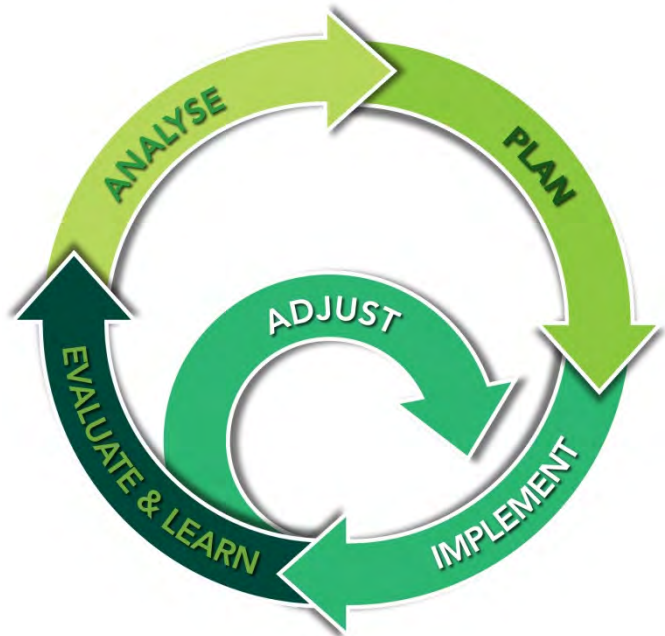


Figure A6: Model for the adaptive management approach to be implemented throughout the Witzenberg Municipality to enable continual improvement of governance and enterprise management.

### A8.2.1 MUNICIPAL SPHERE

- a) Planning: To be achieved through the preparation and revision of the IDP and the SDF and associated programmes and projects which are to be aligned.
- b) Implementation: To be achieved through the implementation of the IDP and the SDF and associated programmes and projects.
- c) Evaluation: To be achieved through the process summarised in A8.1.4 (refer to Toolkit D2) and guidelines put forward in the SDF.
- d) Analysis and Revision: To be achieved through the process summarised in A8.1.4 (refer to Toolkit D2) and guidelines put forward in the SDF.
- e) Adjustment and Continual Improvement: To be achieved through the scheduled revision of the IDP and the SDF and the incorporation and implementation of the findings of the auditing process.

### A8.2.2 PRIVATE SECTOR ENTREPRENEURIAL LAND-USE PLANNING SPHERE

- a) Planning: To be achieved through the preparation of a dedicated Environmental Management System (EMS) for the enterprise supported by project-specific Environmental Management Plans (EMPs) as may be required. These are to be aligned with the IDP and the SDF.
- b) Implementation: To be achieved through the implementation of the IDP and the SDF and associated programmes and projects.
- c) Evaluation: To be achieved through the process summarised in A8.1.4 (refer to Toolkit D2) and guidelines put forward in the SDF.
- d) Analysis and Revision: To be achieved through the process summarised in A8.1.4 (refer to Toolkit D2) and guidelines put forward in the SDF.
- e) Adjustment and Continual Improvement: To be achieved through the scheduled revision of the EMSs and EMPs and the incorporation and implementation of the findings of the auditing process.

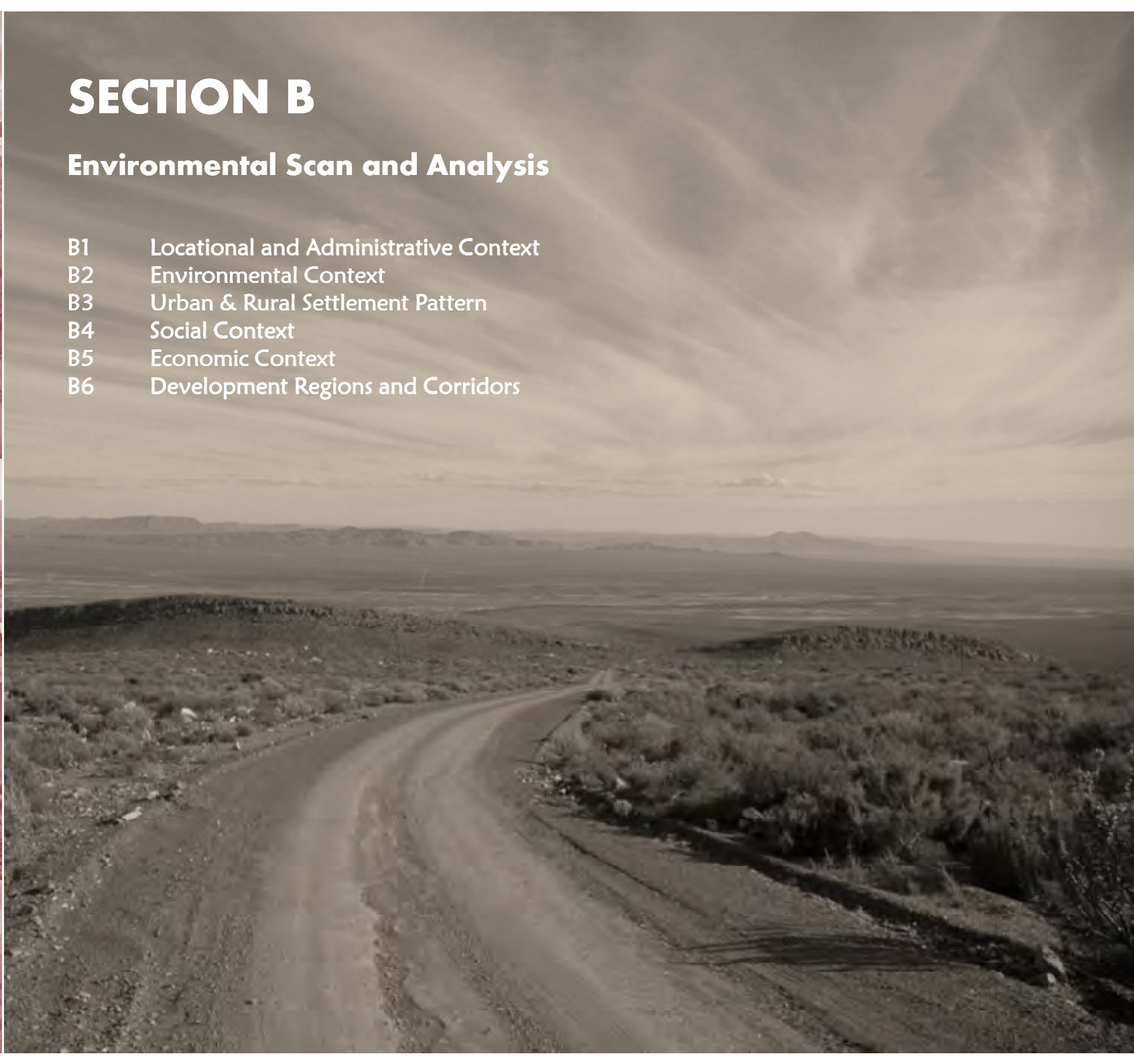
### A8.3 ESTABLISHING A BENCHMARK FOR PERFORMANCE AUDITING

The SDF supports the principle that *'if you cannot measure it, you cannot manage it'*. The Cape Winelands Environmental Management Framework (Cape Winelands EMF) provides a *status quo* assessment of most of the elements of the natural resource base. Much of this has been recorded in Section B of this report. However, it is important that the EMF data be supplemented as may be required, with specific reference to the current and project carbon footprint of the Municipality. The auditing to be undertaken on accordance with Toolkit D2 has to identify those aspects that need further baseline studies.

# SECTION B

## Environmental Scan and Analysis

- B1 Locational and Administrative Context
- B2 Environmental Context
- B3 Urban & Rural Settlement Pattern
- B4 Social Context
- B5 Economic Context
- B6 Development Regions and Corridors





## SECTION B: ENVIRONMENTAL SCAN AND ANALYSIS

### SECTION SYNOPSIS

Section B provides a comprehensive summary of the characteristics of the Witzenberg Municipality as a distinct place, the components of which have to be planned and managed in an integrated manner so as to be able to achieve sustainability. The rationale and premise for Section B is as follows:

- *Our world consists of concrete phenomena such as people, animals, trees, stones, towns, water, homes, the moon, stars, clouds, night, day, etc. The concrete ‘things’, which constitute the world for humans, are interrelated and complex and some phenomena may include others. In general, it can be said that some phenomena form an environment to others. The concrete term for ‘environment’ is place (Norberg-Schulz, 1984). A place (e.g. the Witzenberg Municipality) can therefore be defined as ‘a totality of concrete things, which have material substance, shape, texture and colour’. These substances determine the environmental character, which is the essence of place (Norberg-Schulz, 1984).*
- *The unique ecological, cultural, social and economical characteristics and components of each of the component places of the Witzenberg Municipality co-exist and function in an integrated, and often complex, manner. For such places to be optimally effective in terms of their community-supporting functions, it is of paramount importance that this symbiosis of characteristics and functions be maintained. Each of its places, or components, is an important part of the Witzenberg Municipality, and the mutual relationships and linkages between these phenomena must be understood and applied when managing them.*
- *Natural and material elements are usually the primary components of place and the latter is usually described in physical or geographical terms. However, place means more than a geographical location and comprises more than material substance. Place also comprises intangible phenomena such as feelings, which provide the content of human existence. Therefore, a primary objective is to articulate the qualities of place in order to promote a better understanding of both the form (structure) and context (meaning) of place, with the aim to arrive at a point where agreement could be reached pertaining to the ‘goodness’ or value of a place. The qualitative nature of place-making is considered integral to the sustainable development imperatives of human well-being and environmental integrity, and is therefore of decisive importance in the quest to achieve sustainable development.*

In this section, the mayor components of the Witzenberg Municipality as a distinct place are categorised and addressed under the following headings:

- 1. Locational context.**
- 2. Environmental context.**
- 3. Urban and rural settlement context.**
- 4. Social context.**
- 5. Economic context.**
- 6. Regional development context.**

In the final chapter of this section (i.e. Chapter B7) a synopsis is provided of the key aspects of the above broad categories to be addressed in Section C in the form of objectives, policy, strategies and guidelines and a spatial vision.

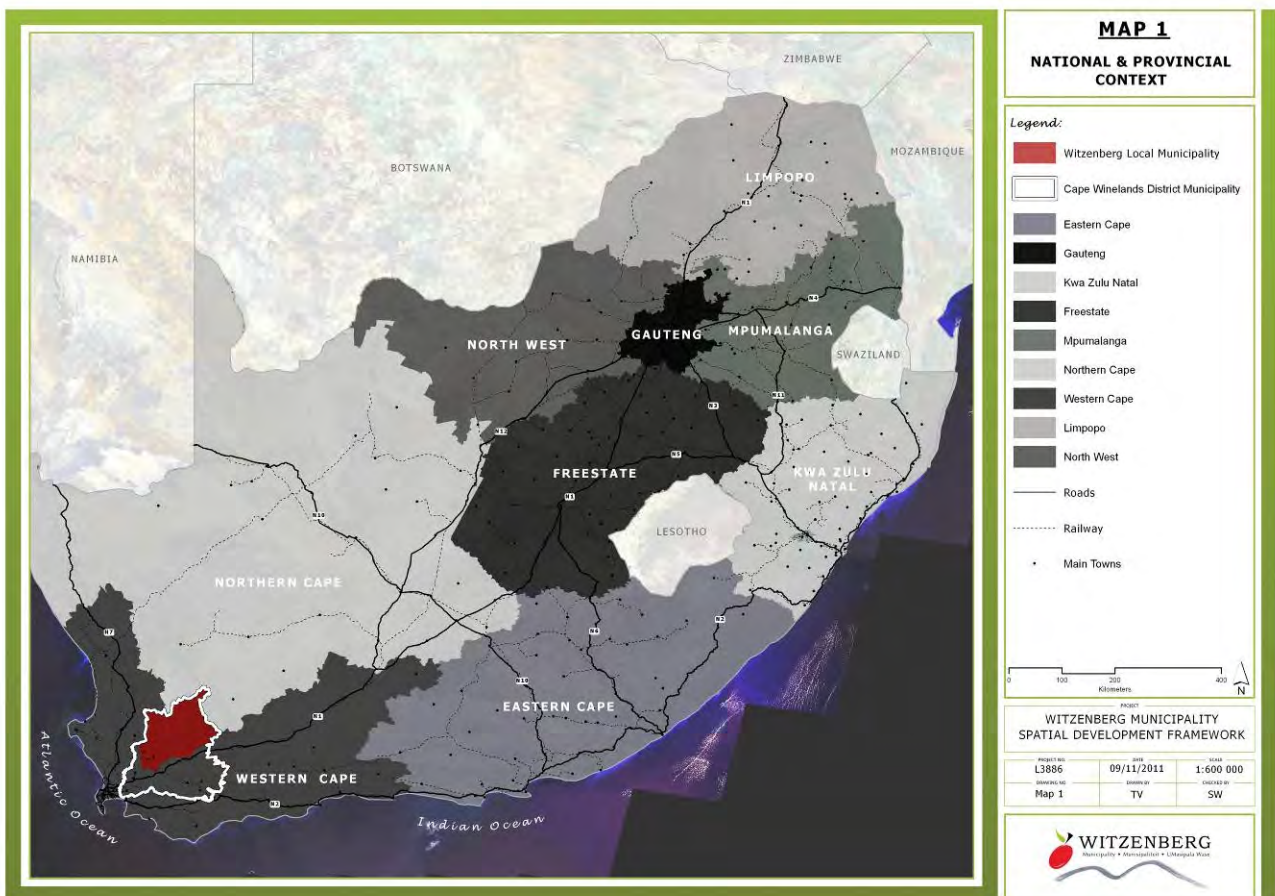
**B1 LOCATIONAL AND ADMINISTRATIVE CONTEXT**

**B1.1 NATIONAL AND PROVINCIAL CONTEXT**

The Witzenberg Municipality is located in the Western Cape Province approximately 150 kilometres north-east of Cape Town.

The Western Cape is the southernmost province of South Africa and is renowned for its biodiversity and diverse natural landscapes. It is bordered by the Northern and Eastern Cape, and the cold Atlantic and warm Indian Ocean. The province has a diverse, balanced and stable economy, with main sectors being agriculture, forestry and fishing with finance, real estate and business services also making key contributions. Approximately 90% of all South African wine is produced in the Western Cape, and it is also the largest deciduous fruit producer in the country.

Although the agricultural sector is one of the main contributors to the Gross Domestic Product (GDP), the majority of the population lives of the Witzenberg in urban areas, with only 9.6% living in rural areas (2001-estimates) (SRK Consulting, 2011).



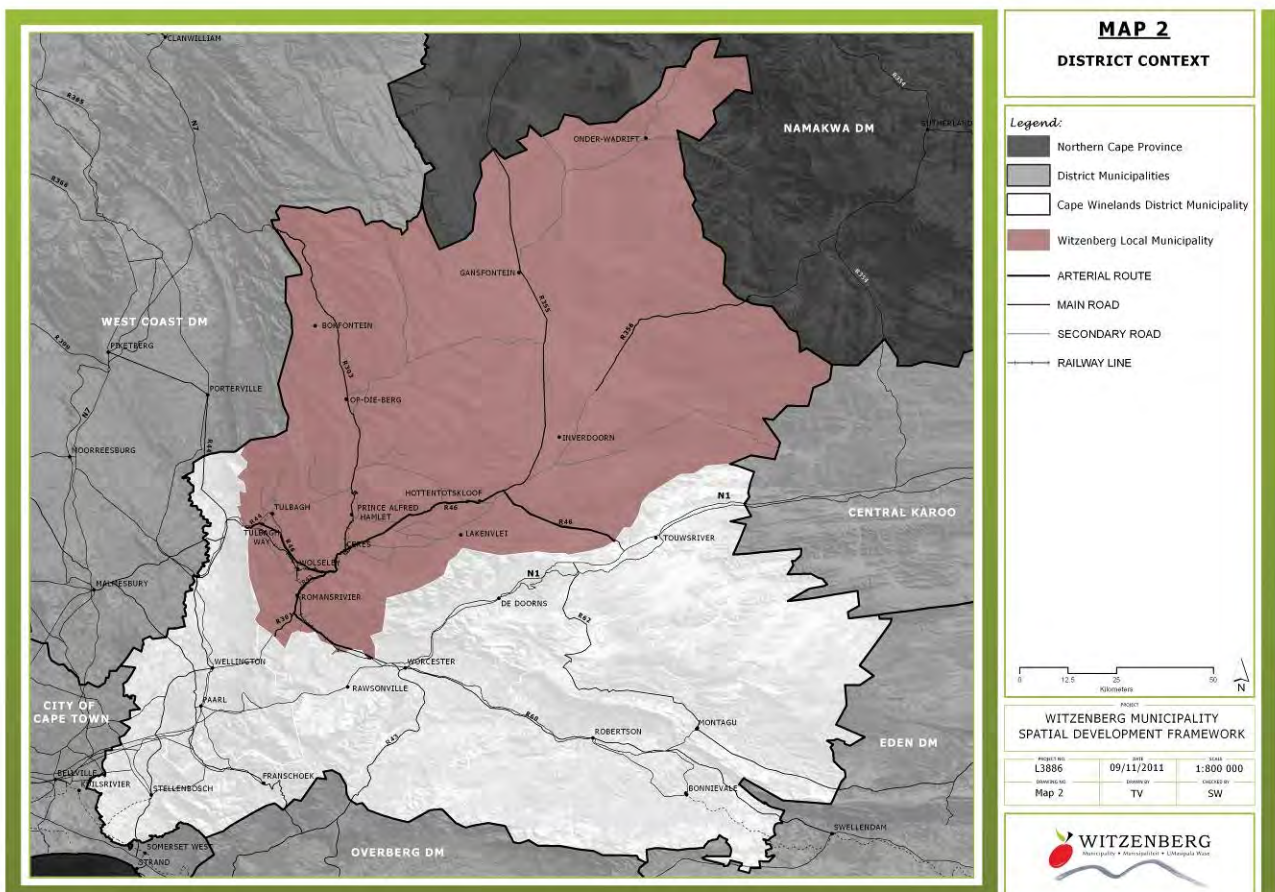
### B1.2 DISTRICT CONTEXT

The Witzenberg Municipality is located within the district municipality, which is the fourth largest district municipality in the Western Cape Province (covers 17% of the Western Cape Province).

The population of the Cape Winelands is characterised by a 70/30 urban/rural split which consists of the relatively urbanised Stellenbosch/Drakenstein area (where the majority of the population reside) and a high ratio of rural occupants in the Breede Valley and Karoo areas, which includes the Witzenberg Municipality (Rode Plan, 2009).

The District municipality has the second largest economy in the Western Cape, with agriculture being the main contributing sector whilst also employing the largest proportion of the population. The district’s main produce are grapes, deciduous fruits and vegetables (SRK Consulting, 2011).

The settlement pattern of the district is characterised by a system of lower order towns and villages linked into a broader regional system of towns (leader towns). The physiography of the mountains and valleys has resulted in a linear system of towns and villages along fertile valleys and major transportation routes (DMP, 2007). The N1 is the primary transportation corridor, while the R62 serves as a major tourism route as well as a link road with the N2.

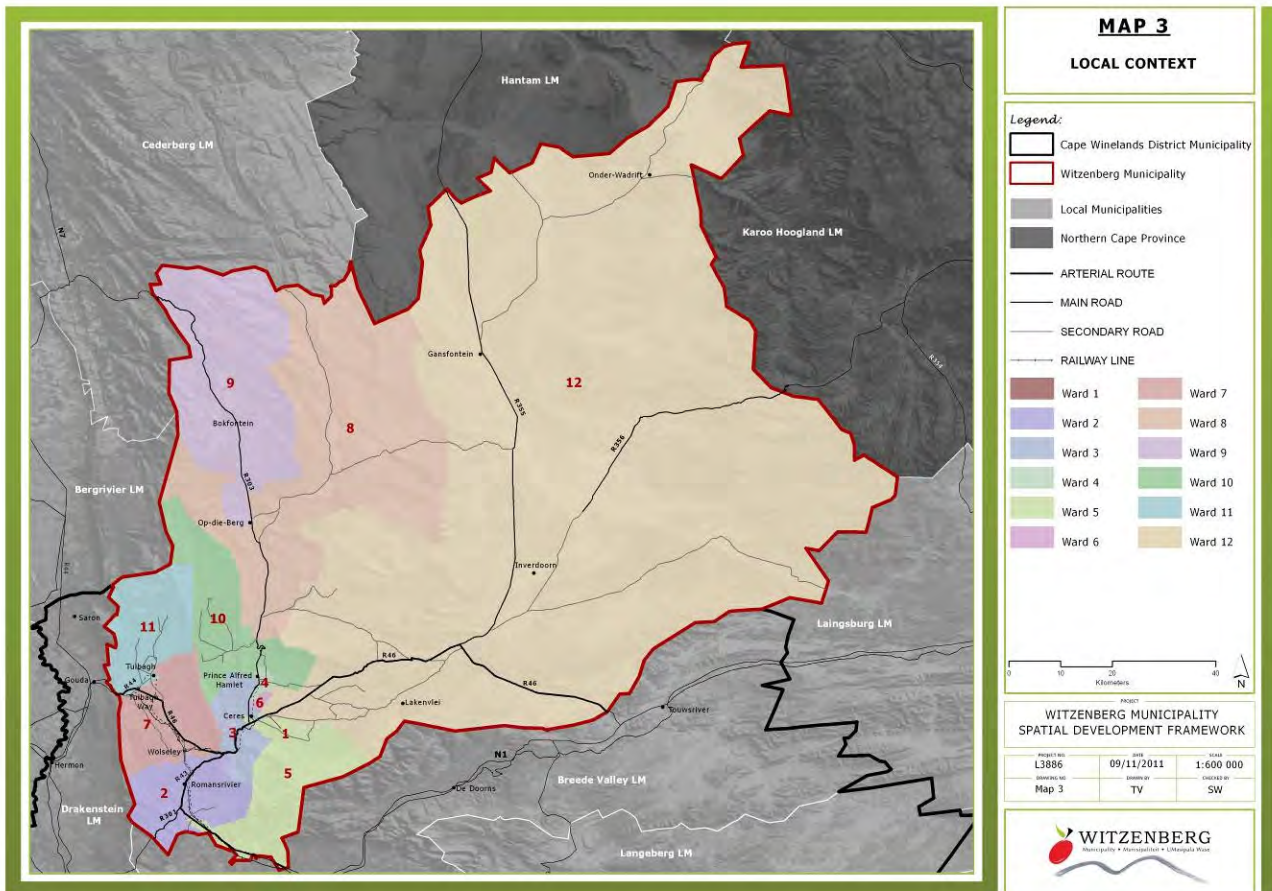


### B1.3 LOCAL CONTEXT

Witzenberg Municipality (WC022) is a Category B (Local) Municipality. It borders on the Northern Cape Province to the north and north-east, while the Laingsburg Municipality forms the eastern boundary. To the west it is bounded by the West Coast District Municipality and to the south-east by the Drakenstein Municipality and Breede Valley Municipality, respectively.

The Municipality was established in terms of Provincial Notice 487 of the Provincial Gazette 5590 dated 22 September 2000 and originally consisted of the disestablished municipality of Ceres, Matroosberg Transitional Representative Council, Municipality of Prince Alfred’s Hamlet, Tulbagh Municipality, Witzenberg Transitional Representative Council and the Municipality for the area of Wolseley. In 2011, the Witzenberg Municipality was extensively enlarged by incorporating most of the previous District Management Area (DMA) of the Cape Winelands District Municipality into its jurisdiction. The Witzenberg Municipality includes the following main settlements:

- a) Bella Vista (next to Ceres).
- b) Ceres.
- c) Nduli (near to Ceres).
- d) Op-die-Berg.
- e) Prince Alfred Hamlet.
- f) Steinthal (close to Tulbagh).
- g) Tulbagh.
- h) Wolseley.



The Witzenberg Municipality covers 50% of the Cape Winelands District Municipality and is by far the largest local municipality. The largest contributors to the Municipality's economy are agriculture and manufacturing followed by the wholesale, retail trade, catering and accommodation sector. Although Witzenberg's economy is the smallest in the district, the importance of the agriculture sector's contribution to the Western Cape's economy is reflected by the fact that over 6% of all agricultural production occurs in this area (Witzenberg IDP, 2007-2011).

Witzenberg is characterised by a unique diversity of landscapes and areas that have historically been identified (intuitively, in terms of bioregional principles) such as the Warm Bokkeveld, Koue Bokkeveld, Tankwa and Ceres Karoo and the Land of Waveren.

Ceres (after the mythical *Goddess of Agriculture and Fertility*) is the main town of the Witzenberg Municipality and is the hub of administrative activities in the region.

#### **B1.4 BRIEF LAND-USE HISTORY**

Witzenberg has an interesting history. In particular, as it relates to the diversity of peoples that lived and moved around in the region, including the Khoisan people, explorers, farmers, hunters and transport riders.

According to Hart (2010) almost the entire Berg River Valley and the western parts of Witzenberg shows evidence of occupation by very early humans (i.e. *Homo erectus*, *Homo ergaster*) who roamed the area since over a million years ago. The shale-based soils that are characteristic of the Tulbagh Valley are extremely fertile compared with the sandstone derived soils of the Cape Fold Belt Mountains. These areas reportedly supported large numbers of game animals in the prehistoric past which may explain why the area was so popular for early people.

The dispersion of humans to the southernmost part of Africa started approximately 1 million years ago. Human fossils, which serve as evidence of their prehistoric presence, are however rare due to the development of the region and the fact that the bones are not well preserved in the acidic soils associated with the region (Indigenous Vegetation Consultancy *et al* in DMP, 2007).

Prior to the European settlers moving into the Witzenberg area, hunter-gatherers, followed by the Khoi herders, inhabited the region (DMP, 2007). The San (also referred to as the Bushmen) were the first known indigenous inhabitants of the area. They lived off plants and game and found shelter in caves or constructed windbreaks or waterproof 'skerms' in more open areas. San rock paintings and/or rock art are commonly found in the mountains around Ceres and Tulbagh. These rock paintings and art, some of which are up to 6 000 years old, provide a unique experience to any traveller visiting this region. The San were gradually forced northwards by the nomadic Khoi herders who grazed their sheep and cattle in the area for at least 2000 years. These nomadic herders probably introduced the practice of herding and the burning of veld to stimulate growth for grazing purposes (DMP, 2007).

Governor Willem Adriaan van der Stel visited the valley at the foot of the Winterhoek Mountains in 1699. He named it *Land van Waveren* in honour of the Waveren family, a prominent Amsterdam family related to this mother. Farmers soon began to stream into the well-watered valley (Erasmus, 2004). Farms were granted on loan to landless Dutch families and despite Khoi raiding parties the area became a prosperous farming district by the mid-1700s.

Colonial settlement initiated many changes in the landscape, with initial impacts on resources including the exploitation of natural pastures, timber and game. Thereafter, the expansion of the pastoral frontier was rapid and uncontrollable and agriculture intensified (Indigenous Vegetation Consultancy *et al* in DMP, 2007). By the early nineteenth century farming extended over most of the area and all the major towns were well established, including Tulbagh, Ceres and Prince Alfred Hamlet (refer to Chapter B3.2 for a description of the main areas of concentration).

The colonial expansion introduced the history of the slaves. Many slaves possessed a sense of craft not generally available in the area, which led to the building of, for example, the second parsonage for the congregation of the Dutch Reformed Church in Tulbagh in 1765. In 1825 a slave uprising, led by Galant and Abel, took place on the farm, *Houdenbek*. Four people were killed and property was destroyed. The so-called *Bokkeveld rebels* were caught, put on trial, found guilty of high treason, murder and armed robbery and their leaders were sentenced to death<sup>3</sup>.

By the early 1840s the growing traffic between Cape Town and the interior demanded a proper road into the Warm Bokkeveld<sup>4</sup> and from there into the plains of the Great Karoo. Driven by circumstances, ambition and a strong vision, celebrated civil engineer, Andrew Geddes Bain, constructed the Michell's Pass between 1846 and 1848 which is today regarded as one of the country's most scenic routes. In 1848, he also built the Gydo Pass that linked the Warm Bokkeveld with the Koue Bokkeveld (refer to Chapter B2.5.5 for more detail pertaining to the unique mountain passes) (Erasmus, 2004).

The *Forgotten Highway* formed part of the old route to the North and was used by explorers such as Burchell and Lichtenstein. The route to the North played a cardinal role in the development of Ceres as a village. The route ran through Ceres and many transport riders, miners and mail coaches passed through the village and provided the boost for economic development and prosperity. For more than 200 years, travellers used *Karooport* as a place to stay over before venturing on into the interior. Karooport is situated 43 km from Ceres. The road between Karoo Poort beyond Ceres and Verlaten Kloof was once part of the great road to the north-east. It began as the route across the Bokkeveld Karoo used by farmers from the Warm Bokkeveld who, 1750 and 1800, were establishing '*leen plaase*' and even permanent farms over the Koedoesberg along the foot of the Roggeveld Range.

Long before Kimberley, Fraserburg or Beaufort West have been established, the continuation of this old road beyond Verlaten Kloof became the standard route to the Orange River, to Kuruman and the Klaarwater Mission and beyond the Litako (Takoon). The forgotten highway runs from Karoo Poort across Spes Bona (Inverdoorn) beneath Paardeberg, and takes an arrow flight across the Bokkeveld Karoo to the Hang Rock when the hills begin. This deserted spot had once been an important landmark in the Karoo.

<sup>3</sup> [http://www.westerncape.gov.za/eng/pubs/public\\_info/P/82884/7](http://www.westerncape.gov.za/eng/pubs/public_info/P/82884/7) – accessed on 6 June 2011.

<sup>4</sup> The term 'Bokkeveld' was originally known in Dutch as the Bockland, the region was named after the vast herds of Springbok, Blue Wildebeest and Zebra that used to migrate into the area in spring and early summer. The Warm Bokkeveld is one of the most fertile valleys in the country and various agricultural products are produced here, such as deciduous fruit, both fresh and dried, fruit juices, wheat, dairy products and wool. This valley is called the 'Warm Bokkeveld' to distinguish it from the *Koue or Cold Bokkeveld*, which lies immediately to the east of the mountain range of the same name. Together with the Cederberg, the Koue Bokkeveld, north of Ceres, is a very important component of the western escarpment. The Warm Bokkeveld valley is bounded by the Hex River range in the south, the Witzenberg and Skurweberg in the west, and the Gydo and Waboom mountains in the north.

The Anglo Boer War broke out in 1899, and the railway line, being the most important access route between the Boer Republics in the north and the British Cape Colony was extremely vulnerable. Blockhouses were constructed along the route, particularly at bridges, to protect the line from Boer attacks. Two blockhouses still exist at the Breede River crossing outside Wolseley.

The emancipation of slavery at the Cape took place in 1834, ten years after the abolition of the slave trade. This resulted in a boom period in the growth of mission stations across the Cape Colony. In 1842-1843, the Rhenish missionary G.A. Zahn bought land on the east side of Tulbagh on the farm Witzenberg (SRK Consulting, 2011) to serve as an additional haven for freed slaves, where they could build a house and have vegetable gardens. At approximately the same period, a school was opened for the smaller children and later even offered education to white children due to its high standard of education. The settlement was called Steinthal and was taken over by the Rhenish Mission Society<sup>5</sup>. Today, the school building is registered as a heritage site under name, G.A. Zahn Resource Centre, and serves as a library and resource centre for the inhabitants of the Steinthal Estate.

## B2 ENVIRONMENTAL CONTEXT

### B2.1 CLIMATE

The Witzenberg Municipality falls within the winter rainfall region of South Africa, and has a Mediterranean climate. The climate is characterised by warm to hot, dry summers and mild to cool, wet winters. Mediterranean climates are characterised by the long growing seasons with moderate to warm temperatures.

Rainfall mostly occurs between May and October, with snowfalls occurring periodically on the highest mountain tops. The Matroosberg Mountain range close to Ceres records the highest snowfall and is often covered with snow for lengthy periods during winter. A ski club has erected a hut on the Matroosberg Mountain and skiing is practiced during winter<sup>6</sup>.

Table B1: Summary of climatic conditions.

	CLIMATIC CONDITIONS		
	Average rainfall	Average Min Temp	Average Max Temp
<b>Ceres</b>	<ul style="list-style-type: none"> <li>• <math>\pm 599</math> mm/annum</li> <li>• Lowest: <math>\pm 9</math> mm in February</li> <li>• Highest: <math>\pm 117</math> mm in June</li> </ul>	<ul style="list-style-type: none"> <li>• Average minimum temperature drops to <math>\pm 3.8^{\circ}\text{C}</math> in July.</li> </ul>	<ul style="list-style-type: none"> <li>• Daily average maximum temperature ranges from <math>\pm 15.2^{\circ}\text{C}</math> in July to <math>\pm 28.2^{\circ}\text{C}</math> in February.</li> </ul>
<b>Prince Alfred Hamlet</b>	<ul style="list-style-type: none"> <li>• <math>\pm 614</math> mm/annum</li> <li>• Lowest: <math>\pm 9</math> mm in February</li> <li>• Highest: <math>\pm 116</math> mm in June</li> </ul>	<ul style="list-style-type: none"> <li>• Average minimum temperature drops to <math>\pm 3.5^{\circ}\text{C}</math> in July.</li> </ul>	<ul style="list-style-type: none"> <li>• Daily average maximum temperature ranges from <math>\pm 14.7^{\circ}\text{C}</math> in July to <math>\pm 27.9^{\circ}\text{C}</math> in February.</li> </ul>
<b>Wolseley</b>	<ul style="list-style-type: none"> <li>• <math>\pm 575</math> mm/annum</li> <li>• Lowest: <math>\pm 10</math> mm in January</li> <li>• Highest: <math>\pm 107</math> mm in June</li> </ul>	<ul style="list-style-type: none"> <li>• Average minimum temperature drops to <math>\pm 4.7^{\circ}\text{C}</math> in July.</li> </ul>	<ul style="list-style-type: none"> <li>• Daily average maximum temperature ranges from <math>\pm 16.7^{\circ}\text{C}</math> in July to <math>\pm 29.7^{\circ}\text{C}</math> in February.</li> </ul>
<b>Tulbagh</b>	<ul style="list-style-type: none"> <li>• <math>\pm 567</math> mm/annum</li> <li>• Lowest: <math>\pm 11</math> mm in January</li> <li>• Highest: <math>\pm 105</math> mm in June</li> </ul>	<ul style="list-style-type: none"> <li>• Average minimum temperature drops to <math>\pm 5.2^{\circ}\text{C}</math> in July.</li> </ul>	<ul style="list-style-type: none"> <li>• Daily average maximum temperature ranges from <math>\pm 17.3^{\circ}\text{C}</math> in July to <math>\pm 30.8^{\circ}\text{C}</math> in February.</li> </ul>

<sup>5</sup> [http://www.westerncape.gov.za/eng/pubs/public\\_info/P/82884/7](http://www.westerncape.gov.za/eng/pubs/public_info/P/82884/7) - accessed on 13 July 2011.

<sup>6</sup> <http://www.ceres.org.za/about-ceres/climate.html> - accessed on 10 June 2011.

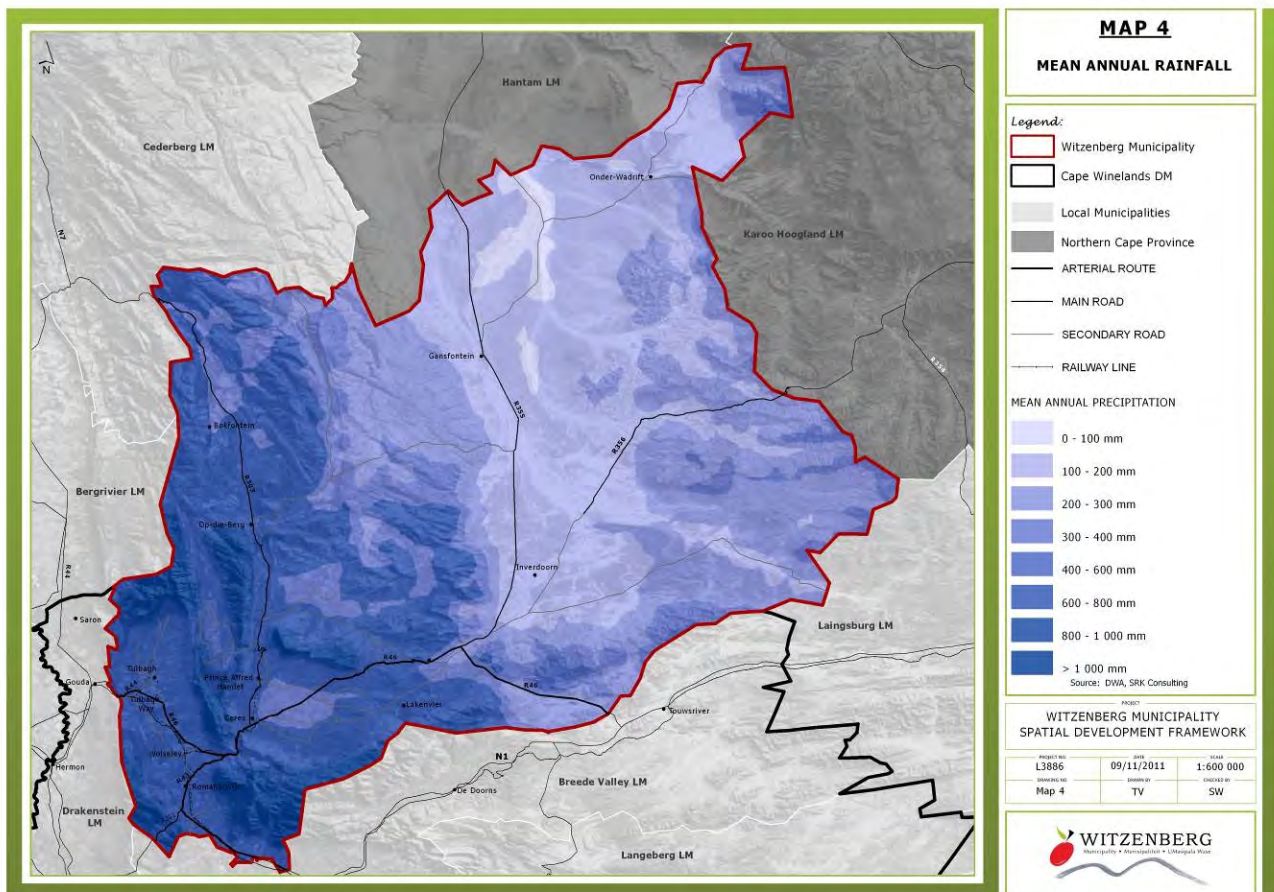
(Source: SA Explorer, [www.saexplorer.co.za/south-africa/climate](http://www.saexplorer.co.za/south-africa/climate) ).

The Western Cape as a whole is characterised as a water-scare region. Projections for the Western Cape include a drying trend from west to east, with a weakening of winter rainfall and possibly slightly more summer rainfall (mainly in the east of the province). Other projected impacts are a shift to more irregular rainfall of possible greater intensity, and rising mean, minimum and maximum temperatures everywhere (Aurecon in SRK Consulting, 2011).

These trends are associated with climate change and possible further impacts of climate change on Witzenberg’s natural, cultural and economic environments are discussed in Chapter B2.6.1.

*Box B1 - Key Issues: Climate*

- Climate change has implication for the distribution and extent of natural vegetation and habitats, agricultural activities, water resources and availability.





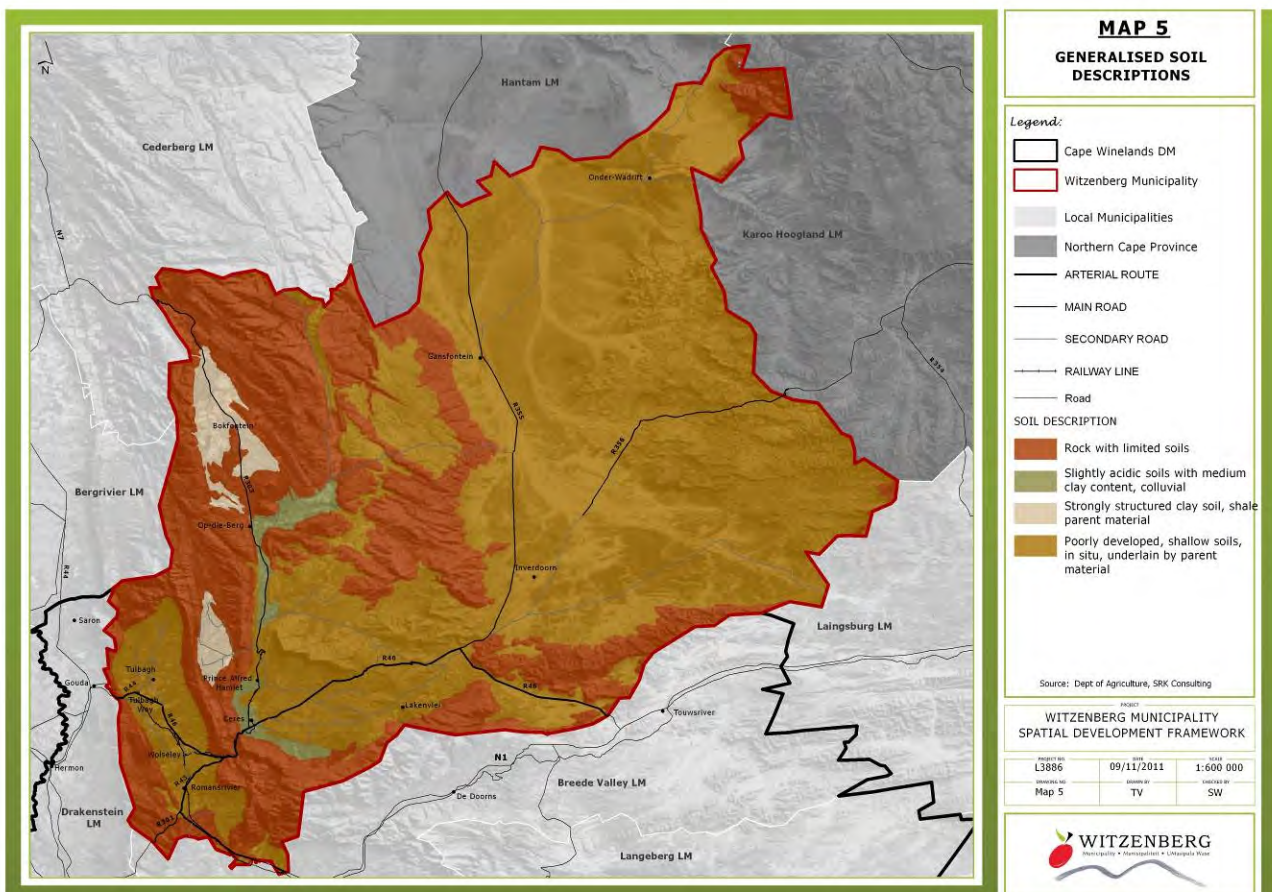
## B2.2 GEOLOGY, TOPOGRAPHY AND SOILS

### B2.2.1 GEOLOGY

Geology has an important influence on topography and soil types, which in turn affects aspects such as the agricultural potential and land-use patterns of an area (Bargmann in SRK Consulting, 2011).

Most of the Witzenberg region is geologically derived from the Cape Fold Belt consisting of a band of parallel ranges of quartzitic sandstone ridges with intervening undulating shale. The earliest deposits are over 400 million years old, but the mountain ranges are more recent, having been formed some 200 million years ago. The sandstone soils are mostly acidic and infertile but the shale soils of the valley floor are extremely fertile. This geological landscape has remained unchanged for over 65 million years.

The alternating mountain ridges and valleys are primarily a result of folding and most of the folding was caused by massive faulting associated with the separation of South America from Africa between 135 and 139 million years ago. A classic example of this is the Worcester Fault which runs from Nuwekloof Pass, southwards to Robertson and further east. Faulting is also evident in the Koue Bokkeveld, Agter-Witzenberg and the Ceres Valley (Low and Pond, 2005).



### a) Malmesbury Group

This is the oldest geological formation in the region and comprises mainly phyllitic shales and fine-to medium-grained greywacke, and dates back to around 550-540 million years ago. This formation is mostly confined to the Tulbagh area, where it occupies the base of the valley.

### b) Cape Supergroup

The Cape Supergroup was formed some 480 to 350 million years ago by a succession of sedimentation of sandstone (silt, mud and sand). The distinct reddish colour of rock is a result of minerals like iron and manganese that formed part of the sediments. The Cape Supergroup consists of the Table Mountain Group (TMG), which is overlaid by the argillaceous (clay-derived sedimentary rock), the Bokkeveld Group, which is overlaid by the alternating shales and sandstones of the Witteberg Group (Meyer in SRK Consulting, 2011).

The lower part of the Bokkeveld Group (includes the Ceres Subgroup plus Bidouw Subgroup) contains numerous fossils of shallow marine invertebrates of the Malvinokaffric Faunal Province of Gondwana. The Bokkeveld shelly biotas are dominated by four main fossil groups, namely, trilobites, brachiopods (lampshells), molluscs (bivales, gastropods, nautiloids, etc.) and echinoderms (crinoids, starfish and relatives). The overall palaeontological sensitivity of the Bokkeveld Group is considered to be high to very high (Almond, 2011). Furthermore, the Warm Bokkeveld and Ceres have numerous locations where fossils can be found and viewed.

### c) Karoo Supergroup

In the northern and north-eastern parts of the Witzenberg Municipality the geology changes to the Karoo Supergroup. It is the largest stratigraphic unit in Southern Africa, covering almost two thirds of the present land surface, including the central Cape Province, almost all of the Free State, western Natal, much of south-east Transvaal, Zambia, Zimbabwe and Malawi.

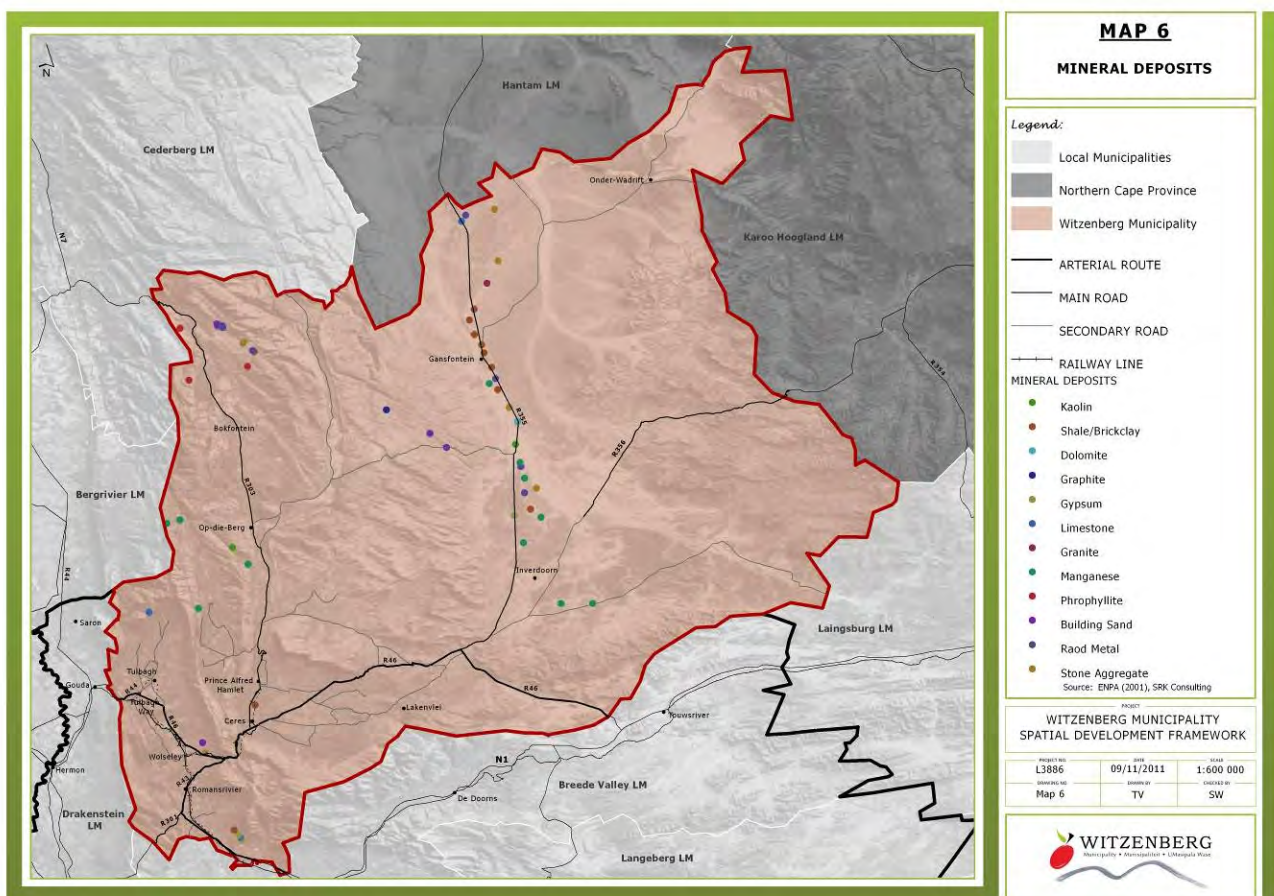
Table B2: Geological units in the Witzenberg Municipality (SRK Consulting, 2011).

Permian	Karoo Supergroup	Beaufort Group	Mudstones, sandstone; intruded by dolerite dykes and sheets
		Ecca Group	Shale; intruded by dolerite dykes and sheets
Carboniferous		Dwyka Group	Tillite with subordinate sandstone, mudstone, shale; intruded by dolerite dykes and sheets
Devonian	Cape Supergroup	Witteberg Group	Quartzitic sandstone, shale
		Bokkeveld Group	Shale, siltstone, sandstone
Ordovician		Table Mountain Group	Quartzitic sandstone, subordinate shale and tillite
Pre-Cambrian	Malmesbury Group	Schist, phyllite, phyllitic shale, shale, limestone lenses, sandstone, greywacke, conglomerate, quartzite, greenstone	

## B2.2.2 MINERAL DEPOSITS

The Witzenberg municipal area is the richest in mineral resources in the Cape Winelands District Municipality. These include building sand and stone, stone aggregate, granite, shale/brickclay, kaolin, dolomite, limestone, gypsum, graphite, manganese, pyrophyllite and lignite (SRK Consulting, 2011).

The major deposit cluster is located along the Doring River in the Tankwa Karoo, where shale / brickclay and manganese dominate, with some other deposits of kaolin, dolomite, gypsum, limestone and road metal. A smaller cluster is located in the north western extent of the municipality where pyrophyllite, building sand and road metal are dominant (refer to Map 6).



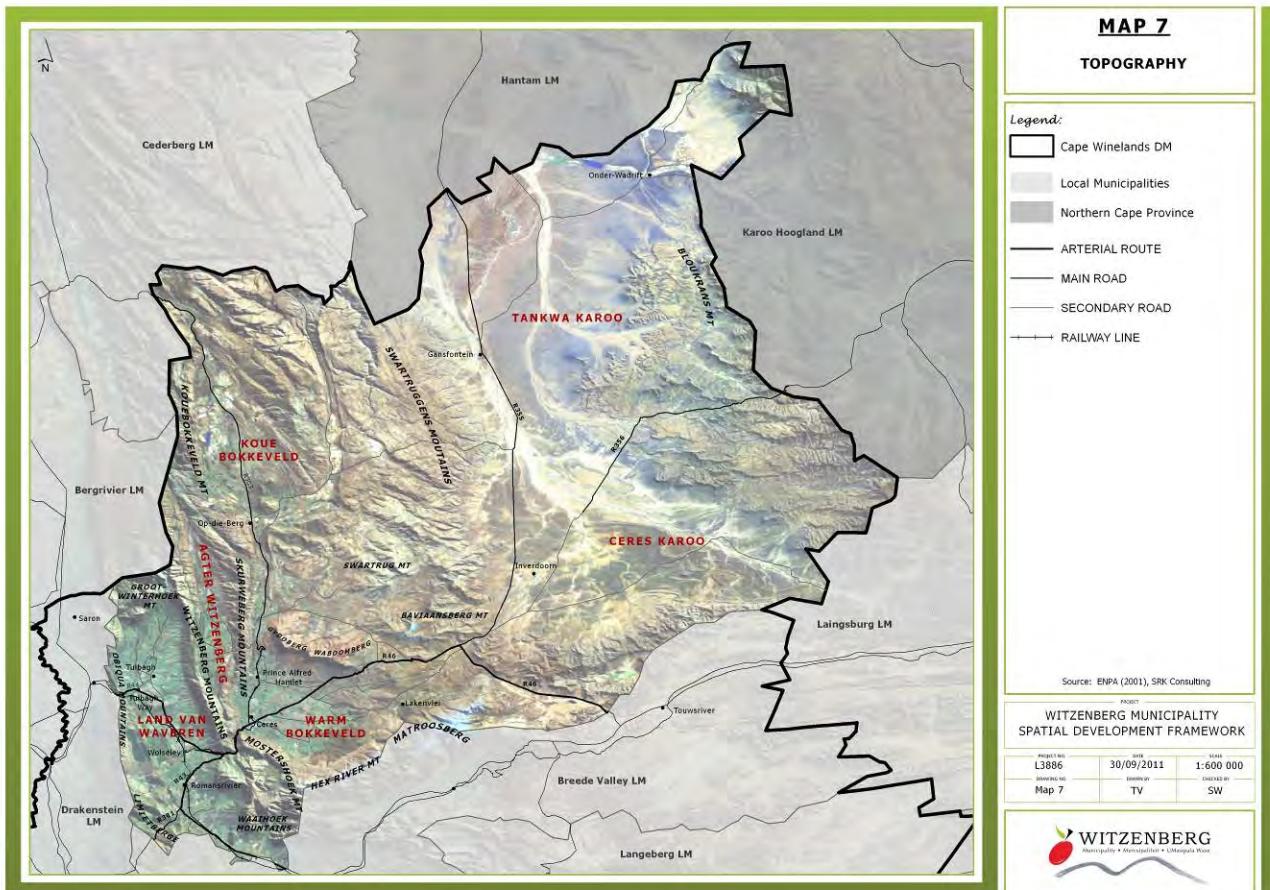
## B2.2.3 TOPOGRAPHY

The western part of Witzenberg is the most mountainous, characterised by broad, deep valleys surrounded by steep mountain slopes developed on resistant rocks of the Table Mountain Group. Three prominent mountain ranges are located in the Witzenberg Municipality, namely the Obiqua Mountains to the west, the Winterhoek Mountains to the north and the Witzenberg Mountains to the east. The northern and north-eastern part of Witzenberg is considerably less mountainous extending into the Ceres and Tankwa Karoo.

According to Low and Pond (2005) the topography of Witzenberg varies from approximately:

- 750 to 1 900 m in the Koue Bokkeveld. The tallest peaks are Drie Koppe (1 781 m) and Tafelsig (1 910 m).

- b) 900 to 1 850 m in the Agter-Witzenberg. Eureka Peak is at 1 987 m and Hansiesberg is at an elevation of 1 843 m.
- c) 450 to 2 000 m in the Ceres Valley. Well-known peaks include Waboomsberg (1 694 m) and Milner Peak (1 995 m). The Matroosberg Peak is at 2 449 m, and is the highest in the Boland, and approximately 250 m higher than Sneeuberg in the Cederberg.
- d) 250 to 2 100 m in the Upper Breede River Valley. The Groot Winterhoek peak is 2 078m, Bailey's Peak is 1 516 m and Mostertshoek Twins is 2 030 m.
- e)



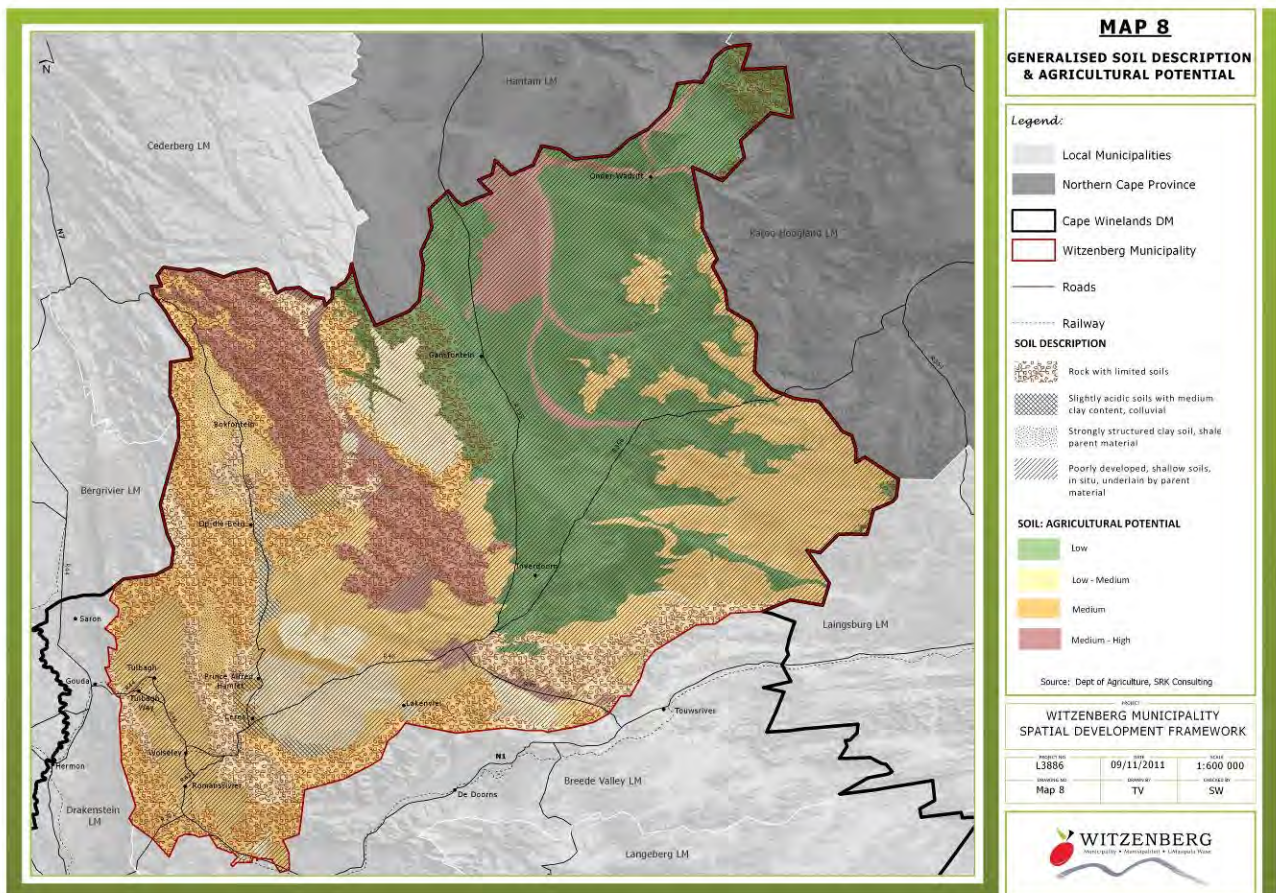
### B2.2.4 SOILS

Soil types are important as they provide a supply of water, anchorage in the ground and a source of nutrition, which, together with climate, determines the vegetation types that can be supported (Bargmann in SRK Consulting, 2011).

Generally, few soils form and remain *in situ*; however, the Municipality has some well-developed residual soils<sup>7</sup> due to the stable geological conditions that have existed in the region for the past 65 million years (SRK Consulting, 2011). The following three main groups of soils are characteristic of the area (rocky areas where limited soil development has occurred are excluded) (McVicar in SRK Consulting, 2011) (refer to Map 8).

<sup>7</sup> Soils produced as a direct result of mechanical and chemical weathering of the local bedrock, illustrating a direct relationship between the soil and geology.

<p><b>Slightly acidic soils with medium clay content.</b></p>	<p>These are mainly red, apedal soils, moderately to highly leached (<i>low to moderate fertility status</i>), with a wide textural range, mostly sandy loam to sandy clay loam. Soils contain a greyish subsoil layer (plinthic) where iron and manganese accumulate in the form of mottles, due to a seasonally fluctuating water table. With time, these mottles may harden (or even cement) to form concretions. These plinthic layers will cause restricted water infiltration and root penetration. In drier areas, however, they may help to hold water in the soil that plants can use. These soils occur in the Op-die-Berg and Ceres valleys.</p>
<p><b>Strongly structured clay soil, shale parent material.</b></p>	<p>These are soils with a marked clay accumulation, strongly structured, where more than 10% of the landscape consists of a variety of structured clay soils (vertic, melanic or plinthic soils). Shallow, rocky soils commonly also occur in places. These soils occur in river valleys in the vicinity of Prince Alfred Hamlet.</p>
<p><b>Poorly developed, shallow soils, in situ, underlain by parent material.</b></p>	<p>These are dark or red coloured, strongly to very strongly structured soils (topsoil and subsoil) of varying depths, with high clay contents (mostly clay loam to clay texture) and a <i>high fertility status</i>. However, they are often difficult to cultivate, especially the dark clays. The soils have a high water-holding capacity and mostly contain a high percentage of swelling clay minerals, which pose a hazard for construction. These soils occur in low lying areas between mountainous areas and river valleys.</p>



## a) Land Degradation

South Africa's soils are generally very vulnerable to land degradation and have low resilience (recovery potential) (Laker in SRK Consulting, 2011). Land degradation results in impoverished soil that is more susceptible to drought and makes agricultural production more expensive and challenging. The soil's ability to support plant growth and biodiversity is also reduced (SRK Consulting, 2011).

Land degradation in the form of sheet erosion, which refers to the large-scale removal of topsoil, is especially prevalent in the Ceres and Tankwa Karoo (generally the previous District Management Area). Large areas to either side of the Ongeluks River and the upper reaches of the Doring River are degraded, as well as the area to the north-east (SRK Consulting, 2011).

Although sheet erosion is essentially a natural process of top soil erosion through wind and water combined with slope, soil type, rainfall intensity and land-use, an increase in the frequency and intensity of fires and/or alien infestation, exacerbates this process (SRK Consulting, 2011).

### *Box B2 - Key Issues: Geology, Topography & Soils*

- General land degradation, particularly due to sheet erosion.
- Mining and poor agricultural practices.
- Invasive alien vegetation.

## B2.3 HYDROLOGY AND WATER MANAGEMENT

Water affects every activity and aspirations of human society and sustains all ecosystems. Freshwater ecosystems provide for many of our fundamental needs: water for drinking and irrigation, food such as fish and water birds, and reeds for craftsmanship. Healthy ecosystems also provide important regulating ecosystem services, such as preventing floods and easing the impacts of droughts. A healthy ecosystem supports functional communities of plants and animals that are able to remove excess nutrients and toxic substances from water, keeping it cleaner for drinking, irrigation and recreation. Healthy rivers, wetlands and groundwater systems also maintain water supply and buffer the effects of storms, reducing the loss of life and property to floods. Healthy river banks with natural vegetation help to trap sediments, stabilise river banks and break down pollutants draining from the surrounding lands (Driver *et al*, 2011).

The importance of the water resources must be considered within the context that large portions of the Witzenberg area are semi-arid. The availability of water is, therefore, the most critical factor in the municipal area. Water resources are crucial to the well-being of humans and it plays a fundamental role in the continuing existence and health of our ecosystems. Water is also vital for cultivation, processing and manufacturing activities, which drives the economy of Witzenberg. It furthermore contributes to the unique sense of place of the area (Aurecon in SRK Consulting, 2011).

Land-use patterns largely influence the maintenance of water yields. Interference with the natural conditions in mountain catchment areas, e.g. draining, canalising or cultivating areas such as vleis, seepage areas, riparian areas and stream-bed alluvium, over-exploitation of natural vegetation (e.g. flowering picking) and the uncontrolled spread of alien vegetation is detrimental to the proper functioning of a catchment system.

The availability of water also holds the key to the settlement of emergent or small farmers. It is paramount for proposed new developments to be considered in a bioregional context in terms of (a) water availability, (b) environmental requirements, and (c) overall viability of the proposed scheme.

On 6 October 2011, the Witzenberg Municipality was placed third for the Greenest Municipality Competition hosted by the Department of Environmental Affairs and Development Planning. This is testimony that Witzenberg is promoting improved service delivery standards as well as creating awareness within the community to protect and care for the environment. Water management is a very important criterion in this provincial competition, and Witzenberg won an award for water management standards.

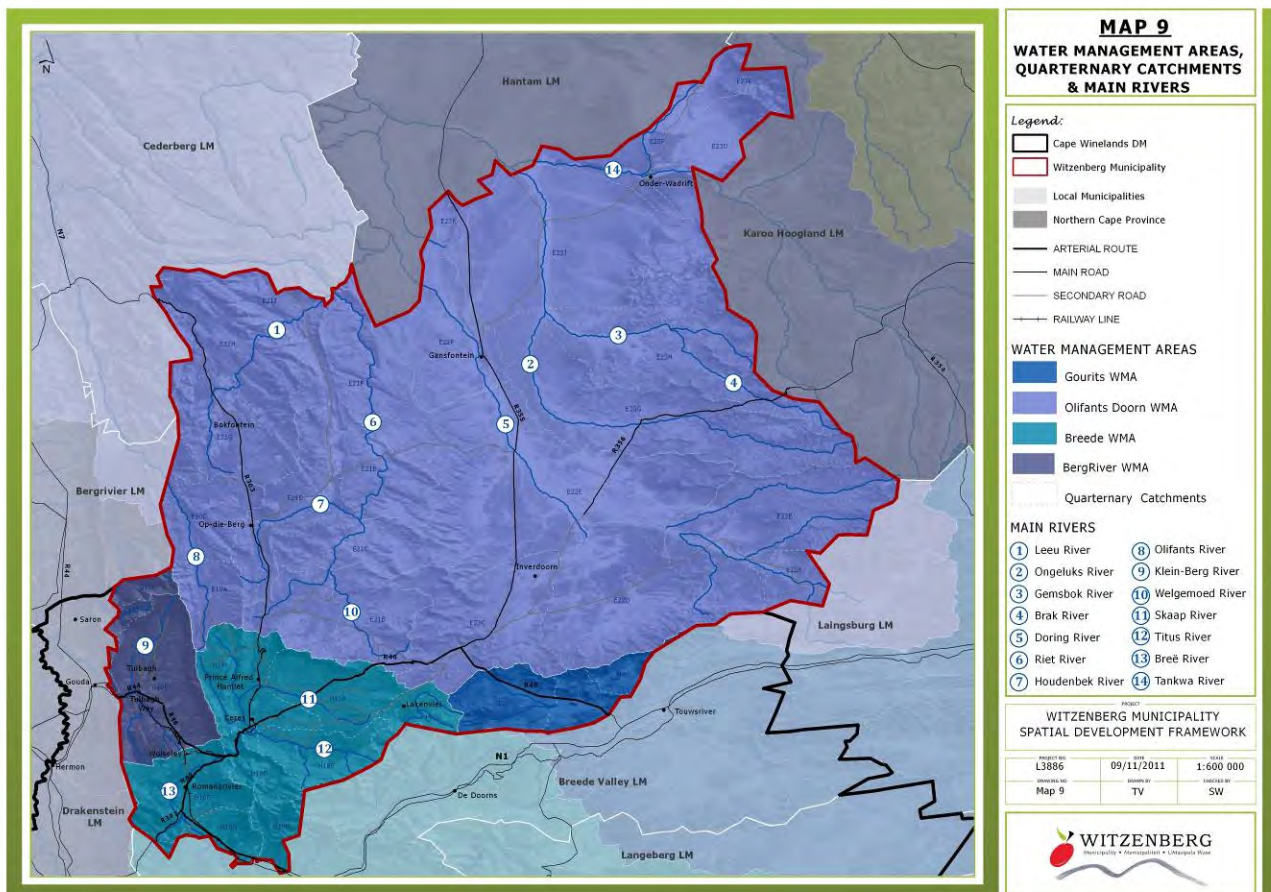
### B2.3.1 SURFACE WATER RESOURCES: CATCHMENTS

The Olifants/Doorn Water Management Area (WMA) covers most of the Witzenberg Municipality, while Berg WMA, Breede WMA and Gourits WMA covers the western, southern and south-eastern parts of the area.

<b>Olifants/Doorn WMA</b>	The Olifants/Doorn WMA covers the Ceres and Tankwa Karoo and extends beyond the Witzenberg Municipality to the West Coast and into the Northern Cape Province. The area is generally an arid region with an average rainfall of less than 300 mm per annum. The catchment is drained by the Olifants River of which the Doring River, draining the Koue Bokkeveld and Doring subareas, is the main tributary. The Olifants, Doring and Koue Bokkeveld subareas contribute the highest run-off to the WMA (Ninham Shand Consulting Services <i>et al</i> , 2005). More than 90% of available water resources are used for irrigation purposes in the summer months, making bulk water storage an essential component of water resources management (DWAF, 2004).
<b>Berg WMA</b>	Only a small portion of the Berg WMA is located within in the Witzenberg Municipal area. Tulbagh and environs are located in the eastern most section of the Upper Berg subarea (quaternary sub-catchment G10E). This sub-area is characterised by poor water quality due to poor quality effluent discharge from the Tulbagh Waste Water Treatment Works (WWTW), winery effluent discharged into the Klein Berg River and pollution from settlements and a general shortage of water in especially summer.
<b>Breede WMA</b>	The Breede River Water Management Area (WMA) is the southern-most water management area in South Africa and lies entirely in the Western Cape Province. The majority of the towns of the Witzenberg Municipality fall within the Upper Breede subarea. The main rivers draining into the Upper Breede subarea is the Upper Breede River, and its tributary, the Witels and other smaller rivers. Most of the area is intensively cultivated with stone fruit orchards and irrigation from more than 60 dams.
<b>Gouritz WMA</b>	The Groot subarea of the Gouritz WMA cover a very small portion of the south eastern part of the Witzenberg Municipality and as such is not further discussed.

### B2.3.2 SURFACE WATER RESOURCES: RIVERS

Rivers are very important in South Africa, representing the primary source of freshwater to farmers and rural communities for watering crops and livestock, to towns, cities, mines, industry and for power generation. Rivers process and dilute waste, supply natural products such as reeds and fish and provide places for recreation, tourism and cultural rituals. Rivers also sustain plants, animals, habitats and ecosystem processes that are important for nature conservation (River Health Programme in SRK Consulting, 2011).



The Doring River is the largest river in the Witzenberg Municipality. Its headwaters and approximately 60 km of its upper reaches are located in the Tankwa Karoo (i.e. north-eastern portion of the municipal area). The Doring River flows in a north-westerly direction and it joins the Olifants River outside of the municipal area shortly before flowing into the sea at the West Coast. The Doring River corridor has been identified as a *Freshwater Ecosystem Priority Area* (FEPA), this reflects the fact that the Doring River is the only remaining larger river in the area that is in a natural state and free-flowing, which also functions as an important migration corridor for threatened fish species (SRK Consulting, 2011).

The Breede River originates in the Skurweberg mountains near Ceres. The river flows in a south-easterly direction through the southern part of the municipal area before crossing into the Breede Valley Local Municipality just after its confluence with the Wit River, also identified as a FEPA.

The headwaters of the Olifants River and approximately 55km thereof are located in the north-western part of the municipal area. It originates in the Agter Witzenberg Mountains north of Ceres.

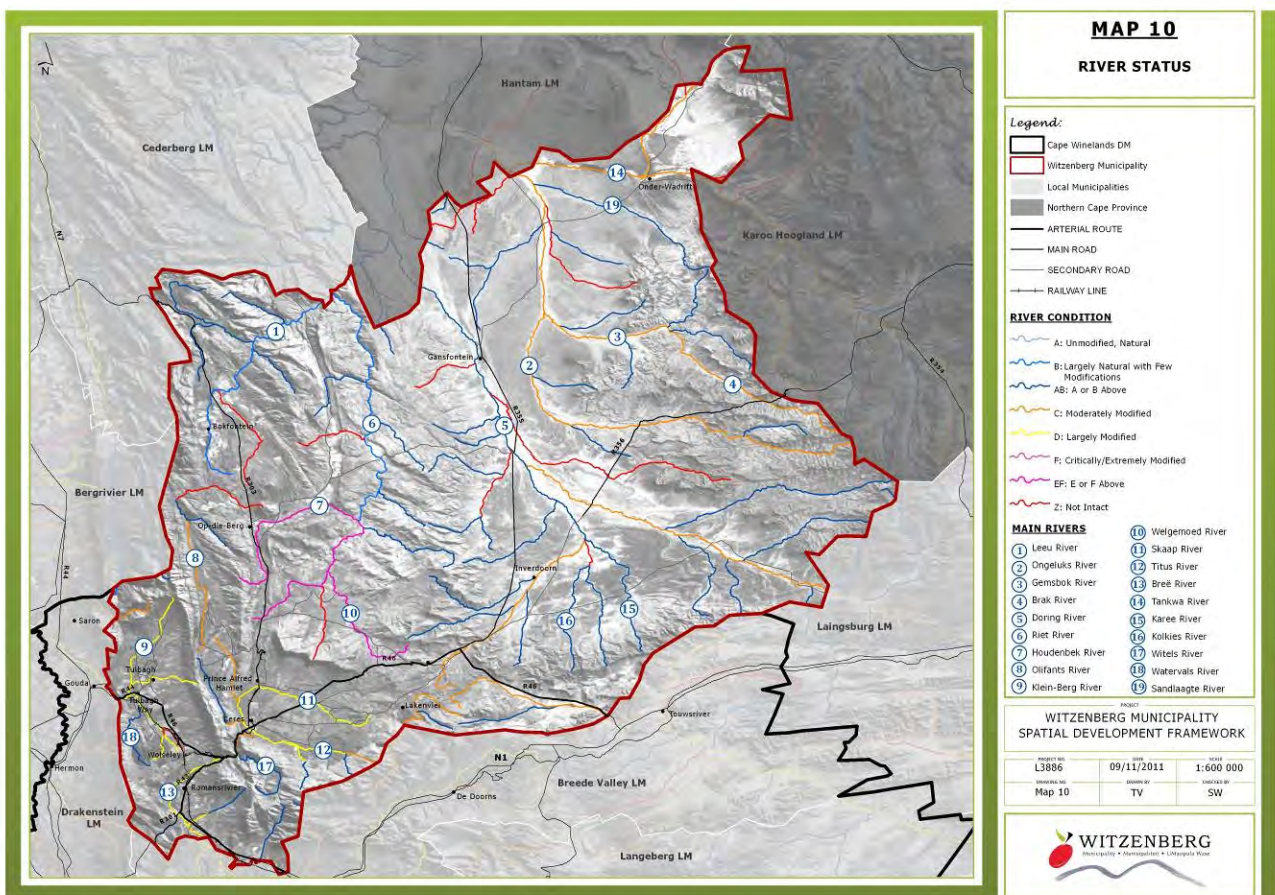


Most of the Olifants River, a moderately modified river, located in the municipal area has been identified as a *Freshwater Support Area (FSA)*.

There are a number of smaller perennial and non-perennial rivers which drain the mountainous areas and flow through the valley landscapes in the municipal area. The main rivers and their current status are indicated on Map 10.

**a) River Condition**

Most of the perennial and non-perennial rivers located in the Tankwa and Ceres Karoo as well as the northern Koue Bokkeveld are still considered to be intact and able to contribute towards river ecosystem targets<sup>8</sup> (SRK Consulting, 2011). Most of the rivers located in the intensively cultivated and built-up southern area of the Witzenberg Municipality are largely to seriously modified, such as the Klein Berg River in the Tulbagh Valley, Skaap and Titus Rivers in the Ceres area (refer to Map 10).



The Doring River remains the only major river in the Cape Winelands District that has been identified as largely natural. It has also been classified as ‘free flowing’, meaning that it still flows undisturbed by having no dams all the way from its source to its mouth at the confluence with the Olifants River. It is also one of only two rivers in the Western Cape that are rated in the Top 15 of free flowing rivers in South Africa, and it is the longest of them all. As such, the Doring River is now a

<sup>8</sup> ‘As defined in the National Freshwater Ecosystem Priority Areas Project (NFEPA, being undertaken by SANBI and the CSIR), which is in the process of identifying a national network of freshwater conservation areas and developing a classification of river conditions’ (SRK Consulting, 2011).

rare feature in the South African landscape and part of the heritage, as it provides social and ecological connectivity in an increasingly fragmented landscape (NFEPA, in SRK Consulting, 2011).

In general, there is a relatively close relationship between the condition of river buffer areas (the amount of natural vegetation remaining), the condition of the river itself and the presence of agriculture and/or towns along the river. More degraded rivers generally have less natural vegetation remaining in their river buffers, and rivers that are largely natural in their upper reaches become noticeably degraded once they enter agricultural areas or downstream of urban areas (SRK Consulting, 2011).

## **b) Ecological Importance of Rivers and Catchments**

Based on the condition of the river and its importance in the greater ecological context, the National Freshwater Ecosystem Priority Areas project (NFEPA) has identified a number of strategic spatial priorities for conserving freshwater ecosystems and associated biodiversity. FEPAs are often tributaries and wetlands that support hard-working large rivers, which need to stay in a good condition to manage and conserve our freshwater ecosystem and to protect water resources for human use (Driver *et al* in SRK Consulting, 2011).

The corridor along the Doring River has been given the highest status as a FEPA. The catchments associated with a number of other river stretches including the Sandlaagte, Karee, Kolkies, Riet, Witels and Watervals Rivers have also been identified as FEPAs. Tributaries support the more utilised main rivers and are an essential part of the ecosystem.

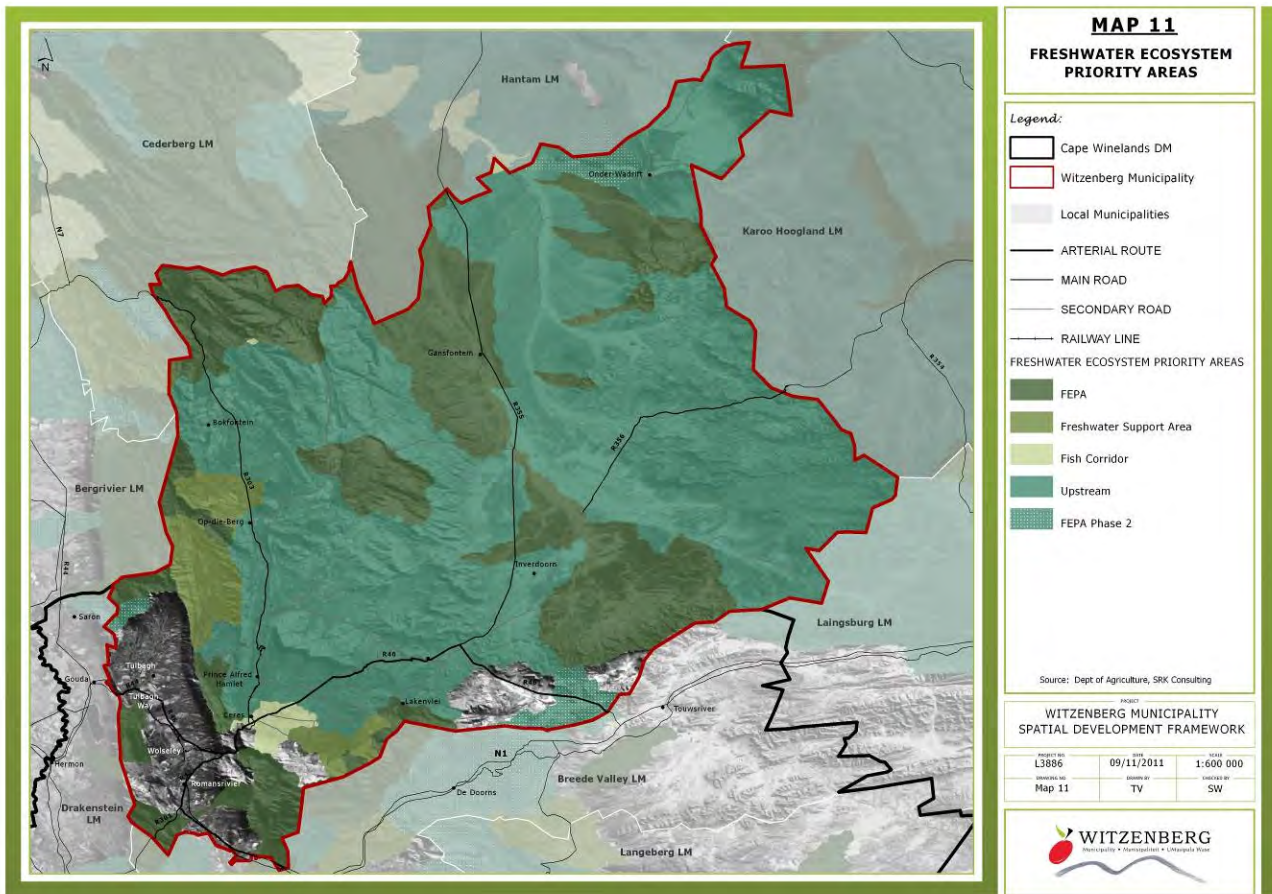
The Witzenberg Municipality has a number of important aquatic systems and they have all been mapped by the project of the National Freshwater Ecosystem Priority Areas (NFEPA). The NFEPA map products provide strategic spatial priorities for conserving South Africa's freshwater ecosystems and supporting sustainable use of water resources. These strategic spatial priorities are known as Freshwater Ecosystem Priority Areas (FEPAs) – a FEPA map has been developed for each of the 19 Water Management Areas in South Africa.

Freshwater ecosystem management and conservation depends on the co-operation of a wide range of sectors at multiple levels of governance (Driver *et al*, 2011). The purpose of freshwater ecosystem management is to conserve biodiversity pattern (i.e. species numbers and distributions) and ecological processes (e.g. sediment supply, hydrological regime, organic matter inputs), and to maintain natural variability. Freshwater ecosystems are vulnerable to human activities throughout the catchment, and these activities can lead to irreversible damage (e.g. introduction of invasive alien plants, species extinctions) or to long-term, gradual, cumulative changes (e.g. accelerated erosion and sedimentation, pollution).

The main *Freshwater Support Areas* (FSAs) in the Municipality, which are ecologically important rivers that are not currently in a natural or largely natural condition, include the Olifants and Titus Rivers. The portion of the Breede River that flows through the Municipality has been identified as a *migration corridor* that is important for the migration of threatened fish species as well as other ecological processes.

The project further identified that, under current circumstances, it would be the most efficient to rehabilitate the catchments of the Tankwa River to a natural or largely natural condition to meet river status targets (SRK Consulting, 2011). Upstream management is particularly required in most

of the remaining catchments located in the Municipality in order to prevent the downstream degradation of FEPAs (Doring River) and FSAs (mainly Olifants River) (SRK Consulting, 2011).



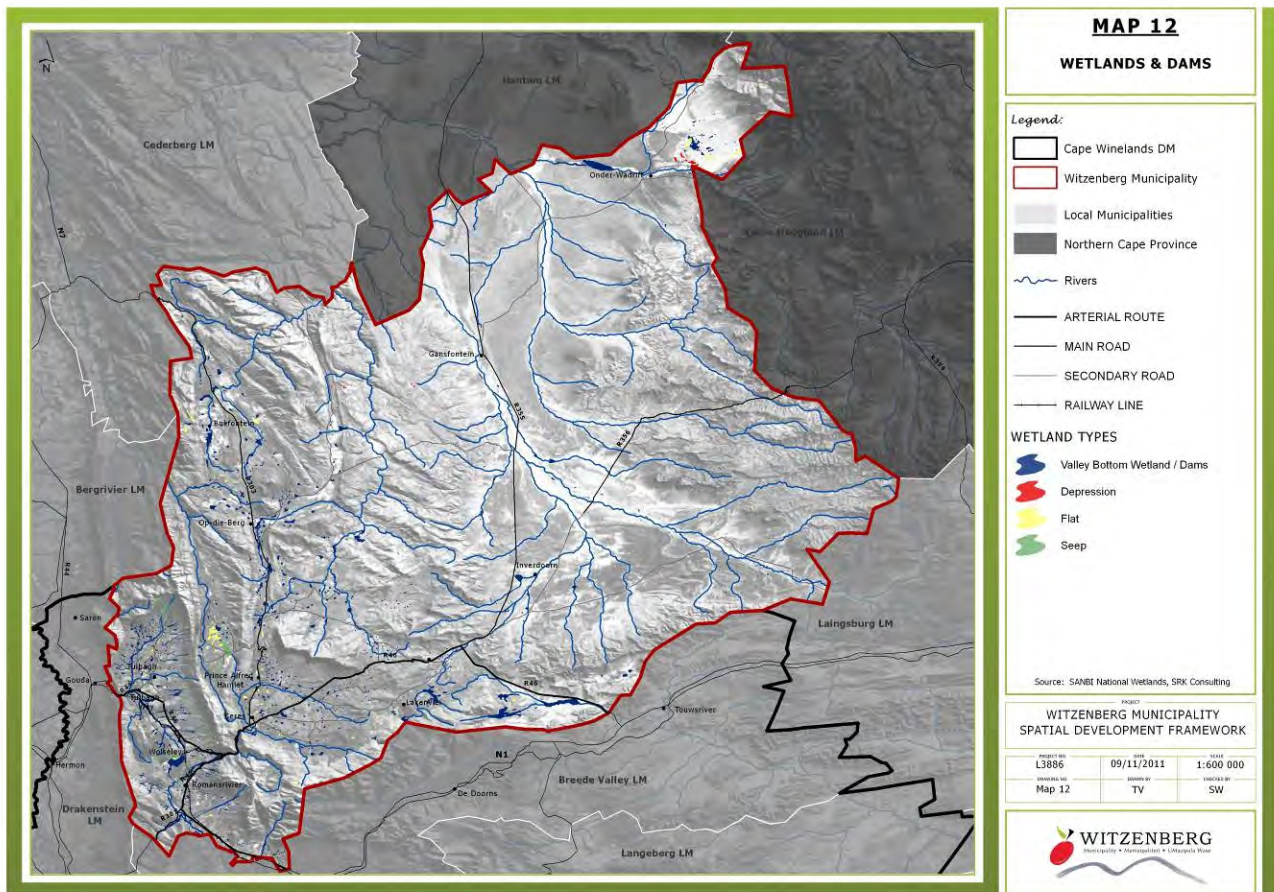
**B2.3.3 SURFACE WATER RESOURCES: WETLANDS AND DAMS**

Wetlands are intrinsically valuable ecosystems that provide many important services to the environment and society. Amongst other functions, they play a critical role in flood attenuation, groundwater recharge and amelioration of water quality and often also have societal and economic value (Dallas *et al* in SRK Consulting, 2011).

As a contracting party to the RAMSAR convention, South Africa and the Witzenberg Municipality, should conserve all existing natural wetlands and adhere to the general objectives of the RAMSAR Convention. It is however not always possible to conserve all wetlands, and thus it is of the utmost importance that priority wetlands should be identified and conserved. Most wetlands in the Witzenberg Municipality are located in the western and south-western portion and have been classified into the following functional types (SRK Consulting, 2011):

FUNCTIONAL TYPE	DEFINITION
<b>Depression wetland</b>	Situated in a topographic depression.
<b>Flat wetland</b>	A wetland habitat on an area of comparatively level land (with a slope less than 1%) with little or no relief, but not directly associated with either a valley bottom or floodplain feature.
<b>Seep wetland</b>	Concave or convex area that is permanently or periodically saturated, usually on a slope, where groundwater or interflow meets the surface.
<b>Floodplain wetland</b>	A valley bottom area with a well-defined, gently sloped, stream channel

	characterised by alluvial transport and deposition of sediment, usually leading to a net accumulation of sediment. Water enters from the main channel when the channel banks overspill.
<b>Valley bottom wetland</b>	A low-lying, gently-sloped area that receives water from an upstream channel and/or from adjacent hill slopes, not subject to periodic over-bank flooding by a river channel.



Dams collect surface water during the wet season and store this water, thereby providing a relatively reliable and predictable supply of water for agricultural, domestic and other use, particularly during the dry season and generally in areas that receive little rainfall (SRK Consulting, 2011).

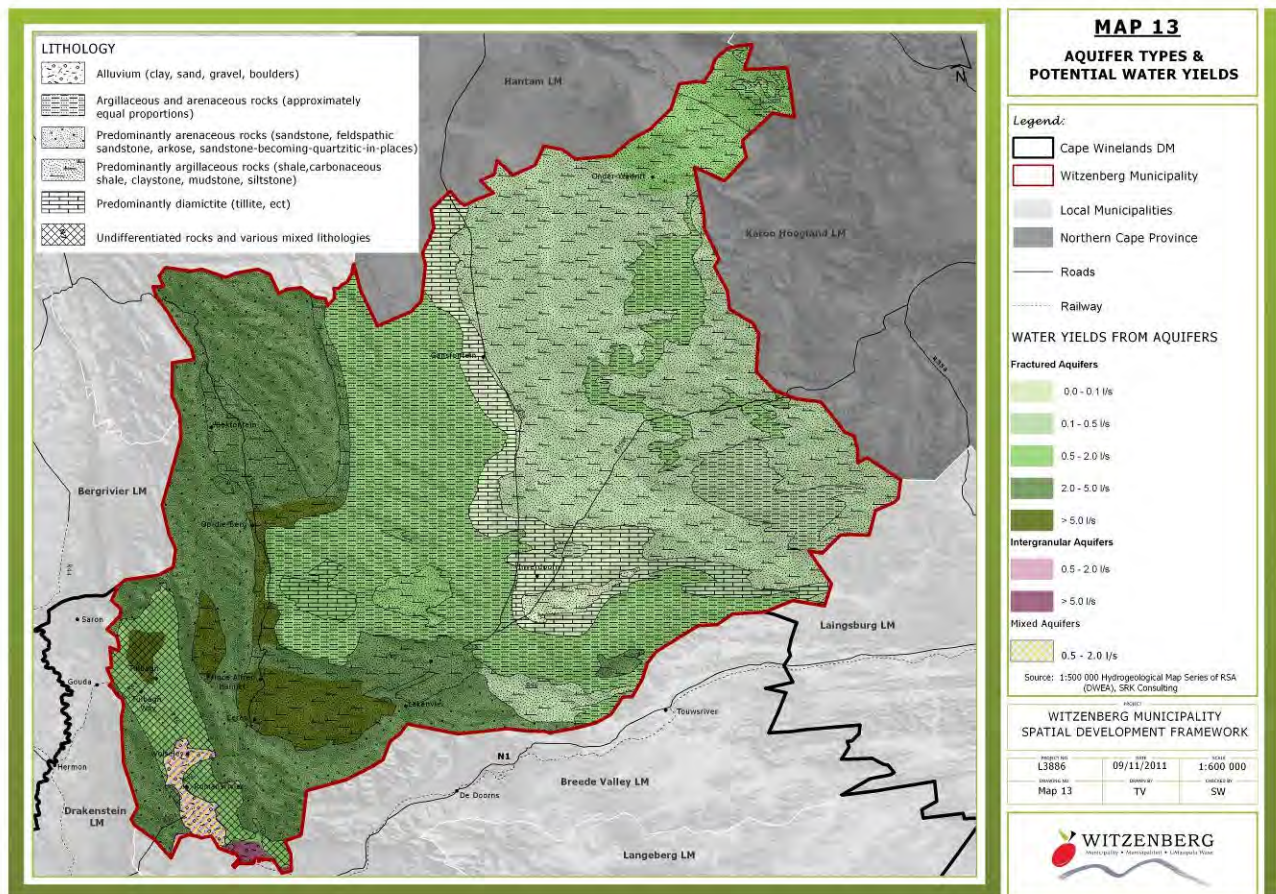
There are a number of large-scale private farm dams in the Witzenberg Municipality which are primarily used for irrigation purposes. Most of these dams are located in the fertile valleys which are extensively used for agricultural purposes. Fewer dams are located in the Tankwa and Ceres Karoo. The Koekedouw Dam is the only major dam in the Municipality and has a full storage capacity of 22.5 million m<sup>3</sup>. The construction of the Koekedouw Dam has however left an enormous debt burden on the Witzenberg Municipality's financial viability and once again the Municipality will engage other spheres of government in trying to find relief.

#### B2.3.4 GROUND WATER RESOURCES

Groundwater is increasing in importance as a source of water, due to the ever increasing demand for water and an increasing scarcity of surface water in many areas. The Witzenberg Municipality overlies the largest groundwater resource in the Western Cape, the Table Mountain Group Aquifer,

which originates in the larger Cape Winelands District, as most of the recharge to this system occurs in the mountains of the District municipality (MCA 2008a in SRK Consulting, 2011).

The Witzenberg Municipality is entirely underlain by fractured aquifers, with varying yields, except for small inter-granular and mixed aquifers in the Tulbagh, Ceres and Wolseley environs. Map 13 indicates the typical types of aquifers found in the Witzenberg Municipality.



Groundwater is an important component of the hydrological resources of the Olifants-Doorn WMA, and geological and hydrogeological conditions vary considerably. The main implication of this variability across the WMA is that groundwater quantity and quality varies significantly. Consequently the role groundwater plays in the socio-economic and ecological sectors also varies (Blue Science, 2011).

The highest yielding areas, producing between 2 and >5 litres per second, are found in the western portion of the municipal area, running from the north-west towards the south-east. These are predominantly underlying various sandstone formations (i.e. arenaceous rocks), which facilitate the infiltration of surface water into the ground, and are located underneath the major mountain chains in the municipal area, namely the Kouebokkeveld, Skurweberg, Swartrugberg, Witzenberg and Hex River mountains (SRK Consulting, 2011).

Fractured aquifers located in the valleys between and to the north of these mountain chains have lower groundwater yields of between 0.1 - 2 litres per second. The lowest yields are recorded in portions of the Tankwa and Ceres Karoo, where productivity only reaches between 0.0 - 0.5 litres per second (SRK Consulting, 2011). Smaller inter-granular aquifers are present in the Upper Berg

and Breede subareas, mostly around Tulbagh, Ceres and Wolseley where yields are moderate to high, reaching between 0.5 -5 litres per second (SRK Consulting, 2011).

### a) Aquifer Vulnerability

The vulnerability of an aquifer system is defined as *the tendency or likelihood for contamination to reach a specified position in the groundwater system after introduction at some location above the uppermost aquifer* (Parsons and Conrad, 1998 in SRK Consulting, 2011). Vulnerability is thus mainly a function of geology. The Cape Winelands Environmental Management Framework (Cape Winelands EMF) indicates that most aquifers in the Witzenberg Municipality are classified as having very low to low vulnerability to contamination. The aquifers underlying the western portion of the municipal area have medium vulnerability. Some aquifers situated in the Upper Berg and Breede subareas, mainly around Tulbagh and Wolseley, show high vulnerability, with the intergranular aquifers in those areas being the most vulnerable (SRK Consulting, 2011).

### b) Groundwater Quality

Groundwater quality, indicated by electrical conductivity<sup>9</sup>, is generally good to very good (low electrical conductivity and total dissolved solids) in most of the Witzenberg Municipality. These areas are predominantly underlain by sandstones belonging to the Table Mountain and Bokkeveld Groups (refer to Chapter B2.2.1), which are old and well-weathered and therefore leach very few salts and nutrients into the groundwater (Aurecon, 2009 in SRK Consulting, 2011). In most of these areas the groundwater are potable due to its low conductivity of 0 to 70 milli Siemens per meter (mS/m) (refer to Map 14).

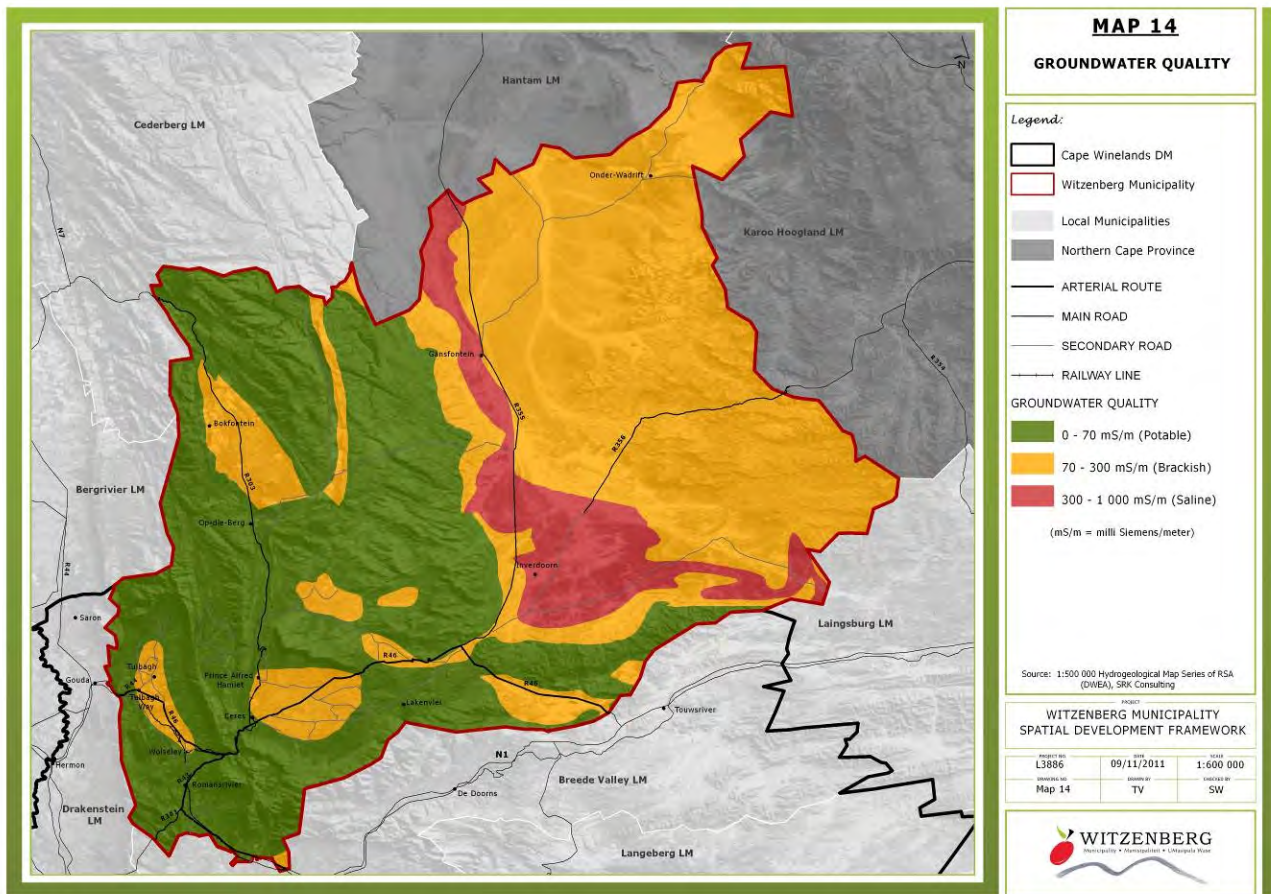
The Tankwa and Ceres Karoo (eastern portion of the municipal area) is dominated by shales that are associated with relatively large amounts of salts (with low nutrient levels). These leach into the groundwater, which generally exhibits relatively high electrical conductivity and total dissolved solids associated with the geology (Aurecon, 2009 in SRK Consulting). Conductivity of groundwater in the eastern portion of the Municipality reaches 70 to 300 mS/m, making it brackish and less fit for human consumption (SRK Consulting).

Groundwater quality is poorer in the very low yielding fractured aquifers that are underlying predominantly diamictite deposits in a central band on the edge of the Karoo. Conductivity in these areas reaches 300 to 1 000 mS/m, meaning that the groundwater is unfit for human consumption without further treatment (SRK Consulting, 2011).

The quality of groundwater is not only important for human use, but it is imperative for irrigation purposes. Crops can be sensitive to deteriorating groundwater quality; with yields of moderately salt sensitive crops diminishing noticeably if groundwater contamination (indicated by electrical conductivity) increases (SRK Consulting, 2011).

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<sup>9</sup> Conductivity is a measure of the ability of water to pass an electrical current. Each stream tends to have a relatively constant range of conductivity that, once established, can be used as a baseline for comparison with regular conductivity measurements. Significant changes in conductivity could be an indicator that a discharge or some other source of pollution has entered a stream (SRK Consulting, 2011).



### B2.3.5 WATER USE

Water is vital to the economy of the area and is thus in very high demand. In the Witzenberg Municipality both surface water and groundwater are mainly being used for irrigated agriculture and activities associated with urban areas.

#### a) Surface Water Abstraction

Surface water is used extensively as the main source of fresh water in the Witzenberg Municipality with most of the rivers in the Municipality either feeding dams or used for direct abstraction, significantly affecting the remaining water volumes in the rivers (SRK Consulting, 2011).

Currently the largest surface water use in the municipal area is irrigated agriculture. Most cultivated areas lie in the south-western portion of the municipal area around the urban areas and along the larger rivers. Virtually no irrigation takes place in the Tankwa and Ceres Karoo, with the exception of some portions in the north-west on the border to the Witzenberg Municipality (SRK Consulting, 2011). Agricultural water demand continues to increase due to expansion of agricultural activities, e.g. to accommodate new crops and emerging farmers, and planting of crops that have a very high water demand, such as fruit (CSIR, 2007 in SRK Consulting 2011). Urban water use and the transfer of water between WMAs are the remaining 'water use' in the municipal area.

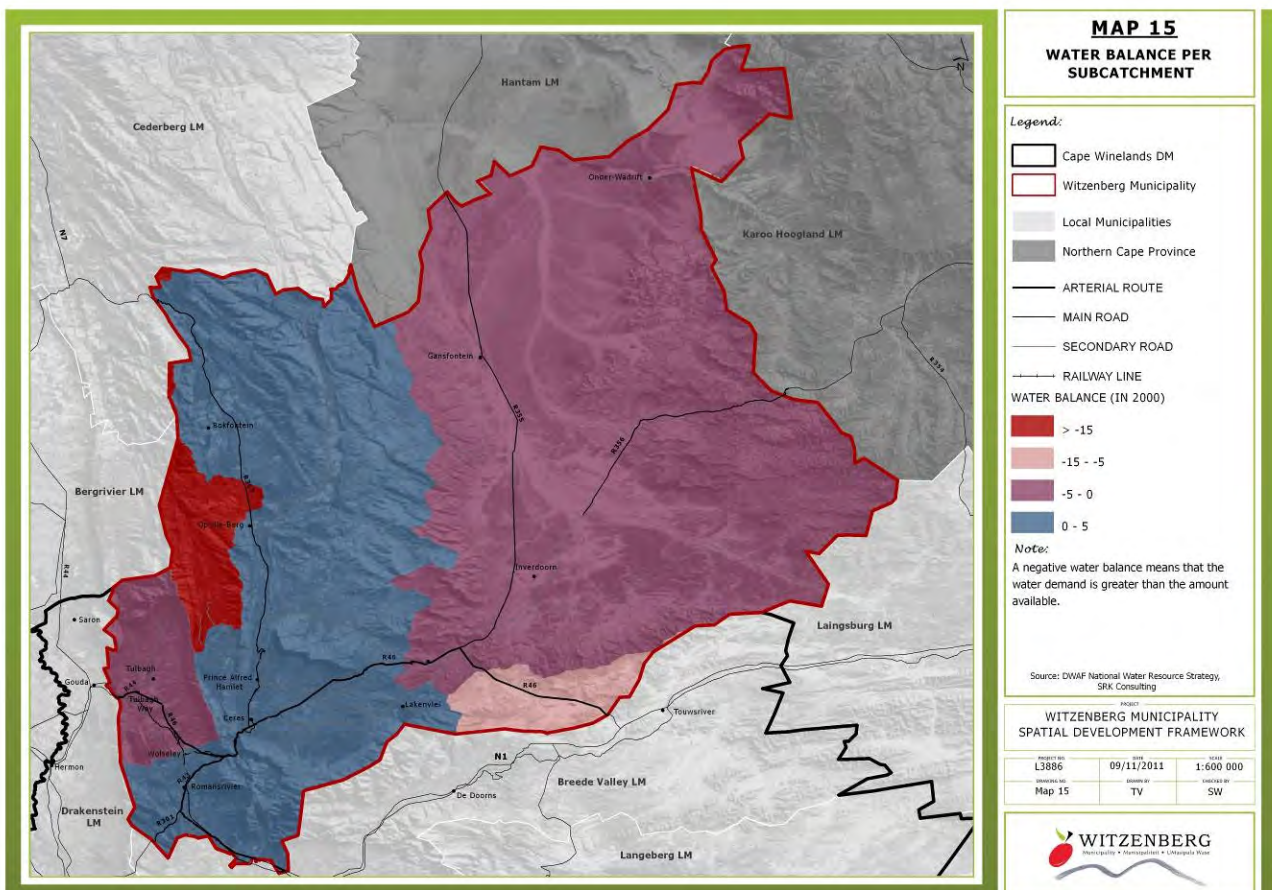
The surface water in the Witzenberg Municipality is a critical economic resource that is in increasingly short supply (refer to, for example, the recent water shortages in Tulbagh). A water balance provides an indication of the available water yield of a system versus the current water requirements. The purpose of a water balance is to provide a tool to reconcile the water

requirements and available water to enable an understanding of where there is surplus water available for future developments, where water supply and demand are in balance and where there is a deficit (BOCMA, 2010a in SRK Consulting, 2011).

During 2000 the water demand and supply were almost balanced in most parts of the municipal area, with a slight surplus in the Koue Bokkeveld sub-catchment and a slight deficit in the Doring sub-catchment (refer to Map 15). The largest shortfall of water relative to demand was recorded in the Olifants / Doorn sub-catchment north of Ceres. When the study was undertaken in 2000, the water balance of the Upper Berg sub-catchment was expected to decrease and become negative by 2025. In most of the municipal area it was expected that water demand and supply will remain approximately equal by 2025 (SRK Consulting, 2011).

BOCMA notes that there is no scope for further water abstraction during summer in all catchments falling within the Witzenberg Municipality, while off-channel storage of winter excess is possible (pers. comm. van Staaden, 2010 in SRK Consulting, 2011). The Ceres Dam has some excess water available, which is however very expensive. Clearing of alien vegetation in the high rainfall areas supplying the streams, and thereby increasing runoff, is a more cost effective way of obtaining additional water (SRK Consulting, 2011).

Additional schemes to transfer water from the Breede WMA to the Berg WMA are currently under investigation to increase the amount of water available to the Western Cape Water Supply System (which provides Cape Town with water). These would result in further loss of water to the Municipality and more pressure on catchment H1, in which the towns of Prince Alfred Hamlet, Wolseley and Ceres are located (SRK Consulting, 2011).





## b) Groundwater Abstraction

Groundwater plays an increasingly important role as the potential for expansion of surface water supply to meet increasing demand becomes more limited. Farmers in the Ceres and Tulbagh area in particular, rely heavily on groundwater (Cape Winelands DM, 2008 in SRK Consulting, 2011).

Groundwater abstraction occurs in several places within the Witzenberg Municipal area by means of high-yielding abstraction points, where more than 10 million m<sup>3</sup> of water are extracted per annum. Another abstraction point yielding 5-10 million m<sup>3</sup> of water per annum is located just north of Ceres. A few smaller abstractions points, delivering between 0.1 and 2 million m<sup>3</sup> of water per annum, are located in other higher-yielding areas within the central belt of the municipal area (SRK Consulting, 2011).

The highest volumes abstracted in the Witzenberg Municipality, are from quaternary catchments H10C north of Ceres (Breede WMA, 13 million m<sup>3</sup> per annum), E21G (Olifants / Doorn WMA, 12 million m<sup>3</sup> per annum) and G10E to the west of H10C (Berg WMA, 11 million m<sup>3</sup> per annum). Less than 1 million m<sup>3</sup> per annum of groundwater are abstracted from most quaternary catchments in the Tankwa and Ceres Karoo, while between 1 and 10 million m<sup>3</sup> per annum are abstracted from the remaining quaternary catchments in the municipal area. Table B3 indicates that groundwater in the Municipality is almost exclusively used for irrigation, with municipal use and industrial use playing very minor roles.

Table B3: Approximate groundwater abstraction and use in the Witzenberg Municipality.

	WATER USE													
	RURAL		MUNICIPAL		IRRIGATION		LIVESTOCK		MINING		INDUSTRY		TOTAL	
	(mm <sup>3</sup> /yr**)	%	(mm <sup>3</sup> /yr)	%	(mm <sup>3</sup> /yr)	%	(mm <sup>3</sup> /yr)	%	(mm <sup>3</sup> /yr)	%	(mm <sup>3</sup> /yr)	%	(mm <sup>3</sup> /yr)	%
<b>WITZENBERG*</b>	0.0	0.1	1.4	1.8	77.1	96.9	0.3	0.3	0.0	0.0	0.7	0.9	79.6	100
<b>DMA*</b>	0.0	0.2	0.0	0.0	15.4	97	0.4	2.8	0.0	0.0	0.0	0.0	15.9	100

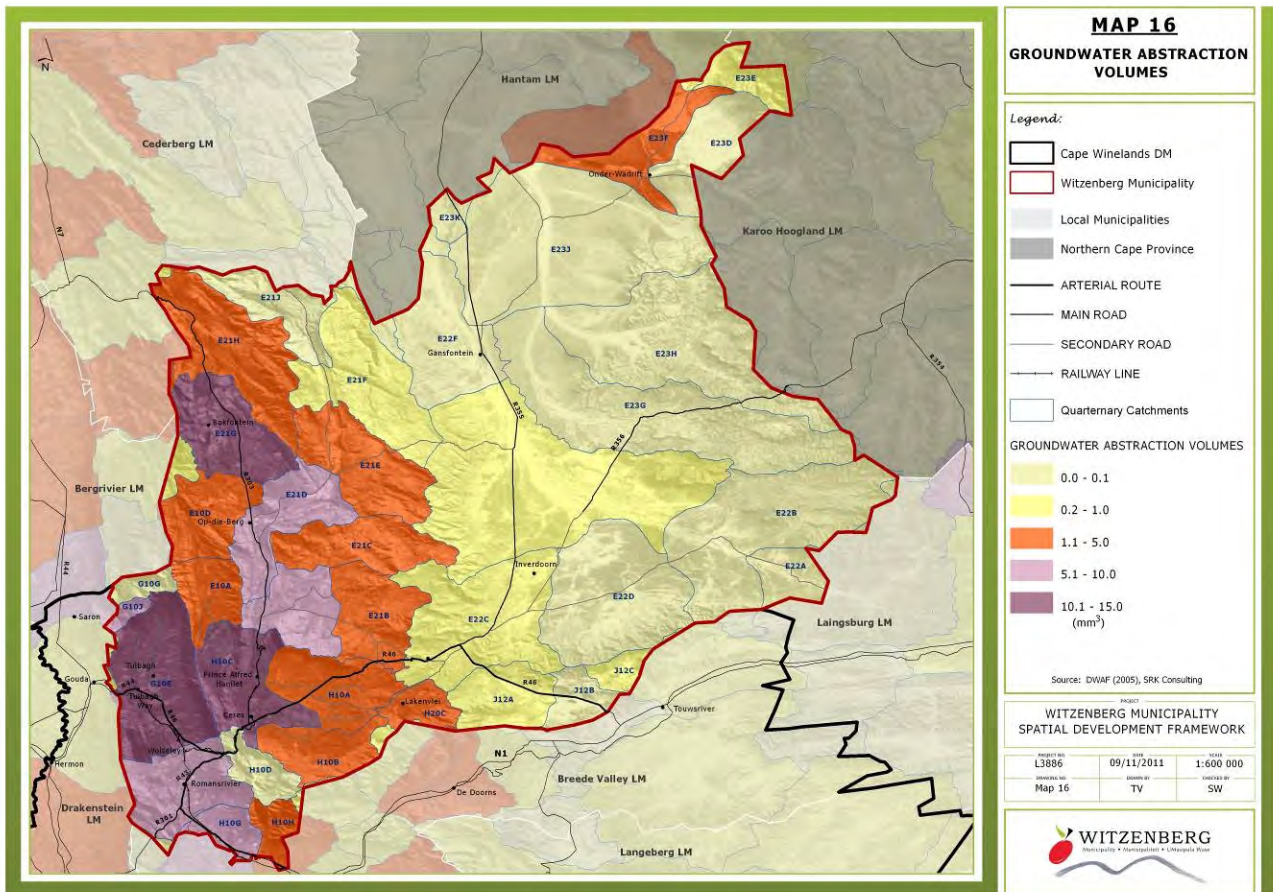
\*Witzenberg & DMA refers to the old municipal demarcation.

\*\*million m<sup>3</sup> per annum.

(Source: DWAF, 2005 in SRK Consulting, 2011).

In context of the individual river systems, most groundwater within the Witzenberg Municipality is abstracted from the Breede River system, followed by the Olifants River system. Abstraction volumes in the Berg River and Gouritz River system, of which only small portions falls within the municipal area, are much smaller. The net aquifer recharge volumes, which take into account the total recharge of the aquifer minus groundwater lost to abstraction and base flow (i.e. groundwater that feeds rivers) are the lowest in areas that also experience the lowest rainfall volumes, e.g. Tankwa and Ceres Karoo. The aquifer recharge volume are the lowest in Catchment H10C north of Ceres, which despite experiencing high rainfall, is also subject to the highest groundwater abstraction in the municipal area (refer to Map 16) (SRK Consulting, 2011).

The maximum volume of groundwater that may still be abstracted without depleting the aquifer is relatively low in most of the municipal area and environs, ranging from less than 5 000 m<sup>3</sup> per annum per quaternary catchment in the north-east and south-east of Worcester to between 10 000 and 50 000 m<sup>3</sup> per annum per quaternary catchment in the central mountain belt running from the north-west to south-east. Smaller areas with a higher harvesting potential are located in the high-rainfall areas in the south-west of the Cape Winelands District (SRK Consulting, 2011).



### Box B3 - Key Issues: Water

- Over-abstraction of water and damming of rivers.
- Pollution of water resources.
- Invasive alien vegetation.
- Encroachment of agricultural activities on rivers.
- Climate change.
- General lack of good catchment management.

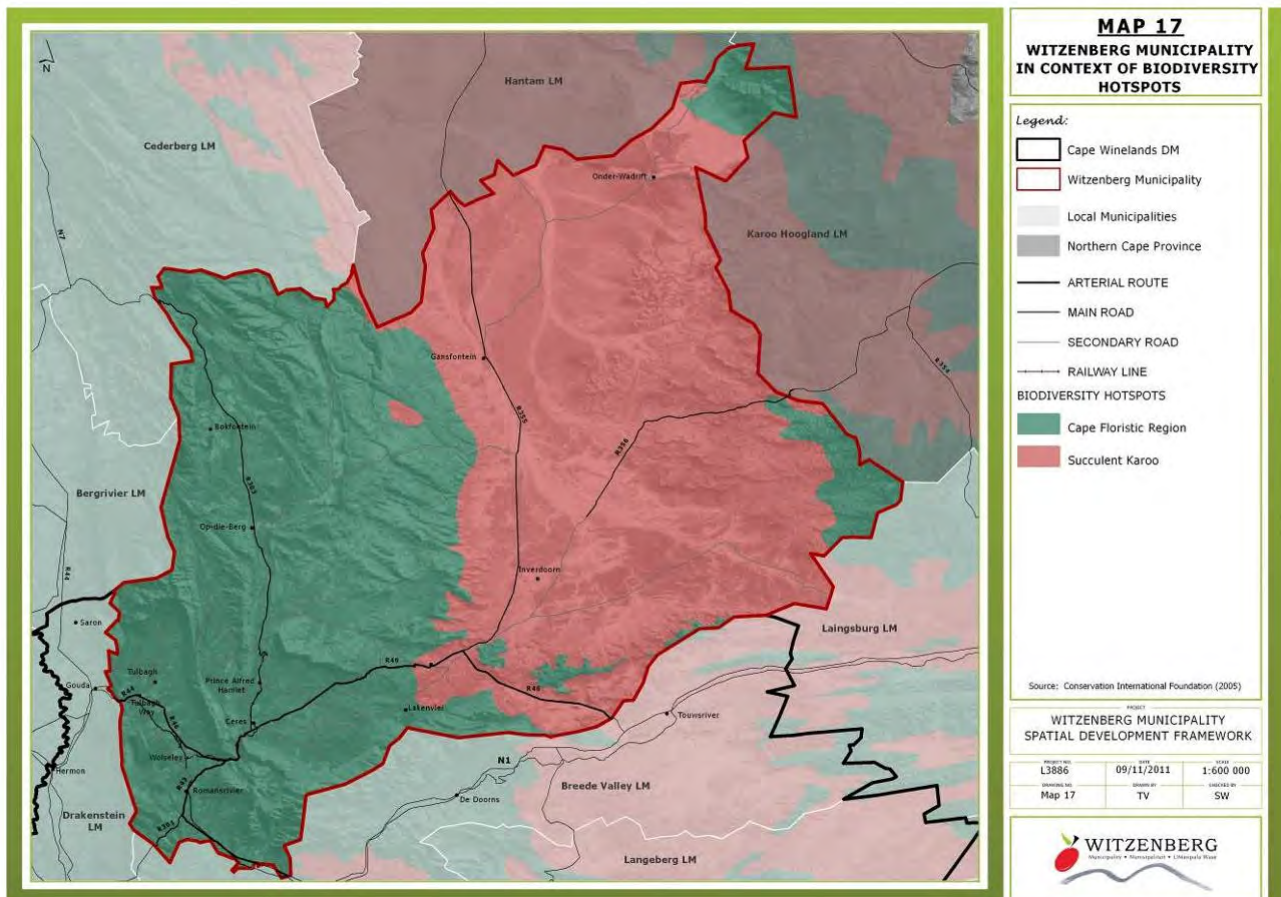
BOCMA notes, however, that there is limited scope for further groundwater development in catchment H1, in which Ceres, Prince Alfred Hamlet and Wolseley are located, and that further development of groundwater resources in the Hex valley (catchment H2) should only occur under restrictive regulations (SRK Consulting, 2011).

#### B2.3.6 RECYCLED WATER

The Witzenberg Municipality recognises the potential to re-use water that has not been used for consumption purposes especially for industrial and domestic use. Recycling is currently done on a small scale at the Wolseley, Prince Alfred Hamlet and Tulbagh waste sites.

## B2.4 BIODIVERSITY AND CONSERVATION

The Witzenberg Municipality is diverse in terms of its landscape and ecological characteristics due to its location on the transition between the Fynbos and the Succulent Karoo Biomes (refer to Map 17). The Fynbos biome, considered to be synonymous with the Cape Floristic Region (CFR) or Cape Floral Kingdom, and the Succulent Karoo biome are recognised as global biodiversity hotspots<sup>10</sup>.

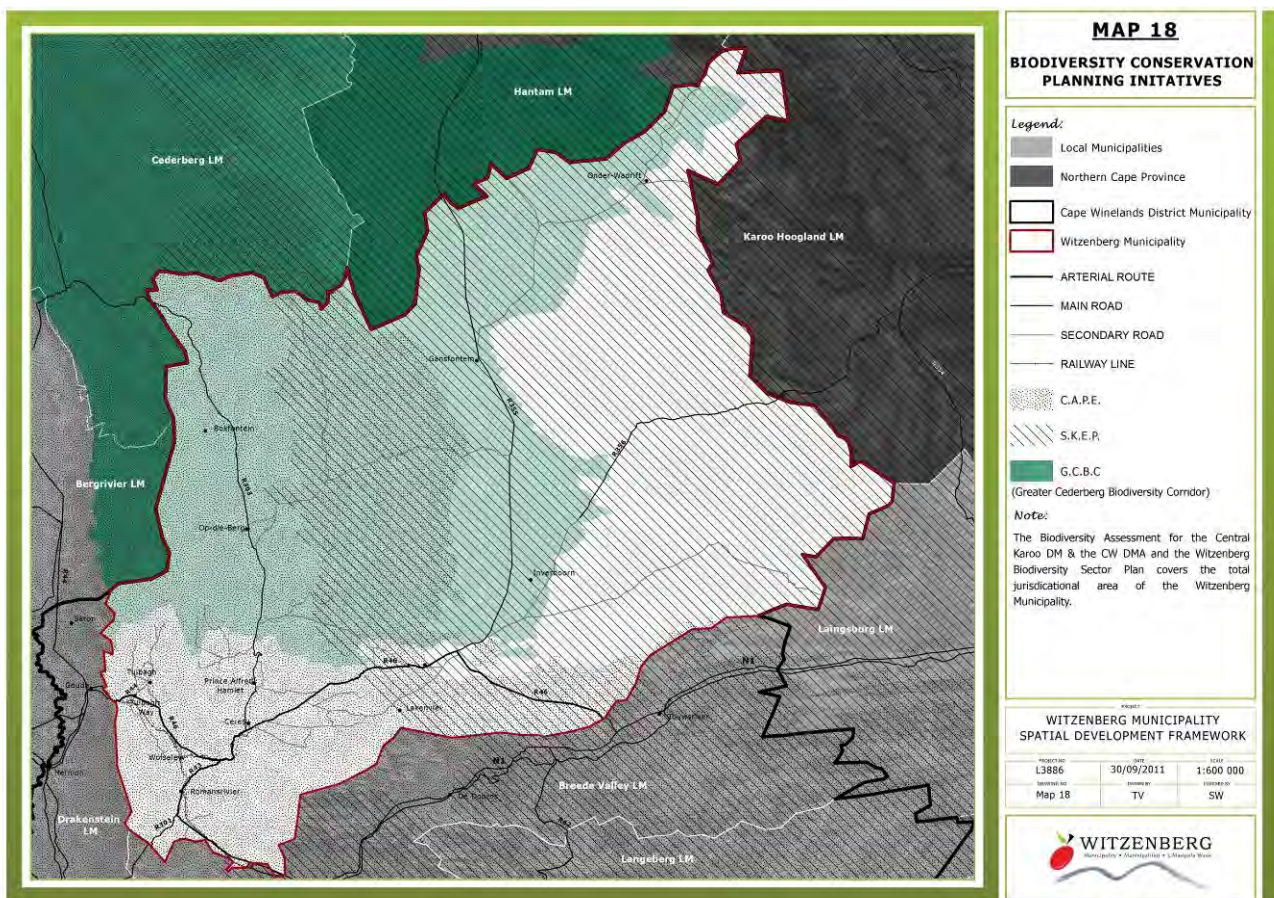


Approximately 6 000 out of the 9 000 species of the CFR are endemic to the region, meaning that they are not found anywhere else in the world. The CFR also has high animal diversity and is a priority area for endemic freshwater fish and birds. The Succulent Karoo is one of only two semi-arid biodiversity hotspots in the world, and exhibits, by far, the highest plant diversity for a semi-arid ecosystem (Maree & Vromans, 2010). Almost the entire municipal area is subject to biodiversity conservation planning initiatives, including Fine Scale Planning projects collectively presented by the following:

- Cape Action for People and the Environment, a conservation strategy partnership between government and civil society focussing on the CFR and adjacent marine environment (SRK Consulting, 2011).
- Succulent Karoo Ecosystem Programme, a long-term, multi-stakeholder bioregional conservation and development partnership programme (SRK Consulting, 2011).

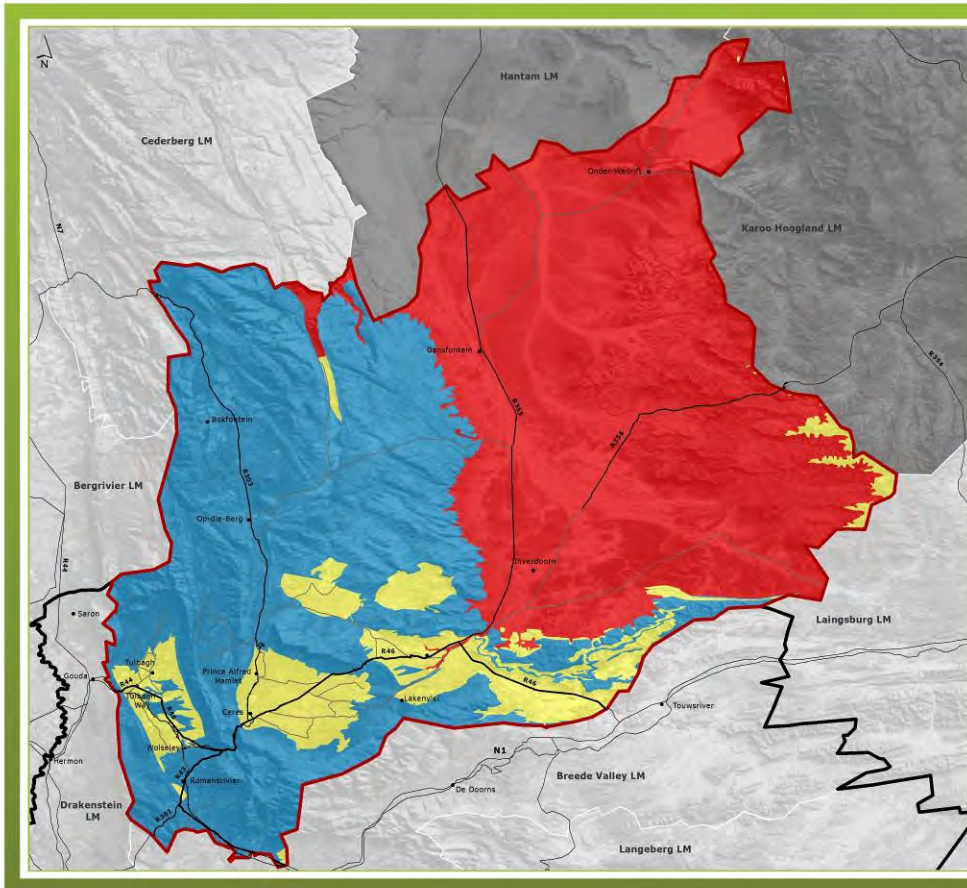
<sup>10</sup> The biodiversity hotspots are regions known to hold especially high numbers of species found nowhere else, yet their remaining habitat combined covers a little more than two percent of Earth's land surface (Conservation International, 2005).

- c) The Greater Cederberg Biodiversity Corridor is a conservation initiative of global importance striving to introduce people to sustainable ways of using their land and the natural resources of this unique and diverse region.
- d) Cape Winelands District Municipal Area (DMA02) Biodiversity Assessment to inform SDFs, Biodiversity Sector Plans, EMFs, SEAs and EIA processes.
- e) Fine Scale Planning (FSP) for the Witzenberg Municipality identifying Critical Biodiversity Areas and associated land-use management guidelines.
- f) Cape Winelands District Municipality Environmental Management Framework, undertaking in terms of the National Environmental Management Act 107 of 1998 and associated EMF Guidelines, to guide planning and decision making by each local municipality in the district (SRK Consulting, 2011).



### B2.4.1 VEGETATION TYPES

The Witzenberg comprises approximately 28 vegetation types, which correspond roughly to the national vegetation types as described by Mucina & Rutherford (2006). Helme and Koopman mapped local (fine-scale) vegetation types for the Upper Breede Valley as part of the Biodiversity Sector Plan for the Witzenberg, Breede Valley and Langeberg Municipalities, but no such fine-scale mapping has been undertaken for the Tankwa and Ceres Karoo (previous DMA). Maps 19 and 20 and Table B4 list the local vegetation types and associated ecosystem categories represented in the Witzenberg Municipality as listed in the Cape Winelands EMF.



**MAP 19**  
**ECOSYSTEMS PRESENT IN WITZENBERG MUNICIPALITY**

**Legend:**

- Cape Winelands DM
- Witzenberg Municipality
- Local Municipalities
- Northern Cape Province
- ARTERIAL ROUTE
- MAIN ROAD
- SECONDARY ROAD
- RAILWAY LINE

**ECOSYSTEMS**

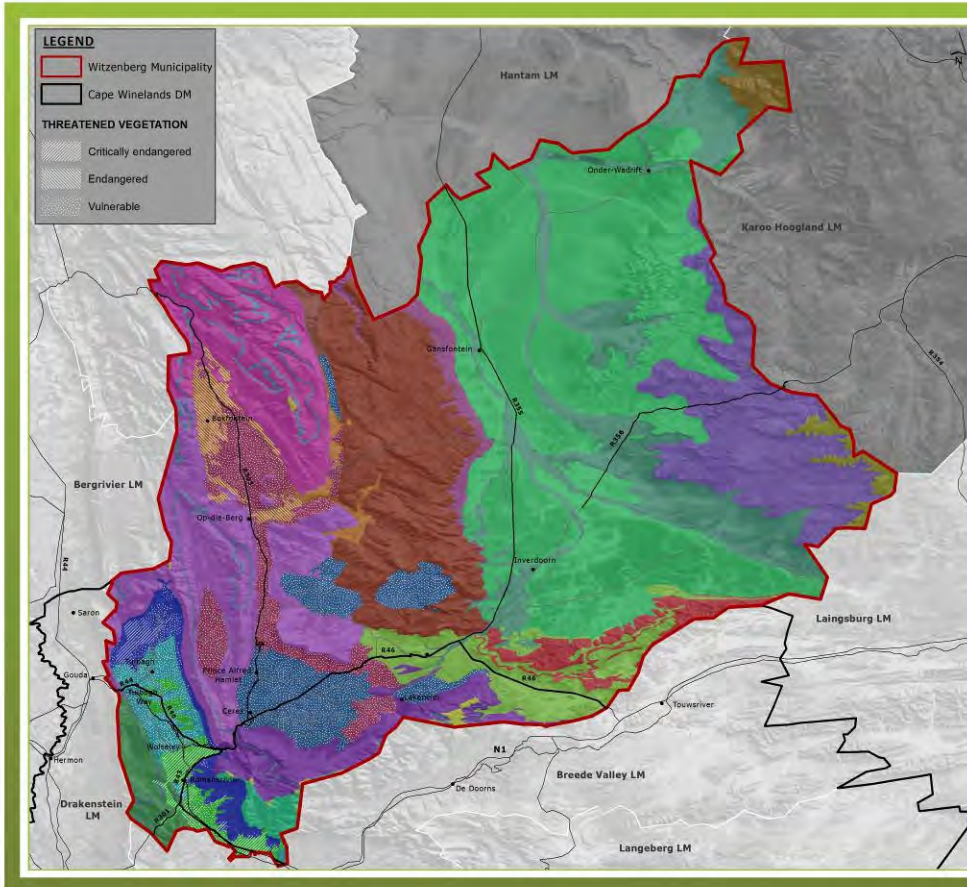
- Midland-Upland Fynbos
- Renosterveld
- Succulent Karoo

Source: SANBI, SRK Consulting

PROJECT  
**WITZENBERG MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK**

PROJECT NO. L3886	DATE 09/11/2011	SCALE 1:600 000
ISSUED BY Map 19	ISSUED BY TV	ISSUED BY SW

**WITZENBERG**  
 Municipality • Waterworks • Landcare • Youth



**MAP 20**  
**VEGETATION TYPES OF WITZENBERG MUNICIPALITY**

**LEGEND**

- Witzenberg Municipality
- Cape Winelands DM

**THREATENED VEGETATION**

- Critically endangered
- Endangered
- Vulnerable

- Agter-Sederberg Shrubland
- Breede Alluvium Fynbos
- Breede Shale Fynbos
- Breede Shale Renosterveld
- Cederberg Sandstone Fynbos
- Central Mountain Shale Renosterveld
- Ceres Shale Renosterveld
- Haeuquas Sandstone Fynbos
- Koedoesberge-Moordenaars Karoo
- Kouebokkeveld Alluvium Fynbos
- Kouebokkeveld Shale Fynbos
- Matjiesfontein Quartzite Fynbos
- Matjiesfontein Shale Renosterveld
- North Hex Sandstone Fynbos
- Northern Inland Shale Band Vegetation
- Olifants Sandstone Fynbos
- Roggeveld Shale Renosterveld
- South Hex Sandstone Fynbos
- Swartland Alluvium Fynbos
- Swartland Shale Renosterveld
- Swartruggens Quartzite Fynbos
- Swartruggens Quartzite Karoo
- Tanqua Escarpment Shrubland
- Tanqua Karoo
- Tanqua Wash Riviere
- Western Altimontane Sandstone Fynbos
- Western Coastal Shale Band Vegetation
- Winterhoek Sandstone Fynbos

Source: SANBI, SRK Consulting

PROJECT  
**WITZENBERG MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK**

PROJECT NO. L3886	DATE 09/11/2011	SCALE 1:600 000
ISSUED BY Map 20	ISSUED BY TV	ISSUED BY SW

**WITZENBERG**  
 Municipality • Waterworks • Landcare • Youth

Table B4 also indicates the local vegetation types and its endemism to the Witzenberg Municipality as listed in the Biodiversity Sector Plan (Maree & Vromans, 2010).

Table B4: Vegetation types and degree of endemism of the Witzenberg Municipality.

ECOSYSTEM	VEGETATION TYPE (SRK Consulting, 2011)	VEGETATION TYPE (Maree & Vromans, 2010)	ENDEMISM <sup>11</sup> (Maree & Vromans, 2010)
Mid-Upland Fynbos	Breede Alluvium Fynbos		33.45
	Breede Shale Fynbos		34.02
	Cederberg Sandstone Fynbos		18.24
	Hawequas Sandstone Fynbos		5.10
	Kouebokkeveld Alluvium Fynbos		65.76
	Kouebokkeveld Shale Fynbos		74.41
	Matjiesfontein Quartzite Fynbos		/
	North Hex Sandstone Fynbos		48.18
	Northern Inland Shale Band Vegetation		35.64
	Olifants Sandstone Fynbos		0.01
	South Hex Sandstone Fynbos		25.39
	Swartland Alluvium Fynbos		0.03
	Swartruggens Quartzite Fynbos		/
	Western Altimontane Sandstone Fynbos		19.57
	Western Coastal Shale Band Vegetation		6.93
	Winterhoek Sandstone Fynbos		62.08
		Breede Arid Alluvium Fynbos	23.17
		Breede Sand Fynbos	0.03
		Cape Lowland Freshwater Wetlands	0.68
		De Heuwel Sandolien Alluvium Fynbos	100
		Elandskloof Sandstone Fynbos	85.85
		Hartebeesrivier Alluvium Fynbos	5.60
		Hex & Witzenberg Waboomveld	40.36
		Limietberg Waboomveld	55.11
		Mitchells Pass Thicket Fynbos	100
		Romansriver Renosterbeld Alluvium Fynbos	100
		Tulbagh Alluvium Fynbos	100
	Tulbagh Shale Fynbos	100	
	Witzenberg Sandolien Renosterveld Fynbos	100	
	Wolseley Alluvium Fynbos	100	
Renosterveld	Breede Shale Renosterveld		55.41
	Central Mountain Shale Renosterveld		/
	Ceres Shale Renosterveld		48.38
	Matjiesfontein Shale Renosterveld		/
	Roggeveld Shale Renosterveld		/
	Swartland Shale Renosterveld		/

<sup>11</sup> The percentages indicate the degree to which a vegetation type is endemic to a particular area. A high percentage indicates a high level of endemism. Some vegetation types are endemic to only one local municipality, e.g. 100% of Tulbagh Shale Fynbos is found only in the Witzenberg Municipality, while other vegetation types are spread over all three Upper Breede River Valley municipalities, but occur nowhere else (Maree & Vromans, 2010).

		Brandwacht Arid Renosterveld	13.03
		Brandwacht Fynbos Renosterveld	38.58
		Breede Alluvium Renosterveld	4.51
		Breede Shale Renosterveld	55.41
		De Heuwel Fynbos Renosterveld	100
		Kluitjieskraal Silcrete Renosterveld	100
		Romansriver Proteoid Renosterveld	100
		Slanghoek Alluvium Fynbos	6.76
		Slanghoek Sandstone & Shale Fynbos Mosaic	22.83
		Tulbagh Fynbos Renosterveld	100
		Wolseley Fynbos Renosterveld	100
		Worcester Sandolienveld	13.37
Succulent Karoo	Agter-Sederberg Succulent Shrubland		/
	Koedoesberge-Moordenaars Succulent Karoo		/
	Tanqua Escarpment Succulent Shrubland		/
	Swartruggens Sandstone Karoo		/
	Tanqua Karoo		/
	Tanqua Riviere		/
Forest		Southern Afrotropical Forest	0.05
Thicket		Worcester Renosterveld Karoo	0.82
Water		Breede River & Floodplain	0.35

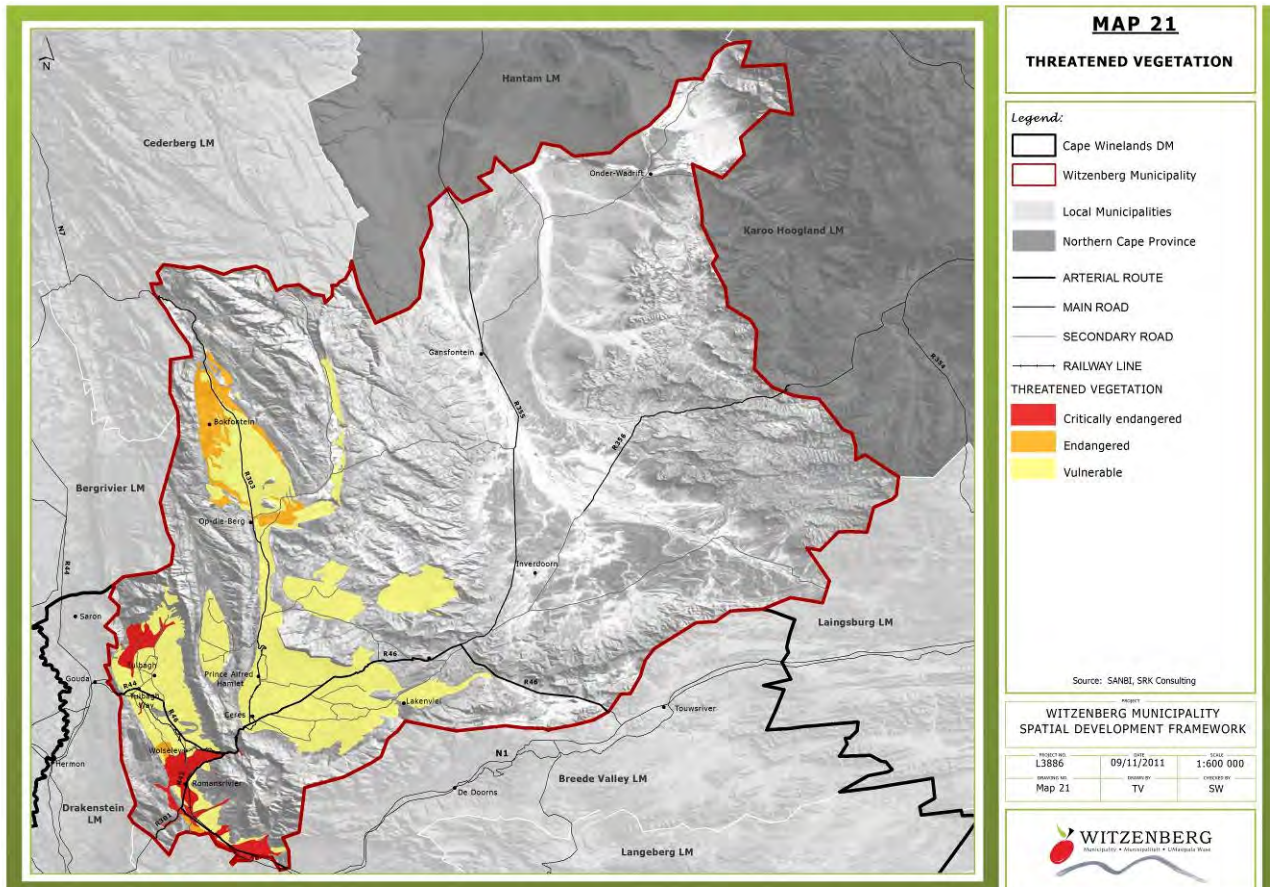
### a) Threatened Vegetation and Natural Habitat Remaining

Table B5 lists all of the vegetation types considered threatened, i.e. critically endangered (CR), endangered (EN) or vulnerable (VU), at a local scale in the Witzenberg Municipality (SRK Consulting, 2011).

Table B5: Threatened vegetation types in Witzenberg Municipality.

BIOME	VEGETATION TYPE	LOCAL STATUS
Fynbos	Breede Alluvium Fynbos	CR
	Romansriver Proteoid Renosterveld	
	Breede Arid Alluvium Fynbos	
	Tulbagh Alluvium Fynbos	
	Swartland Alluvium Fynbos	
Renosterveld	Swartland Shale Renosterveld	EN
Afrotropical Forest	Southern Afrotropical Forest	
Fynbos	Slanghoek Alluvium Fynbos	EN
	Kouebokkeveld Alluvium Fynbos	
Renosterveld	Breede Alluvium Renosterveld	VU
	Kluitjieskraal Silcrete Renosterveld	
Fynbos	De Heuwel Fynbos Renosterveld	VU
	Breede Sand Fynbos	
	Tulbagh Shale Fynbos	
	Kouebokkeveld Shale Fynbos	
Renosterveld	Wolseley Fynbos Renosterveld	VU
	Breede Shale Renosterveld	
	Tulbagh Fynbos Renosterveld	
	Ceres Shale Renosterveld	

Map 21 shows the original extent of the threatened vegetation types occurring in the Witzenberg Municipal area. Critically endangered, endangered and vulnerable vegetation types are found predominantly Kouebokkeveld, Warmbokkeveld, Agter-Witzenberg and Land van Waveren. Approximately 86% (9 263 km<sup>2</sup>) of the nearly 10 754 km<sup>2</sup> retains natural (and near natural or moderately degraded) habitat.



## B2.4.2 FAUNA

Vulnerable fauna populations occur over most of the Witzenberg Municipality but there are fewer known vulnerable populations in the north-eastern parts of the previous DMA. The interrelationship between fauna populations and their habitat means that fauna diversity is greatly dependent on the integrity and diversity of vegetation types (SRK Consulting, 2011). In the Witzenberg Municipality, fauna populations are therefore threatened by any threats to the natural vegetation, such as loss of habitat (e.g. through urbanisation and agriculture) and invasion by alien species. One of the most important ways of protecting fauna biodiversity is therefore the protection of their habitat. However, there are also more direct threats to fauna diversity in the Municipality, such as:

- a) Hunting and poisoning of species considered to be 'problem' species, especially in the agricultural industries.
- b) Barriers to movement in the form of roads and fences.
- c) The presence of domestic animals that hunt the indigenous wildlife.
- d) The spraying of insecticides to control pests (SRK Consulting, 2011).

The known habitats of sensitive fauna (such as the Riverine rabbit) occurring in the municipal area have been incorporated into the Critical Biodiversity Areas identified (refer to Chapter B2.4.3).



**a) Mammals**

Species such as Leopard (*Panthera pardus*), Caracal (*Felis caracal*), Grey Rhebok (*Pelea capreolus*), Cape Grysbok (*Raphicerus melanotis*) and Klipspringer (*Oreotragus oreotragus*) are some of the medium sized species occurring in the Witzenberg Municipal area and environs (Maree & Vromans, 2010). Smaller animals, which are commonly spotted, include Baboon (*Papio ursinus*), Badger (*Mellivora capensis*), Dassie (*Hystrix africae australis*), Grey Mongoose (*Galerella pulverulenta*), Striped Polecat (*Ictonyx straitus*), Porcupine (*Hystrix africae australis*), and Water Mongoose (*Atilax paludinosus*) (Maree & Vromans, 2010).

Bontebok, Red Hartebeest, Eland, Cape Mountain Zebra, etc., have been reintroduced into some areas within the region. The reintroduction of suitable species contributes to the faunal diversity and is encouraged and regulated by CapeNature in terms of a formal translocation policy. Small mammal *Species of Special Concern* includes the Striped Field-mouse (*Rhabdomys pumilio*), Namaqua Rock Mouse (*Aethomys namaquensis*) and Spine Mouse (*Acomys subspinosus*) (Maree & Vromans, 2010).

**b) Avifauna**

The bird species occurring in the area are typical of that of the Cape mountains, such as the Hamerkop (*Scopus umbretta*), Barn Owl (*Typo alba*), Cape Eagle Owl (*Bubo capensis*), Cape Sugarbird (*Promerops cafer*), Malachite Sunbird (*Nectarinia famosa*), and the Lesser Double-Collared Sunbird (*Nectarinia chalybea*). A number of birds of prey also occur in the area, the most notable of which are the Black Eagle (*Aquila verreauxii*) and the African Fish Eagle (Maree & Vromans, 2010). Egyptian Goose (*Alopochen aegyptiacus*) and Spurwing Goose (*Plectropterus gambensis*) occur in large numbers and represent a harvestable resources that can be utilised by controlled hunting.

**c) Herpetofauna**

A significant number of reptiles occur in the area. These include the Hawequa Flat Gekco (*Afreodura hawequensis*) which is listed in the South African Red Data Book as restricted. The region is also home to one of the World's Top 25 Endangered Turtles, listed by the Turtle Conservation Fund (TCF), namely the endangered Geometric Tortoise (*Psammobates geometricus*). This species is endemic to the Renosterveld of the area. The Geometric Tortoise or Suurpootjie is the only endemic tortoise in the Fynbos biome, and one of the rarest in the world (Maree & Vromans, 2010).

**d) Fish**

Most of the Witzenberg Municipality falls in the Olifants-Doorn Water Management Area and this primary catchment system is a southern African endemic hotspot for freshwater fish species, containing the highest number of endemic freshwater fishes, which are all threatened by invasive alien fish species, unsustainable water abstraction and habitat degradation. The Olifants-Doorn WMA offers fish sanctuaries for indigenous fish species (Job *et al*, 2008).

Fish sanctuaries are sub-quaternary catchments that are essential for protecting threatened and near-threatened freshwater fish that are indigenous to South Africa. They were used by the National Freshwater Ecosystem Priority Area project (NFEPA) as biodiversity surrogates to

supplement the representation of river ecosystem types. A goal of NFEPA is to keep further freshwater species from becoming threatened and to prevent those fish species that are already threatened from becoming extinct (Nel *et al*, 2011).

The Olifants and Doorn rivers support ten endemic fish species, eight of which are endemic to these systems. There are three cyprinid Redfin Minnow (*Barbus* and *Pseudobarbus* spp.), two Rock Catfish (Austroglanididae), and three large cyprinid species (*Barbus* and *Labeo* spp.). The three Redfin Minnow and two catfish species are restricted to the headwaters of tributaries, whereas the three larger cyprinids occur throughout the mainstream and tributaries of both systems. In addition to the endemic species, there are two other indigenous species with wider South African distributions, a small cyprinid, *Barbus anoplus*, which occurs in the northern tributaries of the Doring River, and the Cape Kurper, *Sandelia capensis*, which is endemic to the Western Cape, but may have been introduced into the Olifants River. Bass (*Micropterus* spp.) and Bluegill Sunfish (*Lepomis macrochirus*) that have been introduced into the system pose a significant threat to the indigenous species (Blue Science, 2011).

Abstraction, particularly in the Olifants River, is believed to have contributed to the decline in numbers and range of the three large cyprinids, i.e. Clanwilliam Yellowfish (*Labeobarbus capensis*), the Sawfin (*Barbus serra*) and Clanwilliam Sandfish (*Labeo seeberi*).

#### e) Invertebrates

A number of butterfly species classified as endangered in the SA Red Data Book for Butterflies have been identified in the Witzenberg Municipality and environs. These include *Poecilmitis endymion*, *Poecilmitis nigricans nigricans* and *Tsitana dicksoni*. Both *Poecilmitis endymion* and *Tsitana dicksoni* are classified as rare species, while *Poecilmitis nigricans nigricans* is classified as intermediate. These species are endemic to areas in the vicinity of the Du Toit's Kloof and Franschhoek Mountain Pass. *Poecilmitis endymion* inhabits the highest peaks of the mountains, with its colonies usually just off the summits along small rocky ridges. *Tsitana dicksoni* is found on partly grassy slopes (Maree & Vromans, 2010).

### B2.4.3 PRIORITY AREAS

#### a) Protected Natural Areas

Protected Areas are areas of land or sea that are formally protected by law and managed mainly for biodiversity conservation. Formal protected areas allow for long-term security of tenure and are gazetted in terms of the National Environmental Management: Protected Areas Act 57 of 2003 (NEMPAA).

Conservation Areas are those areas of land that are informally protected by landowners and users and managed at least partly for biodiversity conservation, e.g. areas subject to biodiversity agreements, non-declared private nature reserves, conservancies, etc. Conservation areas are not gazetted in terms of the NEMPAA and as such do not allow for long-terms security of tenure.

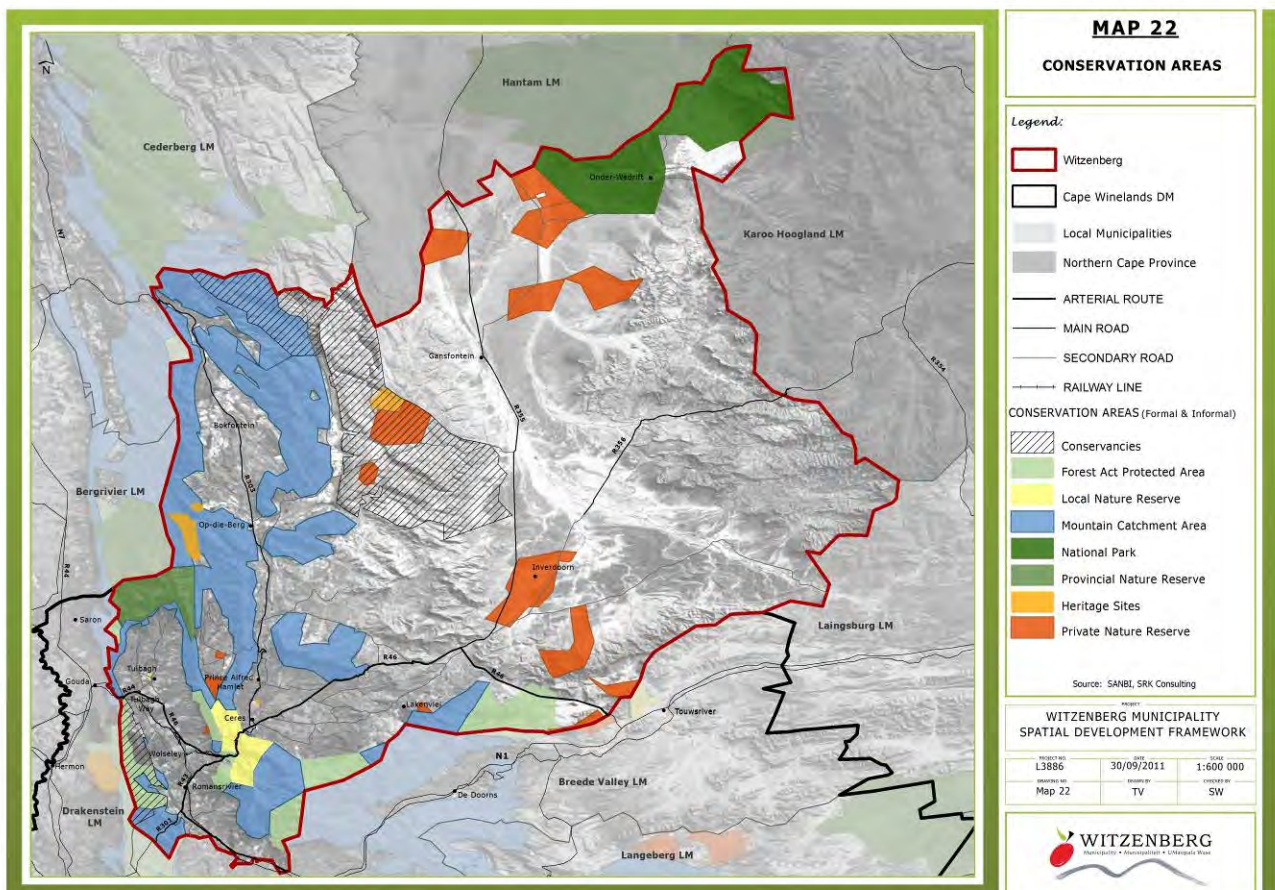
A total of 246 040 ha ( $\pm 23\%$ ) of land within the Witzenberg Municipality has been afforded some level of formal protection (refer to Table B6 and Map 22). However, approximately 60% of the protected areas constitute *Mountain Catchment Areas*, which are not considered secured for biodiversity conservation purposes due to a lack of promulgated land-use management regulations

and/or obligations. Furthermore, these tracts are vulnerable to threats such as alien invasion (mostly by pines and *Hakea sericea*) and increased fire frequencies and reduced moisture availability which is likely in the face of climate change (Maree & Vromans, 2010).

An additional 47 633 ha (4%) of land are listed as Private Nature Reserves, with the Cederberg Conservancy and the Swartruggens Conservancy adding another 96 815 ha of land which is managed in terms of cooperative agreements between the land owner and CapeNature.

Table B6: Formally proclaimed Protected Areas in or overlapping with the Witzenberg Municipality.

NATIONAL PARKS	PROVINCIAL NR	LOCAL NR	PROCLAIMED MCA	FOREST ACT PROTECTION AREA	PRIVATE NATURE RESERVES	HERITAGE SITES
-Tankwa Karoo	-Groot Winterhoek Wildeness Area	-Ceres Mountain Fynbos -Tulbagh	-Cederberg -Hawequas -Koue Bokkeveld -Matroosberg -Winterhoek	-Ben-Etive -Bokkeriviere -Fonteintjiesberg -Grootwinterhoek -Waterval -Wittebrug -Witzenberg	-Boontjiesrivier -Elim -Whispering Hills -Matroosberg -Kapkliip -Wakkerstroom -Opdrag -Vaalkloof -Inverdoorn -Klein Cedarberg -Groenfontein -Groote Kapelsfontein -Zwartbosch -Basjanskloof -Jakkalsfontein -Uintjieskraal	-Bo-Boschkloof (A) -Bo-Boschkloof (B) -Groenfontein PNR -Perdefontein -Visgat Natural Heritage Site



## b) Critical Biodiversity Areas

Fine-scale biodiversity plans or Critical Biodiversity Area (CBA) maps have been compiled for the Witzenberg Municipality. The CBA-plan is a scientifically defensible plan that prioritises conservation actions by setting quantitative thresholds for biodiversity features (e.g. vegetation types). It aims to identify a representative sample of biodiversity patterns for safeguarding, including species and habitats, as well as areas for ecological and evolutionary processes that maintain biodiversity.

The network of areas on the CBA map is designed to represent the most spatially efficient way of meeting the twin goals of pattern and process - i.e. to meet biodiversity thresholds within the least amount of land possible. These areas have been selected to avoid, where possible, conflict between biodiversity objectives and other land-uses (Maree & Vromans, 2010).

CBA maps indicate the following (Maree & Vromans, 2010):

- (i) Protected areas: Terrestrial or marine areas that are formally protected in terms of the National Environment Management: Protected Areas Act 57 of 2003 and/or Marine Living Resources Act 18 of 1998.
- (ii) Critical Biodiversity Areas: Areas required to meet biodiversity thresholds. They are areas of land or aquatic features (or riparian buffer vegetation alongside CBA aquatic features) which must be safeguarded in their natural state if biodiversity is to persist and ecosystems are to continue functioning.
- (iii) Ecological Support Areas (ESA): Supporting zones required to prevent the degradation of Critical Biodiversity Areas and Protected Areas. ESAs can be further subdivided into *Critical Ecological Support Areas (CESA)* and *Other Ecological Support Areas (OESA)*.
- (iv) Other Natural Areas: Areas of natural or near-natural vegetation identified on the map whose safeguarding is not required in order to meet national thresholds.
- (v) No Natural Remaining Areas: Sites which have been irreversibly transformed through development (e.g. urban development, plantation, agriculture) or poor land management (e.g. erosion) and as a result, no longer contribute to the biodiversity of the area.

### *Box B4 - Key Issues: Biodiversity & Conservation*

- Loss and fragmentation of natural habitat.
- Invasive alien vegetation.
- Altered fire regimes.
- Water abstraction and modification of wetland areas.
- Climate change.
- Inappropriate agricultural development, inadequately controlled mining and overgrazing.
- Development pressure associated with eco-tourism.

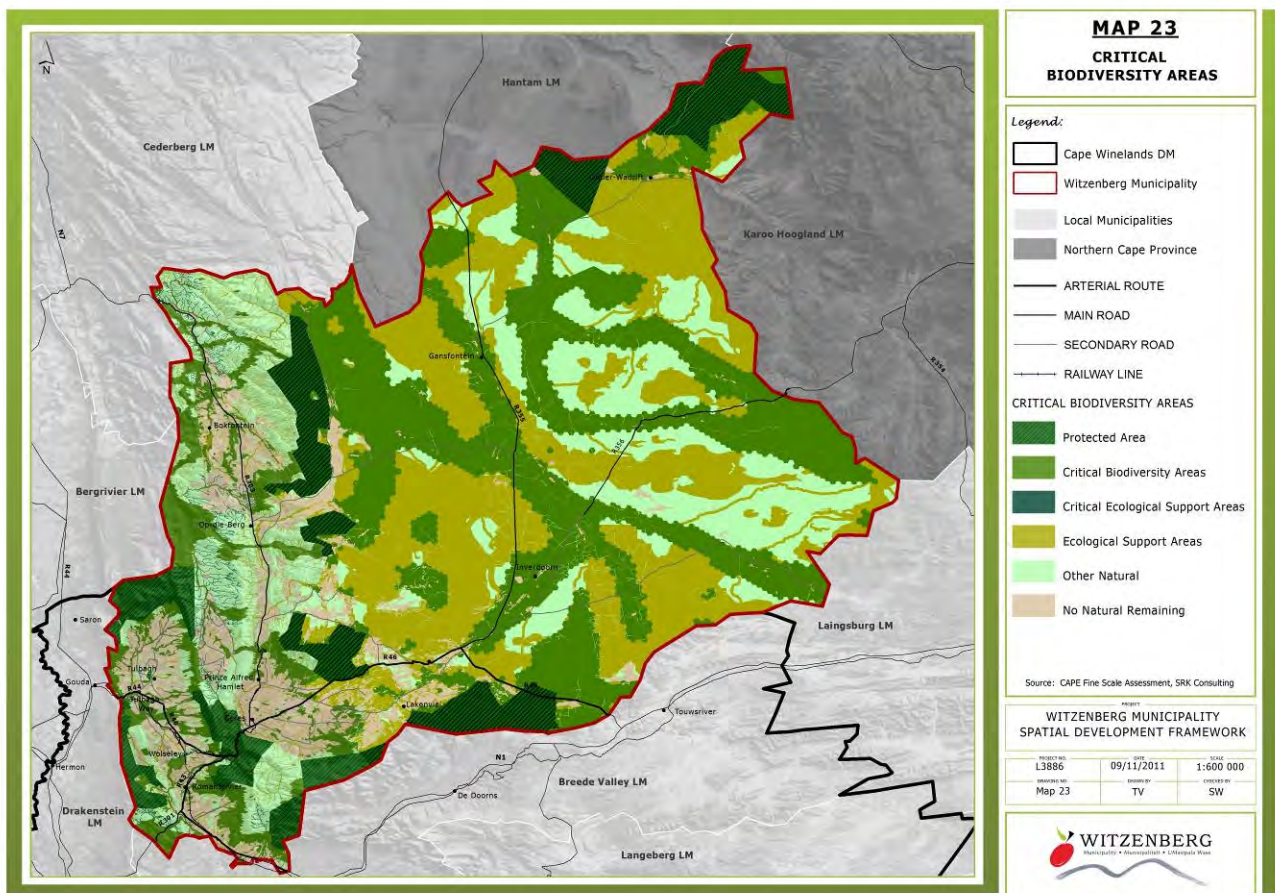
## c) Areas to be considered for Proactive Conservation Action

Currently, the range of Protected Areas does not adequately conserve representative samples of the full spectrum of the region's biodiversity. The reason is that historically, areas were placed under conservation for a variety of unrelated reasons. For example, an area might have been incorporated into a reserve because it was saline or waterlogged and unsuitable for farming or development. The net result is that the existing conservation estate does not include

representatives of all the region’s habitat types. Some habitats have high levels of protection while others have been completely overlooked (Maree & Vromans, 2010).

In order to achieve the objective of national biodiversity thresholds, all Critical Biodiversity Areas and all Ecological Support Areas (ESA) need to be safeguarded through appropriate land-use management. Although the CBA and ESA network represents the long-term conservation goal, this does not imply that all CBA or ESA need to become formal Protected Areas. Their *Desired Management Objectives* should rather be met, which implies that all degraded CBAs or ESAs or those characterised by invasive alien vegetation should be rehabilitated and restored.

CBA MAP CATEGORY	DESIRED MANAGEMENT OBJECTIVE
<ul style="list-style-type: none"> <li>- Terrestrial Critical Biodiversity Areas</li> <li>- Aquatic Critical Biodiversity Areas (feature &amp; buffer)</li> <li>- Protected Areas</li> </ul>	Maintain natural land. Rehabilitate degraded to natural or near natural and manage for no further degradation.
<ul style="list-style-type: none"> <li>- Ecological Support Areas (feature &amp; buffer)</li> <li>- Other Ecological Support Areas (feature &amp; buffer)</li> </ul>	Maintain ecological processes.
<ul style="list-style-type: none"> <li>- Other Natural Areas</li> <li>- No Natural Remaining Areas</li> </ul>	Sustainable development and management within general rural land-use principles. Favoured areas for development.



In addition to meeting the Desired Management Objective of a site, some ecosystems should also be targeted for proactive conservation. Proactive conservation involves the declaration of land as a formal Protected Area and the proper management thereof. Because it is not possible to target the

entire CBA and ESA network for proactive conservation all at once, certain ecosystems or species will need to be prioritised above others.

This prioritisation is a relative exercise and almost directly correlates to the rarity or degree of threat to the ecosystems or Species of Special Concern; i.e. threatened ecosystems and species should be targeted for proactive conservation before those non-threatened ecosystems are targeted. The following ecosystems have been identified as sites which should be considered for proactive conservation action (Maree & Vromans, 2010):

- (i) Aquatic ecosystems: Freshwater vleis are among the highest conservation priorities as their biology is relatively poorly understood and the units are threatened by vineyard and dam development, alien plant invasion, water abstraction and wetland drainage.
- (ii) Forests: The patches of Afromontane Forest constitute the only indigenous forests in the Upper Breede River Valley. These forest patches protect water sources and provide habitat for many restricted animal and plant species.
- (iii) Renosterveld: Romansriver Proteoid Renosterveld is rich in threatened species and a significant proportion of the remaining patches are disturbed. All patches of these vegetation types which can be rehabilitated should be cleared of alien plants and sound fire-management regimes need to be introduced.
- (iv) Fynbos: Alluvium Fynbos is severely threatened by agriculture, urbanization and alien invasion.
- (v) All remaining patches of healthy vegetation units which had an original extent of 5 000 ha or smaller. Although their ecosystem status may be 'not threatened', the smaller ecosystems are far more vulnerable than their larger counterparts. A single extensive development can convert a small unthreatened ecosystem to remnants which are Critically Endangered.
- a) All ecosystems that are listed on the National list of threatened terrestrial ecosystems or categorised as Endangered or Critically Endangered by either the NSBA 2004 or FSP analysis.

## **B2.5 CULTURAL HERITAGE RESOURCES**

### **B2.5.1 PALAEOLOGY**

The palaeontology of the Municipality is very complex. The numerous fossil-bearing shale bands and sandstones of the Cape Fold Belt are of particular significance and are the subject of ongoing scientific research. Areas where mountain passes cut through the fossil-bearing formations, e.g. the Gydo Pass (northern entrance into Ceres through the Skurweberg), are particularly at risk of illegal collection of fossil material, and destruction by infrastructure development (SRK Consulting, 2011).

### **B2.5.2 ARCHAEOLOGY**

Owing to threats of vandalism and wilful destruction, there is a tradition amongst academic institutions of not making public the exact location of archaeological<sup>12</sup> sites, particularly rock art sites and rather indicating areas of high archaeological potential (SRK Consulting, 2011). The whole of the Cape Fold Belt Mountain Range has a high potential for rock art and associated sites. No systematic archaeological surveys have taken place in the Witzenberg Municipality and the more remote areas, such as the Ceres and Tankwa Karoo, are thus hugely underrepresented in literature regarding archaeology (refer to Map 24). The Cape Winelands EMF states that according to Wiltshire (pers. comm. 2010) recent surveys of portions of the Municipality show a high

<sup>12</sup> Sites containing remains resulting from human activity, which are in a state of disuse and which are older than 100 years, including artefacts, human and hominid remains and manmade features and structures.

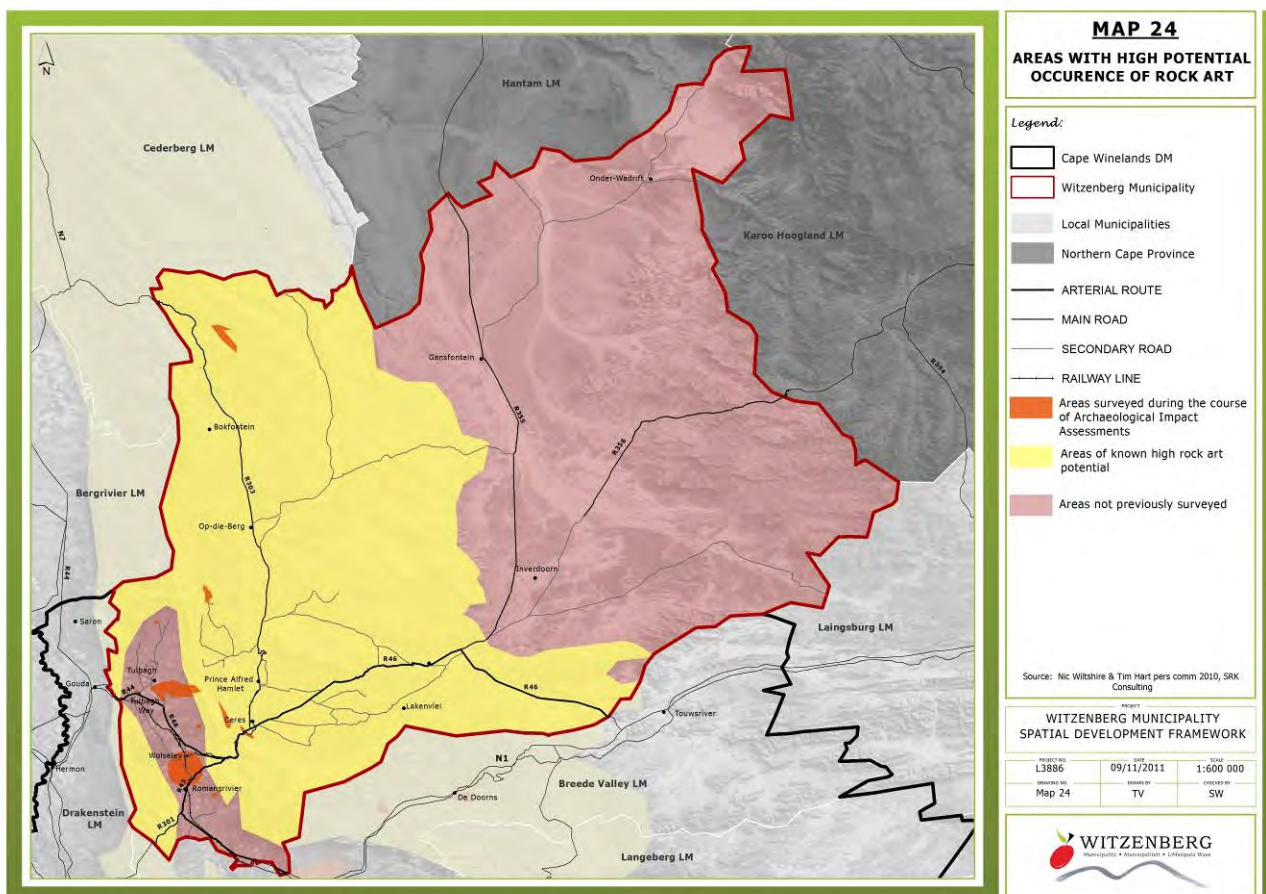
archaeological potential and it is conceivable that the whole area will have a high archaeological potential. Archaeological sites ranging from the Early Stone Age (ESA) right into the 19th century can be expected (SRK Consulting, 2011).

### B2.5.3 CULTURAL LANDSCAPES

In South Africa and especially in the Cape Winelands District, the human presence in the landscape is of great antiquity, extending back more than a million years. Embedded in the cultural landscape are the (end) products of human social interaction (cultural activities) e.g. rock art, stone tools, roads, historical houses, towns etc. (SRK Consulting, 2011).

The following historic themes are evident in the Witzenberg landscape (SRK Consulting, 2011):

- 18th century expansion into the interior (rural settlements/farms established at access points to water, range of rural architecture from simple pioneer-style houses to more elaborate homesteads and associated outbuildings).
- Anglo-Boer War (blockhouses, fortifications, graves).
- Apartheid (separate development of residential areas).
- British colonialism (Expansion of towns and settlements).
- Human occupation of the landscape through time (archaeological landscape).
- Slavery (Steinthal; associated architecture in rural areas e.g. slave bells).
- Transport (Road network, historic passes, railway line).
- Zones of cultural contact (as illustrated in some instances of rock art).



There are a number of cultural landscapes within the Witzenberg Municipality which in terms of historic significance and high scenic qualities could be considered for nomination as Grade 1

heritage sites e.g. the Tulbagh and Upper Breede River Valley (SRK Consulting, 2011). Table B7 provides a summary of the key cultural landscapes constituting the Witzenberg Municipality, including the heritage significance of each.

Table B7: Cultural landscapes represented in the Witzenberg Municipality.

CULTURAL LANDSCAPE	HERITAGE SIGNIFICANCE
<b>Tulbagh Valley</b>	<ul style="list-style-type: none"> <li>– Rural agricultural landscape associated with historical ‘Land van Waveren’.</li> <li>– Historic town of Tulbagh, established in 1743.</li> <li>– Concentration of conservation-worthy farmsteads.</li> <li>– Rhenish mission station, Steinthal, and its link with other mission stations in the Western Cape.</li> <li>– Significance in terms of the history of slavery and the role of Steinthal in the post-emancipation period.</li> <li>– Link between the Karoo stock farmers and farmers in the Tulbagh valley and Boland.</li> <li>– Historic passes (Roodezandt and Witzenberg).</li> <li>– Historic rail network and associated Anglo-Boer War blockhouses.</li> <li>– Tulbagh and Upper Breede River Valley identified as potential nomination for World Heritage Site.</li> </ul>
<b>Karooport-outspan &amp; associated road</b>	<ul style="list-style-type: none"> <li>– Historical and architectural significance in terms of outspan and tollhouse (a Provincial Heritage Site).</li> <li>– Historic gateway to the Karoo and association as the ‘highway’ to the diamond and gold fields.</li> <li>– Gateway qualities into the Karoo.</li> <li>– Representative of outspans as refreshment and overnight points on old wagon routes.</li> <li>– Inclusion of earlier outspan places, Theronsberg Pass (farm Leeufontein) and Hottentotskloof Pass, which were in common use during the 18<sup>th</sup> and 19<sup>th</sup> century.</li> <li>– Place of contact between indigenous groups and early colonist farms (reflected in the rock art).</li> </ul>
<b>Hex River Valley</b>	<ul style="list-style-type: none"> <li>– Spectacular scenic qualities with regards to the setting against the mountain backdrop.</li> <li>– One of the earliest viticultural landscapes outside the Boland.</li> <li>– Concentration of conservation-worthy farmsteads.</li> <li>– Hex River Railway line and the historic stations.</li> <li>– The Matroosberg Station: a very good example of a Victorian Station.</li> <li>– Matroosberg Station also significant in terms of its association with the Kaffrarian Rifle Memorial.</li> <li>– Associated rock art.</li> <li>– Place of contact between indigenous groups and early colonist farms during the 18<sup>th</sup> and 19<sup>th</sup> century (reflected in the rock art).</li> </ul>
<b>Wolseley Valley</b>	<ul style="list-style-type: none"> <li>– Collection of historical homesteads on the slopes of the Witzenberg.</li> <li>– Town of Wolseley has limited heritage value, although it is placed at the junction of two scenic routes and two valley systems (sense of place).</li> <li>– Scenic values with regards to its riverine setting.</li> </ul>
<b>Ceres Basin</b>	<ul style="list-style-type: none"> <li>– Historic settlement pattern forming a distinctive arc along the edge of the Ceres Basin.</li> <li>– Scenic qualities associated with the mountainous backdrop.</li> <li>– Collection of historical farmsteads.</li> </ul>

(Source: SRK Consulting, 2011)



#### B2.5.4 BUILT ENVIRONMENT

All the Witzenberg settlements have historic origins. However, no local heritage inventory has yet been prepared and vast areas of the Municipality have not been surveyed, especially in the Ceres and Tankwa Karoo.

Heritage sites have however been listed by the South African Heritage Resource Agency (SAHRA) and recorded in a number of secondary sources. Table B8 provides an inventory of these identified historic towns and their heritage sites. It is important to note that the total number of Built Heritage Sites would be much higher, once buildings older than 60 years have been included.

Table B8: Distribution of Provincial Heritage Sites in urban areas.

Town	Origin	Date/period	No. of Provincial Heritage Sites	No. of Built Heritage Sites
Ceres	Church	1854	0	1
Prince Alfred Hamlet	Railway	1861	0	1
Steintal	Mission	1843	1	1
Tulbagh	Church / Drostdy	1743/1804	34	38
Wolseley	Railway	1893	0	0

The lack of a systematic survey of the built environment and the identification of heritages sites in terms of the National Heritage Resources Act 25 of 1999 is evident when one looks at the representation of heritage sites in the rural areas. It is important to note that the lack of heritage sites is not an indication of an absence of sites, but rather a factor of a lack of survey material. A total number of 12 Provincial Heritage Sites and 36 Built Heritage Sites have been listed as occurring in the rural area of the Witzenberg Municipality (SRK Consulting, 2011).

#### B2.5.5 SCENIC ROUTES AND PASSES

Due to its topography the Witzenberg Municipality has a number of historic passes with outstanding scenic qualities. The early governors of the Cape Colony realised that access to the interior was the key to economic growth and expansion. Early settlers and farmers had to transport their wares by ox-wagon. Any journey through the inhospitable, mountainous terrain in the Witzenberg proved to be most difficult. Most mountain crossings involved unloading the ox-wagon, dismantling it, carrying the payload and the wagon over the mountain piecemeal on the backs of the oxen, and then re-assembling and reloading the wagons to continue the journey on the other side<sup>13</sup>.

Early passes primarily followed the paths trodded by herds of heavy animals. In early times, large herds of Elephant, Buffalo, Kudu, etc. roamed the Ceres and Tulbagh valleys. The development of the passes did indeed prove to be the impetus to the economy of the Cape Colony. Renowned road-builder Andrew Geddes Bain's signature pass above Wellington, Bain's Kloof, opened up a route to the north. This, together with the Michell's Pass had helped reduce the travel time between Beaufort West and Cape Town by ox-wagon from 20 to 12 days. This route through Ceres remained the main road to the north until the Du Toits Kloof Pass was completed in 1948.

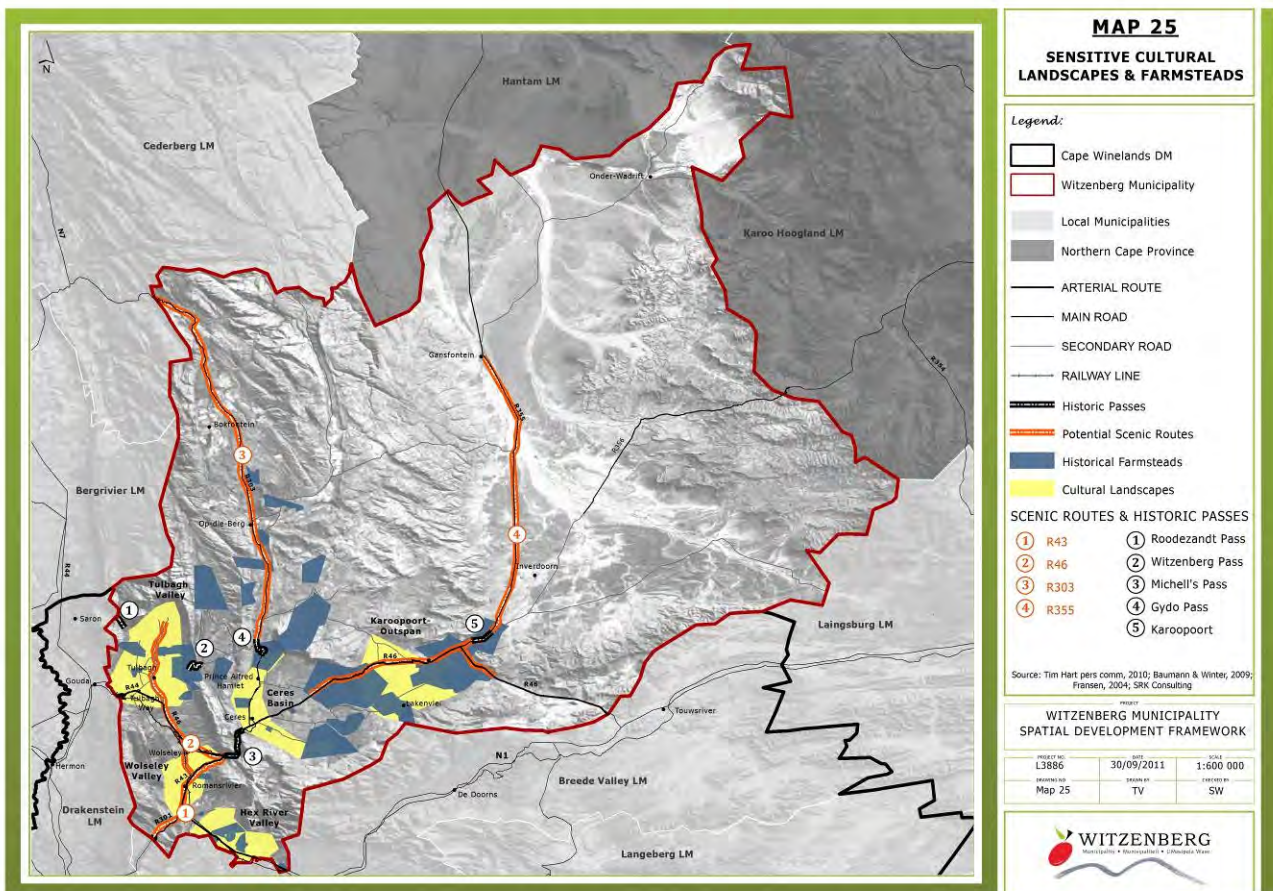
<sup>13</sup> <http://samountainpasses.co.za/Home/WesternCape/Passes/WINELANDS/tabid/118/Default.aspx> - accessed on 19 July 2011.

### B2.5.5.1 Potential Scenic Routes

Although no scenic routes have been officially declared in the Western Cape to date there is a high degree of overlap between the older road network and those which are considered scenic routes. Many of the existing secondary roads follow the alignment of 19<sup>th</sup> century wagon routes which linked farms with each other and provided access to the nearby towns and can be listed as potential scenic routes (refer to Table B9 and Map 25 (SRK Consulting, 2011).

Table B9: Potential scenic routes based on their outstanding environmental characteristics.

ROAD	SCENIC QUALITIES	MAP NO
<b>R43</b> From Worcester to Ceres	Traverses areas with a concentration of historic farmsteads.	<b>1</b>
<b>R46</b> From N1 via Ceres & Wolseley to Tulbagh	Traverses areas with a concentration of historic farmsteads.	<b>2</b>
<b>R303</b> From Ceres via Prince Alfred Hamlet & Op-die-Berg to Citrusdal	Unique mountainous experience of the Skurweberg as ascending the Gydo Pass.	<b>3</b>
<b>R355</b> Gravel road to Calvinia	Traverses areas with a concentration of historic farmsteads. It passes through the Karooport and at this point is considered to have unique scenic qualities relating to its role as threshold into the Karoo.	<b>4</b>



It is important to note that certain streets in Tulbagh and Ceres also qualify as scenic routes which have outstanding characteristics. For example Van der Stel and Church Street in Tulbagh have great tourism potential for Witzenberg. Refer to Toolkit D3 for guidelines regarding scenic routes.

It is imperative that Van der Stel Street and Church Street in Tulbagh be subject to creative design and landscaping in order to transform the entire town into one of the most memorable small town experiences in the Western Cape. For instance in Van der Stel, the creation of walk ways, bicycle paths, bus/taxi stops, etc. should be implemented to boost the tourism and recreational amenities of Tulbagh.

### B2.5.5.2 Historic Passes

Due to its topography the Witzenberg Municipality has a high concentration of historic passes with outstanding scenic qualities (refer to Table B10 and Map 25).

Table B10: Historic passes with heritage significance.

MOUNTAIN PASS	DATE	HERITAGE SIGNIFICANCE	MAP NO
Roodezandt Pass/ Oudekloof Pass	1748/1750	<ul style="list-style-type: none"> <li>– Historic origins and association with Thomas Bain.</li> <li>– Associated rock art.</li> <li>– Historic railway alignment with culverts and cuttings.</li> <li>– Off-takes of the Gouda 'leiwater' system.</li> </ul>	<b>1</b>
Nuwekloof	1968	<ul style="list-style-type: none"> <li>– Old Tulbagh Kloof Pass.</li> <li>– Carried traffic for over a hundred years.</li> </ul>	<b>2</b>
Witzenberg Pass	1780	<ul style="list-style-type: none"> <li>– Erstwhile direct route into the Ceres basin from Tulbagh.</li> <li>– Relic landscape feature.</li> </ul>	<b>3</b>
Michell's Pass	1848	<ul style="list-style-type: none"> <li>– Historic origins as Mostertshoek Pass (1765).</li> <li>– Associated in contexts which are rich in heritage such as rock art and palaeontology.</li> <li>– Michell's Pass Toll house (a Provincial Heritage Site).</li> </ul>	<b>4</b>
Gydo Pass	1848	<ul style="list-style-type: none"> <li>– Historic origins.</li> <li>– Associated contexts which are rich in heritage such as rock art and palaeontology.</li> <li>– Scenic qualities.</li> <li>– Threshold into the Ceres Basin from the north.</li> </ul>	<b>5</b>
Karooport (including Hottentotskloof and Theronberg Pass)		<ul style="list-style-type: none"> <li>– Historic highway into the interior.</li> <li>– Link with historic farms serving as outspans/overnight points from 18th century to early 20th century.</li> <li>– Conservation worthy farmsteads present along the route.</li> <li>– Tollhouse and Outspan is a Provincial Heritage Site.</li> </ul>	<b>6</b>

#### a) Nuwекloof Pass

There were four different passes used through the centuries to access the Tulbagh Valley or the *Land van Waveren* (the local farmers referred to the area as *Roodezand*). The Oudekloof Pass (previously known as Old Roodezand Pass), first passage to the area, was discovered by Pieter Potter in the 1700s, a land surveyor who was sent in search of cattle to barter from the Khoisan. The pass crossed a low neck between the Obiqua and Oudekloof Mountains. It was extremely

narrow and steep, which meant that wagons had to be unloaded and taken apart at the foot of the mountains and belongings had to be carried over<sup>14</sup>.

The Nieuwekloof Pass (also known as Nieuwe Roodezand Pass) was an alternative route discovered out of necessity due to the constraints posed by the Oudekloof Pass<sup>15</sup>. This route had no steep section like the other and by the 1760s superseded the original pass.

In 1855, some 200 years after the first pass was built, Thomas Bain inspected the Tulbagh Kloof and constructed the Tulbagh Kloof Pass on the western side along the left bank of the Klein Berg River. The Tulbagh Kloof Pass carried traffic for over a hundred years. By this time the current formation of the pass could not handle the volume of traffic. Engineering had certainly improved enormously in those 100 years and a new route along the inside bank of the river was formed. The Tulbagh Kloof Pass was renamed to the Nuwekloof Pass and was opened in 1968.

### *Box B5 - Key Issues: Cultural Heritage Resources*

- Pressure of urban densification, which could destroy aesthetic qualities of historic towns.
- Changes in urban form or character, i.e. gated communities and gentrification, and a general loss of good quality places.
- Inappropriate construction of linear infrastructure.
- Informal settlements, which fragment the agricultural landscape and negatively impact visual qualities.
- Placement of lower income housing.
- Heritage tourism, which increases the exposure of sensitive heritage sites.

#### **b) Michell's Pass**

The Skurweberg ('the scaly mountains') and Witzenberg Mountains posed a real threat to the development of Ceres and also the Warm and Koue Bokkeveld. These ranges were formidable and only after Andrew Geddes Bain drove Michell's Pass up the Breede River Valley, did this area start to realise its potential<sup>16</sup>.

In 1765, farmer Jan Mostert laid a 13 km road, known as *Mostershoek's* Pass, up the valley and it served travellers for over 80 years. Two other routes existed, the Witzenberg and Skurweberg Passes built by Jan Pienaar in 1780.

In 1846, Colonel Charles Michell, surveyor-general of the Cape instructed Andrew Geddes Bain to make a new road through the Breede River gorge. Building the 'new road' on the existing Mostershoek Pass with 240 convicts, Bain completed the job in a little over two years and the new pass was opened on 1 December 1848. This beautiful and well-constructed pass was upgraded in the 1930s to handle more traffic, and during the Second World War the road was surfaced with concrete due to shortages of bitumen. It also suffered damage in the 1969 earthquake but was duly repaired.

<sup>14</sup> <http://namibsands.wordpress.com/2010/03/08/the-long-way-home-via-five-mountain-passes-a-weekend-in-the-olifants-river-mountains-part-v/>

<sup>15</sup> <http://samountainpasses.co.za/Home/WesternCape/Passes/WINELANDS/NuwekloofPass/tabid/174/Default.aspx> - accessed on 19 July 2011.

<sup>16</sup> <http://samountainpasses.co.za/Home/WesternCape/Passes/WINELANDS/MichellsPass/tabid/172/Default.aspx> - accessed on 19 July 2011.

In 1955, a tablet commemorating Mostert's first 'road' was put at the point where it crossed Bain's road. Bain's original pass, sections which are still used today, were proclaimed a heritage site in 1998, and the original Toll house is also a heritage site. As with the Gydo Pass, Michell's Pass is associated in contexts which are rich in heritage such as rock art and palaeontology (SRK Consulting, 2011).

### c) Gydo Pass

Approximately 10 km north of Prince Alfred Hamlet the Gydo Pass takes the R303 through the mountains by the same name, to link the Warm Bokkeveld valley with the Koue Bokkeveld. The pass was built by Andrew Geddes Bain in 1848 while he was working on the Michell's Pass. Both the pass and the mountains take their name from the Khoi language that means 'steep pass'<sup>17</sup>. Flowering shrubs such as *ericas* and *proteas* occur in large numbers along the pass and on the mountain slopes. Along the pass a number of rock art and palaeontological sites are sited (SRK Consulting, 2011).

## B2.6 ENVIRONMENTAL RISKS

### B2.6.1 CLIMATE CHANGE

Climate change is considered one of the biggest challenges facing humankind (Maree & Vromans, 2010) and possibly the most serious threat to most of the ecosystem services in the district (CapeNature in CSIR, 2007). Climate change impacts on the availability of suitable habitat for natural vegetation, availability of natural water resources as well as agricultural activities, posing a serious risk to the environment as well as basic human requirements (i.e. water, health and food) (Maree & Vromans, 2010).

In the Western Cape, climate change is predicted to result in a drying trend from west to east, with a reduction in winter rainfall and possibly slightly higher summer rainfall (especially in the eastern portion of the province). It is anticipated that this will result in more irregular rainfall of possibly greater intensity, and of an overall reduction in rainfall and more drought periods (i.e. when there is a deficiency of rainfall or precipitation for extended periods of time). The greatest impact of climate change in the Municipality is thus expected to be on water supply (Marree and Vromans, 2010 and Africon, 2005 in SRK Consulting, 2010).

It is expected that minimum, maximum and mean temperatures will rise, with an estimated increase in the annual average temperature of at least 1°C by 2050 and between 3°C and 5°C by 2100 (SRK Consulting, 2011). The frequency and intensity of extreme climatic events is also likely to increase (DEADP, 2007 in SRK Consulting, 2011). The Cape Winelands is one of the district municipalities most affected by drought in the Western Cape. During the 2003/2004 season with the Witzenberg Municipality was declared a disaster area after continuously receiving below-average rainfall (Africon, 2005 in SRK Consulting, 2011).

One of the most effective ways to mitigate the effects of climate change at a local level is through the protection of Critical Biodiversity Areas (CBAs) and Ecological Support Areas (refer to Chapter B2.4.3 and Map 23). The CBA maps have identified a network of important biodiversity areas linking

<sup>17</sup> <http://samountainpasses.co.za/Home/WesternCape/Passes/WINELANDS/GydoPass/tabid/340/Default.aspx> - accessed on 19 July 2011.

lowland valleys with mountain peaks, as well as specific features in the landscape such as south-facing mountain sides, which would stay cooler and moister than exposed northern-facing slopes and thus become important habitats for species driven from their current habitats when conditions there change. Keeping such ecological corridors intact enables the migration of birds, animals and plants, thus enhancing their ability to persist in spite of changing climatic conditions, and strengthens the overall resilience of the natural ecosystem, which provides a multitude of ecosystem services to mankind, against climate change (Maree & Vromans, 2010 in SRK Consulting, 2011).

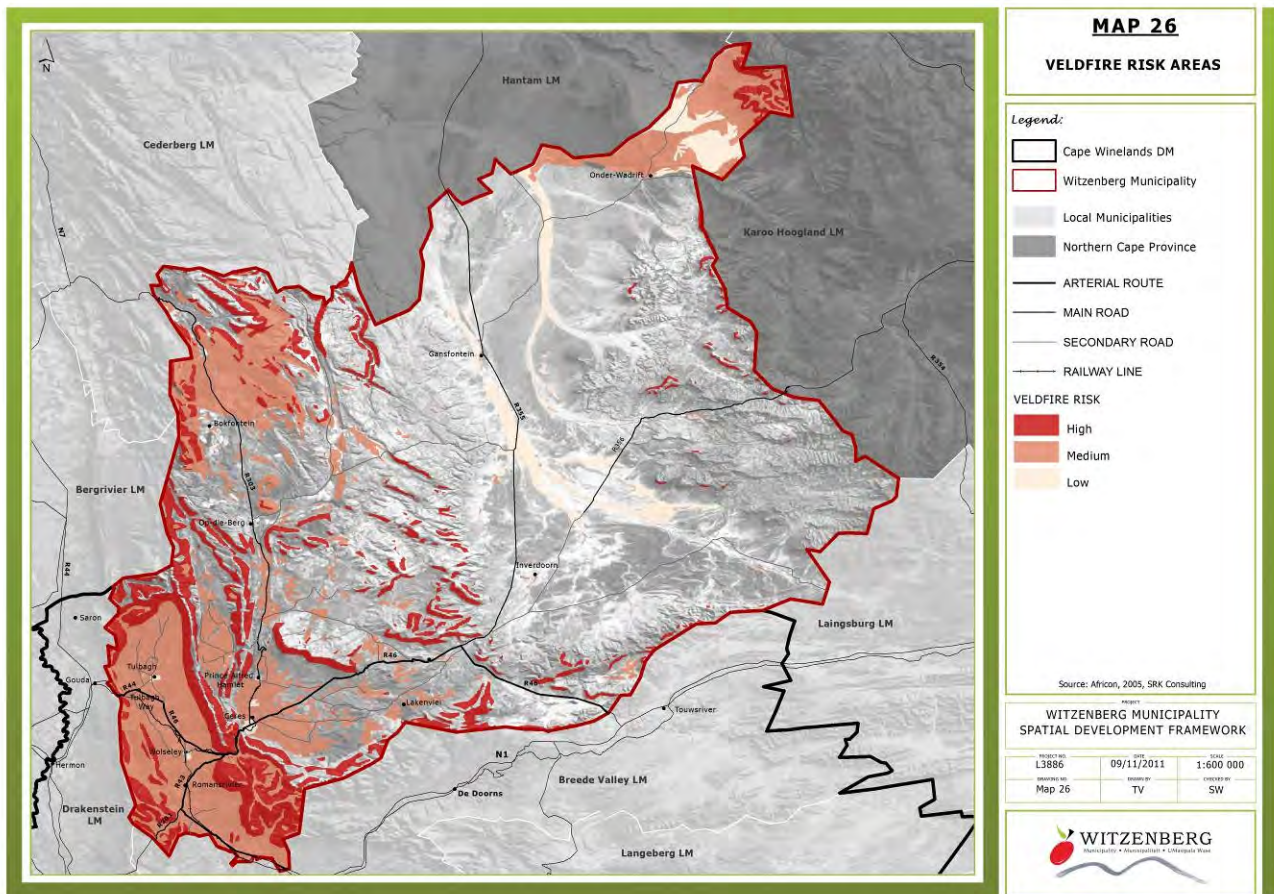
The potential impacts of climate change emphasise the importance of the long-term protection of water resources as well as management of mountain catchment areas as the primary source of water supply. Suitable management and protection of priority sub-catchments along with their buffers (as identified on the CBA maps) is critical for the protection of water resources, in the face of climate change (Maree & Vromans, 2010 in SRK Consulting, 2011).

### **B2.6.2 WILDFIRES**

Fire is part of the natural ecological processes in most parts of South Africa, and occur in many areas without necessarily posing a threat to life, property or the environment. Fynbos is a fire prone system, and has adapted to survive and depend on fire for nutrient cycling as well as stimulation of various stages in the Fynbos life cycle, including flowering, release of seeds and germination in various species. Where human settlement has encroached into the natural environment, however, wildfires pose a growing threat to vulnerable properties and communities. Wildfire control and prevention measures (to protect human settlement) may thus result in Fynbos areas not being burnt at appropriate (natural) frequencies, and limiting regeneration of the veld. In addition, environmental change such as the spread of alien invasive plants, a process that can be accelerated by fire, increases the hazard from wildfires, as fires can occur more frequently and burn for more intensely and for longer periods. This poses a threat to both human settlement and natural Fynbos vegetation (SRK Consulting, 2011).

Weather conditions, the topography of the area, and the quantity and type of fuel present, influence fire behaviour (i.e. the manner in which fuels ignite and fire spreads) in several ways (SRK Consulting, 2011). The Witzenberg Municipality falls within one of the distinct fire climate zones, which is characterised by a high mean potential for fire in summer. Weather conditions characteristic of wildfires are persistent windy conditions coupled with high temperatures (> 30°C) and low mean relative humidity (SRK Consulting, 2011).

Areas at risk of veld fires largely coincide with the mountainous regions of the Koue and Warm Bokkeveld, Agter-Witzenberg and Land van Waveren (refer to Map 26). The expected increase in temperatures associated with climate change may result in an increase in veld fire frequency. Alien invasive vegetation is highly flammable and provides large volumes of fuel for veld fires. The combination of more frequent and more intense fires is likely to have devastating effects on the region, both its ecosystem and man-made assets (Maree & Vromans, 2010 in SRK Consulting, 2011).



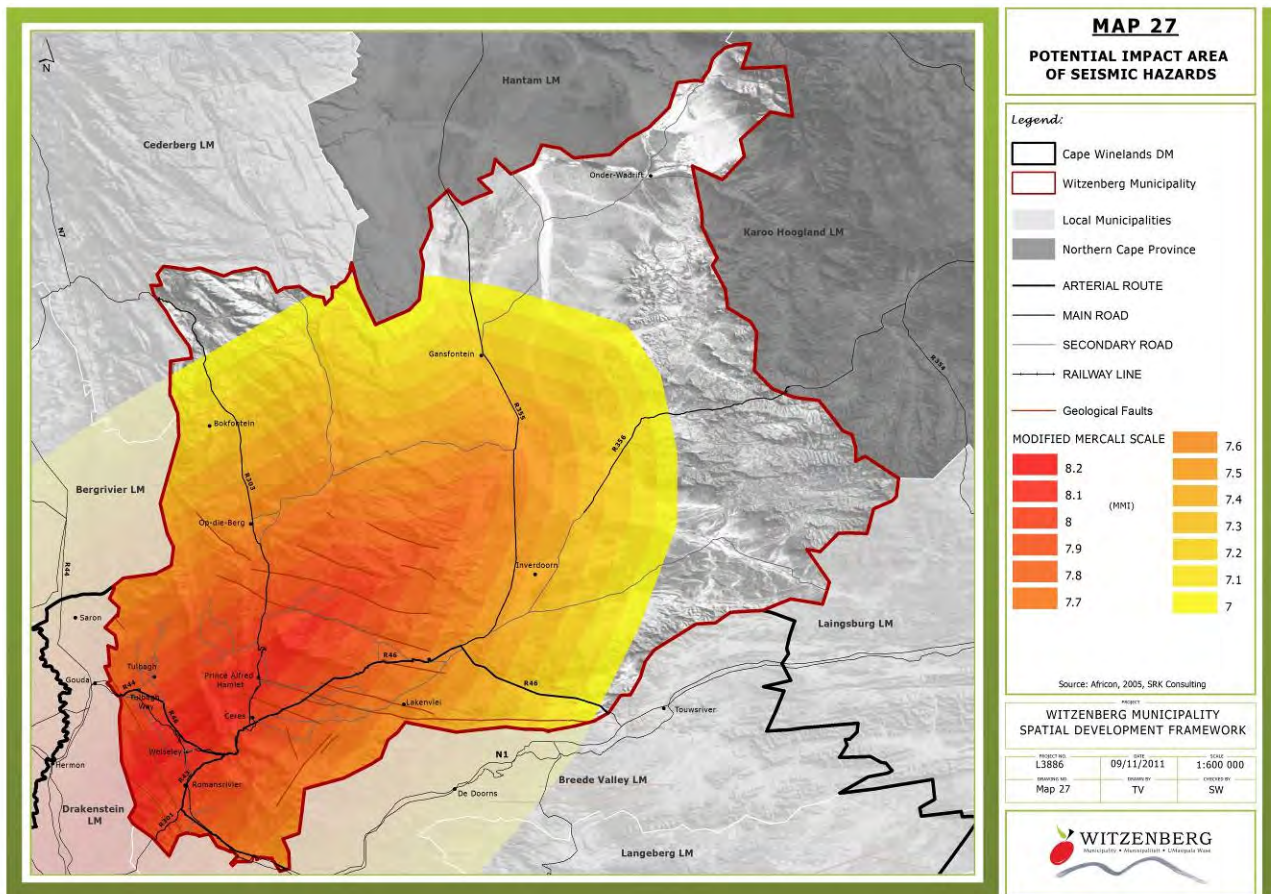
### *Box B6 - Key Issues: Environmental Risks*

- Impacts on biodiversity and ecosystem services.
- Increase in frequency and intensity of veld fires.
- Alienation of flood patterns and its intensity and frequency.
- Reduction in availability of surface water, impacting in turn on recharge of groundwater resources.
- Reduced agricultural yields and poorer quality produce.
- Dependency on agriculture may significantly impact the economic composition of the Municipality.
- Significantly impacting the vulnerable communities.
- Possibility of earthquakes and associated after-shocks.

#### **B2.6.3 SEISMIC ACTIVITY**

Earth tremors have been recorded in the south-western Cape as early as 1620 (Kijko, 2002). In the past 50 years, at least 53 tremors have been recorded in the District municipality, primarily in the vicinity of Tulbagh, six of which exceeded 4.5 local magnitude (ML) and four of which exceeded 5.1 ML (Fernandez and Guzman, 1979).

On 29 September 1969, a destructive earthquake occurred in the Tulbagh-Ceres area, with a ML of 6.3 on the Richter scale, and the Western Cape is now being considered one of the most seismically active regions in South Africa. The worst damage occurred near the epicentre in the northern region of the Tulbagh Valley (Keiser, 1974 in SRK Consulting, 2011), as illustrated in Map 27.



Geological investigation into the earthquake suggested that the main earthquake along with the aftershocks that followed were part of a 'swarm'. It is suspected that the earthquake was caused by a shallow tectonic failure along the Saron-Groenkloof lineament which is consistent with the type of tremors that occurred in the Witzenberg Mountains during the 1969-1970 period. The earthquake was followed by a series of aftershocks, the most devastating of which occurred on 14 April 1970, with a ML of 5.7 on the Richter scale (Kijko, 2002 in SRK Consulting, 2011).

### B3 URBAN AND RURAL SETTLEMENT PATTERN

Some of the settlements of the Western Cape have solid developmental bases and experience dynamic growth, whilst others are stagnant or are declining. Settlements with declining populations, economic activities, services and infrastructure leads to decreasing social and economic service levels in the surrounding hinterland, which consequently impacts negatively on rural quality of life (US & CSIR, 2010). This is particularly relevant to the settlements and rural hinterland of the Witzenberg Municipality and it is therefore imperative that the dynamics and intricacies of these problems and challenges be approached in an integrated manner.

The Growth Potential Study of Towns in the Western Cape was completed in 2004 (further referred to as the 2004-Towns Study) and was instrumental in the gazetted Western Cape PSDF. The 2004-Towns Study was recently reviewed, primarily to ascertain whether any significant changes have occurred in the growth potentials of settlements since 2004 and to update the relevant principles and prescriptions to align with the latest national and provincial policy documents. The analyses of the settlements of the Witzenberg Municipality are primarily based on the 2010-Towns Study with reference to the Cape Winelands SDF and the 2004-Towns Study.



### B3.1 SPATIAL ECONOMY

The western portion of the Witzenberg Municipality is characterised by a agrarian landscape with a cluster of urban settlements located adjacent to the main transportation routes (the southern portion falls within the Breede River Valley Major Regional Development Corridor as per the Western Cape PSDF). The eastern part of the Municipal area is a typical Karoo landscape, characterised by undeveloped natural veld, mostly used for extensive agriculture. This spatial structure corresponds with the planning clusters identified in the Cape Winelands District SDF, i.e. the northern settlement cluster and the 'deep' rural areas (refer to Map 28).

Ceres, Tulbagh and Wolseley, all settlements located in the *northern settlement cluster*, have relatively broad economic bases primarily based on agriculture, with agri-processing, retail and financial services, tourism and transport as supporting driving forces. This area is however faced with the reconciliation between a stagnant, if not declining population and the need and demand for improved residential infrastructure facilities, in context of a decreasing local revenue base (Rode Plan, 2009).

According to the 2010-Town Study the Witzenberg Municipality has a low development potential with medium social needs. It has a low performance in the economic, infrastructure and institutional indexes, while the physical environment index's performance was of medium standard. This current situation could pose to be problematic since most of the settlements located in the Municipality have medium to high social needs. It is unlikely that a municipality with low development potential will be able to address the social needs of it settlement without some form of intervention from provincial government or partnerships with the public sector.

Current challenges facing the Witzenberg Municipality are likely to remain, if not increase in severity. Even with the best of intentions, the local authority will not be able to address the issues of poverty, unemployment, etc. given its own staff and resource limitations. Effective public-private partnerships based on a pragmatic and flexible approach to development thus becomes critical (Rode Plan, 2009).

#### B3.1.1 HIERARCHY OF TOWNS

Various levels of nodes/settlements are applicable to Witzenberg. The CWD SDF identified Ceres as a *first order town*, with Wolseley, Tulbagh and Prince Alfred Hamlet being rated *third order towns* and Op-die-Berg a *fourth order town* (Rode Plan, 2009). This classification was based on the investment categories identified in the 2004-Town Study (refer to Table B11 and Map 28).

The 2010-Town Study classified the *agricultural service centres*<sup>18</sup> of Ceres and Wolseley as stable settlements with medium development potential. Tulbagh, a *agricultural service centre with a strong tourism component and identity* has also been classified as a stable settlement with medium development potential. Prince Alfred Hamlet, a *residential settlement*, has been classified as a settlement with low development potential and thus barely coping, while the *residential settlement* of Op-die-Berg are struggling due to very low development potential. Tulbagh and Wolseley are

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<sup>18</sup> All settlements were classified in terms of their main function and place identity in the 2010-Town Study, with the particular view to inform development and investment decisions that would be applicable and targeted to each group of settlements in terms of its functional classification.

furthermore characterised by high social needs, Ceres and Prince Alfred Hamlet have medium social needs while the need for social services are low in Op-die-Berg.

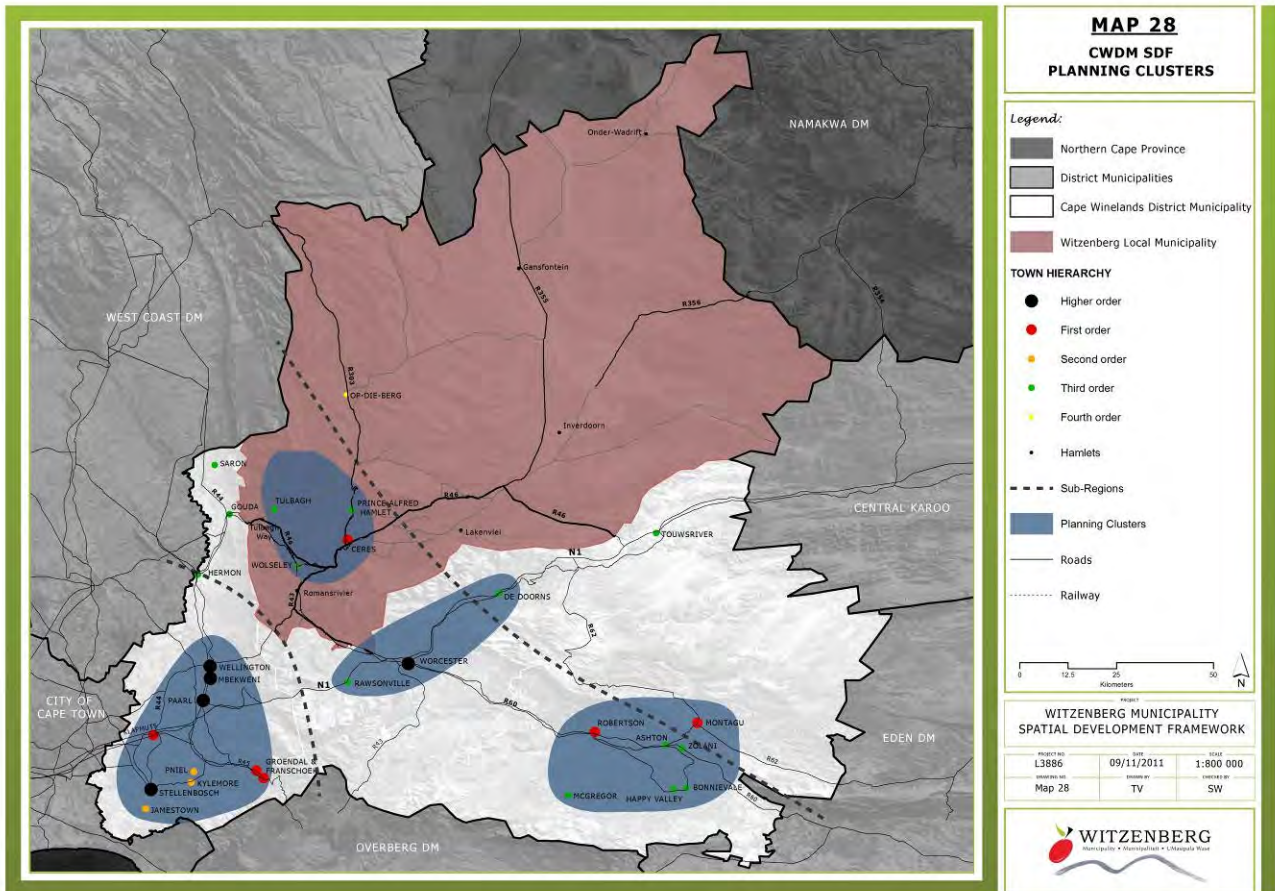


Table B11: Comparison between 2004 and 2010 classification of the Witzenberg Settlements and Cape Winelands DM SDF’s reclassification.

SETTLEMENT	2004-TOWN STUDY		CWD SDF	2010-TOWN STUDY		2010-TOWN STUDY
	Development Potential	Social Needs		Development Potential	Social Needs	
Ceres	High	Medium	First Order Town	Medium	Medium	Stable settlement
Op-die-Berg	Low	Low	Fourth Order Town	Very Low	Low	Struggling settlement
Prince Alfred Hamlet	Low	Medium	Third Order Town	Low	Medium	Coping settlement
Tulbagh	Medium	High	Third Order Town	Medium	High	Stable settlement
Wolseley	Medium	Medium	Third Order Town	Medium	High	Stable settlement

### B3.2 SETTLEMENTS

The cross tabulation of development potential and social needs hold important implications for the type of development and investment decisions on a broad scale. In order to avoid what Atkinson (2008:4) refers to the NSDP becoming a self-fulfilling prophecy where so-called ‘areas lacking in economic potential’ will ‘continue to be starved of government funding and development effort...it is necessary to identify innovative approaches to support development in settlements outside the metropolitan area and formulate development and investment policies and strategies sensitive to the function and identify of individual settlements (US & CSIR, 2010).

The detailed analyses of each settlement are described below and include the following:

- Development index performance.
- Index classification for economic, physical environment, infrastructure, institutional and composite development index.
- Core indicators in which the settlement performed best and worst.

### B3.2.1 CERES

#### a) Land-Use History

Ceres is the administrative centre of the Witzenberg Local Municipality. According to Erasmus (2004), the settlement of Ceres was established in 1854 on the farm of Jan Frederik Munnik. Municipal status was granted 10 years later. From the outset, the civic leaders assiduously promoted the development of both public and private gardens as well as tree planting on an extensive scale. This accounts for the many oak, poplar, pine and bluegum trees that continue to line the streets, farm roads and rural lanes of the area.

The suburb of Bella Vista is located adjacent to Ceres. Following an application by Ceres Fruit Growers for expansion of their business premises and housing for their workers, the divisional council took a call option in 1965 on the land where Bella Vista is located. On 6 November 1969 the area known as *Area K* was proclaimed a coloured area.

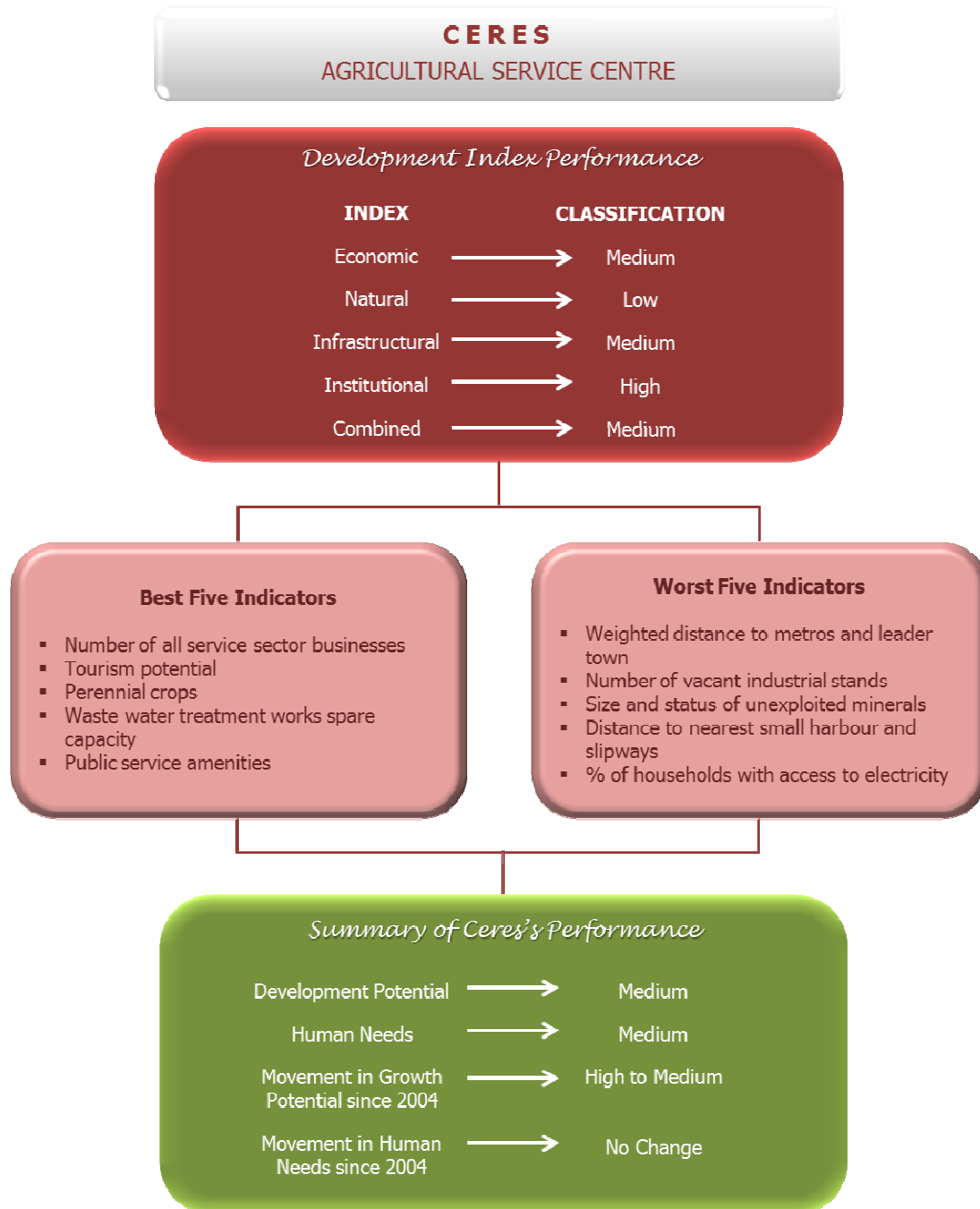
The expansion of the area was problematic as it was seen as an independent coloured area that had to replace the existing coloured areas of the town<sup>19</sup>. The development of Nduli started during the 1940s when mention was made of the provision of a 'location' for Black African people<sup>20</sup>. However, Black Africans had been living in the Ceres district for a long time. Sakkiesdraai was the first residential area in Ceres for black people. The name probably refers to the building material (bags) used for the houses. Later accommodation was supplied outside the town in a place called Nduli, which means '*on the hill*'.

During the 1960's people were moved from Sakkiesdraai to this new development outside Ceres. After the abolishment of influx control the population of Nduli increased significantly and a housing shortage developed. Today Nduli consists of two areas, the town (old section) and the informal residential area.

<sup>19</sup> [http://www.ceresmuseum.co.za/?page\\_id=155](http://www.ceresmuseum.co.za/?page_id=155) – accessed on 13 July 2011.

<sup>20</sup> [http://www.ceresmuseum.co.za/?page\\_id=127](http://www.ceresmuseum.co.za/?page_id=127) – accessed on 12 July 2011.

## b) 2010-Town Study Analyses



## c) 2012-2017 Witzenberg IDP

The 2012-2017 Witzenberg IDP identifies the growth direction for Ceres as being in the following areas:

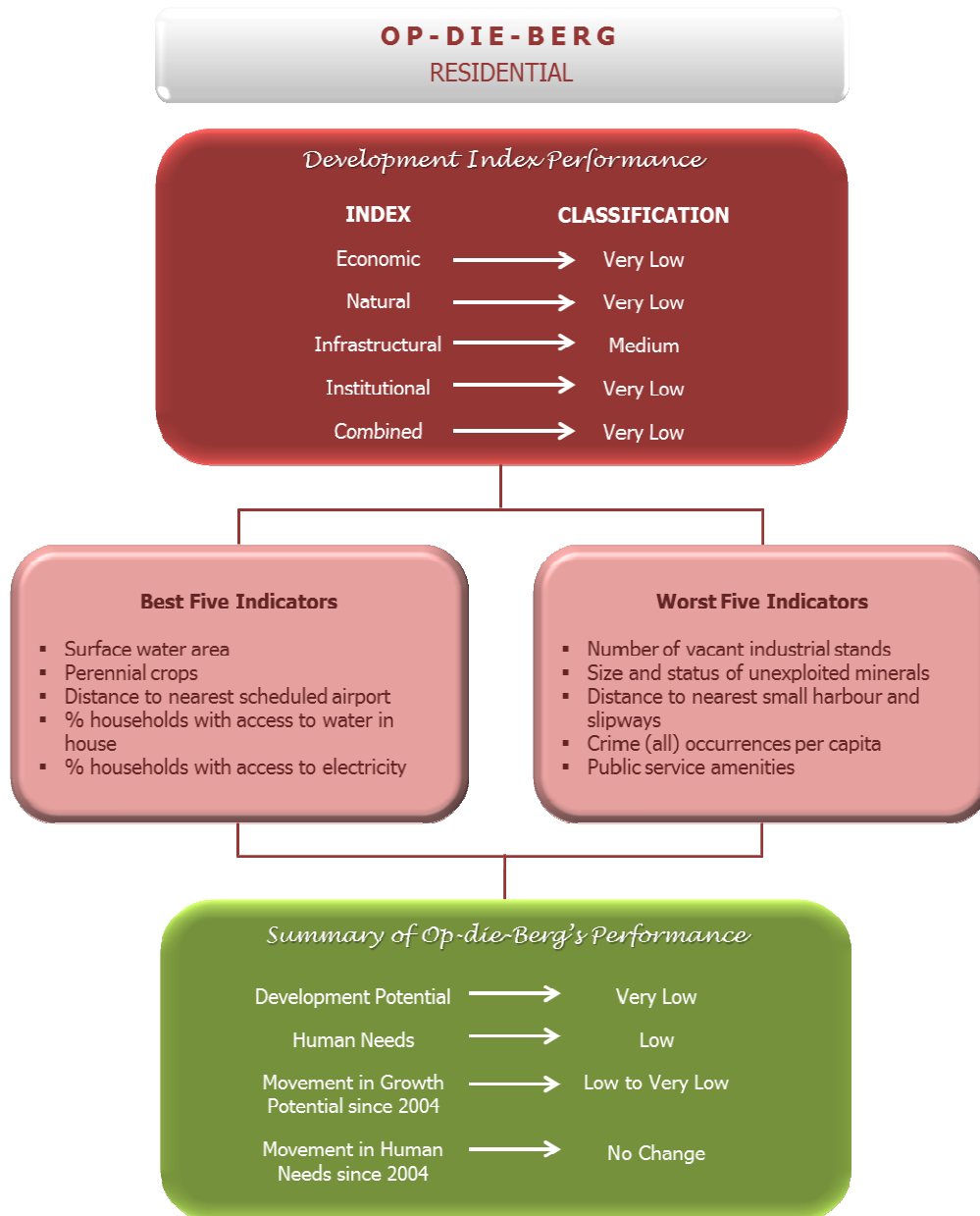
- (i) Major town, administrative and economic centre.
- (ii) Increase economic development supported by infrastructure investment.
- (iii) Support tourism initiatives.
- (iv) Settlement growth (Bella Vista & Nduli).
- (v) Social investment support (Bella Vista & Nduli).
- (vi) Township regeneration (Bella Vista & Nduli).

### B3.2.2 OP-DIE-BERG

#### a) Land-Use History

Op-die-Berg, in the Koue Bokkeveld, is a small 'agri-village' situated on top of a mountain range approximately 50 km north of Ceres. A small stream creates a physical barrier between the low cost housing of Op-die-Berg South (known as Nuwedorp) and the town's commercial centre.

#### b) 2010-Town Study Analyses



#### c) 2012-2017 Witzenberg IDP

The 2012-2017 Witzenberg IDP identifies the growth direction for Op-Die-Berg as being in the following areas:

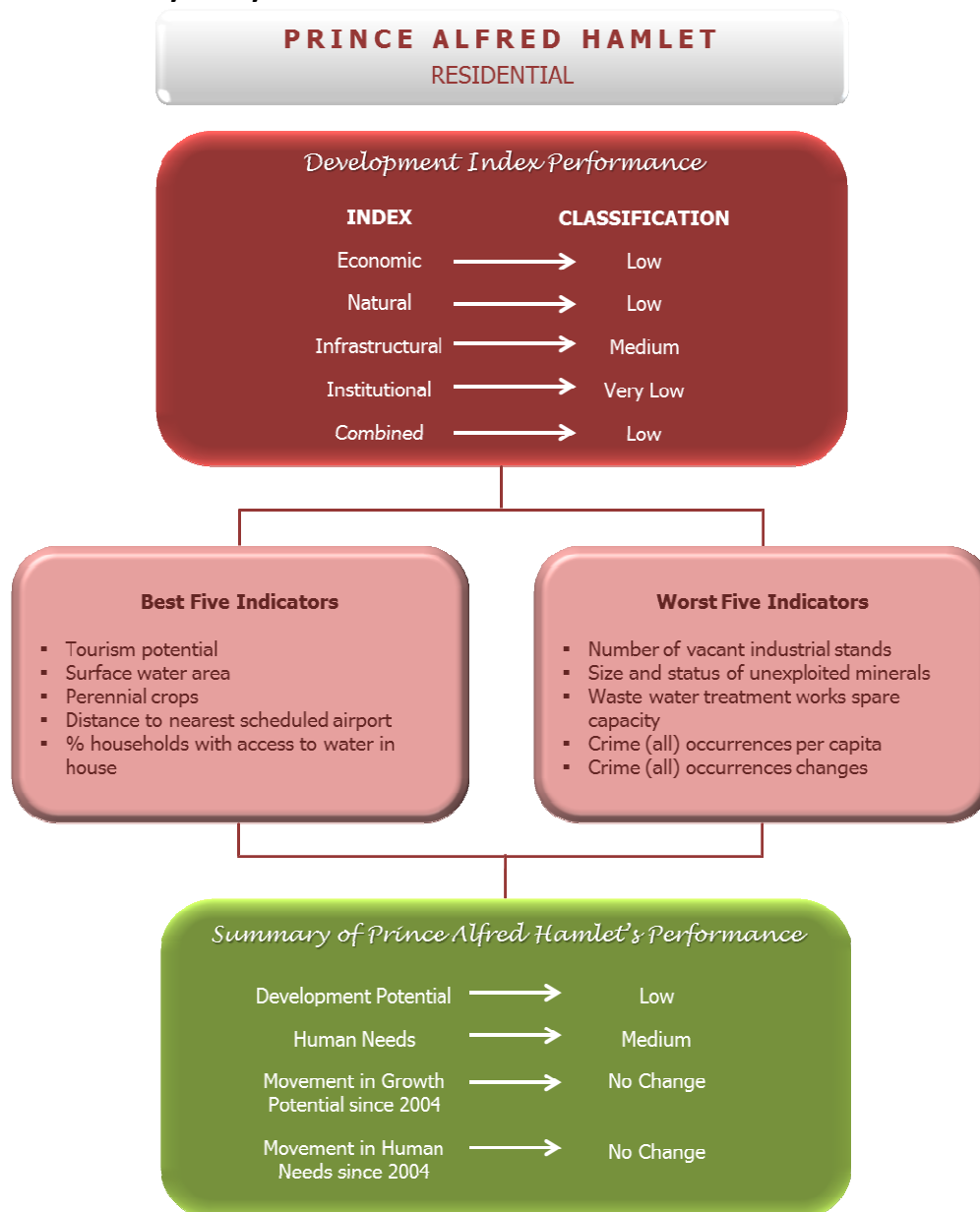
- (i) Low development potential.
- (ii) Social investment support.
- (iii) Support tourism initiatives.

### B3.2.3 PRINCE ALFRED HAMLET

#### a) Land-Use History

Prince Alfred’s Hamlet is approximately 10 km north of Ceres on the R303. The town was founded on Jan Goosen’s farm, Wagenboomsrivier on 8 December 1861 and named after Queen Victoria’s second son, who visited South Africa the year before. A town council was inaugurated on 8 December 1874 and on 28 December 1910 the town was given municipal status. In 1926 a town hall was built and in 1979 the offices next to it were added. The Hamlet Country Hotel is the oldest business still in operation in Prince Alfred Hamlet, and part of the building was constructed in the 19<sup>th</sup> century.

#### b) 2010-Town Study Analyses



### c) 2012-2017 Witzenberg IDP

The 2012-2017 Witzenberg IDP identifies the growth direction for Prince Alfred's Hamlet as being in the following areas:

- (i) Low development potential.
- (ii) Social investment support.
- (iii) Support conservation and eco-tourism of large critical biodiversity areas.
- (iv) Township regeneration.

### B3.2.4 TULBAGH

#### a) Land-Use History

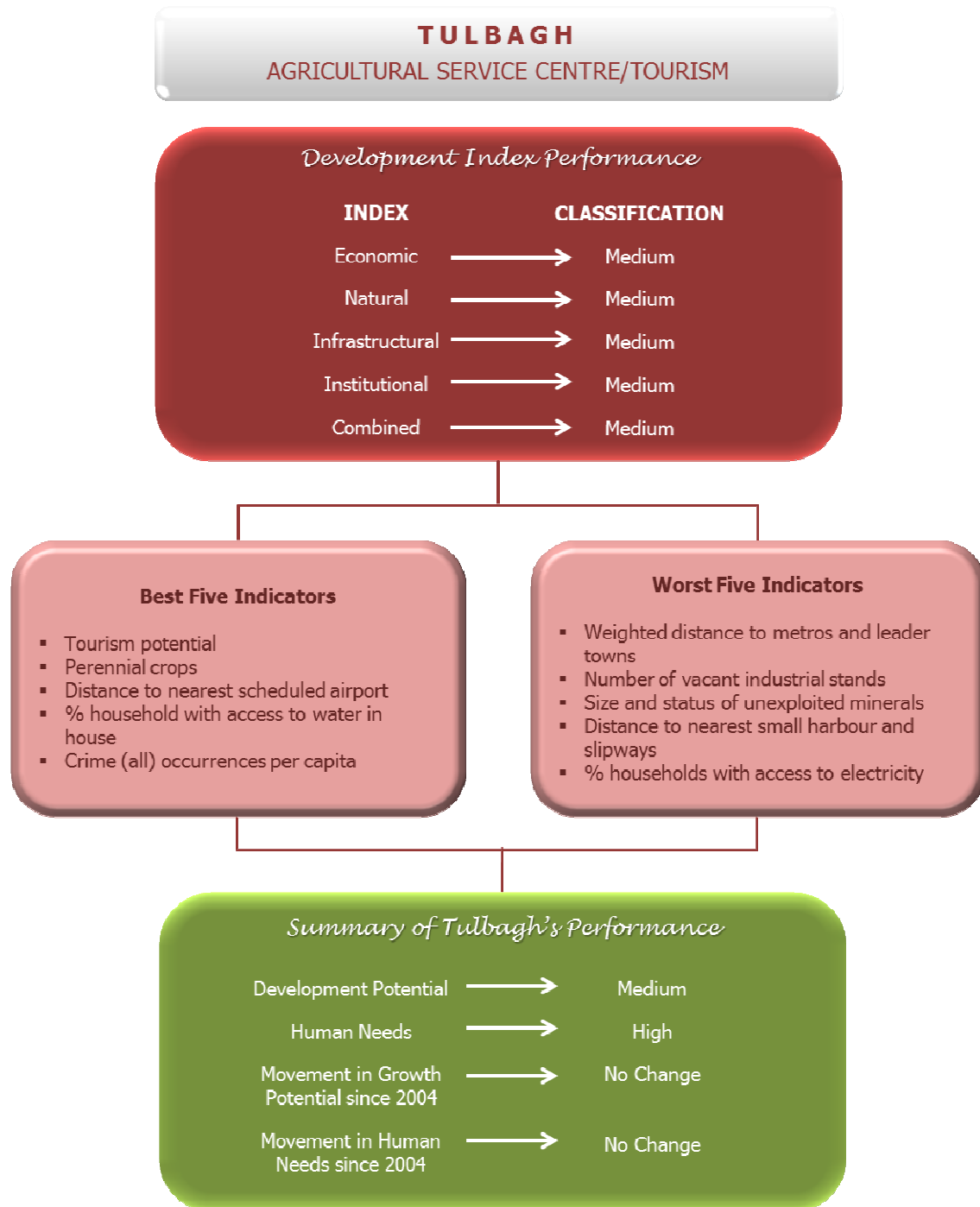
As mentioned previously, the Tulbagh valley was originally known as 'Het Land van Waveren' in honour of the Waveren family of Amsterdam whose family was connected to the mother of Simon van der Stel. Farmers soon began to stream into the well-watered valley immediately after the Governor's favourable report. In 1743, a Dutch Reformed church was built for the congregation, which called itself Roodezand ('red sand'), a reference to the ravine in the western mountains. The town was laid out in 1795 and named after Ryk Tulbagh, the then Cape governor. The drostdy (magistrate's residence) followed in 1806 on the farm *Rietvlei*. The town was granted municipal status in 1861 (Erasmus, 2004).

The town is situated in a bowl surrounded by imposing mountain ranges, with the Obiqua Mountains to the west, the Winterhoek Mountains in the north and the Witzenberg Mountains in the east. Like Ceres, the valley experiences a Mediterranean-type climate. The southern side of the valley is open to cooling south-east winds during the hot summer months. Accordingly, Tulbagh enjoys some of the most diverse and attractive conditions for viticulture in the Cape and the differences in terroir available to wine makers allow for a wide diversity of distinctive wines of excellence, attributes which have attracted many new producers to the valley.

Today Tulbagh is an important commercial centre servicing its souring hinterland and has the country's oldest wine co-operative. Apart from premier-quality white wines and sherry, the district also produces wheat and a variety of deciduous fruit. Sheep farming also makes an important contribution. Furthermore, the Tulbagh Horse and Wildflower Show, first staged in 1887, is also the oldest flower show in the country.

On 29 September 1969 a full-fledged earthquake, registering 6.4 on the Richter-scale, rocked the town, killing nine people and causing considerable damage to many of the old buildings. A minor earthquake followed approximately six months later, on 14 April 1970. These disasters prompted what is probably the largest single reconstruction and restoration project in South Africa to date. Church Street with its 32 buildings were fully restored and all of them were proclaimed as heritage sites which now constitutes the largest concentration of heritage sites in a single street in South Africa. Furthermore, Tulbagh also has access to the famous Route 62 Tourism Route (refer to Chapter B6 ).

## b) 2010-Town Study Analyses



## c) 2012-2017 Witzenberg IDP

The 2012-2017 Witzenberg IDP identifies the growth direction for Tulbagh as being in the following areas:

- (i) Historical and tourism centre.
- (ii) Support private development initiatives.
- (iii) Low industrial growth potential.
- (iv) Social investment support.
- (v) Township regeneration.

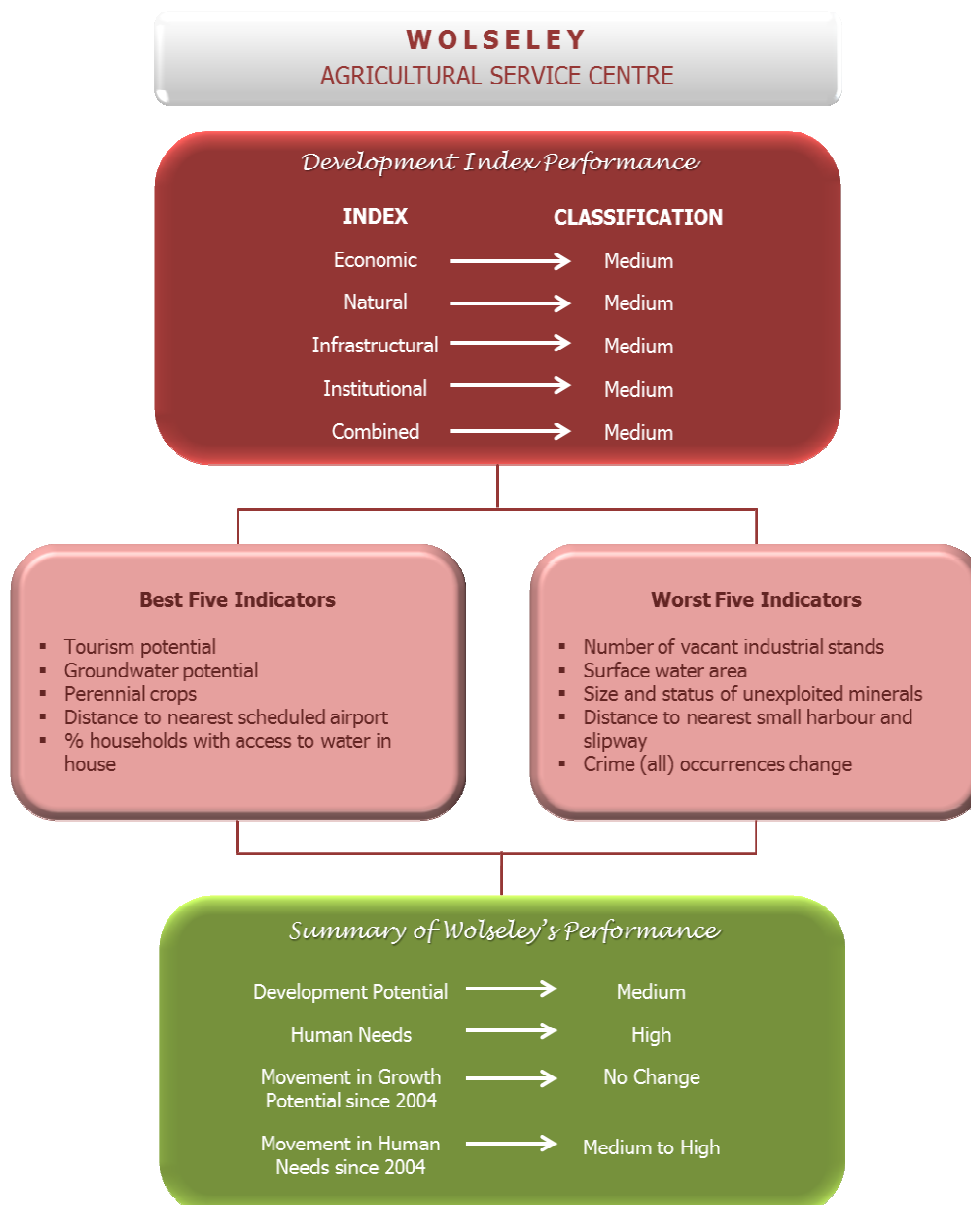


### B3.2.5 WOLSELEY

#### a) Land-Use History

Wolseley was founded in 1875 on the farm *Goedgevonden*. It was named after Sir Granet Wolseley, appointed governor of Natal and supreme commander of the British forces in South Africa in 1875. At first, the new village was developed as a railway terminus for the fruit growers of the Tulbagh Valley and the Warm Bokkeveld east of the Witzenberg Mountains. The railway reached Wolseley in 1876 and the branch line through the Michell's Pass to Ceres was built in 1912 (Erasmus, 2004). Later the small town developed a modest industrial base of its own, including the first wool washery in the country. The first fruit-canning plant was commissioned in 1936. Wolseley is known for its cultivation of wine, fruit and 'waterblommetjies', and fruit canning, packing and despatch are principal activities for the town. In 1968, Brenn-o-Kenn started producing cream of tartar – it is the only factory of its kind in the country (Stevens, 2003).

#### b) 2010-Town Study Analyses



### c) 2012-2017 Witzenberg IDP

The 2012-2017 Witzenberg IDP identifies the growth direction for Wolseley as being in the following areas:

- (i) Increase economic development supported by infrastructure investment.
- (ii) Settlement growth.
- (iii) Social investment support.
- (iv) Township regeneration.

### B3.2.6 OTHER TOWNS AND RURAL SETTLEMENTS

Table B12: Other towns and settlements in Witzenberg.

SETTLEMENT		DESCRIPTION
a)	<b>Tulbagh Road:</b>	The settlement of Tulbagh Road originated around a former railway station. The railway line divides the settlement in a residential component of only 7 units south of the railway line and agriculture-related activities north of the line. At present, Witzenberg Municipality does not provide any services to the residents in this settlement.
b)	<b>Steinthal:</b>	Steinthal originated in 1842/1843 as a haven for freed slaves, where they could build a house and have vegetable gardens. At approximately the same period, a school was opened for the smaller children and later even offered education to white children due to its high standard of education. Between 1995 and 2001, the institution was upgraded to its present form with an adequate Skills Development Centre. Today, Steinthal is an Estate with a Poultry Farm, Dairy, Children's Development Centre and a Home for the Socially Disadvantaged as well as a Secondary School for Learners with Special Education Needs.
c)	<b>Drostdy:</b>	The settlement of Drostdy is located some 3km north of the town of Tulbagh, adjacent to the Drostdy-Hof winery. The settlement consists of approximately 20 agricultural-zoned properties. At present, Witzenberg Municipality does not provide any services to the residents in this settlement.
d)	<b>Waterval:</b>	Waterval is situated approximately 8.5km southwest of Tulbagh and 4km southeast of Tulbagh Road. This settlement was established as a housing node for Cape Nature Conservation employees. The settlement consists of 26 houses, a two-classroom school and a small clinic. The school is currently used as an office and training centre. The clinic has not been used for some time and has fallen into a state of disrepair. Discussions held with the community at Waterval identified a preference by the residents to obtain transfer of the houses and approximately 93 ha of neighbouring agricultural land to a trust for farming purposes.
e)	<b>Kluitjieskraal:</b>	Kluitjieskraal Forestry Station is situated adjacent to the Pine Valley residential area to the east of Wolseley. Kluitjieskraal was one of the first forest stations to be established as a labour and housing node for the Department of Forestry. The residential village currently extend over some 80 units. The settlement is located far from the centre of Wolseley which negatively impacts on service delivery and transport costs. It is also removed from the main formal and informal activities of Wolseley.

f)	<b>Breede River Station:</b>	Breede River station is an accumulation of residential units on private and public land next to the Breede River railway siding. The majority of units in this settlement have been established on land owned by the Waboomsrivier Wynkelder. In addition, a farm school has been established on Farm No. 208/55, next to the R43.
g)	<b>Prince Alfred Hamlet Station:</b>	The former Wolseley/Ceres/Prince Alfred Hamlet railway line terminated at the station south of Prince Alfred Hamlet. Several package plants and related stores have been established in this area together with a fair share of farm workers' houses. The area is readily accessible and able to connect to the bulk service network.

## B4 SOCIAL CONTEXT

### NOTE:

In July 2011 the Witzenberg Municipality has been amended by incorporating most of the former District Management Area of the Cape Winelands District Municipality (CWDMA 02). No statistics are available for this amended municipal area.

The socio-economic data provided by Statistics South Africa was therefore amended to determine an approximate status quo as it relate to human resources in the Witzenberg Municipality. The census data was taken from the interactive tables of the 2001 South African Census as amended on 9 December 2005. The tables for the former Cape Winelands District Management Area (CWDMA 02) were added to the tables of the former Witzenberg Municipality (WC022) to determine an estimated average.

Data from the 2007 Community Survey and Global Insight South Africa (2008), as presented by the Witzenberg IDP 2012/2017 is used in order to provide a more current perspective. For the purpose of strategic planning, the adapted data from the 2001 Census, as amended in 2005, remains the baseline data.

### B4.1 DEMOGRAPHY

The 2001 Census data puts the population of the Witzenberg Municipality at approximately 83 568 people, with a fairly even distribution according to age and gender. The average density ratio is 31.98 persons per square kilometre with 7.67 black people per km<sup>2</sup>, 2.91 white people per km<sup>2</sup>, 21.35 coloured people per km<sup>2</sup>, and 0.05 Asians per km<sup>2</sup>.

The population of the amended Witzenberg Municipality is estimated to be 90 066 people with the major ethnic group being the Coloured population, representing approximately 70% of the entire population (refer to Table B13). The sex structure is almost equal with 50.1% (45 114) of the total population being female. The male population constitutes the remaining 49.9% (44 952).

Table B13: Population composition of Witzenberg Municipality.

ETHNIC GROUP									
BLACK		COLOURED		WHITE		INDIAN/ASIAN		TOTAL POPULATION	
Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
9 869	8 076	30 999	32 904	4 013	4 173	71	52	44 952	45 114
<b>17 945</b>		<b>63 812</b>		<b>8 186</b>		<b>123</b>		<b>90 066</b>	

(Adapted 2001 Census, as amended in 2005).

The compound population growth rate between 1996 and 2008 was 1.7%, characterised by the following breakdown per racial group (Global Insight in Witzenberg IDP 2007-2011):

- Blacks at 6.2%
- Coloureds at 0.9%
- Asians at 5.3%
- Whites at -0.7%

In stark contrast to the above, the 2012-2017 Witzenberg IDP estimated the population of the Municipality to be 75 152 people in 2007 with a negative growth rate of 1.8% between 2001 and 2007. According to the IDP, the Coloured population group represented 68.5% of the population in 2007, followed by Africans at 18.9%, Whites at 12.7% and Asians at 0.02%. Discrepancies such as these present a major challenge to ensure proper forward planning for any municipality.

As mentioned in the note above, for the purpose of strategic planning, the adapted data from the 2001 Census, as amended in 2005, therefore remains the baseline data for the purpose of the SDF.

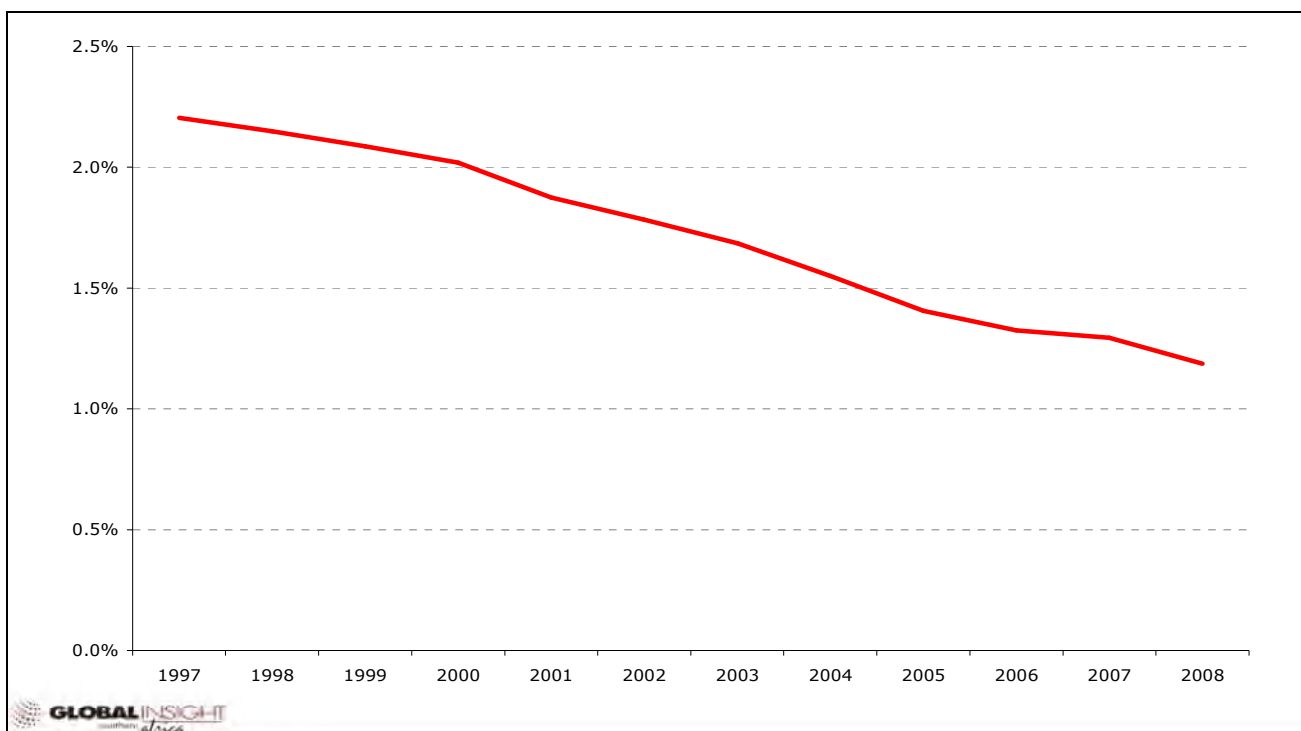


Figure B1: Total population growth of Witzenberg Municipality (Source: Global Insight).

#### B4.1.1 COMPOSITION OF THE POPULATION

Almost 40% of the total population of Witzenberg Municipality is under the age of 19 years, and approximately 58% is younger than 25 (refer to Table B14). This trend is often referred to as a 'bell-shaped' population pyramid and it is forecast to remain constant, at least for the next few years (refer to Figure B2).

This youthful population trend holds significant implications for future development planning as this section of the population will become economically active within the next few years. A consistent economic growth rate and the creation of sufficient job opportunities are therefore of importance. Approximately 4% of the population are older than 65 years. Most members of this group of people are not economically active.

Table B14: Population Structure of Witzenberg Municipality.

Age Group	African/Black		Coloured		Indian/Asian		White		% of Population (75 671)	TOTAL
	Male	Female	Male	Female	Male	Female	Male	Female		
0-4	774	706	3 569	3 490	7	4	282	237	10.07%	9 069
5-9	546	525	3 574	3 487	4	5	328	275	9.71%	8 744
10-14	517	557	3 586	3 494	7	4	340	333	9.81%	8 838
15-19	618	747	3 218	3 277	7	7	292	282	9.39%	8 455
20-24	1 331	1 173	2 617	2 646	5	5	165	144	8.98%	8 086
25-29	1 779	1 313	2 472	2 810	14	7	234	269	9.88%	8 898
30-34	1 210	998	2 601	2 949	10	6	314	332	9.35%	8 420
35-39	953	615	2 318	2 672	4	0	350	318	8.03%	7 230
40-44	656	457	1 933	2 215	3	0	324	342	6.58%	5 930
45-49	501	352	1 491	1 708	3	3	292	286	5.15%	4 636
50-54	373	243	1 234	1 234	4	6	252	266	4.01%	3 612
55-59	233	122	813	890	0	5	228	259	2.83%	2 550
60-64	172	122	627	687	0	0	188	191	2.21%	1 987
65-69	98	73	439	480	3	0	145	145	1.54%	1 383
70-79	90	55	397	569	0	0	196	311	1.80%	1 618
80+	18	18	110	205	0	0	76	183	0.68%	610
<b>TOTAL</b>	<b>9 869</b>	<b>8 076</b>	<b>30 999</b>	<b>32 813</b>	<b>71</b>	<b>52</b>	<b>4 013</b>	<b>4 173</b>	<b>100%</b>	<b>90 066</b>

(Adapted 2001 Census, as amended in 2005).

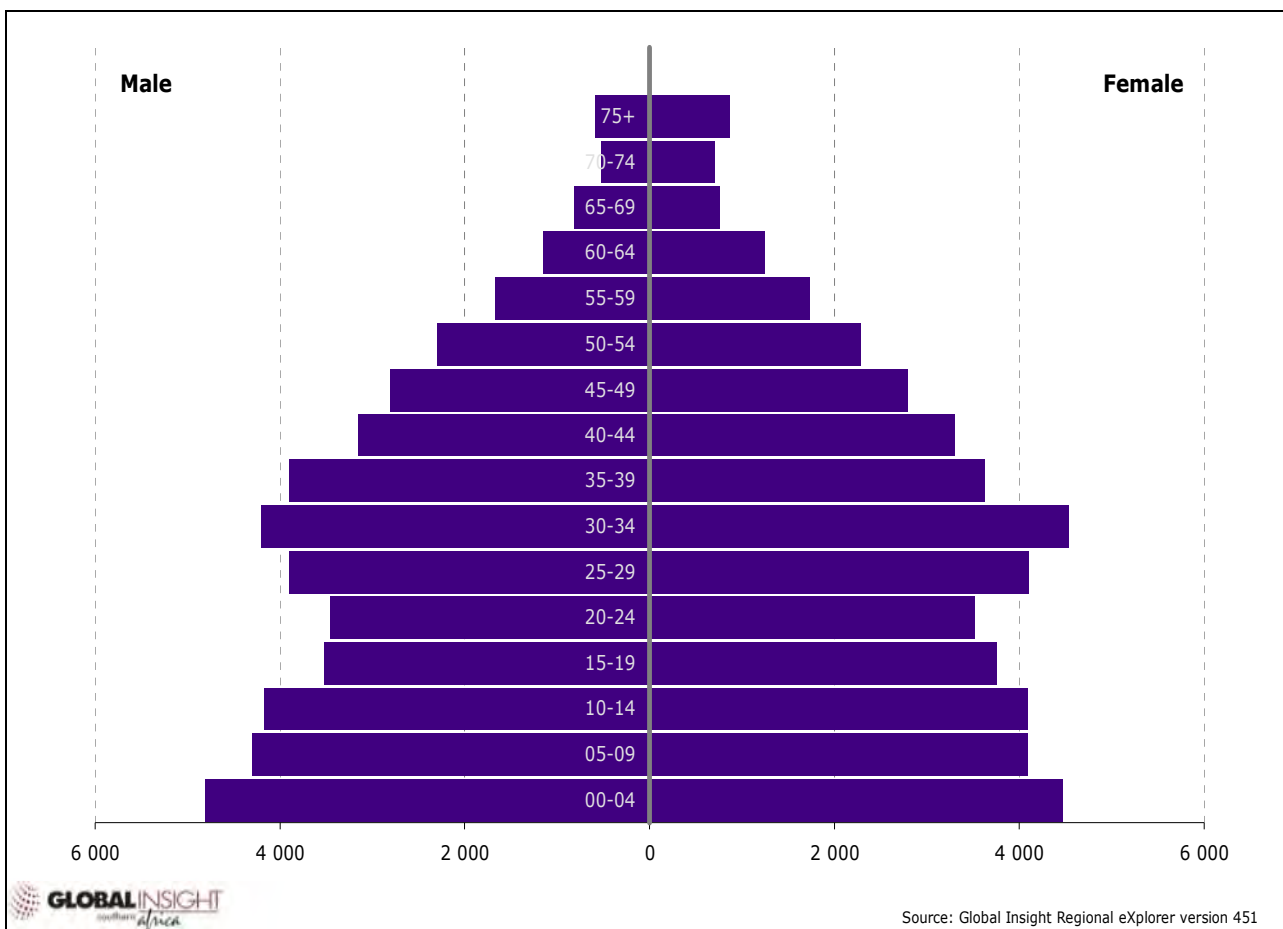


Figure B2: Population pyramid of Witzenberg Municipality, 2008.

## B4.2 HUMAN DEVELOPMENT INDEX

The Western Cape Province has the highest Human Development Index (HDI) compared to South Africa's other provinces. The HDI provides an alternative method to measure the relative socio-economic development of an area and is seen as a measure of people's ability to live a long and healthy life, to communicate, to participate in the community and have sufficient means to be able to afford a decent living<sup>21</sup>.

According to the Cape Winelands District Municipality SDF (2012/13-2016/17) the HDI for the Western Cape is 0.69, compared to 0.58 for South Africa as a whole. Furthermore, the HDI for the Western Cape peaked at 0.79 in 1995, and South Africa's peak in the same year was 0.73.

The Cape Winelands District Municipality had an average HDI value of 0.7 which is lower than the average for the entire Western Cape Province, but is still higher than the national average. Furthermore, the average HDI for the Witzenberg Municipality is calculated at 0.72 and for the previous Cape Winelands District Management Area, which currently constitutes a large portion of new municipal boundary for the Witzenberg Municipality, is calculated at 0.7. It is thus apparent that human development and quality of life in the Witzenberg municipal area is above the average of South Africa.

### B4.2.1 GENERAL HEALTH AND LONGEVITY

Effective health systems and primary health care services are vital for the sustainability and overall quality of life of communities. A strong health care system not only promotes the population's longevity, but can also contribute towards the region's economic development. The population relies on government to administer and deliver affordable and quality health care services that encompass critical health care treatment, diagnosis, rehabilitation and disease prevention.

In the prevalence of a weak social fiber—and consequently, low human and social capital—the healthcare sector bears the brunt of negative consequences arising from risky behaviour, skew distribution of resources, and social and economic exclusion.

Settlement patterns (influenced by inner city gentrification, destitution, informal settlements, etc.), high levels of substance abuse and high tuberculosis (TB) prevalence are a few examples which demonstrate the extent that societal values have been eroded.

The Witzenberg IDP (2007-2011) identified tuberculosis and HIV/AIDS as the leading causes of premature death at 16,3%, and 15,4% respectively. It is suggested that the high TB death rate can be contributed to a low cure rate. The increase in HIV infections is very disconcerting. Recent figures of the Witzenberg Department of Socio-Economic Development indicates an alarming

<sup>21</sup> The Human Development Index (HDI) was developed by the United Nations Development Programme (UNDP) based on the philosophy that the goal of development was to ensure that individuals live long, informed and comfortable lives. The HDI consists of three components:

- Longevity, which is measured by life expectancy at birth.
- Educational attainment, which is measured by two education variables, namely adult literacy and combined gross primary, secondary and tertiary enrolment ratio.
- Income, which is measured by gross domestic product (GDP) per capita.

Performance in each dimension is expressed as a value between 0 and 1, and the HDI index gives an internationally accepted measure of the wellness (quality of life) of the population of the area under consideration. An HDI of 0.8 or more is considered to represent high development, whilst an HDI of below 0.5 is considered to represent low development.

increase in the HIV/AIDS figures of more than 13 times year on year from 1996 to 2010. The municipality has 1 anti-retroviral treatment (ART) service sites and 15 TB clinics (Witzenberg IDP, 2012-2017).

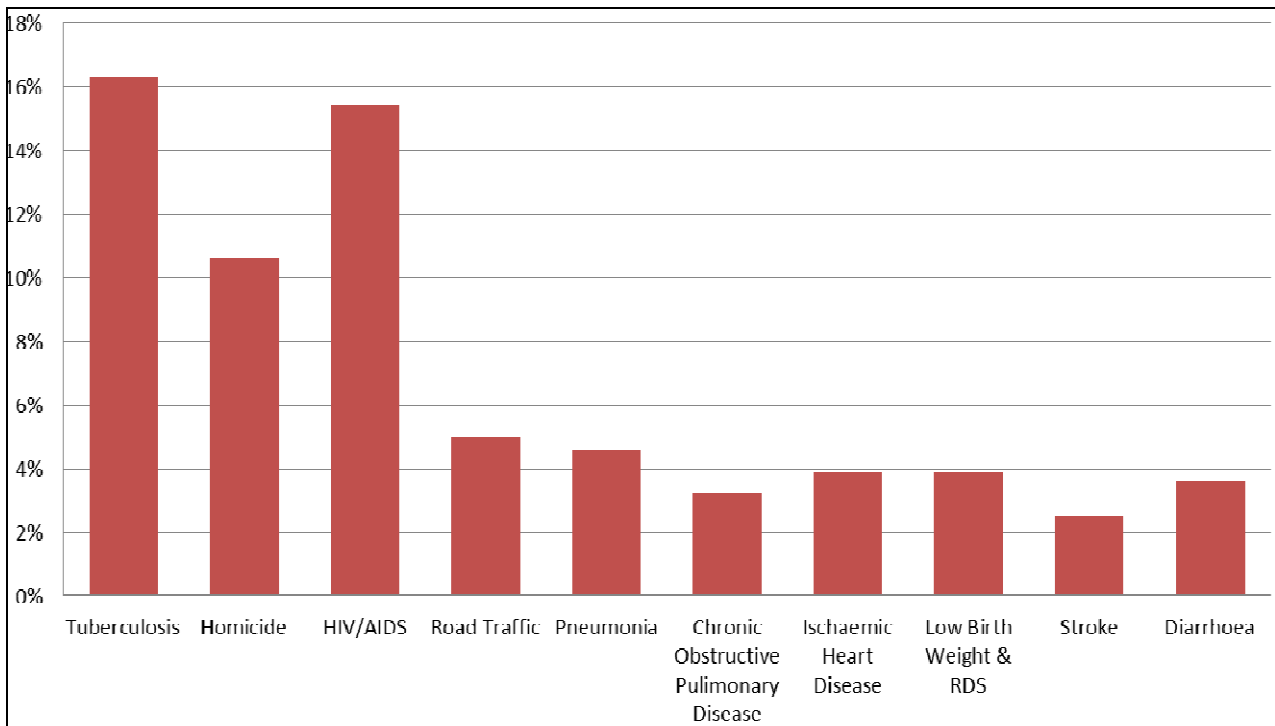


Figure B3: Primary causes of mortality in Witzenberg Municipality, 2004-2005 (Source: Medical Research Council).

The Infant Mortality Rate (IMR) is an important measure of the well-being of infants, children and pregnant women and is indicative of a number of factors such as maternal health, quality and access to medical care, socio-economic conditions, and public health practices.

The Witzenberg Municipality IMR of 42 per 1000 live births, with an under-five mortality rate of 51 per 1000 live births was the highest in the Boland/Overberg region when measured in 2005.

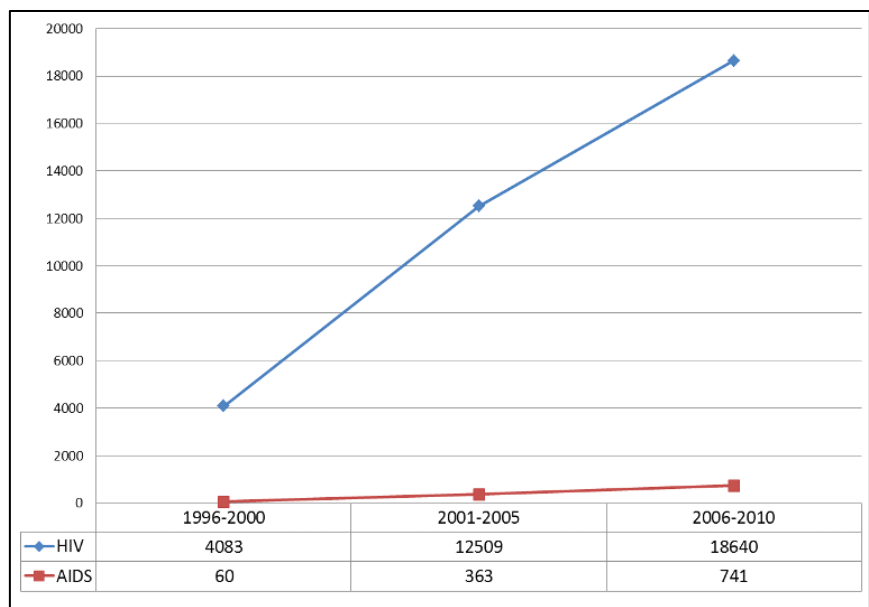


Figure B4: HIV/AIDS infection rates. (Source: Witzenberg Municipality).

It has been suggested that the leading causes of infant and child deaths were pre-maturity, congenital abnormalities, HIV, diarrhoea, protein energy malnutrition, and ill-defined natural causes (Witzenberg IDP 2007-2011).

Clearly the provision of primary health care and access thereto could be improved in the Municipality. The current circumstances warrant a paradigm shift in the approach to population health and resource allocation. The facts stated above should form the basis of the parameters for health investment decisions. Investments should be directed to those areas that have the greatest potential to positively influence health.

#### B4.2.2 EDUCATIONAL ATTAINMENT

Education is a strong lever for change and normally has a direct bearing on better prospects of employment as it increases chances of securing employment in the presence of job-creating economic growth.

A good education also escalates the likelihood of better health prospects and is a key influence to those with a higher socio-economic standing (Witzenberg IDP 2007-2011). Only 7% of the population of Witzenberg is illiterate<sup>22</sup> and approximately 24% is functional illiterate<sup>23</sup>. The high rate of literacy contributes to the Municipality's above national average HDI, which is indicative of relatively highly developed society.

Table B15: Literacy and Education Levels.

	LITERACY LEVELS	
	TOTAL	%
% Totally Illiterate	6 615	7.34%
% Functional Illiterate	21 190	23.52%
Some secondary	17 006	18.88%
Complete Grade 12	6 934	7.69%
Higher Education	3 211	3.56%

(Adapted 2001 Census, as amended in 2005).

More recent data from Global Insight Southern Africa (2008) pertaining to the level of education in the Witzenberg Municipality is summarised in Table B16 and Figure B5.

Table B16: Recent levels of education.

	No schooling	Grade 0 - 6	Grade 7-11	Grade 12	Grade 12 & Certificate/Degree
<b>Black</b>	1697	3856	9132	1718	269
<b>White</b>	44	86	1619	2512	2426
<b>Coloured</b>	2373	8473	23184	6279	1506
<b>Asian</b>	5	34	34	36	-
<b>TOTAL</b>	<b>4 119</b>	<b>12 449</b>	<b>33 969</b>	<b>10 545</b>	<b>4 201</b>

(Source: Global Insight Southern Africa, 2008 in Witzenberg IDP 2007-2011).

<sup>22</sup> The Department of Social Development defines people aged 14 years and older as literate if they have successfully completed 7 years of formal education (i.e. passed Grade 7/Standard 5).

<sup>23</sup> 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.



Recent Grade 3 and Grade 6 literacy and numeracy tests performed by the Western Cape Department of Education (WCDE) reveal some serious numeracy and literacy deficiencies in our current schooling system.

In 2011, schools in the Witzenberg Municipality performed below the provincial average of 47.7% with a pass rate in literacy of 37%. The pass rate of 15.1% for numeracy were also well below the provincial pass rate of 31%.

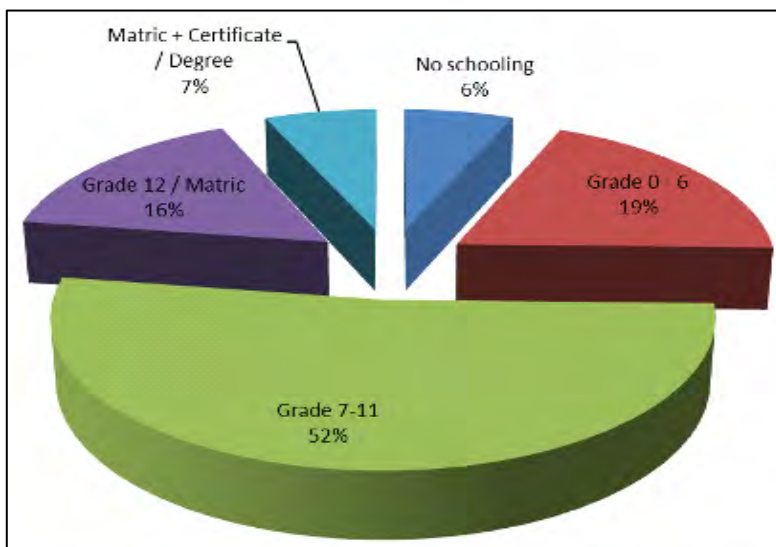


Figure B5: Level of education in 2011-2012.

**B4.2.3 EMPLOYMENT AND INCOME STATUS**

It is recognised that poverty<sup>24</sup> remains the core obstacle to a stable and prosperous future in South Africa. Despite commendable efforts of government and state-supported efforts, poverty continues to be chronic problem for much of South Africa’s population, including Witzenberg Municipality.

The Poverty Index indicates that unemployment and the poverty levels of the Cape Winelands District have gradually increased over the past few years. The Witzenberg Municipality, at 21.42 points on the index, ranks as the highest in the district. Comparative figures show a disconcerting trend in Witzenberg, e.g. the 1996 Census showed a figure of 18.2, climbing marginally to 18.6 in 2001, and the most recent available estimate according to Stats SA’s Community Survey 2007 shows that the poverty index for Witzenberg increased to 21.42.

Global Insight’s published figures indicate that 30.1% of the Witzenberg residents live in poverty (refer to Table B17 and Figure B6), while the number of people accessing social grants are estimated at 10 173 (Witzenberg IDP 2012-2017).

Table B17: Current poverty indicators for people living in poverty in Witzenberg.

	BLACKS	WHITES	COLOUREDS	ASIANS	TOTAL
<b>Total number</b>	11 555	48	15 802	48	27 543
<b>%</b>	<b>52.8</b>	<b>0.6</b>	<b>25.9</b>	<b>0.6</b>	<b>30.1%</b>

**a) Employment Status**

Since 2007 the total job losses nationally were in the order of 6%. At the end of 2009 the total of unemployed nationals in South Africa were 4,1 million, or 25% of potential job seekers. The figure for the South African youth cohort (the 18-24 age group) for unemployment was a staggering 48.2% (Witzenberg IDP 2007-2011).

<sup>24</sup> Poverty is defined as the inability to attain a minimal standard of living, measured in terms of basic consumption needs or the income required to satisfy people. Poverty means the alienation from the community, food insecurity, crowded homes, usage of unsafe and inefficient forms of energy, lack of adequately paid and secure jobs, and fragmentation of the family. (Source: Landman *et al*, 2003).

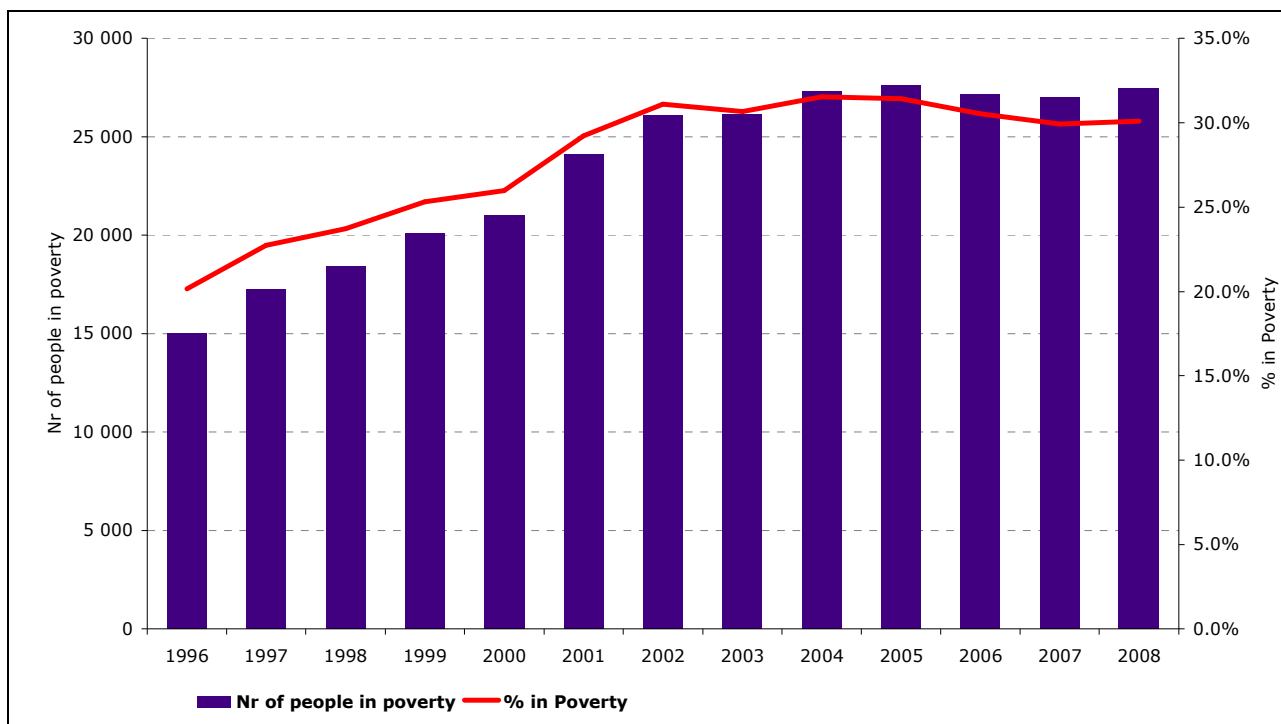


Figure B6: Poverty overview in 2012.

Witzenberg is not immune to the scourge of unemployment and its associate poverty. Another factor impacting on the level of poverty is the number of unemployed / seasonally-employed immigrants. We acknowledge the need for focused interaction with the agricultural sector in order to address this challenge (Witzenberg IDP 2007-2011). The Labour Market<sup>25</sup> of Witzenberg constitutes approximately 67% of the total population (i.e. 60 137 people). Approximately 40% of the Labour Market is employed, while the unemployment rate is at only 6.3%. The *not economically active*<sup>26</sup> people constitute approximately 20% of the Labour Market. In terms of the 2012-2017 IDP, Witzenberg had an unemployment rate of 7.6% in 2007 compared with 19.6% in 2001, which reflects a vast improvement. The unemployment rate of 6.3% could be somewhat misleading due to the fact that people not seeking work, which can be classified as unemployed people, are not included.

According to the Witzenberg IDP (2012-2017) the municipality must pay attention to this phenomenon to ensure that the youth and particular the age group 20-24 years can be absorbed in to the economy.

Table B18: Census Employment Status.

	EMPLOYMENT STATUS		
	Employed	Unemployed	Not Economically Active
<b>Total Individuals</b>	<b>36 457</b>	<b>5 675</b>	<b>18 005</b>
<b>% of Total Population (90 066)</b>	<b>40.47%</b>	<b>6.30%</b>	<b>19.99%</b>

(Adapted 2001 Census, as amended in 2005).

Unemployment is predominantly concentrated within the Coloured population. Even though the African population group has a marginally higher unemployment rate of 8.8% in 2007, they account

<sup>25</sup> The Labour Market constitutes all those of working age (15 - 65 years) and include those who are employed, unemployed and not economically active.

<sup>26</sup> This classification includes housewives/homemakers, students or scholars, pensioners, and retired people as well as those not seeking work.

for 25.5% of the total labour force and 29.4% of the unemployed. Contrastingly, the Coloured workers experienced the second highest unemployment rate of 8.3%. However, the group represents the largest percentage share (63.4%) of the total labour force and also the highest percentage share (68.9%) of the unemployed (Witzenberg IDP 2012-2017).

## b) Household Income

Of the total *employed labour force*<sup>27</sup> almost 50% earn less than R800 per month whilst approximately 14% earn less than R400 per month. Close to 80% of the entire labour force earn less than R1 600 per month, and therefore live in poverty.

Table B19: Monthly Income Level.

	INDIVIDUAL MONTHLY INCOME									
	No Income	R1 - R400	R401 - R800	R801 - R1600	R1601 - R3200	R3201 - R6400	R6401 - R12800	R12801 - R25600	R25601 - R51200	R51201 or More
<b>TOTAL</b>	432	4 940	18 049	6 598	3 005	1 951	1 046	258	104	80
<b>%</b>	<b>1.18%</b>	<b>13.55%</b>	<b>49.50%</b>	<b>18.09%</b>	<b>8.24%</b>	<b>5.35%</b>	<b>2.86%</b>	<b>0.7%</b>	<b>0.28%</b>	<b>0.21%</b>

In an effort to make basic services accessible to the poor and to contribute to the poverty alleviation programme of National Government, Witzenberg is assisting the poor through its *Indigent Policy*, where indigent households are provided with free access to water, electricity, sanitation and refuse removal.

Households with a combined earnings of less than R3 000 per month are covered by the *Indigent Provision*. Benefits conceded through the Indigent Policy are: property rates exemption (increased from R15 000 to R85 000), free water, 50 kWh of electricity, free sanitation and free refuse removal (Witzenberg IDP 2007-2011).

The number of indigent households in the whole of Cape Winelands increased from 25 664 in 2005 to 29 545 in 2006, an increase of 15%. Within Witzenberg, the corresponding figures remained unchanged at 1 066, or 3.6% of all the indigent households in the Cape Winelands. However, Witzenberg municipality has since launched an incisive awareness campaign, and the *Indigent Net* has expanded considerably. At the beginning of March 2010 the number of Witzenberg households in the poverty alleviation net tallied 2 588. The 2011/2012 Budget makes provision for 3 262 cases, but any additional cases which come to hand (and which qualify in terms of the Witzenberg's *Indigent Policy's* criteria) will be accommodated in the spirit of our 'pro-poor' approach (Witzenberg IDP 2007-2012). In this regard, recent figures from the Witzenberg Municipality tallied the indigent households at 3 842.

## c) Social Grants

In 2007, approximately 13% (10 173 beneficiaries) of the population of the Witzenberg Municipality receive some form of social grant. When one takes the 'bell-shaped' population pyramid that characterises the demography of the Municipality into consideration it is no surprise that most people are on either a child support grant or an old age pension.

<sup>27</sup> The Labour Force consists of people of working age (between 15 – 65 years) who are either employed or unemployed, and is also referred to as 'economically active population'.

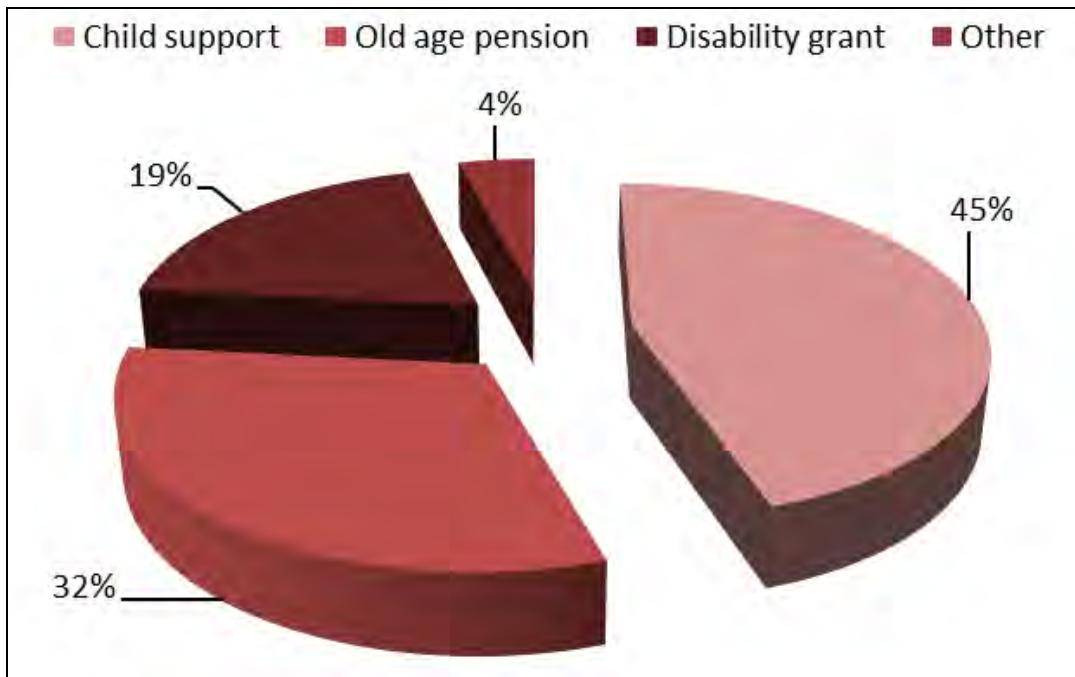


Figure B7: Social grants (% of grants) in 2011.

#### B4.2.4 COMMUNITY SAFETY

High crime levels deter investment and erode social capital. It is important that planning should take into cognizance the importance of security and justice in building livable communities. The 5 police stations of the Witzenberg Municipality represent 3.4% of the 149 stations in the province.

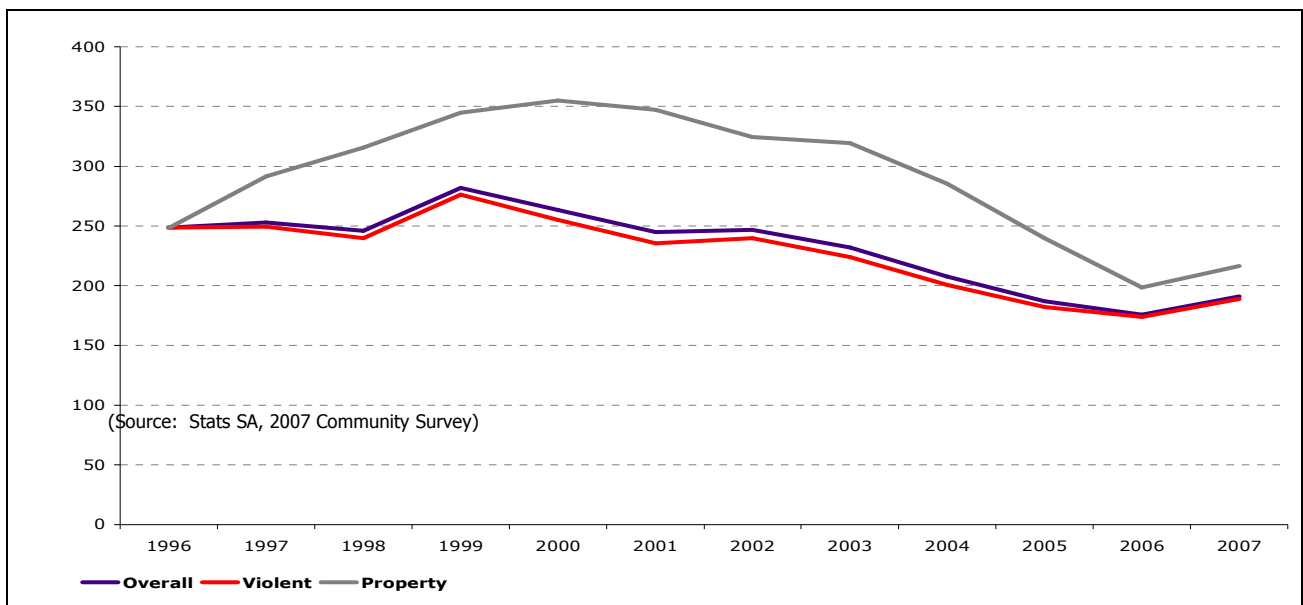


Figure B8: Overview of crime in 2011.

Table B20: Crime Statistics (2004-2007).

	2004	2005	2006	2007
Murder	75	70	↓	61
Sexual Crimes	364	350	↓	346
Assault	1 716	1 575	↓	1 524
Robbery, Burglary & Theft	1 339	1 851	↑	1 482
Drug-Related Crime	880	962	↑	996
Neglect & Ill-Treatment	12	14	↑	17
All other	1 648	580	↓	552

(Source: Global Insight Southern Africa, 2008 in Witzenberg IDP 2007-2011).

Note: Arrows indicate whether specific crime rate has dropped (↓) or increased (↑) since previous year.

In 2006/07, the total number of reported crime incidences has decreased by 31,6% in comparison with the crime reported in 2004/05. Recent reported crime estimates by the Witzenberg Department of Socio-Economic Development indicates the following:

Table B21: Crime Estimates (2008-2011).

	2008/2009	2010/2011
Sexual Crimes	217	186
Attempted Murder	11	10
Common Robbery	43	54
Burglary at Residential Premises	403	519
Drug-Related Crime	1040	1095
Driving under the influence	89	84
Commercial Crime	46	33
Culpable Homicide (Manslaughter)	23	28
Public Violence	4	3
Neglect & Ill-Treatment	15	17

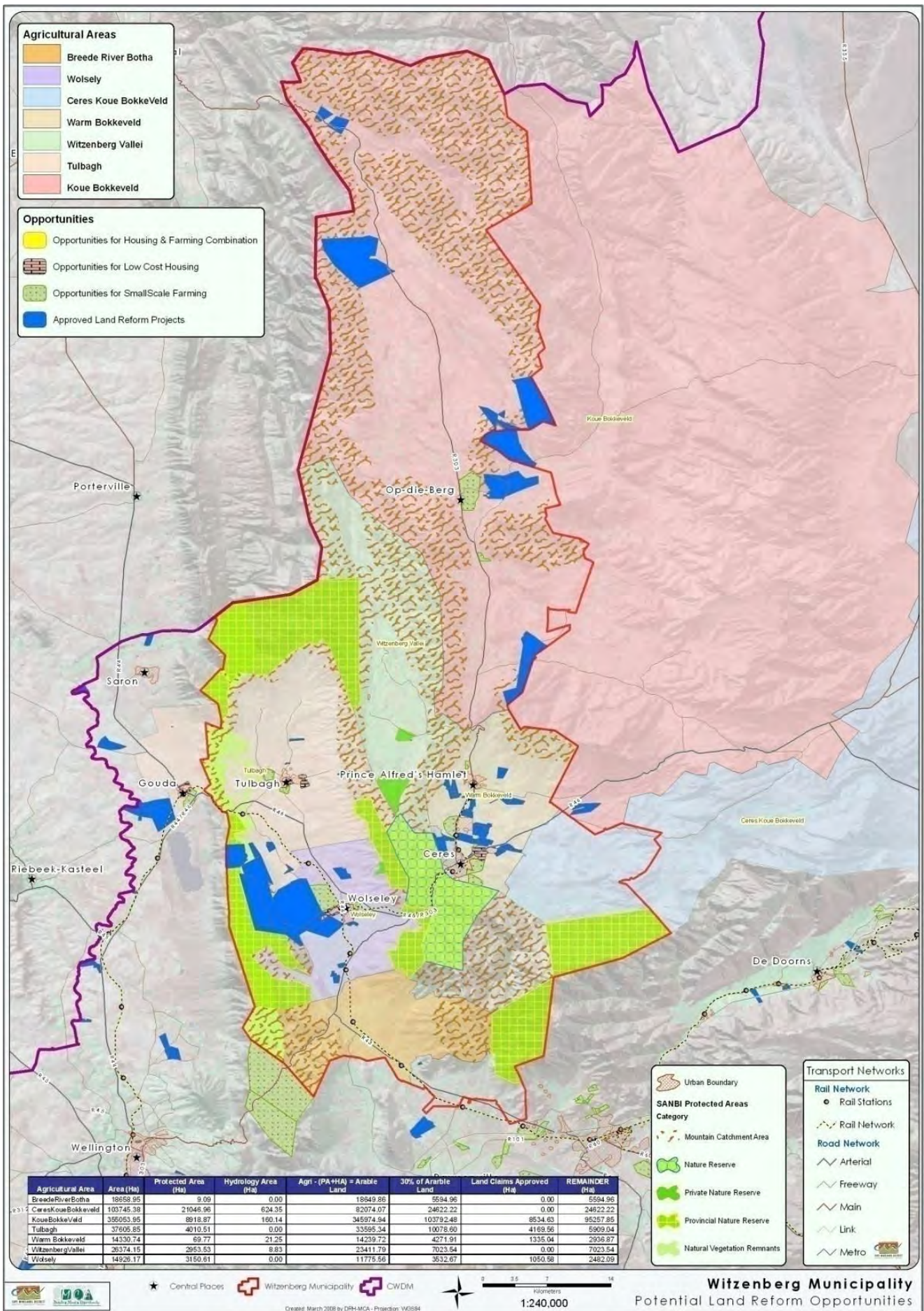
(Source: Witzenberg Department of Socio-Economic Development)

Note: Arrows indicate whether specific crime rate has dropped (↓) or increased (↑) since previous year

### B4.3 LAND REFORM

The Witzenberg Municipality has made the highest progress with land reform of all local municipalities in the Cape Winelands District (Cape Winelands SDF, 2011). According to the Witzenberg IDP (2007-2011) the following land reform projects have been undertaken:

PROJECT NAME	TYPE	YEAR	HECTARES	BENEFICIARIES	FARMING ACTIVITY
Koekedouw	LRAD	2001	326	326	Animals and by-products
Den Haag / Denou	LRAD	2005	116	116	Horticulture
Haaswerf	LRAD	2007	48	48	Horticulture – fruit
Fynbos	LRAD	2008	116	116	Horticulture – fruit and vegetables
Omega / Gouda	LRAD	2003	65	65	Animals and by-products
Digby	LRAD	2001	0	0	N/A
Williams Family Tulbagh	LRAD	2004	2	2	Animals and by products



Figur B9: Land reform sector plan for the Witzenberg Municipality.

Op-die-Berg and Prince Alfred Hamlet are areas of special need and potential and land reform initiatives are proposed in these settlements. Kuiltjieskraal also offers opportunities for tourism facilities and agriculture as part of the land reform programme. The Witzenberg IDP states that land reform / land redistribution strategies need to be devised to determine how best to utilise some of the suitable vacant and under-utilised land parcels for agriculture and food gardens, as well as for the creation of 'agri-villages'.

#### B4.4 ACCESS TO SERVICES AND INFRASTRUCTURE

##### B4.4.1 SERVICE STANDARDS: HOUSING PROVISION

According to the 2001 census data, there are 22 398 households present in the Municipality. Of these households, approximately 83% live in formal dwellings, whilst 10% live in informal dwellings.

Recent figures by the Directorate Community Services: Housing of the Witzenberg Municipality indicate the number of people on the waiting list for subsidised housing at 7 119. This figure excludes an estimate of 2 800 farm dwellers who also qualifies. Figure B10 summarises the number of applicants on the housing waiting list per settlement.

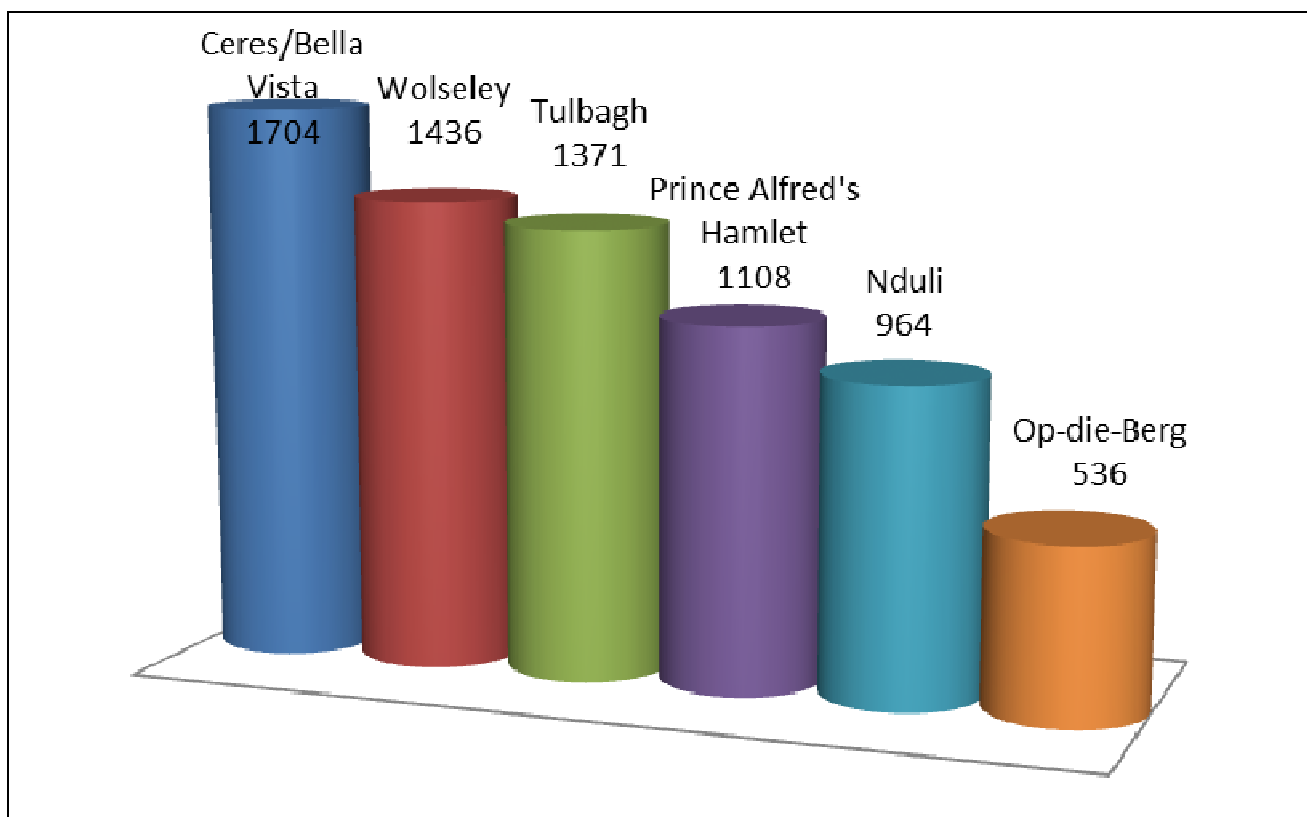


Figure B10: Housing waiting list (Source: Witzenberg Municipality, 2011).

The situational analyses undertaken in the Integrated Sustainable Human Settlement Plan (MCA, 2009) stated the following key aspects as it relates to housing provision and the construction of integrated sustainable human settlements:

- The Witzenberg Municipality has limited institutional capacity to implement housing projects and address illegal structures and land invasions.
- There is a lack of funding to address demand for housing – reprioritisation of projects is needed to align with Division of Revenue Act 2 of 2010 (DORA) allocations.

- c) Inadequate maintenance of infrastructure, services and facilities due to lack of capacity and funding.
- d) Nduli is identified as a priority area to address housing needs.
- e) Ensure that the use of vacant land for housing projects enhances the character of historic towns such as Tulbagh and Wolseley (and not detract from this).
- f) Farm evictions and the need to provide for farm worker housing is a growing challenge. In particular the need for housing for people currently living in rural areas is not fully understood.
- g) Based on the 2001 Census results, more than 70% of households in the Witzenberg area qualify for a government housing subsidy.
- h) If the delivery target set by the Municipality can be maintained the backlog would be addressed relatively quickly.

With regard to the quality of housing projects and its impact at the scale of the settlement, the current municipal housing delivery programmes are found wanting if assessed in terms of criteria set by national and provincial policies. The Integrated Sustainable Human Settlement Plan states that current projects make limited contributions to the integration of the upper- to middle-income areas with poorer areas. Other priority issues related to integrated sustainable human settlements in Witzenberg have been summarised as follows:

- (i) The poor quality of environments in townships, with the result that subsidised housing has very little asset value.
- (ii) The lack of housing options (particularly in more established parts of town), including rental and other options for poorer communities.
- (iii) The need to provide appropriate housing options for rural people.
- (iv) The limited access to economic activities, as well as quality education, health and other social welfare facilities and opportunities.
- (v) The sustainability (or lack thereof) of current patterns of development and housing models.

Housing projects are concentrated in the former townships that have been created as satellites to the white towns (Nduli and Bella Vista in relation to Ceres) or on the periphery of towns such as in the case of Prince Alfred Hamlet and Wolseley. In addition, only single units on individual plots are currently provided, with the layout not necessarily allowing for expansion of the unit, optimal orientation in terms of climatic conditions or creating vibrant, safe streetscapes (MCA, 2009).

These issues can, to a large extent, be attributed to the lack of availability of land in suitable locations as well as capacity issues and current implementation regime at the municipality. Due to its limited implementation and planning capacity, and lack of funding to augment subsidies, the municipality is highly reliant on private-sector implementation agents to plan and implement subsidised housing projects. It is thus imperative that the focus need to shift away from locating affordable housing within townships only, but rather closer to areas well-endowed with economic and social opportunities. This needs to be coupled with a greater range and variety of housing typologies and tenure types (MCA, 2009).

More recently, the municipality, in collaboration with the Provincial Government and other Departments embarked on a strategy entitled the Housing Pipeline for Witzenberg. This is a 9-year plan which aims to address housing-related issues in the municipality. The pipeline aims to develop 4874 residential stands/units over the period in the respective settlements in Witzenberg. The priority investment areas of the plan are illustrated by the table below.



Table B22: Housing pipeline for Witzenberg.

TOWN/SUBURB	PRIORITY	HOUSING PROGRAMME	STANDS/ UNITS	ERF NUMBER	YEAR OF CONSTRUCTION
Tulbagh	1	UISP <sup>28</sup>	427	Erf 389	2011/2013
Op-die-Berg	2	IRDP <sup>29</sup>	281	Erf 92 & 103	2013/2014
Pine Valley, Wolseley	3	UISP	200	Erf 1	2014/2015
Bella Vista	4	IRDP	387	Erven 2623, 7074, 5419-5423 & 5425-5431	2015/2017
Vredebes, Ceres	4	IRDP	2993	Farm 364/72 & 18	2017 onwards
Nduli	5	UISP	649	Erven 5645, 5809, 7348, 7366, 7486, 7491 & 7606	After Vredebes

#### B4.4.2 SERVICE STANDARDS: SEWAGE REMOVAL

In 2001, approximately 4 000 households in the current Witzenberg Municipality did not have access to water borne sanitation. This figure represents 18% of the total number of households in the Municipality. According to the SA Census 2001 statistics, approximately 82% of households have flush toilets and approximately 9.79% of households have no sanitation facilities.

Table B23: Standard of Sewage Removal.

	SEWAGE REMOVAL					Total Household
	Sanitation availability per Household					
	Flush	Pit Latrine	Bucket Latrine	None	Chemical	
<b>TOTAL</b>	18 369	1 313	382	2 194	141	22 400
<b>%</b>	<b>82.0%</b>	<b>5.86%</b>	<b>1.71%</b>	<b>9.79%</b>	<b>0.63%</b>	<b>100%</b>

(Adapted 2001 Census, as amended in 2005).

In 2007, 91% of households had access to flush toilets (connected to sewerage/septic tank). The use of pit toilets decreased as 2% of households made use of pit toilets as a means of sanitation in 2007. The municipality has also experienced a decrease in the use of the bucket toilet system from 1.8 to 1.2% of households. Although there had been an improvement in access to sanitation, 2.3% of households still did not have access to sanitation in 2007 (Witzenberg IDP 2012-2017).

#### B4.4.3 SERVICE STANDARDS: WATER RETICULATION

In 2011, the Witzenberg Municipality achieved the prestigious Blue Drop<sup>30</sup> status for excellent water quality and management, which implies that the Municipality complied with 95% of the weighted criteria in the biannual assessment. According to Farmer (2011), the Blue Drop assessment for 2009 and 2010 of Witzenberg Municipality is as follows:

<sup>28</sup> Upgrade of Informal Settlement Programme.

<sup>29</sup> Integrated Residential Development Programme.

<sup>30</sup> The Blue Drop Certification system is a campaign by the Department of Water Affairs that encourages local municipalities to improve their water quality management while empowering consumers with the right information about what is coming out of their taps.

SYSTEM	2009 (%)	2010 (%)
Ceres	77	96.15
Op die Berg	77	93.5
Prince Alfred Hamlet	49	95
Tulbagh	77	92
Wolseley	77	89.75
<b>Overall 2009 (%)</b>	71.4	
<b>Overall 2010 (%)</b>	93.3 (improvement of 21.9%)	

(Source: Farmer, 2011).

More than 88% of households have access to running water either by means of water points situated on their erven (20.9%) or from taps within their dwelling (67.37%). Approximately 61% of households rely on a regional or local water scheme as their source of potable water with the remaining households relying on boreholes, natural springs, dams, rivers and water vendors for their supply of water.

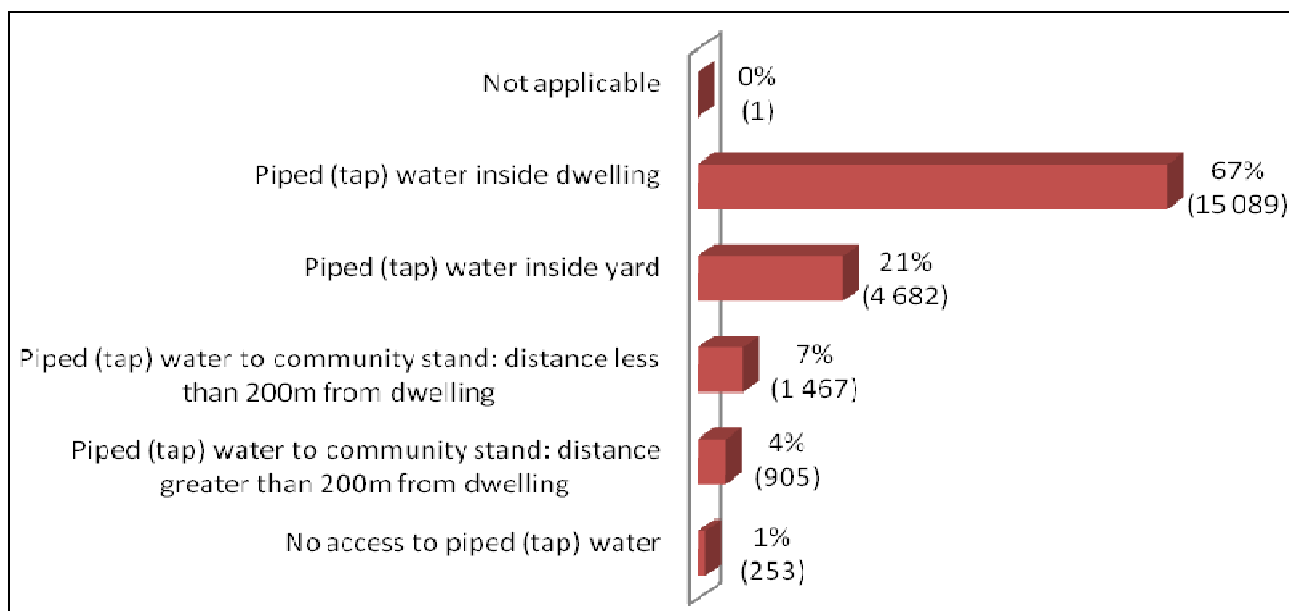


Figure B11: Access to piped water (Adapted from the 2001 Census as amended in 2005).

The rural areas still present the biggest challenge to the Witzenberg and although the actual figures need to be evaluated with the understanding of limited accurate data, basic water services is only lacking in the rural areas, where there is at the moment limited control by the municipality. No significant changes were observed during the past revision period and approximately 3% of the households is assumed to still have no access to basic water supply (Witzenberg IDP, 2012-2017).

The Witzenberg Municipality receives most of its raw water from surface water resources in the mountains and valley areas. The Breede and Berg River Systems provide nearly all surface water resources. In terms of the Internal National Strategy the Berg River System and, especially, the Klein Berg River system is considered as a water-stressed area. Tulbagh often experiences water shortages due to a lack of adequate resources (Witzenberg IDP 2007-2011).

Table B24: Surface water sources in the Witzenberg Municipality.

Name	Source Type	Licensed Abstraction (Million litres per year)	Current Use	Additional requirements at 5 years
<b>CERES</b>				
<b>Koekedouw</b>	<b>Dam</b>	<b>10 000</b>	<b>3 105</b>	<b>4 085</b>
<b>TULBAGH</b>				
Moordenaarskloof	River	667		
Tierkloof	River	200		
<b>TOTAL</b>		<b>867</b>	<b>502</b>	<b>1 200</b>
<b>WOLSELEY</b>				
<b>Tierhokkloof</b>	<b>River</b>	<b>4 462</b>	<b>739</b>	<b>1 700</b>
<b>PRINCE ALFRED HAMLET</b>				
Wabooms	River	N/A		
Cutting Fountain	Fountain	N/A		
<b>TOTAL</b>			<b>607</b>	
<b>OP DIE BERG</b>				
<b>Op die Berg</b>	<b>Fountain</b>		<b>114</b>	

(Source: Witzenberg Municipality, 2006).

Ceres receives most of its water from the Koekedouws Dam. The Koekedouws Dam, which is the major dam in the Witzenberg Municipality with a full storage capacity of 22.5 million m<sup>3</sup>, is located in the headwater area of the Breede River system. Water quality from Koekedouw is good and is only chlorinated before distribution. Two reservoirs (3 and 5 million litres) serve as storage reservoir to the distribution network of 114 km with 4 supply zones (Bella Vista, Nduli, Ceres main supply zone and Ceres Pressure Reducing Valve zone). The network includes a 2 million litre services reservoir, a booster pump station to the pressure tower at Bella Vista as well as a 750 kilo-litre service reservoir at Nduli (Witzenberg Municipality, 2006).

In Tulbagh, the Moordenaarskloof and Tierkloof Rivers are the main resources for the supply of water. Construction is at present underway to provide an additional 1.2x10<sup>6</sup>m<sup>3</sup> storage from the Klein Berg River. This project will include a storage dam with a capacity of approximately 750 000m<sup>3</sup>. One borehole at Kruysvallei supply additional water to Tulbagh. During 2006 two additional resources, referred to as the Schalkenbosch tributaries and Skilpadrug, were also identified as possible future resources. Infrastructure to partially link Schalkenbosch with the water supply network was implemented in 2007 after an agreement of the management of this resource was reached with the property owner.

All the raw water is stored in a 570 million litre raw water dam, and the purification plant consists out of five slow gravity sand filters as well as chlorination system. Two reservoirs (800 kilo-litres and 1 million litres) serve as storage reservoir to the distribution network of 29 km with 2 pressure zones. The network includes a booster pump station to the pressure tower (i.e. 500 kilo-litres).

Wolseley receives its water supply from the Tierkloof weir and purification consists out of pressure filters and chlorination. The Ceres Road Reservoir (i.e. 680 kilo-litres) and the newly-constructed 6 million litres Wolseley reservoir serves as a storage reservoir to the distribution network of 44 km with two pressure zones. The network includes a 4.5 million litre services reservoir (Stamper Street Reservoir) and a booster pump station. An additional pump station with a capacity of 58l/s was completed during 2010/2011 to enable the transfer of 'lei' water during periods of low flow from the Artois canal to this reservoir.

Prince Alfred Hamlet has three water sources, namely: Wabooms River weir, a fountain and a borehole. Due to the quality of the raw water no treatment is required, and four 500 kilo-litre reservoirs serve as storage reservoirs to the distribution network of 32 km with only one pressure zone. A link between the Koekedouw dam and PA Hamlet will be constructed during 2012 and an agreement with the Koekedouw Irrigation board has been reached regarding the joint use of existing infrastructure to supply the water (Witzenberg IDP 2012-2017).

Op-die-Berg has three water sources, a fountain and two boreholes. Due to the quality of the water only chlorination is required, and 3 x 50 kilo-litres reservoirs serve as storage reservoirs to the distribution network of 6 km with only 1 pressure zone (Witzenberg Municipality, 2006).

Irrigated areas are predominantly located along the large rivers in the area, particularly the Breede River and all of its tributaries. Irrigation is very limited in the north to northern eastern areas of Witzenberg where the climate is dry to arid. Additional schemes to transfer water from the Breede River WMA to the Berg River WMA are currently under investigation to increase the amount of water available to the Western Cape Water Supply System (which provides Cape Town with water). These would result in further loss of water in the municipal area.

#### **B4.4.4 SERVICE STANDARDS: ROADS AND STREETS**

The road network of the Witzenberg Municipality consists of proclaimed provincial roads, under the authority and ownership of the Provincial Roads Authority, and a local street network, which is the responsibility of the Municipal Roads Authority. The proclaimed roads are the main distribution network in the Province and may towns and settlements have formed around these roads. As a result, the road reserve widths should be taken note of and respected.

The road network through Witzenberg consists of approximately 1970km of provincial roads. Major provincial roads include MR310 (R301) from Ceres, past Op-die-Berg towards Citrusdal, TR22/1 and TR22/2 (R46), and MR302 (R43). Provincial roads are classified into four categories according to function, and include trunk roads, main roads, divisional roads and minor roads. Trunk roads and main roads link larger towns and provide access to bordering districts. Divisional roads link rural areas to trunk and main roads, while minor roads provide local access (Witzenberg IDP 2012-2017).

The R44, R46 and R303 carry high freight volumes and the impact of the proposed toll roads on the N1 in terms of road maintenance and increased traffic must not be underestimated.

Apart from private transport, the Witzenberg Municipality is served in varying degrees by two public transport modes, i.e. minibus-taxi and bus services, with the taxi services being the overwhelming mode of transport. Minibus-taxi facilities are provided in Ceres, Wolseley and Tulbagh, with the most departures listed in Ceres at Bella Vista (2 400) and Nduli (3 200). Limited bus services exist, while most of available service providers are contracted out. Farm transport is provided especially during the season, often using farm vehicles, while seven official minibus-taxi routes servicing the rural areas (Winelands ITP, 2005 in Rode Plan, 2009.).

According to the Witzenberg IDP 2012-2017, it is calculated that R4.6 million will have to be spent annually on the road network to erase the backlog and restore the condition of the network to an excellent level of service.

#### B4.4.4.1 Integrated Transport Plan

Public transport is an important mode of transport. Unlike private cars and hired vehicles, public transport provides passenger services which are available for use by the general public. Public transport services consist primarily of buses, minibus-taxis (MBTs) and commuter trains. The MBT is the dominant public transport mode in Witzenberg, providing both commuter and long-distance services. MBT services operate predominantly out of Ceres during weekdays. The highest demand for taxis are on Saturdays, especially at the end of the month, with the smaller towns of Wolseley and Tulbagh becoming significantly more active on weekends.

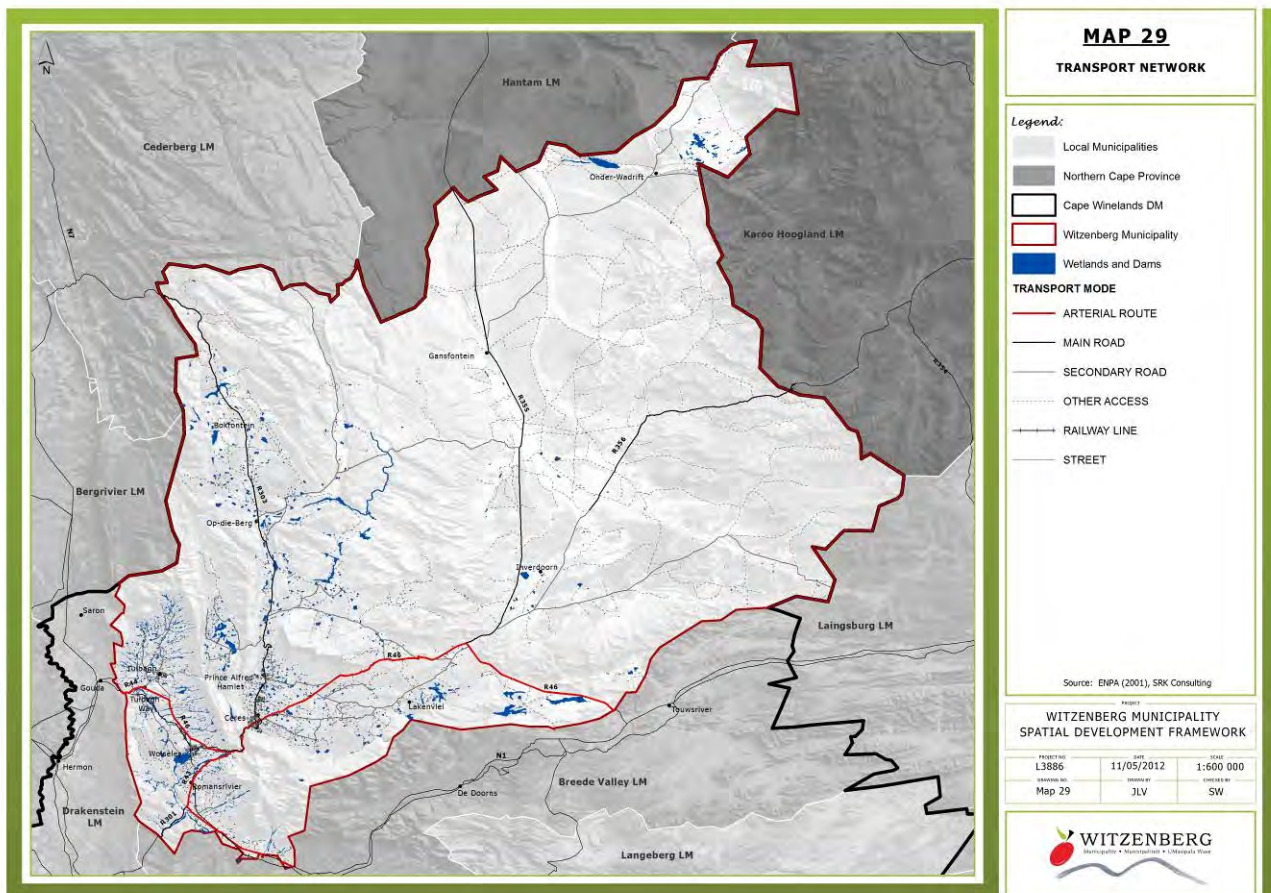
There are currently no commuter bus services for local commuters in the towns of Witzenberg Municipality. The only bus services are subsidised learner transport and private (staff) contract services. Metrorail operates the Cape Town-Worcester rail line, which stops at five rail stations in Witzenberg Municipality, before arriving at Worcester station. It has single train in the morning and afternoon. The long distance rail service currently operates on a daily basis including weekends. Shosholoza Meyl passes through the Witzenberg Municipality en-route to Johannesburg, Port Elizabeth and Durban. There is no formal non-motorised transport (NMT) infrastructure network in Witzenberg Municipality inhibiting NMT movement in the municipal area.

The *Integrated Transport Plan for Witzenberg* (November, 2010) states that transport planning should also include provision for special categories of passengers by incorporating principles of universal access design that will assist passengers to move comfortably from one place to another. Tourism serves as the second economy in the municipal area, the primary attraction being the mountainous natural and scenic beauty of the area. Promotion of agriculture and tourism is therefore vital to the continued prosperity of the area. Attention should be paid to maintenance of scenic routes.

The Transport Plan includes the following key projects to investigated and implemented in the municipal area:

- a) WMRU001: Upgrade access road to Kluitjieskraal – improve traffic flow on the primary road network.
- b) WRMRU003: Upgrade the street network in Tulbagh - improve traffic flow on the primary road network.
- c) WRMU004: Upgrade roads in Prince Alfred’s Hamlet – improve traffic flow on the primary road network.
- d) WRMU005: Surface roads in Op-die-Berg – improve primary road network.
- e) WRMU006: Upgrade/reconstruction of Van der Stel Street, Tulbagh – improve traffic flow on the primary road network.
- f) WMPF002: Preparation of a Non-motorised transport plan (NMT) Plan.
- g) WMPF004: Heavy Vehicle overnight facility in Ceres or Prince Alfred Hamlet.
- h) WMPF005: Investigate lighting on the R303 between Prince Alfred and Bella Vista.
- i) WMPF006: Investigate turning Church Street, Tulbagh into a one-way street.
- j) WMPT003: Public Transport Facility in Wolseley.
- k) WMPT001: Consolidation of Public Transport Facilities, Ceres.
- l) WMPT004: Acquire budget for paved public area Erf 43 in Van der Stel Street, Tulbagh.
- m) WMPT002: Investigate locations and shelter at pick up points in Bella Vista.
- n) WMP003: Improvement of NMT walkways in Tulbagh.
- o) WMP001: Improvement of NMT walkways in Ceres.

- p) WMP002: Improvement of NMT walkways in Wolseley.
- q) WMP005: Improvement of NMT walkways in Prince Alfred's Hamlet.
- r) WMP004: Improvement of NMT walkways in Op-die-Berg.



#### B4.4.5 SERVICE STANDARDS: REFUSE REMOVAL

According to the Witzenberg IDP 2012-2017, the current waste management system in Witzenberg is fairly successful in the collection and disposal of municipal waste, however, no or very little effort is made to reduce the generation of waste within the municipal area. Due to the relatively small amount of waste generated, mainly due to the below population figures, the economic feasibility of waste recovery through recycling and composting should be carefully investigated. The analyses of the current waste management system have shown the following (Witzenberg IDP, 2012-2017):

- a) All formal urban residential erven are receiving a weekly door-to-door waste collection service.
- b) All collected municipal waste is disposed at the municipality's engineered and licensed waste disposal site near Wolseley. The permit for this site expires in 2013.
- c) No significant waste recovery is done, except for private enterprises.
- d) No significant waste avoidance is done.

The majority of households in the Witzenberg Municipality have access to refuse removal, either by the Municipality or by their own arrangements. Almost 57% of households are serviced by the Municipality/private company either once a week (54.62%) or less often (2.72%). Approximately 40% of households in the Witzenberg Municipality make their own arrangements with only 2.9% that has no access to refuse removal services at all (Rode Plan, 2009 in SRK Consulting, 2011).

The Witzenberg Municipality has a domestic landfill site at Wolseley (with an interim license until 2013) which received solid waste from Ceres, Wolseley, Tulbagh and Prince Alfred Hamlet. The site has sufficient capacity until 2018 and expansion possibilities exist to the west. The buffer would require some consideration since the municipality has approved the development of low cost housing within the buffer of this site and an informal residential area exists on the eastern boundary of the site. The future of the Wolseley site will also depend on the outcome of the investigation into a regional landfill for the District Municipality.

A second, licenced site exists at Op-die-Berg while garden waste and builders' rubbles are disposed of at the Tulbagh (licensed) and Prince Alfred Hamlet (unlicensed) sites. Management of these sites is conserved average. A closed and partially rehabilitated landfill is located at Ceres.

Table B25: Status of Refuse Disposal Services.

REFUSE DISPOSAL		
Number of households with access to refuse disposal services		
Local Authority (Once a Week)	12 233	54.62%
Local Authority (Less Often)	609	2.72%
Communal Refuse Dump	3 486	15.56%
Own Refuse Dump	5 419	24.20%
No Refuse Disposal	650	2.90%
<b>TOTAL</b>	<b>22 397</b>	<b>100%</b>

(Adapted 2001 Census, as amended in 2005).

#### B4.4.5.1 Integrated Waste Management Plan

The *Witzenberg Municipality Integrated Waste Management Plan* (December 2010) prepared by Jan Palm Consulting Engineers states the municipality is committed to a system of waste management that will see the least possible amount of waste going to modern engineered landfills. This will be achieved through the use of education, law enforcement and material recovery, and treatment plants. New and emerging technologies, where applicable and affordable, will also play a part in overall waste management. The Waste Management Strategic Objectives for Witzenberg Municipality on which this Waste Management Plan is based, commits the municipality to:

- a) Create an atmosphere in which the environment and natural resources of the region are conserved and protected.
- b) Develop a communication/information/education strategy to help ensure acceptance of 'ownership' of the strategic objectives among members of the public and industry throughout the municipality and to promote co-operative community action.
- c) Provide a framework to address the municipality's growing problem of waste management in accordance with best prevailing norms, financial capacity and best environmental practice.
- d) Provide solutions for the three main objectives:
  - The avoidance of waste generation.
  - The reduction of waste volumes.
  - The safe disposal of waste.

No significant waste minimisation efforts could be identified in Witzenberg, but the ideal is to avoid the creation of waste in the first place. Waste avoidance refers to a pro-active approach by industrial as well as domestic waste producers to minimise the volume of waste, by not creating the waste in the first place. Regular audits should be conducted by an independent entity on the avoidance practices, to form a basis for applying incentives/penalties. An important tool for

monitoring purposes is a proper Waste Information System (WIS). This WIS should be developed for Witzenberg and be aligned with the provincial and national guidelines in order to feed information directly into these systems.

The best place to start implementing waste avoidance would be at the well-established industries on a voluntary basis. A joint venture between such industries and the Witzenberg Municipality may be mutually beneficial. The industry will receive positive advertising of these 'green' initiatives through the media, whilst Witzenberg will be taking a leading role in South Africa through proactively spawning waste avoidance to the benefit of the community and the environment. Successful waste avoidance will result in further lowering of the demand on the Witzenberg waste management infrastructure and the functions of collection, recovery and disposals will be done more efficiently.

Currently, there is no need to replace the fleet of waste collecting vehicles, and the vehicles should ideally not be operated beyond 7 to 8 years in age since the maintenance costs increase dramatically with age. A waste collection service is provided by Witzenberg Municipality for all residents in urban areas, and all formal residential erven are receiving a weekly door-to-door collection service. Furthermore, all the towns in Witzenberg receive a street cleansing service in the CBD areas.

Witzenberg Municipality has no formal facilities for waste recovery as yet. There is however a private company operating a materials recovery facility between Ceres and Prince Alfred Hamlet, sorting source separated wastes and baling it for transport to Cape Town as well as a number of smaller recyclers operating in Tulbagh area. The private companies in total recover approximately 11% of Witzenberg's waste stream.

Household garden waste generated in the Witzenberg municipal area (only urban areas) amounts to approximately 45 tons per month on average. In order to operate a central composting facility economically a minimum garden waste volume of 350 tons per month is required. However, in Witzenberg Municipality, due to its unique agricultural activities, large volumes of fruit wastes are produced in the Ceres area. Combining this with the garden waste generated by the urban residents a composting facility may be borderline economically sustainable.

It has been shown that home composting can reduce the waste stream by 20% to 30% if carried out properly. This is a prime example of 'reduction at source' or waste avoidance. This should be promoted in the Witzenberg Municipality. Another method to decompose composts is *vermicomposting* – the deliberate introduction of earthworms during early stages of the composting process. *Vermicomposting* lends itself well to household-sized ventures, as it requires very careful control, but produces very high quality compost in a relative short period of time.

Witzenberg Municipality currently operates three landfills:

- (i) Wolseley landfill: It receives waste from Ceres, Wolseley, Tulbagh and Prince Alfred Hamlet. This site is used as interim landfill until a permanent site has been permitted and the current permit expires in 2013. The technical location of the site is good and consideration should be given to modifying this site's status to permanent. The future of the Wolseley site will also be depending on the outcome of the investigation into a regional landfill for the district municipality.
- (ii) Tulbagh landfill: Is used for garden waste and builder's rubble only, and operation of the site is average.



- (iii) Op-die-Berg landfill: Is licensed as a communal site and is operated according to the trench method and operation is average to good.

The previous Ceres landfill has been closed and partially rehabilitated, and the rehabilitation of this site should be finalised. Witzenberg Municipality has no dedicated builder's rubble sites since all existing waste sites receive builder's rubble, and there are no waste transfer stations in Witzenberg. There are no public drop-off facilities to date in any of the towns within the municipal area.

#### B4.4.6 SERVICE STANDARDS: ELECTRICITY

Electricity is supplied by Witzenberg Municipality for the towns of Ceres, Wolseley and Tulbagh. Prince Alfred's Hamlet and the rural areas are directly supplied by Eskom.

Statistics South Africa differentiates between the percentage of households using electricity for lighting, cooking and heating. In 2001 approximately 84% of households' dwellings were provided with electricity, while some 16% of households still had not have access to electricity and have to rely on candles or paraffin for lighting purposes. It is interesting to note that not all of these households make use of electricity for cooking purposes.

Table B26: Provision of Electricity.

Energy Source	ELECTRICITY					
	Availability of Electricity for Lighting, Cooking and Heating					
	LIGHTING		COOKING		HEATING	
	Households	%	Households	%	Households	%
Electricity	18 788	83.89	14 910	66.57	11 379	50.81
Gas	58	0.26	999	4.46	285	1.27
Paraffin	739	3.31	3 077	13.74	1 703	7.60
Candles	2 723	12.16	/	/	/	/
Wood	/	/	3 180	14.20	8 696	38.83
Coal	/	/	56	0.25	50	0.22
Animal dung	/	/	78	0.35	25	0.11
Solar	32	0.14	46	0.21	27	0.12
Other	56	0.25	59	0.26	230	1.03
<b>TOTAL</b>	<b>22 397</b>	<b>100%</b>	<b>22 396</b>	<b>100%</b>	<b>22 396</b>	<b>100%</b>

(Adapted 2001 Census, as amended in 2005).

The situational analyses (September 2011) of the Department of Electrical Services highlighted the following:

- a) New housing projects: An amount of R2 million was allocated by the Integrated National Electrification Programme (INEP) for connection of informal houses in Nduli (W1) and Chris Hani (W11). To date 470 informal dwellings have been connected. Service Providers have been appointed for the design and installation of MV, LV and street lighting reticulation networks in the Chris Hani Subsidized housing project. MIG funding in the amount of R990 000 has been provided for street lighting in Chris Hani in the 20012/2013 CAPEX budget.
- b) Preventive Maintenance programme: The planned maintenance programme could not be adhered to during 2010/11 due to shortage of resources and projects that were carried out departmentally (e.g. Pine Valley and electrification of informal settlements). A planned maintenance policy was approved by Council and a Planned Maintenance Plan is being developed. For the 2011/12 financial year an amount of R2 905 190 has been allocated for maintenance.

- c) Electricity loss management programme: Monitoring of bulk and domestic meter readings is in progress in Tulbagh (W11) and indications are that losses in that area have decreased from approximately 45% in June 2006 to 12% in June 2011. Tender specifications will be submitted for procurement of remote metering of *Large Power Users* and bulk supply meters to monitor trends and identify faults proactively. Annual losses in Ceres are 4.73%, Tulbagh 12% and Wolseley 28%. A service provider has been appointed to store, analyse and display customer data on the GIS which will assist in reducing energy losses.
- d) Develop/Review Master Plans: The Tulbagh Electrical Master plan and the Master Plan of Ceres have been updated. The Master Plan for Wolseley is almost ready for presentation to Council. Recommendations resulting from the master planning will be presented for consideration in future budgets.
- e) Operational KPIs: Which include attention to the processing of applications and restoring power failures achieved 100% success within the NRS specifications with the exception of Street lighting complaints which did not meet the required targets due to shortage of resources.

A number of service delivery gaps have also been identified in the *Electricity Medium Voltage Network Master Plan* of October 2011, prepared by *Arcus Gibb* for Ceres, Tulbagh and Wolseley, as discussed below:

#### **B4.4.6.1 Ceres**

The Ceres electrical network is owned and operated by the Witzenberg Municipality, and it buys electricity in bulk from Eskom via two 11kV bulk metering point at Eskom's Ceres Power Station and Bon Chretien Substation. This is distributed to consumers within Ceres supply boundaries at 11kV, 400v and 230V. *Arcus Gibb* estimated the demand for electricity for the next 5 years based on the list of future developments happening in Ceres. It is recommended that the list be updated every second year. The predicted maximum demand (kVA) for the following 5 years is as follows:

- 2012: 32 867 kVA.
- 2013: 38 264 kVA.
- 2014: 38 494 kVA.
- 2015: 41 225 kVA.
- 2016: 41 472 kVA.

The *Medium Master Plan for Ceres* has the following future recommendations (for the next 5 years) that area essential upgrades to this settlement, and the capital needed is estimated at approximately R40 780 000 (excluding VAT):

- a) The replacement of old aluminium feeder cables with new copper feeders between Bon Chretien and De Bos substation.
- b) The introduction of a new 66kV distribution line and substation. This line will be constricted via the future growth alignment and terminate in a 66kV/11kV Substation in Bella Vista. The addition of this substation would resolve the under voltage conditions of customers in Panorama and Jakaranda.
- c) Critical replacement includes the replacement of the 35mm<sup>2</sup> Cu to 70mm<sup>2</sup> copper between Heide – Te Huis – Owen 2 (Spar) and Staff – Keet. Also, Ceres Power Station – Panorama feeder's 185mm<sup>2</sup> aluminium cable must be upgraded to an 185mm<sup>2</sup> copper cable.
- d) The Golf Estate upgrade will trigger the replacement of the supply cable from Ceres Power Station to Lyell from a 185mm<sup>2</sup> aluminium be a an 185mm<sup>2</sup> c

- e) Copper and a dedicated 70mm<sup>2</sup> copper supply cable should be introduced from Lyell to the golf course.
- f) Introducing a second Calvinia Road feeder. This 100mm<sup>2</sup> bare feeder must be installed at Vredebes, and Nduli. Alignment dependent on timing of item (b) above.
- g) Assess and repair existing power factor correction capacitors bank in Bon Chretien.
- h) Quality of supply assessment to comply with Eskom's requirements.
- i) The existing 11kV panels/protection equipments condition to be assessed and service life to comply with SANS 62271-200.
- j) Update existing GIS data for better maintenance and management purposes.

#### **B4.4.6.2 Tulbagh**

The Tulbagh electrical network is owned and operated by the Witzenberg Municipality, and it buys electricity in bulk from Eskom via one 11kV bulk metering point at Eskom's Tulbagh Substation. This is distributed to consumers within Ceres supply boundaries at 11kV, 400v and 230V. *Arcus Gibb* estimated the demand for electricity for the next 5 years based on the list of future developments happening in Tulbagh. It is recommended that the list be updated every second year. The predicted maximum demand (kVA) for the following 5 years is as follows:

- 2012: 4949.32 kVA.
- 2013: 5023.56 kVA.
- 2014: 5098.92 kVA.
- 2015: 5175.40 kVA.
- 2016: 5253.03 kVA.

The *Medium Master Plan for Tulbagh* has the following future recommendations (for the next 20 years) that area essential upgrades to this settlement, and the capital needed is estimated at approximately R8 262 000 (excluding VAT):

- a) The introduction of a 70mm<sup>2</sup> copper feeder between Station Road and Digby RMU. This will serve as the new incoming feeder to Station Road Substation.
- b) Introducing a dedicated 185mm<sup>2</sup> second feeder from Tulbagh Main Substation to Station Road Substation.
- c) The replacement of certain 25mm<sup>2</sup> and 35mm<sup>2</sup> cables with 70mm<sup>2</sup> along important supply points. For example at Piet Retief RMU 1 and Station Road Substation (via Kerk Street and Marais Street).
- d) The upgrading of certain overhead feeders supplying bulk users.
- e) Strengthening the electrical network for proposed future developments.
- f) Update existing GIS data for better maintenance and management purposes.

#### **B4.4.6.3 Wolseley**

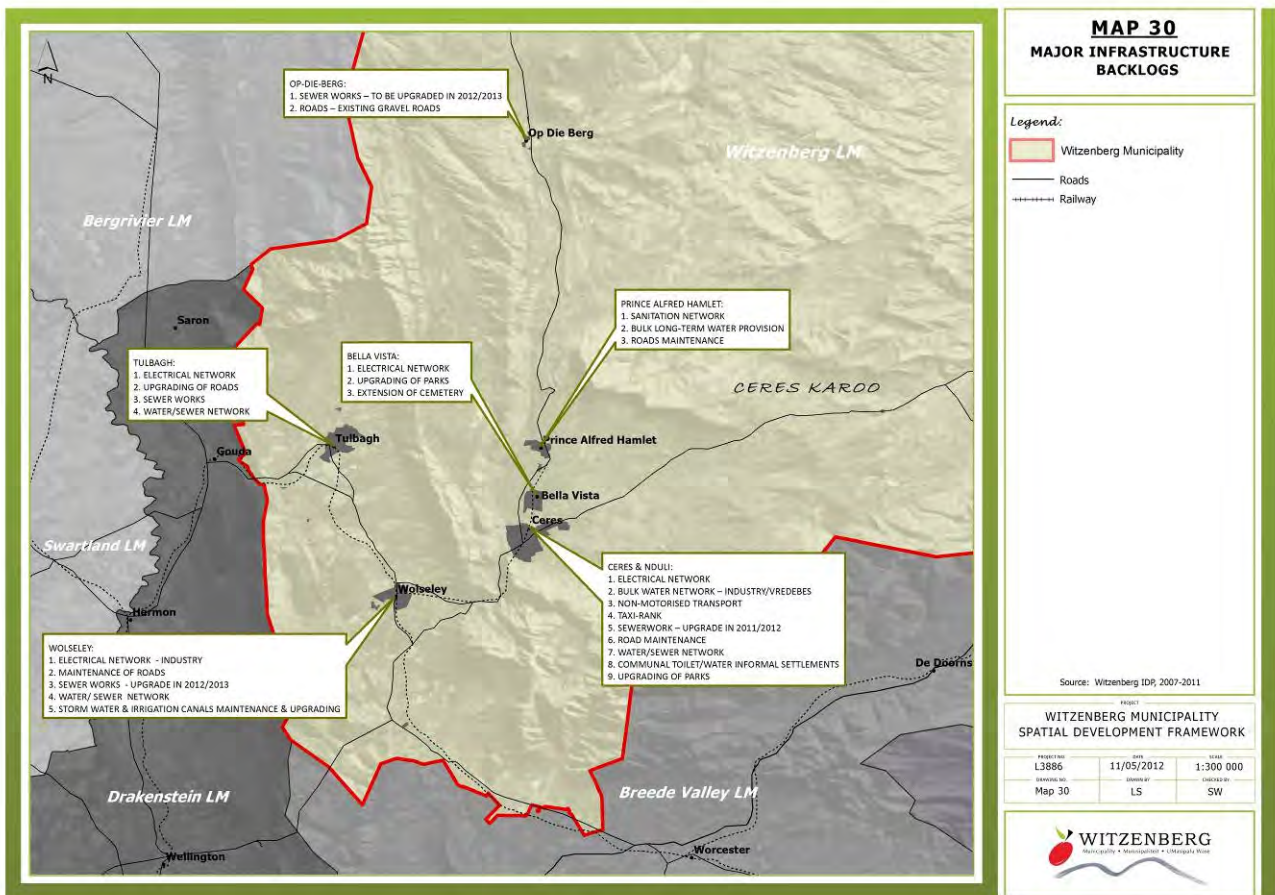
The Wolseley electrical network is owned and operated by the Witzenberg Municipality, and it buys electricity in bulk from Eskom via a single 11kV bulk metering point at Eskom's Wolseley Substation. This is distributed to consumers within Wolseley supply boundaries at 11kV, 400v and 230V. *Arcus Gibb* estimated the demand for electricity for the next 5 years based on the list of future developments happening in Tulbagh. It is recommended that the list be updated every second year. The predicted maximum demand (kVA) for the following 5 years is as follows:

- 2012: 4154.46 kVA.
- 2013: 4237.55 kVA.
- 2014: 4322.30 kVA.

- 2015: 4408.74 kVA.
- 2016: 4496.92 kVA.

The *Medium Master Plan for Wolseley* has the following future recommendations (for the next 5 years) that area essential upgrades to this settlement, and the capital needed is estimated at approximately R2 556 000 (excluding VAT):

- The Montana Industrial Upgrade – Introduce two new RMUs connected with a 95mm<sup>2</sup> copper feeder. Ensuring a secondary feed to the industrial area.
- Replacing the existing overheads line with 100mm<sup>2</sup> Hare ACSR between Wolseley Substation and critical supply nodes.
- Replacing the existing 35mm<sup>2</sup> cables with 95mm<sup>2</sup> copper between Wolseley Substation and critical supply nodes.
- Voortrekker Substation’s circuit breakers are obsolete and outdated. Major repairs on these units will be impossible. Voortrekker substation is a critical connection pint in the Wolseley reticulation network. Losing the ability to switch from this point will compromise all electrical supplies from Montana RMU.



**B5 ECONOMIC CONTEXT**

**B5.1 ECONOMIC STRUCTURE AND PERFORMANCE**

According to the Provincial Treasury of the Western Cape (2010) the Cape Winelands District Municipality had the second largest regional economy in the Western Cape in 2009, with a total regional gross value of R21.56 billion.

Furthermore, in the period from 2001 to 2009 the economy of the Cape Winelands District grew at annual average of 3.2% compared to the Western Cape Province’s annual average growth of 4.3%. The effect of the global financial crisis has caused both the Cape Winelands District and the Western Cape Province’s economies contracting by 0.4% and 1.2% respectively in 2009.

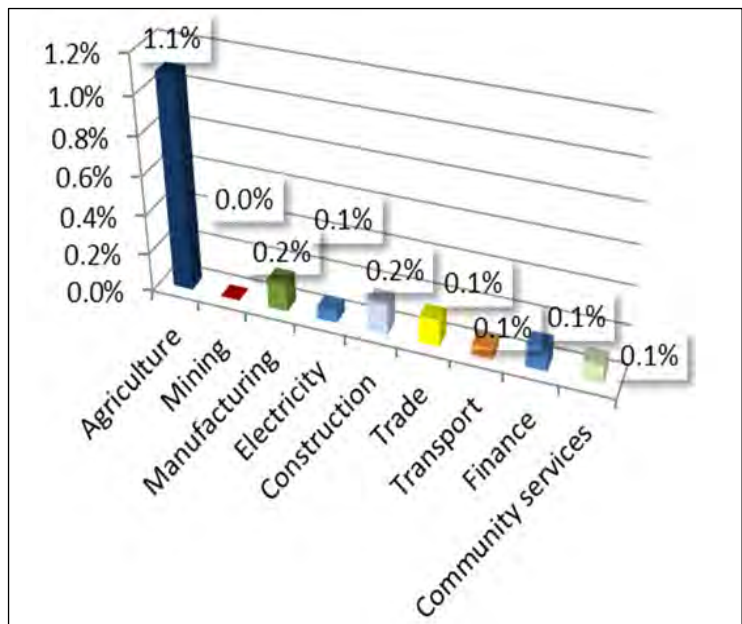


Figure B12: Gross value added (2010).  
(Source: Witzenberg Municipality).

The Witzenberg Municipality economy is the smallest compared to the rest of the Cape Winelands District. It contributes 9% to the Cape Wineland’s regional Gross Domestic Product Regional (GDPR) (Witzenberg IDP 2007-2011). Recent figures from the Department of Socio-Economic Development (2011) indicate that the two largest sector contributors to the Gross Value Added for the region are agriculture (20.7%) and the finance sector (19.9%).

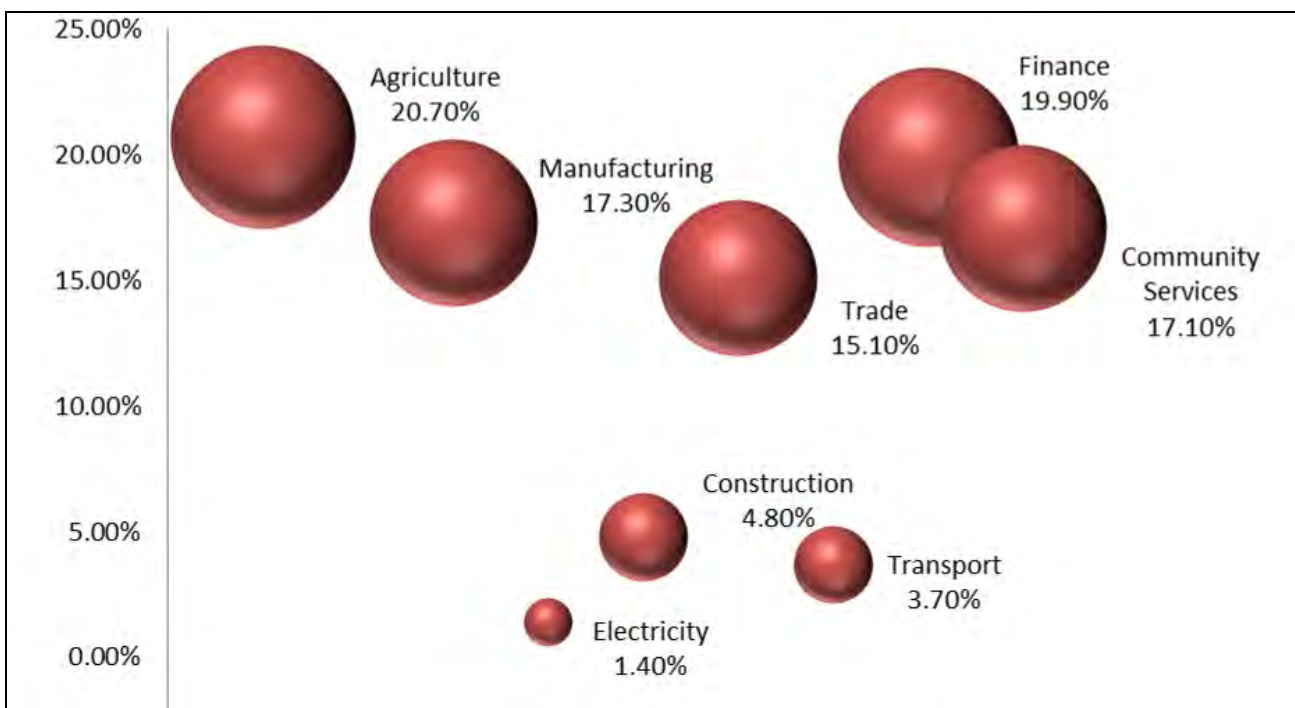


Figure B13: Sectoral share in the municipal economy (2009).

The importance of the agricultural sector specifically as it relates to employment is confirmed by the fact that approximately 64% of the employed population in Witzenberg are employed in the agricultural sector, followed by 8.3% in the wholesale and retail supply sector (i.e. it is a well-known tourist destination).

Table B27: Employment per Economic Sector.

INDUSTRY	NUMBER OF EMPLOYEES	% OF TOTAL EMPLOYEES
<b>PRIMARY SECTOR</b>		
Agriculture, Hunting and Forestry	23 365	64.08%
Mining & Quarrying	4	0.01%
<b>SECONDARY SECTOR</b>		
Manufacturing	1 952	5.35%
Electricity, Gas & Water Supply	69	0.18%
Construction	777	2.13%
<b>TERTIARY SECTOR</b>		
Wholesale & Retail Trade, repairs, hotels and restaurants	3 010	8.25%
Transport, Storage & Communication	451	1.23%
Financial Intermediation, Insurance, Real Estate & Business Service	851	2.33%
Community, Social & Personal Services	2 802	7.68%
<b>MISCELLANEOUS</b>		
Private Households	1 171	3.21%
Other & Not Adequately Defined	0	0
Undetermined	2 008	5.50%

(Adapted 2001 Census, as amended in 2005).

In order to promote Local Economic Development (LED) in the Witzenberg it is important to support and give practical effect to the guidelines addressed in the *National Framework for LED in South Africa*. The private sector, the cooperative sector consisting of formal and informal, social enterprises, as well as the income-generating community projects and survival businesses in the informal sector, that operates in these municipal regions are the engines of economic growth. In promoting the local economy, the primary focus of the municipality should be upon the:

- a) Provision of infrastructure and quality and reliable services.
- b) Managing spatial policies.
- c) Land-use regulation and development applications.
- d) Managing service tariff policies.
- e) Managing a progressive property tax system.
- f) Marketing the territory

According to the National Framework for LED there are numerous sources of funding for the inputs that can contribute to developing a local economy. The challenge is to build the requisite capability both at local, provincial and national government level to guide the mobilisation and application of funding in local economies in an effective manner. The following funding sources could be accessed by the Witzenberg Municipality to grow its economy: Municipal Infrastructure Grant, Neighbourhood Development Partnership Grant (NDPG) and urban development incentives (National Treasury), Sector Support (i.e. National departments and State Owned Enterprises), Development Finance Institutions (DFIs) such as Industrial Development Corporation (IDC), Development Bank of South Africa (DBSA), National Empowerment Fund, private banks, venture capital companies, etc. and donor funding.

## B5.2 PRIMARY ECONOMIC SECTORS

The primary economic sectors and their key aspects are summarised below.

### B5.2.1 AGRICULTURE

The agriculture sector's importance to the Western Cape's economic activity is also reflected in the fact that over 6% of all agricultural production occurs in this area. In total, however, Witzenberg only contributes 0,8% to the Province's total GDP. In 2005, Witzenberg was the slowest growing economy in the Cape Winelands District, with a contribution of R1,19 billion or 9% to the District's gross domestic product (GDP). It is anticipated that the region's annual growth will remain fairly constant between 3,3% and 3,5%, reflecting a fairly robust economy (Witzenberg IDP 2007- 2011).

According to the EMF (2011) for the Cape Winelands District Municipality agriculture is by far the most important sector in Witzenberg and in the previous District Management Area of the Cape Winelands (most of which currently forms part of the Witzenberg). In fact, agriculture generated R430 million for Witzenberg, and R60 million for the previous DMA. Agriculture plays the largest role in northern parts of the Witzenberg, the old Cape Winelands DMA, where it contributes nearly 80% to the total GDP of that area.

Witzenberg is predominantly rural and dependent on agriculture not to just feed its people but as the backbone of economic activity. Environmental conservation is critical to ensure the sustainability of economic activity going forward. There is already extensive evidence of environmental damage as a result of agricultural and related activities (Witzenberg IDP 2007- 2011).

In 2007, the Witzenberg Community Trust was established with the core focus areas of education, healthcare and SMME development with a specific focus on agriculture and women in the Ceres, Tulbagh and Witzenberg areas. The Trust owns two percent in *Vuya! Investments*, and *Vuya! Investments* with Henkel SA entitled 32 learners the opportunity to fulfil their educational dreams<sup>31</sup>. Ceres, Tulbagh and Wolseley are well-known for its fresh fruits, fruit juices, wine, mineral water etc. Today there are more pear trees in the fertile valley of Ceres than in other Cape fruit regions together. The region dominates in the production of peaches, apples, plums, grapes, potatoes, onions and wheat.

Participants at a recent round table discussion on the development potential of the region indicated that there are approximately 27 375 hectares of land available for irrigation in the Ceres area. However, a limiting factor is not the amount of water available, but inadequate storage capacity.

A pre-feasibility study was undertaken to investigate the possibility of launching an irrigation scheme that would benefit commercial and individual farmers. A segment of the scheme is the allocation of farmland to permanent farm workers for cultivation through an empowerment process, while commercial farmers would provide the necessary assistance to the empowerment beneficiaries. The study found that there is enough water and soil to launch such a scheme with a pilot of 600 hectares, reaching up to 2 000 hectares at full capacity.

This development has the potential to generate a gross income of R200-R250 million (2007 figures); 2 000 permanent job opportunities, and 3 000-4 000 seasonal opportunities. Furthermore,

<sup>31</sup> <http://www.vuyainvestments.co.za/index.php?choice=witzenberg> – accessed on 29 July 2011.

additional BBBEE opportunities can be developed in secondary activities such as cold storage, transport, etc. It is also envisaged that there will be an opportunity to establish an agri-village for farm workers which might result in better service provision for them as well as over the long-term in the form of a special retirement option. Whilst a steering committee has been established as is required; the necessary intervention regarding the issuing of water use authorisations and authorisations for the building of dams – is being stalled at the Department of Water Affairs.

### a) Wine Industry

As mentioned before, there are many fine wine estates in the Tulbagh valley, which are open to the public for wine tastings, sales and cellar tours. The Tulbagh Wine Route's terroir has been recognised as amongst the finest in the country. The Tulbagh Wine Route encompasses one of the Cape's oldest wine-producing regions. Present-day Tulbagh wine farms such as Theuniskraal, Drostdy-Hof and Twee Jonge Gezellen's roots stretch back to the first settlement of the valley. Wine of Origin<sup>32</sup> status was conferred on Tulbagh in 1971, but it was only in 2002 that 12 of Tulbagh wine cellars were elected to form an official wine route. The Tulbagh Valley is surrounded by three mountain ranges, Obiqua, Winterhoek and Witzenberg which protects the valley, drains the valley with enough water and this 'horseshoe' traps cool night air in the valley, resulting in relatively cool daytime temperatures despite hot summer months. This anomaly, along with Tulbagh wine cellars' northerly position in the valley, sees grapes ripen early and with high acidity, perfect for making Tulbagh's acclaimed *Methode Cape Classique* wines. Other wine cultivars grown in the area include Chenin Blanc, Cabernet Sauvignon, Shiraz, and Colombard<sup>33</sup>.

The wine cellars and estates around Wolseley form part of the Tulbagh as well as the Breedekloof Wine Routes. Koelfontein is the only wine producer in Ceres<sup>34</sup>.

### b) Potato farming

Ceres, in particular the Koue and Warm Bokkeveld, is the main potato producing area in the region. The area has only one production period with planting taking place from September to November and harvesting from January to May. The cold winter makes it impossible for a second planting season (StepSA, 2011)<sup>35</sup>. According to Potatoes SA<sup>36</sup>, the favourable conditions in Ceres results in very high yields per hectare. In 2008/2009 approximately 294 850 ha were planted under potatoes and it yielded 99 330 bags of 25 kg each. The main cultivars are Vanderplank and Lady Rosetta, and nearly 30% of the table potato crop is processed with all plantings under irrigation.

### c) Other fruits

Deciduous fruits such apricots, pears, cherries (i.e. Klondyke Cherry Farm), plums, etc. are also produced in great amounts. SRK Consulting (2011) describes the deciduous fruits grown in Witzenberg as follows:

<sup>32</sup> The Wine of Origin term refers to the official division of the South African Winelands into geographical units, regions, districts and wards. When a wine claims that it is 'of origin' it refers to the fact that the vines are grown and the wine was made, in its entirety, in the district under which it is categorised ensuring that it is 'original' to its area of production.

<sup>33</sup> <http://www.tourismgrading.co.za/sat/content/en/za/trade-full-article?oid=342909&sn=Detail&pid=309664&Tulbagh-Wine-Route> – accessed on 25 July 2011.

<sup>34</sup> <http://www.south-african-hotels.com/suburb/ceres/> - accessed on 23 July 2011.

<sup>35</sup> Spatial Temporal Evidence for Planning: South Africa (StepSA), May 2011. <http://www.stepsa.org/resources/shared-documents/cape-winelands-ii-report> - accessed on 29 July 2011.

<sup>36</sup> <http://www.potatoes.co.za/production/seed-potatoes/potato-certification-service/seed-potato-production/ceres.aspx> - accessed on 29 July 2011.



FRUIT	MAIN PRODUCTION AREA	AREA UNDER PRODUCTION	CHANGE FROM 2004	PRODUCTION AS% OF SOUTH AFRICA
Pears	Ceres, Wolseley and Tulbagh	6 088 ha	- 8%	53%
Apples	Ceres	5 318 ha	- 2%	25%
Peaches	Ceres, Wolseley and Tulbagh	3 273 ha	- 16%	39%
Plums	Wolseley and Tulbagh	2 182 ha	- 7%	52%

(Source: Murray {2010} as cited in SRK Consulting {2011}).

In recent years, the volume of exports has either stagnated or declined in products such as apricots and apples. Whilst the production and exports of pears are fairly stable profitability is worsening (SRK Consulting, 2011). The largest cost increases are in production and packaging. Agri-Western Cape argues that the main culprit for the low profitability levels in the wine and fruit industries is domestic cost increases (StepSA, 2011).

The deciduous fruit industry comprises a number of organisations such as the SA Apple and Pear Producers' Association and the SA Stone Fruit Association. The umbrella body for the industry is the Deciduous Fruit Producers Trust (DFPT) which has played a major part in stabilising the industry and providing a consolidated platform to negotiate and develop, as well as to initiate research in the area (Witzenberg LED, 2005).

#### d) Forestry

Approximately 3 700 ha of large scale pine and gum tree plantations are grown and located west of Ceres. Smaller patches of approximately 20 ha area scattered around other parts of the Witzenberg Municipality (SRK Consulting, 2011). Kluitjieskraal State Forest (also known as Swanenbergpark) near Wolseley is the biggest plantation in the area.

Kluitjieskraal was one of the first forest stations to be established as a labour and housing node for the Department of Forestry and subsequently became the property of SAFCOL. The residential village grew over the years to the current extent of some 80 timber built houses (Chittenden Nicks de Villiers, 2002).

#### e) Other products

Other agricultural products or rather new niche market products include essential oils, buchu and olives, and organic farming initiatives which could bring valuable opportunities for small farmers and upcoming farmers in Witzenberg. The Wild Olive Farm<sup>37</sup> in Tulbagh has a boutique winery and an olive oil production facility whilst Waverley Hills near Wolseley is practising organic farming techniques and provides an eco-centre with environmental programmes such as the *Green Fingers Initiative* which educates learners in subjects such as recycling, river rehabilitation, etc.

In the Witzenberg area there is the Buchu<sup>38</sup> Project which aims to develop opportunities for the local communities and later it will also be involved with essential oils. The market growth for

<sup>37</sup> [www.wildolivefarm.com](http://www.wildolivefarm.com)

<sup>38</sup> Buchu (*Agasthosma betulina*, *A. crenulata*) is naturally found in *inter alia* in Tulbagh and Ceres. Buchu leaf oil is obtained by steam distillation of the leaves as a dark yellow to brown liquid with a characteristic, strong, minty-fruity odour, reminiscent of black currant. Apart from its pharmacological use, Buchu leaf oil is used as a flavour ingredient (e.g. in fruit aromas) and in perfumery.

essential oils and natural products are currently more than 10% annually. In South Africa approximately 10 to 100 kg of indigenous oil is produced for a local niche market, where the expectation for the export niche markets is more in the 2 to 10 ton bracket. The projects are aimed at supporting small farmers, BEE and women in the region<sup>39</sup> and includes the creation of community gardens and urban agriculture in all settlements.

### B5.2.2 TRANSPORT

Roads are the lifelines of any economy, especially in a mostly rural economy such as the Witzenberg Municipality. The better connectivity improves socio-economic conditions of the people living in the areas. Good communication and transport network opens up the economy for better utilisation of its potential resources, facilities and induces growth of all sectors. An efficient and well established network of roads is desired for promoting trade and commerce in the municipality and also fulfils the needs of a sound transportation system for sustained economic development.

According to Table 9-12 in the EMF for the Cape Winelands District Municipality (2011), the road infrastructure of Ceres, Op-die-Berg, Prince Alfred Hamlet, Tulbagh and Wolseley is regarded as 'good'. However, on page 24 of the Witzenberg LED (2005) it is stated that poor road conditions inhibit development of key sectors. The importance of a good road network in the Witzenberg is emphasised in the Witzenberg LED (2005) that states: *It is generally concluded that the basis of Witzenberg's economic competitiveness can be consolidated inter alia by ... the maintenance both of the link road network with Cape Town harbour that currently carries all the export fruit produced in Witzenberg and the adequacy of peak-season fruit-handling capacity of Cape Town harbour itself.*

Furthermore, the Witzenberg LED (2005) states the following regarding the importance of a well-maintained-road infrastructure:

- a) *The 'hard' or economic infrastructure (i.e. the infrastructure that will make the local economy more productive and more competitive in producing for external and domestic markets) can be made more effective and efficient by building or improving key access roads in support of economic activity ... improving road and rail passenger and goods services in accordance with the production needs of the local economy. (page 46-47).*
- b) *The road and rail infrastructure in the Cape Winelands District is well-developed, yet large areas are served with gravel roads, particularly in the areas of Witzenberg ... the District Management Area. The quality of roads is an important economic factor since it has an influence on the agricultural produce transported along the routes. (page 135).*
- c) *The entire harvest of deciduous fruit has to be transported by truck from Witzenberg to the various market destinations. As a result the quality of the road network is very important, particularly for the transport of export fruit, as the fruit must not be damaged in any way. In Witzenberg there is some cause of concern as the condition of key sections of the road network. (page 227).*

Enviro Dinamik (2007), states that the farms of the Ceres Karoo are typically used for winter grazing by farmers from the Koue Bokkeveld or the Roggeveld, for four months of the year. Thus, for roughly eight months of the year there is no activity on the farms and opportunities exist for the increase in the viability of the farms and lead to the creation of job opportunities. Increased visitor-use of the roads offers opportunities for the owners of the properties to establish guest house-type accommodation for travellers in co-operation with all the relevant authorities and allow for local economic development opportunities.

<sup>39</sup> [http://www.mcgregorvillage.co.za/images/Documents/projects\\_150305.pdf](http://www.mcgregorvillage.co.za/images/Documents/projects_150305.pdf) - accessed on 23 July 2011.

### **B5.2.1.1 Provincial land transport framework**

The Provincial Land Transport Framework (2011/12 – 2015/16) (PLTF) is a strategic document with the purpose to inform all transport and land-use related provincial decision-making pertaining to transport infrastructure maintenance and investments, public transport, road traffic safety and management, as well as guide district-wide and local integrated transport planning. In short, the purpose of the Provincial Land Transport Framework is to:

- a) State provincial objectives and policies that give direction to transport on a provincial-wide scale.
- b) Ensure national planning objectives and policies are implemented at the provincial scale.
- c) Assist in coordinating and integrating transport in the province.
- d) Serve as the basis for the preparation of Integrated Transport Plans (ITPs) and Public Transport Plans (PTPs) in the province.

Six goals have been identified that are essential to the achievement of the long-term transport vision in the Western Cape which stipulates *an equitable, sustainable, economically efficient, effective and safe integrated multimodal transport system that allows citizens to access opportunities in a dignified manner, in support of the provincial goal of creating an open opportunity society*. These goals are applicable to the Witzenberg Municipality and needs collaborative efforts from key transport role-players such as municipal town planners, Passenger Rail Agency of South Africa (PRASA), SANRAL, Transnet, as well as three spheres of government. The goals are as follows:

- (i) An efficient, accessible and integrated multimodal public transport system managed by capacitated and equipped municipal authorities.
- (ii) Non-motorised transport as a pivotal part of all forms of transport planning in urban and rural areas.
- (iii) A well-maintained and preserved transport system.
- (iv) A sustainable transport system.
- (v) A safe transport system.
- (vi) A transport system that supports the province as a leading tourist destination.

### **B5.2.4.2 PSO3: Moving the Western Cape Forward: increasing access to safe and efficient transport**

The Western Cape Government has 12 Provincial Strategic Objectives (POS) to ensure sustainable future growth in the province. The 3<sup>rd</sup> POS is to increase access to safe and efficient transport.

The main targets for increasing access to safe and efficient transport in the Western Cape are:

- a) Achieving a 13% modal shift from private to public transport by 2014 through the promotion of improved rail transport, support to integrated transport networks including the provision of rapid trunk routes for existing public transport services, and formalising the minibus taxi industry.
- b) Shifting contestable freight haulage from road to rail by 10% by 2014.
- c) Reducing the number of fatalities on the Western Cape Roads by 50% by 2014.
- d) Reducing transport infrastructure maintenance backlogs by 16% by 2014.

The Witzenberg Municipality should link with these provincial objectives of the PSO3 Strategy to ensure that the transportation infrastructure of the municipal area in the future is more sustainable, safe and efficient.

1. *Maximising economic and employment growth:*
  - (i) Create opportunities for employment through infrastructure delivery and maintenance.
  - (ii) Support economic growth through capital investment.
  - (iii) Increase employment within transport services as they will be operating more formalised services.
  - (iv) Allow people in rural areas to access opportunities in towns and settlements through regular transport services.
  - (v) Support industry development which is required to support – possible new services and systems linked to rail, maritime and aviation.
2. *Improving school education outcomes:*
  - (i) Enable learners to access education facilities, participate in extra-mural activities.
3. *Maximising health outcomes:*
  - (i) Enable patients to be able to access health facilities.
  - (ii) Enable family and friends to visit loved ones at health facilities.
  - (iii) Reduce the burden of disease through fewer road accidents.
  - (iv) Improving the health and well-being of our communities through promoting non-motorised transport.
4. *Reducing crime:*
  - (i) Increased and improved law enforcement of the transport systems with dedicated focus on public transport operations.
5. *Optimising human settlement integration:*
  - (i) Providing the necessary transport linkages – both road and rail – public and private.
  - (ii) Promote non-motorised transport – pedestrian and cycle paths leading to more liveable towns and cities.
6. *Maximising sustainable resource management and use:*
  - (i) Public transport will require energy efficient vehicles to be operated.
  - (ii) Emissions of public transport vehicles will be monitored through contractual targets.
  - (iii) Increase the volume of freight moved by rail as opposed to road transport.
  - (iv) Provide viable alternatives for people to move from private transport to public transport thereby reducing emissions, and congestion.
7. *Increasing social cohesion:*
  - (i) Allow people to move freely within the Western Cape and within the town or settlement, thereby supporting integration of communities.
  - (ii) Providing access to sporting and cultural events and locations.
8. *Reducing poverty:*
  - (i) Individuals who require government grants can access them at a reasonable cost.
9. *Clean, value-drive, efficient, effective and response government:*
  - (i) Allow citizens to access government services.
  - (ii) Allow citizens to participate in consultation processes organised by government.

### **B5.2.3 MANUFACTURING**

Approximately 5% of the employed population in Witzenberg is involved in the manufacturing industry. The manufacturing sector is strongly linked to the agricultural sector in Witzenberg with the main products being wine, juice, juice concentrates and dried and tin fruits. Other manufacturing activities include fruit packaging and processing. Concern has been voiced in the industry over insufficient processing of fruit grown in the region. Round table discussions indicated

that further value-add to agricultural products can occur but that start-up funding for especially small businesses is needed.

With the increase in fuel and energy costs that adds to the costs of fruit cultivation, storage and transportation, the possibility exists to source various agricultural inputs closer to home. This opens up the possibility for growth in the agricultural support sector in light industries. The location of the fruit processing industries will lower the carbon footprint of such products as they would be produced close to where the fruit is cultivated.

In the Witzenberg IDP (2007-2011) it is stated that Accelerated and Shared Growth Initiative of South Africa (ASGISA) has identified growth sectors which include both agriculture and tourism. These two growth sectors, as well as agri-processing (manufacturing), are also key sectors in the Witzenberg region. The Ceres Fruit Juices (Pty) Ltd<sup>40</sup>, founded in 1986 is the largest fruit juice packaging operation in Africa with a first-class manufacturing facility and presence in all five continents. It is well-known for its 100% fruit juice products.

According to the Witzenberg LED (2005) initiatives were underway in Tulbagh to involve the local community in creating various craft manufacturing and sales opportunities based on the available skills and particularly for the transfer of skills to the unskilled, unemployed or disadvantaged. Furthermore, *there is a strong need for 'value-adding' manufacturing in the region, and local small industries to invest locally and reinvest profits locally. Value-adding manufacturing can facilitate a shift from low-cost mass production to high unit cost final product production.*

The timber grown in forestry plantations is predominantly used in the pulp, paper and board industry with the sawmilling industry being the next biggest consumer.

#### **B5.2.4 TOURISM**

Tourism has been identified as one of the key areas for Local Economic Development in the Witzenberg Municipality – *stimulate tourism by working in synergy with the tourism sector, and to embark on a concreate drive to market Witzenberg in order to attract investment ... The Witzenberg Municipal area is characterised by commonage for eco-tourism potential ... Witzenberg local municipality recognises the importance of their natural resources not only as one their greatest assets but also as an attraction for tourism.*

The Cape Winelands District Municipality EMF (2011) states that tourism is an important income source for the district, and increasingly so as, for example, farmers diversify into tourism and related businesses to supplement their income. The area benefits from spectacular views, opportunities such as wine tasting and its proximity to Cape Town, a major tourism hub in South Africa. According to the World Tourism Organisation (UNWTO), tourism is *number one in the international services trade* accounting for 40% of global trade in services and 6% of total world trade.

The Western Cape Tourism Barometer (2009) states that the majority (68.3%) of visitors to the Cape Winelands region were domestic, followed by 29.7% who originated from overseas and 1.2% from Africa (excluding domestic visitors). The overseas visitors dominated across towns of Stellenbosch and Paarl, and the domestic visitors across the towns of Tulbagh and Ceres.

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<sup>40</sup> <http://www.ceresjuices.com/company/>

TOWN	OVERSEAS	DOMESTIC	AFRICA (EXCLUDING DOMESTIC)
Ceres	26.2%	70.7%	3.0%
Tulbagh	18.9%	78.8%	0.7%

(Source: Western Cape Tourism Barometer, 2009).

### a) Eco-Tourism Activities

Knowledge and protection of the area's unique ecological and cultural characteristics could promote tourism that draws on these unique attributes of the area, in line with tourism trends and market demands (i.e. the provision of a unique tourist experience that is also educational). This should not only help boost the area's tourism industry, but should also promote environmental and socio-cultural conservation.

The natural and cultural environments of the Witzenberg Municipality offers numerous outdoor activities such as river rowing, hiking along waterfalls, walking, sunset drives, game-viewing, bird-watching, mountain biking, rock-climbing, bush walks, 4x4 trails, snow-skiing, wine route tours, food tours, water-skiing, etc. Well-known adventure and sports activities *inter alia* include:

- (i) The Vaalkloof Private Nature Reserve near Ceres has numerous 4x4 routes, hiking trails, mountain-biking trails, including the famous Suurpootjie Hut route.
- (ii) Matroosberg Mountain Drive is only accessible by 4x4 vehicles and has several viewpoints from which the stunning surroundings can be seen.
- (iii) Matroosberg All 4 Fun Day: 4x4 Family Fun.
- (iv) The Kluitjieskraal mountain-bike trail close to Wolseley is 41 kilometres of stunning mountain, forest and waterfall scenery, and includes a shorter trail of 14 km<sup>41</sup>.
- (v) Elsbos Route in Tulbagh spans over several wine farms and gives hikers an idea of how farming is done. The second route leads through Fynbos vegetation along the hills of the Witzenberg Mountains.
- (vi) Numerous farm dams in the municipal area allow fishing of species such as bass, carp and tilapia. Trout fishing opportunities exist in Ceres and Tulbagh.
- (vii) The Tulbagh area especially is criss-crossed with several hiking, biking and horse-riding trails. The Groot Winterhoek area is known for its lovely hikes.
- (viii) The New Munster hiking trail at the foot of the Mostertshoek Mountain is specially tailored to lead hikers through pristine indigenous vegetation.
- (ix) Nature and game Reserves such as Iverdoorn Private Game Reserve, provide activities such as horse riding, game drives, villas, swimming pools, etc.
- (x) The Kagga Kamma Private Game Reserve offer cave walking, culture tours to rock paintings, stargazing by telescope, geological tours, etc.
- (xi) San cave paintings are found in the Koue Bokkeveld and some guided tours are offered.

The following provincial nature reserves are located in Witzenberg, namely: Ben-Etive, Cederberg Wilderness Area, Fonteintjiesberg, Hawequa, Hexberg, Waterval, Witteburg, and Witzenberg. Local Nature Reserves include: Ceres Mountain Fynbos. Other protected areas include the Tulbagh Protected Area, and the Cederberg, Hawequas, Winterhoek, and Koue Bokkeveld Catchment Areas (refer to Chapter B2.4.3). Some of these above-mentioned protected areas offer hiking trails, cycle trails, eco-tours, self-catering units, etc.

<sup>41</sup> <http://www.sa-venues.com/attractionswc/wolseley.php> - accessed on 3 July 2011.

## b) General Amenities and Opportunities

A broad spectrum of tourist amenities and opportunities occur.

- (i) Numerous guesthouses, self-catering units, bed-and-breakfast facilities, over-night facilities, hotels etc are available all the settlements and in the rural areas.
- (ii) 'Fruit activities' include fruit tours (in-season times) in the Ceres area to various farms, and Klondyke Cherry Farm includes cherry-picking activities for visitors during mid-November to end December. Juice tasting is hosted at the Ceres Transport Rider's Museum.
- (iii) Agri-tourism opportunities provide insight into fruit farming, processing of fruits, etc and Waverley Hills Estate provides an Eco Centre where environmental programmes can be facilitated from.
- (iv) A number of historic buildings, such as Boplaas where Boerneef was born, offer tours and the *Togryersmuseum* is an unique museum on the pioneering travellers and transport riders of the Cape.
- (v) Various craft and art shops and galleries are located in the main settlements of Tulbagh, Ceres and Wolseley.
- (vi) Venues for weddings, team-building, and conferences are plentiful on the wine farms and the game reserves around Ceres, Wolseley and Tulbagh.
- (vii) Top class restaurants, coffee shops, and eateries are found in the area that offer barbeque to gourmet dishes.
- (viii) Some top class wine estates are located in the Tulbagh and Wolseley area such De Heuvel, Drostdyhof, Lemberg, Blue Crane Vineyards, Saronsberg, etc. Some of these wine farms are part of the famous Tulbagh Wine Route.
- (ix) Cultural and heritage tours are available in Tulbagh, Ceres and Wolseley to experience the various architectural styles and buildings of bygone times.
- (x) The area boasts some of the most beautiful mountain areas in South Africa, and the Michell's Pass and Gydo Pass offer stunning viewing points of the mountain areas. Landscapes such as the Warm Bokkeveld (one of the richest agricultural regions of the Western Cape), Bo-Swaarmoed (famous cherry picking in season, panoramic views), Koue Bokkeveld (highland fruit and vegetable producing area), and Ceres Karoo and Tankwa Karoo (endless horizons in semi-arid areas) offer unique nature-viewing amenities.
- (xi) Camping sites and caravan sites are available at Tulbagh, Ceres and Wolseley. The Fynbos Guest Farm near Wolseley is a working farm that offers tranquil camping/caravan sites with panoramic valley and mountain views.
- (xii) Wolseley, Tulbagh and Ceres are all reachable to the famous tourist road, Route 62, which is a prominent tourist attraction in the Western Cape.

## c) Festivals, Markets and Events

- (i) Eselfontein Outdoor Festival (October), Ceres: This mountain biking event is held on a specially designed single track route that has been continuously altered and bettered for the last 20 years. The event is unique in that it offers mountain bikers the most single track riding, with enough passing sections, out of all events on the South African Mountain Biking Calendar. Distances are 20 km, 40 km and 70 km.
- (ii) Tulbagh Horse and Wildflower Show (end of September to beginning October), Tulbagh: The South African National Horse Championships are held annually and the highlight of the show is the wild flower exhibition, where flowers are displayed as they would appear in their

natural state. Furthermore, various exhibitions, art and craft stalls, wine and beer garden and family entertainment is also presented<sup>42</sup>.

- (iii) Tulbagh Christmas in Winter Festival (end of June), Tulbagh: Every year, Tulbagh is celebrating Christmas early and especially Church Street is decorated with Christmas lights and trees with all the trimmings while local restaurants serve up traditional Christmas dinners. This two-day festival includes arts and crafts, exhibitions, art galleries, various food stalls ranging from cheeses, olives to Belgian chocolate, sports bar, wine tent, Rock with Santa Party, etc. and takes place at various venues throughout the Tulbagh Valley<sup>43</sup>.

According to the Witzenberg LED (2005) the tourism industry in Witzenberg *enjoys some niche advantage relative to the Cape metropole for specific tourism experiences, and there is a growing trend towards farm- or agricultural tourism with farmers making access to their land available for tourism activities and offering accommodation facilities, combined with various agri-tourism attractions*. Although the tourism industry experiences a growth phase, the Witzenberg LED (2005) stipulates that *there is not a single/coherent/existing future vision for tourism. At present, the industry is going through a growth phase, is fragmented and there seems to be enough market to mop-up new entrants. However, this is not sustainable, and the area should develop its offering and market the region as a whole*.

### B5.2.5 SERVICES SECTOR

The services sector includes professional, government, financial, real estate and financial services and collectively accounts to approximately 10% of the total employment of the area. Ceres is the administrative and regional centre of Witzenberg, and most banks, schools, shopping malls, government-related services, educational facilities, etc. are located there.

## B6 DEVELOPMENT REGIONS AND CORRIDORS

The spatial economy of the Western Cape is currently conceptualised in the Western Cape PSDF by a pattern for strategically directing investment to consolidate a long-term settlement development pattern at a provincial scale by both the public and private sector.

The primary areas of concentration include the following:

- |    |                                 |                                                                                                                                                                                                                                      |
|----|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a) | Regional Motors:                | Saldanha/Vredenburg and the Southern Cape.                                                                                                                                                                                           |
| b) | Regional Development Corridors: | Olifants River Valley and Breede River Valley.                                                                                                                                                                                       |
| c) | Regional Transport Corridors:   | City of Cape Town to Saldanha.                                                                                                                                                                                                       |
| d) | Leader Settlements:             | Well-resourced settlements with both an exceptionally high growth potential and a relatively high level of human need that have a critical role in the support and development of surrounding towns and settlements in their region. |

With regards to the Breede River Valley Development Corridor, within which the Witzenberg settlements of Wolseley and Tulbagh is located, Chapter 3.6 of the PSDF states that *the potential to substantially increase the population carrying capacity and invest in the Regional Development Corridor of the Breede River Valley corridor, as a major new area of integrated urban and regional*

<sup>42</sup> <http://www.sa-venues.com/events/westerncape/tulbagh-horse-and-wildflower-show/> - accessed on 3 July 2011.

<sup>43</sup> <http://blog.sa-venues.com/provinces/western-cape/christmas-tulbagh> - accessed on 3 July 2011.



development that intercepts and feeds off traffic using a substantially upgraded, hopefully rail based, transport system between the Southern Cape and the City of Cape Town, should be investigated.

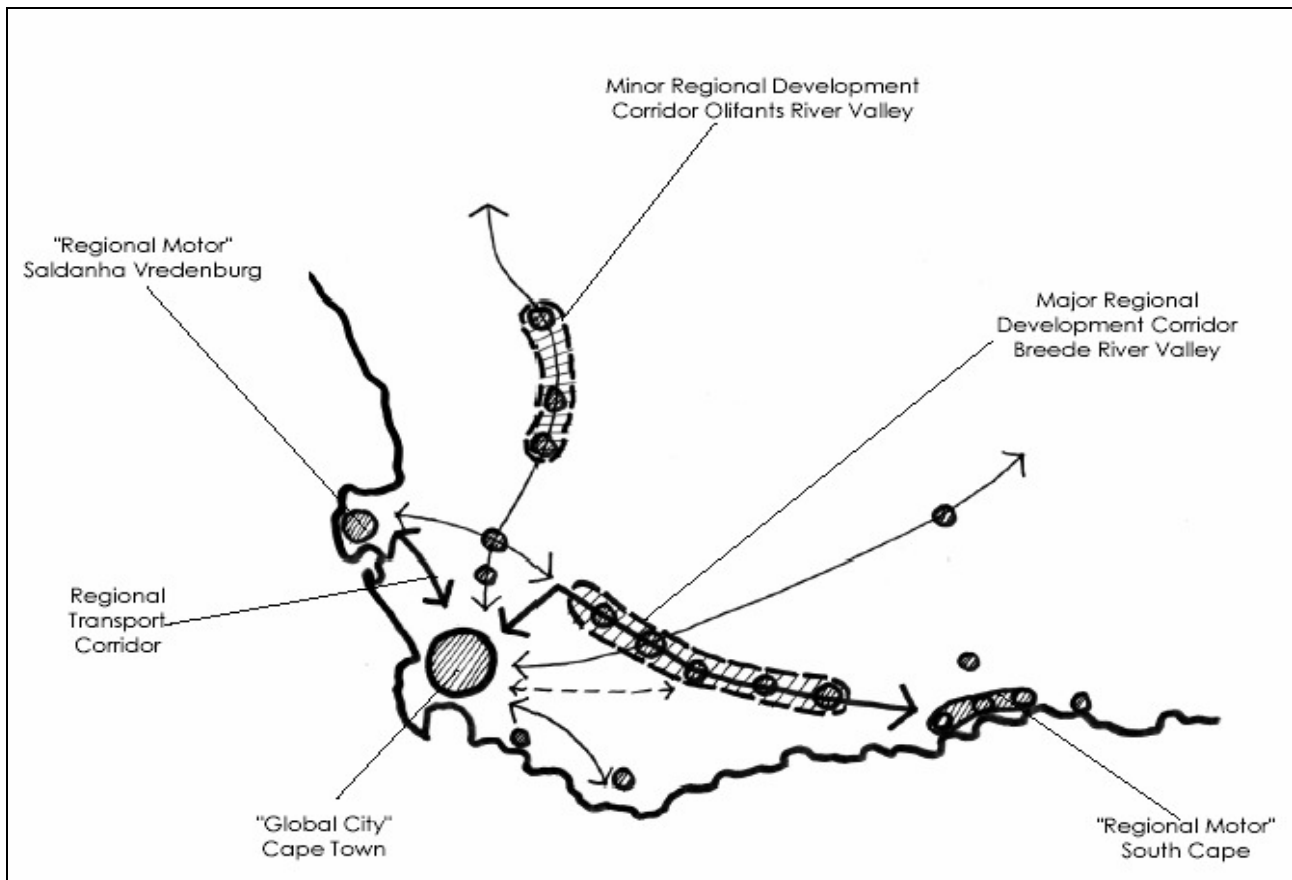


Figure B14: Provincial spatial economy (Source: PSDF).

The Integrated Tourism Development Framework (2002) identified 11 provincial *Tourism Development Areas (TDAs)* for further development on the basis of product and resource strength, supply of infrastructure, market requirements and trends, and socio-economic need. The Route 62 corridor is an important TDA for the Witzenberg Municipality.

The areas identified as TDAs are relatively developed however potential exists for further growth given inherent product strength. The Western Cape Province must concentrate resources around its competitive and marketable destinations and products. There has to be recognition that not every village and settlement can be a tourist destination, or every road a tourist route or corridor. Prioritisation of some areas above others can cause conflict. There is however, a need to recognise that if resources are spread thinly delivery will be minimal. If strength is concentrated then areas of product outwith the initial focus will benefit.

In the PSDF (PGWC, 2009) a map identifies these 11 provincial TDAs (refer to Figure B15). Of importance to Witzenberg is the location of the Route 62 in relation to the municipality and its settlements. Ceres, Wolseley and Tulbagh are linked to Route 62. The Route 62 steers away from the main transport artery, the N2, and takes the traveller along a scenic route through farming lands, mountains, across rivers, historic settlements, fruit growing and wine producing areas, etc. It is regarded as one the longest wine routes in the world. This route has grown in popularity, and has significant positive economic impact on the hinterland that is suffering from rural depopulation, decreasing economic opportunities and neglect. According to the PSDF (PGWC 2009), Route 62 is a

particularly interesting example of various local initiatives co-ordinated into an overall programme in a part of the Western Cape that is not generally well-endowed with economic or employment opportunities.



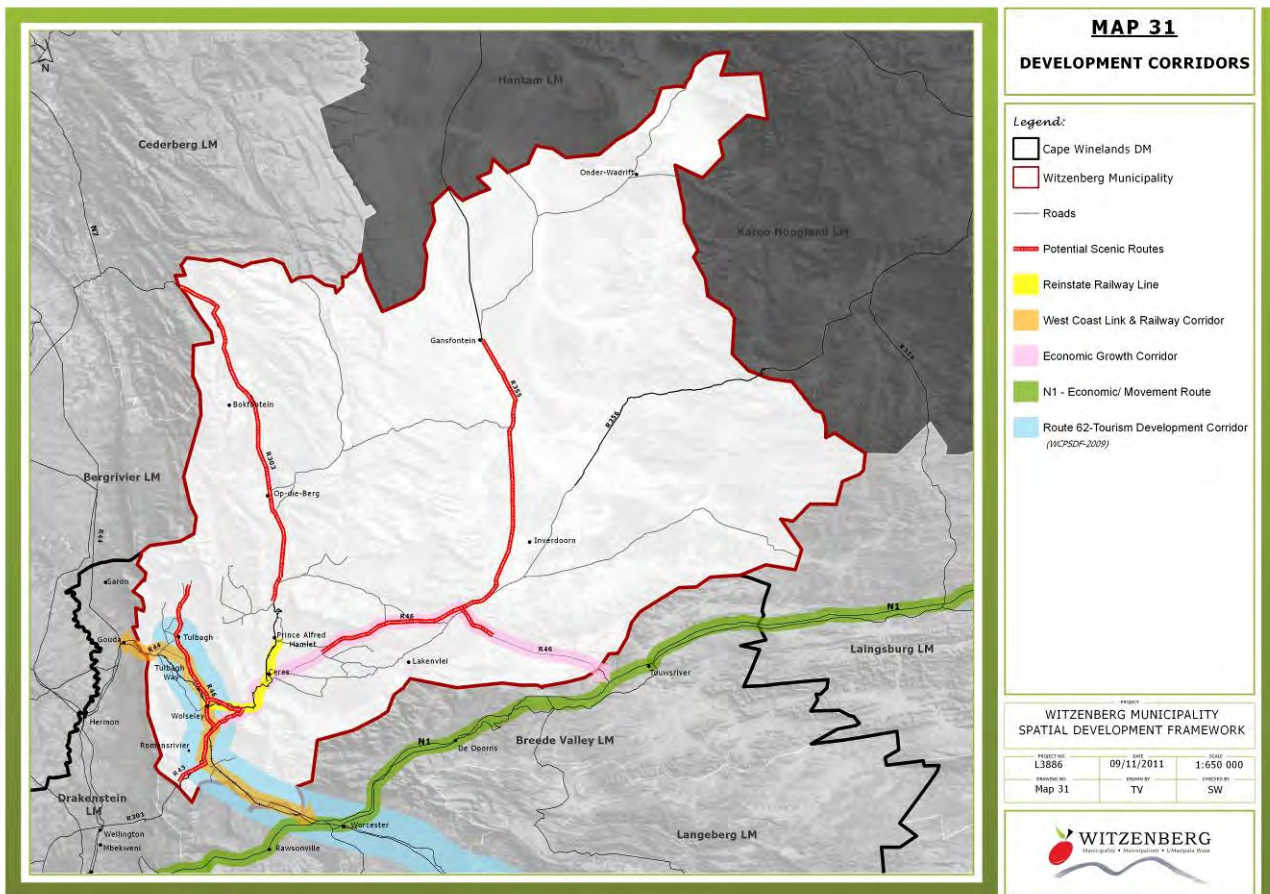
Figure B15: Potential industrial development nodes and tourism development areas (Source: PSDF).

Economic development opportunities are the key determinant in the settlement pattern described in Section C. Economic development, in turn, typically responds to the availability of *Environmental Capital* (e.g. water, suitable agricultural soil, mining resources, etc.) and *Infrastructural Capital* (e.g. roads, electricity, bulk engineering services, etc.). Over time, this has resulted in the evolution of distinct *development regions and corridors*.

The *development regions and corridors* constitute a clustering of nodes and the creation of a system that will synergise the capacity of stakeholders and entities within these nodes to ensure institutional and leadership capacity that will lead to regional equity. The table and map below summarise and illustrate the spatial context of the current and future *development regions and corridors* of Witzenberg. Corridors are of regional economic significance and can provide linkages between sectors and activities, promoting integration between economic sectors and different precincts within its sphere of influence. Corridors create opportunities that are beneficial to local operators and promote the movement of people and goods. Furthermore, a corridor ties various elements of its influence sphere together by connecting people with various opportunities, points of interest and modes of transit that are promoted along the route.

Table B28: Development regions and corridors of the Witzenberg Municipality.

REGION AND CORRIDOR	DESCRIPTION
<b>WEST COAST LINK CORRIDOR</b>	<p>The R46 and R43 represent an important link between the West Coast industries (especially at Saldanha) and the N1. This area is particularly popular during school holidays (i.e. Easter and December) and the spring flower period (August to September).</p> <p>The natural and heritage resources – rock art, mountain landscapes, unique vegetation, and unpolluted air of the West Coast are largely undiscovered. It also provides a linkage to the N7 that leads to the Cederberg Gateway which is well-known for its scenic beauty, unusual vegetation and rock art of the Cederberg Wilderness Area.</p> <p>The industries and harbour at Saldanha are important export harbours of fruit grown in Witzenberg. Linkages with Saldanha could provide much-needed income to Witzenberg pertaining to the export and import of goods. The existing movement routes should therefore be reinforced to support existing economic opportunities.</p>
<b>WEST COAST RAILWAY CORRIDOR</b>	<p>The West Coast Link Corridor is also important in terms of a railway freight strategy. Investment in the upgrade/construction of a freight depot along the railway line at Wolseley could improve the functionality of the railway line and reduce the volume of traffic on the roads.</p> <p>The rail network has an important role to play in future strategies. Consideration must be given to upgrading and privatisation of strategic sections of rail. This railway corridor has an opportunity to provide access to the market.</p>
<b>ECONOMIC GROWTH CORRIDOR (N1 TOLL ROADS)</b>	<p>The planned implementation of a toll system on the N1 route between De Doorns and Cape Town could result in the increasing usage of the alternative R46 via Ceres. The 2012-2017 IDP identified the latter as a possible niche that could hold distinct opportunities for the municipality.</p>
<b>TOURISM CORRIDORS</b>	<p>These corridors include <i>inter alia</i> the potential scenic routes identified in Chapter B2.5 as well as the West Coast Link and Railway Corridor which should be expanded to include a station at Wolseley for passenger services. The tourism corridor is a mechanism for encouraging tourists to move beyond the core destinations and will stimulate regional economic development.</p> <p>Furthermore, it offers products, activities and accommodation in an agricultural backdrop to engage travellers and give exposure to local culture, offers and entrance and exit points that enhances the travel experience and draws the rural hinterland into the core urban areas. Rail tourism offers a range of products at different price points in order to attract both economy and premium passengers. Transport and its related infrastructure have been identified as key support systems to the development of tourism in the Western Cape. The movement networks and links between tourism attractions as well as gateways are key to attracting the identified markets to the identified destinations (PSDF, 2009).</p>



## B7 SYNOPSIS OF SECTORAL ASPECTS TO BE ADDRESSED

As stated previously, in this section the mayor components of the Witzenberg Municipality as a distinct place were categorised and addressed under the following headings:

1. Locational context.
2. Environmental context.
3. Urban and rural settlement context.
4. Social context.
5. Economic context.
6. Regional development context.

The information pertaining to the various headings has been drawn from the available literature, the Internet, official data sets and from the stakeholder participation process. The key aspects to be addressed in Section C of the SDF were synthesised from the inventory and were subsequently categorised in accordance with the following criteria and principles (refer to Figure B16):

- **Positive:** These area aspects considered as potential strengths and opportunities as it relates to the achievement of the vision of the Witzenberg Municipality.
- **Negative:** These area aspects considered as potential threats and weaknesses as it relates to the achievement of the vision of the Witzenberg Municipality.
- **Internal:** These are aspects and interventions that should be undertaken by internal sources (i.e. the Municipality, in particular) that could contribute towards the achievement of the vision of the Witzenberg Municipality.

- **External:** These area aspects and interventions that could be undertaken by external sources (e.g. the private sector) that could contribute towards the achievement of the vision of the Witzenberg Municipality.

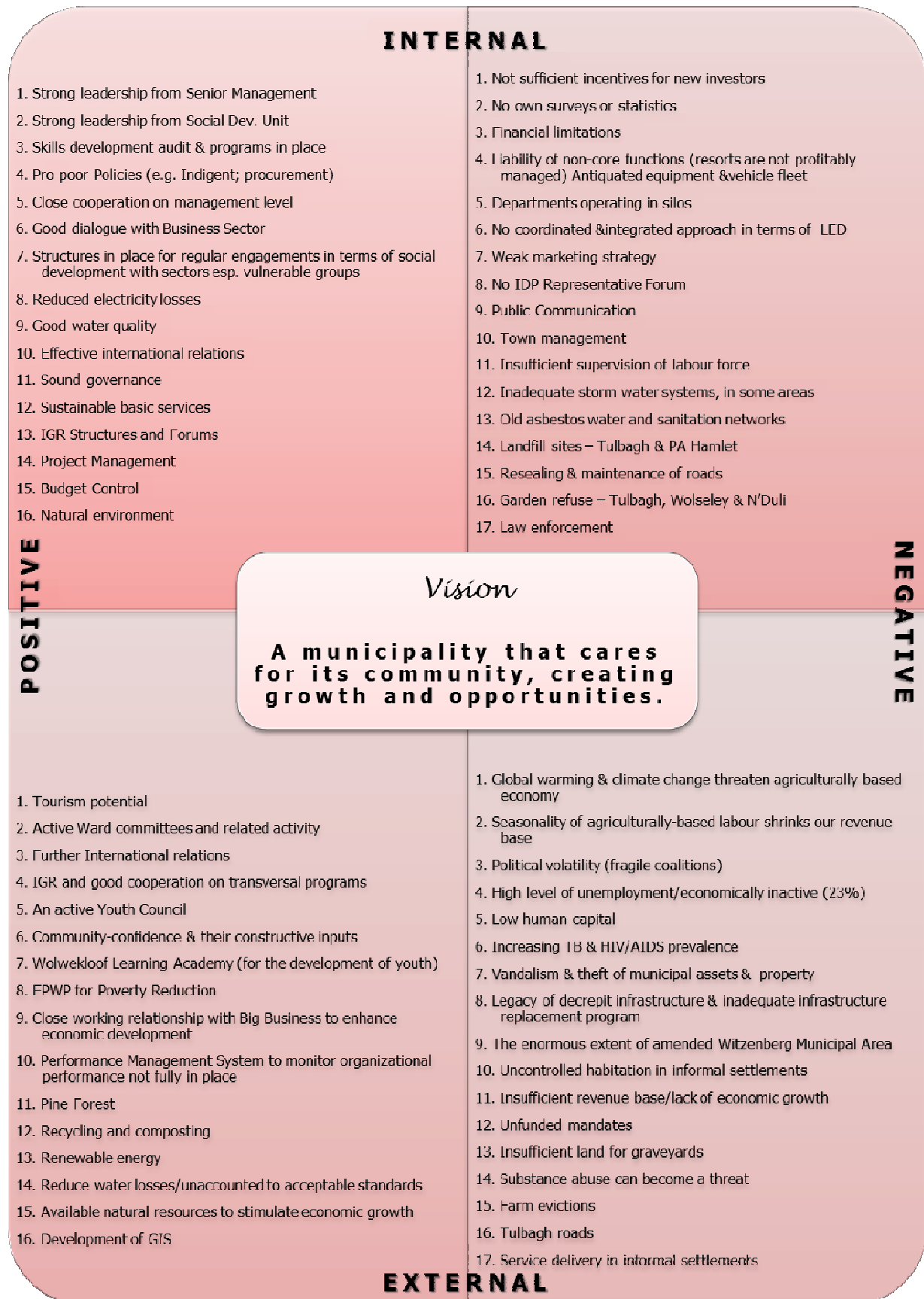
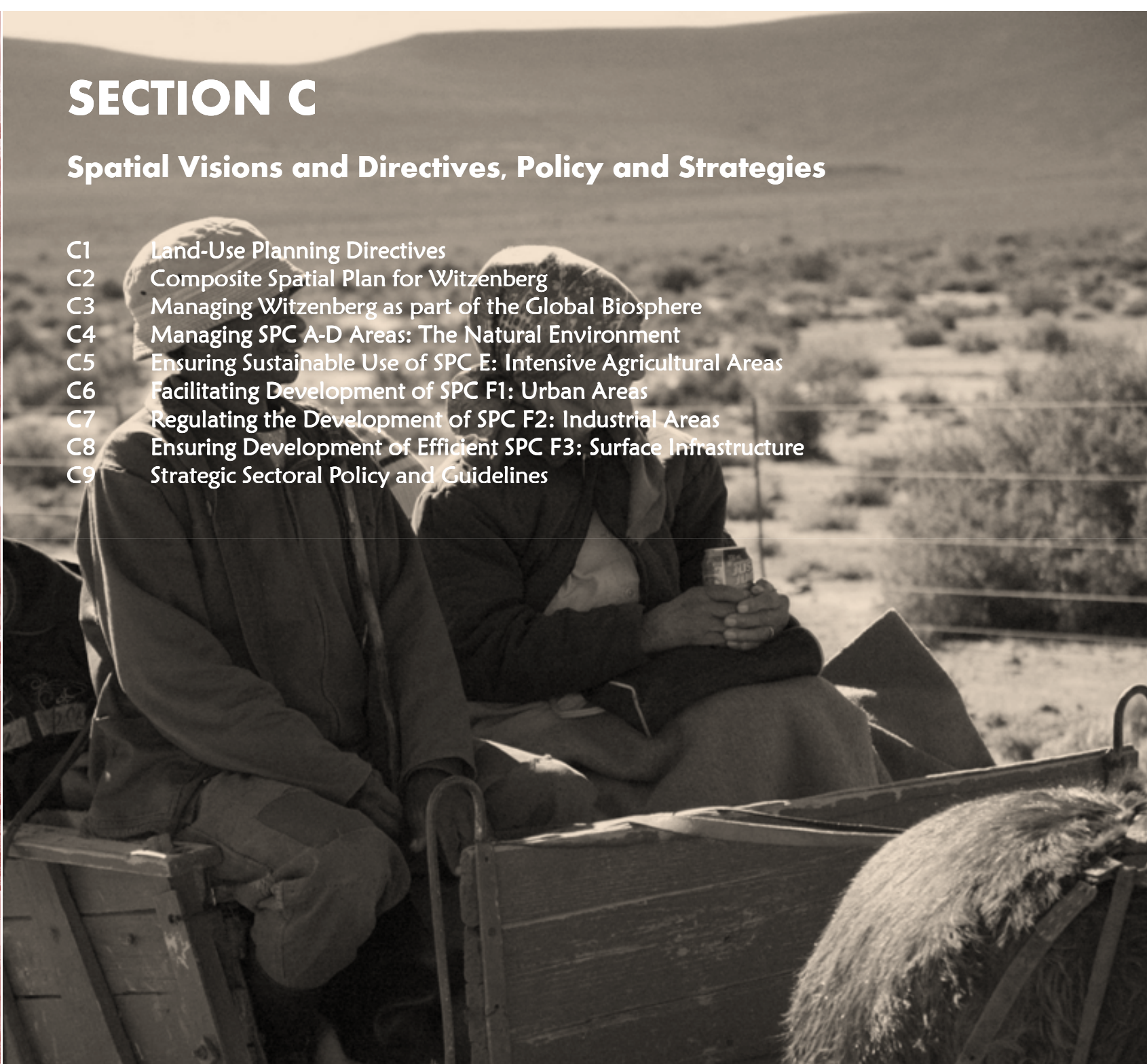


Figure B16: Synopsis of sectoral aspects to be addressed.

# SECTION C

## Spatial Visions and Directives, Policy and Strategies

- C1 Land-Use Planning Directives
- C2 Composite Spatial Plan for Witzenberg
- C3 Managing Witzenberg as part of the Global Biosphere
- C4 Managing SPC A-D Areas: The Natural Environment
- C5 Ensuring Sustainable Use of SPC E: Intensive Agricultural Areas
- C6 Facilitating Development of SPC F1: Urban Areas
- C7 Regulating the Development of SPC F2: Industrial Areas
- C8 Ensuring Development of Efficient SPC F3: Surface Infrastructure
- C9 Strategic Sectoral Policy and Guidelines



## SECTION C: SPATIAL VISIONS AND DIRECTIVES, POLICY AND STRATEGIES

### C1 LAND-USE PLANNING DIRECTIVES

#### C1.1 OBJECTIVES

As stated previously, a key function of the SDF, from a spatial planning perspective, are the following:

- a) Give effect to the directives of the Provincial Government of the Western Cape as expressed in *inter alia* the Western Cape PSDF.
- b) Give spatial effect to the provisions of the Witzenberg IDP and guide implementation of its anchor projects.
- c) Provide guidance to public and private infrastructure investment in the Municipality, taking cognisance of the growth and development potential of the various settlements in the Municipality.
- d) Spatially co-ordinate and direct the activities and resources of the Municipality.
- e) Providing a framework that would inform any future municipal demarcation with the aim to reconcile future municipal boundaries with defined bioregional parameters.
- f) Facilitating the land-use classification of the entire land surface of the Municipality in a standard format in accordance with defined *Spatial Planning Categories (SPCs)*, which are based on a broad spectrum of environmental parameters and a system of values and ethics.
- g) Describing the existing and desired future spatial patterns that provide for integrated, efficient and sustainable settlements in the Municipality.
- h) Guiding the investment of public resources (capital) through the following:
  - (i) Providing a credible context for public investments.
  - (ii) Promoting equitable development of areas that have lagged behind.
  - (iii) Providing certainty to all stakeholders regarding spatial and socio-economic implications of future development in the Municipality.
- i) Providing a basis for co-ordinated decision-making and policy-formulation regarding future land-use.
- j) Facilitating cross-boundary co-operation and co-ordination between the Witzenberg Municipality, the neighbouring municipalities of Laingsburg, Breede Valley, Drakenstein, Bergrivier, Cederberg, and the adjacent Hantam Municipality and Karoo Hoogland Municipality in the Northern Cape in respect of issues that are of mutual interest for their respective areas of jurisdiction (refer to *inter alia* issues pertaining to land-use, biodiversity conservation, and resource utilisation).

#### C1.2 SPATIAL PLANNING CATEGORIES

A composite plan was prepared for the Witzenberg Municipality in accordance with a set of *Spatial Planning Categories (SPCs)*. The SPCs used in this SDF were derived from the overarching SPCs as proposed by the Western Cape PSDF in terms of the bioregional planning principles. The Municipality has directed that the SDF be based upon the bioregional planning approach.

The SPCs include all land zonings that are provided for under the existing Zoning Scheme Regulations (including the draft Witzenberg Scheme Regulations). The SPCs are a mechanism to

indicate the appropriate land-use on any particular land unit. Such classification has been determined through an iterative process of consultation with the HODs of the Witzenberg Municipality and other stakeholders, overlaying and cross-referencing of sectoral plans with district-wide strategies, policies and environmental management frameworks, and ground-truthing of certain key fine-scale planning proposals. The SPCs constitute the following:



The SPCs provide a framework to guide decision-making regarding land-use at all levels of planning. The designation of SPCs does not change existing zoning or land-use regulations or legislation. SPCs help to clarify and facilitate coherent decision-making that can lead to better zonation, laws and regulations. The SPCs, furthermore, provide a framework in terms of which land-use decisions can be standardised throughout the municipality. It is advisable that the draft Witzenberg Zoning Scheme be aligned with the SPCs.

The land-use classification is based upon UNESCO’s biosphere reserve zonation model as advocated by UNESCO’s MaB Program. South Africa’s endorsement of the MaB program and the adoption of a bioregional planning approach imply that the said model should be applied in the municipality. The model provides for three broad land-use categories, i.e. core conservation area (SPC A and B), a conservation-focused buffer area (SPC C-E) and a transition area (SPC F).

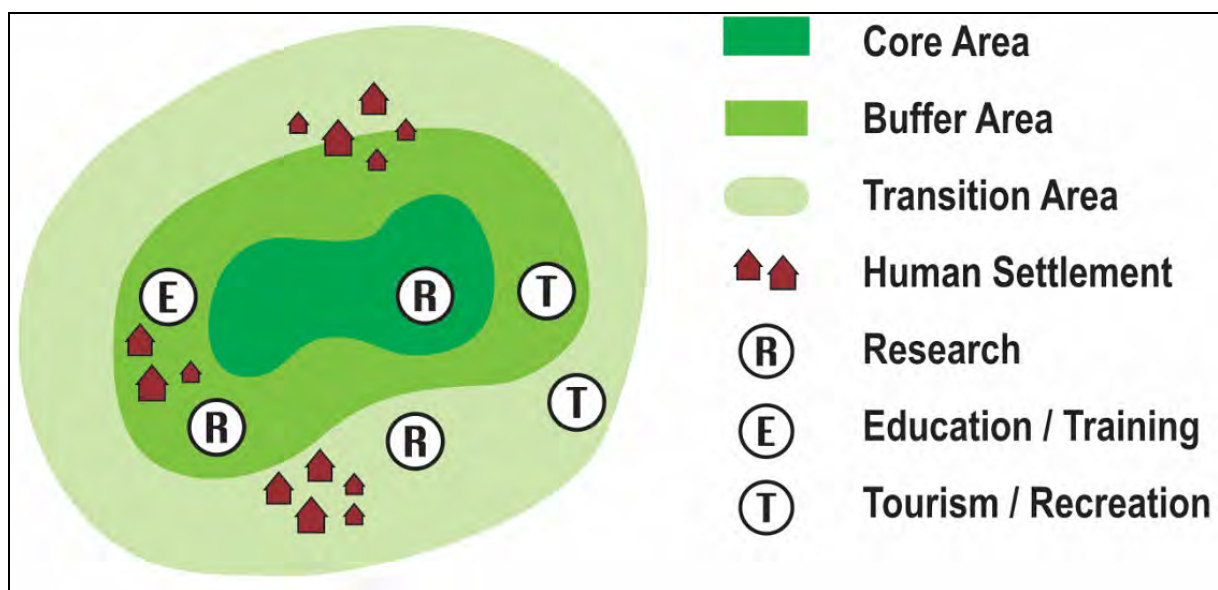


Figure C1: Land-use classification model adopted for the Witzenberg Municipality.



A comprehensive set of Sub-Categories have been created to refine the designation process at municipal level (refer to Figure C2 below).


	<b>A</b> CORE 1	<ul style="list-style-type: none"> <li>A.a Formal Protected Areas</li> <li>A.b Critical Biodiversity Areas (CBA)</li> <li>A.c FEPA - Freshwater Ecosystem Priority River Areas</li> </ul>
	<b>B</b> CORE 2	<ul style="list-style-type: none"> <li>B.a Ecological Support Areas (ESA)</li> <li>B.b Mountain Catchment Areas</li> </ul>
	<b>C</b> BUFFER 1	<ul style="list-style-type: none"> <li>C.a Ecological Corridors / Areas</li> <li>C.b Other Natural Areas</li> </ul>
	<b>D</b> BUFFER 2	<ul style="list-style-type: none"> <li>D.a Extensive Agriculture</li> <li>D.b Urban Green Areas</li> </ul>
	<b>E</b> INTENSIVE AGRICULTURE	<ul style="list-style-type: none"> <li>E.a Cultivated Areas</li> <li>E.b Plantations &amp; Woodlots</li> </ul>
	<b>F.1</b> URBAN RELATED	<ul style="list-style-type: none"> <li>F.1.a Main Local Town</li> <li>F.1.b Local Towns</li> <li>F.1.c Rural Settlements</li> <li>F.1.d Institutional Areas</li> <li>F.1.e Authority Areas</li> <li>F.1.f Residential Areas</li> <li>F.1.g Light Business Areas</li> <li>F.1.h Other Business Areas</li> <li>F.1.i SMME Incubators</li> <li>F.1.j Mixed Use Development Areas</li> <li>F.1.k Cemeteries</li> <li>F.1.l Sports fields &amp; Infrastructure</li> <li>F.1.m Transport Infrastructure</li> <li>F.1.n Resorts &amp; Tourism Related Areas</li> <li>F.1.o Farmsteads &amp; Outbuildings</li> <li>F.1.p Urban Agriculture / Community Gardens</li> </ul>
	<b>F.2</b> INDUSTRIAL	<ul style="list-style-type: none"> <li>F.2.a Agricultural industry</li> <li>F.2.b Light industry</li> <li>F.2.c General industry</li> <li>F.2.d Nuisance industry</li> <li>F.2.e Extractive industry</li> </ul>
	<b>F.3</b> SURFACE INFRASTRUCTURE & BUILDINGS	<ul style="list-style-type: none"> <li>F.3.a National roads</li> <li>F.3.b Main roads</li> <li>F.3.c Minor roads</li> <li>F.3.d Public Streets</li> <li>F.3.e Heavy Vehicle Overnight Facilities</li> <li>F.3.f Railway lines</li> <li>F.3.g Power lines</li> <li>F.3.h Telecommunication Infrastructure</li> <li>F.3.i Renewable Energy Structures</li> <li>F.3.j Dams &amp; Reservoirs</li> <li>F.3.k Sewerage Plants and Refuse Areas</li> </ul>

Figure C2: Spatial Planning Categories and Sub-categories to be applied in the Witzenberg Municipality.

### C1.3 POLICY

The following policy guidelines apply:

- a) All future land-use planning must be undertaken in terms of the bioregional planning approach.
- b) Land-use planning at the municipal level is to be supported by a standard Spatial Planning Information System (SPISYS) (refer to Chapter C1.4 below).
- c) The SPCs do not create, or take away, land-use rights.
- d) The SPCs are to be applied in a flexible and pragmatic manner that focuses on promoting a developmental state and which takes into account the merits and particular circumstances of each case as required by law (i.e. through an Environmental Impact Assessment undertaken in terms of the National Environmental Management Act 107 of 1998).
- e) No development proposals may be approved until the boundaries of the bioregional spatial planning categories have been delineated and approved, for that particular project if it is a large scale project, or for the precinct or sub-district if it is a small scale project. In all instances forward planning should honour systematic biodiversity plans.
- f) The SPC designation illustrated by Plan Nos. C1.1 to C1.6 and C6.3-1 to C6.3-6 must be used as a criterion for evaluation of rezoning and development applications. In the case where an application is inconsistent with relevant SPC, or where it implies a change of SPC designation, the onus will be on the applicant to prove that the proposed change is desirable and that it will not have a significant detrimental impact on the environment.
- g) Amend the draft Witzenberg Zoning Scheme, where possible, to accommodate the SPCs and their applications.

### C1.4 SPATIAL PLANNING INFORMATION SYSTEM

A key dimension of land-use management as contemplated by the SDF and other land-use policy is a *Spatial Planning Information System* (SPISYS). The purpose of such system is to facilitate land-use planning and governance throughout the municipality in terms of standard formats and procedures.

The *Manual for the Application of Bioregional Planning in the Western Cape Province* (DEADP, 2003)<sup>45</sup> makes provision for a Spatial Planning Information System (SPISYS) in order to facilitate effective land-use planning throughout the province through the implementation of the SPCs and Sub-Categories in digital format using GIS software. (It is important to note that the Western Cape has, in terms of its bioregional planning policy, been a national leader with regard to SPISYS, but that the execution of this strategy through, for example, the SDFs of all spheres of government has been sadly neglected).

The main goal of a SPISYS is to create 'vibrant, equitable and sustainable rural communities' by assisting with the real time linking of all stakeholders in land-use planning to enable good governance through making informed decisions based on live data and spatial information<sup>46</sup>.

The SPISYS is an information system comprising an integrated set of components for collecting, storing and processing data and for delivering information, knowledge and digital products. SPISYS combines hardware, software, infrastructure and trained personnel organised to facilitate effective land-use planning throughout all provinces through the implementation of the SPCs and

<sup>45</sup> Approved by the Department of the Environmental Affairs and Development Planning on 8 October 2003.

<sup>46</sup> <http://spisys.co.za/> - accessed on 16 August 2012.

Sub-Categories. It provides for the standardisation of spatial data in a coherent manner to promote the utilisation of spatial information for all applicable end-users. The implementation of GIS software will ensure geo-referencing, standardisation, and coordination of spatial data in digital format.

#### **C1.4.1 POLICY**

The policy in respect of developing and implementing an effective SPISYS is as follows:

- a) A SPISYS must be developed and implemented as part of the SDF.
- b) Specialised personnel must be appointed by the municipality for managing the SPISYS, programming and data management. These personnel must have access to the necessary hardware and software to run the system effectively.
- c) To ensure effective functioning of the SPISYS data must be exchangeable throughout the various spheres of government. This will lead to efficiency, longevity and reliability of the data and the system.
- d) The SPISYS should conform to the following requirements:
  - (i) Providing information that is easy to use and maintain by authorities.
  - (ii) Providing fast, but accurate results.
  - (iii) Centralising and standardising applications and procedures.
  - (iv) Aligning applications and procedures with the SPCs and Sub-Categories.
  - (v) Providing relevant departments with shared access to the same up-to-date data.
  - (vi) Providing an improved service to the community.
  - (vii) Serving public interest by making relevant information accessible.

#### **C1.4.2 KEY ASPECTS OF THE SPISYS**

Internet/Intranet technology will be used to integrate the GIS with a database that provides general users with spatial information and tools that could be used without the need of expert GIS knowledge.

End-users would include both specialised and general users. The requirements of general end-users, such as municipal officials and the public, who would need limited functionality from the system (retrieval of documents, digital maps and data, etc.) would be provided for via Internet/Intranet technology. This basic use would not require specialised and expensive GIS software. General end-users would probably only need normal desktop office and Internet software.

General end-users should have access to a specialised GIS manager for specialised queries, backup and feedback (such as reporting problems in the system), either by phone, by e-mail or in person. GIS managers should be equipped with sufficient GIS tools, which should meet the needs of each user and should be customisable to meet their specific needs.

The SPISYS must adhere to set standards. To enable the sharing of data and information between district and local municipalities and other users, standardisation needs to take place in terms of the following:

- a) System Structure: The system must be structured and designed to enable effective management.
- b) Data Structure: Data structure must be systematic according to the SPCs and combined into one spatial database by layers building onto each other. Data will be spatially

orientated and not necessarily in project context. It is the task of end-users and GIS managers to develop their own relevant project-based database. After completion of a project, it will be crucial to update the main database. This will be the task of the GIS managers. In this regard, it will be important to have a data quality checkpoint. Data quality standards will, in due course, be developed by the Western Cape Government.

- c) **Data and File Format:** To ease the flow of information and data, especially in respect of the development and management of the system, compatible GIS software should be used. Data should be created, updated and managed taking into consideration standards such as the draft National Land Information System (NLIS)<sup>47</sup>.
- d) **Colour-Coding:** SPCs and Sub-Categories should be colour-coded and numbered throughout the entire system in a standardised manner. User rights should be set to ensure that unauthorised users do not alter colours or symbols on the database. Table C1 below illustrates the SPC colours.

Table C1: Colour-coding of SPCs.

SPC	DESCRIPTION	COLOUR CODE
A	Core 1	Dark green
B	Core 2	Dark green
C	Buffer 1	Light green
D	Buffer 2	Light green
E	Agricultural Area	Sand
F	Urban-related Area	Grey

- e) **Numbering:** The numbering of individual entities is to be undertaken in accordance with the following procedure:
- (i) Number of the local municipality.
  - (ii) A capital letter indicating the SPC.
  - (iii) A lower case letter indicating the sub-category.
  - (iv) A number identifying the specific place or feature.
- f) **Access to and operating the system:** Digital map layers of the SPCs and Sub-Categories are to be integrated with other data (such as cadastral, land-use and infrastructure information) as well as visual landscape management criteria. Users need to have access to the database by way of an electronic on-screen map (via the Internet/Intranet, or desktop mapping applications). Levels of access should be controlled by user passwords and set by specialised end-users and system developers. The ultimate SPISYS could incorporate regulations regarding zoning, building heights, placement of sewer pipes, etc. and procedures, in the form of customised on-screen tools. To make these guidelines practical and viable, consideration has to be given to setting up of spatial planning information centres to users of the SPISYS. Such spatial planning information centres could comprise the following:
- (i) A user-friendly environment to boost the public image of local authority and enhance public participation.
  - (ii) Online access to the spatial database.
  - (iii) Efficient consultants to assist the public.
  - (iv) Access to technology to scan photographs, Google Earth imagery, etc.

<sup>47</sup> The NLIS has been created to provide meaningful, coordinated and integrated land information on a national basis. It specifies the minimum standards to which any data must reform.

- (v) Paper copies of maps and documents or systems that can produce needed copies on demand.

## C2 COMPOSITE SPATIAL PLAN FOR WITZENBERG

The spatial vision for Witzenberg Municipality is depicted by the Composite Spatial Plan (Plan No. C1) (refer to Chapter C2.3 below). This plan serves as a fine-scale guide to land-use throughout the municipality.

The process followed in the articulation of the spatial vision for the municipality is illustrated by the figure below. It constitutes the following sequential steps:

**Step 1:** Formulation of a conceptual spatial vision in accordance with the bioregional planning principles summarised in Chapter A5 and the land-use directives stipulated in Chapter C1.

**Step 2:** 'Layering' of the spatial plans that have been articulated for the various SPCs and/or sectors in Chapter C3-C9.

**Step 3:** Collating all spatial data into a composite Spatial Plan or Vision for the Municipality.

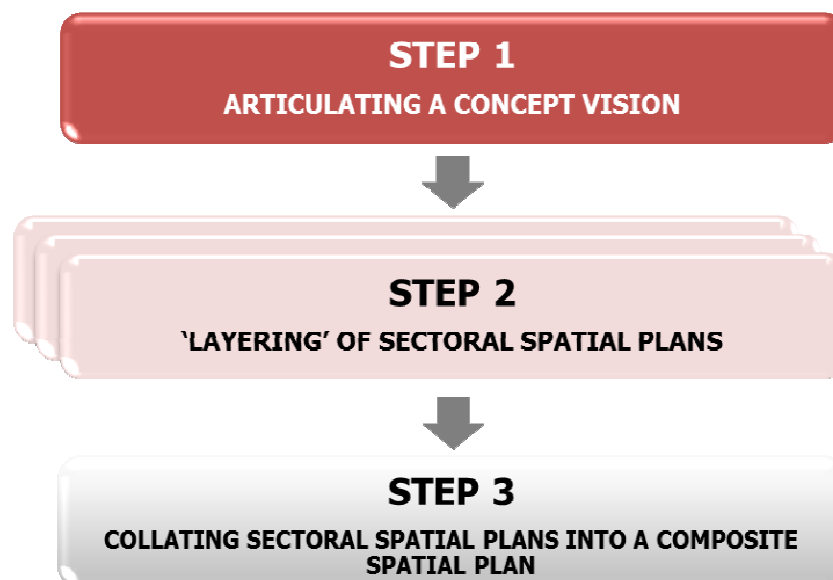


Figure C3: Articulating a Spatial Plan for Witzenberg Municipality.

### C2.1 THE CONCEPT

Essentially, the purpose of the SDF is to create an environment that is conducive to economic, social and ecological sustainability and prosperity. Accordingly, the spatial plan for the Witzenberg Municipality for the following 5 years comprises the following:

- ❖ It envisages the municipality in an appropriate international, national and provincial context which recognises the municipality as a key component of the biosphere due to its inherent comparative and competitive advantages.
- ❖ It constitutes a coherently structured matrix of sustainable land-use zones that collectively support a dynamic provincial economy vested in the primary economic sectors, in particular, agriculture, tourism, and to a lesser degree, the energy industry. The matrix comprises the following (Figure C4 below illustrates the conceptual matrix of land-uses):
  - a) Natural resource areas and critical biodiversity areas connected through a network of functional ecological corridors.
  - b) Productive agricultural regions pivoting around the core agricultural resources.

- c) A coherent hierarchy of viable and appropriately-governed human settlements bordered by appropriate bioregional parameters.
- d) The settlements are clustered in close proximity to the primary economic development corridors supported by adequate bulk services and linked by an efficient transportation network to the global, national and neighbouring provincial, district and local economies.

In context and in compliance with the above concept, the vision for the respective comparative and competitive economic advantages of the municipality and the various forms of capital and associated land-uses are collated and synthesised into a composite long-term visionary plan for the Municipality (refer to Chapter C2.3 below).

## C2.2 'LAYERING' OF SPC AND/OR SECTORAL SPATIAL PLANS

The spatial plans for the eight SPCs and/or sectors were overlaid to form a Composite Plan (referred to as Plan No. C1) which depicts the spatial plans for the municipality.

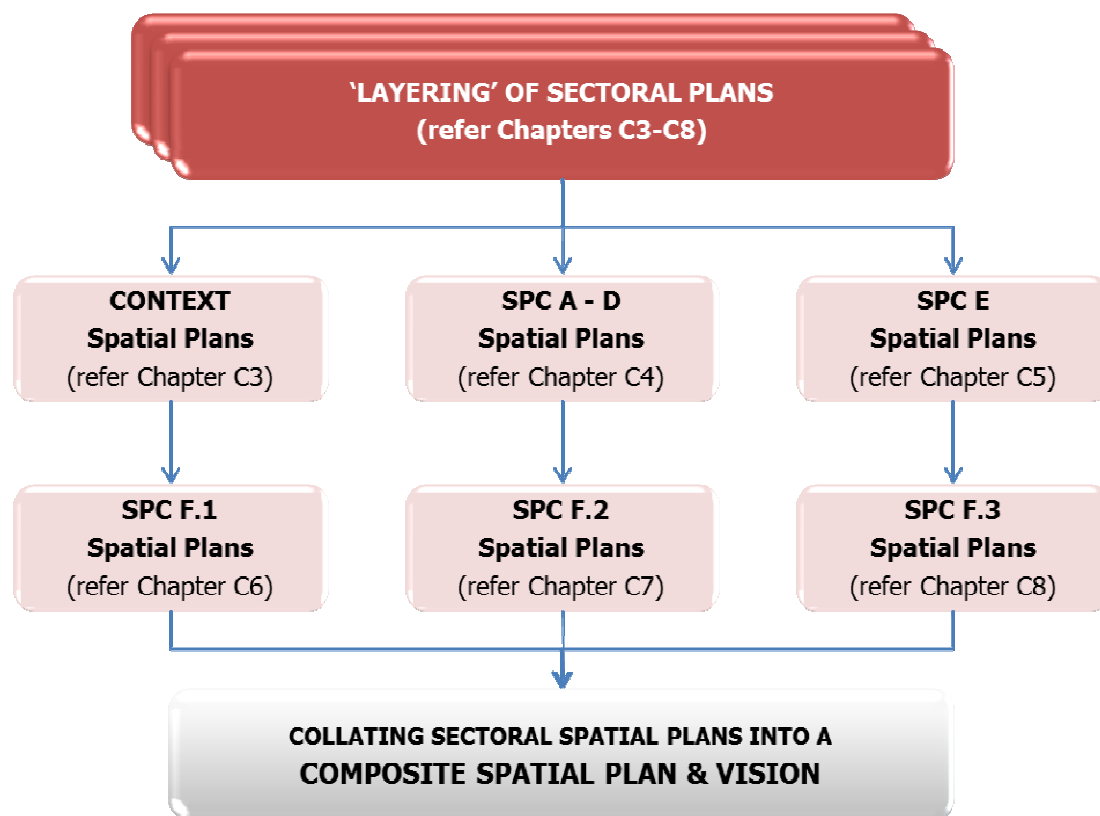


Figure C4: 'Layering' of sectoral spatial plans to compile a 'Composite Spatial Plan' for Witzenberg Municipality.

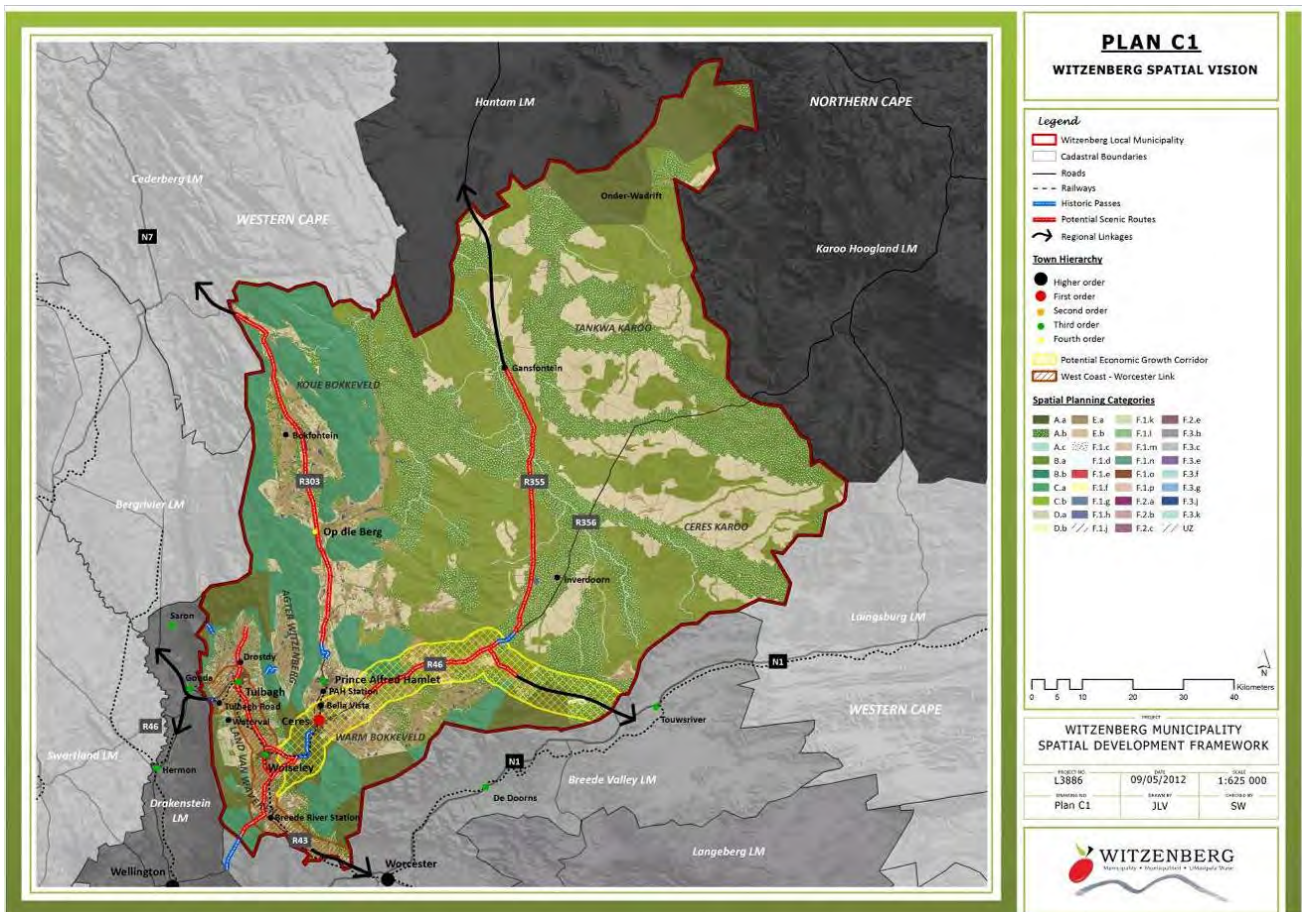
The sectoral spatial plans are premised upon the baseline maps put forward in Section B and incorporate the inputs received from the stakeholders that were consulted during the drafting of the SDF. The relevant spatial plans are:

- Plan C2: Spatial plan for designated biosphere reserves in Witzenberg (refer to Chapter C3.1).
- Plan C3: Spatial plan for Witzenberg as a regional pivot (refer to Chapter C3.2).
- Plan C4: Spatial plan for tourism (refer to Chapter 3.3).
- Plan C5: Spatial plan for SPC A and SPC B-D areas; Natural Environment (refer to Chapter C4).

- Plan C6:** Spatial plan for SPC E: Agricultural Areas (refer to Chapter C5).
- Plan C7:** Spatial plan for SPC F.1: Settlement Investment Typology (refer to Chapter C6).
- Plan C8:** Spatial plan for SPC F.2: Industrial and/or manufacturing areas (refer to Chapter C7).
- Plan C9:** Spatial plan for SPC F.3: Surface infrastructure (refer to Chapter C8).

**C2.3 THE COMPOSITE PLAN FOR THE WITZENBERG MUNICIPALITY**

The spatial plan for the Witzenberg Municipality is depicted by the Composite Spatial Plan below (refer to Plan C1 attached under Annexure 1 for a larger-scale copy).



**C3 MANAGING WITZENBERG AS PART OF THE GLOBAL BIOSPHERE**

**C3.1 GIVING EFFECT TO INTERNATIONAL OBLIGATIONS**

There is an increasing global awareness against economic growth at the expense of the natural environment. United Nations organisations such as UNEP and UNESCO, and international conservation bodies such as the IUCN, WRI, and WWF advocated national and regional development policies, and strategies that can facilitate sustainable development.

In the *World Conservation Strategy*, sustainable development is considered to be a set of tools and strategies, which respond to five broad requirements, namely:

- a) Integration of conservation with development.
- b) Satisfaction of basic human needs.

- c) Achievement of equity and justice.
- d) Provision of social self-determination and cultural diversity.
- e) Maintenance of ecological integrity.

It is clear that sustainable development will not be achieved by only conserving natural areas. The *Global Biodiversity Strategy* (IUCN/UNEP/WWF) states that conservation strategies must be aimed at accommodating cultural, economic, and political circumstances at local and regional levels. Such strategies must *inter alia* be aimed at improving the well-being of local and regional communities through the implementation of conservation strategies.

The South African Government is a signatory to a number of international protocols, conventions and agreements pertaining to the above aspects. All lower-sphere governments (including Witzenberg) are obliged to adopt and give effect to these protocols, conventions and agreements.

### **C3.1.1 OBJECTIVES**

The key objectives are to:

- a) Give effect to the international sustainability obligations placed on the Witzenberg Municipality by virtue of the protocols, conventions and agreements endorsed by the South African Government on behalf of the country.
- b) Obtain the highest international recognition for globally-unique natural manifestations in the municipality.
- c) Implement and reap the benefit vested in international programmes promoting environmental sustainability through integrated land-use planning.
- d) Adopt a global programme of international scientific co-operation dealing with people-environment interactions over the entire realm of bioclimatic and geographic situations of the biosphere.
- e) Create a more efficient premise for joint research, information management and investment facilitation between neighbouring municipalities and provinces.
- f) Adopt a strategy, supplementary to SKEP, to involve the international community, decision-makers and local people in research projects, training and demonstration at the field level, and the bringing together of disciplines from the social, biological and physical sciences in addressing complex environmental problems.

### **C3.1.2 POLICY**

- a) Witzenberg is not an 'island' isolated from its surroundings – it is an integral part of the global biosphere of which its cultural, social and economic functions are uniquely interdependent. The status of Witzenberg as a unique entity is to be enhanced and maintained through efficient land-use management as provided for in this SDF.
- b) Compliance with the strategies listed in Chapter C3.1.3 is mandatory and is to be given effect through the municipal SDF.
- c) In particular, effect is to be given to the eight Millennium Development Goals, i.e.:
  - (i) Eradication of extreme poverty and hunger.
  - (ii) Achievement of universal primary education.
  - (iii) Promotion of gender equality and empower women.
  - (iv) Reduction of child mortality.
  - (v) Improvement of maternal health.
  - (vi) Combating HIV/AIDS, malaria and other diseases.



- (vii) Ensuring environmental sustainability.
- (viii) Establishment of a global partnership for development.
- d) Witzenberg supports and strives to give effect to the protocols, agreements and conventions listed below:
  - (i) United Nations Millennium Development Goals.
  - (ii) Agenda 21.
  - (iii) Local Agenda 21.
  - (iv) UNESCO's World Heritage Convention.
  - (v) Convention on Biological Diversity.
  - (vi) United Nations Framework Convention on Climate Change.
  - (vii) Kyoto Protocol on Climate Change, including Clean Development Mechanisms.
  - (viii) United Nations Convention to Combat Desertification.

### **C3.1.3 STRATEGIES AND GUIDELINES**

- a) Prepare and implement a comprehensive climate neutrality strategy that is to be implemented through all development projects and which could subsidise sustainability programmes with the aid of international and national funding institutions (refer to Toolkit D4: Guidelines for a climate neutrality strategy).
- b) Implement UNESCO's MaB Programme as an overarching strategy to give effect to the policy cited under Chapter C3.1.2 with specific reference to the implementation of international protocols, agreements and conventions.

#### **C3.1.3.1 Implementation of the MAB Programme**

The over-arching goal of the Witzenberg SDF is to promote sustainable development throughout its area of jurisdiction. It is generally accepted that UNESCO's MaB Programme provides an ideal framework for achieving this objective. The MaB Programme is a global programme of international scientific co-operation, dealing with people-environment interactions over the entire realm of bioclimatic and geographic situations of the biosphere. The MaB Programme was designed to solve practical problems of resource management, and aims to fill gaps in the understanding of the structure and function of ecosystems, and of the impact of different types of human interaction.

The MaB Programme is supported by a host of institutions that could lend financial and/or logistical support. The strategies, programmes and projects proposed by the SDF are generally aligned with and give effect to the goals of the MaB Programme and, accordingly, qualify for support from the relevant institutions.

The *World Network of Biosphere Reserve* provides an ideal platform for implementing the MaB Programme in defined areas and for creating partnerships for knowledge-sharing, research and monitoring, education and training, and participatory decision-making. Biosphere reserves are defined as '*areas of terrestrial and coastal/marine ecosystems or a combination thereof, which are internationally recognised within the framework of UNESCO's MaB Programme.*' Biosphere reserves provide the ecological and social framework within which government, community, corporate and other private interests, share responsibility for co-ordinating land-use planning, for both public and private land and for dealing and implementing development options that would ensure that human needs are met in a sustainable way (WRI, et al, 1992). There are currently 610 biosphere reserves in 114 countries.

The main objective<sup>48</sup> of biosphere reserves is to promote and test innovative approaches to sustainable development challenges. This structural framework, to promote sustainable development, is a unique asset of biosphere reserves. Biosphere reserves are intended to fulfil three basic functions, which are complementary and mutually reinforcing, namely:

- **Conservation function** - to contribute to the conservation of landscapes, ecosystems, species and genetic variation.
- **Development function** - to foster economic and human development which is socio-culturally and ecologically sustainable.
- **Logistical support function** - to provide support for research, monitoring, education and information exchange related to local, national and global issues of conservation and development.

A key strategy to be implemented in Witzenberg, as it relates to the MaB Programme, is to:

- Plan and manage the entire municipality as a biosphere reserve (i.e. through the bioregional planning approach described in Chapter A5).
- Establish the Cederberg Biosphere Reserve as was approved in the Cederberg and Environs Spatial Development Framework (approved in terms of Section 4(6) of the Land Use Planning Ordinance) (refer to Figure C5 below).
- Identify, plan and include into the designated Cederberg Biosphere Reserve other areas that qualify for biosphere reserve status.

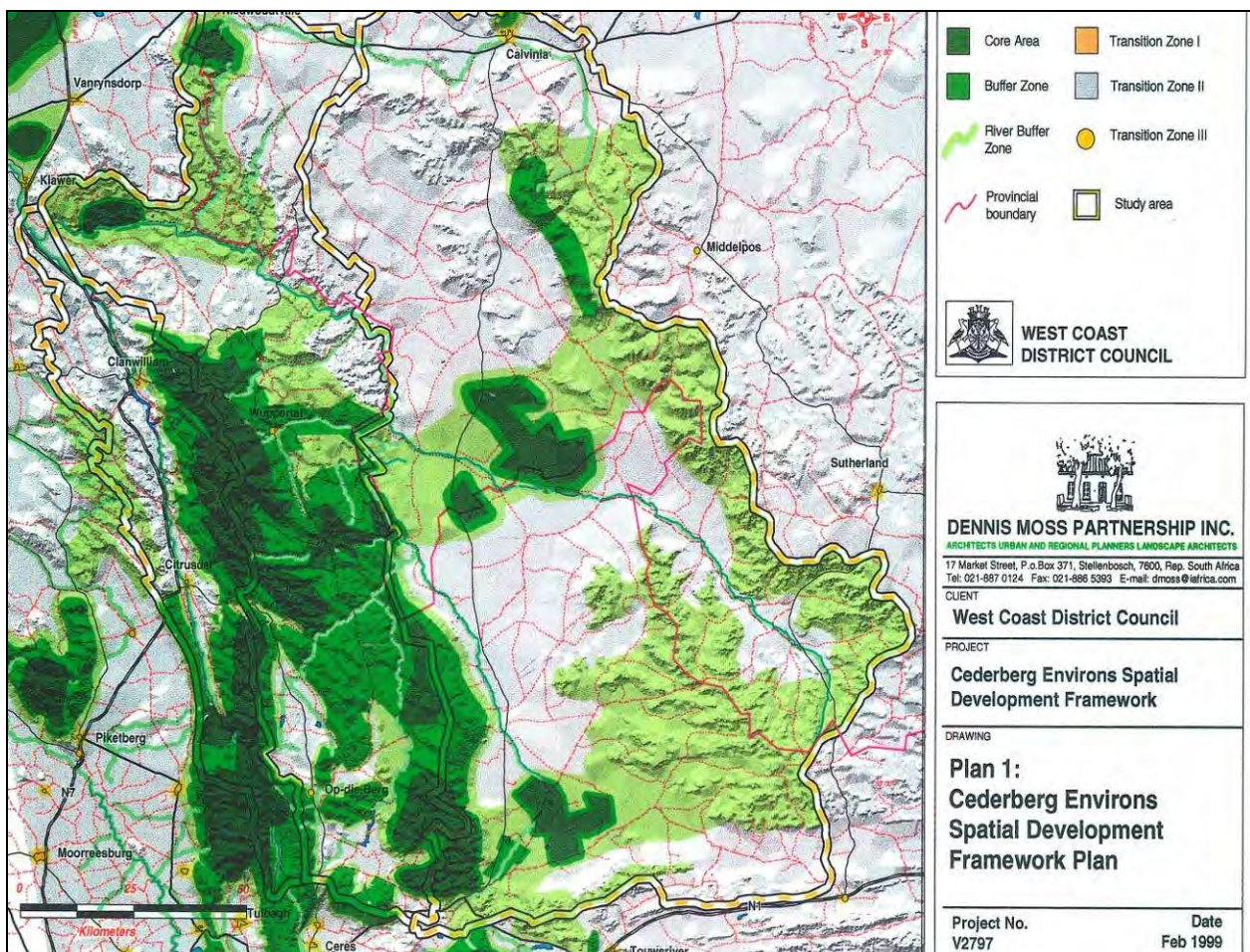


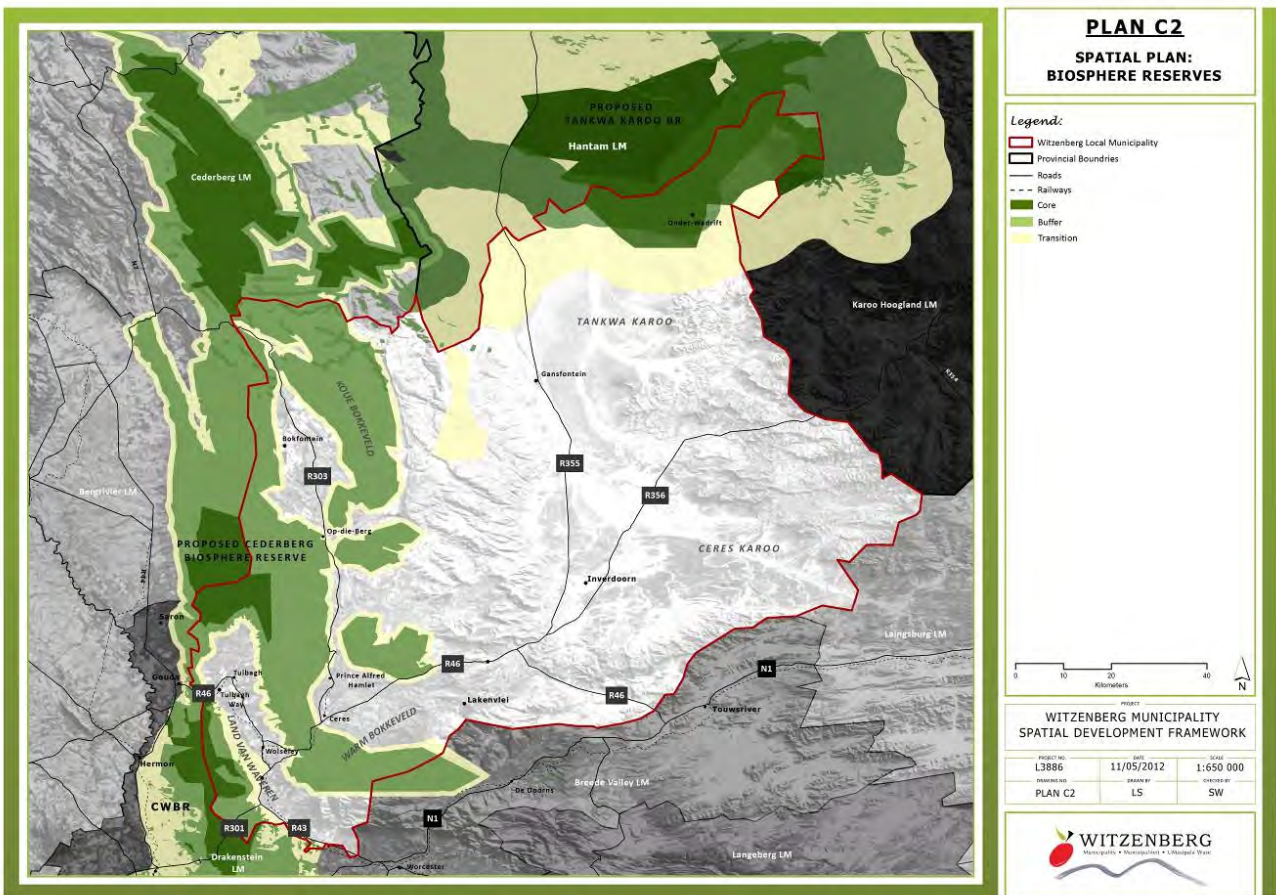
Figure C5: Cederberg Biosphere Reserve as proposed in the Cederberg Environs Spatial Development Framework that has been approved in terms of Section 4(6) of LUPO.

<sup>48</sup> UNESCO Fact Sheet: 40 years of the UNESCO 'Man and the Biosphere' Programme.

### C3.1.4 SPATIAL PLAN FOR DESIGNATED BIOSPHERE RESERVES

The spatial plan for designated biosphere reserves (i.e. those to be registered with UNESCO) is a constellation of the following baseline maps:

- a) The designated Cederberg Biosphere Reserve (Figure C5 above).
- b) Water catchment areas, quaternary catchments and main rivers (Map 9 on Page 40).
- c) Biodiversity hotspots (Map 17 on Page 51).
- d) Biodiversity conservation planning initiatives (Map 31 on Page 124).
- e) Conservation areas (Map 21 on Page 56).
- f) Critical Biodiversity Areas (Map 22 on Page 59).
- g) Sensitive cultural landscapes and farmsteads (Map 24 on Page 63).



## **C3.2 WITZENBERG IN A PROVINCIAL CONTEXT**

### **C3.2.1 OBJECTIVES**

- a) Enhance the pivotal functions of Witzenberg as a vital linkage with the remainder of the Western Cape Province and with South Africa.
- b) Enhance the comparative economic advantages vested in being a linkage between the municipality and international markets.

### **C3.2.2 POLICY**

- a) Transport linkages within the municipality must be of a high standard.
- b) Witzenberg Municipality and the Hantam and Karoo Hoogland Municipalities in the Northern Cape Government must jointly manage aspects which require cross-boundary cooperation.
- c) Strengthen the settlement pattern within Witzenberg in accordance with resources and economic growth potential.

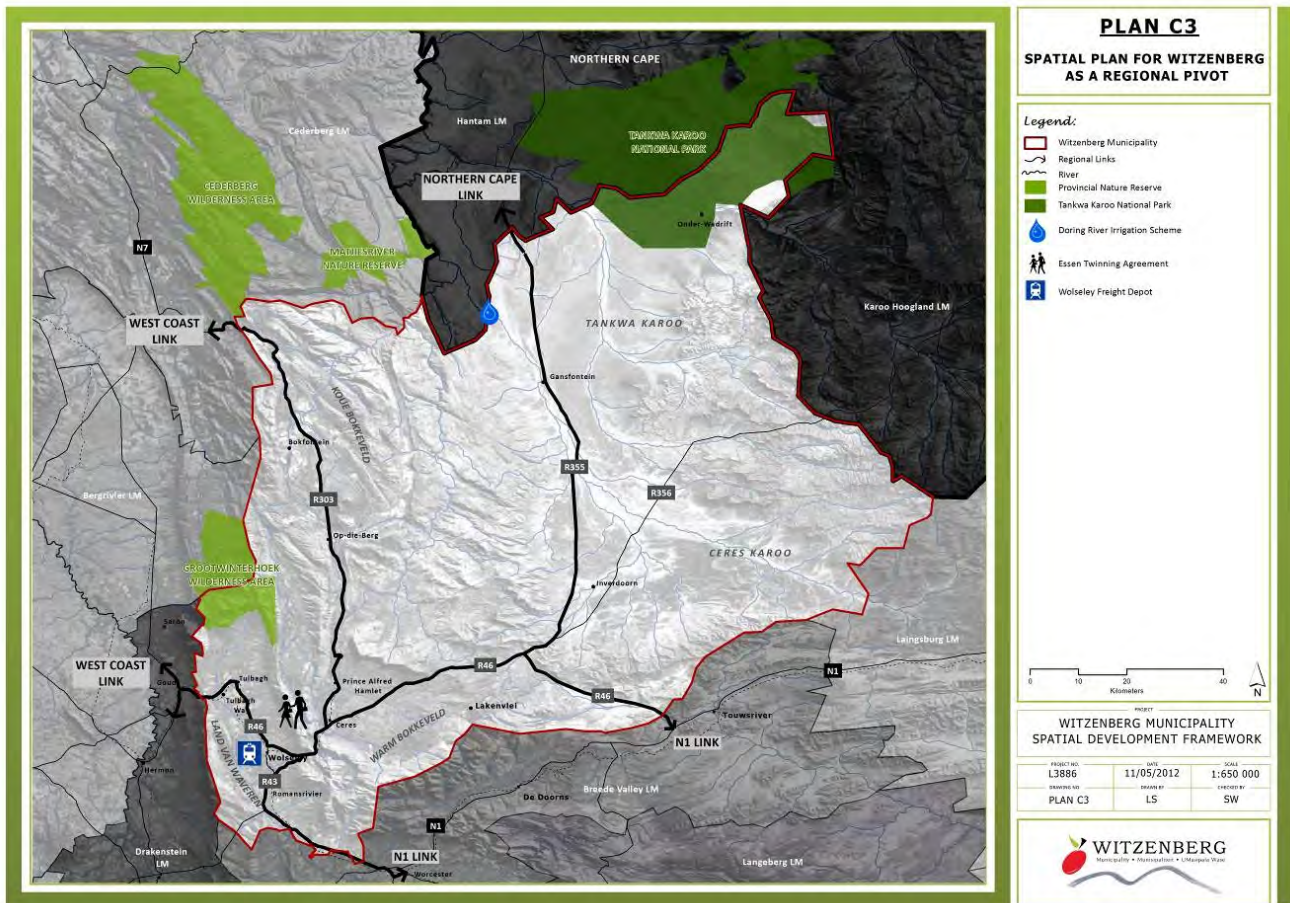
### **C3.2.3 STRATEGIES AND GUIDELINES**

- a) Enhance the use of Ceres as an agri-industrial hub and portal to the export markets situated in the City of Cape Town.
- b) Promote development of tourism-related amenities and activities along the main routes through the Municipality.
- c) Establish formal relationships with neighbouring municipalities regarding aspects of mutual relevance.
- d) Establish a freight depot at Wolseley to export fruit and other agricultural products via railway line to inland provinces and harbours.
- e) Ensure the upkeep of the R43, R46, R303 and R355 as major economic transport routes and scenic routes in light of the proposed toll roads on the N1.
- f) Build on the Twinning Agreement between Witzenberg and Essen Municipality in Belgium to include all three legs of sustainability.
- g) Determine and entrench the minimum water requirements of the natural environment prior to allocating water to any other user. Undertake a survey regarding water source capacity across the municipal area, especially in the Tankwa Karoo.

### **C3.2.4 SPATIAL PLAN FOR WITZENBERG AS A PIVOTAL PART OF THE WESTERN CAPE**

The spatial plan below is a constellation of the following aspects as associated plans:

- a) Inter-provincial aspects of mutual interest: The Doring River in the Tankwa Karoo in the northern extremity of the municipality has always been a resource with development/agricultural potential. The Tankwa Karoo National Park requires co-ordinated management as the park straddles the boundary between the Witzenberg Municipality and the Hantam and Karoo Hoogland Municipalities in the Northern Cape.
- b) Greater Cederberg Biodiversity Corridor (refer to Map 16 on Page 52).
- c) The Breede River Valley Development Corridor (refer to Map 31 on Page 124).
- d) Transport network of the municipality (refer to Map 29 on Page 102).



### C3.3 TOURISM AS A KEY ECONOMIC SECTOR

#### C3.3.1 OBJECTIVES

- Enhance the comparative economic advantages of the municipality as it relates to tourism and tourism-related activities.
- Promote the development of tourism-related activities in accordance with the MEDS<sup>49</sup> proposals and associated *Route 62 Tourism Development Area*.
- Conserve all archaeological resources on state and private land for present and future generations.

#### C3.3.2 POLICY

- Tourist amenities and the service presented to tourists must be of a high standard and must reflect the sense of place qualities of Witzenberg.
- Encourage diversification of agricultural products to include tourism-related products/activities.
- Scenic routes and historic passes must be maintained to a high standard.
- The scenic character of cultural landscapes and historic farmsteads must be protected and enhanced.

<sup>49</sup> The MEDS is one of the leading Provincial Growth and Development Strategies and is tasked with identifying economic development opportunities.

- e) Settlements along the identified tourism corridors should be 'Priority Fixed Investment Urban Settlements', e.g. Wolseley and Ceres (including Nduli and Bella Vista) (PSDF Strategy HR4).
- f) The Micro-Economic Development Strategy (MEDS) of the Western Cape Province has *inter alia* identified the following potential economic development locations:
  - (i) Agricultural industry: Ceres.
  - (ii) Tourism: Tourism Development Areas, which includes the Route 62, and retirement/golf and eco-estates inside urban edges (PSDF Strategy HR6).

### C3.3.3 STRATEGIES AND GUIDELINES

- a) Prepare a comprehensive Tourism Development Plan for the municipality based upon the SDF, the Recreation Opportunity Spectrum (ROS) concept (refer to Chapter C3.3.4), and the principles of sustainable tourism. This should include a Tourism Growth Strategy and appropriate management plans based on the ROS to guide the development and management of tourism-related activities.
- b) Facilitate development, management and maintenance of tourist routes and facilities in accordance with the ROS.
- c) Implemented the place-specific design and planning guidelines for the municipality to ensure appropriate development in sensitive scenic areas (refer to Toolkit D3).
- d) Create opportunities for the small business sector (e.g. sale of products, crafts, curios), especially in the Tourism Nodes, Precinct and Corridors.
- e) Introduce local examples of the area's unique ecological and cultural characteristics in school curriculums to promote tourism and environmental and socio-cultural conservation awareness at an early age.
- f) Make available municipal commonages for tourism initiatives as public-private-community-partnerships.
- g) Market historical structures as tourism attractions such as in Tulbagh (collaborate with tourism structures and bureaus). Utilise historical buildings and structures on a sustainable basis.
- h) Control human impact at archaeological sites:
  - (i) Institute effective permit systems to control access.
  - (ii) Erect barriers and pathways/board walks to regulate movement at sensitive sites.
- i) Record, survey and declare the following roads in Witzenberg as scenic routes:
  - (i) R43: From Worcester to Ceres.
  - (ii) R46: From the N1 via Ceres and Wolseley to Tulbagh.
  - (iii) R303: From Ceres via Prince Alfred Hamlet and Op-die-Berg to Citrusdal.
  - (iv) R355: Gravel road to Calvinia.
- j) Institute and nominate the following cultural landscapes as grade 1 sites in the municipal area:
  - (i) Tulbagh Valley.
  - (ii) Karoopoort-outsplan and associated road.
  - (iii) Hex River Valley.
  - (iv) Wolseley Valley.
  - (v) Ceres Basin.
- k) Enhance the aesthetic appearance of scenic routes by:
  - (i) Preserving the natural environment, and ensuring a sense of fit with the character of the area traversed.

- (ii) Curvilinear horizontal alignments and gently rolling profiles to be applied in new developments with a minimisation of cut and fill; and the adoption of curvilinear profiles rather than steep-sided slopes and squared shoulders.
  - (iii) Using natural materials for street furniture and roadside walling.
  - (iv) Where new (urban) developments along scenic routes are unavoidable, fences and boundary walls are to be constructed and positioned as to have minimum visual impact on the landscape character e.g. constructed below/beyond the shoulder of embankments or below ridgelines to avoid a silhouette.
  - (v) Existing and new service stations must have minimal visual impact and be landscaped appropriately.
- l) Development in rural/cultural landscapes and adjacent to scenic routes must be undertaken in accordance with the guidelines put forward in Toolkit D3.
  - m) Ensure that changes in land-use maintain the integrity, authenticity and accessibility of significant cultural landscapes. Contain urban sprawl and restrict urban development to within designated urban edge. Integrate low-cost housing within the urban area to combat urban sprawl and reduce negative visual impact on the cultural landscapes.
  - n) Identify opportunities to empower local operators to become more active in the tourism sector as part of LED.
  - o) Draft an *Integrated Tourist Transportation Strategy*, which could be linked with appropriate long-distance bus stops and shelters along major routes.
  - p) Prepare Visual Resource Management Plans for the identified scenic routes and cultural landscapes.
  - q) Large-scale infrastructural developments alongside any of the identified scenic routes to present a detailed Visual Impact Assessment for consideration by the municipality prior to approval by the Provincial Government or the Municipality.

#### **C3.3.4 RECREATION OPPORTUNITY SPECTRUM: A FRAMEWORK FOR PLANNING AND MANAGEMENT OF TOURISM**

In order to facilitate the planning and management of tourism in the municipal area, a framework is provided for the preparation of a comprehensive *Recreation Opportunity Spectrum (ROS)* for Witzenberg.

The purposes and practical application of the ROS include the following:

- a) It provides a framework for the formulation of an appropriate 'image for the municipal area and for the branding and marketing of the primary tourism products.
- b) It provides a comprehensive inventory of tourism opportunities so as to attract the appropriate target market. This will be achieved through the creation of appropriate mental images as a basis for the evaluation and selection of the tourist's choice of destination.
- c) It ensures that tourists will not have false expectations and that these expectations and aspirations will be fulfilled.
- d) It provides guidance in respect of the most appropriate tourism type and/or opportunity class to be presented in any zone of the municipal area. These guidelines are based on the environmental ethics and value system, and the designated SPC Categories described in Chapter C1. In order to illustrate where each of the tourism types defined by the ROS can be undertaken, the ROS was linked to, and should be read together with the *SPC (Land-Use)* and *Spatial Structuring Elements Plans*.

It provides a framework that will facilitate the preparation of guidelines for the development of tourist facilities (e.g. in accordance with the principal of critical regionalism) and the management of tourism activities in each zone.

- It provides a framework in terms of which the municipality will be in the position to guide future tourism development and management throughout Witzenberg.
- It provides a framework for the preparation of management plans for tourism destinations and enterprises.

The ROS concept implies 'product-led' tourism, which entails developing forms of tourism that are most compatible with the environment and society, and targeting those markets that are consistent with the product even though this may result in fewer tourists, but not necessarily smaller financial return ('market-led' tourism, on the other hand, is tourism that attracts a broad market regardless of the impact of development).

Key requirements for sustainable 'product-led' tourism include the following:

- Provision of high-quality and authentic tourism 'products'.
- Effective educational programs that promote an understanding of the tourism products with both the tourists and the local communities.
- Effective marketing of the tourism products with the purpose of attracting specific types of tourists.
- Appropriate management of the tourism resources in order to ensure their sustainability.

The table below represents a conceptual ROS for Witzenberg. The preparation of a comprehensive ROS for Witzenberg will be the subject of thorough tourism planning and the preparation of a dedicated tourism plan to be undertaken as a consequence of this SDF.

Table C2: Preliminary Recreation Opportunity Spectrum for Witzenberg Municipality.

TOURISM TYPE	OPPORTUNITY CLASS	DEFINITION	ZONE	LOCALITY
<b>NATURE TOURISM</b>	<b>Nature experiences</b>	Non-consumptive activities in natural areas focussed on physically and spiritual enjoyment of nature. Relatively safe forms of outdoor recreation such as hiking, biking, camping as well as game and bird watching. The nature areas/reserves and other conservation areas located in the Witzenberg Municipality offer cycle trails, hiking trails, eco-tours, etc.	SPC A.a, A.b B.a, B.b and B.c, C.a, D.a. etc.	Statutory and Non-statutory nature reserves, private farms.
<b>ADVENTURE TOURISM</b>	<b>Adventure and dedicated sports activities</b>	Non-consumptive activities in the natural environment. An element of danger; requiring physical skill and endurance, degree of risk-taking. Includes river-rafting, canoeing, mountain-biking, quad-biking, micro-light flights and skiing.  <i>(*NOTE: Mechanised sports, e.g. quad-biking, may only take place in dedicated zones in order to avoid any noise and dust disturbances).</i>	SPC A.b, B.a, B.b, B.c, C.a, D.a, etc.	Appropriate locations throughout Witzenberg Municipality
<b>SPECIAL INTEREST TOURISM</b>	<b>Educational study tours</b>	Non-consumptive study and experience of aspects of both the natural and cultural environment and its resources.	SPC A.a, A.b, B.a, B.b, B.c, C.a, etc.	Throughout Witzenberg Municipality

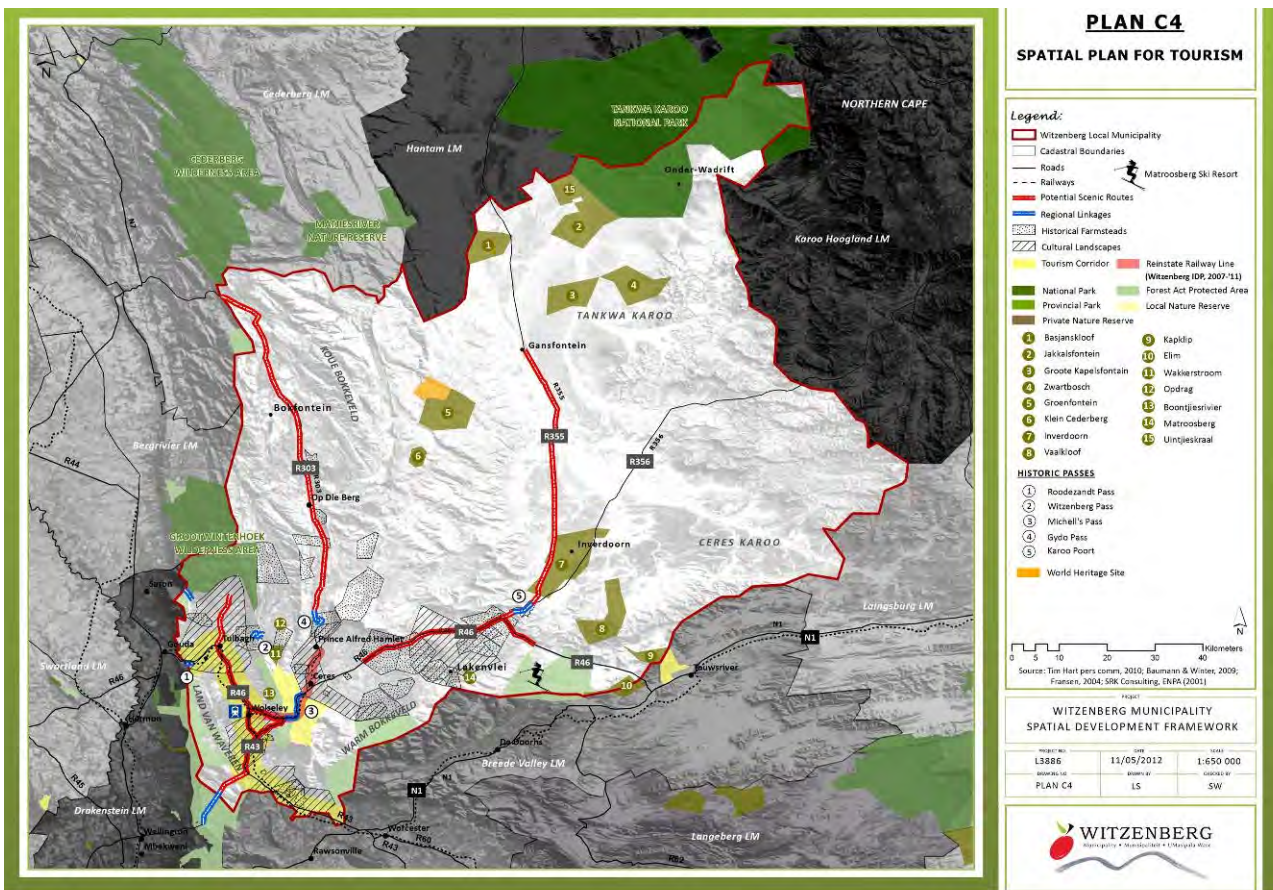


		Includes diverse educational travel programs.		
<b>CULTURE TOURISM</b>	<b>Local culture and tradition in traditional settlement areas.</b>	Direct experiencing local cultures, traditions, and life style, e.g. eating traditional food, visiting traditional settlements, wine farms., etc.	SPC F.1, etc.	Throughout Witzenberg Municipality.
	<b>Local history, archaeology &amp; palaeontology.</b>	Study local history – visit cultural villages, follow cultural/historical routes, visit sites of historical significance.	SPC. A.a,, F.1, D.a. etc.	Throughout Witzenberg Municipality (e.g. Tulbagh’s historical route of its buildings).
	<b>Festive occasions and agricultural shows.</b>	Experience cultural shows and festive occasions commemorating local culture, traditional, agricultural aspects.	SPC D.a, F.1, etc.	Throughout Witzenberg Municipality (e.g. Eselfontein Outdoor Festival, Tulbagh Horse and Wildflower Show, etc.).
<b>‘AGRI’ TOURISM</b>	<b>Traditional life styles and agricultural practices.</b>	<p>Study and experience traditional lifestyles and land-use practices of the area, e.g. cultivation/production of wine, dried fruit, juice-making, game products.</p> <p>Join the farmer and his family in their home or opt for a self-contained cottage or traditional farmhouse.</p> <p>Accommodation and guided tours on farms or through agri-industries.</p>	SPC D.a, F.1, F.2.a, E.a, etc.	Some farms around Ceres and Tulbagh offer agri-tourism tours, wine tours, etc.
<b>GENERAL TOURISM</b>	<b>All other forms that are not catered for under the above categories.</b>	Includes camping, general holiday-making in and around resorts.	SPC F.1.n – F1.o	Throughout Witzenberg Municipality in the different towns, nature reserves, and farms.

### C3.3.5 SPATIAL PLAN FOR TOURISM-RELATED ACTIVITIES

The spatial plan for tourism-related activities is a constellation of the following baseline maps:

- Sensitive cultural landscapes and farmsteads (Map 25 on Page 66).
- Conservation Areas (Map 22 on Page 59).
- MEDS Strategy proposals (Figure B15 on Page 138).
- Tourism corridors (Figure B14 on Page 121).



**C4 MANAGING SPC A – D AREAS: THE NATURAL ENVIRONMENT**

In meeting its international obligations of the Rio Summit of the United Nations (refer to Agenda 21), the South African government is required to develop national strategies, plans or programmes, or adapt existing ones, to integrate the conservation and sustainable use of biodiversity into sectoral and cross-sectoral plans, programmes and policies. To this end, the Government has published the White Paper on the Conservation and Sustainable Use of South Africa’s Biological Diversity (Government Gazette No. 1095 of 1997) and promulgated NEMA (Act 107 of 1998).

The Biodiversity Policy and Strategy (DEAT, July 1997) provides for the conservation and sustainable use of the country’s rich biological diversity. Of particular relevance are the following aims of the Biodiversity Policy:

- (a) Conserve the diversity of landscapes, ecosystems, habitats, communities, populations, species and genes in South Africa, through the following:
  - (i) Establishing and managing a representative and effective system of protected areas.
  - (ii) Promoting environmentally sound and sustainable development in areas adjacent to, or within, protected areas, with a view to furthering protection of these areas.
- (b) Use biological resources sustainably and minimise adverse impacts on biological diversity, through integrating biodiversity considerations into land-use planning procedures and environmental assessments.

According to the Western Cape PSDF (2009), *high levels of floral and faunal biodiversity are essential to ensure that the Province is able to withstand climate change and provide the necessary on-going environmental capital to sustain life.*

As described in Chapter B2.4, Witzenberg Municipality comprises a number of important vegetation habitats and habitat units, including *inter alia* Agter-Sederbeg Succulent Shrubland, Breede Alluvium Fynbos, Kouebokkeveld Shale Fynbos, Winterhoek Sandstone Fynbos, Breede Shale Renosterveld, Ceres Shale Renosterveld, etc. associated with the Cape Floral Kingdom and Succulent Karoo. A total of approximately 23% of land within the Witzenberg Municipality is afforded some level of formal protection. However, approximately 60% of the protected areas constitute *Mountain Catchment Areas*, which are not considered secured for biodiversity conservation purposes due to a lack of promulgated land-use management regulations and/or obligations.

The main functions and values of the natural areas are to:

- a) Maintain representative and viable samples of the full range of natural ecosystems and biodiversity - the natural heritage of all people and of future generations.
- b) Maintain life-support systems that provide the communities of Witzenberg Municipality with ecosystem services, such as a sustainable flow of high-quality.
- c) Provide essential insurance (buffers) against inevitable mistakes in land management and resource utilisation.
- d) Provide opportunities for contact with nature ('maintaining a link with the land'), and associated opportunities for outdoor recreation and environmental education.
- e) Provide a 'sense of place' to all people (state owned conservation areas are virtually the only parts of the country that all South Africans can call their own).

There is concern that these areas of conservation importance are not adequately protected. It is consequently proposed that a system of protected nature areas, eco-corridors and urban green areas be established, which includes portions of privately-owned land.

In order to achieve integrated management of conservation-worthy areas throughout Witzenberg Municipality and the adjacent municipalities it is imperative that close collaboration be established between the District municipality, the relevant local municipalities (including Witzenberg Municipality), CapeNature and DEA&DP. It is important that the Cape Winelands EMF be implemented through the SDF and the IDP.

#### **C4.1 SPC A & B: CORE 1 AND CORE 2**

SPC A and B areas constitute sites of high conservation importance including terrestrial land, aquatic systems (i.e. rivers, wetlands and estuaries). Due to their highly irreplaceable status such areas should be protected from change or restored to their former level of ecological functioning. Such SPC A and B areas are a natural resource (capital) of national and provincial significance within which the natural environment is able to provide a range of ecosystem services essential for sustainable life on earth. The integrity of the SPC A and B areas is therefore an imperative for the long-term future of the Witzenberg Municipality.

### C4.1.1 CATEGORY DESCRIPTION AND PURPOSE

CATEGORY A: CORE 1		
SUB-CATEGORY		DESCRIPTION
<b>A.a</b>	<b>Formal Protected Areas</b>	Areas designated in terms of legislation for biodiversity conservation, defined categories of outdoor recreation and resource use.
A.a.1		<p><u>Wilderness Areas</u> (declared in terms of NEMPA<sup>50</sup> 57 of 2003)</p> <p>Areas characterised by their intrinsically wild and pristine appearance and character, or that are capable of being restored to such, and which are undeveloped, without permanent improvements or human habitation. Such areas are declared to:</p> <ol style="list-style-type: none"> <li>protect and maintain the natural character of the environment, biodiversity resources, associated natural and cultural resources ;</li> <li>provide environmental goods and services;</li> <li>provide outstanding opportunities for solitude and primitive outdoor experiences; and</li> <li>provide controlled access to those who understand and appreciate wilderness, and those who wish to develop such an understanding.</li> </ol>
A.a.2		<p><u>Special Nature Reserves</u> (declared in terms of NEMPA 57 of 2003)</p> <p>Areas characterised by sensitive, ecologically outstanding ecosystems or natural habitats, natural communities, populations or species, or unique geological or biophysical features conserved primarily for scientific research, educational and limited nature-based recreational purposes.</p>
A.a.3		<p><u>National Parks</u> (declared in terms of NEMPA 57 of 2003)</p> <p>Designated to protect areas of national or international biodiversity importance; or containing a representative sample of South Africa's natural systems, scenic areas or cultural heritage sites; or the ecological integrity of one or more ecosystems. National parks provide spiritual, scientific, educational, recreational and tourism-related opportunities which are mutually and environmentally compatible and can contribute to local and regional economic development.</p>
A.a.4		<p><u>Nature Reserves</u>, including provincial, local authority and registered private nature reserves (declared in terms of NEMPA 57 of 2003)</p> <p>Areas of significant ecological, biophysical, historical, or archaeological interest or that are in need of long-term protection for the maintenance of its biodiversity or for the provision of environmental goods and services. Nature reserves are declared to</p> <ol style="list-style-type: none"> <li>supplement the systems of wilderness areas and national parks in South Africa;</li> <li>sustainably provide natural products and services to local communities;</li> <li>enable the continuation of traditional resource uses; and</li> <li>provide nature-based recreational and tourism opportunities.</li> </ol>
A.a.5		<p><u>Protected Environments</u> (declared in terms of NEMPA 57 of 2003)</p> <p>Areas may be declared as a protected environment to:</p> <ol style="list-style-type: none"> <li>Conserve the area as a buffer zone for the protection of a wilderness area, special natural reserve, national park, world heritage site or nature reserve.</li> <li>Enable owners of land to take collective action to conserve biodiversity on their land and to seek legal recognition for such actions.</li> <li>Protect the area if it is sensitive to development due to its – <ul style="list-style-type: none"> <li>– Biological diversity;</li> <li>– Natural, cultural, historical, archaeological or geological value;</li> <li>– Scenic and landscape value; or</li> <li>– Provision of environmental goods and services.</li> </ul> </li> <li>Protect a specific ecosystem outside of a wilderness area, special nature reserve, national park, world heritage site.</li> <li>Ensure that the use of natural resources is sustainable.</li> <li>Control change in land-use if the area is earmarked for declaration as, or inclusion in, a wilderness area, national park or nature reserve.</li> </ol> <p><u>Forest Wilderness Areas / Forest Nature Reserves</u> (in terms of s 8[1] of National Forests Act 84 of 1998).</p> <p>Declared forest wilderness areas and forest nature reserves include:</p> <ol style="list-style-type: none"> <li>natural forests, i.e. tract of indigenous trees whose crowns are largely contiguous and which comprise all other floral and faunal forest elements;</li> <li>woodlands, i.e. a group of indigenous trees which are not a natural forest, but whose crowns cover more than 5% of the area bounded by the trees forming the perimeter of the group; and</li> <li>natural habitats or ecosystem components.</li> </ol>

<sup>50</sup> National Environmental Management: Protected Areas Act 57 of 2003

	World Heritage Sites (declared in terms of World Heritage Convention Act 49 of 1999). Cultural <sup>51</sup> or natural <sup>52</sup> areas that has been: a) Included on the World Heritage List, or the tentative list of the Republic, and has been proclaimed as a World Heritage Site, or b) Proclaimed to be a special heritage site for management in accordance with the Act (such areas cannot be referred to as a World Heritage Site).	
<b>A.b</b>	<b>Critical Biodiversity Areas</b>	Areas identified through systematic biodiversity plans as irreplaceable in terms of meeting representation and/or pattern targets. These areas are known to support high biodiversity or recognised as being important for more than one taxonomic group (e.g. plants and birds).  These areas do not have statutory conservation status, although they have been identified in terms of approved bioregional plans.  Include Critical Biodiversity Areas 1 (Irreplaceable Sites) as near natural sites with ecosystems and species fully intact and undisturbed and Critical Biodiversity Areas 2 (Important Areas) as near natural sites with ecosystems and species largely intact and undisturbed.
<b>A.c</b>	<b>Freshwater Ecosystem Priority River Systems (FEPA)</b>	Wetlands and rivers identified as Freshwater Ecosystem Priority Areas (FEPAs), including a 100m buffer as required by the National Freshwater Ecosystem Priority Areas (NFEPA) Project Guidelines.
<b>CATEGORY B: CORE 2</b>		
<b>SUB-CATEGORY</b>		<b>DESCRIPTION</b>
<b>B.a</b>	<b>Ecological Support Areas</b>	Areas identified through systematic biodiversity plans as areas not yet exhibiting high levels of biodiversity loss, but which should be protected and restored in order to ensure biodiversity patterns and that ecological process targets can be met.
<b>B.b</b>	<b>Mountain Catchment Areas</b>	Areas declared, in terms of the Mountain Catchment Areas Act 63 of 1970, as mountain catchment areas that provide for the conservation, use, management and control of such land.

#### C4.1.2 OBJECTIVES

- a) Facilitate SPC A and B status for all Critical Biodiversity Areas through innovative public-private partnerships.
- b) Manage SPC A and B areas as:
  - (i) Benchmarks ('a base-datum of normality or naturalness') or as standards for environmental health and self-sustaining ecosystems.
  - (ii) Secure refugia for source populations and biodiversity.

<sup>51</sup> For the purpose of the Convention Concerning the Protection of the World Cultural and Natural Heritage, the following shall be considered as '**cultural heritage**': monuments, architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science, groups of buildings, groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science, sites, works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.

<sup>52</sup> For the purpose of the Convention Concerning the Protection of the World Cultural and Natural Heritage, the following shall be considered as '**natural heritage**': natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view, geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation, natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty.

- (iii) Sites where natural processes can continue without human interference.
  - (iv) Sites providing opportunities for solitude or primitive and unconfined types of recreation.
  - (v) Sites containing ecological, geological, or other features of scientific, educational, scenic, historical or cultural value.
  - (vi) Sites providing ecosystem functions, including the provision of a clean water from catchments, serving as carbon sinks, etc.
- c) Conserve the ecological and social integrity of natural areas and provide a broad spectrum of compatible outdoor recreational opportunities.

#### **C4.1.3 POLICY**

- a) The highest statutory protection must be afforded to SPC A areas.
- b) Only non-consumptive activities are permitted, for example, passive outdoor recreation and tourism, traditional ceremonies (e.g. at grave sites), research and environmental education.
- c) Aesthetically prominent natural features or areas should be declared Protected Natural Environments if such declaration would promote natural scenic beauty or biodiversity. No development must be allowed in proclaimed Protected Natural Environments.
- d) Important cultural-historic or archaeological sites are protected in terms of the National Heritage Resources Act 25 of 1999 and must be entered into a National Registry of conservation-worthy immovable property, to facilitate their protection. Future planning and development that could affect such sites would then be controlled by the South African Heritage Resources Agency (SAHRA) and the relevant local government authority.
- e) A system of protected areas must be established throughout the municipality in accordance with the National Environmental Management: Protected Areas Act 24 of 2008. Such a system should radiate out from core reserves, and should be connected through a network of ecological corridors and buffer zones where people pursue livelihoods subject to an agreed-upon system of values and environmental ethics.
- f) The system of formally protected nature areas must cover SPC A areas (refer specifically to those areas that have a high intrinsic and systemic value) in order to:
  - (i) Provide a benchmark for environmental health and self-sustaining ecosystems.
  - (ii) Provide secure refugia for source populations and biodiversity.
  - (iii) Allow natural processes to continue without human interference.
  - (iv) Contain ecological, geological, or other features of scientific, educational, scenic, historical or cultural value.
- k) The protected nature area system must comply with the following criteria:
  - (i) It should transect the bioregions, from low-to-high elevation, terrestrial, freshwater, wetlands, rivers, forests, and other ecosystem types, as well as the full range of climate, soil types, geology, etc.
  - (ii) It should be large enough to provide functional habitat for the indigenous organisms that inhabit them. Where necessary, they should be rehabilitated and critical 'keystone' species should be re-introduced. They should also be large enough to support natural disturbance regimes such as 'natural' wildfires, floods, and storms that play a critical role in their dynamics. In order to provide evolutionary continuity, such disturbance regimes should either occur naturally, or be carefully mimicked through management intervention techniques.
  - (iii) It should include representation from all levels of biodiversity, including populations, species, and landscapes.

- (iv) It should include terrestrial, freshwater, and marine ecosystems.
- l) The system of protected areas must be managed in a manner that honours long-standing, benign uses by local people for whom the system should include places of spiritual and cultural renewal.
- m) Proposals for new reserves must be scientifically defensible. In this regard, the establishment of protected areas must be based upon scientific information indicating the irreplaceability of habitats or broad habitat units, as provided by *inter alia* STEP.
- n) The management plans for a protected area system must make provision for the following:
  - (i) Effective integration of reserves with their surrounding environments, which could be achieved through the establishment of conservancies.
  - (ii) Appropriate management of ecological corridors that link the statutory conservation areas.
  - (iii) Appropriate management of private land that forms part of the ecological corridors and sustainable use of resources, to be achieved through *inter alia* the establishment of conservancies and Special Management Areas.

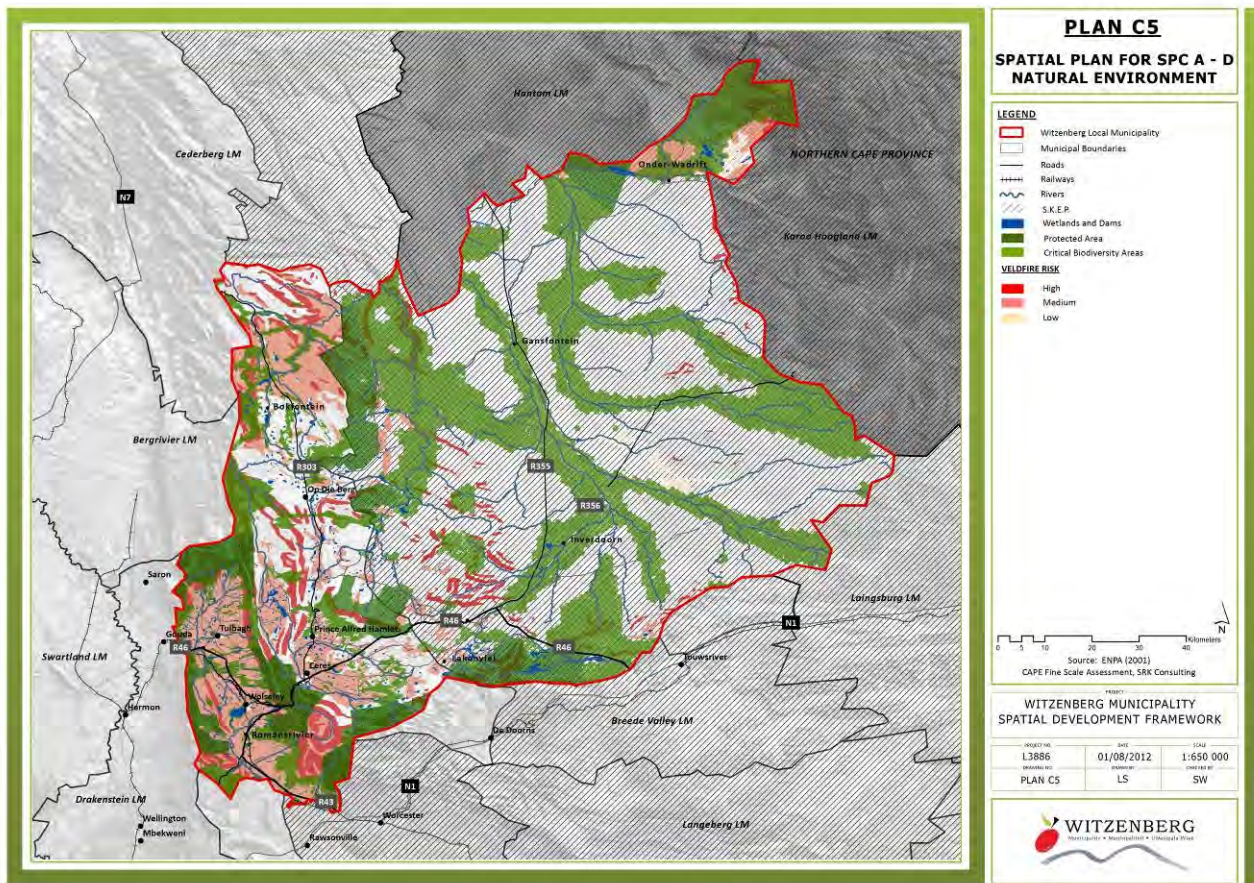
#### C4.1.4 STRATEGIES AND GUIDELINES

- a) Secure additional potential SPC A and B areas with the aid of institutions such as the WWF, IUCN, SKEP and GEF.
- b) Seek international recognition for SPC A areas in terms of, for example, the World Heritage Convention, Biodiversity Convention, UNESCO's MaB Programme, and Ramsar Convention.
- c) Establish a system of protected areas incorporating the diverse coastal landscapes, ecosystems, habitats, communities, species, and culturally significant sites.
- d) Consolidate the conservation areas on the CBA maps to extend the conservation areas. It is important to reach the '*Desired Management Objectives*' which implies that all degraded CBAs or ESAs, or those characterised by invasive alien vegetation, should be rehabilitated and restored.
- e) Apply the aquatic freshwater ecosystem guidelines (Driver *et al*, 2011) for land use practices or activities that impact on water quantity and quality in wetland FEPAs, habitat and biota in wetland FEPAs, water quantity and quality in river FEPAs, on habitat and biota in river FEPAs, water quantity in sub-quadernary catchments associated with river FEPAs, and Upstream Management Areas, water quality in sub-quadernary catchments associated with river FEPAs, and Upstream Management Areas, and on habitat and biota in sub-quadernary catchments associated with FEPAs, and Upstream Management Areas.

#### C4.1.5 SPATIAL PLAN

The spatial plan for SPC A and B areas (Plan C5) is a constellation of the following baseline maps:

- a) River Status (Map 10 on Page 41).
- b) Wetlands and dams (Map 12 of Page 44).
- c) Critical Biodiversity Areas (Map 23 of Page 61).
- d) Protected areas of Witzenberg Municipality (Map 22 on Page 59).
- e) Veldfire risk areas (Map 26 on Page 71).



**C4.2 SPC C AND D: BUFFER AREAS**

**C4.2.1 CATEGORY DESCRIPTION AND PURPOSE**

CATEGORY C: BUFFER 1		
SUB-CATEGORY		DESCRIPTION
C.a	<b>Ecological corridors /areas</b>	Linkages between natural habitats or ecosystems that contribute to the connectivity of the latter and to the maintenance of associated natural processes.
C.a.1		<u>Rivers or riverbeds (incl. 32 m buffer)</u> (in terms of NEMA <sup>53</sup> 107 of 1998) <i>All other perennial and non-perennial rivers and wetlands, including a buffer of 32m based on the generic buffer width used for aquatic features in the Listing Notices of the Environmental Impact Assessment Regulations, 2010 (GN R544, GN R545 and GN R546).</i>
C.b	<b>Other Natural Areas</b>	Large intact portions and remnants of natural or near natural vegetation not designated as CBA or ESA, especially in proximity/adjacent to CBAs and or ESAs, as identified through systematic bioregional plans.
CATEGORY D: BUFFER 2		
SUB-CATEGORY		DESCRIPTION
D.a	<b>Extensive Agricultural Areas</b>	Agricultural areas covered with natural vegetation, used for extensive agricultural enterprises, e.g. indigenous plant harvesting, extensive stock-farming, game-farming, eco-tourism (i.e. areas zoned Agricultural).
D.b	<b>Urban Green</b>	Municipal open spaces (including playgrounds) that form in integral part of

<sup>53</sup> National Environmental Management Act 107 of 1998.



	<b>Areas</b>	the urban structure (including areas zoned Public Open Space and Private Open Space).
D.b.i	Public Park	
D.b.ii	Landscaping	

#### C4.2.2 OBJECTIVES

- a) Create appropriate buffer areas around or adjacent to SPC A and B areas that protect the latter against land-use impacts.
- b) Create a continuous network of natural resource areas throughout the municipality that maintain ecological processes and provide ecosystem services (e.g. benefits that people derive from ecosystems. In Witzenberg, these include the provision of water, arable soil, disaster amelioration, recreational opportunities, etc.).

#### C4.2.3 POLICY

- a) SPC C and D designation illustrates the following:
  - (i) Extent of the area that contains conservation-worthy habitats or habitat units.
  - (ii) Extent of land, which should, ideally, be rehabilitated to improve the quality of the natural landscape and/or to promote biodiversity conservation.
- b) SPC D.a areas are primarily private property. The designation of SPC D.a areas does not imply that it is necessarily undesirable to undertake any development within such areas. Such designation is rather an indication that one must proceed with caution.
- c) SPC D.a provides an explanation of the nature and extent of the landscape characteristics of the particular area and presents a basis for the evaluation of development proposals in proper context. SPC D.a designation, therefore, essentially represents an ideal, the achievement of which represents a challenge to the authorities, planners, developers and landowners.
- d) SPC D.a designation does not take away any of the landowner's rights, nor does it grant any rights. It merely indicates that the particular tract of land is of importance to biodiversity conservation and, consequently, to the well-being of the people of the area, and that due care should be taken in the management of the land.
- e) Only activities that have an acceptable ecological footprint are permitted in SPC C and D. For example, resorts, where the buildings and permissible activities are sustainable. Where applications are made for such developments the onus is on the applicant to prove the desirability and sustainability of the proposed development.
- f) Buildings primarily associated with the management of biodiversity, agriculture and tourism may be considered.
- g) Ribbon development along riverbanks outside the defined urban edge is prohibited.
- h) New river bank development within urban edges must be behind the ecological setback lines including flood and storm surge lines (i.e. 1:50 year flood line).
- i) Resorts on river cliffs and hilltops should be set back far enough from the cliff edge that they do not break the skyline.
- j) Fire sensitive areas must be kept clear of structures. Where agricultural areas and associated infrastructure do however come in close contact with natural Fynbos areas, the necessary fire breaks must be established at the interface of such uses.
- k) In SPC C and D areas development is prohibited in the following areas:
  - (i) Geologically unstable sites, e.g. potential hill-slide or mud-slide sites, etc.

- (ii) Sites of karst topography (sinkholes) within ancient limestone/calcified sand dune areas or other unstable geological formations.
  - (iii) Steep slopes (>1:4).
  - (iv) Sites having a high water table or constituting an aquifer.
  - (v) Sites below the 1:50 year flood-line or on the banks of water-courses or water bodies.
- l) Any modification of an SPC C and D area is subject to an appropriate environmental off-set or *quid pro quo*. Such off-set could be in the form of other SPC C or D land being formally designated as SPC A or B, and mitigation banking (i.e. putting an appropriate amount of monetary capital into a trust to fund conservation initiatives where required).

#### C4.2.4 STRATEGIES AND GUIDELINES

- a) Ensure appropriate management of SPC C and D areas through ongoing application of the relevant legislation e.g. CARA<sup>54</sup> and NEMA and compliance monitoring.
- b) Obtain formal conservation status (i.e. SPC A designation for SPC A status) for designated SPC B areas (refer in particular to CBAs in private ownership) through the implementation of innovative strategies, such as the establishment of a Special Management Area (refer to Toolkit D7: Establishment and management of Special Management Areas). Such strategies in particular apply where approval for rezoning or development rights are applied for.
- c) Institute and expand 'greening projects and environmental management initiatives in the municipal area such as the 'green fingers' project at seven schools in the municipal area and the recycling program in Tulbagh (Chapter 2.7, Witzenberg IDP [2007-2011]).
- d) Special Management Areas must be considered as a strategy to promote sustainable land-use over a group of land units. As a first step, consider establishing a Special Management Area over the farms north of Prince Alfred Hamlet, including a portion of the Commonage.
- e) The establishment of conservancies is a voluntary action and conservancies have no statutory status.
  - (i) The establishment of a conservancy must improve the status, and variety of wildlife and other natural resources in an area, by means of sound conservation management principles. A conservancy can include statutory conservation areas and other forms of protected land.
  - (ii) Both public and private land can be declared a Special Management Area, and both natural, cultivated (i.e. farmland) and inhabited land can be included into a Special Management Area.
  - (iii) The establishment of a Special Management Area can be required as a condition of approval where new or additional land-use rights or subdivision have been granted. As such, the establishment of a Special Management Area could be a viable mechanism for ensuring long-term environmental sustainability on the relevant property.
  - (iv) The Special Management Area is to be managed in accordance with an Environmental Management System (EMS) or an Environmental Management Plan (EMP) that conforms to international standards for environmental management (e.g. ISO 14001).
  - (v) The owner of the Special Management Area must establish a trust fund, which will ensure that the necessary financial resources are available for effective long-term management of the Special Management Area.

<sup>54</sup> Conservation of Agricultural Resources Act 43 of 1983.

### C4.2.5 SPATIAL PLAN

The spatial plan for SPC C & D areas (Plan C5 on Page 151) is a constellation of the following baseline maps:

- a) River Status (Map 10 on Page 41).
- b) Wetlands and dams (Map 12 of Page 44).
- c) Biodiversity conservation planning initiatives (CAPE, SKEP & GCBC) (Map 18 on Page 52).
- d) Critical Biodiversity areas (Map 23 of Page 61).
- e) Protected areas of Witzenberg Municipality (Map 22 on Page 59).
- f) Veldfire risk areas (Map 26 on Page 71).

## C5 ENSURING SUSTAINABLE USE OF SPC E: INTENSIVE AGRICULTURE AREAS

Witzenberg is predominantly rural and dependent on agriculture not just to feed its people but as the backbone of economic activity. Increasing agricultural production is an important means to enhancing regional income and employment, and subsequently improving the welfare of local communities.

Environmental conservation is critical to ensure the sustainability of economic activity. There is however already extensive evidence of environmental damage as a result of agricultural and related activities. Indiscriminate agricultural development and farming practices cause serious damage to the natural environment and its community-supporting resources. In this regard the agricultural sector holds the key to the sustainability of the natural resources of Witzenberg. It is, therefore, paramount to ensure that agricultural land is developed and used in a sustainable manner.

### C5.1 CATEGORY DESCRIPTION AND PURPOSE

CATEGORY E: INTENSIVE AGRICULTURE		
SUB-CATEGORY		DESCRIPTION
E.a	<b>Cultivated Areas</b>	Agricultural areas used for intensive agricultural practices, e.g. crop cultivation, vineyards, intensive stock farming on pastures (areas zoned Agricultural Zone I).
E.b	<b>Plantations and Woodlots</b>	Plantations, i.e. group of trees cultivated for exploitation of the wood, bark, leaves or essential oils in the trees; forest produce, i.e. anything which appears or grows in such plantation including any living organisms and any product of it (areas zoned Agricultural Zone I).

### C5.2 OBJECTIVES

- a) Develop and utilise the comparative economic advantages vested in agriculture.
- b) Protect high potential agricultural land from non-agricultural development.
- c) Utilise agricultural land in terms of the principles of sustainable agriculture.
- d) Utilise natural agricultural resources for the benefit of all (e.g. through partnerships).
- e) Provide sustainable opportunities for small-farmers or emergent farmers.

### C5.3 POLICY

The following policy pertaining to the protection and sustainable use of agricultural land apply:

- a) High potential agricultural land must be excluded from non-agricultural development and must be appropriately utilised in accordance with sustainable agriculture<sup>55</sup> principles.
- b) Land-users causing unacceptable degradation of the natural environment are responsible for rehabilitation of mismanaged natural agricultural resources.
- c) Agricultural activities must be monitored and regulated in terms of the Conservation of Agricultural Resources Act 43 of 1983. In particular, restoration and reclamation of eroded land, control of the number of stock kept and the control of weeds and invader plants must be monitored.
- d) Make productive use of under-utilised resources such as vacant land, treated wastewater, recycled waste and unemployed labour. The following opportunities for urban agriculture exist in Witzenberg:
  - Opportunities around state-owned land: There are public facilities which present opportunities for access to land for urban agricultural activities. These include underutilised land around clinics, libraries, schools, hospitals and many more. Undeveloped public open spaces, vacant industrial land, road and rail reserves, storm water ponds and servitudes for power lines present also opportunities for access to land.
  - Other municipal-linked opportunities: Sufficiently treated wastewater are used for, *inter alia*, irrigation of sport fields and urban agricultural activities. This water resource can make a valuable contribution towards the availability and affordability of water for urban agricultural activities.
- e) Any enhanced development rights on SPC E areas must be subject to the establishment of a Special Management Area where the ethos of sustainable development (sustainable agriculture) is served in practice.

### C5.4 STRATEGIES AND GUIDELINES

- a) Ensure equitable access to and participation in agricultural opportunities through the National and Provincial Government's Land Reform program and the Comprehensive Agricultural Support Program (CASP), MAFISA Fund and CASIDRA.
- b) Provide housing for farm workers in Op-Die-Berg, Prince Alfred's Hamlet, Ceres/Bella Vista/Nduli, Wolseley and Tulbagh in terms of the Housing Pipeline (Witzenberg IDP 2007-2011) (refer to Plan Nos. C6.3-1 to C6.3-6).
- c) Provide the following land-uses as identified as Stakeholder Priority Issues in the Witzenberg IDP (2007-2011) (refer to Plan Nos. C6.3-1 to C6.3-6):
  - (i) *Wards 4 and 10, Prince Alfred Hamlet:* Land for community garden and land for livestock grazing.
  - (ii) *Wards 4 and 6, Bella Vista:* Land for community garden.
  - (iii) *Wards 1 and 6, Nduli:* Land for small farmers.
  - (iv) *Wards 2 and 7, Wolseley:* Land for the establishment of community gardens, especially in Pine Valley.

<sup>55</sup> This is agriculture that is socially, just, humane, economically viable, and environmentally sound. Sustainable agriculture integrates three main goals: environmental stewardship, farm profitability and prosperous farming communities.

- d) Implement projects identified by the Comprehensive Rural Development Programme (CRDP).
- e) High potential agricultural land near the urban edge of settlements should be protected to the extent possible as it is in these locations where agricultural production is generally the most cost-effective (e.g. due to lower transport costs).
- f) Encourage local processing of farm products and the provision of local farm services to enhance the rural economy, increase the viability of agricultural production and reduce rural poverty.
- g) Sensitive environments within SPC E.a areas, i.e. areas comprising conservation-worthy biological or cultural resources, representative complex landscapes, and areas prone to hazardous risks, should be excluded from development and should be appropriately conserved.
- h) The agricultural sector has the potential to help address the primary social problems of the area (e.g. unemployment and poverty) and to enhance land restitution. 'On-farm' options such as 'share-schemes for farm ownership' should be explored by organised agriculture.
- i) The manner in which farm boundaries are demarcated upon rezoning must be controlled in order to conserve the aesthetic quality and character of the area. In addition, the historical patterns of tree planting and hedges along property boundaries, windbreaks, homesteads, roads and dams within agricultural land, must be considered when rezoning is undertaken and must be conserved and enhanced as important landscape features, maintaining the specific character of the area.
- j) Undertake detailed farm planning in accordance with the standard SPC designation facilitating *inter alia* appropriate placement of infrastructure, protection of ecological corridors, and appropriate use of the various sections of the farm (refer to Figure C65 below).

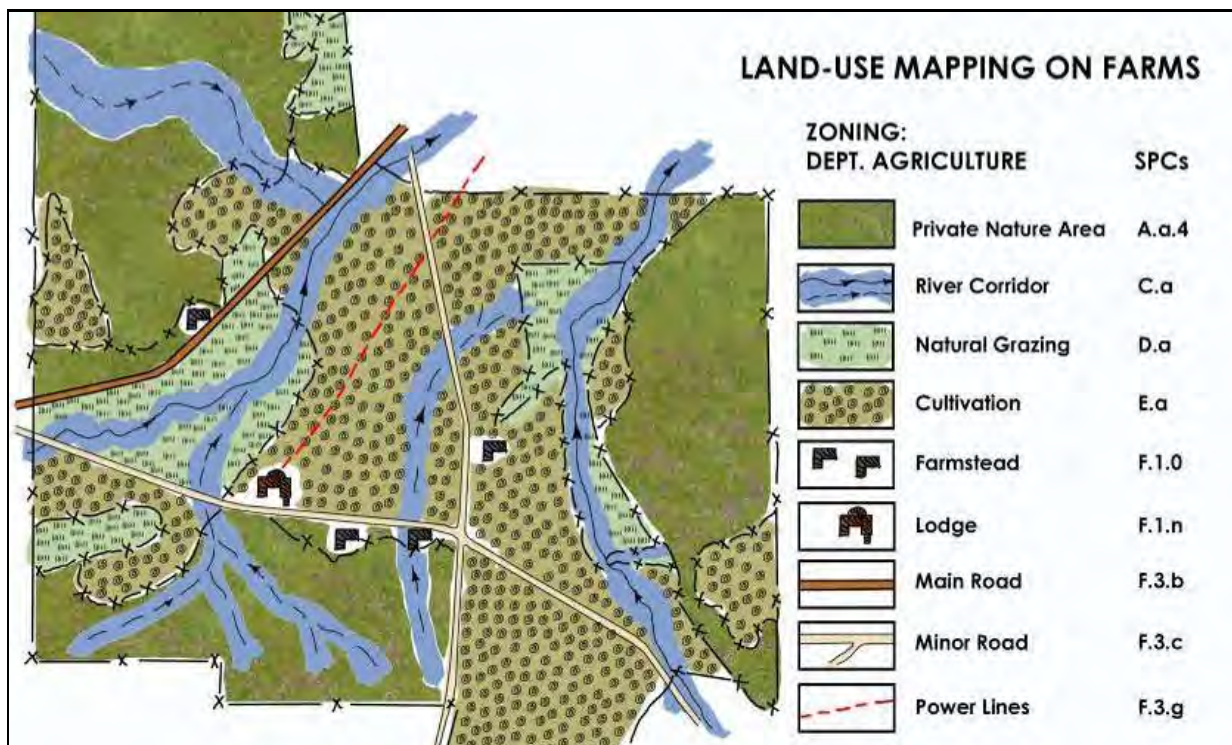


Figure C6: Detailed farm planning approach (Adapted from Department of Agriculture).

- k) Applications for rezoning of agricultural land could be considered favourably, on condition that they must contribute significantly to the promotion of the objectives of the IDP,



## C6 FACILITATING DEVELOPMENT OF SPC F1: URBAN AREAS

### C6.1 ESTABLISHING SUSTAINABLE SETTLEMENTS

The human-made (cultural) place is defined as *the environment that has been created or modified by humans to the extent that its primary ecosystem functions and natural aesthetic appeal are lost or diminished* (Schmithusen, 1964). Human-made places symbolise people's understanding of their environment and 'gather' a number of meanings (Norberg-Schulz, 1993). Human-made places generally fall into two broad categories, namely:

- a) The farm and agricultural village that are related to the land and, as such, form part of a particular environment, which has an influence on their structure.
- b) Urban dwellings within which the relationship to the natural environment has been weakened, or has been lost.

It is often overlooked that the inhabited landscapes are the works of humankind and that a general understanding of what constitutes qualitative inhabited landscapes, and what to do to maintain such landscapes, are of decisive importance for long-term sustainable development. Furthermore, inhabited landscapes are contained by natural landscapes and that the relationship between the inhabited and natural landscapes is a fragile one. The quality and meaning of both are dependent on a shared understanding of the authenticity of the environment.

To ensure sustainability of the urban environment, it is important that development should enhance the quality of life of the habitat communities. Requirements for sustainable urban development include the following:

- Integrate urban and rural planning (align urban land-use planning in accordance with bioregional planning principles).
- Contain urban sprawl (urban sprawl implies higher per capita cost of providing essential services and loss of valuable agricultural or natural land).
- Restore and maintain specific character (urban areas must reflect the culture-historical character of the area and its people and unique local land-uses).

It is a generally-accepted principle that public funds should be applied for the improvement of a small settlement's structure and functioning (e.g. investment in market support, provision of water and electricity, development of housing and new industrial areas) only if the basic rural development conditions are found to be suitable (Hinderink & Titus, 2002). The basic driving force behind a town's growth is provided by its specific economic activities, which generate job opportunities, capital, buildings and infrastructure (Badcock 2002: 66). An economic, social and environmental interdependence exists between urban and rural areas and the 'rural-urban linkage development perspective' is increasingly becoming the accepted approach in developing countries. Rural-urban linkage generally refers to the flow of monetary capital, people, goods and information between urban and rural areas. Infrastructure such as transportation, communications, energy and basic services, form the backbone of the urban-rural development linkage approach. Adequate investment in this domain improves rural productivity and better access to markets, jobs and public services (Weliwita & Okpala, 2004).

An evaluation of urban space in the region reveals that many urban settlements are devoid of the endearing qualities that characterise historic settlements. The primary negative characteristics are the following:

- a) A general lack of charming urban streets, square buildings and places, which provide the characteristic structure of historic places.
- b) Existing buildings generally do not play any positive role in giving the urban space a particular quality. Institutional buildings, such as churches, municipal offices and business buildings are scattered throughout the towns without any evidence of an understanding of the important role such buildings should play in providing status to the various types of urban space and how they should help define and shape specific types of public places (e.g. town squares and streets).
- c) There is generally no evidence of a well-defined town or settlement border that provides a recognisable inside-outside relationship and a sense of enclosure.
- d) With the exception of some attempts to copy and clone ‘regional building styles’, there is little evidence of successful integration of the characteristic qualities of the built heritage of the region into new development.

### C6.1.1 CATEGORY DESCRIPTION AND PURPOSE

CATEGORY F.1: URBAN-RELATED AREAS		
SUB-CATEGORY		DESCRIPTION
<b>F.1.a</b>	<b>Main Local Town</b>	The main town of Witzenberg Municipality, i.e. Ceres, including Bella Vista and Nduli.
<b>F.1.b</b>	<b>Local Towns</b>	Local towns of Tulbagh, Wolseley and Prince Alfred Hamlet.
<b>F.1.c</b>	<b>Rural Settlements</b>	Rural settlements that form part of Witzenberg Municipality, including Op-Die-Berg.
<b>F.1.d</b>	<b>Institutional Areas</b>	Areas designated for schools, colleges (areas zoned Community Zone I); churches and mosques (areas zoned Community Zone II) and areas zoned Community Zone III.
F.1.d.i	Place of Instruction (Community Zone I).	
F.1.d.ii	Public Place of Worship (Community Zone II).	
F.1.d.iii	Institution (Community Zone III).	
<b>F.1.e</b>	<b>Authority Areas</b>	Areas designated for governmental purposes and other official uses, e.g. municipal offices, offices of parastatals (Telkom, Eskom) (areas zoned Authority Zone).
<b>F.1.f</b>	<b>Residential Areas</b>	Areas designated for residential purposes, e.g. single title erven of low to high density (areas zoned Single Residential Zone I - III), group housing, town housing and flats (areas zoned General Residential Zone I - III), incremental housing (areas zoned Single Residential Zone IV), ‘GAP housing’ <sup>56</sup> and informal settlements.
F.1.f.i	Single Residential House (Single Residential Zone I, II & III).	
F.1.f.ii	Group Housing (General Residential Zone I).	
F.1.f.iii	Town Housing (General Residential Zone II).	
F.1.f.iv	Flats (General Residential Zone III).	
F.1.f.v	Incremental Housing (Single Residential Zone IV).	
F.1.f.vi	GAP Housing.	
F.1.f.vii	Low Cost Housing.	

<sup>56</sup> ‘GAP housing’ refers to a category of residential units that falls between the housing units provided by the state (< R100 000) and those provided by the private sector (>R250 000). The GAP housing market typically caters for people earning between R3 500 and R10 000 per month, which is too little to enable them to enter the private property market, yet too much to qualify for state assistance.



<b>F.1.g</b>	<b>Light Business Areas</b>	Areas designated for activities associated with retail and service industries, e.g. shops, restaurants, professional offices (areas zoned Business Zone II) and low intensity commercial and mixed-used activities on neighbourhood level (areas zoned Business Zone I).
F.1.g.i	General Business Zone (Business Zone II).	
F.1.g.ii	Neighbourhood Business Zone (Business Zone I).	
<b>F.1.h</b>	<b>Other Business Areas</b>	Areas designated for other business activities associated with service trade industries, e.g. industries associated with motor vehicle sales, repairs, service stations and associated facilities (areas zoned Business Zone III), and areas designated as petroports adjacent main transport routes (areas zoned Business Zone IV).
F.1.h.i	Service Station (Business Zone III).	
F.1.h.ii	Petroport (Business Zone IV).	
<b>F.1.i</b>	<b>SMME Incubators</b>	Areas designated for Small Medium and Micro Enterprises (SMMEs) and associated infrastructure and services focused on community-based service trades and retail.
<b>F.1.j</b>	<b>Mixed Use Development Areas</b>	Areas designated for innovative combinations of land-use, e.g. residential/light business; and light industry/light business (in terms of various municipal zonings).
<b>F.1.k</b>	<b>Cemeteries</b>	Cemeteries and formal burial parks (areas zoned Open Space Zone IV), excluding crematoriums.
<b>F.1.l</b>	<b>Sports fields &amp; Infrastructure</b>	Dedicated sports fields together with the associated infrastructure, parking areas, and services.
F.1.l.i	Sports Fields.	
F.1.l.ii	Sport Infrastructure.	
<b>F.1.m</b>	<b>Transport Infrastructure</b>	Area designated for infrastructure and services associated with public and private transport such as airports, landing strips, taxi and bus depots, etc. (areas zoned Transport Zone I).
<b>F.1.n</b>	<b>Resorts &amp; Tourism Related Areas</b>	Resorts (areas zoned Resort Zone I) and tourism-related nodes, and amenities that form part of a designated Hospitality Corridor/Precinct.
<b>F.1.o</b>	<b>Farmsteads &amp; Outbuildings</b>	Main farmsteads, including on-farm infrastructure required for farm logistics, e.g. houses, sheds, packing facilities, etc.
<b>F.1.p</b>	<b>Urban Agriculture / Community Gardens</b>	Areas designated for the purpose of establishing community gardens within urban settlements.

### C6.1.2 OBJECTIVES

- a) Develop sustainable settlements that will promote the well-being of the people of Witzenberg, i.e. where they can live with dignity and pride.
- b) End the apartheid structure of urban settlements.
  - (i) Prohibit further outward expansion of urban settlements that entrenches the current spatial apartheid pattern and results in urban sprawl.
  - (ii) Ensure that public funds are not spent in perpetuating segregated and unsustainable settlement patterns.

- (iii) Use socio-economic gradients based on walking distance to create a far higher level of integration than currently exists while remaining sensitive to community social norms and levels of living.
- (iv) Use publicly owned land and premises to spatially integrate urban areas and to give access for second economy operators into first economy spaces.
- c) Promote sustainable urban activities and public and non-motorised transport.
  - (i) Use walking distance as the primary measure of accessibility.
  - (ii) Develop walking and cycling routes.
  - (iii) Densify urban settlements, especially along main transport routes, at nodal interchanges etc.
  - (iv) Identify areas of highest accessibility that can be designed to maximise safe social and economic activity, especially for participants in the Second Economy.
  - (v) Restructure road networks to promote economic activity in appropriate locations.
  - (vi) Cluster community facilities together with commercial, transport, informal sector and other activities so as to maximise their convenience, safety and social economic potential.

### **C6.1.3 POLICY**

The following policy guidelines apply:

- a) Urban settlements are to be restructured so as to break down the spatial barriers created by apartheid and make them more convenient and pleasant to live in while creating economic opportunities close (within walking distance) to where people live.
- b) Settlements which show high economic growth potential and have high population thresholds shall be prioritised as locations for fixed infrastructure investment (PSDF Strategy HR13).
- c) Densification of urban settlements must occur with due regard for ecological and heritage concerns as identified in EIAs/HIAs. Ecological concerns include impacts on biodiversity, flora/fauna in general, soil, and water quality and quantity, and heritage concerns include cultural landscapes, historic buildings and precincts, and artefacts of memory.
- d) Municipal transport plans must make provision for non-motorised transport, bicycles and pedestrians along major routes as a start.
- e) The Provincial Road Access Guidelines should be applied in a transparent manner in an attempt to find a balance between the demand for access, with the need to protect the rights of the wider community for sustainable transportation, while at the same time ensuring adequate mobility in support of accessibility to economic opportunities.
- f) Transport interchanges are to be integrated into a series of mixed-use nodal points strategically located in General Business Corridors in the larger towns.
- g) Institutional buildings that accommodate community activities, as well as education, health and entrepreneurial development and business and skills training, should be located at points of highest access in urban settlements.
- h) The aesthetic qualities of the area must be a determinant of the scale and format of development in the area.
- i) Development outside urban areas must blend in or harmonise with the biophysical characteristics of the environment. Aspects to be illustrated on plans submitted for consideration must include:
  - (i) Developmental components must be discretely sited within the environment (i.e. out of sight from public roads and neighbouring development nodes).

- (ii) Development must blend in with the natural surroundings in terms of colour, use of locally occurring natural building materials and architectural style.
- (iii) Development must conform to the local vernacular in terms of scale and design.
- (iv) Where necessary, existing unsightly development must be screened through effective landscaping.
- (v) Measures to conserve energy and other essential resources.
- (vi) Measures for sustainable service provision.
- j) To ensure that buildings of resort developments are in harmony with the surrounding landscape and local vernacular, thus maintaining the character and aesthetic quality of the area, the planning and design process must address, inter alia, the following:
  - (i) Architectural vernacular.
  - (ii) Architectural design (cast shadows, break bulk of buildings, etc.).
  - (iii) Urban design to maintain space.
  - (iv) Materials to be used (e.g. natural stone, thatch, wood, etc.).
  - (v) Fencing (if any).
  - (vi) Height and coverage of units.
  - (vii) Landscaping proposals for the site.
  - (viii) Extent of units.
- k) The municipality may lay down conditions of approval for rural development which entitles such development to be self-sufficient with regard to services.
- l) The place-specific design guidelines, included as Toolkit D5, must be adopted for each town as part of the SDF. An Aesthetics Committee must be established for each town to review building and planning applications in collaboration with the Municipality and in accordance with the principles of critical regionalism (i.e. giving effect to a sense of place, a sense of history, a sense of nature, a sense of craft and a sense of limits).
- m) Landscaping must be undertaken simultaneously with construction. Such landscaping could include the following:
  - (i) Indigenous vegetation could be used to break the harsh, straight lines of buildings, i.e. for screening, water-saving measures, etc.
  - (ii) As much of the indigenous flora on the site must be retained as possible, especially in areas prone to wind-blown sand.
  - (iii) As far as possible, only indigenous plants must be allowed in the landscaping of the property.
  - (iv) Earthworks, such as earth berms and mounds, to add topographical interest, provide wind-shelter and screen structures, must be encouraged in the landscaping of the development.
- m) Procedures for monitoring design quality (e.g. aesthetics committee) need to involve the full range of design consumers, such as planners, architects, councillors and amenity spokespersons.
- n) The proponent of a development must submit financial assurances for long-term environmental management and rehabilitation of the development site and the surrounding environment. One way of providing assurance is to establish a trust fund for the development. This could be required as a condition of approval. The trust fund could be funded by depositing into it a percentage of the sale of each portion of the property.
- o) In terms of the concept of critical regionalism all development should reflect a sense of limits. There is a need for physical and temporal boundaries to frame and limit human places and activities. Limits need to be considered over the full spectrum of environmental management practices and issues, including the following:
  - (i) Scale of urban expansion.

- (ii) Scale of natural resource utilization.
- (iii) Architectural styles, scale and visual impacts of surface infrastructure and roads.
- p) The scale of urban development must be within the carrying capacity of water reserves, capacity for waste absorption, use of recreational amenities, etc.
- q) New developments to be located in and around existing farmsteads and disturbed areas. Existing structures and associated footprints to be used to the extent possible.
- r) All future buildings, roads and infrastructure including powerlines, solar and wind farms must be sited and designed according to the relevant SPCs and guidelines and are subject to heritage, environmental and visual impact analyses.
  - (i) Pipelines, transmission lines and telecommunications masts should be aligned along existing and proposed transport corridors rather than along point to point cross-country routes.
  - (ii) Solar and wind farms should be located where they will cause least visual impact taking into consideration the viability of the project.
- r) Incentivise consolidation of the conservation estate by introducing:
  - (i) Limited low density rural development rights.
  - (ii) Financial incentives in terms of the Property Rates Act, 6 of 2004.
  - (iii) Other incentives (e.g. resource economic approaches).
- s) As a general rule, non agricultural development may not be permitted outside the urban edge except for bona-fide holiday/tourism accommodation; bona fide agri-industry development; agri-settlements, and social facilities and infrastructure necessary for rural development. However, this guideline is subject to Section 3(1)(j) Development Facilitation Act 67 of 1995 which states that 'each proposed land development area should be judged on its own merits and no particular use of land, such as residential, commercial, conservational, industrial, community facility, mining, agricultural or public use, should in advance or in general be regarded as being less important or desirable than any other land-use'.

#### C6.1.4 DEVELOPMENT STRATEGIES AND GUIDELINES

In the past, the settlements within Witzenberg were generally structured through the application of general standards and regulations pertaining to, amongst others, street widths, building guidelines in respect of lines and heights, erf dimensions, and minimum densities. These standards and regulations serve an important purpose in regulating development. However, due to the fact that the regulations do not take sufficient cognisance of site-specific requirements and the existential dimensions of people's lives, they contribute to the development of 'nowhere' places. Such 'nowhere places' are generally characterised by *inter alia* a lack of structure and character, urban sprawl and extensive road and electricity networks that have negative ecological and aesthetical impacts. In order to provide an antithesis for the rules-based decision-making process referred to above, the SDF promotes a process based on a thorough understanding of the environment and its processes and functions (i.e. critical regionalism). This implies that any considerations regarding the desirability and scale of development must be primarily based on site-specific environmental criteria. It is imperative that consideration also be given to *inter alia* the broader environmental context and the potential cumulative impact of the development, as well as innovative town planning and urban design criteria. The following strategies and guidelines are to be adopted:

- a) Ensure that development scale and design are determined by the carrying capacity of the environment, including the following:
  - (i) Biophysical characteristics (i.e. the *intrinsic* value of the site).

- (ii) Sensitivity and/or irreplaceability of natural habitats that may be affected by the proposed development (i.e. the *systemic* value of the site).
  - (iii) Aesthetic qualities of the proposed development site.
  - (iv) Availability of resources such as water.
  - (v) Potential aesthetic impact of the proposed development.
  - (vi) Potential of the site for sustainable agriculture or other productive land-use (i.e. the *instrumental* value of the site).
  - (vii) Density and scale required in order to establish an appropriate sense of place within the proposed development.
  - (viii) Extent of the property.
- b) The municipality must provide quality spatial data and interpretation to land managers to assist decision-making and adaptive management, and make regional natural resource information and knowledge widely available or accessible (i.e. the SPISYS).
- c) Develop Restructuring Zones in accordance with provincial guidelines.
- d) Adopt the place-specific urban design guidelines document (refer to Toolkit D5). The document *inter alia* addresses the following:
- (i) Tree planting projects, including appropriate indigenous, ornamental and fruit trees, urban greening (landscaping) and food gardens along streets and in open spaces as part of urban restructuring programmes. Successful tree planting programmes are recognised as having the largest aesthetic impact in return for the least cost of any urban renewal strategy.
  - (ii) Adoption of a place-specific planning and design approach based upon the principles of critical regionalism.
  - (iii) Guidelines to restoration and rehabilitation of unattractive and inappropriate urban areas, in terms of the principles of critical regionalism.
- e) Improve the quality of subsidised housing settlements through innovative urban planning and design and cross-subsidising. Such settlements should include areas suitable for informal and formal public activities such as streets, boulevards and squares should be created in well located highly accessible spaces in urban settlements.
- f) Provide basic services to all settlements in accordance with their combined development index provided by Map 32 below.
- g) The SDF address the following key elements in order to ensure qualitative place-making:
- (i) Vacant Land Analysis: Availability and extent of vacant land that could be utilised to address the various needs of the relevant settlements and its inhabitants. The analysis also indicates potential opportunities for land development or any other appropriate forms of land-use by means of Spatial Planning Categories.
  - (ii) Land-Use Classification: Appropriate classification of the relevant landholdings with the objective to ensure the sustainability of such land-uses and the compliance thereof with the vision, goals and objectives of the area.
  - (iii) Spatial Structuring Elements: To be imposed to ensure that any future urban renewal and restructuring, development projects, and associated land-uses to be undertaken in the relevant settlement comply with the criteria and principles of 'good place-making'. These spatial structuring elements include:
    - Appropriate outer limits for outward spread of the relevant town under the present growth rate and in terms of the current and predicted availability of resources.
    - Activity corridors that abut primary transport routes and provide opportunities for mixed-use development.

- Activity Streets that provide viable opportunities for local business and community facilities.
- Nodes that occur at intersections of activity corridors and streets and which are designated for concentrations of a particular use.
- Precincts, or special use areas, dominated by primary community-based activities and land-uses that influence settlement pattern and growth.
- A Municipal Open Space System (MOSS) which consists of a contiguous network of natural corridors and public open spaces.

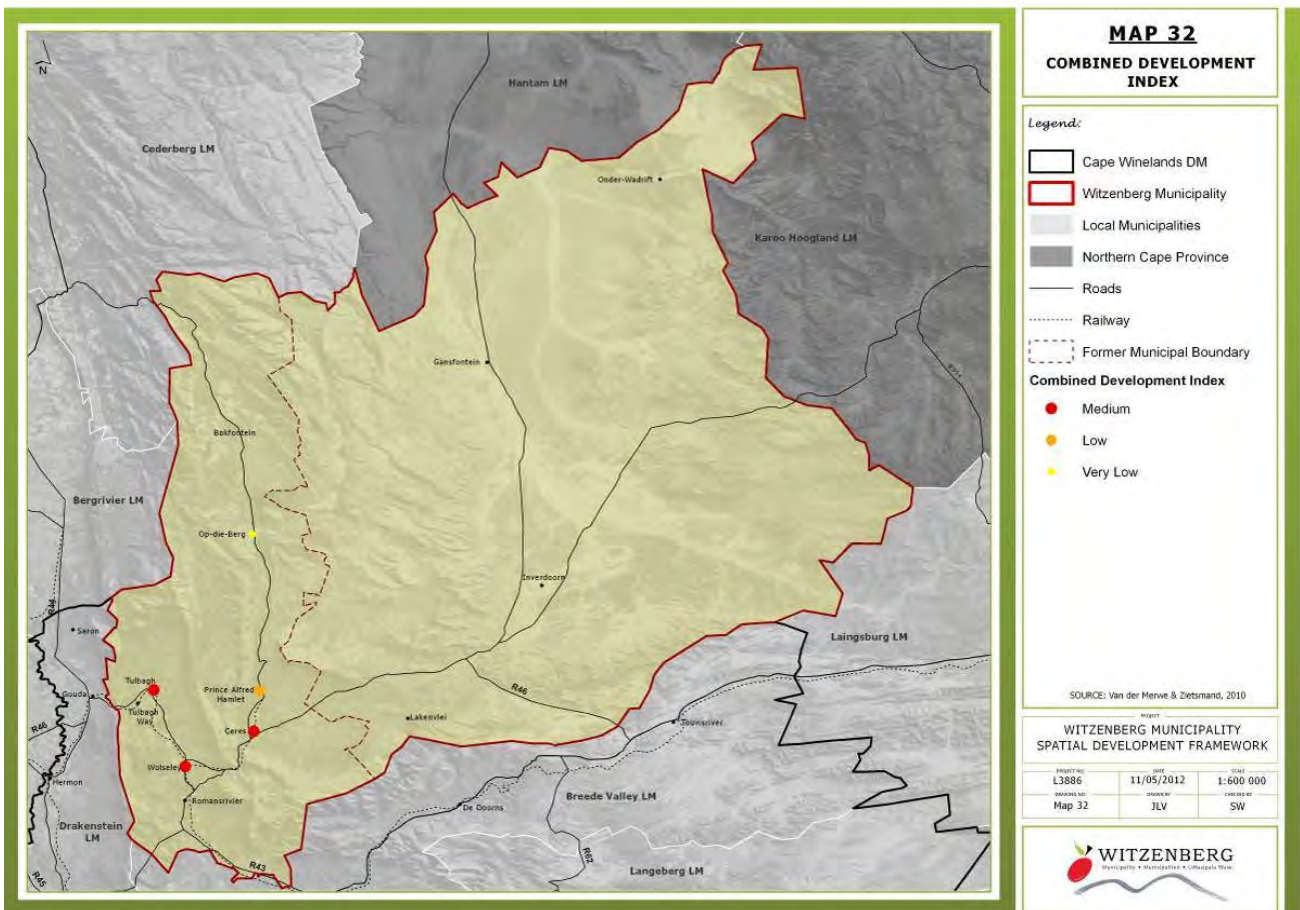


Figure C7: Quality of subsidised housing that could be achieved through innovative design and cross-subsidisation.

## C6.2 VACANT LAND ANALYSIS

The SDF builds on the premise that public land within Witzenberg is a primary resource with huge latent value and that this value should be unlocked in a sustainable manner to the extent possible. An inventory and analysis was therefore undertaken of all public and parastatal land. Such public land *inter alia* holds the key to achieving the vision, goals and objectives set for Witzenberg, in particular, as it relates to social integration, and eradication of poverty and inequality. The SDF consequently promotes innovative and responsible use of public land, either as a tradable asset, or as an investment opportunity through public-private-community partnerships.

All public property which has been developed since the Public Land Audit of December 2009 has been excluded from the more recent analysis. All public land was categorized into the following three categories:

Table C3: Land categories.

	CATEGORY	DESCRIPTION
a)	<b>Vacant</b>	Properties which have not been subject to any form of infrastructural development/improvement.
b)	<b>Partially Developed</b>	Properties which have been partially subjected to either informal or formal development or infrastructural development and investment below ground level (e.g. service infrastructure).
c)	<b>In-Process</b>	Properties which are in the process of being developed and/or in terms of which a rezoning application has been submitted and/or approved.

The public land in the Municipality comprises a significant number of portions and subdivisions most of which fall into the category of Vacant. The largest singular unit of public land is the municipal commonage. This land has been subdivided and re-subdivided into a plethora of portions, the majority of which is Vacant, while a number of portions have been categorized as Partially Developed and In-Process. The table below summarises the status of the public land units in Witzenberg.

Table C4: Status of public land units (estimated).

	CATEGORY	NUMBER OF PROPERTIES
a)	<b>Vacant</b>	328
b)	<b>Partially Developed</b>	56
c)	<b>In-Process</b>	55
	<b>TOTAL</b>	<b>439</b>

Plans C6.2-1 to C6.2-6 illustrate the public land units in Witzenberg and their current status. It is imperative that these plans be up-dated constantly by the Directorate Town Planning and Building Control so as to keep appropriate record of the municipal land resource base.

## C6.3 LAND-USE CLASSIFICATION

### C6.3.1 A VALUE-BASED DESIGNATION APPROACH

The development and management of the natural and human-made environment is influenced by land-use decisions. In turn, land-use decisions are influenced by values, norms and ethics. A general problem in this regard, is that the strong moral values, norms and ethics required for

coherent decision-making are often not given the necessary priority, or are over-ruled by rules-based systems, resulting in, amongst others, non-sustainable land-use, development of low quality settlements, uncontrolled and rural sprawl, etc. such as is evident in the Witzenberg Municipality. It is therefore clear that land-use decisions should not only be informed by rules and regulations, but also by a set of agreed-upon values, norms, and ethics.

The Cape Winelands District Municipality, during 2010, commissioned the drafting of a comprehensive Environmental Management Framework (EMF) to regulate the various land-uses in its area of jurisdiction at a strategic level. The EMF guidelines constitute a key component of the Witzenberg SDF specifically as it relates to the drafting of a detailed land-use plan for the entire municipality. During the drafting of the SDF land-use plan, the EMF was evaluated and scrutinised in accordance with a set of basic values and environmental ethics. These were determined in a collaborative, participative process with stakeholders, representing an adequate mix of local traditional and scientific knowledge.

The current and potential values of the various places collectively forming Witzenberg Municipality have been recorded and translated into a Composite Spatial Plan (refer to Chapter C2.2), which collectively provide concrete and practical guidelines for the different stages of planning, design, decision-making, implementation and management of projects and plans. It is imperative that the determination of the value of places in Witzenberg will not be a once-off event, but rather an ongoing process and that the SDF be updated accordingly.

The premise for the evaluation process was the United Nations World Charter for Nature which states that 'every place, thing or form of life is unique, warranting respect regardless of its worth to man' (Rolston, 1994). The values addressed and the relevant questions posed when determining the value, environmental constraints, and appropriate land-use for the entire Witzenberg Municipality are as follows:

Table C5: Towards determining value.

	VALUE	QUESTIONS POSED	EXAMPLES
a)	<b>Intrinsic Value</b> (This refers to aspects such as aesthetic quality, heritage and cultural significance, social connotations).	<i>What are the unique intangible assets and characteristics of the particular land portion or feature?</i>	<i>Bo-Boschkloof heritage site is an area that has a very high Intrinsic Value. This is based on the heritage and cultural significance of the area.</i>
b)	<b>Instrumental Value</b> (This refers to the potential use or functions of the site, or item).	<i>What are the current and/or potential uses of the particular portion or feature?</i>	<i>The area around sewage works has the potential to be used for small-scale agriculture.</i>
c)	<b>Systemic Value</b> (This refers to the role of the site or feature in an ecological, social, or economic system).	<i>What is the real or potential contribution of the portion or feature to the health of the natural and cultural environment, the social environment, and the local economy?</i>	<i>Romansriver Proteoid Renosterveld is listed as critically endangered and should be conserved at all costs.</i>
d)	<b>Current Status</b>	<i>What is the current status of the portion or feature, in particular, as it relates to land-use?</i>	<i>Housing pipeline deliverables in the respective towns and settlements.</i>
e)	<b>Vision</b>	<i>What could the vision of the portion or feature be, in</i>	



		<i>particular, as it relates to the promotion of a developmental state in Witzenberg?</i>	
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### C6.3.2 SPATIAL PLANNING CATEGORIES

The SPCs and associated application guidelines used in this SDF were derived from the overarching SPCs as proposed by the Western Cape Provincial PSDF in terms of the *bioregional planning* approach and policy. The Municipality has directed that the SDF be based upon the bioregional planning approach.

The SPCs take cognisance of the values and ethics summarised in Chapter C6.3.1 and include all land zonings that are provided for under the existing Zoning Scheme Regulations (including the draft Witzenberg Scheme Regulations). The SPCs are applied as a mechanism to indicate the appropriate land-use on any particular land unit.

Such classification has been determined by means of a reiterative process of consultation with Departmental Managers within the Witzenberg Municipality, a cross-reference of individual sectoral plans with district-wide strategies and policies, assessment of Environmental Management Frameworks and determining fine scale planning initiatives.

SPCs help to clarify and facilitate coherent decision-making that can lead to better zonation, laws and regulations. The SPCs, furthermore, provide a framework in terms of which land-use decisions can be standardised throughout the Municipality. The existing Zoning Scheme Regulations and the proposed SPCs have been aligned to a large extent. It should, however, be noted that the SPCs are not a blueprint for land-use classification. SPCs are not a zoning scheme and their designation does not change existing zoning or land-use regulations or legislation.

As described above, a total of eight primary SPCs have been provided to facilitate land-use classification at the provincial level. In addition, 43 Sub-categories have been created for the purpose of refining the designation process at municipal level (refer to Figure C2 on Page 127). The various SPCs and Sub-categories were numbered in alphabetical order, the purpose being to provide for a system in terms of which each entity in the municipal area can be allocated a coded number that would facilitate effective land-use management.

#### C6.3.2.1 Application of Spatial Planning Categories

To enable informed and objective decisions regarding the desirability of specific development proposals, it is important that municipal councillors, planning officials, local professional planners, developers, and prospective applicants understand the SPCs and Sub-categories and their specific purpose(s) and selection criteria.

In practise, the application of SPCs constitutes the following:

- a) The SPCs indicate the desired land-use designation of all land in the Municipality and specific types of land-uses that are not necessarily included in the existing Zoning Scheme Regulations. The latter should therefore be constantly aligned with the SPCs and *vice versa*.
- b) SPC designation builds on the premise that any new development implies a diversion from the *status quo*. For example, an application for the construction of new farm buildings in a tract of extensive agricultural land implies a change in SPC from D.a (Extensive Agriculture)

to F.1.o (Farmsteads and Outbuildings). This implies that the applicant will have to provide assurance to the Municipality that the proposed development complies with the place-specific planning and design principles set for SPC F.1.o and that the proposed development will not have an unacceptable impact on the D.a area.

- c) SPC A areas are essentially *No Development Zones*. No conventional development would therefore be allowed. Development types that could be considered include environmentally-sustainable tourism-related infrastructure. Applications would be subject to an EIA.
- d) SPC A.b, B, C.a and C.b designation on private land does not take away any of the landowner's rights, nor does it grant any rights. It merely indicates that the particular tract of land is of importance to biodiversity conservation and, consequently, to the well-being of the people of the area, and that due care should be taken in the management of the land. No conventional development should be allowed unless it is conclusively proven by the applicant that the proposed development will be sustainable and desirable. Applications would be subject to an EIA.
- e) SPCs E and F collectively represents the *Development Zone*. Development in these areas will be subject to the place-specific guidelines documented in Toolkit D5.
- f) It is recognised that the human-made landscapes of Witzenberg are 'contained' by the surrounding natural landscape. The symbiotic relationships between the two landscape types need to be understood and should be reflected in any development that that affects this relationship. For example, it would be undesirable to approve the establishment of an SPC F.2.b (Light Industry) within SPC A.a (Formally Protected Areas). However, under exceptional circumstances and under strong conditions, it may be permissible to establish such an SPC F.2.b in an SPC D.a area (Extensive Agricultural Areas). The planning and design of such proposed development and the decision to be taken by the Municipality would be subject to the guidelines put forward in Toolkit D5.
- g) On the other hand, the establishment of an SPC F.2.a area (Agricultural Industry) within an SPC E (Agricultural Area) will not have to be approached with the same caution as the latter example, because the proposed alternative land-use (agriculture-related) will not be foreign to its setting. Similarly, an application to establish an SPC F.1.n (Resort and Tourism-Related Area) within an SPC D area would be more acceptable than an SPC F.2.e (Extractive Industry).

### **C6.3.3 LAND-USE CLASSIFICATION PLAN FOR WITZENBERG**

The detailed land-use classification plan for Witzenberg is illustrated by Plan C1 on Page 134. In order to provide a more user-friendly and appropriate planning tool, the Composite Spatial Plan for Witzenberg was also illustrated for each of the following planning areas:

- a) Tankwa Karoo (Plan C1.1).
- b) Ceres Karoo (Plan C1.2).
- c) Koue Bokkeveld (Plan C1.3).
- d) Warm Bokkeveld (Plan C1.4).
- e) Agter Witzenberg (Plan C1.5).
- f) Land Van Waveren (Plan C1.6).

The detailed land-use classification for the individual towns and settlements are illustrated by Plans C6.3-1 to C6.3-6.

## C6.4 IMPLEMENTATION OF SPATIAL STRUCTURING ELEMENTS

A primary aim of the Witzenberg SDF is to provide guidance to the Municipality, developers, landowners and individuals with regard to future development and urban restructuring. The objective of this is to:

- enhance and preserve the unique characteristics and qualities of the individual towns of the Municipality;
- restore degraded places; and
- create high-quality places in accordance with the principles of good ‘place-making’ and in terms of the principles of sustainable development.

Together with the land-use classification approach (the SPCs application) described in Chapter C1, six Spatial Structuring Elements are proposed to guide urban renewal and future development in Witzenberg. The Structuring Elements are practical tools arising from major movement routes in the municipality and areas of economic growth, as depicted on sectoral plans and strategies of individual departments. The structuring elements are to be used by all stakeholders to help shape settlements that are sustainable and where a high quality for its inhabitants is ensured.

### *Box C1 - Key Functions of Structuring Elements*

- **Containment of urban sprawl** (urban sprawl implies higher per capita cost of providing essential services and loss of valuable agricultural or natural land).
- **Promotion of urban and social integration** by creating compact urban areas (compact urban areas, i.e. mixed use areas where a wide range of urban activities/facilities are accommodated within walking distance of living areas, contributes to the accessibility of economic, social and recreational opportunities to the community).
- **Promotion of acceptable higher densities** (higher densities imply more efficient use of available urban land, natural resources and service infrastructure).
- **Creation of quality urban environments through urban renewal and landscaping** (priority should be given to the conservation and reuse of buildings, infrastructure and materials and the beautification of the urban environment through intensive landscaping).
- **Reduction of the need for traffic movement and promotion of pedestrian and non-motorized movement patterns** (the price signals of transport, such as construction costs and cost of petrol given by the transport market, because they ignore environmental costs, mislead the users into believing that personal mobility is cheaper than it really is).
- **Restoration and maintenance of a defined sense of place** (urban areas must reflect the culture-historical character of the area and its people and unique local land uses).
- **Alleviation of poverty and inequality** (future urban development should improve the state of any given situation within the context of the constitutional imperative of promoting both human well-being and environmental integrity).
- **Protection and enhancement of the properties and investment** of all inhabitants by *inter alia* preventing inappropriate development or land use in the proximity of such properties and promoting renewal/upgrading of existing development that detracts from the overall value and integrity of an area.
- **Enhancing and simplifying decision-making regarding development applications**, e.g. a rezoning application for a guesthouse within a designated Hospitality Corridor will only be subject to the guidelines and principles relevant to Hospitality Corridors as documented in this SDF (refer to Chapter C6.4.4 below). Applications that are not consistent with the designated *Spatial Structuring Elements* will be subject to standard directives, including the Witzenberg Scheme Regulations.

The Spatial Structuring Elements to be implemented and maintained in Witzenberg include the following:

- a) Precincts.
- b) Nodes.
- c) Activity Corridors.
- d) Activity Streets.
- e) Municipal Open Space System.
- f) Urban Edge.

### C6.4.1 PRECINCTS

*Precincts* are special use areas, which are dominated by a primary activity together with an appropriate diversity of land-uses closely associated with the primary activity. The development of such *Precincts* could influence the settlement patterns and growth of the individual towns and within Witzenberg Municipality as a whole. Three distinct precincts have been identified, namely:

- a) Central Business District (CBD).
- b) Tourism and Hospitality Precinct: This precinct consists of existing and/or envisaged residential or business-related areas where the majority of land-uses are geared towards tourism or the provision of hospitality services.
- c) Industrial Precinct: This precinct consists of the existing designated industrial areas and envisaged industrial expansion areas.

Plans C6.3-1 to C6.3-6 illustrate the identified precincts and other spatial structuring elements described in the chapters below, where the associated types of development and land-use are to be concentrated.

#### C6.4.1.1 Precinct Policy Guidelines

The following policy guidelines shall apply with regard to precincts:

- a) The CBDs, as identified on the plans above, are to be developed in accordance with a dedicated CBD Renewal Plan which facilitates the implementation of the general development guidelines for *Activity Corridors*, *Hospitality Corridors*, *Activity Streets* and *Nodes* within the CBD. Specific attention must be given the following aspects:
  - (i) Reduce heavy vehicle through-traffic in towns by restricting it to only one or two streets in the CBD.
  - (ii) Creation of preferably basement parking areas for new developments within the CBD.
  - (iii) Conversion of defined streets to pedestrian streets in order to facilitate and encourage pedestrian movement and limiting the dominance of the motor car.
  - (iv) Detailed landscaping of the CBD – consistency in the planting, hard landscaping, lighting, street furnishing and signage will develop and enhance the identity of the CBD.
- b) Expansion of the CBDs is to be undertaken in the directions indicated by Plans C6.3-1 to C6.3-6. This would contribute to densification, urban structuring, and economic and social integration. The integrated development of the CBD Precinct, and the development of the *Activity Corridors* that link it to *Neighbourhood Nodes* and *vice versa* must be undertaken in accordance with the guidelines listed in the preceding chapters and the planning and design guidelines described in Toolkit D5.
- c) *Tourism and Hospitality Precincts* are to be developed in accordance with dedicated development plans to be developed for each precinct.
- d) The planning and design of the various Precincts must be undertaken in accordance with the principles described in the planning and design guidelines included as Toolkit D5. If a development proposal is considered inconsistent with these principles, the municipality will inform the applicant about the nature and extent of the inconsistency and the avenues to be explored to find appropriate solutions.
- e) Subdivision of residential properties in designated *Tourism and Hospitality Precincts* only to be considered under the following conditions:

- (i) The area of the new portion to be created must be equal or higher than 50% of the average sum of the immediate surrounding properties.
- (ii) The minimum size of newly created portions may not be smaller than the areas indicated on Plans C6.3-1 to C6.3-6.

#### C6.4.2 NODES

Various levels of nodes are applicable to Witzenberg. According to the Cape Winelands District Municipality SDF, Ceres has been identified as a *first order town* or Higher Order Node while Wolseley, Tulbagh and Prince Alfred Hamlet have been identified as being *third order towns* or Lower Order Nodes.

In each of these towns, irrespective of its order, *Local Nodes* occur in the form of 'junctions' or 'concentrations' of a particular use or physical character at the intersection of *Activity Corridors*, *Hospitality Corridors*, *Activity Streets* and/or *Connectors*. These are strategic localities within which the primary economic activities of each town are concentrated and within which the much-needed integration of the local communities is to be achieved. These *Local Nodes* are characterized by higher development densities and mixed-use activities.

Based on the significance of the particular *Local Nodes* in terms of scale, location, diversity and agglomeration of activities and services, differentiation is made between three types of Local Nodes, namely:

- a) **Neighbourhood Nodes:** This type of node occurs at a neighbourhood level and is intended to serve the daily economic and social needs of at least one neighbourhood.
- b) **Lower Order Neighbourhood Nodes:** This is a scaled down *Neighbourhood Node* and usually occurs at the intersection of *Activity Streets* and *Connectors*. Lower Order Neighbourhood Nodes are intended as a public meeting place for communities (i.e. local corner café, church and playgrounds) with only the minimum of activities to satisfy the daily need of the particular community.
- c) **Speciality Nodes:** This type of node surrounds a primary activity and serves a specific market. Activities within these nodes are of a specific or specialized nature, which could be retail, professional services, health care, tourism, etc.

*Activity Corridors*, *Streets* and *Nodes* are interdependent and reliant upon each other. The corridors and streets rely on nodes along their length to generate movement and economic activity. In turn, nodes form the logical strategic points where economic and social investment is focused. *Activity Corridors* and *Streets* reinforce the economic efficiency and significance of *Nodes* and *vice versa*.

##### C6.4.2.1 Neighbourhood Nodes Policy Guidelines

*Neighbourhood Nodes* will be developed and managed in terms of the following policy guidelines (refer to Toolkit D 9):

- a) The *Neighbourhood Nodes*, as identified on Plan Nos. C6.3-1 to C6.3-6, shall apply and be managed accordingly.
- b) Development applications associated with the relevant *Neighbourhood Nodes* will only be considered on properties located within the particular node's sphere of influence.

- c) The nodes must be developed from the inside outwards and the boundaries thereof will only be extended once the development potential of the designated node has been reached.
- d) A Site Development Plan (SDP) will form part of development applications in this zone. The general development parameters applicable to development applicants in *Neighbourhood Nodes* are indicated in Table C6.

Table C6: General parameters for development in *Neighbourhood Nodes*.

USE	HEIGHT	DENSITY	COVERAGE	PARKING
a) General Business Use (i.e. Central Business Zone and Neighbourhood Business Zone).	2 Storeys with loft space	30 du/ha (Gross)	To be determined by SDP	Parking requirements as per Witzenberg Zoning Scheme to apply
b) Institutional Uses (i.e. Educational Zone, Worship Zone and Institutional Zone).				
c) Authority Uses (i.e. Authority Zone).				
d) High Density Residential Land-Uses (Group Housing, Town Housing and Flats) & Hotels (i.e. Central Business Zone).				

- e) A Site Development Plan (SDP) will form part of development applications in this zone. The general development parameters applicable to development in *Lower Order Neighbourhood Nodes* are summarised in the table below.

Table C7: General parameters for development in *Lower Order Neighbourhood Nodes*.

USE	HEIGHT	DENSITY	COVERAGE	PARKING
a) General Business Use (i.e. Central Business Zone and Neighbourhood Business Zone).	2 Storeys with loft space	30 du/ha (Gross)	To be determined by SDP	Parking requirements as per Witzenberg Zoning Scheme to apply
b) Institutional Uses (i.e. Educational Zone, Worship Zone and Institutional Zone).				
c) Authority Uses (i.e. Authority Zone).				

- f) The *Speciality Nodes (SN)*, as identified on Plan Nos. C6.3-1 to C6.3-6, shall apply and be managed accordingly.
- g) A Site Development Plan (SDP) will form part of development applications in this zone. The general development parameters applicable to development applicants in *Speciality Nodes* are cited in Table C8.

Table C8: General parameters for development in *Speciality Nodes*.

USE	HEIGHT	COVERAGE	PARKING
Alteration of existing buildings to make provision for any land-uses which are directly related to the primary activity around which the Speciality Node is formed. This implies that if the primary activity in the Node, for example, is a health care facility (i.e. hospital or clinic), the municipality will consider development applications for health care-related land-uses (i.e. surgeries for general practitioners,	2 Storeys with loft space	35%	Parking requirements as per Witzenberg Zoning Scheme to apply

dentists, physiotherapists, optometrists, etc.)			
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- h) The development of all nodes should be orientated towards the street and should enhance pedestrian movement through the node. Pedestrian movement routes and bicycle paths must be incorporated into the urban design of nodes in order to link up with public transport stops.
- i) The development of an 'outdoor room' – a partly enclosed space, with partial roof, columns without walls, possibly with a trellis, which is placed strategically within the node i.e. besides an important path and within view of many homes, institutions or shops – should be incorporated into the design of nodes.

### C6.4.3 ACTIVITY CORRIDORS

An *Activity Corridor* is a linear zone of medium to high density, mixed-use development abutting a primary transport route. Activity corridors link areas of greater intensity of land-use, namely *Nodes* or *Precincts*. In the activity corridors a variety of social and economic functions are integrated with higher density residential functions.

Two types of *Activity Corridors*, that reflect their primary use, are promoted in Witzenberg, namely:

- a) General Business Corridors: These are medium to high density business-orientated development areas abutting either side of a primary transport route. Secondary land-uses compatible with business-orientated developments, i.e. higher density residential uses, may also be considered.
- b) Hospitality Corridors: These are areas abutting either side of the primary transport route, where low to medium density community-based hospitality initiatives and projects are promoted and implemented. In these corridors obligations are placed on those that own hospitality-related enterprises to ensure their meaningful participation in creating an environment conducive of viable tourism and to ensure their long-term commitment in this regard.

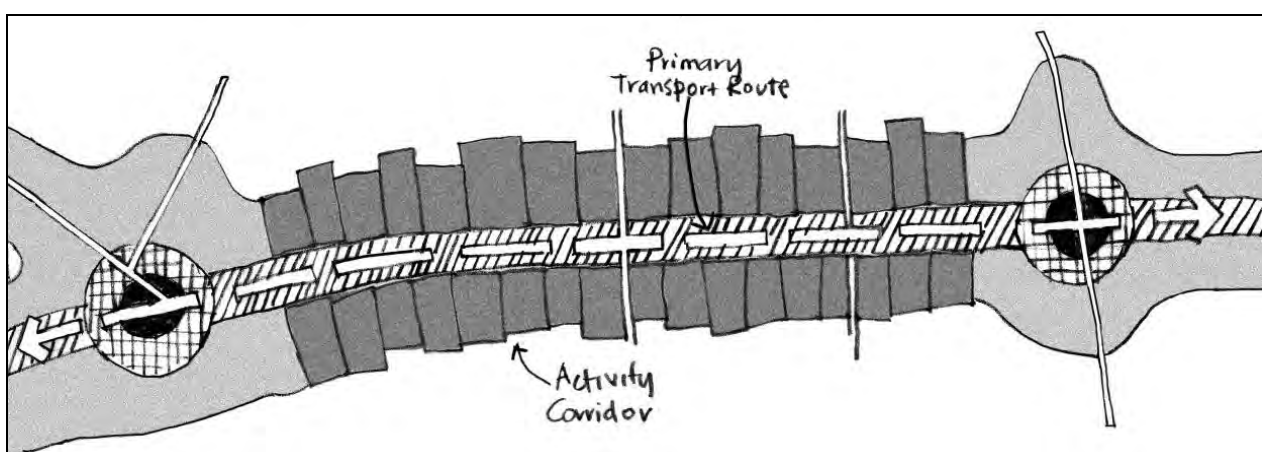


Figure C8: Conceptual Activity Corridor linking Nodes of high intensity use.

Activity corridors are important structural elements focussed on the:

- (i) Promotion of social integration;
- (ii) Increasing residential and business densities;
- (iii) Enhancing accessibility of economic and social opportunities; and

- (iv) Creating high-quality urban environments through urban renewal and intensive landscaping.

#### **C6.4.3.1 Activity Corridor Policy Guidelines**

The *Activity Corridors* and the development and management thereof will be undertaken in terms of the following policy guidelines:

- a) Development in any *Activity Corridor* is subject to the approval of the municipality. Any proposed change of land-use and/or new development application must be undertaken in terms of the general legislative framework and the development guidelines and parameters of the Witzenberg SDF.
- b) *Activity Corridors* are regarded as a *Speciality Zone Area* with specific development parameters.
- c) The typical development type allowed in *Activity Corridors* is medium to high-density mixed-use development.
- d) Proposed land-uses must complement each other aesthetically and functionally and care should be taken not to jeopardize one another. Potential noise, availability of parking, public transport and scale and nature of land-use will be deciding factors in the adjudication of applications.
- e) In the development of *Activity Corridors* provision must be made for free pedestrian movement and adequate public open space. In these open spaces, property owners and developers must contribute to the implementation and maintenance of the Witzenberg Landscape Plan upon completion.
- f) *Activity Corridors* must be characterized by spatial qualities (i.e. positive outdoor spaces, defined streets and squares, built form that encourages a high level of natural surveillance over the public realm, etc.), façade characteristics, visual prominence and their position in the overall structure of the town.
- g) *Activity Corridors* are the main focus for densification. The development densities proposed as part of the development parameters for *Activity Corridors* must be promoted where contextually appropriate. Higher densities do not necessarily imply high-rise development. Acceptable levels of densification can be achieved through well-designed low-rise development. Multi-storey developments (i.e. between two and three storeys) should be considered, especially closer to *Nodes*. Surrounding land-uses must however be taken into consideration.
- h) Where buildings exist, covered walkways (arcades) or pergolas should be constructed and used to connect buildings to one another. Covered walkways not only play a vital role in the way that people interact with buildings, but also provide shelter from natural the elements.
- i) Lateral enclosure and edge continuity are to be promoted by placing building fronts right up to the street at slightly uneven angles.
- j) Sidewalks must permit people to walk at a varying pace. Pedestrians must also be safe, in particular, from vehicles. Therefore, sidewalks must be as wide as possible with low demarcating walls, railings or balustrades where possible.
- k) Where a pedestrian path crosses a road that has enough traffic to create more than a two second delay to people crossing, a 'knuckle' is to be created at the crossing, by *inter alia* narrowing the road to the width of the through-lanes only; continuing the pedestrian path through the crossing about 300 mm above the roadway; creating islands between lanes; sloping the road up toward the crossing 1:6 maximum, and marking the path with a canopy or shelter to make it visible.



- l) Street furniture such as signage, external lights, bollards, benches, litter bins, tree guards or outside furniture should be designed in a co-ordinated manner, also consider applying a standard colour scheme to all street infrastructure.
- m) Landscaping is to be used to create a sense of place and enclosure in *Activity Streets* where the role of vehicles cannot be reduced. Trees are to be planted as close as possible to the road verge in order to define the edge of pedestrian and vehicular routes.

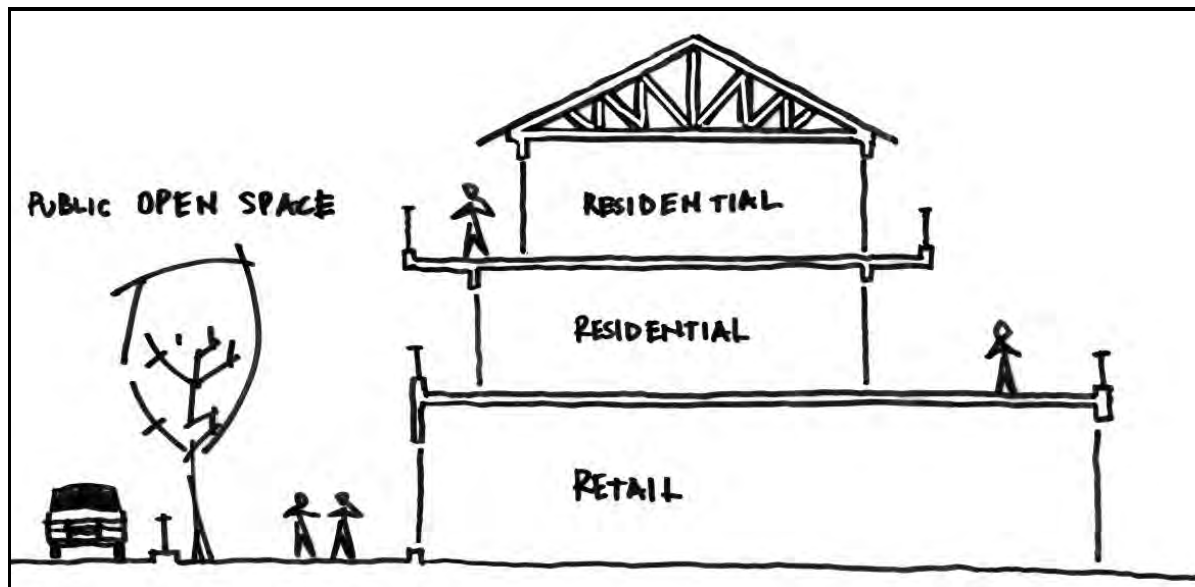


Figure C9: Conceptual medium to higher density mixed-use development in a General Business Corridor.

**C6.4.3.2 General Business Corridor Guidelines**

The following policy guidelines for *General Business Corridors* shall apply:

- a) The *General Business Corridors*, as identified on Plan Nos. C6.3-1 to C6.3-6, shall apply and be enforced accordingly.
- b) *General Business Corridors* include the first row of properties abutting each side of the primary transport route.
- c) The general development parameters applicable to development applications in the *General Business Corridor* are indicated in Table C9 below.

Table C9: General development parameters for development applications in the *General Business Corridor*.

USE	HEIGHT	DENSITY	COVERAGE	PARKING
a) General Business Use (i.e. Central Business Zone and Neighbourhood Business Zone).	3 Storeys	30 du/ha (Gross)	To be determined by SDP	Parking requirements as per Witzenberg Zoning Scheme to apply
b) Institutional Uses (i.e. Educational Zone, Worship Zone and Institutional Zone).				
c) Authority Uses (i.e. Authority Zone).				
d) High Density Residential Land-Uses (Group Housing, Town Housing and Flats) & Hotels (i.e. Central Business Zone).				

- d) Adequate parking must be provided. Parking areas should wherever possible be placed in basements and/or to the back of properties. The provision of parking is subject to the Witzenberg Scheme Regulations and development guidelines of this SDF.
- e) A Site Development Plan (SDP) will form part of development applications in this zone. The municipality may consider a departure from the development parameters in the table above if adequate proof were provided that such departure is justified.

### C6.4.3.3 Hospitality Corridors

The following policy guidelines for with regards to *Hospitality Corridors* shall apply:

- a) The *Hospitality Corridors*, as identified on Plan Nos. C6.3-1 to C6.3-6, shall apply and be enforced accordingly.
- b) *Hospitality Corridors* include the first row of properties abutting each side of the primary transport route.
- c) The general development parameters applicable to development applications in the *Hospitality Corridor* are summarised in the table below.

Table C10: General parameters for development in the *Hospitality Corridor*.

USE	HEIGHT	DENSITY	COVERAGE	PARKING
a) Boutique hotels, Guest houses and Bed and Breakfasts (Central Business Zone and consent use under Single Residential Zone and Incremental Housing).	2 Storeys	10 du/ha (Gross)	To be determined by SDP	Parking requirements as per Witzenberg Zoning Scheme to apply
b) Coffee shops, Curio shops & Art galleries (Central Business Zone, Neighbourhood Business and consent use under Flats).				

- d) A Site Development Plan (SDP) will form part of development applications within this zone. The municipality may consider a departure from the development parameters in Table C11 if adequate proof were provided that such departure is justified.
- e) In *Hospitality Corridors* there should be a focus on innovative landscaping that will enhance the quality of the environment and the hospitality product as a whole.
- f) Adequate provision must be made for parking on-site. Parking areas should preferably be placed in basements and/or to the back of properties. Small landscaped parking areas to the front of properties may also be considered. The provision of parking for each development application is subject to the Witzenberg Scheme Regulations and development guidelines of the Witzenberg SDF.
- g) Development applications must describe how consideration was given in the planning and design of the surrounding land-uses and must illustrate how the proposed development will contribute towards the sense of place of the surrounding area and to the enhancement of environmental integrity in general.

### C6.4.4 ACTIVITY STREETS

An *Activity Street* is a local road that displays the same characteristics and principles of linearity and mixed use development than an activity corridor, but with a lower level of intensity of use and

market threshold. It attracts enough passing trade to provide viable opportunities for local business and community facilities.

*Activity Streets* play a vital function in linking previously isolated communities at the local level and provide appropriate locations for small and informal enterprises. It reinforces *Higher* and *Lower Order Nodes* and strengthens the integration of communities and the accessibility to economic, cultural and social functions.

*Activity Streets* are linked by *Connectors* which are primarily main streets that carry through-traffic and have the capacity to handle higher traffic volumes. *Connectors* play a key role in the spatial structuring of urban areas by linking the Spatial Structuring Elements of *Activity Corridors*, *Activity Streets*, *Nodes* and *Precincts*.

#### C6.4.4.1 Activity Street Policy Guidelines

*Activity Streets* will be developed and managed in terms of the following policy guidelines:

- a) Sections of the following streets in the respective settlements have been identified as *Activity Streets* (refer to Plan Nos. C6.3-1 to C6.3-6):
  - (i) Retief Street, Ceres.
  - (ii) Jakaranda & Vrede Streets, Bella Vista.
  - (iii) Eufees & White Streets, Wolseley.
  - (iv) Market & Steinhil Streets, Tulbagh.
- b) *Activity Streets* includes the first row of properties abutting each side of the primary transport route.
- c) The general development parameters applicable to development applications in the *Activity Streets* are summarised in the table below.

Table C11: General parameters for development in *Activity Streets*.

USE	HEIGHT	DENSITY	COVERAGE	PARKING
a) General Business Uses (i.e. Central Business Zone and Neighbourhood Business Zone).	2 Storeys	20 du/ha (Gross) depending on density and form of surrounding land-uses	To be determined by SDP	Parking requirements as per Witzenberg Zoning Scheme to apply
b) Institutional Uses (i.e. Educational Zone, Worship Zone and Institutional Zone).				
c) Authority Uses (i.e. Authority Zone).				
d) Medium to Higher Density Residential Uses (i.e. Group Housing, Town Housing and Flats).				

- d) A comprehensive Site Development Plan (SDP) will be included in each application for development adjacent to *Activity Streets*. The municipality may consider a departure from the development parameters in Table C11 if adequate proof were provided that such departure is justified.
- e) Any proposed change of land-use and/or new development is subject to approval of the municipality in terms of the general legislative framework, Witzenberg Scheme Regulations and the development guidelines and parameters of this SDF.
- f) All *Activity Streets* must be regarded as a Speciality Zone Area with the development parameters stipulated in Table C11 above.

- g) New land-uses may not have a negative impact on surrounding development and associated land-use.
- h) New development should focus on lower-order services, amenities, and retail and commercial uses. Residential use is also encouraged and this should take the form of low-rise, high density development such as town houses and low rise flats.
- i) The 'woonerf concept' is to be adopted and implemented where appropriate (refer to the figure below). This concept was developed as a traffic calming measure in residential areas and as a 'shared space' where pedestrian and cycle traffic would receive priority over vehicular traffic. The main aims of the concept are to change the role and function of the street; promote traffic calming, increase pedestrian safety, improve urban quality of life; reduce noise pollution, improve the scope of activities in a neighbourhood; and improve the aesthetic quality of the street through the introduction of soft landscaping.

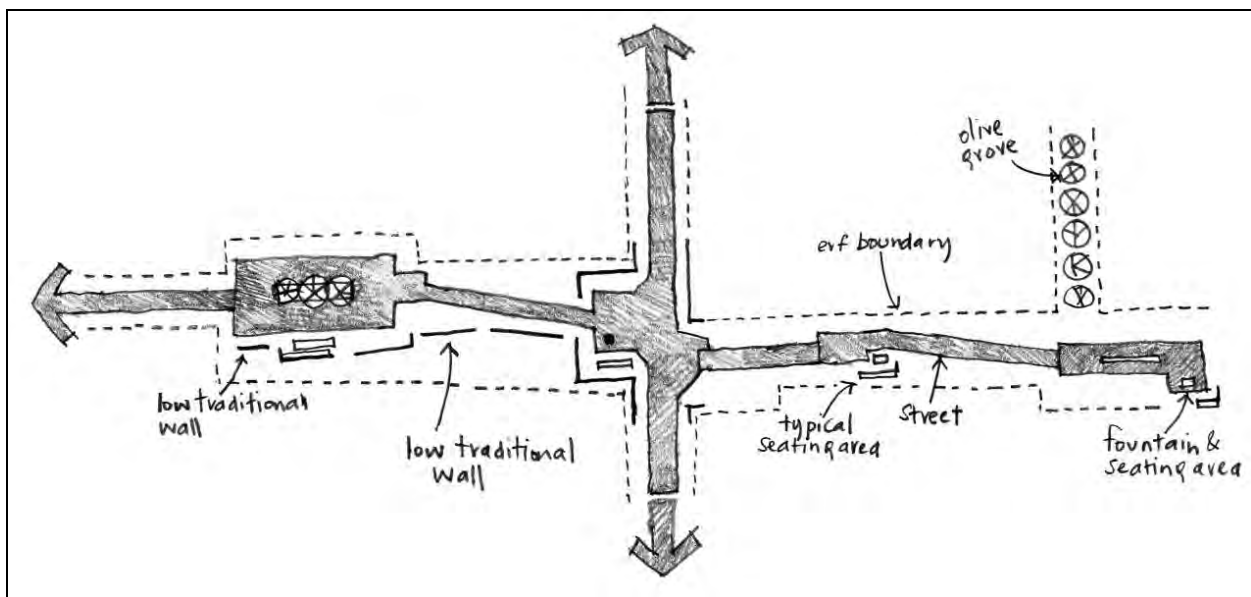


Figure C10: The 'woonerf' concept.

- j) The development of *Activity Streets* must be considered in the context of the phased growth and development of *Activity Corridors* and its associated *Nodes* and must be informed by the overall economic and spatial planning objectives of Witzenberg. The development of *Activity Streets* should only be allowed after its associated *Nodes* have reached full development capacity, or if the further expansion thereof were deemed inappropriate.
- k) *Activity Streets* must be characterized by positive urban spaces where collective community life and social integration occur. *Activity Streets* are therefore a most important element in the integration strategy of the Witzenberg SDF.
- j) *Activity Streets* should induce and encourage people to spend time and not just as a movement route. To facilitate this, urban squares are to be created by making a bulge in the street and narrowing the ends thereof (refer to the figure below). These public areas are to be surrounded by gathering places with pockets of activity. Small, partly enclosed areas at the edges, which jut forward into the open space between the paths, and contain activities which make it natural for people to pause. These squares should become *Lower Order Neighbourhood Nodes* (refer to Chapter C6.4.3 above).
- k) *Activity Streets* should be priority areas for introducing a system of bike paths, which are marked clearly with a special, easily recognisable surface. Adequate bike racks must be

provided at public transport stops and meeting places. Additional bike paths can be identified as the need arises.

- I) Where development applications in *Activity Streets* are inconsistent with the Witzenberg SDF, the onus will be on the applicant to prove to the municipality that the relevant application can be reconciled with the objectives and directives of the SDF.

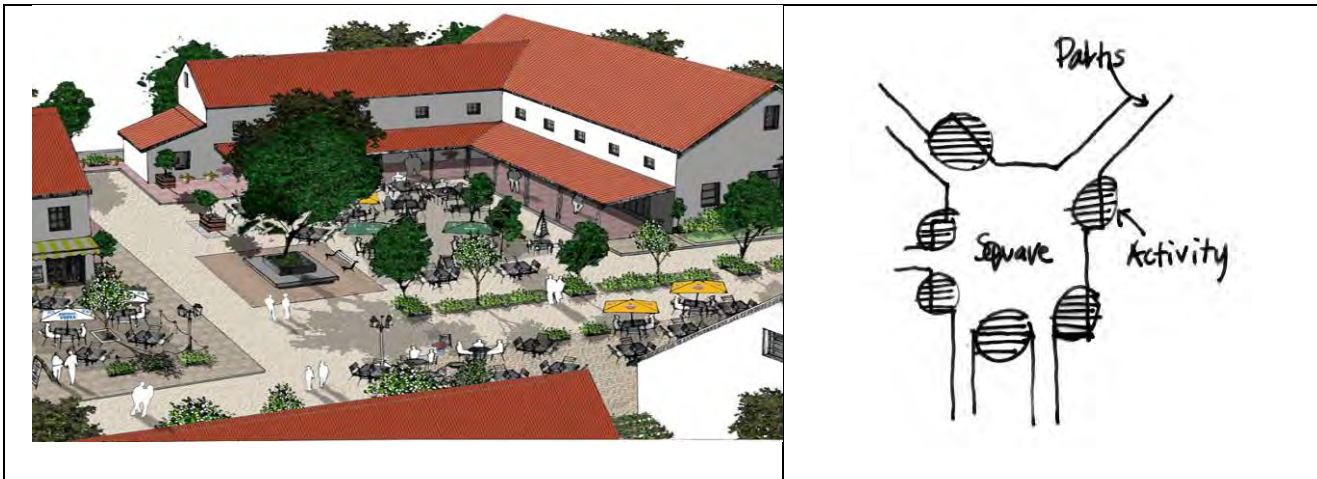


Figure C11: Typical urban square linked by Activity Streets.

#### C6.4.5 MUNICIPAL OPEN SPACE SYSTEM

The Municipal Open Space System (MOSS) is network of contiguous natural corridors and urban green areas throughout the towns of Witzenberg.

The MOSS consists of 3 categories of open space:

- |    |                                 |                                                                                                                                                                                                                                                                                                                                                                         |
|----|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a) | <u>Ecological Open Space:</u>   | <ul style="list-style-type: none"> <li>• Statutory and Non-Statutory Conservation Areas (SPC A.a &amp; A.b)</li> <li>• Freshwater Ecosystem Priority River Systems (SPC A.c)</li> <li>• Ecological Support Areas (SPC B.a) and Mountain Catchment Areas (SPC B.b)</li> <li>• Ecological Corridors / Areas (SPC C.a)</li> <li>• Other Natural Areas (SPC C.b)</li> </ul> |
| b) | <u>Social Open Space:</u>       | <ul style="list-style-type: none"> <li>• Urban Green Areas (SPC D.b)</li> <li>• Sports Fields and Infrastructure (SPC F.1.I)</li> </ul>                                                                                                                                                                                                                                 |
| c) | <u>Agricultural Open Space:</u> | <ul style="list-style-type: none"> <li>• Extensive Agricultural Areas (SPC D.a)</li> <li>• Cultivated Areas (SPC E.a)</li> <li>• Plantations and Woodlots (SPC E.b)</li> </ul>                                                                                                                                                                                          |

The MOSS is aimed at:

- complimenting the built environment by providing it with diversity, natural quality, recreation opportunities and open space general enjoyment, and
- enhancing and protecting biodiversity in the urban environment by providing natural linkages between ecosystems and creating habitats for localized animal and plant species.

### C6.4.5.1 MOSS Policy Guidelines

The *Municipal Open Space System* will be developed and managed in terms of the following policy guidelines:

- a) The intrinsic, instrumental and systemic values of unique and/or significant natural open spaces (SPC A.a, A.b, A.c, B.a, B.b, C.a and C.b), social open spaces (SPC D.b and F.1.I) and agricultural open spaces (SPC D.a, E.a and E.b) should be acknowledged, protected and enhanced.
- b) Only those activities compatible with the main land-use of SPC A.a, A.b, A.c, B.a, B.b, C.a and C.b areas, as indicated in the *Recreational Opportunity Spectrum* (refer to Chapter C3.3.4), should be permitted in this zone, including education, recreation, sustainable harvesting of wild resources, eco-tourist facilities and appropriate resort development. Proposed development should be directed at facilitating environmental education, research, nature-based tourism and recreation, whilst maintaining their 'natural' or 'wilderness' qualities.
- c) Development within the MOSS must be limited to previously disturbed areas or non-sensitive areas in return for entrenching active conservation or rehabilitation of ecological areas. Such developments should be managed according to an approved *Environmental Management System*. Conditions of approval should subject proposed developments to development controls that ensure the following:
  - (i) Conservation of the remainder of the property.
  - (ii) Establishment and maintenance of corridor linkages between SPC A areas and SPC E areas.
  - (iii) Maintenance of the aesthetic quality of the landscape.
  - (iv) Protection and promotion of the architectural vernacular of the area.
- d) In principle, no structures for permanent human habitation are permitted below the 1:50-year flood line. In the case of existing buildings, or where the flood line has been altered by natural or unnatural circumstances, the development or redevelopment of such areas may be allowed on condition that a comprehensive flood main management program is drafted, which includes flood control works and/or flood-proofing of buildings.
- e) It is imperative that a comprehensive study and assessment regarding the flood-proofing of buildings be undertaken for properties next to river or streams as part of the mandatory *Scoping* and *Environmental Impact Assessment* (EIA) process. The following factors related to flood characteristics must be investigated:
  - (i) Height of maximum flood level: The lower the depth of flooding the easier it is to flood-proof.
  - (ii) Velocity of water flow during flood peaks: The lower the flow velocity the easier it is to design a building that would resist flood waters.
  - (iii) Duration and frequency of floods: The longer the area is flooded, the more difficult and expensive is the flood-proofing.
  - (iv) Other factors such as floating debris.
- f) The following flood proofing methods could be considered in the feasibility study regarding flood-proofing of buildings as part of the *Scoping* and *EIA* process:
  - (i) Buildings on fill: The construction of buildings on fill raised above the design flood level would be required for new subdivisions. It does not require design modifications, and if the design flood water level is exceeded, the depth of water over the fill will be shallow and of short duration.

- (ii) Buildings on piers, piles or columns: Elevating structures above design flood level on an appropriate support structure (to be designed by a consulting engineer) provides reliable protection against flood damage. This method uses land efficiently, does not raise the flood level, and has minimal adverse effects on flood flows. This strategy does however require careful design to prevent damage of supports from floating debris and to allow sufficient space for it to pass underneath. It cannot be used for large existing buildings and may be difficult to apply even to small, light structures.
  - (iii) Seal of lower levels of buildings: Flood-proofing of the lower levels of buildings by sealing them against water penetration requires that they be made strong enough to withstand cracking from the lateral and uplift pressure of the water. Accordingly, careful design of drainage systems, floor slabs, basement walls, lower windows and all entrances is essential.
- g) Ensure that every community has access to a well-developed *Social Open Space* by developing the parks and recreation areas in accordance with the needs identified in the Integrated Development Plan.
  - h) The design of new developments along the edge of the MOSS, especially along *Social Open Spaces*, should, where possible and practical, front onto the open space rather than backing onto it in order to promote access and natural surveillance. Provide the opportunity for as many different uses as possible to enable long-term viability and sustainability of the entire open space system.
  - i) Make the multi-use of open space a priority, e.g. identify sites for urban agriculture and other uses that have potential economic benefit.
  - j) Design open space systems, especially within the urban environment, to allow the various interlinked ecosystems to function effectively.

#### **C6.4.6 URBAN EDGE**

The Urban Edge for the individual towns and settlements within Witzenberg Municipality is the demarcated outer boundary of such urban areas and marks the transition between urban and rural land-uses.

The Urban Edge consists of the following components:

- a) Urban Edge Line: The *Urban Edge Line* is the demarcated outer boundary within which urban expansion can be accommodated within a defined period of time.
- b) Built Edge Line: The *Built Edge Line* defines the outer boundary of the existing built up area and will always be contained by, or coincide with, the *Urban Edge Line*.
- c) Urban Fringe: The *Urban Fringe* is the area located between the *Urban Edge Line* and the Built Edge Line. The *Urban Fringe* is significant because it is the area in which urban expansion must be accommodated.

The Urban Edge is demarcated to manage, direct and control the outer limits of development and protect valuable natural environments and resources. It is also an important tool to contain urban sprawl and *ad hoc* low-density development which adds to the life cycle costs of urban areas and places an unnecessary heavy burden on communities. Chapter C7 provides a detailed description of the methodology used to demarcate the respective urban edges, as prescribed in the Western Cape Provincial Urban Edge Guideline of 2005 and the Western Cape Provincial Spatial Development Framework, Settlement Restructuring: Explanatory Manual (2009).

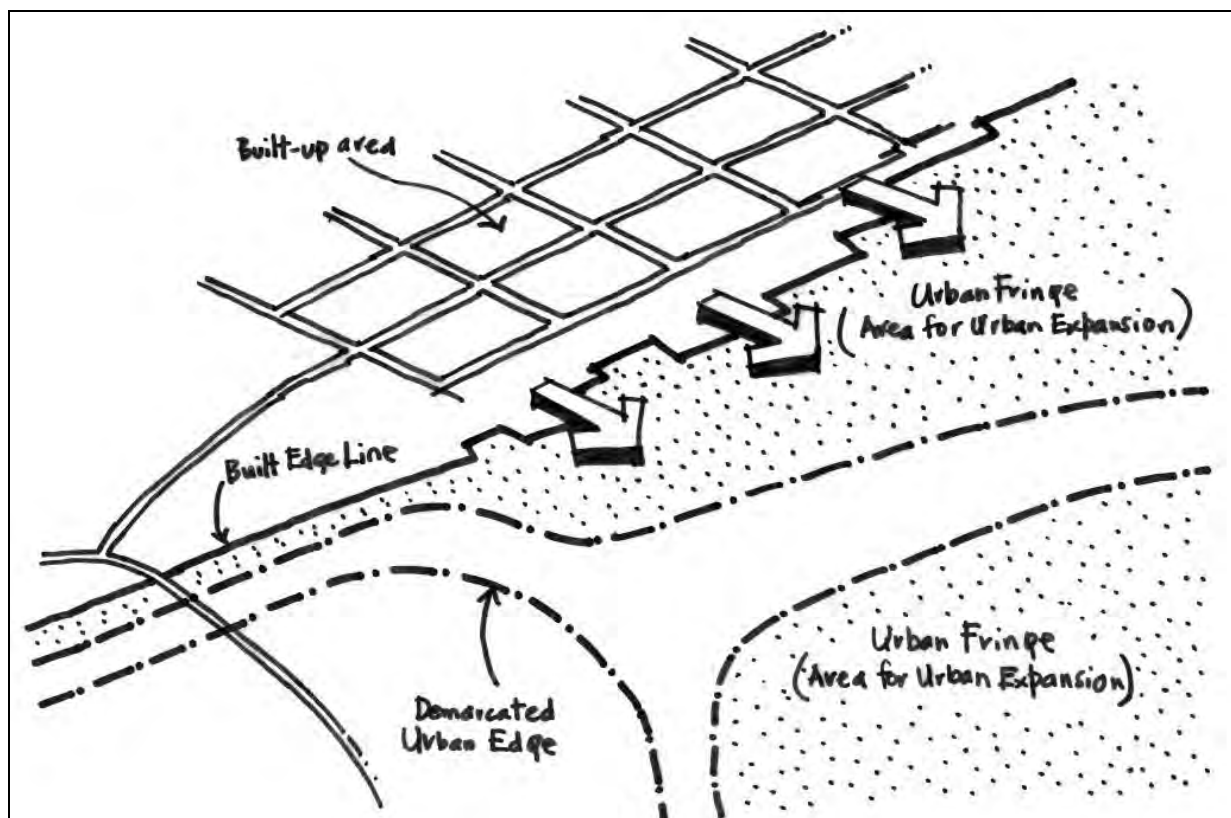


Figure C12: Components of the urban edge.

In order to determine appropriate areas within the *Urban Fringe* where development could be accommodated, the Vacant Land Analysis was overlaid with the proposed Urban Edge. The urban fringe calculation is based upon the land availability, irrespective of the physical and biological constraints such as conservation-worthy buildings and structures, buffer areas, river and streams, etc. As such, a total of ±1 100ha has been identified as *Urban Fringe*. Of this total, approximately 260ha is open spaces along river corridors, sensitive areas or areas identified for community agriculture. The *Urban Fringe* areas of the individual towns, and the actual developable land within the *Urban Fringe* are as follows:

	TOWN/SETTLEMENT	TOTAL URBAN FRINGE	DEVELOPABLE LAND
a)	Ceres	±440ha	±400ha
b)	Bella Vista	±80ha	±40ha
c)	Prince Alfred Hamlet	±53ha	±30ha
d)	Op Die Berg	±11ha	±9ha
e)	Wolseley	±120ha	±112ha
f)	Tulbagh	±450ha	±305ha
	<b>TOTAL</b>	<b>1154ha</b>	<b>896ha</b>

It is also important to note that some land parcels within the Urban Fringe have already been granted development rights but have not yet commenced with development. There are also several smaller vacant land parcels, as identified in the Vacant Land Analysis, and even that could be redeveloped, which is categorised as being Urban Fringe in terms of the above definition.



## Box C2 - Credible Edges

### Credible Edges:

A credible edge refers to an urban edge delineated and approved by the municipality and the DEA&DP. A credible edge is a well considered edge delineated through an urban edge study, using demarcation criteria that allows for sufficient land within the urban edge to (i) accommodate growth whilst at the same time (ii) promoting integration and densification goals and (iii) protecting conservation-worthy, productive land and valuable landscapes.

A credible edge consists of two categories of edges:

#### a) Permanent Edge:

A 'permanent edge' is 'non-negotiable'. It is aimed at protecting valuable natural environments, farmland and areas of scenic or cultural value.

Two types of permanent edges apply to Witzenberg:

##### - Celebration Edge

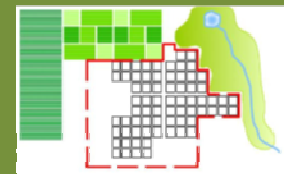
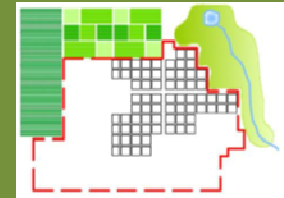
It is a non-negotiable urban edge aimed at celebrating the interface between the urban areas and the rural areas containing natural environments, farmland and areas of scenic or cultural value.

##### - Containment Edge

It is an urban edge drawn tightly around urban anomalies (e.g. golf and polo estates, forest stations) where further development and densification is undesirable.

#### b) Growth Management Edge:

A growth management edge is an edge boundary that is delineated to accommodate growth within a certain timeframe, or until certain growth management goals (e.g. desired density) have been achieved.



Source: *Settlement Restructuring Manual (PGWC, 2009)*

The designated urban edges illustrated by Plans C6.4\_1 to C6.4\_6 make provision for an adequate supply of vacant land that can be efficiently serviced and which can cater for the current (1996 – 2008) population growth rate of approximately 1.7% (Global Insight in Witzenberg IDP 2007/2011) and the associated infrastructural requirements over a 10-year period, from 2012 onwards.

The Settlement Restructuring Manual (PGWC, 2009) describes various types of urban edges. Amongst others, the Manual describes Interim/Built Edges as well as Maverick Urban Edges, which is not supported by the Provincial Government. Instead, all edges proposed in the SDF are credible edges.

### C6.4.6.1 Urban Edge Policy Guidelines

The urban edge and development inside thereof will be regulated in terms of the following policy guidelines:

- a) The Urban Edge indicated by Plans C6.4-1 to C6.4-6 will be applicable for a 10-year period from 2012-2022. The average gross residential density in urban settlements must be increased before further extensions to the urban edge are considered. The term 'average' implies that densities may be as low as 3-6 du/ha on the urban periphery but should increase to 20-30 du/ha at or near the centre of the urban area. Densification should only

- occur in identified business corridors, activity streets and nodes. Heritage resources should be taken into account so that they are not destroyed.
- b) Urban edges will be subject to evaluation together with the Witzenberg SDF on a 5-year cycle, commencing on the date of approval of the SDF, however, permanent edges are regarded as fixed and, as a general rule, only be amended if such amendment were proven to be imperative through a Strategic Environmental Assessment (SEA) and EIA.
  - c) The development types that would be considered inside the Urban Edge are as follows:
    - (i) Conventional urban development, i.e. general residential, business and/or industrial uses, but excluding extractive industries.
    - (ii) Roads and transport interchanges.
    - (iii) Social and institutional uses.
    - (iv) Subdivision of infill areas.
    - (v) Residential estates.
    - (vi) Golf estates.
    - (vii) Resorts and tourism-related developments.
    - (viii) Smallholdings.
  - d) Development applications will be considered in accordance with the SPC Plan and the relevant policy and legislation. Any proposed change in land-use and/or new development application is subject to the approval of the Municipality and must be undertaken within the policy and legislative framework of this SDF, the Witzenberg Scheme Regulations, and all applicable legislation.
  - e) Where development applications are inconsistent with the Witzenberg SDF, both inside and outside the demarcated Urban Edge, the onus will be on the applicant to prove, through a *Strategic Environmental Assessment* and *Environmental Impact Assessment*, that the relevant application is desirable.
  - f) Planning and design of development will be undertaken in accordance with the principles described in the place-specific design guidelines of the Municipality (refer to Toolkit D5). If development proposal were considered inconsistent with these principles, the Municipality will inform the applicant about the nature and extent of the inconsistency and the avenues to be explored to find appropriate solutions.

In accordance with the *Guidelines for Determining Urban Edges* as put forward in the Provincial Urban Edge Guideline (2005), an urban edge was determined for each of the towns and settlements within the Witzenberg Municipality.

#### **C6.4.6.2 Edge Demarcation Criteria**

The mentioned guideline document lists several issues, criteria and factors which must be regarded as informants when considering urban edges for urban areas. The document further states that urban edges should be determined to exclude the following:

- a) Prominent landforms and environmental character areas from the urban area;
- b) Valuable soils for agricultural purposes;
- c) Valuable soils for mining purposes;
- d) Surface and ground waters resources that could be used to produce potable water;
- e) Surface and ground water features;
- f) Ecological resources and established ecological corridors to link to resource areas;
- g) All statutorily declared, proclaimed and protected natural areas;
- h) High intensity use and high potential agricultural resources and activity areas;
- i) Scenic routes and routes of tourism significance;

- j) Cultural and heritage resource areas and sites;
- k) Areas that have high visual sensitivity, skylines, mountainsides, ridgelines and hilltops; and
- l) The PSDF defined core areas.

Having regard for the above, the urban edges for the individual towns and settlements within Witzenberg was demarcated and categorised in terms of the following:

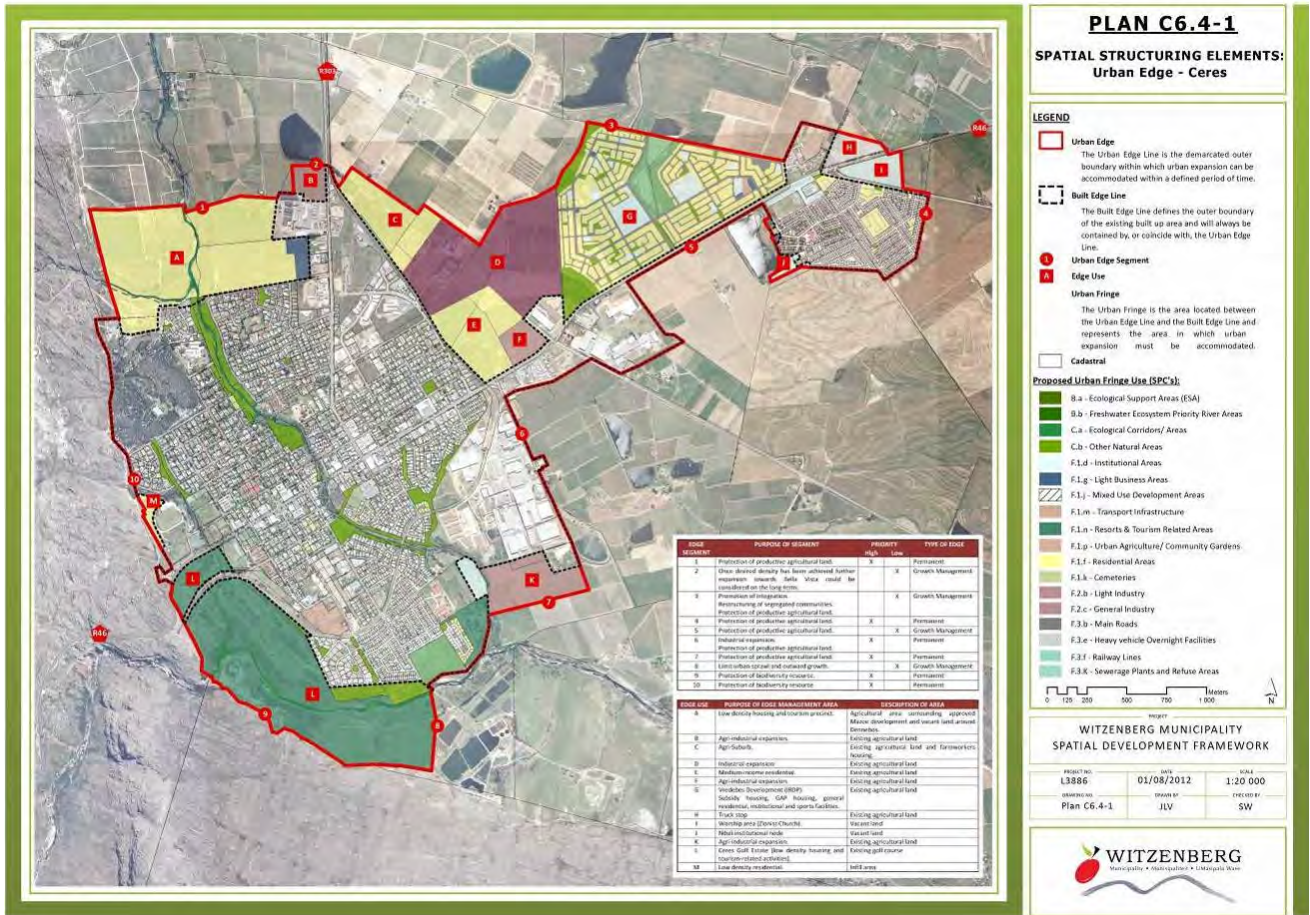
- (i) Segments: The urban edge was determined in segments to achieve a specific goal. The goal may vary between e.g. conservation of environmental assets, promotion of integration, promotion of growth, containing sprawl along major transport routes or rivers, or, limiting expansion beyond the reach of service infrastructure.
- (ii) Purpose/Function of Segment: The purpose or function of the urban edge segment is determined. The function of the urban edge is threefold, namely:
  - It is a means of restructuring the urban area and integrating segregated communities.
  - It is a growth management tool, used to limit urban sprawl and the outward growth of urban areas.
  - It is a conservation tool, used to exclude certain elements of the environment from the urban area, in order to protect or preserve it.
- (iii) Priority: A **priority** ranking is awarded to the urban edge segment. A high priority segment is one that must be retained at all cost and is indicated as having a conservation or restructuring purpose. A **low** priority edge is one that could be amended in response to a suitable application.
- (iv) Type of Edge: Differentiation is made between the following types of credible edges, as supported by the PGWC (refer to Box C2 above):
  - Permanent edge  
(Celebration Edge, Containment Edge)
  - Growth management edge

The various demarcated urban edges are indicated on a detailed cadastral map indicating all topographical features, the extent of the current built form and the nature of the proposed land uses inside the urban edge.

## C6.5 URBAN EDGES PROPOSED FOR THE VARIOUS TOWNS AND SETTLEMENTS

### C6.5.1 URBAN EDGE FOR CERES

Ceres, with Nduli and Bella Vista, is the largest settlement in the municipality, with the most diverse infrastructure, community facilities and land use. Ceres itself is the administrative centre of the municipal area, as well as the largest employment centre, with many businesses and industries related to the agricultural sector. Ceres in its scenic location, surrounded by both wilderness areas and intensive farming, is regarded as having significant growth potential (Witzenberg Integrated Sustainable Human Settlements Plan, 2009). Plan 6.4-1 below illustrates the urban edge proposed for Ceres (a larger copy is appended under Annexure 1).



The rationale and motivation for the Ceres urban edge proposed on Plan C6.4-1 are as follows:

EDGE SEGMENT	EDGE USE	ERF/FARM NO.	AREA	PRIORITY		TYPE OF EDGE
				High	Low	
1	A	1884, 7900, 1498, 1002	50ha	X		Permanent

**PURPOSE OF SEGMENT** Protection of productive agricultural land to the north.

**NATURE OF PROPOSAL**

Proposed Development	X	Application In Process	Approved Development

The proposed development on the mentioned properties represents a joint venture between Baumann’s Store, Ceres Fruit Processors (CFP) and Crispy Farms. The latter is an empowerment company which aims to further enhance its landholdings by funds generated through the proposed property development. The specific land parcels identified for the project has a low potential for sustainable agriculture and was aptly identified for an alternative use.

The objective of the project is to make provision for an integrated development that would address the following:

- a) Housing needs of Ceres,
- b) Renewal of the CFP factory site and mitigation of the detrimental impact thereof.
- c) Creating investment opportunities that would broaden the tax base and, in particular, help to address aspects of poverty and inequality in the area.

As such, the respective owners have committed themselves to the establishment of a *Sustainable Development Initiative* (SDI), as provided for in Toolkit D3, which aims to provide meaningful and lasting benefit for local economic development and for the receiving environment. The SDI will be undertaken in partnership with local communities.

Discussions are well underway to establish the fully-fledged lifestyle village which comprises all the elements of a

sustainable settlement. The proposed development has already been taken into account in the bulk service planning and allocation of budgets of the municipality.						
1	A	1880	21ha	/	/	/
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		<b>Application In Process</b>		<b>Approved Development</b>		<b>X</b>
On 22 September 2008, the Technical Services Committee of Witzenberg Municipality approved a mixed-use development on the mentioned property.						
The development will make provision for single and group housing residential units and commercial properties located to the east, adjacent to the existing industrial area.						
The approval allows for approximately 350 residential units to be established at a gross density of 20 units/ha. It is however recognised that a revised development alternative with a lower overall density has been submitted in reaction to concerns raised by residents of the adjacent Umzumaai neighbourhood.						

2	B	7900	4ha		X	Growth Management
<b>PURPOSE OF SEGMENT</b>		In the interim, the purpose of the urban edge is to protect the productive agricultural land to the north. Once the desired density has been achieved further expansion towards Bella Vista could be considered in the long term.				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		<b>X</b>	<b>Application In Process</b>		<b>Approved Development</b>	
Ceres is identified in the 2010 revision of the <i>Growth Potential of Towns in the Western Cape</i> (US & CSIR) as an agricultural service centre with a medium development potential (refer to Chapter B3.2). As a result a number of parcels have been identified for the expansion of agricultural industries.						
Ceres Fruit Processors (CFP), owners of erf 7900, current utilises only a portion of their property for agri-industrial purposes. The facilities on the property expanded steadily over a number of years to the extent that a portion of the property, north of the existing factory, is currently being utilised as storage space. CFP therefore need additional space to expand their factory. With the approval of the mixed-use development on erf 1880 any expansion in a westerly direction would potentially result in conflicting land uses.						
It is therefore proposed that the eastern edge of the existing orchard north of the factory be regarded as the new urban edge for expansion of the CFP factory site.						

EDGE SEGMENT	EDGE USE	ERF/FARM NO.	AREA	PRIORITY		TYPE OF EDGE
				High	Low	
3	C	3757, 8048, 7916	17ha		X	Growth Management
<b>PURPOSE OF SEGMENT</b>		<ul style="list-style-type: none"> <li>Promotion of integration.</li> <li>Protection of productive agricultural land.</li> <li>Land Restitution</li> </ul>				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		<b>X</b>	<b>Application In Process</b>		<b>Approved Development</b>	
An existing farmworker housing settlement is present on a portion of erf 8048. The need has been expressed during the drafting of the SDF for the provision of secure farm worker housing in the vicinity of the main settlements and towns. It is therefore proposed that the existing farm settlement be expanded to a fully-fledged agri-suburb. The aim of this settlement would be to allow farm workers and their dependents to fully benefit from various tenure, housing and subsidy benefits and rights. As such, the agri-suburb must be planned and developed in accordance with the Policy for the Settlement of Farm Workers in the Western Cape.						
The agri-suburb would be centrally located near commercial activities and close to transportation routes. In addition, the suburb would be the interface between the urban area and the rural/agricultural area.						

3	D	7916, 8048	49ha		X	Growth Management
<b>PURPOSE OF SEGMENT</b>		<ul style="list-style-type: none"> <li>Promotion of integration.</li> <li>Protection of productive agricultural land.</li> </ul>				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		X	<b>Application In Process</b>			<b>Approved Development</b>
<p>Ceres is identified in the 2010 revision of the <i>Growth Potential of Towns in the Western Cape</i> (US &amp; CSIR) as an agricultural service centre with a medium development potential (refer to Chapter B3.2). As a result, a number of parcels have been identified for the expansion of agricultural industries.</p> <p>The mentioned land parcels have specifically been identified as a means to link segregated communities with the CBD of Ceres. The envisaged infill development will predominantly be developed for industrial-related land uses, thus effectively bringing the economic opportunities closer to previously disadvantaged communities and adhering to the municipal strategies for integration (refer to chapter 1.3 of the Witzenberg IDP 2012/2017).</p> <p>The planned industrial expansion has already been taken into account in the bulk services plan for the area.</p>						

3	E	8047, 7916, 8048	19ha	/	/	/
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		X	<b>Application In Process</b>			<b>Approved Development</b>
<p>The mentioned properties have been identified for medium-income residential housing as an extension to the existing neighbourhood west of Retief Street. A concept layout has already been prepared and included into the bulk services plan for the area.</p>						

EDGE SEGMENT	EDGE USE	ERF/FARM NO.	AREA	PRIORITY		TYPE OF EDGE
				High	Low	
3	F	8028	5ha	/	/	/
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		X	<b>Application In Process</b>			<b>Approved Development</b>
<p>Crispy Coolers currently utilises the factory site on erf 8030. The dominance of the agricultural market and its strong linkages to the manufacturing industry has resulted in an expansion of agri-industrial activities. As such, Crispy expressed interest in acquiring erf 8028 to expand the capacity of their existing factory.</p> <p>The new site is directly opposite erf 8030 and is readily accessible via the new connection road and link to Retief Street.</p>						

3	G	364/72, 364/18	100ha		X	Growth Management
<b>PURPOSE OF SEGMENT</b>		<ul style="list-style-type: none"> <li>Promotion of integration.</li> <li>Restructuring of segregated communities.</li> <li>Protection of productive agricultural land.</li> </ul>				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>			<b>Application In Process</b>		X	<b>Approved Development</b>
<p>South African settlements are characterised by a fragmented settlement pattern where townships were built on the periphery of the historical settlement in order to achieve separation along racial lines. In an effort to address this trend, Government embarked on a path to establish integrated human settlements. The National Housing Plan approved by Cabinet reinforces the vision 'to promote the achievement of a non-racial, integrated society through the</p>						

*development of integrated human settlements and quality housing’.*

Unfortunately current housing programmes are found wanting in terms of the criteria set by national and provincial policies. Major concerns are the locations chosen for housing projects as well as limited tenure and typology options. Most of the locations chosen perpetuate the Apartheid legacy and further entrench marginalisation. The Witzenberg Integrated Sustainable Human Settlements Plan (Witzenberg Municipality 2009) found that current projects make limited contribution to the integration of upper- to middle-income areas with poorer areas. The proposed Vredebes development is therefore regarded as the ideal antipode in the fight against separation of settlements.

Vredebes has been prioritised as part of the Municipality’s Sustainable Human Settlements program. The program addresses current backlogs according to the housing waiting list and is in line with foreseen budgeted funding. The project is funded as part of the Integrated Residential Development Program (IRDP) and implementation is aimed for 2017.

Vredebes will be developed as an inclusive settlement, which aims to link the satellite town of Nduli with the economic opportunities found in the town of Ceres. Situated west of Nduli, Vredebes will make provision for various residential options, schools, crèches, churches, old age homes and other community facilities. The settlement will also have sports fields and commercial areas.

Many of the larger streets in the settlement will be developed in accordance with the principles of activity streets. These will connect Neighbourhood Nodes and Lower Order Neighbourhood Nodes (refer to Chapter C6.4). The establishment of businesses in these activity streets will be encouraged, as have been made provision for in the development plan.

To date, the land for the project has been acquired, engineering investigation and land surveys completed and the environmental impact assessment initiated.

Vredebes is considered as a long-term integration strategy and it may take many decades for the settlement of Nduli (and possibly in future, Bella Vista) to be connected to Ceres. It is however important to direct growth to these areas, away from the periphery of townships furthest from opportunities.

3	H	368/10	4ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of productive agricultural land.				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		X	<b>Application In Process</b>			<b>Approved Development</b>
<p>During the public participation process conducted between June and August 2012 several stakeholders voiced their concern with regard to heavy vehicles utilising vacant plots and/or general parking areas as overnight facilities. This trend is particularly evident in the towns of Ceres and Prince Alfred Hamlet. In South Africa, research conducted on the topic of truck drivers and road crashes found that the main problems experienced by truck drivers are fatigue-related (39%) while the main causes of road crashes is also fatigue-related (41%).</p> <p>The primary recommendations from the research study called for more safe and clean truck stops where drivers can sleep in relative safety. As the R303 and R46 represent the major transport roads in the area, it is proposed that suitable truck stops be allocated along these roads in the vicinity of the major towns.</p> <p>It is therefore proposed that a truck stop be established on the eastern-most boundary of the town of Ceres, next to the correctional facility. This site is suitably located as no obvious conflicting land uses exist adjacent to the site. The proposed facility should typically include a large parking area for trucks and other heavy vehicles and an eating establishment. The stop should also offer a range of services for professional truck drivers to rest and refresh themselves, often with accommodation and other services available.</p>						
3	I	368/35	5ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of productive agricultural land.				
<b>NATURE OF PROPOSAL</b>						

Proposed Development	X	Application In Process	Approved Development
Interest has been expressed by the Zionist Church of South Africa to acquire Portion 35 of Farm No. 368 in order to establish an institutional facility on the site. The settlement of Nduli has reached its capacity and any addition to the area would require an amendment of the urban edge.			

4	J	5959	1ha	X	Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of productive agricultural land.			
<b>NATURE OF PROPOSAL</b>					
Proposed Development		Application In Process	X	Approved Development	
A speciality node is proposed in the vicinity of erven 8341, 8082, 8022, 5963, 5964, 7909, 7910 and 5966 in Nduli. This node is based on the grouping of institutional erven on the western edge of the settlement. The speciality node will further be expanded with the inclusion of erf 5959. An application has, in this regard, been submitted to the Witzenberg Municipality for consideration.					

7	K	364/107, 364/132	15ha	X	Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of productive agricultural land.			
<b>NATURE OF PROPOSAL</b>					
Proposed Development	X	Application In Process	Approved Development		
Ceres Fruit Juices currently operates a factory on Farm No. 364/132 and 364/12. As is evident on Plan C6.4-1, no vacant land parcels are available in the industrial precinct upon which industrial expansion can take place. As a result, a natural expansion of the factory occurred in a southern direction, on a portion of Farm No. 364/107.					
As described in Chapter B5.2.5, the Accelerated and Shared Growth Initiative of South Africa identified agriculture as a key growth sector. Together with agri-processing, this represents a major sector in Witzenberg. It is therefore recommended that the urban edge be demarcated to make provision for the growth in the agri-processing (manufacturing) industry in this specific location.					

8,9	L	8323, 8327	90ha	X	Permanent
<b>PURPOSE OF SEGMENT</b>		<ul style="list-style-type: none"> <li>Limit urban sprawl and outward growth.</li> <li>Protection of biodiversity resource.</li> </ul>			
<b>NATURE OF PROPOSAL</b>					
Proposed Development		Application In Process	Approved Development	X	
The redevelopment of the Ceres golf course into a private Golf and Eco Estate was approved by the Witzenberg Municipality.					
The development will make provision for 289 single residential units and town houses located along an 18-hole golf course. In addition, a clubhouse will be developed to facilitate a range of social and sporting events. The clubhouse will be regarded as the centre point for residents' and guests' forays to the golf course as it will house a Pro Shop, golf cart parking and dedicated caddies' area.					

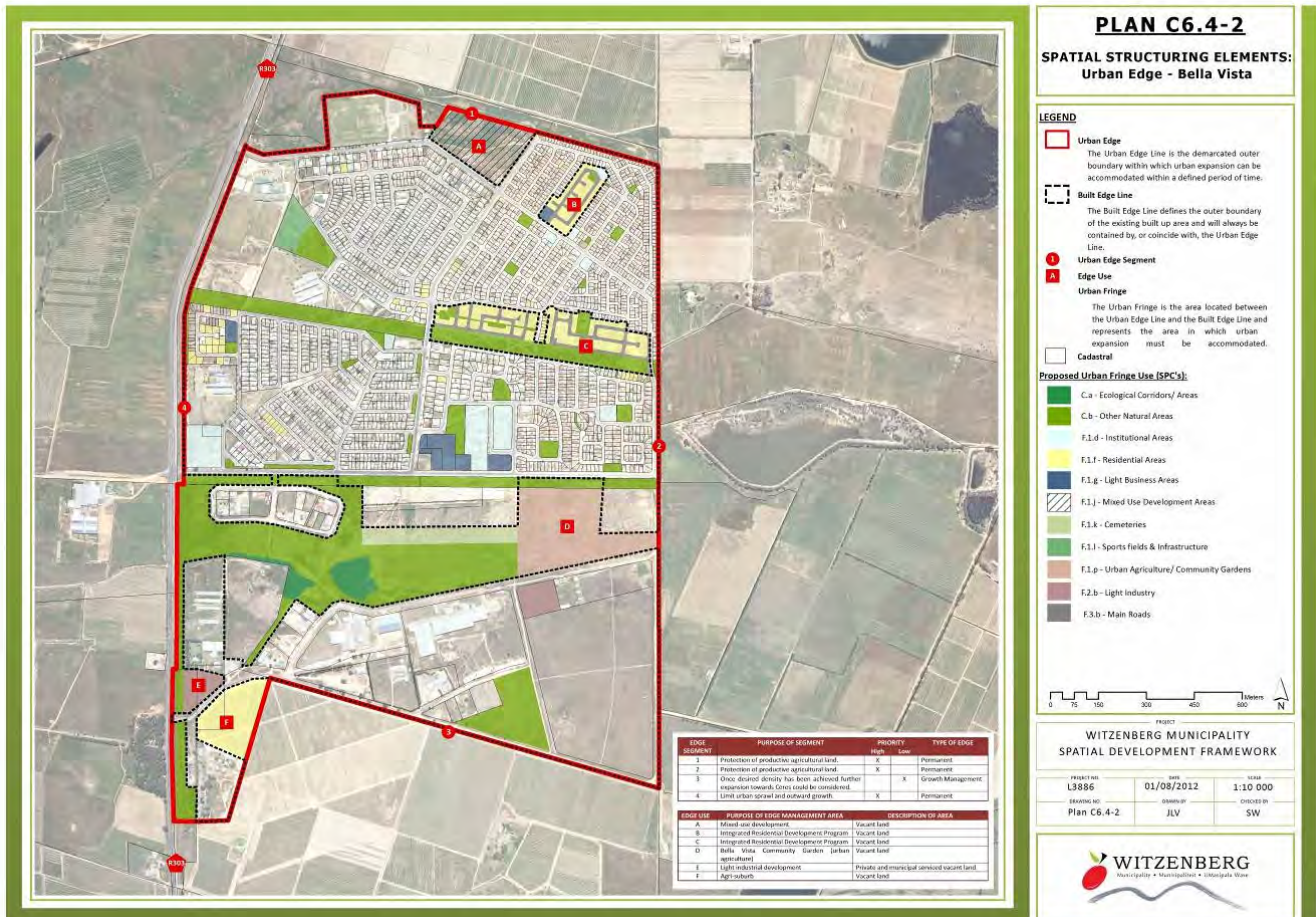
10	M	8126	2ha	X	Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of biodiversity resource.			
<b>NATURE OF PROPOSAL</b>					
Proposed Development		Application In Process	X	Approved Development	
An application has been submitted with the Witzenberg Municipality for the establishment of single residential					



properties on the mentioned erf. Access to the latter site will be obtained via an extension of Phillip Street and the proposed tourism precinct.

### C6.5.2 URBAN EDGE FOR BELLA VISTA

Plan 6.4-2 below illustrates the urban edge proposed for Bella Vista (a larger copy is appended under Annexure 1).



The rationale and motivation for the Bella Vista urban edge proposed on Plan C6.4-2 are as follows:

EDGE SEGMENT	EDGE USE	ERF/FARM NO.	AREA	PRIORITY		TYPE OF EDGE
				High	Low	
1	A	2919	4.3ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of productive agricultural land and landscaped area to the north.				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>	X	<b>Application In Process</b>			<b>Approved Development</b>	

The Integrated Sustainable Human Settlements Plan as well as the Witzenberg IDP (2012-2017) recognises the lack of a sense of place in many of the towns and villages in Witzenberg Municipality. This is particularly evident in Bella Vista. The SDF therefore propose that the spatial structuring elements, as proposed in Chapter C6.4, be introduced to create high-quality places in accordance with the principles of good place-making.

Consideration should therefore be given to the development of the mentioned property in accordance with the principles of the structuring elements. As such the specific land parcel is perfectly positioned at the intersection of the

proposed Jacaranda and Vrede Streets activity streets and will be regarded as infill development between the sports fields in the west and the residential dwellings in the east.

EDGE SEGMENT	EDGE USE	ERF/FARM NO.	AREA	PRIORITY		TYPE OF EDGE
				High	Low	
1	B	7074	2.2ha	/	/	/
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>			<b>Application In Process</b>			<b>Approved Development</b>
						<b>X</b>
<p>Bella Vista has been prioritised as part of the Municipality's Sustainable Human Settlements program. The program addresses current backlogs according to the housing waiting list and is in line with foreseen budgeted funding. Erf 7074 has been identified for development and will be funded as part of the Integrated Residential Development Program (IRDP). Implementation is due by 2015.</p> <p>The proposed development will make provision for 106 single residential dwellings, business premises, a crèche and open spaces.</p>						

2	C	2623	9.4ha	/	/	/
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>			<b>Application In Process</b>			<b>Approved Development</b>
						<b>X</b>
<p>Bella Vista has been prioritised as part of the Municipality's Sustainable Human Settlements program. The program addresses current backlogs according to the housing waiting list and is in line with foreseen budgeted funding. Erf 2623 has been identified for development and will be funded as part of the Integrated Residential Development Program (IRDP). Implementation is due by 2015.</p> <p>The proposed development will make provision for 281 single residential dwellings and open spaces.</p>						
2	D	2622	9ha	X		Permanent
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		<b>X</b>	<b>Application In Process</b>			<b>Approved Development</b>
<p>The Witzenberg IDP 2012-2017 provides a prioritised summary of the issues raised during the stakeholder engagements. At each of the stakeholder meetings for the individual wards, the need for community/food gardens was high on the priority list.</p> <p>This SDF therefore identifies suitable land for urban agriculture / community gardens. The specific land parcel has been identified for this purpose as it is unsuitable for residential, industrial or other urban-related uses.</p> <p>It is suggested that the land parcel be used for urban agriculture / community gardens as it is important for food security as well as a potential source of income to participants. In this instance partnerships with NGOs and the community, as well as supporting government agencies such as the departments of Social Services and Agriculture, will be important to ensure the long-term viability of such projects.</p>						
EDGE SEGMENT	EDGE USE	ERF/FARM NO.	AREA	PRIORITY		TYPE OF EDGE
				High	Low	
2	E	2616, 2613	1.2ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		Limit urban sprawl and outward growth.				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		<b>X</b>	<b>Application In Process</b>			<b>Approved Development</b>
<p>Plan C6.3-2 depicts the industrial precinct of Bella Vista in the southern extents of the settlement. The mentioned property is situated amongst the industrially-zoned erven and has excellent access to the major transport network.</p>						

The property could also easily be connected to the bulk services network of the area. It is therefore proposed that this property be included in the larger industrial precinct.

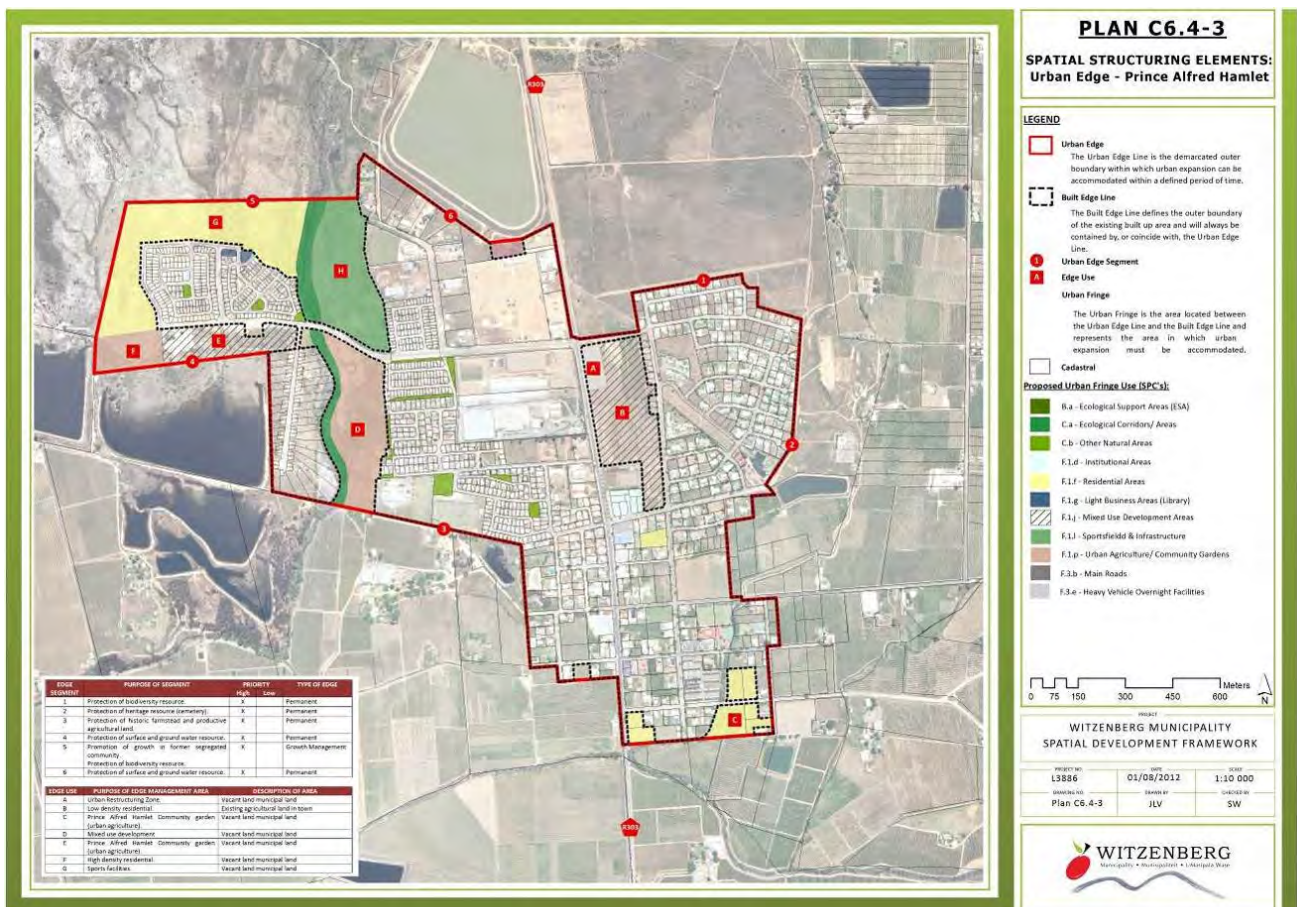
2	F	2613, 2614, 2615	3.5ha		X	Growth Management
<b>PURPOSE OF SEGMENT</b>		Protection of productive agricultural land. Once the desired density has been achieved further expansion towards Ceres could be considered in the long-term.				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>	X	<b>Application In Process</b>		<b>Approved Development</b>		

A farmworker housing settlement is present on a portion of erf 2614. The need has been expressed during the drafting of the SDF for the provision of secure farm worker housing in the vicinity of the main settlements and towns. It is therefore proposed that the existing farm settlement be expanded to a fully-fledged agri-suburb. The aim of this settlement would be to allow farm workers and their dependents to fully benefit from various tenure, housing and subsidy benefits and rights. As such, the agri-suburb must be developed in accordance with the Policy for the Settlement of Farm Workers in the Western Cape.

### C6.5.3 URBAN EDGE FOR PRINCE ALFRED HAMLET

Prince Alfred Hamlet is an agricultural support centre, situated in an area of intensive agriculture as well as valuable natural vegetation (particularly the commonage). The town is regarded as having limited potential for growth and job creation. It is never the less suitable for farm worker housing (Witzenberg Integrated Sustainable Human Settlements Plan, 2009).

Plan 6.4-3 below illustrates the urban edge proposed for Prince Alfred Hamlet (a larger copy is appended under Annexure 1).



The rationale and motivation for the Prince Alfred Hamlet urban edge proposed on Plan C6.4-3 are as follows:

EDGE SEGMENT	EDGE USE	ERF/FARM NO.	AREA	PRIORITY		TYPE OF EDGE
				High	Low	
1	A	Rem. 1	7.6ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of biodiversity resource.				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		X	<b>Application In Process</b>			<b>Approved Development</b>
<p>During the public participation process conducted between June and August 2012 several stakeholders voiced their concern with regard to heavy vehicles utilising vacant plots and/or general parking areas as overnight facilities. This trend is particularly evident in the towns of Ceres and Prince Alfred Hamlet. In South Africa, research conducted on the topic of truck drivers and road crashes found that the main problems experienced by truck drivers are fatigue-related (39%) while the main causes of road crashes is also fatigue-related (41%).</p> <p>The primary recommendations from the research study called for more safe and clean truck stops where drivers can sleep in relative safety. As the R303 and R46 represent the major transport roads in the area, it is proposed that suitable truck stops be allocated along these roads in the vicinity of the major towns.</p> <p>It is therefore proposed that a truck stop be established on a portion of the Remainder of Erf 1 in Prince Alfred Hamlet. The truck stop would be located next to the R303, opposite the industrial precinct. Potential detrimental impacts of the truck stop would therefore not impact on 'sensitive' residential properties.</p> <p>The proposed facility should typically include a large parking area for trucks and other heavy vehicles and an eating establishment. The stop should also offer a range of services for professional truck drivers to rest and refresh themselves, often with accommodation and other services available.</p>						

EDGE SEGMENT	EDGE USE	ERF/FARM NO.	AREA	PRIORITY		TYPE OF EDGE
				High	Low	
1	B	Rem. 1	7.6ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of biodiversity resource.				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		X	<b>Application In Process</b>			<b>Approved Development</b>
<p>The National Social Housing Policy (2005) and the Social Housing Bill (2006) provides for the designation of restructuring zones, where subsidised social housing will be accommodated. Social housing is defined as rental or co-operative housing options for low income persons at a level of scale and built form which requires institutionalised management and which is provided by accredited social housing institutions or in accredited social housing projects in designated restructuring zones.</p> <p>It is, subsequently, proposed that the portion of the Remainder of Erf 1, adjacent to the R303, be set aside as a restructuring zone. The primary aim of this zone would be to achieve spatial restructuring by bringing lower income people into areas where there are economic opportunities in areas where they would otherwise be excluded.</p>						

EDGE SEGMENT	EDGE USE	ERF/FARM NO.	AREA	PRIORITY		TYPE OF EDGE
				High	Low	
2/3	C	232, 233, 251, 252, 260, 261, 263	3ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of productive agricultural lands.				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		X	<b>Application In Process</b>			<b>Approved Development</b>
<p>Hamlets typically refer to small settlements in a rural area. As a general rule, hamlets are rural, and many arise around a specific site such as a mill, or in the case of Prince Alfred Hamlet, a railway line. Although Prince Alfred Hamlet has lost some of its endearing qualities, the settlement still present a good example of a hamlet.</p>						

The south-eastern boundary of the settlement is poorly defined. With the proposed infill of residential erven in this area, and as illustrated by Plan C6.4-3, it is envisaged that the relationship between the settlement and the agricultural landscape will be better defined. A clear inside-outside relationship will be created whereby the quality of the settlement will be enhanced. The settlement would thereby effectively be 'contained' by the agricultural landscape.

EDGE SEGMENT	EDGE USE	ERF/FARM NO.	AREA	PRIORITY		TYPE OF EDGE
				High	Low	
3	D	Rem. 1	7ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of historic farmstead and productive agricultural lands.				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		X	<b>Application In Process</b>			<b>Approved Development</b>
<p>The Witzenberg IDP 2012-2017 provides a prioritised summary of the issues raised during the stakeholder engagements. At each of the stakeholder meetings for the individual wards, the need for community/food gardens was high on the priority list.</p> <p>This SDF therefore identifies suitable land for urban agriculture / community gardens. The mentioned land parcel has been identified for this purpose as it is unsuitable for residential, industrial or other urban-related uses.</p> <p>It is suggested that the property be used for urban agriculture / community gardens as it is important for food security as well as a potential source of income to participants. In this instance partnerships with NGOs and the community, as well as supporting government agencies such as the departments of Social Services and Agriculture, will be important to ensure the long-term viability of such projects</p>						

4	E	Rem. 1	4ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of surface and ground water resource.				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		X	<b>Application In Process</b>			<b>Approved Development</b>
<p>The development of the Kilprug low-cost housing settlement on a portion of the Remainder of Erf 1, north of the dam on the Remainder of Farm No. 429, was undertaken on the premise that it would be located further to the north to prevent possible pollution of the dam by residential properties on its borders. As such, an approximate 4ha portion of land is situated between the dam and the residential settlement.</p> <p>In recent year, an institutional facility has been developed in this 'buffer' area. It is therefore proposed that similar institutional facilities be established in this area. These should be planned with due care of the adjacent dam and should therefore be interspersed with open spaces and parks. These facilities could be regarded as a potential neighbourhood node in terms of the spatial structuring elements (refer to Chapter C6.4).</p>						

4	F	Rem. 1	2.4ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of surface and ground water resource.				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		X	<b>Application In Process</b>			<b>Approved Development</b>
<p>The Witzenberg IDP 2012-2017 provides a prioritised summary of the issues raised during the stakeholder engagements. At each of the stakeholder meetings for the individual wards, the need for community/food gardens was high on the priority list.</p> <p>This SDF therefore identifies suitable land for urban agriculture / community gardens. The mentioned land parcel has</p>						

been identified for this purpose as it is unsuitable for residential, industrial or other urban-related uses.

It is suggested that the property be used for urban agriculture / community gardens as it is important for food security as well as a potential source of income to participants. In this instance partnerships with NGOs and the community, as well as supporting government agencies such as the departments of Social Services and Agriculture, will be important to ensure the long-term viability of such projects

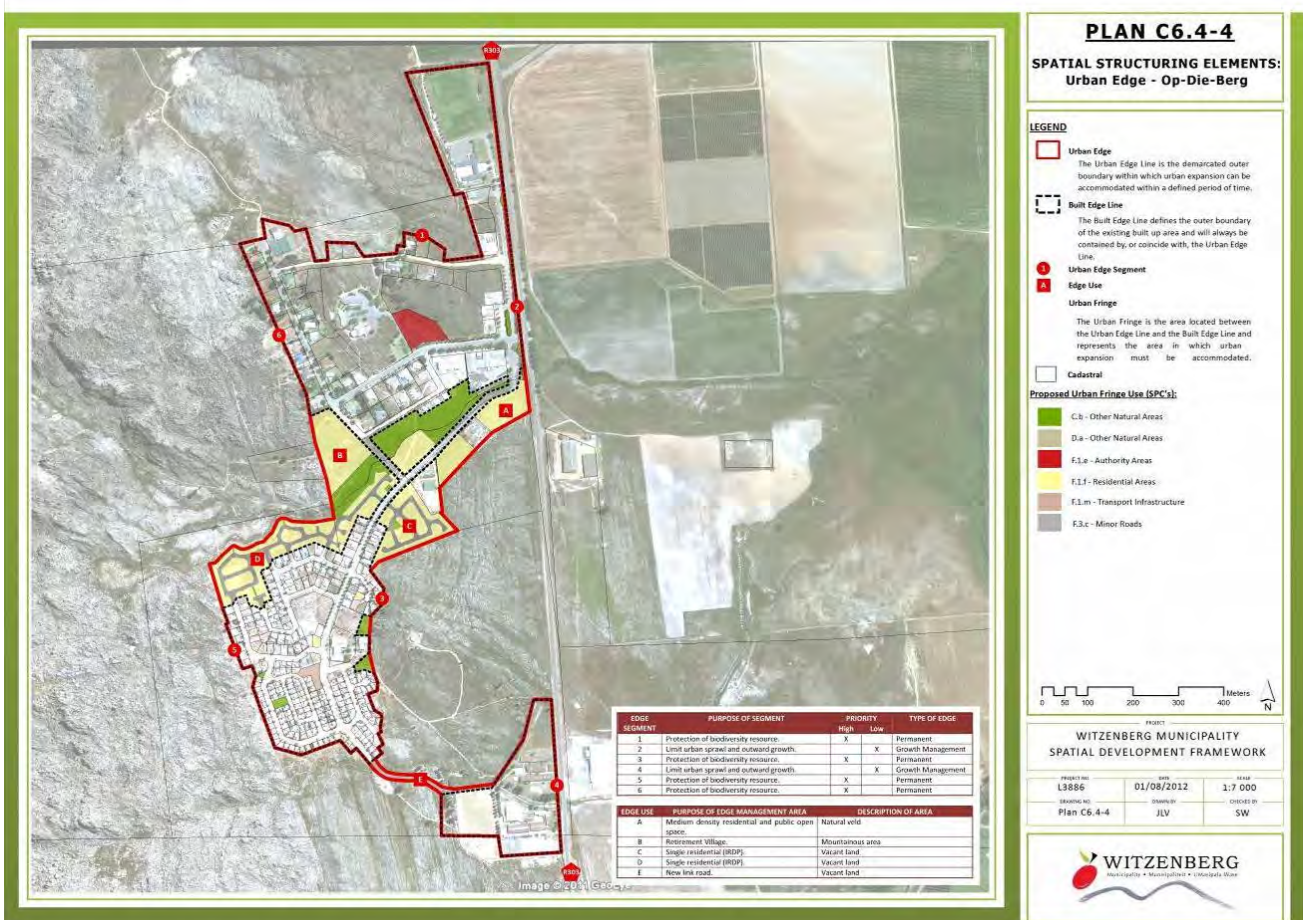
5	G	Rem. 1	12.6ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of biodiversity resource.				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		<b>Application In Process</b>		<b>X</b>	<b>Approved Development</b>	
<p>Approximately 150 shacks have been erected on the eastern side of the Kliprug low-cost housing settlement. The households living in these shacks will be accommodated in the further extensions to the low-cost settlement. As such, the settlement will be expanded in a western and northern direction.</p> <p>Provided that the proposed extension be developed at a similar density as the existing low-cost settlement (i.e. 25du/ha), approximately 300 units could be provided for in the area identified for the extension.</p>						

5	H	Rem. 1	7.8ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of biodiversity resource.				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		<b>X</b>	<b>Application In Process</b>		<b>Approved Development</b>	
<p>The area on Plan C6.4-3 depicted as 'H' represents some 8ha of municipal land. A large portion of this land is situated in the floodplain and is therefore not suitable for the construction of buildings. The area can, however, be developed as a formal open space or recreational area.</p> <p>With the envisaged expansion of Kliprug, and the apparent lack of recreational facilities in the current and proposed layout, the identified portion of land is aptly suited for such use.</p>						

#### C6.5.4 URBAN EDGE FOR OP-DIE-BERG

Op-die-Berg is a rural settlement that developed around the establishment of a church for the farming community. It remains a small agricultural support centre. It is regarded as having some potential for eco-tourism development (Witzenberg Integrated Human Settlements Plan, 2009).

Plan 6.4-4 below illustrates the urban edge proposed for Op-Die-Berg (a larger copy is appended under Annexure 1).



The rationale and motivation for the Op-Die-Berg urban edge proposed on Plan C6.4-4 are as follows:

EDGE SEGMENT	EDGE USE	ERF/FARM NO.	AREA	PRIORITY		TYPE OF EDGE
				High	Low	
2/3	A	Rem. 417	1.5ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of biodiversity resource, limit urban sprawl and outward growth.				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		<b>X</b>	<b>Application In Process</b>		<b>Approved Development</b>	
Due to its physical location, very little expansion opportunities exist in Op-die-Berg. Although some parcels of municipal land exist in the vicinity of the settlement, most of these are too rocky, steep or mountainous to be developed.						
Housing represents a major challenge in the area, with 536 people on the housing waiting list in Op-die-Berg alone. Consideration should therefore be given to the development of the mentioned properties for residential purposes.						

EDGE SEGMENT	EDGE USE	ERF/FARM NO.	AREA	PRIORITY		TYPE OF EDGE
				High	Low	
6	B	14	1.3ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of biodiversity resource.				
<b>NATURE OF PROPOSAL</b>						

Proposed Development	X	Application In Process	Approved Development
A need has been expressed from the farming community to consider the development of a retirement village on the mentioned property. The exact manner in which such a retirement village is to be established should still be determined, however, it should be regarded as some form of social investment.			

3/5/6	C	92, 103	5.2ha	X	Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of biodiversity resource.			
<b>NATURE OF PROPOSAL</b>					
Proposed Development		Application In Process	Approved Development	X	
Op-die-Berg has been prioritised as part of the Municipality's Sustainable Human Settlements program. The program addresses current backlogs according to the housing waiting list and is in line with foreseen budgeted funding. Erven 92 and 103 has been identified for development, the funding of which will be obtained through the Integrated Residential Development Program (IRDP). Implementation is due by 2013.					
The proposed development will make provision for 281 single residential erven and open spaces. The average size of the residential erven will be 102m <sup>2</sup> .					

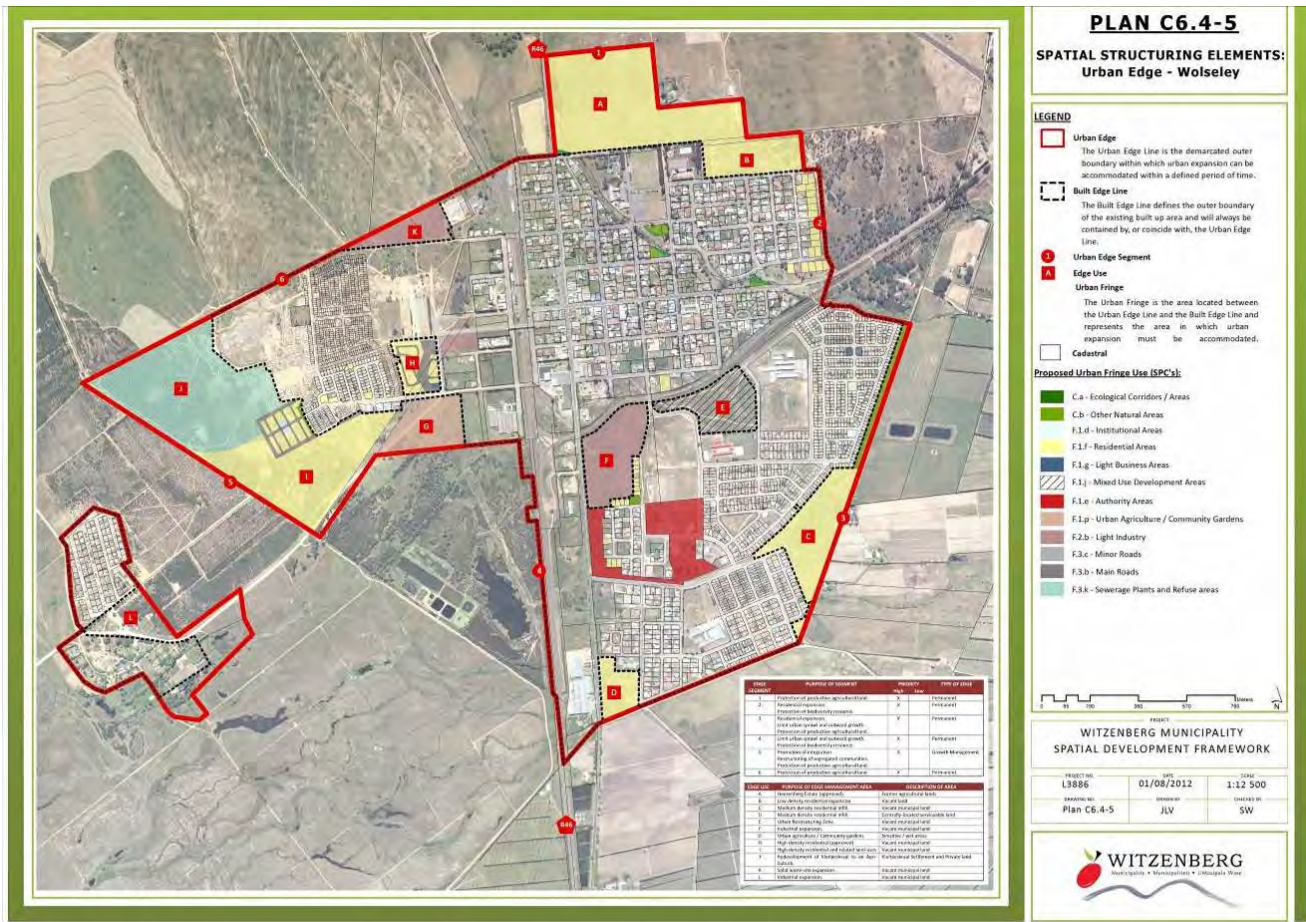
3/5	D	103	0.3ha	X	Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of biodiversity resource.			
<b>NATURE OF PROPOSAL</b>					
Proposed Development	X	Application In Process	Approved Development		
As with many of the settlements in Witzenberg, the subsidised housing component in Op-die-Berg is situated far from economic opportunities and institutional facilities. To this end, the residents of Op-die-Berg have forged their own link to the institutional facility south of the settlement.					
It is therefore proposed that Kerk Street be extended as a formal link road between the settlement and the institutional facility to facilitate ease of movement and unrestricted access.					

### C6.5.5 URBAN EDGE FOR WOLSELEY

Wolseley, the second largest town in the municipality developed around the railway facilities and major routes that intersect here. The town's economy is still mainly based on its role as an agricultural support and institutional centre, but because of its strategic connection with the Cape Metropole, it is envisaged that the town has potential for industrial development (Witzenberg Integrated Human Settlement Plan, 2009).

Plan 6.4-5 below illustrates the urban edge proposed for Wolseley.





The rationale and motivation for the Wolseley urban edge proposed on Plan C6.4-5 are as follows:

EDGE SEGMENT	EDGE USE	ERF/FARM NO.	AREA	PRIORITY		TYPE OF EDGE
				High	Low	
1	A	348/1	20ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		Protection of productive agricultural land.				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		<b>Application In Process</b>		<b>Approved Development</b>		<b>X</b>
On 2 June 2010, the Witzenberg Municipal Council approved the development of the Heerenberg Retirement Village and Lifestyle Estate on a portion of the mentioned property.						
The development will make provision for the establishment of 207 single residential and retirement village erven. As part of the latter component, the development will include assisted living units, frail care units, retirement apartments, a clubhouse and amenities and formal open spaces such as bowling greens.						

EDGE SEGMENT	EDGE USE	ERF/FARM NO.	AREA	PRIORITY		TYPE OF EDGE
				High	Low	
1/2	B	Rem. 496	5.5ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		<ul style="list-style-type: none"> <li>Residential expansion.</li> <li>Protection of biodiversity resource.</li> </ul>				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		<b>X</b>	<b>Application In Process</b>		<b>Approved Development</b>	
It is proposed that a portion of approximately 5.5ha along the northern boundary of the town be regarded as infill						

housing. The land in question is zoned for recreational purposes but has laid fallow for a considerable period of time. The land also does not warrant protection in terms of any biodiversity consideration.

A gross density similar to that of the adjacent residential neighbourhood and the newly approved retirement and lifestyle development to the north could be considered, which would allow for the development of ±55 units. (i.e. 10du/ha).

3	C	Rem. 1	5.4ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		<ul style="list-style-type: none"> <li>Residential expansion.</li> <li>Limit urban sprawl and outward growth.</li> <li>Protection of productive agricultural land.</li> </ul>				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		X	<b>Application In Process</b>			<b>Approved Development</b>
<p>According to the Witzenberg IDP (2012/2017), Wolseley has the second largest housing waiting list of all settlements in the municipality (in excess of 1400 people). The IDP also lists more than 200 informal structures and backyard dwellers of a similar amount which needs to receive priority attention.</p> <p>The Witzenberg Human Settlements Plan (Witzenberg Municipality 2009) identifies infill housing as the most important broad strategy to address <i>inter alia</i> the housing need. It is therefore proposed that the mentioned portion of municipal land be set aside for the establishment of infill housing.</p> <p>Provided that the land in question be developed at a similar density to that of the surrounding residential neighbourhoods (i.e. 26du/ha), approximately 140 residential units could be accommodated in this area.</p>						

3	D	Rem. 1	2.9ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		<ul style="list-style-type: none"> <li>Residential expansion.</li> <li>Limit urban sprawl and outward growth.</li> <li>Protection of productive agricultural land.</li> </ul>				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		X	<b>Application In Process</b>			<b>Approved Development</b>
<p>The mentioned property is also regarded as an infill opportunity. Access is readily available and no environmental considerations are present on site. If developed at a similar density as the surrounding residential neighbourhoods (i.e. 15du/ha), approximately 43 residential dwellings could be accommodated in this area.</p>						

EDGE SEGMENT	EDGE USE	ERF/FARM NO.	AREA	PRIORITY		TYPE OF EDGE
				High	Low	
4	E	Rem. 1	5.7ha	/	/	/
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		X	<b>Application In Process</b>			<b>Approved Development</b>
<p>Very little significant portions of publicly-owned land within the CBDs of the towns and settlements in Witzenberg are available that is suitable for infill housing. Fortunately two portions of municipal land are present in Wolseley upon which, amongst others, infill housing could be accommodated.</p> <p>The segment use marked as 'E' is well-located in close proximity to the CBD and should contribute to reinforcing the connection between the CBD and Montana. In addition, it is envisaged that consideration be given to the establishment of a Restructuring Zone over the mentioned property, as provided for in the National Social Housing Policy and Social Housing Bill. The property could therefore be used for subsidised social housing which could include several rental options.</p>						

4	F	622	9.3ha	/	/	/
NATURE OF PROPOSAL						
Proposed Development	X	Application In Process		Approved Development		
<p>Wolseley has been identified in the 2010 revision of the <i>Growth Potential of Towns in the Western Cape</i> (US &amp; CSIR) as an agricultural service centre with a medium development potential (refer to Chapter B3.2). As a result, a number of parcels have been identified for industrial-related activities.</p> <p>The mentioned land portion is well-located in close proximity to the CBD. The site also has excellent accessibility in terms of its position next to the R46, opposite the industrial area.</p> <p>Given the size of the property, it is proposed that the majority of the property be used for industrial-related activities to strengthen the industrial precinct and character of the town as an agricultural service centre.</p>						

4/5	G	Rem. 1	5.3ha	/	/	/
PURPOSE OF SEGMENT						
<ul style="list-style-type: none"> <li>Limit urban sprawl and outward growth.</li> <li>Protection of biodiversity resource.</li> </ul>						
NATURE OF PROPOSAL						
Proposed Development	X	Application In Process		Approved Development		
<p>The Witzenberg IDP 2012-2017 provides a prioritised summary of the issues raised during the stakeholder engagements. At each of the stakeholder meetings for the individual wards, the need for community/food gardens was high on the priority list.</p> <p>This SDF therefore identifies suitable land for urban agriculture / community gardens. The specific land parcel has been identified for this purpose as it is centrally-located and near a potential water source (Wolseley sewage works).</p> <p>It is suggested that the land parcel be used for urban agriculture / community gardens as it is important for food security as well as a potential source of income to participants. In this instance partnerships with NGOs and the community, as well as supporting government agencies such as the departments of Social Services and Agriculture, will be important to ensure the long-term viability of such projects.</p>						

4/5	H	Rem. 1	3.4ha	/	/	/
NATURE OF PROPOSAL						
Proposed Development		Application In Process		Approved Development		X
<p>Wolseley (Pine Valley) has been prioritised as part of the Municipality's Sustainable Human Settlements program. The program addresses current backlogs according to the housing waiting list and is in line with foreseen budgeted funding. A portion of the Remainder of Erf 1 has been identified for the extension of Pine Valley and will be funded as part of the Upgrade of Informal Settlements Program (UISP). Implementation is due by 2014.</p> <p>The proposed development will form part of Phase 2A of the extension and will make provision for 120 single residential units, business premises and open spaces.</p>						

4/5	I	Rem. 1	15ha		X	Growth Management
PURPOSE OF SEGMENT						
<ul style="list-style-type: none"> <li>Promotion of integration.</li> <li>Restructuring of segregated communities.</li> <li>Protection of productive agricultural land.</li> <li>Protection of biodiversity resource.</li> </ul>						

NATURE OF PROPOSAL						
Proposed Development		Application In Process	X	Approved Development		
<p>Wolseley (Pine Valley) has been prioritised as part of the Municipality's Sustainable Human Settlements program. The program addresses current backlogs according to the housing waiting list and is in line with foreseen budgeted funding. A portion of the Remainder of Erf 1 has been identified for the extension of Pine Valley and will be funded as part of the Upgrade of Informal Settlements Program (UISP). Implementation is due by 2014.</p> <p>The proposed development will form part of Phase 2B of the extension and will make provision for 159 single residential units, a site for a church and crèche, respectively, and open spaces.</p>						

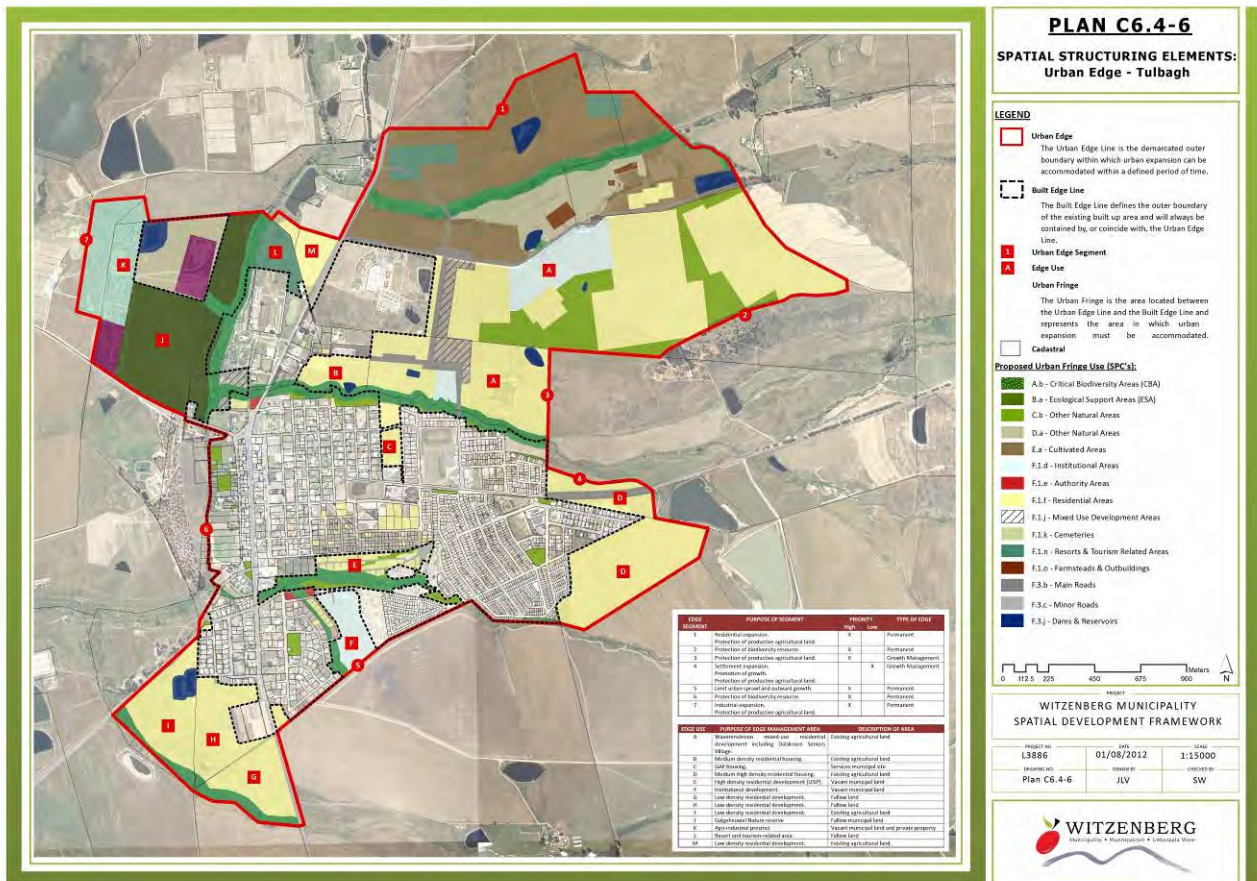
NATURE OF PROPOSAL						
Proposed Development	X	Application In Process		Approved Development		
/	J	Rem. 312	28ha	X		Growth Management
<b>PURPOSE OF SEGMENT</b>		<ul style="list-style-type: none"> <li>Promotion of integration.</li> <li>Restructuring of segregated communities.</li> <li>Protection of productive agricultural land.</li> <li>Protection of biodiversity resource.</li> </ul>				
<p>The Kluitjieskraal Forestry Station is situated adjacent to Pine Valley, east of Wolseley. The inhabitants are all either former employees of SAFCOL or the Department of Water Affairs and Forestry. Residents of the forestry station are far removed from the economic opportunities found in Wolseley (more than 2km).</p> <p>In order to address this separation several options have been investigated through the years. The most logical of which is to regard Kluitjieskraal as an Agri-suburb of sorts, with a strong tourism component. The aim of this settlement would be to allow residents and their dependents to fully benefit from various tenure, housing and subsidy benefits and rights and to take part in mainstream economic activity.</p>						

NATURE OF PROPOSAL						
Proposed Development	X	Application In Process		Approved Development		
5/6	K	Rem. 1	22ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		<ul style="list-style-type: none"> <li>Protection of productive agricultural land.</li> <li>Protection of biodiversity resource.</li> </ul>				
<p>The domestic landfill site at Wolseley receives solid waste from Ceres, Wolseley, Tulbagh and Prince Alfred Hamlet. The importance of this site should therefore not be underestimated. The site has sufficient capacity until 2018. The future of the site will depend on the outcome of the investigation into a regional landfill for the District Municipality. Until the outcome of this investigation has been made known, it is proposed that the land to the west of the site be made available for expansion</p>						

NATURE OF PROPOSAL						
Proposed Development	X	Application In Process		Approved Development		
6	L	1564, Rem. 1	3.6ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		<ul style="list-style-type: none"> <li>Protection of productive agricultural land.</li> </ul>				
<p>It is proposed that the mentioned properties be used to build on the comparative economic advantages of the town of Wolseley. As such, the properties will predominantly be developed for industrial-related land uses, thus effectively bringing the economic opportunities closer to poorer communities and adhering to the municipal strategies for integration (refer to chapter 1.3 of the Witzenberg IDP 2012/2017).</p>						

### C6.5.6 URBAN EDGE FOR TULBAGH

Tulbagh is a historic settlement, with a diversified economy based on support for the agricultural sector, institutions and tourism. The growth potential of this town is seen as related to tourism and high-end property development (Witzenberg Integrated Human Settlements Plan, 2009). Plan 6.4-6 below illustrates the urban edge proposed for Tulbagh (a larger copy is appended under Annexure 1).



The rationale and motivation for the Tulbagh urban edge proposed on Plan C6.4-6 are as follows:

EDGE SEGMENT	EDGE USE	ERF/FARM NO.	AREA	PRIORITY		TYPE OF EDGE
				High	Low	
1/2/3	A	187/34, 187/35, 187/21, 187/29	233ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		<ul style="list-style-type: none"> <li>Residential expansion.</li> <li>Protection of productive agricultural land.</li> </ul>				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		<b>Application In Process</b>		<b>X</b>	<b>Approved Development</b>	
<p>An application has been launched by the prospective developers of the mentioned property to develop the Waverenskroon Country Estate and Dalskroon Seniors Village. These development sites are situated on the northern periphery of Tulbagh and comprise a total of 1350 residential units.</p> <p>In essence, the concept consists of six villages of very different character, clustered around two large privately-provided but public facilities: a private school and a sports oval which can be shared between residents and the school. The villages are separated by corridors of agricultural activity.</p>						

The six villages are, deliberately very different in character and all are different from the existing town of Tulbagh. The eastern village, Equestria, is strongly equestrian in character. The most western village (Roodezand) is somewhat denser, taking the form of two and three storey townhouses. It caters for middle- and lower middle-income households, such as nurses, teachers, police officers, prison officers and the like. Immediately east of this is a retirement village, Dalskroon, while the central precinct, Fijnbosch, is more mixed-use in character. The Arbor Oval, east of Fijnbosch, relates to the school precinct and edge of the development with long and short views to the mountains and of the site. East of the Arbor Oval are Terroir and La Flora. These villages are mostly residential in nature with a small amount of mixed use at the entrance. Terroir and La Flora are less dense than the villages to the west of them, maintaining a dispersal of development as one moves further east and closer to the rural edge of the site.

It is stated that the proposed development brings a number of benefits to the town of Tulbagh, namely:

- It is responsible in terms of nature and sets up a dominant, enduring, green system;
- It limits further sprawl by retaining its agricultural zoning in the northern half of the site;
- It offers a rich range of living conditions, increasing choice;
- It brings with it new community facilities, which are accessible to all residents;
- It contributes significantly to the strengthening of the Steinthal Corridor;
- It strengthens thresholds for local community enterprises and brings new uses, thus diversifying the economy of the town;
- It encourages an increase in agricultural productivity, with the remaining half of the site (Kruisvallei 187) envisaged to become an intensive wine and mixed farming property;
- It vastly enriches the Tulbagh tourism experience offering a myriad of forms;
- It opens new opportunities for local labour;
- It helps to integrate the town into a more coherent totality<sup>57</sup>.

/	B	1365	5.4ha	/	/	/
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>	X	<b>Application In Process</b>			<b>Approved Development</b>	
The mentioned property is zoned Residential Zone I and, with the establishment of the Waverenskroon development, could present a vital residential infill project.						

/	C	Rem. 1331, 1339	3.4ha	/	/	/
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		<b>Application In Process</b>		X	<b>Approved Development</b>	
The mentioned properties have been identified for the development of Gap housing. If developed at an average size of approximately 150m <sup>2</sup> (as a minimum that would be supported by the financial institutions), approximately 150 residential erven could be accommodated on the two erven.						

4/5	D	187/2, 224/7	27.2ha		X	Growth Management
<b>PURPOSE OF SEGMENT</b>	<ul style="list-style-type: none"> <li>Settlement expansion.</li> <li>Limit urban sprawl and outward growth.</li> <li>Protection of productive agricultural lands.</li> </ul>					
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>	X	<b>Application In Process</b>			<b>Approved Development</b>	
According to the Witzenberg IDP (2012/2017), Tulbagh has a housing waiting list in excess of 1300 people. The IDP also lists more than 478 informal structures and 200 backyard dwellers which needs to receive priority attention. The						

<sup>57</sup> Piet Louw and Dave Dewar in Association. 2011. Waverenskroon Country Estate, Incorporating Dalskroon Seniors Village. *Revised Urban Design Report in response to concerns of the Department of Environmental Affairs and Development Planning, letter dated 2011-03-08* (ref number E12/2/3/2-B5/13-0376/07)

Witzenberg Human Settlements Plan (Witzenberg Municipality 2009) identifies infill housing as the most important broad strategy to address *inter alia* the housing need. As most of the land within the current urban area has been set aside for projects associated with the Housing Pipeline, it has been suggested that future residential expansion be directed in an easterly direction. The identified portions of land are situated in a visually unobtrusive location, in an area devoid of any biological considerations. It is therefore proposed, as a first step, that the municipality secure the relevant portion of land and that any future integrated housing programme be directed to this portion of land together with the associated social and recreational infrastructure to ensure the creation of a sustainable human settlement.

EDGE SEGMENT	EDGE USE	ERF/FARM NO.	AREA	PRIORITY		TYPE OF EDGE
				High	Low	
/	E	389	15ha	/	/	/
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>			<b>Application In Process</b>			<b>Approved Development</b>
						<b>X</b>
Tulbagh has been prioritised as part of the Municipality's Sustainable Human Settlements program. The program addresses current backlogs according to the housing waiting list and is in line with foreseen budgeted funding. A portion of the Erf 389 has been identified for the extension of Chris Hani, Helpmekaar and Witzenville and will be funded as part of the Upgrade of Informal Settlements Program (UISP). Implementation is due by 2013. The proposed development will form part of Phases 1 and 2 of the extension and will make provision for 355 informal residential stands, 49 single residential units, churches and a cemetery, business sites and open spaces. The average size of erven in Chris Hani and Helpmekaar will be 150m <sup>2</sup> , while the average size of erven in Witzenville will be in the order of 120m <sup>2</sup> .						
5	F	389	6.5ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		<ul style="list-style-type: none"> <li>• Limit urban sprawl and outward growth.</li> <li>• Protection of productive agricultural lands.</li> </ul>				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>			<b>Application In Process</b>			<b>Approved Development</b>
						<b>X</b>
Phase 3 of the Chris Hani, Helpmekaar and Witzenville extension will include a new educational facility on approximately 3.87ha. In addition, the phase will make provision for 72 informal residential stands, a site for a church and open spaces.						
5	G	224/3	9.8ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		<ul style="list-style-type: none"> <li>• Limit urban sprawl and outward growth.</li> <li>• Protection of productive agricultural lands.</li> <li>• Protection of biodiversity resource.</li> </ul>				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>			<b>Application In Process</b>			<b>Approved Development</b>
						<b>X</b>
This particular edge use segment represents an approved development of 103 single residential erven to be developed at approximately 10du/ha. Access to the development will be obtained from Van der Stel Street.						
5	H	389	11.4ha	X		Permanent
<b>PURPOSE OF SEGMENT</b>		<ul style="list-style-type: none"> <li>• Limit urban sprawl and outward growth.</li> <li>• Protection of productive agricultural lands.</li> <li>• Protection of biodiversity resource.</li> </ul>				
<b>NATURE OF PROPOSAL</b>						
<b>Proposed Development</b>		<b>X</b>	<b>Application In Process</b>			<b>Approved Development</b>
The mentioned property represents some 11.4ha of municipally-owned land. Being situated between two approved residential developments, the property is ideally located for residential infill development.						
Several environmental and cultural considerations should however be respected such as the river drainage line to the south and the existing cemetery to the east. Provided that the property is developed at a slightly higher density that						

the surrounding properties (i.e. 20du/ha), approximately 200 single residential units could be accommodated.							
5	I	192	13ha	X		Permanent	
<b>PURPOSE OF SEGMENT</b>		<ul style="list-style-type: none"> <li>Limit urban sprawl and outward growth.</li> <li>Protection of productive agricultural lands.</li> <li>Protection of biodiversity resource.</li> </ul>					
<b>NATURE OF PROPOSAL</b>							
<b>Proposed Development</b>		<b>Application In Process</b>		<b>Approved Development</b>		<b>X</b>	
A mixed-use development has been approved for the mentioned property. The land uses approved include approximately 100 single residential erven, two town house erven, a butchery and public open spaces. Access to the development will be obtained directly from Station Road, while provision has been made to link the proposed development with erf 389 to the east.							
6/7	k	Erf 1, 116/1, 187/30, 768	32ha	X		Permanent	
<b>PURPOSE OF SEGMENT</b>		<ul style="list-style-type: none"> <li>Limit urban sprawl and outward growth.</li> <li>Protection of productive agricultural lands.</li> <li>Protection of biodiversity resource.</li> </ul>					
<b>NATURE OF PROPOSAL</b>							
<b>Proposed Development</b>		<b>X</b>	<b>Application In Process</b>		<b>Approved Development</b>		<b>X</b>
Together with the existing agri-industry on the Farm No. 768, it is intended that the mentioned properties be developed for municipal infrastructural and agri-industrial purposes. In the latter regard, a portion of approximately 3ha, bordering on Waveren Street, has been made available for the processing of olives. The intended agri-industrial precinct will be separated from conflicting lands uses by means of the registered Galgeheuwel Local Authority Nature Reserve.							
1	L	1	4.5ha	X		Permanent	
<b>PURPOSE OF SEGMENT</b>		<ul style="list-style-type: none"> <li>Protection of biodiversity resource.</li> </ul>					
<b>NATURE OF PROPOSAL</b>							
<b>Proposed Development</b>		<b>X</b>	<b>Application In Process</b>		<b>Approved Development</b>		
<p>The 2010 revision of the <i>Growth Potential of Towns in the Western Cape</i> (US &amp; CSIR) identifies the comparative economic advantage of Tulbagh as being in the tourism industry. The study also states that Tulbagh has a medium development potential (refer to Chapter B3.2). As a result, all development proposals should aim to enhance this aspect of the town.</p> <p>The mentioned land parcel has specifically been identified as a property which could enhance the tourism advantage of the town. The mentioned property represents a portion of the municipal commonage. The property is located in a proposed tourism and recreation precinct and is in close proximity to the Galgeheuwel Local Nature Reserve, municipal caravan park and show grounds.</p> <p>In addition, the property is in close proximity to Van der Stel Street which is regarded as a scenic route and part of a tourism development corridor.</p>							
1	M	431, 381/3	4.4ha	X		Permanent	
<b>PURPOSE OF SEGMENT</b>		<ul style="list-style-type: none"> <li>Protection of productive agricultural land.</li> </ul>					
<b>NATURE OF PROPOSAL</b>							
<b>Proposed Development</b>		<b>Application In Process</b>		<b>X</b>	<b>Approved Development</b>		
An application has been submitted to the municipality for the establishment of a low-density residential development. The proposed development will also adhere to the principles of a tourism precinct and contribute to the enhancement of the tourism advantage of the town.							



## C6.6 GROWTH MANAGEMENT PLANS OF TOWN AND SETTLEMENTS

The demarcation of urban edges for the respective towns and settlements is important for the achievement of the principles contained in the WCPSDF and this SDF regarding the containment of urban sprawl, the intensification of development, promoting the optimum use of land, maximising the use of existing infrastructure, the integration of urban areas, conserving natural and cultural resources and preserving high potential agricultural land.

The chapters above describe and illustrate the demarcation of the urban edge for the respective towns and settlements to establish a limit beyond which urban development will not be permitted.

The Growth Management Plans, as depicted by Plans C6.5-1 to C6.5-6 and attached under Annexure 5, read with the Urban Edge Plans C6.4-1 to C6.4-6, provide an illustration of the key areas identified for residential and industrial/commercial expansion.

In order to determine the total amount of additional residential units and its impact on bulk services, the following densities were allocated to new residential areas, namely:

- a) Low density: 5-15 du/ha<sup>58</sup>
- b) Medium density: 15-25 du/ha
- c) High density: 25-40 du/ha

In instances where density figures were known or the total amount of units in a proposed development have already been determined (such as in the individual projects of the Housing Pipeline), a density range applicable to the residential offering was allocated.

By applying the above-mentioned density schedule, it was determined that a combined total of between ±8 000 and ±15 000 additional new residential units could be accommodated in the respective towns and settlements on the Municipality.

Table C12: Number of additional residential units to be accommodated in the respective towns and settlements of the Witzenberg Municipality.

	TOWN/SETTLEMENT	MINIMUM	MAXIMUM
a)	Ceres	4215	7255
b)	Bella Vista	484	776
c)	Prince Alfred Hamlet (incl. Station)	710	1170
d)	Op Die Berg	175	352
e)	Wolseley	796	1553
f)	Tulbagh	1661	3924
	<b>TOTAL</b>	<b>8041</b>	<b>15030</b>

<sup>58</sup> Dwelling unit per hectare

## **C6.7 GUIDANCE FOR GOVERNMENT AND PRIVATE SECTOR INVESTMENT IN DEVELOPMENT**

The NSDP provides broad guidelines as it relates to where and how government should invest scarce resources into the development of bulk infrastructure, roads, and settlements. It is common cause that the economy of any region needs large-scale private sector investment. It is imperative that meaningful private sector investment be drawn to the Witzenberg and that adequate security for such investment be provided by the Municipality in the form of appropriate spatial guidance and strategic policy directives. Accordingly, the objectives, policy and strategies and guidelines for government and private sector investment in development are as follows:

### **C6.7.1 OBJECTIVES**

- a) Strategically invest scarce public sector resources where they will generate the highest socio-economic returns.
- b) Deliver human development programmes and basic needs programmes wherever they may be required (refer to Plan C7 on Page 190).
- c) Guiding the investment of public resources (capital) through the following:
  - (i) Providing a credible context for public investments.
  - (ii) Promoting equitable development of areas that have lagged behind.
  - (iii) Providing certainty to all stakeholders regarding spatial and socio-economic implications of future development in the Municipality.

### **C6.7.2 POLICY**

- a) Settlements with the highest economic growth potential and population thresholds are to be prioritised as locations for fixed infrastructure.
- b) Settlements with high levels of human need which include settlements with high as well as low economic growth potential are to be prioritised from state funds for the delivery of human resource development and minimum basic services programmes.
- c) New facilities from state funds to accommodate the delivery of these programmes are to be prioritised in settlements with the highest economic growth potential. In other settlements the reuse and renovation of existing facilities are to be prioritised.
- d) Existing facilities such as underutilised public buildings are to be used for accommodating various human resource services even if these services are delivered by departments or organisations who do not own the buildings.
- e) Where such facilities do not exist, periodic service centres are to be established for coordinated use by a wide variety of government, non-government and private organisations.
- f) Periodic service centres are to be located at points of highest access in terms of the principle of sustainable transport.

### **C6.7.3 STRATEGIES AND GUIDELINES**

A key objective is to guide the investment of government and private sector resources. The Growth Potential study of towns in the Western Cape (US & CSIR, 2010) was applied as a spatial rationale and premise for the formulation of dedicated policy guidelines and strategy as it relates to the appropriation of government funds and investment of private sector resources.

The key determinants are the *development potential* and *social need* of the respective settlements. In the chapters below these two determinants and the required and appropriate investment type are summarised and spatially indicated.

### C6.7.3.1 Development Potential

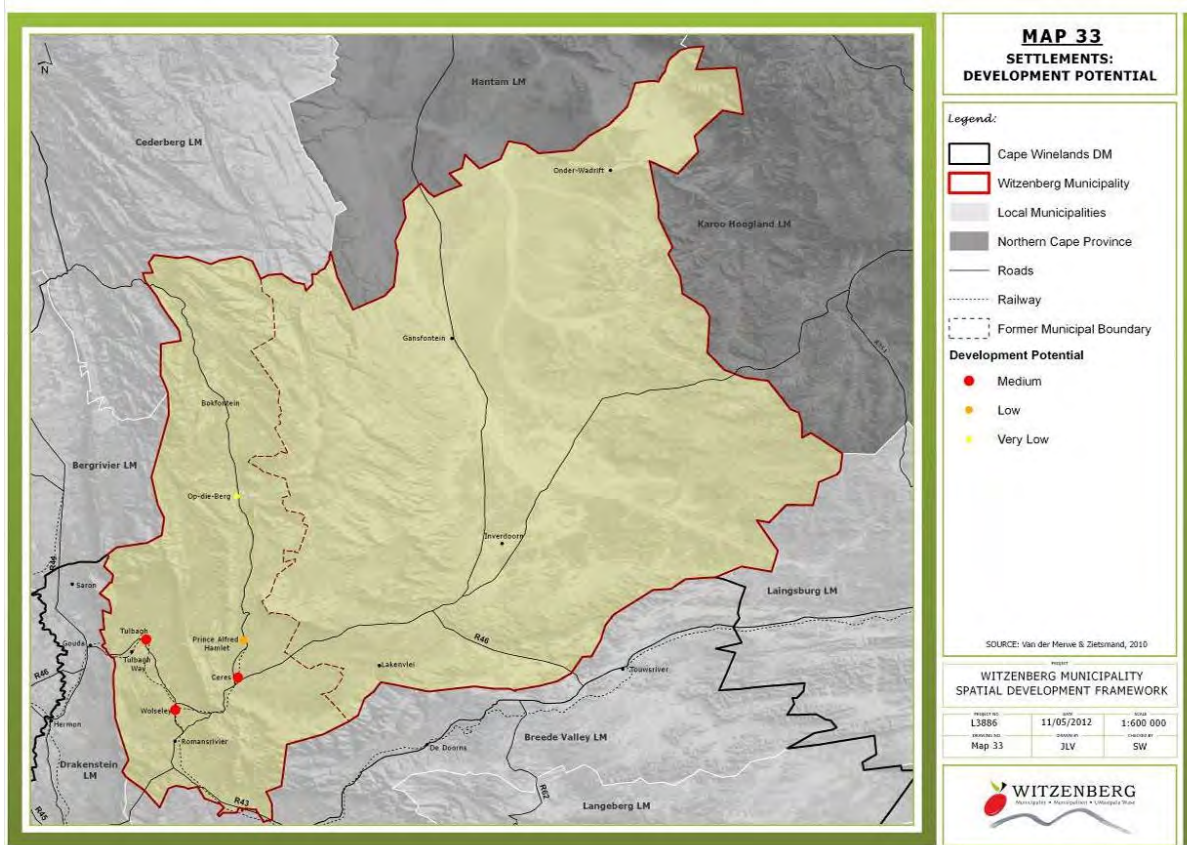
The settlements of the municipality fall within one of the classes or typologies summarised below. Map 33 below illustrates the development potential of the settlements.

Table C13: Categories of development potential (US & CSIR, 2010).

CLASS	DEVELOPMENT POTENTIAL	DESCRIPTION
1 & 2	<u>'Very Low'</u> and <u>'Low'</u> growth potential	These settlements possess limited economic and human resources, devoid of the potential to stimulate the urban economy in a significant way. The difference between 'Low' and 'Very Low' is only a degree variation.
3	<u>'Medium'</u> growth potential	These settlements' development indices are roughly in line with the average value of the provinces' aggregate on the settlements. Consistent and moderate growth prevails in these settlements and certain sectors of the economy show signs of growth, or have the potential for it.
4 & 5	<u>'High'</u> and <u>'Very High'</u> growth potential:	These settlements experience sustainable growth on the positive side of the provincial average. They already have an established and proven track record to operate as 'growth engines' at a certain level. They have the potential to grow at a sustainable and powerful rate in line with the capacity of their resources and to operate as service providers to a relatively extensive hinterland. The difference between 'High' and 'Very High' status only lies in the diversity and intensity of the town dynamics. The meaning of 'High' on the Development Potential scale and on the Human Needs scale respectively should be interpreted in a reciprocal manner.

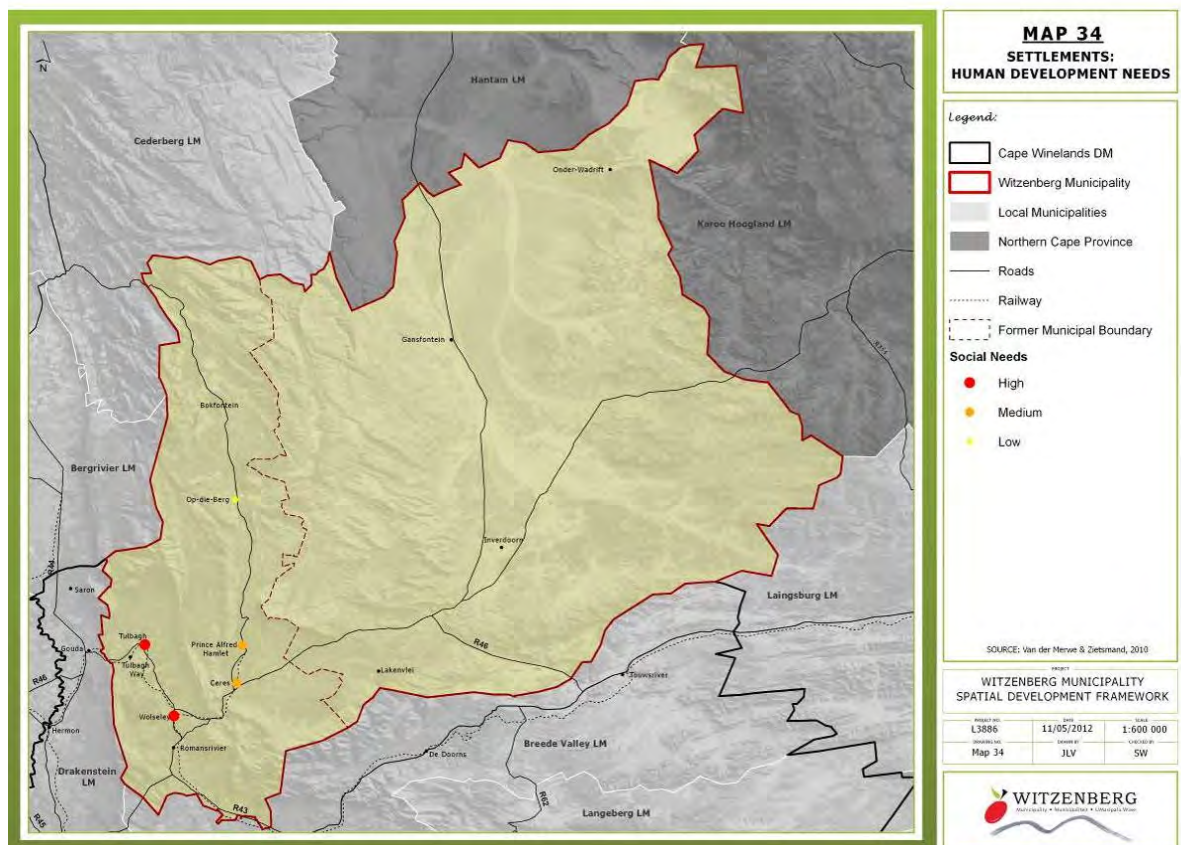
#### *Box C3 - NSDP Strategic Priorities*

In keeping with the NSDP strategic priorities, new infrastructure should be prioritised in settlements with high economic growth potential. The NSDP requires that a strategic approach to investment be taken and that fixed infrastructure be located in urban settlements likely to experience population and economic growth rather than decline. Therefore, as a general principle, fixed investment should be directed towards urban settlements that exhibit high economic growth potential in the first instance and high human need in the second. Settlements with low human need and low economic growth potential would have a lower fixed investment priority. This policy furthermore implies that settlements with large numbers of people would take precedence over those with only a few residents.



**C6.7.3.2 Human Development Need**

Map 34 illustrates the human development need of settlements in the municipality.



### C6.7.3.3 Investment Type

By integrating the *development potential index* (as illustrate by Map 33 on Page 211) with the *human needs index* (as illustrate by Map 34 on Page 211), settlements were classified into a typology for investment.

The Witzenberg SDF supports the principle that the capital (resources) of the municipality is to be developed and employed in an equitable manner in order to generate sustainable benefit for the municipality as a whole. Accordingly, the aim is to facilitate the employment of the various forms of capital vested in the municipality to achieve sustainable development goals and objectives in the settlements. As described above, the *Capitals Model* (Forum for the Future 2010) was used to define and describe the various forms of capital of the municipality, namely:

- a) Environmental Capital:  
Environmental capital is been defined in accordance with the broad description of the 'environment' put forward by NEMA, namely *the aggregate of all external conditions and influences affecting the life of an organism*. The environmental capital of Witzenberg includes the natural resources (energy and matter) and processes needed by the municipality and its communities to achieve their goals and objectives.
- b) Monetary Capital:  
Monetary capital is *those inputs that are necessary in economic processes and that endure (as opposed to inputs that are used up upon consumption). It is, in other words, what we pass on today so that the economy may continue tomorrow. As a concept, capital aligns very well with the temporal aspect of sustainable development.*
- c) Infrastructural Capital:  
Infrastructural capital is *material goods and infrastructure owned, leased or controlled by government and the private sector that contribute to production or service provision, but do not become part of its output*. The main components include roads, communications, community service centres, waste disposal systems and technologies.
- d) Social Capital:  
Social capital is *any value added to the activities and economic outputs of an organisation by human relationships, partnerships and co-operation, and human capital as the health, knowledge, skills, intellectual outputs, motivation and capacity for relationships of the individual. Human is also about joy, passion, empathy and spirituality.*

### C6.7.4 INVESTMENT PRIORITIES: WHERE AND WHAT TO INVEST

It is only when the networked relations and correlations among these forms of capital are recognised and operational, that a sustainable economy and a contented society can be created in Witzenberg. Figure C13 illustrates the general approach to the investment of public and private funds in terms of the business principle that investment should be directed to where the best return on such investment can be generated.

While the idea of focusing government spending on fixed infrastructure in areas with some potential for economic development may seem to exclude other areas/settlements from development, this is in fact not the case. Different regions and settlements have different economic potential and the spatial variations in the incidence of poverty are also vastly different.

According to the NSDP these diverse and disparate spatial contexts suggest a policy approach that itself should be differentiated and conducive to the requirements of the different contexts. Hence, in areas of low or no economic potential, the path of development and poverty reduction should be through a focus on investment in social capital (e.g. education, training, social welfare, rural development planning, land and agrarian reform, expansion of agricultural extension services, etc). This means that each individual settlement should discover its real development potential and then grow to the maximum of that development level. It is important to stress that the NSDP does not in any way rule out investment in small settlements per se. What matters is whether an area has the potential to grow economically in a sustainable way, create jobs and alleviate poverty. If a small town has such potential there is nothing that precludes investment (Oranje *et al*, 2008).

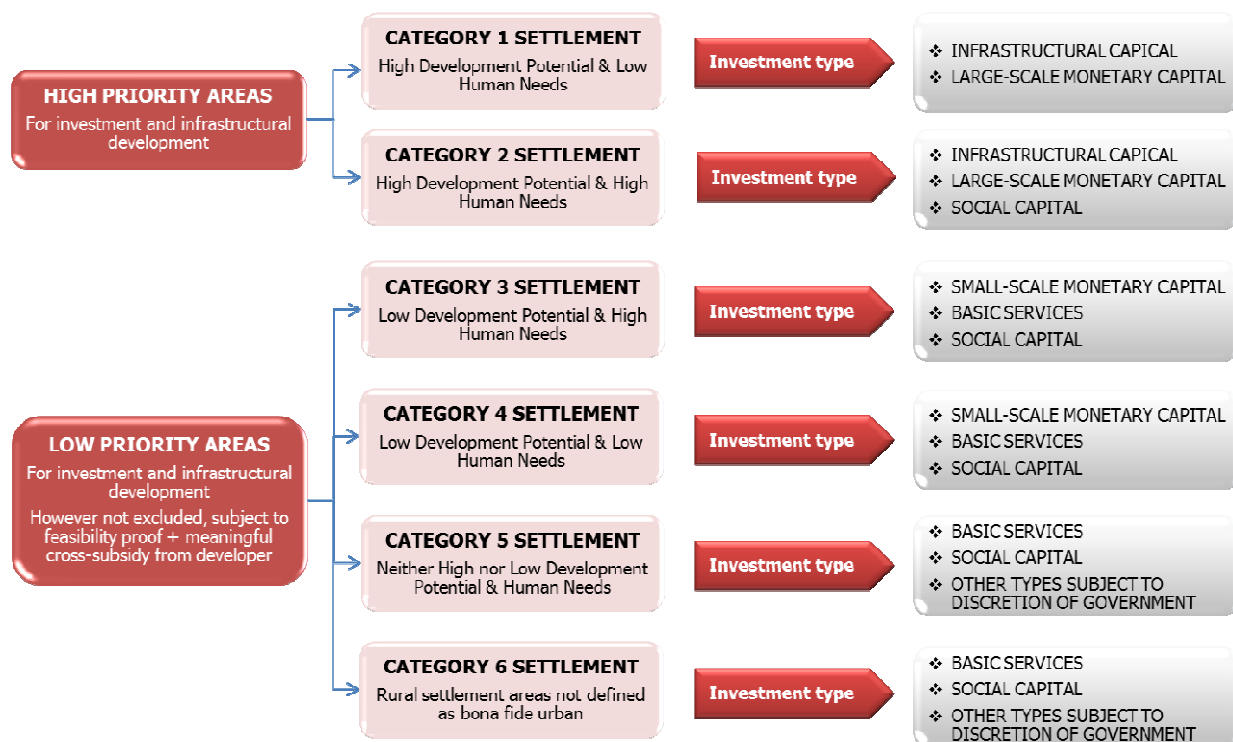
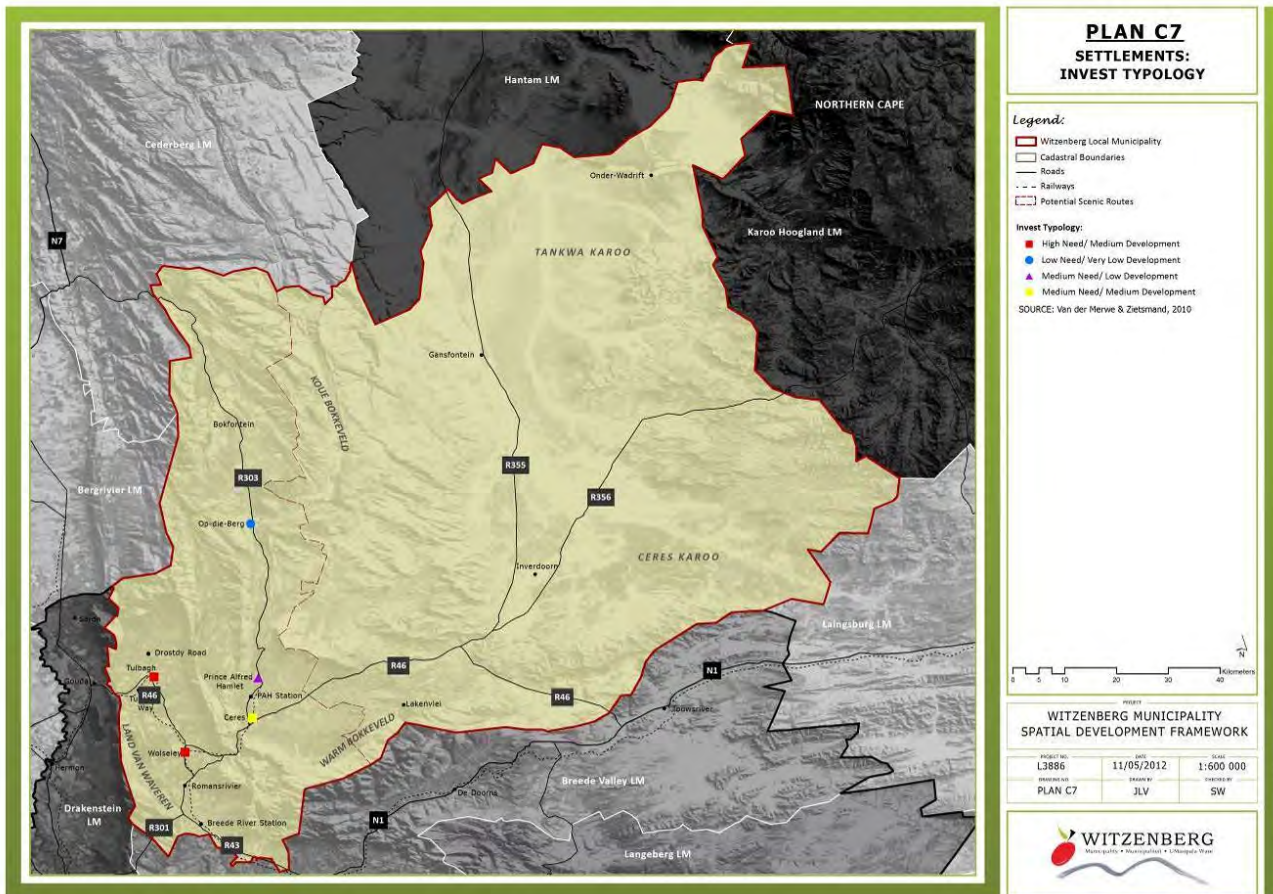


Figure C13: General approach to the appropriation of capital.

Plan C7 below indicates the settlements categorised in terms of their levels of *social need* and *economic potential* and the investment type proposed (US & CSIR, 2010).



## C7 REGULATING THE DEVELOPMENT OF SPC F2: INDUSTRIAL AREAS

A key challenge facing Witzenberg Municipality is how to broaden and encourage the opportunities presented by the availability of natural resources. Industrial activities, whether large- or small-scale, have the potential to stimulate economic diversification and development in the municipality.

As mentioned in previously above, the industrial and manufacturing sector in Witzenberg is strongly linked to the agricultural sector. There is however consensus in the industry that the area currently does not cater adequately for the processing of fruit grown locally. Expansion of industrial activities such as processing plants, would create a number of other possibilities in side-stream and indirect activities. 'Side-stream' activities refer to the service network, vendors and key contracting firms directly affiliated with a particular plant's operations. Not only is this sector significant in terms of contributing to broadening the local employment base and enhancing the potential for further employment spin-offs, but it is of critical importance to the functioning of all departments within a particular mineral-based operation. The 'side-stream' sector associated with each mine or processing plant usually comprises vendors of various sizes, providing either hard or soft services. Hard services are usually production-related activities and plant specific and include hard engineering companies, engineering suppliers, construction and manufacturing firms, and heavy equipment, industrial and electrical suppliers. While most of these activities are technical in nature and require skills which are largely absent in the area and sourced from elsewhere in the province, there are, nevertheless, a number of areas where SMMEs can be developed as preferred suppliers and establish workshops and facilities in the immediate vicinity of such plants. Such opportunities include the localisation of spares (conveyors, mechanical power equipment, motors

and generators, bearings, pumps, fasteners, springs etc.), maintenance facilities, and supply of consumables required in the daily operation of the project (chemicals, reagents etc.). Soft (non-production) services include things such as security, industrial cleaning and plant hygiene, garden/landscaping and interior plant management, consumables, catering, personal protective equipment, legal/logistic activities, consultants (i.e. IT, environmental & industrial), waste management, painting services, etc. Such functions offer numerous possibilities for SMME development and economic diversification.

Industrial development can also enhance indirect impact related to inter-sectoral linkages – i.e. linkages arising between the agricultural-processing sector and other industrial and economic sectors in the municipality. Other sectors that stand to benefit from these projects include transport, construction, tourism, etc. Close collaboration and interaction between the private and public sector will be critical in order to capitalise on these indirect opportunities.

The development of the energy sector holds huge benefit for Witzenberg and the country as a whole, and would have significant multipliers in the local economy. It is therefore important that innovative planning be undertaken to provide the necessary infrastructure and associated amenities to accommodate the industry in an efficient manner. Therefore, in order to ensure the sustainability of the current and future economic sectors and to maximise synergies, it is imperative that industrial development be undertaken in a manner that promotes the principles of environmental integrity, social equity and economic efficiency.

### C7.1 CATEGORY DESCRIPTION AND PURPOSE

<b>CATEGORY F.2: INDUSTRIAL AREAS</b>		
<b>SUB-CATEGORY</b>		<b>DESCRIPTION</b>
<b>F.2.a</b>	<b>Agricultural Industry</b>	Agriculture-related industrial development, e.g. silos, wine cellars, packing facilities (areas zoned Agricultural Zone II), excluding abattoirs.
<b>F.2.b</b>	<b>Light Industry</b>	Areas designated for light industrial activities associated with the service industry (e.g. repair of motor vehicles) including warehouses and service stations (areas zoned Industrial Zone I), which could potentially have no negative impact on the character and the primary activities of business and residential areas.
<b>F.2.c</b>	<b>General Industry</b>	Areas designated for general and more intensive industrial activities (areas zoned Industrial Zone II), which could potential have a negative impact on the character and the primary activities of business and residential areas.
<b>F.2.d</b>	<b>Nuisance Industry</b>	Areas designated for robust industrial activities, e.g. chemical works, brewery, piggeries, manure, processing of hides, abattoirs, stone crushing, crematoriums (areas zone Industrial Zone III).
<b>F.2.e</b>	<b>Extractive Industry</b>	Settlements and infrastructure associated with multiple consumptive resource extraction, e.g. mining (areas zone Industrial Zone IV).



## C7.2 OBJECTIVES

- a) Establish the industrial areas and infrastructure required for the harvesting and processing and beneficiation of the resources of the Municipality with specific reference to the following:
  - (i) Agriculture-related industrial development, e.g. silos, wine cellars, packing facilities, processing plants, excluding abattoirs.
  - (ii) Energy generation, including solar and wind energy.
  - (iii) Science and technology.
  - (iv) Areas designated for light industrial activities associated with the service industry (e.g. repair of motor vehicles) including warehouses and service stations.
  - (v) Areas designated for robust industrial activities, e.g. chemical works, brewery, manure, processing of hides, abattoirs, stone crushing, crematoriums.
  - (vi) Settlements and infrastructure associated with multiple consumptive resource extraction, e.g. mining.
- b) Ensure that the larger economic sector (mining, in particular) contributes to an appropriate off-set or *quid pro quo* for the detrimental impacts associated therewith.
- c) Ensure that the planning, design and construction of industrial areas comply with the principles of sustainability with specific reference to climate-neutrality.
- d) Develop industrial areas in a manner that supports the Second Economy.
- e) Promote, to the extent possible, a bioregional economy, which *inter alia* requires that the municipality and its component districts (bioregions) be self-sufficient as it relates to the production of essential commodities and that resources be processed and benefited locally.
- f) Ensure proper planning and development of industrial areas and industrial facilities required for adequate manufacturing of products.
- g) Explore alternative and emerging technologies to improve quality and quantity within the manufacturing sector.
- h) Ensure constructive public involvement in industrial activities.
- i) Ensure the sustainable use and protection of the natural resources.

## C7.3 POLICY

- a) Codes and standards for energy efficient buildings in the government, commercial, industrial, residential and community sectors are to be set according to the following guidelines:
  - (i) Green House Gas (GHG) emissions reduced by 10% over 20 years commencing in 2012.
  - (ii) Electricity consumption reduced by 20% from what it would have been if the current trend continued unabated for the next 20 years.
- b) Renewable energy sources (i.e. wind, solar thermal, biomass, and domestic hydro-electricity generation) are to be explored and implemented.
- c) Solar thermal water heating and photo-voltaic energy generation are to be compulsory, linked to main electricity sources as backup, on all new residential, commercial, industrial and community buildings, and should be progressively phased in as appropriate.

- d) In order to protect the unique natural characteristics of the municipality, the objective is to ensure that all industrial development is sustainable. In this regard, the following needs to be instituted:
  - (i) Constant assessment of the environmental impact of industrial activities.
  - (ii) Development of system packages for industrial clients.
  - (iii) Industry and maintenance of pollution control equipment.
  - (iv) Development and implementation of 'low or no waste technologies'.
  - (v) Modification of the industrial system itself, with the view to optimise resource use and minimise waste and ecological damage.
- e) Industrial mechanisms are to be designed to prevent the generation of pollution throughout the production process. The growing levels of industrial effluents, stricter pollution control laws and increasing industrial activity are calling for the relevant authority to assess the environmental impact of manufacturing sector.
- f) Industrial development must be clustered in close proximity to the product source, within the defined development corridors, in close proximity to major transport linkages and bulk infrastructure.
- g) Where industrial development is proposed in remote areas that do not comply with the requirements set in (f) above, the proponent has to provide conclusive evidence regarding the desirability and sustainability of the proposed development and must fund the provision of the required access and services.
- h) Industrial precincts in settlements are subject to the parameters listed in Chapter C6.4.2 above.

#### **C7.4 STRATEGIES**

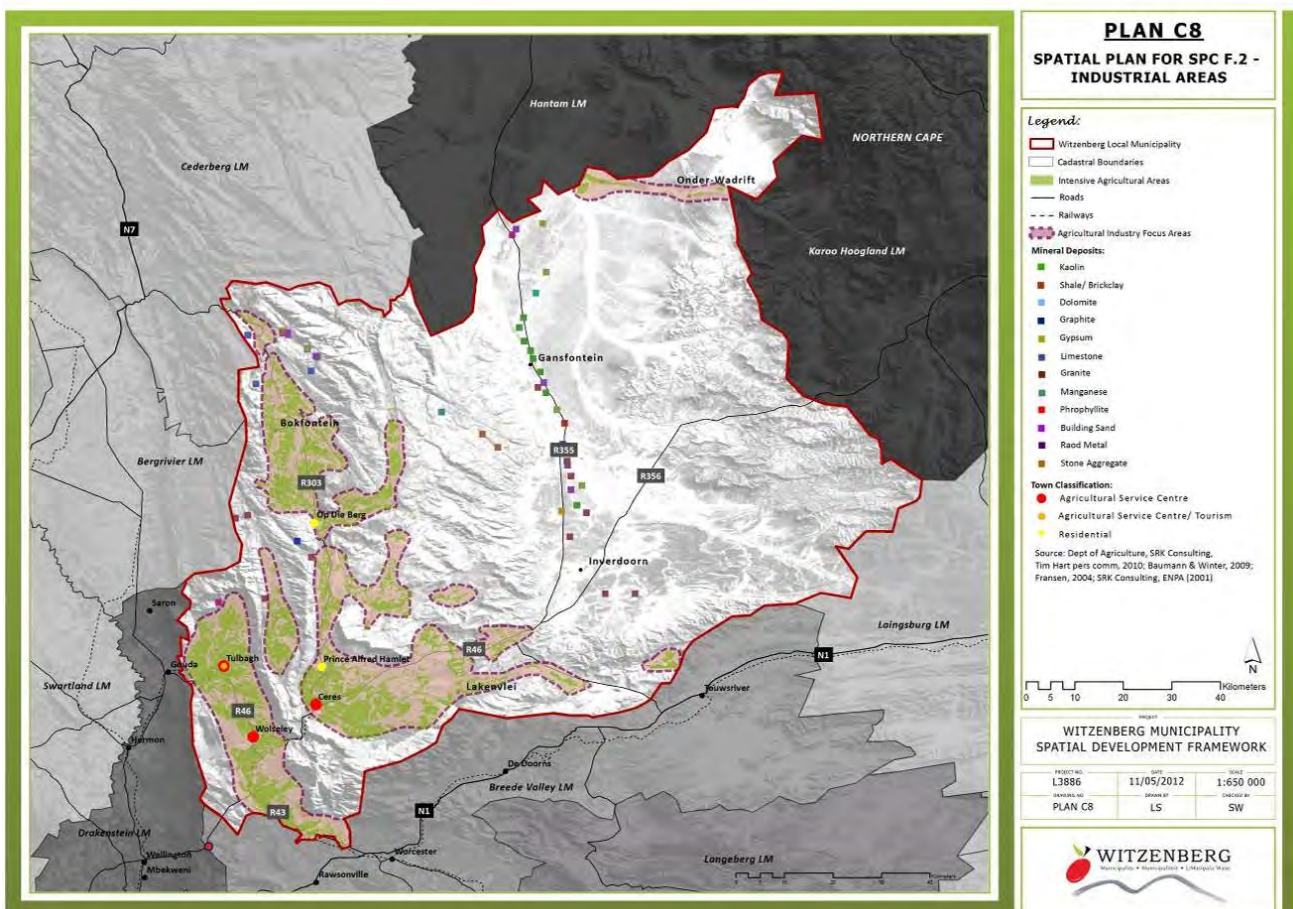
- a) Prepare detailed long-term development and management plans for each industrial area and manufacturing facility within the municipality. Such plan should address the following:
  - (i) Identify suitable industrial sites that would encourage economically viable industries with minimal impact on the environment communities.
  - (ii) Centralise manufacturing enterprises and industrial areas with proximity to resources, adequate water supply, adequate transportation infrastructure and proximity to markets.
  - (iii) Indicate conservation areas.
  - (iv) Provide for environmental audits as a key step towards improved environmental management.
  - (v) Institute educational programmes to establish public interest and involvement in manufacturing activities.
  - (vi) Encourage communities to support industries and to eliminate negative impacts from existing industries.
  - (vii) Encourage industries and communities to work together to achieve sustainable manufacturing methods.
  - (viii) Research sustainable industrial options and emerging technologies.
  - (ix) Provide support and advice to industries with regard to environmental management.
  - (x) Institute compulsory management / monitoring programmes for waste products.
- b) Develop the required industrial amenities and infrastructure in the defined development corridors which respond to the availability of Environmental Capital (e.g. water, suitable agricultural soil, mining resources, etc.) and Infrastructural Capital (e.g. roads, electricity, bulk engineering services, etc.).
- c) Develop SMME incubators to cater for local community needs.

- d) Direct the development of appropriate stands for hawkers and community-based economic activities to the various identified *Neighbourhood Nodes, Activity Corridors* and *Activity Streets*.
- e) Direct the development of all industrial activities to Industrial precincts and applicable SPC F.2 areas.
- f) Centralise manufacturing enterprises and industrial areas in settlements where resources are in close proximity, water supply is adequate, and transportation and market are in close reach.
- g) Institute regular monitoring and auditing of borrow pits.
- h) Ensure effective rehabilitation of mining sites. Rehabilitate quarries where production no longer takes place by means of a mine closure permit.

## C7.5 SPATIAL PLAN

The spatial plan for SPC F.2 areas (Plan C8) is a constellation of the following:

- a) Spatial plan for SPC E: Agricultural Areas (Plan C6 on Page 157).
- b) Spatial plan for SPC F.1 Urban Areas (Plan C7 on Page 214).
- c) Mineral deposits (Map 6 on Page 35).
- d) Development corridors (Map 31 on Page 124).
- e) Composite development index of settlements (Map 34 on Page 165).
- f) Development potential of settlements (Map 33 on Page 211).



## C8 ENSURING DEVELOPMENT OF EFFICIENT SPC F.3: SURFACE INFRASTRUCTURE

An effective, competitive and responsive infrastructure network is imperative for the ongoing economic development of the municipality. Much of the municipality's primary agricultural production is produced in localities distant from markets and from points of export. The municipality's ability to convey goods effectively and efficiently is a key aspect to be addressed. The relevant functionaries therefore have a vitally important task in providing the infrastructure and bulk services required by the various economic sectors, the human settlements of the municipality, and the rural hinterland.

Key challenges are the lack of basic infrastructure in rural areas and the proliferation of informal settlements in urban areas. Both these challenges are beyond the sole institutional and fiscal capabilities of the municipality. It is therefore important that the relevant funding mechanisms and institutions function efficiently and equitably.

### C8.1 CATEGORY DESCRIPTION AND PURPOSE

CATEGORY F.3: SURFACE INFRASTRUCTURE & BUILDINGS		
SUB-CATEGORY		DESCRIPTION
F.3.a	National roads	National roads proclaimed in terms of the National Roads Act 7 of 1998.
F.3.b	Main roads	Provincial and regional roads proclaimed in terms of the Roads Ordinance 19 of 1976.
F.3.c	Minor roads	Regional and local roads proclaimed in terms of the Roads Ordinance 19 of 1976.
F.3.d	Public Streets	Public streets and parking areas within main town and rural settlements (areas zoned Transport Zone II and III respectively).
F.3.e	Heavy Vehicle Overnight Facilities	Areas designated for heavy vehicle parking and overnight facilities (areas zoned Transport Zone III).
F.3.f	Railway lines	Railway lines and associated infrastructure (areas zoned Transport Zone I).
F.3.g	Power lines	Power lines and associated sub-stations and infrastructure.
F.3.h	Tele-communication infrastructure	Any part of the infrastructure of a telecommunication network for radio/wireless communication including, voice, data and video telecommunications, which may include antennae; any support structure, equipment room, radio equipment and optical communications equipment provided by cellular network operators or any other telecommunication providers and all ancillary structures needed for the operation of telecommunication infrastructure.
F.3.i	Renewable energy structures	Any wind turbine or solar voltaic apparatus, or grouping thereof, which captures and converts wind or solar radiation into energy for commercial gain irrespective of whether it feeds onto an electricity grid or not. It

		includes any appurtenant <sup>59</sup> structure or any test facility which may lead to the generation of energy on a commercial basis.
<b>F.3.j</b>	<b>Dams &amp; Reservoirs</b>	Major dams and reservoirs.
<b>F.3.k</b>	<b>Sewerage Plants and Refuse Areas</b>	Areas designated as municipal and private sewerage treatment plants and refuse areas.

## C8.2 OBJECTIVES

### C8.2.1 TRANSPORT

- a) Provide and maintain an adequate road and railway transport system throughout the municipality and, in particular, in the *Breede River Valley Development Corridor*, the main agricultural development nodes, and the primary settlement areas.
- b) Revitalise and optimise the use of the Wolseley/Ceres railway line as an important economic and tourism link.
- c) Implement the *Integrated Transport Plan* (Witzenberg Municipality, 2010).
- c) Institute a centralised commuter bus service for residents and workers commuting daily between the various towns of the municipality.

### C8.2.2 WATER

- a) Increase water storage capacity of the Koekedouw Dam for water security and availability for socio-economic development.
- b) Provide water resources infrastructure to communities that have lagged behind in terms of the CRDP.
- c) Develop a strategy to curb unlawful water use.
- d) Ensure a reliable supply of water from bulk water resources infrastructure within acceptable risk parameters to meet the sustainable demand for the municipality. Solicit and source funding to implement, operate and maintain bulk raw water resources infrastructure in an efficient and effective manner by strategically managing risks and assets.
- e) Facilitate water conservation and water demand management in the municipality.

### C8.2.3 ENERGY

- a) Promote the development of renewable energy supply schemes. With an increasing demand in energy predicted and growing environmental concerns about fossil fuel-based energy systems, the development of large-scale renewable energy supply schemes is strategically important for increasing the diversity of domestic energy supplies and avoiding energy imports while minimizing the environmental impacts.

<sup>59</sup> Appurtenant structure means any structure or accessory necessary for, or directly associated with generation of renewable energy.

- b) Enhance upgrades of the electrical supply network in accordance with the *Medium Voltage Network Master Plan for Ceres, Tulbagh and Wolseley*.
- c) There is a national electricity supply shortage and the country is now in a position where it needs to commission additional plants urgently. As a result, renewable energy projects are considered to be high priority.
- d) Develop and institute innovative new energy technologies to improve access to reliable, sustainable and affordable energy services with the objective to realize sustainable economic growth and development. The goals of securing supply, providing energy services, tackling climate change, avoiding air pollution and reaching sustainable development in the municipality offer both opportunities and synergies which require joint planning between local and provincial government as well as the private sector.
- e) Develop and institute energy supply schemes with the aim to contribute to the achievement of the targets set by the White Paper on Renewable Energy (2003). This target relates to the delivery of 10 000 GWh of energy from renewable energy sources (mainly biomass, wind, solar, and small-scale hydro) by 2013.

#### **C8.2.4 TELECOMMUNICATION**

- a) Ensure the ongoing development of international best-practice telecommunication systems for the municipality as a whole.
- b) Accelerate the deployment of telecommunication infrastructure to enhance effective development in rural areas.
- c) Increase infrastructure deployment in the municipality by exploring cheaper and affordable broadband technologies which will address the means of accessing information and knowledge.
- d) Extend signal coverage of radio and television over the entire municipality.
- e) Develop and implement an e-awareness programme targeted at under-serviced rural communities.
- f) Enhance rural telecommunication enterprise development in order to foster local economic development and improving rural livelihoods.
- g) Deploy incubations hubs in rural areas to support the sustainability of local enterprises and promote innovation.
- h) Broaden the telecommunication market access scope for rural-based small enterprises.
- i) Ensure Internet connectivity to all people in the municipality.

#### **C8.2.5 HOUSEHOLD SERVICES**

- a) Ensure the ongoing development of bulk services required to promote the well-being of all the people of the municipality.
- b) Implement household services in accordance with constitutional imperatives and basic human rights and in terms of the CRDP.
- c) Implement the *Witzenberg Municipality Integrated Waste Management Plan* in order to reduce the amount of waste generated in the waste cycle. The management plan commits the municipality to:
  - (i) Create an atmosphere in which the environment and natural resources of the region are conserved and protected.

- (ii) Develop a communication/information/education strategy to help ensure acceptance of 'ownership' of the strategic objectives among members of the public and industry throughout the municipality and to promote co-operative community action.
- (iii) Provide a framework to address the municipality's growing problem of waste management in accordance with best prevailing norms, financial capacity and best environmental practice.
- (iv) Provide solutions for the three main objectives:
  - The avoidance of waste generation.
  - The reduction of waste volumes.
  - The safe disposal of waste.

### **C8.3 POLICY**

#### **C8.3.1 TRANSPORT**

- a) Transport infrastructure will be constructed, operated and maintained in terms of the principles of sustainability provided in the SDF and, in particular, in accordance with the spatial plans and guidelines for *development corridors*, *activity corridors* and *activity streets*.
- b) Transport corridors containing both road and rail routes should be developed as primary freight and passenger routes, e.g. Wolseley.
- c) Efficient labour intensity of government-funded infrastructure projects is to be increased.
- d) The transport network must be economically efficient, competitive and equitable.
- e) Each economic sector must prepare and annually review a clear freight strategy that will ensure that goods are efficiently transported to the various markets.
- f) Safe and convenient public transport must be provided.

#### **C8.3.2 WATER**

- a) Water is the most vital natural form of capital (resource) of the municipality and must be invested in the most efficient and equitable manner.
- b) The basic water needs of all people in the municipality must be met.
- c) Pollution and degradation of the water resources must be prevented.
- d) The ecological integrity of the natural systems in the municipality must be restored and protected.
- e) The productive potential of land to promote the sustainable use of natural resources must be restored and maintained.
- f) Water quality and quantity are interdependent and shall be managed in an integrated manner which is consistent with the broader environmental management approaches.
- g) The private sector must fulfil an ongoing function as the de facto custodians of the water resources of the Municipality through the legal mechanisms provided for, including Water Use Associations, Irrigation Boards, Agri-Western Cape and Agricultural Associations.

#### **C8.3.3 ENERGY**

- a) The construction of electrical infrastructure must be strictly regulated in terms of the spatial plans and guidelines put forward in, amongst other, Toolkit D3 (Guidelines for

- scenic routes). They must be carefully placed to avoid visual impacts on landscapes of significant symbolic, aesthetic, cultural or historic value and should blend in with the surrounding environment as far as possible.
- b) EIAs undertaken for such construction must assess the impacts of such activities against the directives listed in Section (a) above.
  - c) Renewable energy sources such as wind, solar thermal and biomass are to constitute 25% of the Municipality's energy generation capacity by 2020.
  - d) Solar thermal water heating and photovoltaic energy generation are compulsory in large-scale developments. These systems should be linked to mains electricity sources as back-up. Renewable energy sources on new residential, commercial, small-scale industrial and community buildings and shall be progressively phased in as appropriate.
  - e) The following key policy principles for renewable energy apply:
    - (i) Full cost accounting: Pricing policies will be based on an assessment of the full economic, social and environmental costs and benefits of policies, plans, programmes, projects and activities of energy production and utilisation.
    - (ii) Equity: There should be equitable access to basic services to meet needs and ensure social equity. Each generation has a duty to avoid impairing the ability of future generations to ensure their well-being.
    - (iii) Global and international cooperation and responsibilities: Government will recognise its shared responsibility for global and regional issues and act with due regard for the principles contained in relevant policies and applicable regional and international agreements.
    - (iv) Allocation of functions: Government will allocate functions within the framework of the Constitution to the institutions and spheres of Government that can most effectively achieve the objective of a function within the context of energy policy.
  - f) The implementation of sustainable renewable energy is to be promoted through appropriate financial and fiscal instruments.
  - g) An effective legislative system to promote the implementation of renewable energy is to be developed, implemented, and continuously improved.
  - h) Public awareness of the benefits and opportunities of renewable energy must be promoted.
  - i) The development of renewable energy systems is to be used for economic development throughout the municipality, including the rural areas as part of the CRDP.

#### **C8.3.4 TELECOMMUNICATION**

- a) The construction of telecommunication infrastructure must be strictly regulated in terms of the spatial plans and guidelines put forward in the SDF. They must be carefully placed to avoid visual impacts on landscapes of significant symbolic, aesthetic, cultural or historic value and should blend in with the surrounding environment as far as possible.
- b) EIAs undertaken for such construction must assess the impacts of such activities against the directives listed in Section (a) above.
- c) Internet access into strategic locations such as schools in marginalised parts of the urban settlements and rural areas is to be accelerated.
- d) Wind farms are to be located where they will cause the least visual impact taking into consideration the viability of the project.
- e) Pipelines, transmission lines and telecommunications masts are to be aligned along existing and proposed transport corridors rather than along point to point cross-country routes.



### C8.3.5 HOUSEHOLD SERVICES

- a) Good sanitation is essential for the dignity, health and well-being of the people of the municipality. Good sanitation extends far beyond access to an acceptable toilet and the safe disposal of human waste, it includes practices that support good hygiene and a healthy living environment. Sanitation improvement is about more than providing a toilet infrastructure. It has a major public and primary health component, and calls for close co-ordination between technical, health and social development personnel.
- b) Sanitation is a key intervention that straddles several sectors – housing and settlement development, water services, water resource and environment management, primary and preventative health care, education, local economic development, municipal finance, etc. All of these institutions must co-operate and collaborate to ensure efficient sanitation services.
- c) The provision of household services to marginalised parts of the urban settlements and rural areas is to be prioritised.
- d) The integrated waste management approach must be implemented to ensure that the targets set in the plan are achieved. These plans need to be revised every four years to be aligned with that of the municipal IDP and SDF. The Waste Management System shall consist of a collection service from the source, (e.g. domestic, office or factory) transfer stations and waste disposal sites.
- e) Recycling of waste is a priority in the municipality. Institute material recovery facilities in every urban settlement in the municipality.
- f) Transfer stations must be properly managed according to best practice so as to minimise nuisance to surrounding neighbours. They should be opened after hours and on the weekends and their location should be well known so as to ensure that they are used by the community. Charges should not be levied on loads brought to transfer stations. Micro-enterprises wanting to process waste and trade second hand materials should be encouraged.
- g) Sewerage Plants and Refuse Areas should comply to NEMA regulations that *inter alia* state under Section (2)(4)(a) that *pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied. ... The waste is avoided, or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner.*
- h) Existing waste water treatment works must be progressively improved by means of regulatory measures and thereafter maintained so that the water quality of the rivers and water bodies with they are associated achieve minimum potable, contact and phosphate, nitrate and *E.coli* standards. This requires that they comply with the effluent quality requirements set out in their licenses.
- i) Alternative forms of sewage disposal and treatment for new developments are to be investigated with a view to minimising the source of waste water and minimising the pollution of surface water and groundwater.
- j) All wetland ecosystems must be protected in such a manner that their ecological and stormwater purification function is maintained. Water abstraction from and effluent discharge into wetlands should be prohibited.
- k) Where urban development proposals will exceed infrastructure capacity applications it shall be refused until provision is made to deal with the additional needs. There is an urgent need to change lifestyles particularly with respect to domestic waste generation.

## C8.4 STRATEGIES AND GUIDELINES

### C8.4.1 TRANSPORT

- a) Implement the key projects as identified in the *Local Integrated Transport Plan for Witzenberg Municipality*.
- b) Improve road, built and bulk infrastructure development and integrate into the infrastructure planning activities throughout the municipality.
- c) Improve the levels of mobility, infrastructure development and synergies in the transport planning activities.
- d) Establish a railway station at Wolseley for passengers and freight depot for transport of products to other provinces.
- e) Redevelopment of unutilised and expansion of transport infrastructures.
- f) Institute a network of pedestrian walkways and cycle paths in each urban settlement as a means to improve mobility but also to integrate and link previously segregated communities (e.g. section of R46 between Ceres and Nduli).
- g) Develop an overnight facility for heavy vehicles along the R46, outside Ceres.
- h) Institute road upgrades and associated facilities in the following areas (Witzenberg IDP, 2007-2011):
  - (i) Ceres/Bella Vista/Nduli:
    - Retief Street and route to Vredebes.
    - Taxi facilities at Nduli taxi ranks.
    - R46 from Nduli entrance to Ceres.
    - Speed bumps at Lyell and Berlinka Street intersection.
    - Traffic calming measures for Retief Street.
    - Pavements for Rooikamp to curb flooding.
  - (ii) Op-die-Berg:
    - R303 turn-off into town.
    - Speed bump in Church Street.
    - Tarring of roads in settlement.
    - Maintenance of provincial road (Prince Alfred Hamlet-Gydo-Citrusdal arterial).
  - (iii) Prince Alfred Hamlet:
    - 4-way stop/circle on R303 in town as means of slowing traffic.
    - Taxi/bus facilities.
    - Tarring of Abraham Street.
    - Speed bumps in Meul Street and Waboom Avenue.
  - (iv) Wolseley:
    - Safety measures for taxi and bus facilities in Pine Valley.
    - Better utilisation of rail network/
    - Speed bumps at Vydie and Belvinia Street intersection and 4<sup>th</sup> Avenue and Eiland Street.
    - Upgrade railway station to serve as a stop for the Shosholoza Meyl.
  - (v) Tulbagh:
    - Safety measures for taxi and bus facilities in Chris Hani and central taxi rank.

### C8.4.2 WATER

- a) Support the implementation and continual improvement of the comprehensive water plan and strategy of the Department of Water Affairs (DWA). This plan is to give effect to the Water Allocation Reform (WAR) which aims to:
  - (i) Take steps to meet the water needs of the poor.
  - (ii) Ensure participation by these groups in water resource management.
  - (iii) Promote the sustainable use of water resources.
  - (iv) Promote the beneficial and efficient use of water in the public interest.
- b) Implement low cost water supply options to supplement the conventional systems such as rain water harvesting, solar pumping, fog harvesting, windmills, and improving traditional sources. More creative thinking should be directed into the promotion of roof tanks, re-charging of groundwater resources and the development of traditional resources.
- c) Improve the Blue Drop status of municipal drinking water for Witzenberg.
- d) Implement water demand management techniques such as minimizing leaks by reducing water pressure and a stepped tariff system that effectively addresses excessive water consumption.
- e) Develop an invasive alien species control plan for the Municipality with particular focus on stressed catchments – a coordinated approach, long-term plan and sustained effort is required.
- f) Implement innovative water conservation measures in the municipality. Specific water-related issues that should receive attention include the following:
  - (i) Wards 7 and 11, Tulbagh: Redesign the stormwater channel in Van der Stel Street.
  - (ii) Wards 1 and 6, Nduli: Repair or remove the leaking dam.

### C8.4.3 ENERGY

- a) Prepare a renewable energy plan for the municipality indicating *inter alia* the role of different energy sources and how they should be integrated.
- b) Align renewable energy initiatives with the Department of Energy's Global Village Energy Partnership, and the Renewable Energy and Energy Efficiency Partnership.
- c) Draft guidelines for the household sector pertaining to the following:
  - (i) Regulation of no-cost energy efficiency measures in housing, incorporating passive solar design.
  - (ii) Heat insulation and air tightness measures in homes.
  - (iii) Replacement of electric geysers by solar water heaters.
  - (iv) More efficient home electrical appliances as a result of appliance labelling and enforcement of standards.
  - (v) Energy efficient lighting (i.e. compact fluorescent lights).
- d) Implement clean, renewable solutions and decentralize energy systems. There is no energy shortage. What is needed is to use existing technologies to harness energy effectively and efficiently.
- e) Reduce electricity losses by 1%. This is to be achieved by:
  - (i) Installing transformer meters and linking individual users to it; and
  - (ii) Identifying priority areas and addressing those losses.
- f) Provide lighting in the following streets and areas still in need:
  - (i) Wards 4 and 10, Prince Alfred Hamlet:
    - Roadside lighting between Prince Alfred Hamlet and Bella Vista.

- Meul Street and 'Die Bossie'.
- (ii) Wards 7 and 11, Tulbagh:
  - Informal structures.
- (iii) Wards 8 and 9, Op-die-Berg:
  - Street lighting.
  - Turn-off at R303.
- (iv) Ward 3 and 5, Ceres:
  - Safety flashlight in vicinity of Royal Café.
- (v) Ward 1 and 6, Nduli:
  - Street lighting along 'Canal Walk'.

#### **C8.4.4 TELECOMMUNICATION**

- a) Develop and institute a system that provides universal service access at reasonable cost, connecting all rural areas in the municipality. Creating world-class telecommunication infrastructure to meet the communication requirements of IT, media and other IT based industry.
- b) Develop telecommunication facilities in remote areas of the municipality.
- c) Ensure continual upgrading of the telecommunication sector and provide an equal opportunity for all of the telecommunication service providers.

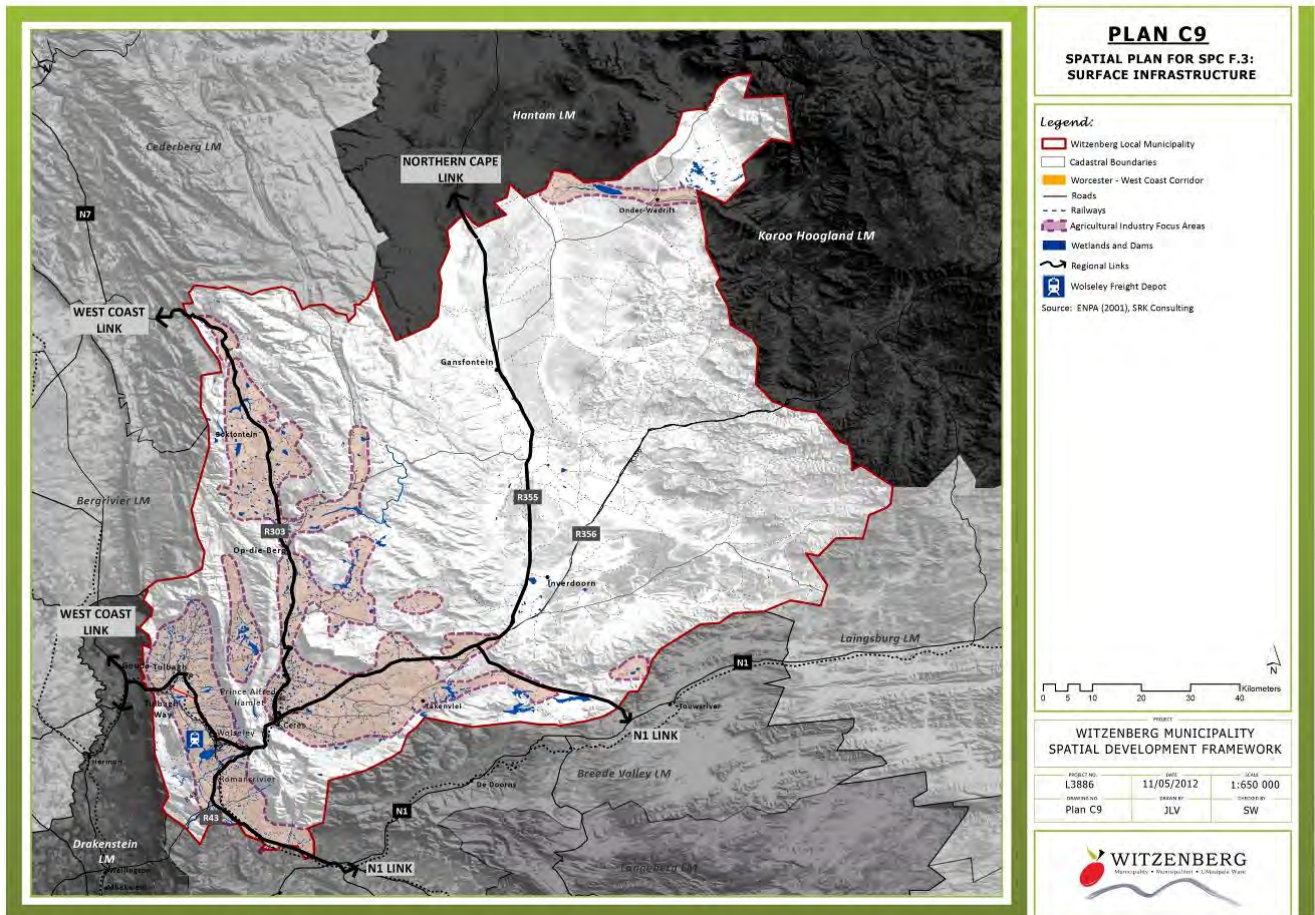
#### **C8.4.5 HOUSEHOLD SERVICES**

- a) Enforce new SANS 104 building codes that require the reduction of water and energy consumption, and the use of renewable building material wherever possible.
- b) Implement the Integrated Waste Management Plan for Witzenberg Municipality.
- c) Restructure urban settlements, in accordance with the Spatial Structuring Elements, so as to minimise the need to travel.
- d) Apply alternative forms of sewage treatment including enviro-loos, urine-diversion toilets, package plants and artificial wetlands should be implemented in new areas, if they do not impact on groundwater.
- e) Undertake a cemetery study to determine appropriate cemetery sites in all towns and settlements.
- f) Promote recycling of waste at source.
- g) Establish a centralised waste transfer station and composting facility in Ceres.
- h) Encourage public-private partnerships in the managing of waste recovery facilities.

#### **C8.5 SPATIAL PLAN**

The spatial plan for SPC F.3: Surface Infrastructure (Plan C9) is a constellation of the following:

- a) Spatial plan for SPC E: Agricultural Areas (Plan C6 on Page 157).
- b) Spatial plan for SPC F.2: Industrial Areas (Plan C8 on Page 195).
- c) Development corridors of Witzenberg Municipality (Map 31 on Page 124).
- d) Combined development index of settlements (Map 32 on Page 165).
- e) Development potential of settlements (Map 33 on Page 211).
- f) Transport network (Map 29 of Page 102).
- g) Wetlands and dams (Map 12 on Page 44).



## C9 STRATEGIC SECTORAL POLICY AND GUIDELINES

### C9.1 ENABLING SUSTAINABLE USE OF RESOURCES (CAPITAL)

The sustainable use of the resources (capital) of the Municipality is a primary objective of the Western Cape PSDF and the enabling national statutes and policy. A key aim of the PSDF is to give effect to the above objective and to ensure that any such use of resources unlocks meaningful and lasting benefit for both the people of the Municipality (i.e. enhancing social equity) and the environment (i.e. enhancing the integrity of the environment). This means that any resource use must, on balance, *'improve the state of'* the conditions or circumstances prevalent in the area to be affected by the resource use.

Whilst being imperative for the economic development of the Municipality, agriculture, urban development, bulk infrastructure and renewable energy installations generally have a detrimental impact on the environment which, in turn, often manifests in a negative impact on human-well-being and on the tourism product. The following objectives and policy apply in this regard:

#### C9.1.1 OBJECTIVES

- Offset direct detrimental impacts of resource use to the extent that it would, on balance, improve the 'state of' in the relevant area in the long-term.
- Provide measures to cater for indirect impacts or impacts that may in the long-term emerge as a result of resource use.

- c) Unlock the latent benefit and synergies vested in the resource use in order to create a positive socio-economic legacy once the initial resource use has reached its productive life cycle.

### C9.1.2 POLICY

- a) All large-scale resource use activities must, on an on-going basis and in a balanced manner, give effect to the imperatives for sustainable development namely, *social equity, environmental integrity* and *economic efficiency*.
- b) All large-scale resource use activities must be managed in accordance with a best-practice Environmental Management System (EMS) that provides for on-going monitoring, auditing and continual improvement as it relates to environmental performance and compliance with (a) above.
- c) All large-scale resource use activities must be planned, implemented and managed in accordance with the *Sustainable Development Initiative* (SDI) (refer to Toolkit D8) or any comparable approach.
- d) Where tracts of agricultural land are to be used for non-agricultural uses such as construction of renewable energy installations, such activities must create sustainable multipliers in the local economy and synergies that would unlock meaningful benefit through implementation programmes (refer to Toolkit D8).
- e) Applications for approval of large-scale consumptive resource use activities must be preceded by a comprehensive checklist to be submitted and discussed with the Municipality (refer to Toolkit D10).
- f) Following on the endorsement of the checklist by the Municipality a comprehensive *Project Development Framework* is to be prepared, which must include *inter alia* the following (also refer to the proposal checklist in Toolkit D10):
- (i) Detailed description of the proposed project.
  - (ii) Graphic illustrations of the nature and extent of the proposed project.
  - (iii) Proposals pertaining to how effect would be given to the objectives cited under Chapter C8.1.1.
  - (iv) Proposals pertaining to how the detrimental impacts of the proposed project would be mitigated.
- g) The *Project Development Framework* will serve as a basis for the EIA to be undertaken in terms of NEMA and for assessing the desirability of the project in an integrated, holistic and informed manner.
- h) Resource exploration is subject to the precautionary principle as stipulated by NEMA.
- i) Proponents of resource exploration projects must provide assurance pertaining to the existence of an adequate mitigation fund that could be used to off-set unforeseen detrimental impacts associated with the project.
- j) Effect must be given to the following policy documented under Chapter C4.2.3 and C5.3 respectively, namely:
- *C4.2.3(l): Any modification of an SPC B area is subject to an appropriate environmental off-set or quid pro quo. Such off-set could be in the form of other SPC B land being formally designated as SPC A, mitigation banking (i.e. putting an appropriate amount of monetary capital into a trust to fund conservation initiatives where required) and implementation of the SDI approach.*
  - *C5.3(e): Any non-agricultural development on a SPC C area is subject to an appropriate environmental off-set or quid pro quo. Such off-set could be in the form of designated SPC B land being formally designated as SPC A, or mitigation banking (i.e. putting an*

*appropriate amount of monetary capital into a trust to fund conservation or social development initiatives where required) in accordance with the SDI approach.*

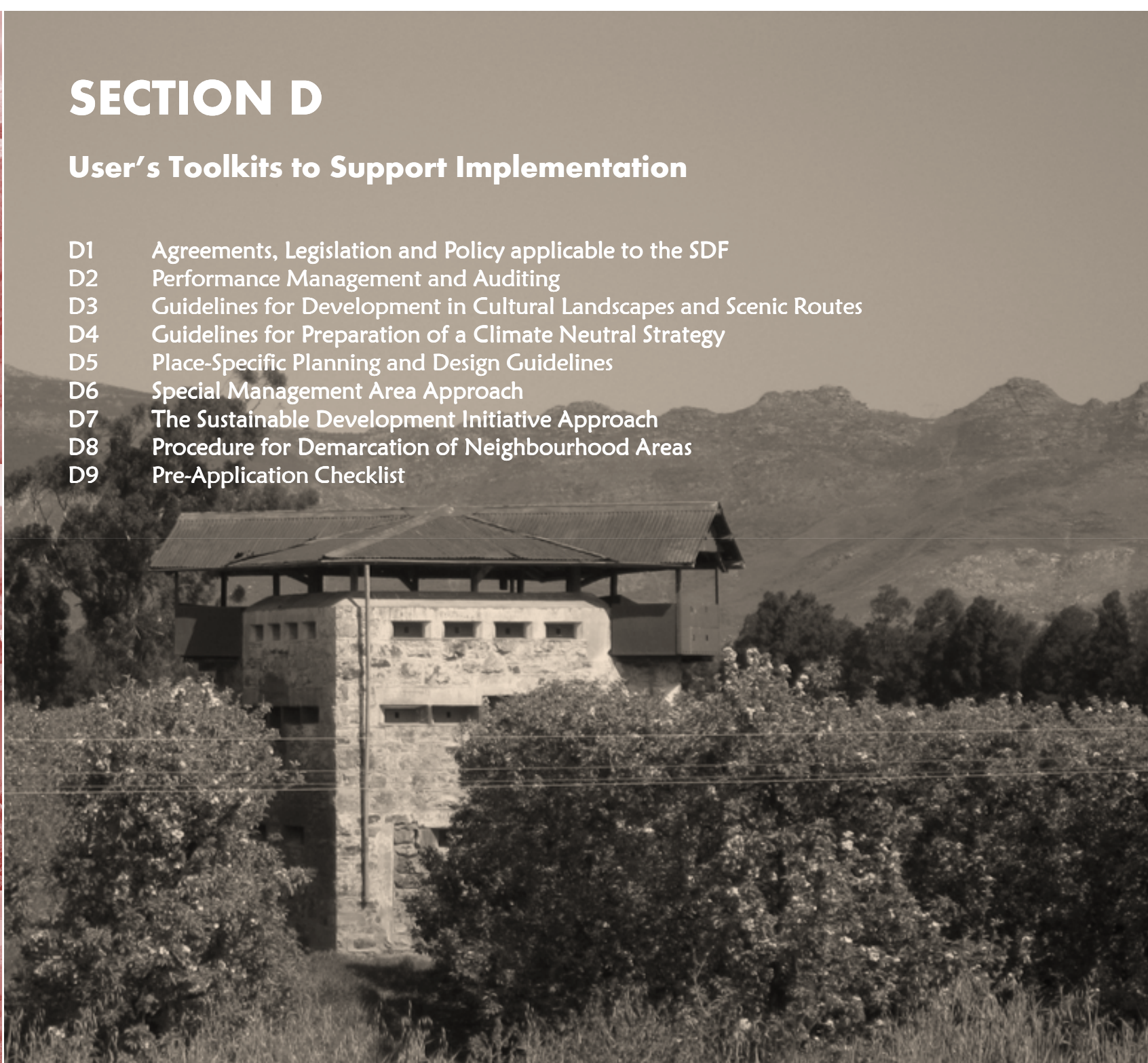
### **C9.1.3 PRIORITISED STRATEGIES AND IMPLEMENTATION GUIDELINES**

NUMBER	DESCRIPTION	RESPONSIBLE INSTITUTION	PRIORITY
C.9.1.3(a)	Plan, implement and manage all large-scale resource use projects in accordance with the SDI approach, or any comparable approach, as a strategy to enhance social equity and environmental integrity through the unlocking and innovative investment of capital.	Municipality	High/ On-going
C.9.1.3(b)	Plan and manage areas where large-scale resource use projects are undertaken as a Special Management Area. This is to serve as a strategy to facilitate integrated land management, land reform and social equity, and the implementation of the <i>LandCare</i> programme of the Department of Agriculture and <i>Stewardship Agreements</i> regarding the conservation of biodiversity.	Municipality	High/ On-going

# SECTION D

## User's Toolkits to Support Implementation

- D1 Agreements, Legislation and Policy applicable to the SDF
- D2 Performance Management and Auditing
- D3 Guidelines for Development in Cultural Landscapes and Scenic Routes
- D4 Guidelines for Preparation of a Climate Neutral Strategy
- D5 Place-Specific Planning and Design Guidelines
- D6 Special Management Area Approach
- D7 The Sustainable Development Initiative Approach
- D8 Procedure for Demarcation of Neighbourhood Areas
- D9 Pre-Application Checklist





## SECTION D: USERS' TOOLKITS TO SUPPORT IMPLEMENTATION

### TOOLKIT D1 AGREEMENTS, LEGISLATION AND POLICY APPLICABLE TO THE SDF

#### TOOLKIT SYNOPSIS

The South African Government is a signatory to a number of international protocols, conventions and agreements pertaining to the above aspects. Consequently, all spheres of government (including the Witzenberg Municipality) are obliged to adopt and give effect to these protocols, conventions and agreements. The purpose of this toolkit is to list the relevant protocols, conventions and agreements.

As described in Chapter C3, all sectoral departments and functionaries, municipalities, economic sectors, and the private sector in general are to give effect to the said obligations through the preparation and implementation of SDFs and, in particular, through strategies that give practical effect to the objectives of the relevant protocols, conventions and agreements. The aspects that are specifically applicable to the ongoing governance of the Witzenberg Municipality have been indicated and colour-coded.

#### D1.1 SOUTH AFRICAN CONSTITUTION

The Constitution of the Republic of South Africa Act 108 of 1996 places an obligation on all to ensure that sustainable development is promoted and that the integrity of the natural environment is respected. In terms of the Constitution and NEMA the term 'environment' cannot be limited to the non-human natural environment, but must be defined broadly to specifically include the inter-relationships between human and the natural environment. This wider definition of environment would then incorporate both socio-economic and cultural dimensions of these inter-relationships.

Under Section 152 of the Constitution it is stated that the objectives of local government are *inter alia* to ensure provision of services to communities in a sustainable manner, to promote social and economic development, to promote a safe and healthy environment, etc. The Constitution stipulates the developmental duties of municipalities, instructing municipalities to structure and manage its administration, and budgeting and planning processes to give priority to the basic needs of the community, and to promote social and economic development of the community.

Section 24(b) of the Constitution places a positive duty on the State, i.e. Witzenberg Municipality, to protect the environment, referring to natural, socio-economic and cultural inter-relationships, for the benefit of future and present generations. This is to be achieved through legislative and administrative measures. Should Witzenberg Municipality not take steps to secure these goals (Section 24{b}[iii] – *secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development*) the individual's right to have the environment protected will be violated.

In order to enable the Municipality to '*respect, protect, promote and fulfil this right*' and to ensure that the quality of life of each citizen is improved, the Constitution awarded major developmental responsibilities to local government.

This developmental role includes the provision of basic services, employment creation and the eradication of poverty and inequality. Section 153 of the Constitution states that as part of the development duties the Witzenberg Municipality must '*structure and manage its administrative, budgeting and planning processes to give priority to the basic needs of the community, and to promote the social and economic development of the community....*'

## **D1.2 SPATIAL PLANNING AND LAND USE MANAGEMENT BILL**

Pre-1994 planning legislation was designed to serve a different political idea that included - segregation, differentiation and privilege. This led to a fragmented system of boundaries and disjointed planning which manifested itself in unequal, incoherent and inefficient settlement patterns. The Development Facilitation Act 67 of 1995 was promulgated as an interim measure to deal with this legacy but was later found to be unconstitutional. In 2012, many of the former laws governing the previous Bantustans were still on the books. A single comprehensive piece of legislation to attend to this task had been called for and thus the current Spatial Planning and Land Use Management Bill 14 of 2012 (SPLUM) was drafted. The absence of a single national legislation had led to a lack of shared vision and clarity over which department is responsible for land-use and spatial planning. Subtle turf wars between the national government and the provinces had arisen over this issue (PMG, 2012)<sup>1</sup>.

The Spatial Planning and Land Use Management Bill 14 of 2012 emerged through the Green Paper and White Paper processes to replace the Development Facilitation Act 67 of 1995, as a legislative instrument to regulate spatial planning and land-use management in the country. As stated under Section 3 of the Bill, the objects are to:

- (a) Provide for a uniform, effective and comprehensive system of spatial planning and land-use management for South Africa.
- (b) Ensure that the system of spatial planning and land-use management promotes social and economic inclusion.
- (c) Provide for development principles and norms and standards.
- (d) Provide for the sustainable and efficient use of land.
- (e) Provide for cooperative government and intergovernmental relations amongst the national, provincial and local spheres of governance.
- (f) Redress the imbalances of the past and to ensure that there is equity in the application of spatial development planning and land-use management systems.

Section 5 of the Bill refers to categories of spatial planning and local municipal planning consists of the following:

- (a) The compilation, approval and review of integrated development plans.
- (b) The compilation, approval and review of the components of an integrated development plan prescribed by legislation and falling within the competence of a municipality, including a spatial development framework and a land-use scheme
- (c) The control and regulation of the use of land within the municipal area where the nature, scale, and intensity of the land-use do not affect the provincial planning mandate of provincial government or the national interest.

<sup>1</sup> PMG, 2012: Spatial Planning and Land Use Management Bill [B14-2012]: briefing by Minister. <http://www.pmg.org.za/report/20120724-briefing-department-rural-development-and-land-reform-spatial-plannin>

Under Chapter 4: Part 4 of this Bill the preparation and content of municipal spatial development frameworks is described and stipulated. Part F in Chapter 4 of the Bill stipulates the status of an SDF: *a municipal tribunal or any other authority required or mandated to make a land development decision in terms of this Act (i.e. the Bill) or any law relating to land development may not make a decision which is inconsistent with a municipal spatial development framework.*

The Witzenberg Municipality should align itself to the objectives and principles of the Bill and should adhere as stated *inter alia* in the preamble *by promoting sustainable development of land that requires the integration of social, economic and environmental considerations in both forward planning and ongoing land-use management to ensure that development to ensure that development of land serves present and future generations.*

### **D1.3 DEVELOPMENT FACILITATION ACT**

The Development Facilitation Act (DFA) 67 of 1995 contains provisions and general principles relating to land development. Provision is made in the Act for granting statutory status to such principles and policies in both the national and provincial spheres of government.

In June 2010, the Constitutional Court found Chapters 5 and 6 of the Development Facilitation Act 67 of 1995 unconstitutional. It provided a two-year suspension of the declaration of invalidity, until June 2012, to remedy this situation. Thus the Development Facilitation Act would be replaced in its entirety by the Spatial Planning and Land Use Management Act (currently still a Bill). The processing of the Bill however had been very tedious and the 18 June 2012 deadline to correct defects in the Development Facilitation Act 67 of 1995 was not met by the Department of Rural Development and Land Reform. The Minister of DRDLR requested that the processing of the Bill to be promulgated as an Act should be accelerated with due haste since sustainable land-use and spatial planning is crucial to the future of the country (PMG, 2012).

### **D1.4 LOCAL GOVERNMENT: MUNICIPAL SYSTEMS ACT**

As mentioned above, with the Constitution being the supreme law of the Republic of South Africa, the obligations imposed by it must be fulfilled and any law or conduct which is inconsistent with it is invalid. The Municipal Systems Act 32 of 2000 was therefore promulgated to provide the legal framework to enable municipalities to fulfil their developmental role. The Witzenberg Municipality must, through its land-use planning, and together with other organs of state, contribute to the progressive realisation of the fundamental rights to a safe, healthy environment, protection of property, housing, health care, food, water, and social security, and education.

It is stated in the preamble of this Act '*... enable municipality to move progressively towards the social and economic upliftment of local communities ... frontline development agency capable of integrating the activities of all spheres of government for the overall social and economic upliftment of communities in harmony with their natural environment*'. The municipal institution is an organ of state, which exercises legislative and executive powers. Municipal powers are exercised in a system of co-operative government which allows the three spheres of government to work together effectively. Municipalities should participate in organised local government structures so that their views are represented in national processes. Participation in organised local government also allows municipalities to draw on each other's experiences and develop common approaches and find solutions in common problems.

The Municipal Systems Act lists two main principles that must be adhered to during the process of integrated development planning which includes the Witzenberg SDF, namely:

- a) *Municipal planning must be developmentally-orientated* (Section 23), which implies that development planning must be geared towards fulfilling the objectives and duties set out in Sections 152 and 153 of the Constitution. Development planning must furthermore, together with other organs of state, contribute to the progressive realisation of the fundamental rights to a safe and healthy environment; protection of property; housing; health care; food; water and social security; and education.
- b) *Municipal planning must take place within the framework of co-operative government* (Section 3 and Section 24) which implies that municipal planning cannot take place in isolation – it must be aligned with the plans and strategies of national, provincial and local government.

### **D1.5 NATIONAL ENVIRONMENTAL MANAGEMENT ACT**

The National Environmental Management Act 107 of 1998 (NEMA) provides for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance, and procedures for co-ordinating environmental functions exercised by organs of state. It further seeks to provide for certain aspects of the administration and enforcement of other environmental management laws.

Chapter 1, Section 2 of NEMA contains principles pertaining to actions that may significantly affect the environment which apply to all organs of State, including the Witzenberg Municipality. These principles must guide decisions under NEMA or any statutory provision concerning the protection of the environment. The principles also guide interpretation, administration and implementation of NEMA and any other law concerned with the protection or management of the environment. Sections 2(2) to 2(4) of NEMA are applicable to every person that does something that may impact the environment.

The Witzenberg Municipality must therefore take cognisance of the following principles as it relates to any action or decision impacting on the environment:

- (2) *Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.*
- (3) *Development must be socially, environmentally and economically sustainable.*
- (4)(a) *Sustainable development requires the consideration of all relevant factors including the following:*
  - (i) *that the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;*
  - (ii) *that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;*
  - (iii) *that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;*
  - (i) *that waste is avoided, or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner;*
  - (ii) *that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;*

- (iii) that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;*
  - (vii) that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and*
  - (viii) that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.*
- (4)(b) Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.*
  - (4)(c) Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.*
  - (4)(d) Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human well-being must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination.*
  - (4)(e) Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.*
  - (4)(f) The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.*
  - (4)(g) Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including traditional and ordinary knowledge.*
  - (4)(h) Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.*
  - (4)(i) The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.*
  - (4)(j) The right of workers to refuse work that is harmful to human health or the environment and to be informed of dangers must be respected and protected.*
  - (4)(k) Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law.*
  - (4)(l) There must be intergovernmental co-ordination and harmonisation of policies, legislation and actions relating to the environment.*
  - (4)(m) Actual or potential conflicts of interest between organs of state should be resolved through conflict resolution procedures.*
  - (4)(n) Global and international responsibilities relating to the environment must be discharged in the national interest.*
  - (4)(o) The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.*
  - (4)(p) The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental*

*damage or adverse health effects must be paid for by those responsible for harming the environment.*

- (4)(q) The vital role of women and youth in environmental management and development must be recognised and their full participation therein must be promoted.*
- (4)(r) Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.*

## **D1.6 HOUSING ACT**

The Housing Act 107 of 1997 provides for the facilitation of a sustainable housing development process by laying down general principles applicable to housing development in all spheres of government and by defining the functions of national, provincial and local governments in respect of housing development. It furthermore makes provision for the establishment of a South African Housing Development Board and matters related thereto.

The Witzenberg Municipality must apply the following general principles when undertaking housing development projects (section 2 of this Act):

- (1) National, provincial and local spheres of government must-*
  - (a) give priority to the needs of the poor in respect of housing development;*
  - (b) consult meaningfully with individuals and communities affected by housing development;*
  - (c) ensure that housing development-*
    - (i) provides as wide a choice of housing and tenure options as is reasonably possible;*
    - (ii) is economically, fiscally, socially and financially affordable and sustainable;*
    - (iii) is based on integrated development planning; and*
    - (iv) is administered in a transparent, accountable and equitable manner, and upholds the practice of good governance;*
  - (d) encourage and support individuals and communities, including, but not limited to, co-operatives, associations and other bodies which are community based, in their efforts to fulfil their own housing needs by assisting them in accessing land, services and technical assistance in a way that leads to the transfer of skills to, and empowerment of, the community;*
  - (e) promote-*
    - (i) education and consumer protection in respect of housing development;*
    - (ii) conditions in which everyone meets their obligations in respect of housing development;*
    - (iii) the establishment, development and maintenance of socially and economically viable communities and of safe and healthy living conditions to ensure the elimination and prevention of slums and slum conditions;*
    - (iv) the process of racial, social, economic and physical integration in urban and rural areas;*
    - (v) the effective functioning of the housing market while levelling the playing fields and taking steps to achieve equitable access for all to that market.*
    - (vi) measures to prohibit unfair discrimination on the ground of gender and other forms of unfair discrimination by all actors in the housing development process;*

- (vii) *higher density in respect of housing development to ensure the economical utilisation of land and services;*
- (viii) *the meeting of special housing needs, including, but not limited to, the needs of the disabled;*
- (ix) *the provision of community and recreational facilities in residential areas;*
- (x) *the housing needs of marginalised women and other groups disadvantaged by unfair discrimination; and*
- (xi) *the expression of cultural identity and diversity in housing development;*
- (f) *take due cognisance of the impact of housing development on the environment;*
- (g) *not inhibit housing development in rural or urban areas;*
- (h) *in the administration of any matter relating to housing development-*
  - (i) *respect, protect, promote and fulfil the rights in the Bill of Rights in Chapter 2 of the Constitution;*
  - (ii) *observe and adhere to the principles of co-operative government and intergovernmental relations referred to in section 41 (1) of the Constitution; and*
  - (iii) *comply with all other applicable provisions of the Constitution;*
- (i) *strive to achieve consensus in regard to the policies of the respective spheres of government in respect of housing development;*
- (j) *observe and adhere to the principles in Chapter 1 of the Development Facilitation Act, 1995 (Act 67 of 1995), in respect of housing development;*
- (k) *use public money available for housing development in a manner which stimulates private investment in, and the contributions of individuals to, housing development;*
- (l) *facilitate active participation of all relevant stakeholders in housing development; and*
- (m) *observe and adhere to all principles for housing development prescribed under subsection (2).*

The Housing Act also makes provision for the drafting of a *National Housing Code* that must contain national housing policy and may include administrative or procedural guidelines in respect of the implementation and application of the national housing policy.

## **D1.7 NATIONAL SPATIAL DEVELOPMENT PERSPECTIVE**

The Cape Winelands District Municipality has been identified as a pilot project for the NSDP. The NSDP provides high-level principles to align investment in social and economic infrastructure across departments and spheres of government in order to give practical effect to its key priority of increasing economic growth and promoting social inclusion. The South African government's key priority is to increase economic growth and to promote social inclusion. A clearly articulated set of spatial priorities and criteria is one of the mechanisms through which government provides a strategic basis for focusing government action, weighing up trade-offs, and linking the strategies and plans of the three spheres and agencies of government.

Being a NSDP pilot study, the District Municipality and the associated local municipalities (i.e. Witzenberg Municipality) are required to think innovatively and strategically about how to address its social and economic challenges in a sustainable manner. The NSDP is a critical instrument for policy co-ordination, with regard to the spatial implications of infrastructure programs in national, provincial and local spheres of government. It is in this context that in January 2003, the NSDP was approved as an indicative tool for development planning in government.

The NSDP provides for:

- a) A set of principles and mechanisms for guiding infrastructure investment and development decisions.
- b) A description of the spatial manifestations of the main social, economic and environmental trends that should form the basis for a shared understanding of the national space economy.
- c) An interpretation of the spatial realities and the implications for government intervention.

The NSDP has been updated in 2006 and its ultimate purpose is to fundamentally reconfigure historic apartheid-based spatial relations, and to implement spatial priorities that meet the constitutional imperative of providing basic services to all and alleviating poverty and inequality. The NSDP examines the spatial dimensions of social exclusion and inequality, recognising the burden that unequal and inefficient spatial arrangements place on communities. For example, the poor have to incur huge transportation costs by commuting large distances to and from work. Furthermore, the NSDP provides a spatial vision and framework to steer detailed policies and investment decisions towards the achievement of common national objectives.

The following five normative principles has to be given practical effect to in the Witzenberg Municipality through its IDP and SDF in order to contribute to the broader growth and development policy objectives of government:

- (i) Rapid economic growth that is sustained and inclusive is a prerequisite for the achievement of other policy objectives among which poverty alleviation is key.
- (ii) Government has a constitutional obligation to provide basic services to all citizens (e.g. water, energy, health and educational facilities) wherever they reside.
- (iii) Beyond the constitutional obligation, government spending on fixed investment should be focused on localities of economic growth and/or economic potential in order to gear up private-sector investment, to stimulate sustainable economic activities, and to create long-term employment opportunities.
- (iv) Efforts to address past and current social inequalities should focus on people, not places. In localities where there are both high levels of poverty and demonstrated economic potential, this could include fixed capital investment beyond basic services to exploit the potential of those localities. In localities with low demonstrated economic potential, Government should, beyond the provision of basic services, concentrate primarily on human capital development by providing, social transfers such as grants, education and training, and poverty-relief programs.
- (v) In order to overcome the spatial distortions of apartheid, future settlement and economic development opportunities should be channelled into activity corridors and nodes that are adjacent to or that link the main growth centres.

The abovementioned NSDP principles are to be aligned and are to focus government actions and investment in order to achieve maximum social and economic results within the context of limited resources (refer to the Chapter B3 for the detailed analyses of the urban settlements of Witzenberg in terms of the NSDP principles).



## **D1.8 'BREAKING NEW GROUND': COMPREHENSIVE PLAN FOR THE DEVELOPMENT OF SUSTAINABLE HUMAN SETTLEMENTS**

This policy document which was published by the National Department of Housing, calls for the following:

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

The Breaking New Ground Strategy provides the following guidelines which is particularly relevant to the drafting of the Witzenberg SDF:

- (i) Residents should live in a safe and secure environment, and have adequate access to economic opportunities, a mix of safe and secure housing, and tenure types, reliable and affordable basic services, educational, entertainment and cultural activities, and health, welfare and police services.
- (ii) Ensure the development of compact, mixed land-use, diverse, life-enhancing environments with maximum possibilities for pedestrian movement and transit via safe and efficient public transport in cases where motorised means of movement is imperative.
- (iii) Ensure that low-income housing is provided in close proximity to areas of opportunity.
- (iv) Integrate previously excluded groups into the city, and the benefits it offers, and to ensure the development of more integrated, functional and environmentally sustainable human settlements, towns and cities. The latter includes densification.
- (v) Encourage Social (Medium-Density) Housing – Social Housing is generally medium-density, and this housing intervention may make a strong contribution to urban renewal and integration.
- (vi) There is a need to move away from a housing-only approach to a more holistic development of human settlements, including the provision of social and economic infrastructure.
- (vii) Multi-purpose cluster concept will be applied to incorporate the provision of primary municipal facilities, such as parks, playgrounds, sports fields, crèches, community halls, taxi ranks, satellite police stations, municipal clinics and informal trading facilities.
- (viii) More appropriate settlement designs and housing products, and more acceptable housing quality.
- (ix) Enhancing settlement design by including design professionals at planning and project design stages, and developing design guidelines.
- (x) There is a need to focus on changing the face of the stereotypical RDP houses, and settlements, through the promotion of alternative technology and design.
- (xi) Social housing must be understood to accommodate a range of housing product designs to meet spatial and affordability requirements. Social housing products may include:

- Multi-level flat, or apartment options, for higher income groups, incorporating beneficiary mixes to support the principle of integration and cross-subsidisation.
  - Co-operative group housing.
  - Transitional housing for destitute households.
  - Communal housing with a combination of family and single-room accommodation with shared facilities and hostels.
- (xii) Funding support will shift away from the current emphasis on uniform individual subsidies towards equity support for social institutions, determined as a percentage of the total capital cost of the project, including medium-density housing, communal housing, hostels and transitional housing.

These above-mentioned directives should be translated into a hierarchy of spatial directives and normative principles.

## D1.9 NATIONAL HOUSING CODE

The National Housing Code (2009) sets the underlying policy principles, guidelines and norms and standards which apply to Government's various housing assistance programmes introduced since 1994. The Code is aimed at simplifying the implementation of housing projects by being less prescriptive while providing clear guidelines.

The National Housing Code provides a broad overview of the following housing assistance programmes which are available to the Witzenberg Municipality:

- a) **Integrated Residential Development Programme:** Makes provision for the planning and development of housing projects that caters for a broad spectrum of land-uses and needs, i.e. housing social and economic needs.
- b) **Upgrading of Informal Settlements Programme:** Facilitates the *in situ* upgrading of informal settlements in a structured manner, including the possible relocation and resettlement of people.
- c) **Provision of Social and Economic Facilities:** Provides assistance to municipalities which do not have sufficient financial resources to provide public social and economic facilities.
- d) **Housing Assistance in Emergency Circumstances:** Financial assistance in the form of grants is provided to municipalities for the provision of temporary aid *in re* housing provision in absolute emergency situations.
- e) **Social Housing Programme:** Provides affordable rental units in 'restructuring zones' as identified by municipalities as areas of economic opportunity where urban renewal/restructuring can be best achieved.
- f) **Institutional Housing Subsidy Programme:** Provides capital grants to social housing institutions which construct and manage affordable rental units. It also makes provision for the sale of units by the social housing institution after at least four years have lapsed.
- g) **Community Residential Units Programme:** Facilitates the provision of secure, stable rental tenure for lower income persons and provides a coherent framework for dealing with the many different forms of existing public sector residential accommodation.
- h) **Individual Subsidy Programme:** Provides access to state assistance where qualifying households wish to acquire an existing house or vacant serviced residential stand, linked to a house construction contract through an approved mortgage loan.
- i) **Rural Subsidy:** Communal Land Rights: Provides for subsidies for housing developments on communal land registered in the name of the state or which will be held by community members subject to the rules or custom of that community.

- j) **Consolidation Subsidy Programme:** Provides households who have received serviced sites in terms of state housing schemes instituted pre-1994 with a consolidation subsidy which enable the completion of houses on the serviced sites.
- k) **Enhanced Extended Discount Benefit Scheme:** Intended to stimulate and facilitate the transfer of public housing stock to qualifying occupants (i.e. pre-1994 housing stock).
- l) **Rectification of Certain Residential Properties Created under the Pre-1994 Housing Dispensation:** Facilitates the improvement of state-financed residential properties created through State housing programme interventions during the pre-1994 housing dispensation that are still in ownership of the public sector institution and/or that were disposed of to beneficiaries.
- m) **Enhanced People's Housing Process:** Assists households who wish to enhance their houses by actively contributing towards the building of their own homes. The process allows beneficiaries to establish a housing support organisation that will provide them with organisational, technical and administrative assistance. Training and guidance on how to build houses are also supplied.
- n) **Farm Residents Housing Assistance Programme:** Attempts to address the wide variety of housing needs of people working and residing on farms by providing a flexible package of housing models to suit the local context.

#### D1.10 CAPE FLORAL REGION PROTECTED AREAS WORLD HERITAGE SITE

The UNESCO World Heritage Convention has declared the Cape Floral Region as a Natural World Heritage Site under the following criteria:

- (a) Criterion 44 (a)(ii): Outstanding example representing significant ongoing ecological and biological processes in evolution.
- (b) Criterion 44 (a)(iv): The most important and significant natural habitats for *in situ* conservation of biological diversity.

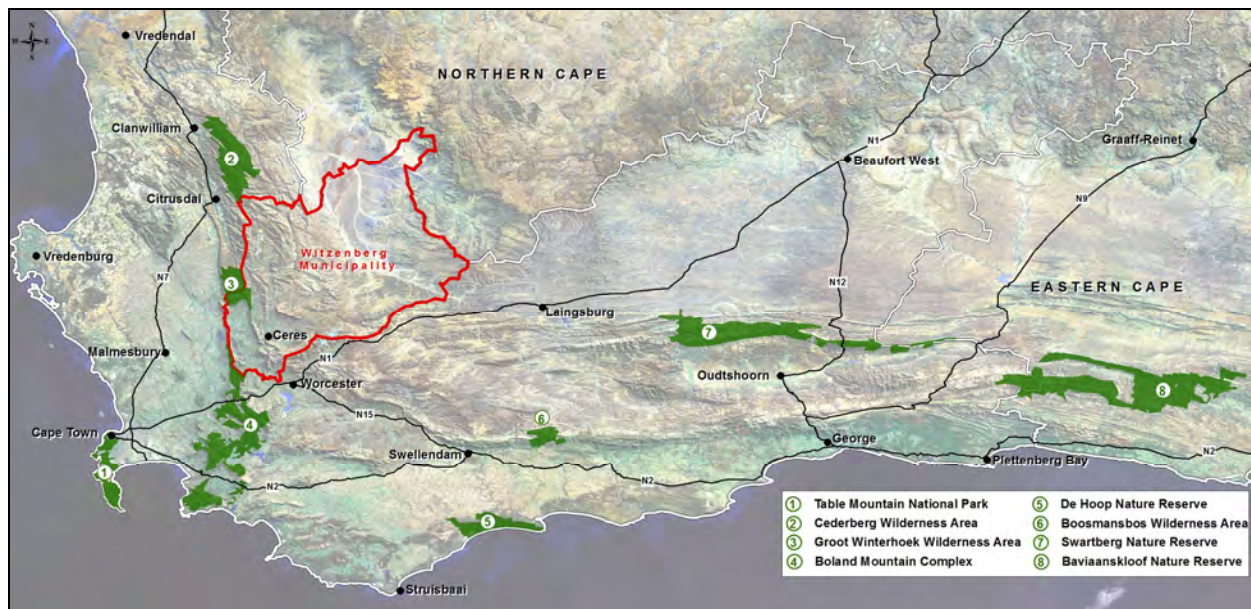


Figure D1: Witzenberg Municipality in context of the Cape Floral Region Protected Areas World Heritage Site.

Since a part of the Witzenberg Municipality falls in the Cape Floral Region Protected Areas World Heritage Site it is important that the Municipality gives practical effect to effective management of

this World Heritage Site by ensuring that the surrounding environment are of a high quality, both naturally and culturally. The outstanding diversity, density and endemism of the flora in this region are unique and must be preserved. The plant reproductive strategies, adaptations to fire regimes, patterns of seed dispersal by insects, as well as patterns of endemism and adaptive radiation found in the Cape Flora, are of exceptional value to science and these processes must be left undisturbed.

### **D1.11 NATIONAL DEVELOPMENT PLAN: VISION 2030**

On 11 November 2011, the National Planning Commission unveiled the *National Development Plan: Vision for 2030* which charts a new path in South Africa to eliminate poverty and reduce inequality by 2030, and has the overall target to reduce the number of households living below R418 a month per person from 39% to zero. Furthermore, it states that unemployment should fall from 27% in 2011 to 6% by 2030 by creating 11 million additional jobs.

The National Development Plan states that developing and upgrading capabilities to enable sustainable and inclusive development requires a new approach and a new mindset. It proposes the following:

- (i) Creating jobs and livelihoods.
- (ii) Expanding infrastructure.
- (iii) Transitioning to a low-carbon economy.
- (iv) Transforming urban and rural spaces.
- (v) Improving education and training.
- (vi) Providing quality health care.
- (vii) Building a capable state.
- (viii) Fighting corruption and enhancing accountability.
- (ix) Transforming society and uniting the nation.

Chapter 8 of the National Development Plan deals with transforming human settlements and proposes *inter alia* the following overarching principles for all spatial development:

- a) *Spatial justice*: The historic policy of confining particular groups to limited space (ghettosiation and segregation) and the unfair allocation of public resources between areas must be reversed.
- b) *Spatial sustainability*: Sustainability patterns of consumption and production should be supported, and ways of living promoted that do not damage the natural environment. Walkable neighbourhoods, for example, reduce the need to travel and limit greenhouse gas emissions.
- c) *Spatial resilience*: Vulnerability to environmental degradation, resource scarcity and climatic shocks must be reduced. Ecological systems should be protected and replenished.
- d) *Spatial quality*: The aesthetic and functional features of housing and the built environment need to be improved to create more liveable, vibrant and valued places.
- e) *Spatial efficiency*: Productive activity and jobs should be supported, and burdens on business minimised. Efficient commuting patterns and circulation of goods and services should be encouraged, with regulatory procedures that do not impose unnecessary costs on development.

### D1.12 OTHER APPLICABLE LEGISLATION AND POLICY DIRECTIVES

The following key national statutes provide the legislative context for the preparation of the Witzenberg SDF:

- a) National Heritage Resources Act 25 of 1999.
- b) Conservation of Agricultural Resources Act 43 of 1983 (CARA).
- c) Disaster Management Act 57 of 2002.
- d) Environment Conservation Act 73 of 1989.
- e) National Water Act 36 of 1998.
- f) National Environment Management Biodiversity Act 10 of 2004.
- g) Mineral and Petroleum Resources Development Act 28 of 2002.
- h) National Environment Management Protected Areas Act 57 of 2003.
- i) White Paper on development & promotion of tourism in South Africa (DEAT, 1996).
- j) White Paper on Agriculture (Dept. of Agriculture, 1995).
- k) Comprehensive Rural Development Program.
- l) Comprehensive Agricultural Support Program.

### D1.13 PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK (PSDF)

The Provincial Spatial Development Framework (PSDF) was approved on 24 June 2009<sup>2</sup> as an Article 4(6) structure plan in terms of LUPO. The PSDF is currently under review.

As described under Chapter 1.6 of the PSDF, the PSDF is aligned with the National Spatial Development Perspective and endorses the vision of Provincial Government of the Western Cape to create *'a home for all'*. In order to achieve this vision, the PSDF aims to:

- a) Be the spatial expression of the Provincial Growth and Development Strategy (PGDS).
- b) Guide municipal (district, local and metropolitan) Integrated Development Plans (IDPs) and Spatial Development Frameworks (SDFs) and provincial and municipal Spatial Development Plans (SDPs).
- c) Help prioritise and align investment and infrastructure plans of other provincial departments, as well as the plans and programs of national departments and parastatals in the Province.
- d) Provide clear signals to the private sector about desired development directions.
- e) Increase predictability in the development environment, for example by establishing 'no go', 'maybe' and 'go' areas for development.
- f) Redress the spatial legacy of apartheid.

As indicated under the Chapter 1.5 of the PSDF, ***'it takes as its starting point the goal of sustainable development'*** and *'development is only acceptable and in the public interest if it is ecologically justifiable, social equitable and economically viable, environmentally sustainable. This means that the development needs of present generations should be met without the ability of future generations to meet their own needs, being compromised'*. Under Chapter 1.7 of the PSDF, it is stated that *the PGWC supports bioregional planning as the methodology on which spatial planning should be based. The bioregional planning methodology as applied in the Western Cape is recognised and endorsed in the PSDF.* The Witzenberg Municipality gives practical effect to bioregional planning.

<sup>2</sup> Provincial Notice 236/2009 as published in the Provincial Gazette of 10 July 2009.

The following policies and action plans identified in the PSDF are particularly relevant to the Witzenberg IDP and SDF and practical effect must be given to all relevant policies as far as possible:

#### **Socio-Economic Development:**

- Objective 1: Align the future settlement pattern of the Province with areas of economic potential and the location of environmental resources.
- Objective 2: Deliver human development programs and basic needs programs wherever they are required.
- Objective 3: Strategically invest scarce public resources where they will generate the highest socio-economic returns.
- Objective 4: Support Land Reform.
- Objective 5: Conserve and strengthen the sense of place of important natural, cultural and productive landscapes, artefacts and buildings.

#### **Urban Restructuring**

- Objective 6: End the apartheid structure of urban settlements.
- Objective 7: Conveniently locate urban activities and promote public and non-motorised transport.

#### **Environmental Sustainability**

- Objective 8: Protect biodiversity and agricultural resources.
- Objective 9: Minimise the consumption of scarce environmental resources, particularly water, fuel, building materials, mineral resources, electricity and land.

The following are examples of some of the Western Cape PSDF proposals which specifically relate to the Witzenberg Municipality:

- Settlements along transport routes including rail corridors should be prioritised for fixed investment, e.g. Wolseley.
- Ceres, Prince Alfred Hamlet, Tulbagh and Wolseley have been identified as areas with high human need where basic needs and developmental services should be provided (refer to Chapter B3 for a detail analyses of each settlement according to the NDSP principles).
- Ceres, Prince Alfred Hamlet, Tulbagh and Wolseley have been identified as *priority fixed investment areas* (including urban services, housing and community facilities – Ceres and Wolseley in particular are seen as areas with high need and high development potential) (refer to Chapter B3 for a detail analyses of each settlement according to the NDSP principles)..
- The economic base of Ceres and Tulbagh has been identified as ‘agricultural service centres’ with Tulbagh also has tourism as an economic base. Op die Berg, Prince Alfred Hamlet and Wolseley have ‘residential’ as economic base (refer to Chapter B3 for a detail analyses of each settlement according to the NDSP principles).
- The Micro Economic Development Strategy (MEDS), as referred to in the PSDF, has identified Ceres as a potential economic development location for agricultural industry.
- Tulbagh and Ceres have been identified as part of Route 62 Tourism Development Area.

#### **D1.14 DRAFT WESTERN CAPE STRATEGIC PLAN 2010 - 2014**

The Western Cape Government prepared a draft Strategic Plan for 2010-2014 which outlines the path to create an open, opportunity society for all in the province. The following 12 Provincial

Strategic Objectives (PSO) have been prioritised in the strategic plan to ensure a sustainable future for all in the province:

1. PSO1: Increasing opportunities for growth and jobs.
2. PSO2: Improving education outcomes.
3. PSO3: Increasing access to safe and efficient transport.
4. PSO4: Increasing wellness.
5. PSO5: Increasing safety.
6. PSO6: Developing integrated and sustainable human settlements.
7. PSO7: Mainstreaming sustainability and optimising resource-use electricity.
8. PSO8: Increasing social inclusion and reducing poverty.
9. PSO10: Integrating service delivery for maximum impact.
10. PSO11: Creating opportunities for growth and development in rural areas.
11. PSO12: Building the best run regional government in the world.

It should be noted that during July 2011 the conflation of *PSO8: Increasing social cohesion* and *PSO9: Reducing poverty* into a single PSO8 was confirmed. Given this, the existing numbering is retained until formal notification is received in this regard.

#### **D1.15 SETTLEMENT RESTRUCTURING: AN EXPLANATORY MANUAL**

The Settlement Restructuring: An Explanatory Manual (further referred to as the Settlement Restructuring Manual) was drafted in terms of the approved PSDF in order to assist municipalities in achieving the aims of urban restructuring and integration. The Manual proposes land-use management and integration tools to assist the Western Cape in their endeavours to establish dignified, enabling and sustainable human settlements.

The compacting, managing of growth and clustering of urban functions within the urban footprint is identified as a first step in creating a sustainable and liveable settlement. The focus then moves towards improving the functioning of settlements and achieving design standards within settlements to attain liveability and sustainability. This is to be achieved by implementing the following land-use management and integration tools:

- An audit of vacant land and underutilised land to identify opportunities for infill development (refer to Section C6.2 for the Vacant Land Analyses of Witzenberg Municipality).
- The delineation of an urban edge to guide future urban growth, infrastructure development and conserve resources (refer to Section C6.4.1 for the delineated urban edges of all urban settlements).
- A densification analyses to encourage densification within urban areas (refer to Section C6.4 for identified areas where densification are encouraged).
- Socio-economic and mixed use integration strategies (refer to Section C6.4 for identified areas where mixed use land-uses are encouraged).

#### **D1.16 CAPE WINELANDS BIOSPHERE RESERVE**

A portion of the Witzenberg Municipality is included in the core, buffer and transition areas of the Cape Winelands Biosphere Reserve, which was officially approved by UNESCO on 18 September 2007, and subsequently listed on the World Network of Biosphere Reserves.

The Biosphere Reserve includes the Cape Floral Region Protected Areas World Heritage Site (refer to Chapter A8.9 above) and gives further international recognition for the global importance of the Cape Floristic Kingdom. The Biosphere Reserve provides a holistic and robust framework that will enable and facilitate long-term protection of this World Heritage Site.

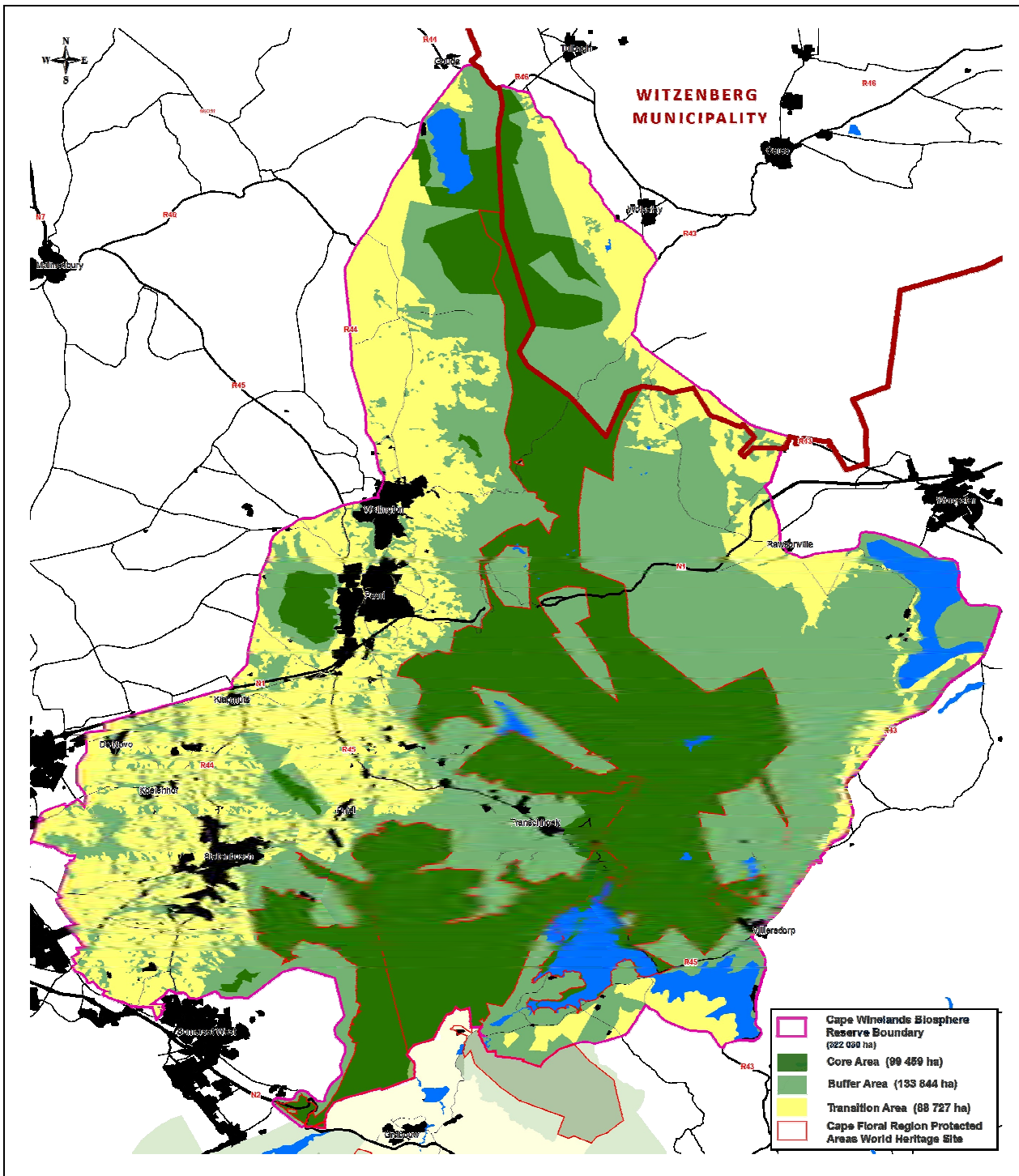


Figure D2: Cape Winelands Biosphere Reserve.

The Biosphere Reserve is a unique and innovative land management system that is to support the development of the Cape Winelands as an *area of excellence and good practice for people, culture and nature.* The Biosphere Reserve purports to be a site of excellence that explores and demonstrates approaches to conservation and sustainable development on a regional scale in accordance with relevant legislation and policy such as the PSDF, in particular. As such, the



Biosphere Reserve aims to provide *'the ecological and social framework within which government, community, corporate and other private interests, share responsibility for co-ordinating land-use planning, for both public and private land and for dealing and implementing development options that would ensure that human needs are met in a sustainable way'* (WRI, 1992).

The Biosphere Reserve is based upon an inter-governmental and international agreement that has been endorsed by *inter alia* Witzenberg Municipality and the Provincial Government of the Western Cape (PGWC). Under Chapter 3 and Chapter 14 of the application (DEAT, 2007) submitted to and approved by UNESCO represents the overarching terms of agreements upon which the Cape Winelands Biosphere Reserve is premised. These refer to the:

- (a) Fulfilment of the three functions of the Biosphere Reserve as stipulated in the *Statutory Framework of the World Network of Biosphere Reserves*.
- (b) Planning and management of the Biosphere Reserve in accordance with the bioregional planning approach of PGWC as described in the *Bioregional Planning Manual*.

The Biosphere Reserve and the associated agreement place obligations on all concerned in the Witzenberg Municipality in the assessment of the need and desirability of proposed projects in the municipal area. The terms of agreement endorsed by the relevant stakeholders are as follows:

1. Agreement regarding 'Conservation'
2. Agreement regarding 'Development'
3. Agreement regarding 'Logistic Support'
4. Agreement regarding 'Bioregional Planning and Management'
5. Agreement regarding 'Promotion of UNESCO's MaB Program'



## D1.17 CAPE WINELANDS DISTRICT MUNICIPALITY INTEGRATED DEVELOPMENT PLAN

The Cape Winelands District Municipality Integrated Development Plan (IDP) 2012/13 – 2016/17 is part of the new five-year cycle of the 3<sup>rd</sup> Generation IDP for the Cape Winelands District. On 24 May 2012, the Cape Winelands District Municipality (CWDM) Council adopted the IDP 2012/13 – 2016/17 and the Medium Term Revenue and Expenditure Framework for 2012/13, 2013/14, 2014/15, 2015/16 and 2016/17.

The five-year IDP is situated in the context of the long-term (revised) Cape Winelands District Growth and Development Strategy and has the following vision: *'A unified Cape Winelands of excellence'* with a mission statement that states: *'All structures of the Cape Winelands co-operate together towards effective, efficient and economically sustainable development.'*

The IDP is also underpinned by following six priorities for the 2012/13 – 2016/17 term of office (refer to the table below):

Table D1: Six priorities of the Cape Winelands District Municipality IDP 2012/13 – 2016/17.

STRATEGIC OBJECTIVE		PREDETERMINED DEVELOPMENT OBJECTIVES
<b>SO1</b>	To ensure the health and safety of communities in the Cape Winelands through the proactive prevention, mitigation, identification and management of environmental health, fire and disaster risks.	<ul style="list-style-type: none"> <li>• Ensure a comprehensive and equitable Municipal Health Service within the Cape Winelands District.</li> <li>• Ensure coordination of multi-disciplinary and sectoral disaster risk reduction through integrated institutional capacity for Disaster Risk Management, Disaster Risk Assessment and Response and Recovery.</li> <li>• Provision of affective planning and coordination of fire prevention, safety and fire fighting services throughout the Cape Winelands.</li> </ul>

<b><u>SO2</u></b>	To facilitate sustainable economic empowerment of all communities within the Cape Winelands District through economic, environmental and social infrastructure investment, poverty alleviation, job creation and skills development.	<ul style="list-style-type: none"> <li>• Facilitate environmentally sustainable economic development and investment attraction and retention through the development and management of strategic partnerships.</li> <li>• Facilitate skills development within the Cape Winelands by means of knowledge management and social infrastructure investment.</li> <li>• Facilitate the creation of sustainable jobs within the Cape Winelands District through the provision and maintenance of economic infrastructure.</li> <li>• Provide support and shared services to local municipalities to facilitate economic development planning within the Cape Winelands District.</li> </ul>
<b><u>SO3</u></b>	To support and ensure the development and implementation of infrastructural services, functional road network and public transport services that contribute to Integrated Human Settlements in the Cape Winelands.	<ul style="list-style-type: none"> <li>• The regulation of passenger transport in the district by improved infrastructure delivery and planning activities.</li> <li>• Ideally, coordinate and facilitate interventions of a regional nature to support/assist sustainable integrated human settlement development within the area of the Cape Winelands.</li> <li>• Improve and maintain municipal infrastructure by coordinated planning and implementation of infrastructure plans and services.</li> <li>• Improve the living conditions of rural dwellers by improving facilities and service in rural areas.</li> </ul>
<b><u>SO4</u></b>	To provide an effective and efficient support services to the Cape Winelands District Municipality's executive directories so that the organisational objectives can be achieved through the provision of: HR Management, ICT, Admin Support Services, Strategic Services and Communication Services.	<ul style="list-style-type: none"> <li>• Facilitate the establishment of Governance Forums (i.e. Audit Committee, Performance Audit Committee, Oversight Committees – Internal and External).</li> <li>• Establish a vehicle for Skills Development and Training.</li> <li>• Enhancing good management, strategic support and labour practices.</li> <li>• Create effective communication mediums to inform/or create awareness to all stakeholders.</li> </ul>
<b><u>SO5</u></b>	To facilitate and ensure the development and empowerment of the poor and most vulnerable people, particularly women, children, youth, the disabled, elderly persons and rural dwellers throughout the Cape Winelands.	<ul style="list-style-type: none"> <li>• Graduate people out of poverty through appropriate human capital investment initiatives.</li> <li>• Address socio-economic vulnerabilities of communities through social inclusion.</li> <li>• Improve the livelihood or rural farm dwellers and rural communities.</li> </ul>
<b><u>SO6</u></b>	To ensure the financial sustainability of the Cape Winelands District Municipality and to fulfil the statutory requirements.	<ul style="list-style-type: none"> <li>• Enabling efficient business operations (i.e. promote good budget and fiscal management, unqualified audits).</li> <li>• Monitoring and evaluation of financial viability (i.e. reporting and assessments).</li> <li>• Enabling effective revenue and expenditure management.</li> <li>• Enhancing efficient, effective and economical supply chain management procedures and systems.</li> </ul>

Under Chapter 3 of the IDP 2012/13 – 2016/17 the situational analysis of the district is described which relates to issues that are considered in especially Section C of the Witzenberg SDF:

- a) The combination of the physical contextual characteristics of the Cape Winelands are, including topography, climate, hydrology, geology, soil and indigenous vegetation, has a direct effect on economic activity (in particular agricultural and related production) and tourism, as well as settlement patterns in the district.

- b) Over consumption of water relative to available resources with parts of rivers often pumped dry during the dry mid-summer. Together with the pollution of water sources in some areas, this problem has a detrimental effect on the natural environment. Water quality is negatively affected by farming activities, informal settlements, leaching from land-fill sites and unsuitable sewage removal systems that lead to river pollution.
- c) The health of ecosystem services in the Cape Winelands District is deteriorating gradually. From a regional perspective, the Cape Winelands District forms part of an area with high agricultural potential, stretching westwards across the district boundary. The district's western half has significant run-off areas that should be managed as an important resource. Sensitive ecosystems and protected areas occur in the district, requiring a joint management approach with adjacent authorities.
- d) The provision of housing opportunities remains one of the key challenges to all municipalities across the Cape Winelands District. Besides the backlog other factors that impact on the delivery of housing include the availability of land, location of land, bulk services capacity, statutory compliance process (i.e. EIAs, HIAs, rezoning applications), and lack of concrete strategies to deal with evictions and capacity constraints at municipalities.
- e) The district's close proximity to the City of Cape Town and its port is an important factor in economic growth. The sheltered valleys between mountains in the Cape Winelands are ideal for the cultivation of export-grade fruits such as apples, table grapes, olives, peaches and oranges. With the Cape Winelands District's large market and the two major export harbours, as well as its natural beauty, well-developed tourism, wine and agri-processing and other manufacturing industries, growing financial services and quality education, the district is well-placed to participate in the Western Cape economy.
- f) The tourism sector has significant growth potential as the Cape Winelands has a rich historical heritage, wine routes and natural beauty. Few places on earth have been more generously blessed by nature than the Cape Winelands district.
- g) The risks of fire, floods, and the transportation of hazardous chemicals were identified as most hazardous to the population of the district. The rest of the top ten hazards are: poor water management, human diseases, infrastructure decay, road and rail accidents, power failure, drought and extreme climatic conditions. From a community perspective, the following hazards were identified as most significant, spread of diseases, blocked drains, non-removal of solid waste, uncontrolled fires, environmental pollution, grey/waste water, problems with toilet facilities, and the lack of facility maintenance.
- h) Recommendations to be followed: At a local level, improve capacity, specific to hazard severity, vulnerability and exposure. Involve the communities for sustainable solutions. Draw on the experiences and knowledge of residents to compliment the expert knowledge held by municipal officials and specialists. Improve municipal accountability with all stakeholders. This can be achieved through open and continuous communication on progress with projects, challenges and successes.

#### **D1.18 CAPE WINELANDS DISTRICT MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK**

The purpose of the Cape Winelands District Municipality Spatial Development Framework (further referred to as the Cape Winelands SDF) developed a 'set of guidelines' to:

- a) Interpret and apply higher-order spatial policy within the Cape Winelands district.
- b) Guide regional and local policy interventions.
- c) Act as a strategic forward-planning tool to guide planning and decisions on land-use and land development.

- d) Consider a spatial rationale to the development vision of the district that is clear enough to allow decision-makers to deal with unanticipated/unplanned situations.
- e) Develop a spatial logic that guides public and private sector investment.
- f) Ensure the social, economic, built and environmental sustainability of the area.
- g) Formulate proposals to redress the spatial legacy of apartheid.
- h) Propose spatial indicators to measure outcome.

These planning principles are based upon the bioregional planning principles as adopted in the PSDF. The Cape Winelands SDF however adds the dimensions of consistency and vertical equity to this set of principles as the former support the rationale for a desired spatial order and the latter a policy-led response.

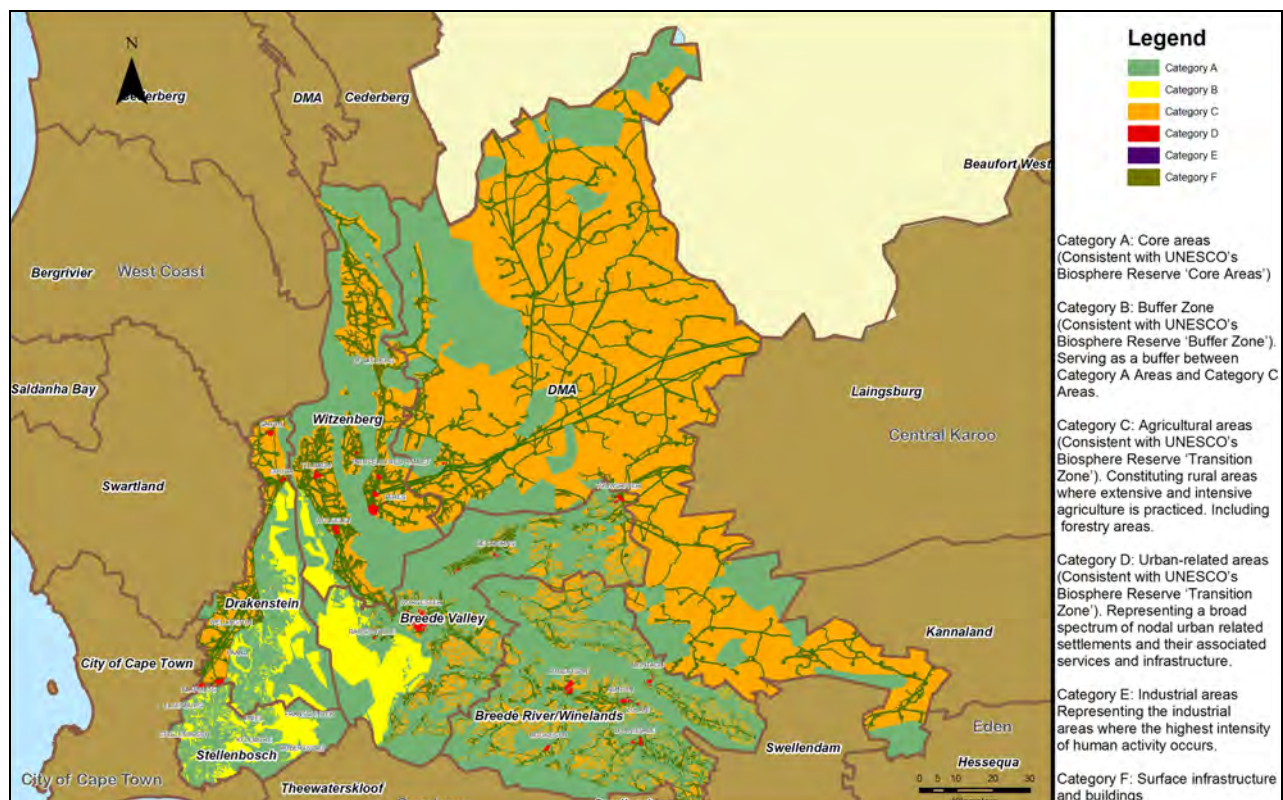


Figure D3: Spatial Planning Categories designated in the Cape Winelands District Municipality SDF (Source: Aurecon).

*The vision of the Cape Winelands District Municipality is formulated as ‘Growing, Sharing, Delivering, Innovating Together’. It is proposed that efforts to ‘improve, strengthen or restructure’ the local development process have to focus on the spatial, racial and social class spread of development and the safeguarding of sustainability – rather than the ‘creation’ of new growth sectors or initiatives.*

Key findings of the Cape Winelands SDF pertaining to the Witzenberg municipality are listed in the table below. The corresponding page number of the SDF is also indicated.

Table D2: Key findings of the Cape Winelands SDF pertaining to Witzenberg.

	KEY FINDINGS	SDF PAGE
(1)	The challenge in the Witzenberg municipal area is to be aware of the need for the reconciliation between a stagnant, if not declining population and the need and demand for improved residential infrastructure in context of a decreasing local revenue base. This is particularly difficult for small places like Prince Alfred Hamlet and Op-Die-Berg, where diseconomies of small scale make it almost impossible to maintain personal services.	21
(2)	'Hierarchy of towns' is important, heavy traffic of large vehicles from Touws River through Ceres, working living in Witzenberg commute to Worcester.	45
(3)	In-migration of people from other provinces and from foreign (African) countries may reach areas like Witzenberg.	58
(4)	Demand for land and services: For residential and small scale farming, Ceres – industrial, not for business use, moratorium on development applications viz. Wolseley, Tulbagh, and Prince Alfred Hamlet, there is a shortage of water.	61
(5)	General spatial planning and higher-order policy compliance is poor.	65
(6)	Urban edge needs to be reconsidered.	72
(7)	Densification: completed land audit, needs densification policy.	75
(8)	Ceres emerges as having a high demand for development.	77
(9)	Land-use trends: Urban areas: Residential (high value/luxury) – Ceres, Tulbagh and Wolseley; shebeens in Nduli, home occupation in Nduli and Ceres; tourism in Tulbagh. Rural areas: Subdivisions (throughout the municipal area); agriculture II (chicken farms); additional dwellings (tourism).	77
(10)	The Department of Rural Development and Land Reform is to pilot the CRDP with two 'additional' programmes implemented by the Department of Water Affairs and the Presidency, in particular wards in the Witzenberg municipal area. These additional programmes are known as 'harvesting of rainwater' and 'war on poverty' with the former implemented in Wards 3 and 7 and the later in Wards 1, 4 and 6.	82
(11)	It is important to note that the conservation areas in the district have been severely fragmented and degraded in some parts, particularly in Witzenberg Municipality, thereby increasing the need for corridors linking those conservation areas in buffer areas that are isolated from the core area and each other, as well as isolated core areas.	86
(12)	In Tulbagh and Wolseley there is a need to upgrade water services – new reservoirs planned in Prince Alfred Hamlet, Wolseley etc. Measures such as water master plan, asset register, water reduction articles and public water weeks, water demand management plan, water service development plan, EWISA software (includes maintenance plan) are taken to improve service availability.	90
(13)	The R44, R46 and R303 in Witzenberg also carry high freight volumes and in view of the proposed toll roads to be established, the increase in traffic on these roads can be significant	99
(14)	Housing: Urban: Not integrated with spatial planning; construction company operates in isolation; recent development problematic. Rural: would support agri-villages (availability of services to be secured).	104
(15)	In the Witzenberg municipal area the activities around towns are essentially agriculture-based, with the towns being 'agricultural service centres', with some agri-processing as well, related to wine, fruit, vegetable and other nice products. Some places are well-known for the niche products, like Ceres for its cherry orchards in the mountainous hinterland. Parallel to agriculture, this municipal area is also string in the tourism field, catering for Cape Town and other Western Cape day-and weekend tourists as well as up-country seasonal tourists. Once again, the continuation of diversified agriculture, some forestry and river fishing strengthen the attractiveness of the area of outside visitors. In addition, the diversity of small towns, interspaced with farms and other rural sights (like snow-capped mountains) make the area particularly attractive for short-term visitors. The fact that these destinations are just a short distance from the N1 and a mere 150-200 km from inner Cape Town) further adds to the comparative strength of the area of tourists.	117
(16)	The areas of Witzenberg within the Breede River catchment targeted for skills development programmes (and associated infrastructure).	124
(17)	The Land Reform Area Based Plan most successful in Witzenberg – a number of land reform	125

	projects were initiated by the building of the Koekedouw Dam in the 1990s. Approximately 27 344 ha of land has been transferred for land reform purposes.	
(18)	Key spatial proposals: social public investment areas, urban restructuring limited, settlement in existing nodes (deviation only as a principle-led response), establish a local planning forum, initiate a study to determine the possible establishment and registration of an 'Upper Breede River Valley' Biosphere Reserve.	149

### D1.19 INTEGRATED SUSTAINABLE HUMAN SETTLEMENT PLAN FOR THE CAPE WINELANDS DISTRICT MUNICIPALITY

The *Integrated Sustainable Human Settlement Plan (ISHSP) for the Cape Winelands District Municipality* (ISHSP) provides a roadmap and guidance to the Cape Winelands District Municipality and its local municipalities to create integrated human settlements that restores the dignity and pride of the people of the district and not only focus on the number of structures built. It is understood that all housing projects will in future be assessed on the contribution of such projects to creating sustainable integrated human settlements.

The following guiding principles for human settlement design are proposed by the CWDM ISHSP:

- **Sense of Justice:** This refers to meeting fundamental human needs (subsistence, protection, affection, understanding, participation, idleness, creativity, identity and freedom) with appropriate satisfiers. Rights-based democratic governance and participation.
- **Sense of Limits:** This entails *inter alia* the following:
  - Incremental gains over time, working with what is available.
  - Transition to renewable energy alternatives and energy efficiency.
  - Zero waste via re-use of waste outputs as productive inputs.
  - Connectivity via sustainable transport, with a major focus on public transport.
  - Home building, sustainable construction materials and building methods.
  - Sustainable water use and re-use of treated sewerage.
- **Sense of place:** This guiding principle includes health, well-being and soulfulness; and refers to safe places within integrated communities (with special reference to children and women).
- **Sense of history:** It includes valuing cultural diversity and community; participatory culture; healing and memory.
- **Sense of craft:** It refers to following:
  - Growing the local economy, greater equity and fair trade.
  - Local and sustainable food supplies, markets, and agricultural value chains (especially organic food).
  - Human skills, knowledge development and continuous learning.
- **Sense of nature:** It entails reverence for all life, enhancing biodiversity and preservation of natural habitats; and working with, rather than against ecosystems.

### D1.20 CAPE WINELANDS DISTRICT MUNICIPALITY ENVIRONMENTAL MANAGEMENT FRAMEWORK

The Environmental Management Framework for the Cape Winelands District Municipality (CWDM EMF) was prepared for the eastern portion of the previous Cape Winelands District Management Area, Witzenberg, Breede Valley and Langeberg Local Municipalities. In 2012 SRK finalised the EMF was finalised however it is currently in the process for approval at the Cape Winelands District Municipality and then it needs to be approved by the MEC.

The specific need for an EMF relates to the increasing demand by both agriculture and biodiversity for space and resources. The area that the EMF covers is located in a highly threatened biodiversity hotspot of global significance, while at same time agriculture, a major source of land transformation and hence threat to biodiversity, is the economic mainstay of the area. Agriculture, together with increasing urban and tourism development, fuelled by the scenic beauty of the area and its proximity to Cape Town, places increasing stress on water resources in the study area.

The broad objectives of the CWDM EMF are the following:

- (a) Support informed and integrated decision-making by making significant and detailed information about an area available before activity proposals are generated.
- (b) Contribute to environmentally sustainable development by anticipating potential impacts and by providing early warnings in respect of thresholds, limits and cumulative impacts.
- (c) Support the undertaking of environmental impact assessments in the area by indicating the scope of potential impacts and information needs that may be necessary for EIAs.
- (d) Support the process of delineating geographical areas within which additional specified activities are to be identified in terms of NEMA.
- (e) Support the process of delineating geographical areas within which activities listed in terms NEMA may be excluded by identifying area that are not sensitive to potential impacts of such activities.

Section F: Environmental Scan and Analyses is primarily based on the Phase 2: Status Quo Assessment of the EMF. This report included:

- An outlines the approach to and phases of the EMF process;
- Description of the state of environment of the study area, including the infrastructural capacity, biophysical features, socio-economic characteristics and institutional arrangements;
- A spatial representation of the status quo of the study, showing existing land-uses;
- Key trends and pressures associated with each of the key environmental attributes; and
- Baseline information to inform the development of the EMF during the next phase of the project.

#### **D1.21 STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE CAPE WINELANDS DISTRICT MUNICIPALITY**

The Strategic Environmental Assessment (SEA) for the Cape Winelands District Municipality (2007) provides a practical framework for the identification of specific actions that must be taken to ensure that ecosystem services are protected and well-managed. The SEA focuses on strategic issues and the identification of environmental opportunities and constraints for development, through the development of an Environmental Strategy and a Strategic Environmental Management Plan (SEMP).

Its vision states the following: *The Cape Winelands District Municipality, together with its key stakeholders, effectively manages human activities to ensure the maintenance and enhancement of key ecosystem services within the area, for the benefit of all, now and into the future.*

The following five strategic goals and its associated objectives identified by the Cape Winelands SEA have direct bearing on the Witzenberg IDP and SDF:

- (a) Sustainable economic development.
- Produces in the Cape Winelands District benefit from the comparative and competitive advantages of ecologically sound production in the Cape Floral Kingdom.
  - The nature-based tourism potential of the Cape Winelands is realised.
  - Long-term ecological, economic and social sustainability is assured in the agricultural sector through large-scale substantive adoption of crops, products and farming methods suitable to dryer and hotter climates.
- (b) Strong institutional capacity, collaboration and law enforcement.
- The capacity (education, leadership and resources) exists within the Cape Winelands District and major stakeholders in the district, to ensure that planning, economic development and other activities are sustainable and there is an understanding of the importance of maintaining ecosystem services.
  - Environmental legislation is effectively enforced and environmental programmes currently underway in the district are substantively supported by the Cape Winelands District Municipality.
  - Land-use planning and decision-making is co-ordinated at local municipality level and between various spheres of government.
- (c) Sound land-use and development planning and resource management.
- SDFs and IDPs provide a sound strategic planning framework that facilitates the sustainability of all new development in the Cape Winelands District Municipality.
  - Local authorities and others responsible for development planning and decision-making of the Cape Winelands District are aware of the potential social, economic and environmental implications of all forms of human activities and consider these in their planning and decision-making in a participatory way that ensures that the ecosystem services of the Cape Winelands are maintained and enhanced.
- (d) High level of stakeholder capacity manifested through the availability of information, awareness and education.
- All key stakeholders within the district are informed of the vital role of the area's ecosystem services in supporting economic development.
  - Farmers and other land-users are aware of the effects of ecosystem fragmentation and alien infestation on the provision of ecosystem services, as well as the influence of climate change on the type of crops that should be cultivated.
- (e) Effective waste management, pollution control and service provision.
- Waste management and air pollution prevention within the district is undertaken in a co-ordinated and integrated way.
  - Adequate water supply, waste water treatment and storm water management infrastructure is an integral part of new development is maintained in good working order to prevent contamination of natural waters.



## **D1.22 DRAFT CAPE WINELANDS DISTRICT MANAGEMENT AREA SPATIAL DEVELOPMENT FRAMEWORK**

During 2007 a draft spatial development framework was prepared for the Cape Winelands District Management Area. The SDF developed a set of policies and principles to guide decision-makers as



far as it relates to land-use management, conservation and development matters. It is intended to facilitate:

- a) Sustainability: The sustainable use and management of the built environment and natural resource.
- b) Equity: Equitably protection and benefits to all.
- c) Efficiency: Desired results of land-use planning with minimum expenditure of resources.
- d) Integration: Co-ordination of the separate and diverse elements of development planning.

### D1.23 CEDERBERG AND ENVIRONS SPATIAL DEVELOPMENT FRAMEWORK

The Cederberg and Environs Spatial Development Framework (CSDF) were approved in terms of section 4(6) of the Land Use Planning Ordinance (LUPO) 15 of 1985 on 7 October 2002.

A number of strategic proposals as it relate to the key categories, i.e. natural environment, economic environment, social environment and legislative and institutional framework, have been identified, and subsequently approved. These recommendations informed the development proposals represented in Section C of the Witzenberg SDF.

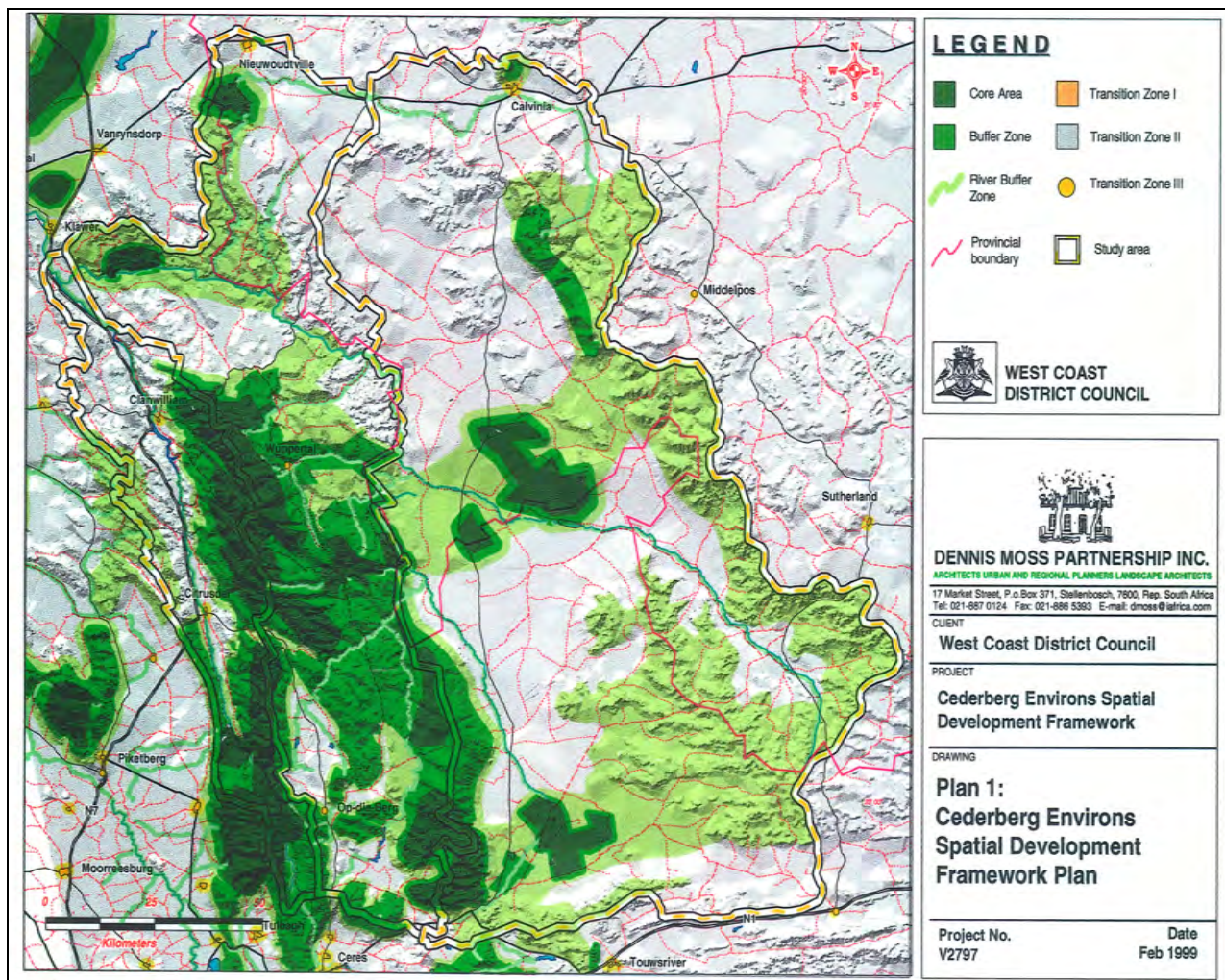


Figure D4: Cederberg Environs Spatial Development Framework.

## **D1.24 BIODIVERSITY CONSERVATION PLANNING INITIATIVES**

The entire municipal area is covered by the following biodiversity conservation planning initiatives, including Fine Scale Planning projects (refer to Map 1):

- a) 'Cape Action for People and the Environment (CAPE), a conservation strategy partnership between government and civil society focussing on the CFR and adjacent marine environment' (SRK Consulting, 2011);
- b) Succulent Karoo Ecosystem Program (SKEP), a long-term, multi-stakeholder bioregional conservation and development partnership program (SRK Consulting, 2011);
- c) The Greater Cederberg Biodiversity Corridor (GCBC) is a conservation initiative of global importance striving to introduce people to sustainable ways of using their land and the natural resources of this unique and diverse region.
- d) Central Karoo District Municipality (CKDM) including Cape Winelands District Municipal Area (DMA02) Biodiversity Assessment to inform SDFs, Biodiversity Sector Plans, EMFs, SEAs and EIA processes.
- e) Fine Scale Planning (FSP) for the Witzenberg Municipality identifying Critical Biodiversity Areas (CBAs) and associated land-use management guidelines.

## **D1.25 GREATER CEDERBERG BIODIVERSITY CORRIDOR**

'A central element of the CAPE strategy is using a landscape-level approach to biodiversity conservation, through 'landscape initiatives' that take various forms, including corridor initiatives, megareserves and biosphere reserves. One such initiative is the Greater Cederberg Biodiversity Corridor (GCBC). Establishing corridors of continuous natural habitat across the landscape is a new approach to conserving species and critical habitats. Corridors are also seen as an important tool to adapt to and prepare for the effects of global climate change, which are likely to have a significant impact in this region' (CAPE, 2008).

The GCBC is a partnership-based initiative that aims to secure the conservation of globally significant biodiversity in the Greater Cederberg Region, while ensuring benefits to people. The area of over 1.8 million hectares stretches from Nieuwoudtville in the north to Groot Winterhoek in the south and from Elandsbaai in the west to the Tankwa Karoo in the east, and includes a mosaic of land-uses. The two major corridors being developed are the Sandveld Corridor and the Cederberg Corridor, which includes Succulent Karoo areas as well as Fynbos.

The GCBC strives to introduce people to sustainable ways of using their land and the natural resources of this unique and diverse region, engaging with the potato and rooibos industries through partnerships that foster best practice and sustainability within these sectors.

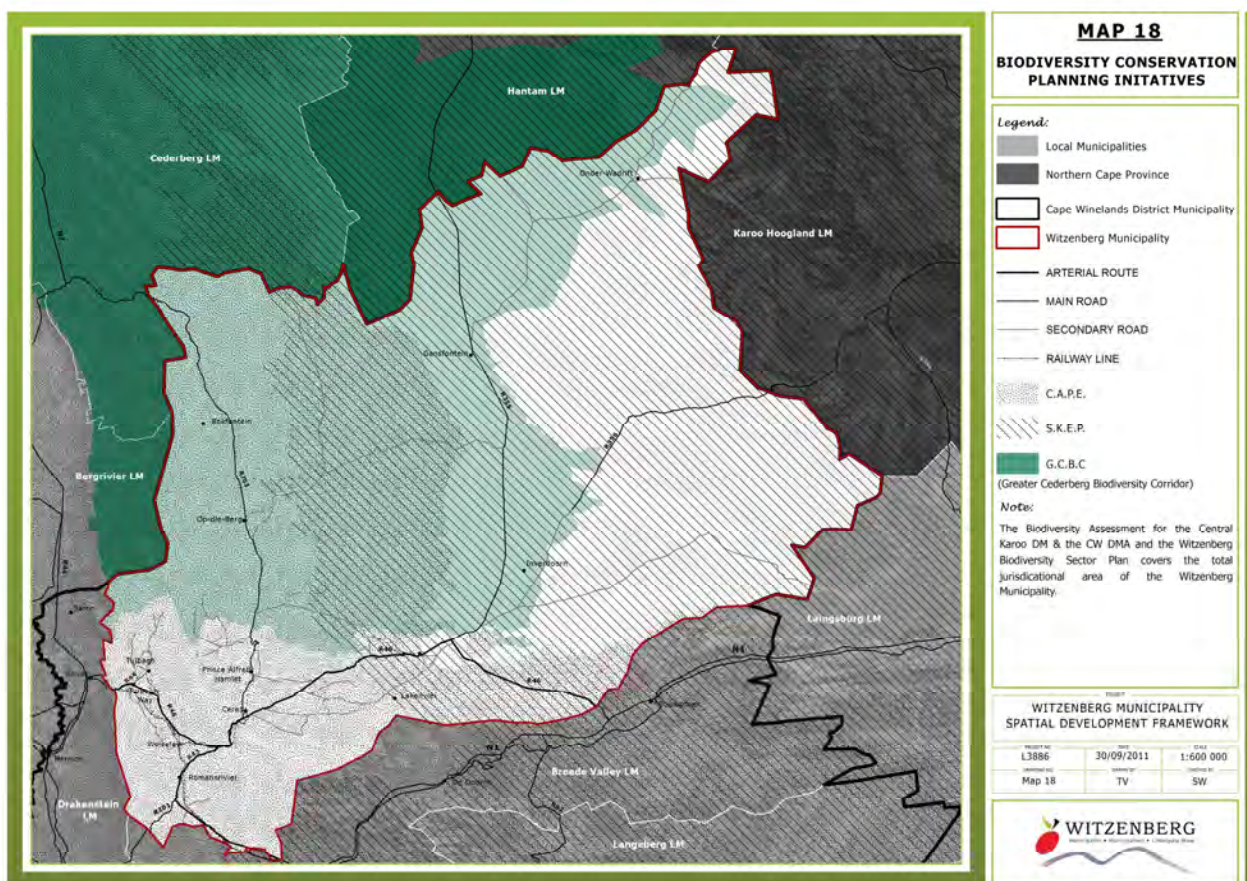


Figure D5: Biodiversity Conservation Planning Initiatives.

#### D1.26 CAPE WINELANDS DISTRICT MUNICIPAL AREA (DMA02) BIODIVERSITY ASSESSMENT

The biodiversity assessment for the Cape Winelands District Municipal Area is designed to identify an efficient set of Critical Biodiversity Areas (and Ecological Support Areas) that meet the targets for the underlying biodiversity features in as small an area as possible and in areas with least conflict with other activities. Of fundamental importance is that these areas are identified in a configuration that deliberately facilitates the functioning of ecological processes (both currently and in the face of climate change) which are required to ensure that the biodiversity features persist in the long term.

The CBA maps prepared for Cape Winelands District are linked to the adjacent Central Karoo District Municipality Critical Biodiversity Areas. The Cape Winelands District Municipal Area Biodiversity Assessment provided information for the Biodiversity Sector Plan for Witzenberg, Breede Valley and Langeberg Municipalities that was done on a 1:10 000 scale (refer to A10.9.3).

#### D1.27 BIODIVERSITY SECTOR PLAN FOR WITZENBERG, BREEDE VALLEY AND LANGEBERG MUNICIPALITIES

‘The Biodiversity Sector Plan provides planners and land-use managers with a synthesis of biodiversity related information that should be integrated into land-use planning and decision-making. By identifying those sites that are critical for conserving biodiversity, this Biodiversity Sector Plan supports ‘mainstreaming’ or the proactive consideration of biodiversity in planning and decision-making’ (Maree & Vromans, 2010).

The Critical Biodiversity Areas Map divides the landscape into the following seven categories: Protected Areas; Critical Biodiversity Areas – Terrestrial; Critical Biodiversity Areas – Aquatic (which includes buffers), Critical Ecological Support Areas (which includes buffers), Other Ecological Support Areas (which includes buffers), Other Natural Areas, and No Natural Remaining Areas.

‘The overall aim is to avoid the loss of natural habitat in Critical Biodiversity Areas and prevent the degradation of Ecological Support Areas (ESA), while encouraging sustainable development in Other Natural Areas (Maree & Vromans, 2010). The Biodiversity Sector Plan can:

- a) Serve as the primary source of information on biodiversity for land and resource-use decision-making and forward planning processes, such as Environmental Management Frameworks and SDFs and IDPs.
- b) Provide detailed information and therefore largely replace broad-scale biodiversity plans, e.g. SKEP, STEP and CAPE.
- c) Provide the spatial framework and policy recommendations for the drafting of a bioregional plan by identifying priority areas for conservation action and the establishment of Protected Areas, as required in terms of Chapter 3 of the National Environmental Management: Biodiversity Act 10 of 2004.
- d) Identify a network of Critical Biodiversity areas whose safeguarding is a requirement in order to meet national biodiversity thresholds.
- e) Provide regional biodiversity priorities, thereby creating a strategic framework for sustainable development.
- f) Assist municipalities to comply with environmental and planning legislation that promotes the protection and management of biodiversity, acting as the spatial framework and policy for sustainable development set by international and national environmental and planning legislation and policy.
- g) Act as an early warning system to developers/environmental consultants, highlighting potential red flags to development.

## D1.28 WITZENBERG MUNICIPALITY INTEGRATED DEVELOPMENT PLAN

The Council of Witzenberg Municipality adopted its new 3<sup>rd</sup> Generation five-year Integrated Development Plan (IDP) 2012-17 on 24 May 2012 – the new IDP did come in effect on 1 July 2012 and will end on 30 June 2017. The new IDP sets out the new vision and mission of the municipality and clearly defines the strategies and plans to achieve the objectives of infrastructure led growth, sustainable human settlements, financial sustainability, LED, social development, strategic partnerships and international relationships.

The vision of the Witzenberg Municipality is: *A municipality that cares for its community, creating growth and opportunities* and this supported by the mission statement that states: *The Witzenberg Municipality is committed to improve the quality of life of its community by (i) providing and maintaining affordable services, (ii) promoting social and economic development, (iii) the effective and efficient use of available resources, and (iv) effective stakeholder and community participation.*

According to Witzenberg IDP 2012-2017 the following corridors/niche poses possible opportunities that should be utilised (refer to table below):

Table D3: Corridors/niches that poses possible opportunities in the Witzenberg Municipality.

CORRIDORS/NICHE	SECTOR	AREA
Road linkage between N1 (Worcester) and West Coast industries (Saldanha). Currently being upgraded to the value of R180 million.	Economic	Wolseley
Main railway between Cape Town and Gauteng. Implementation of Freight Strategy.	Economic	Wolseley and Ceres
Toll Road at De Doorns on N1.	Economic	Ceres and Wolseley
Opening of railway line between Ceres and Wolseley.	Tourism and Economic	Ceres and Wolseley
Increased private development investment.	Economic	Tulbagh
Growing tourism interest and possibilities: <ul style="list-style-type: none"> <li>Natural and undisturbed beauty.</li> <li>Healthy living conditions due to products from region (e.g. fruit, juice, wine, etc.).</li> <li>Mountainous areas including highest accessible point in Province.</li> <li>Tankwa Karoo and private game farms.</li> <li>Gateway to Cederberg Wilderness.</li> <li>Longest zip-slide in Africa.</li> <li>Rock art.</li> </ul>	Tourism	Ceres, Tulbagh, Pirnce Alfred Hamlet and Op-die-Berg
Development of eco-tourism opportunities.	Tourism and Economic for local community	Prince Alfred Hamlet and Ceres

The Witzenberg IDP 2012-2017 indicates the following development directions for the urban areas (refer to table below):

Table D4: Development directions of the urban areas in the Witzenberg Municipality.

URBAN AREA	TOWN	GROWTH DIRECTION
Ceres	Ceres	<ul style="list-style-type: none"> <li>Major town, administrative and economic centre.</li> <li>Increase economic development supported by infrastructure investment.</li> <li>Support tourism initiatives.</li> </ul>
	Bella Vista and Nduli	<ul style="list-style-type: none"> <li>Settlement growth.</li> <li>Social Investment support.</li> <li>Township regeneration.</li> </ul>
Wolseley	Wolseley, Montana, and Pine Valley	<ul style="list-style-type: none"> <li>Increase economic development supported by infrastructure investment.</li> <li>Settlement growth.</li> <li>Social Investment support.</li> <li>Township regeneration.</li> </ul>
Tulbagh	Tulbagh, Witzenville and Chris Hani	<ul style="list-style-type: none"> <li>Historical and tourism centre.</li> <li>Support private development initiatives.</li> <li>Low industrial growth potential.</li> <li>Social Investment support.</li> <li>Township regeneration.</li> </ul>
Prince Alfred Hamlet		<ul style="list-style-type: none"> <li>Low developmental potential.</li> <li>Social Investment support.</li> <li>Support conservation and eco-tourism of large critical biodiversity areas.</li> <li>Township regeneration.</li> </ul>
Op-die-Berg		<ul style="list-style-type: none"> <li>Low developmental potential.</li> <li>Social Investment support.</li> <li>Support tourism initiatives</li> </ul>

Under Chapter 3 of the Witzenberg IDP 2012-2017 the following strategies for housing focus areas for Ceres and Wolseley are indicated:

- a) Allow for infill development in the areas between the townships and the CBD areas.
- b) Improve non-motorised connections between townships and the CBD.
- c) Implement a programme to upgrade the public environment in the area.
- d) Encourage the development of Township CBD areas and activity streets.
- e) Introduce alternative housing typologies through housing programmes.
- f) Ensure that single subsidised housing is designed and placed so that it contributes to the public environment and can be expanded.
- g) Release public land parcels suitable for 'gap' or social housing strategically.
- h) Make suitable land available for small-scale farming/community gardens.
- i) Investigate and service land for emergency housing and evicted families.

Furthermore, the Witzenberg IDP 2012-2017 states on page 97 that it is part of the Cape Winelands Biosphere Reserve, and the municipality should be aligned with it and endorse the agreements upon which the biosphere reserve was premised.

### **D1.29 INTEGRATED SUSTAINABLE HUMAN SETTLEMENT PLAN FOR THE WITZENBERG MUNICIPALITY**

A more detailed *Integrated Sustainable Human Settlement Plan (ISHSP)* was prepared for the Witzenberg Municipality. The Witzenberg ISHSP identified the following priority issues relating to integrated sustainable human settlements:

- a) The lack of integration between formerly segregated areas in all settlements.
- b) The poor quality of environments in townships, with the result that subsidised housing has very little asset value.
- c) The lack of housing options (particularly in more established parts of town), including rental and other options for poorer communities.
- d) The need to provide appropriate housing options for rural people.
- e) The limited access to economic activities, as well as quality education, health and other social welfare facilities and opportunities.
- f) The sustainability (or lack thereof) of current patterns of development and housing models.

In light of the identified priority issues the WM ISHSP listed the following objectives:

- (i) Create urban and rural settlements that generate meaningful livelihood opportunities for all residents.
- (ii) Create opportunities for quality housing and varying housing options, adequately provided with the full range of utility services, such as electricity and water provision and sewage and storm water disposal.
- (iii) Increase the value of property as an asset, in particular those owned by poor communities.
- (iv) Locate poor communities close to economic activity, employment and education opportunities and other public services and facilities.
- (v) Ensure that areas that are prone to flooding, landslides and contamination are avoided.
- (vi) Create pleasant settlement environments with adequate landscaping, and passive and active recreational opportunities.
- (vii) Ensure that housing delivery occurs within a framework of meaningful participation of the key role players and through a prioritised and accelerated process.



**D1.30 STRATEGIC ISHSP PROPOSALS FOR CERES AND WOLSELEY**

According to the Witzenberg ISHSP, Ceres and Wolseley are the two settlements with the highest growth potential, as well as the highest demand for housing. It therefore, as a first phase, focussed its efforts on achieving integrated sustainable human settlements in Ceres and Wolseley.

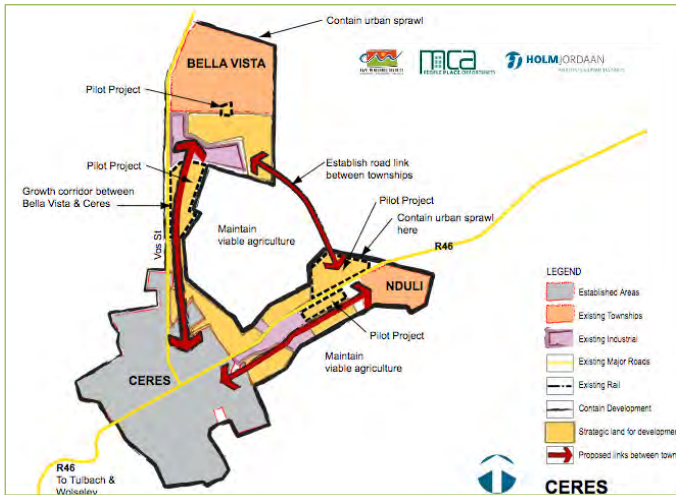


Figure D6 Conceptual integration of Ceres.

The Witzenberg ISHSP identifies the integration of Ceres, Bella Vista and Nduli as a key strategy which should be implemented over the long term. In this regard, activity and movement linkages and connections between Ceres Central Business District (CBD), Bella Vista and Nduli should be encouraged.

Future growth of Bella Vista and Nduli, in particular, should be encouraged towards the CBD of Ceres.



Figure D7: Conceptual integration of Wolseley.

The most important broad strategy to achieve integration in Wolseley is to allow for infill-housing on strategic land parcels and the reinforcing of the connections between the CBD and the townships.

A number of detailed strategies for the CBD's and associated suburbs, areas in-between the CBD and townships and for the townships of Ceres and Wolseley have also been proposed. These strategies are incorporated in the development and land-use proposals recommended in Section C.

## TOOLKIT D2 PERFORMANCE MANAGEMENT AND AUDITING

### TOOLKIT SYNOPSIS

This toolkit should be read together with Chapter A8. It provides a set of Environmental Performance Indicators for local level reporting in the Witzenberg Municipality – and proposes an initial set of environmental performance indicators for local level reporting. This is by no means a definitive final set of indicators, but rather a first step towards recognition and agreement of a core set of such indicators which can be adopted and used as a tool by government and the private sector.

In essence, this toolkit addresses the responsibility of ‘local level reporting’ within the Municipality area. However, the indicators put forward could also be adopted in the auditing systems of private sector enterprises and the various economic sectors operational in the Municipality.

### D2.1 PERFORMANCE INDICATORS

Performance Indicators are defined as *pieces of information that reveal conditions, and over time, trends. Indicators can be used to make policy and planning decisions, to identify whether policy goals and targets are being met, and sometimes to predict change. Indicators can also be used to compare conditions of different localities or progress towards policy targets* (IDRC, 1998).

Environmental Performance Indicators (EPIs) are increasingly being used to identify what effect land-use projects are having on the environment. The defining characteristic of EPIs is *that they quantify and simplify information in a manner that facilitates understanding of environmental problems by both decision-makers and the public. The goal is to assess how project activities affect the direction of change in environmental performance and to measure the magnitude of that change* (Segnestam, 1999).

There may be some overlap with general environmental indicators, such as those used within State of Environment (SOE) reports. These are designed to describe the general state or condition of a particular environment and the factors influencing it. To measure environmental performance of, for example a municipality or one of its policies or activities, it may be necessary to identify the condition of the environment and to track how it changes over time. This toolkit addresses indicators not only for local level SOE reporting, but also for the measurement of performance of different spheres of government in delivering their responsibilities for environmental care. In the latter regard, the focus shifts towards indicators which specifically relate to the measurement of response by government.

#### D2.1.1 WHAT IS TO BE MEASURED?

There are four types of indicators, namely those related to input, process, output and outcome/impact respectively. Each of these measures a different aspect of performance. In the case of a government entity, such as a municipality, the various types constitute the following:

- a) Input indicators are typically cost-related and are most relevant to the day-to-day operations of a municipality.
- b) Process indicators describe how well a municipality uses its resources to produce services. These cover the activities and operations that convert inputs into outputs. It is essentially



an internal type of indicator that is most relevant to the municipality concerned and is therefore of limited relevance to a national set of performance indicators, unless there is a particular reason for their measurement. A sub-group of process indicators are indicators that measure compliance with regard to existing standards and requirements.

- c) Output indicators refer to the 'products' produced by processing inputs – i.e. the immediate or short-term results. For example, the number of protected areas established, the number of pollution licences granted and so on. In general output indicators should only be used for those functions for which municipalities are directly responsible. Where responsibility for provision is clear, output indicators can be used to hold the municipality accountable for provision – they measure how well municipalities are performing in terms of their service delivery mandate.
- d) Outcome/impact indicators measure the extent to which goals and objectives are being met. For example, number of endemic species found in a local area. They are usually based on the results of different variables acting together (for example, not just on the number of protected areas created, but also climatic changed, agricultural practices and so on) and they tend to lag behind output indicators because the outcomes of various outputs can only be measured after the outputs have been produced. They are also more difficult to measure and are usually influenced by factors external to the municipality's control, so it is difficult to hold a municipality solely responsible for performance in this regard. Many 'State of Environment' indicators are of this type.

## D2.2 LOCAL ENVIRONMENTAL PERFORMANCE INDICATOR FRAMEWORK

There is little clarity about where responsibility for the various components of the local environment lies. There is confusion within and between the different tiers of local government – and between the different spheres, as to who is responsible for doing what. Guidance in this regard is provided by the following:

- a) Core mandates of municipalities are defined in Schedules 4b and 5b of the Constitution.
- b) Core mandates of the other spheres defined in Schedules 4a and 5a.
- c) Objects of municipalities in the Constitution (which must be adhered to by all municipalities) including the following:
- Providing a 'safe and healthy environment'.
  - Ensuring the provision of services to communities in a sustainable manner (the Municipal Systems Act expands this requirement to 'environmentally sustainable').
- d) Biodiversity Act states that *all provincial EIPs /EMPs and municipal IDPs must be aligned to the national biodiversity framework and any applicable bioregional plan*. In terms of invasive species, all organs of state must produce a plan for Invasive Species Monitoring, Control and Eradication for land under their control. This must be integrated into the EIPs/EMPs, IDPs and SDFs.
- e) NEMA (Chapter 1{2}) contains a set of environmental principles which are applicable to all organs of state. Municipalities must incorporate these into all planning and policy making activities.
- f) Protected Areas Act states that municipalities must prepare management plans for all 'local protected areas' as defined under the act. These must be submitted to the relevant MEC for approval.

All municipalities must strive within their financial and administrative capacity to achieve these objects. It is assumed that in order to achieve these, a municipality will be obliged to implement any relevant national legislation that relates to a 'safe and healthy environment' or the delivery of

‘environmentally sustainable’ services. All municipalities are also bound to respect, protect, promote and fulfil the environmental rights of an individual, as defined within the Bill of Rights:

- (i) To have an environment that is not harmful to their health or well-being;
- (ii) To have an environment protected for the benefits of present and future generations through legislative and other measures that:
  - Prevents pollution and ecological degradation.
  - Promotes conservation.
  - Secures ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

Thus, Schedules 4 and 5 of the Constitution are the starting point for identification of mandates of spheres of government, with additional detail on what these mean, provided by sectoral legislation. Additional sectoral legislation is also used to identify areas for which municipalities are responsible in order to meet their ‘objects’ as defined in the Constitution.

## **D2.3 CORE MANDATES AND FUNCTIONS OF THE VARIOUS SPHERES OF GOVERNMENT**

Figure D8 summarises the environmental responsibilities of municipalities and of the other spheres of government.

The core mandates of the various spheres of government for specific elements of ‘the environment’ as stipulated under Schedules 4b and 5b of the Constitution include the following:

### **D2.3.1 LOCAL GOVERNMENT**

- a) Air pollution.
- b) Noise pollution.
- c) Refuse removal, refuse dumps and solid waste disposal.
- d) Water and sanitation services.
- e) Beaches.
- f) Municipal parks and recreation.
- g) Local amenities (can be interpreted to include local protected areas).
- h) Storm water management in built up areas.
- i) Municipal planning.

### **D2.3.2 PROVINCIAL GOVERNMENT**

- a) Elements of general waste management.
- b) Hazardous waste.
- c) Environmental impact assessment authorisations.
- d) Agriculture and soil conservation.
- e) Estuaries and some coastal areas.
- f) Water resource protection (including wetlands).
- g) Areas of land within provincial parks.

### **D2.3.3 NATIONAL GOVERNMENT**

- a) Water services and water resource protection (Department of Water Affairs).
- b) Areas of land within National Parks (SANParks).

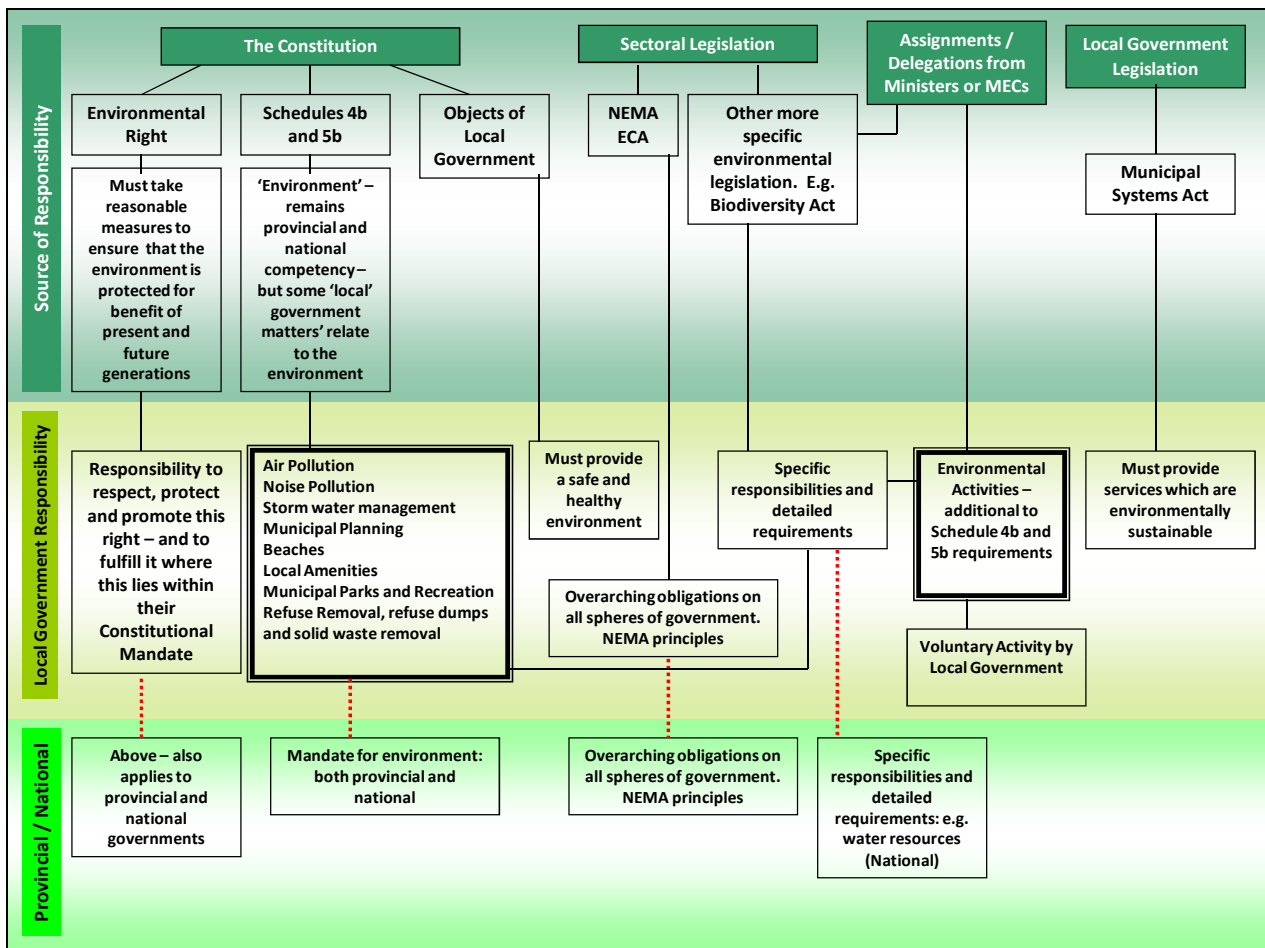


Figure D8: Source of local responsibility for the environment.

## D2.4 INDICATORS

The indicators for each broad 'performance area' of municipalities are presented in the tables below together with the following information:

- Performance area (or in some cases, sub-performance area).
- Indicator code.
- Responsible institution which refers to who will be responsible for reporting the indicator in terms of the sphere of government.
- Indicator.
- Type of indicator.
- Practicality.

### D2.4.1 CLIMATE AND AIR

#### D2.4.1.1 Air Quality

Air quality is an extension of the mandate for 'air pollution' given to municipalities under Schedule 4b and 5b of the Constitution. Specific requirements of municipalities for reporting on air quality, emissions and other air pollution related indicators are specified in the Air Quality Act 39 of 2004. Thus the indicators below are only provisional suggestions and may have to be modified once the air quality legislation and accompanying norms and standards are published. Indicators for municipalities mostly apply to Category A and B municipalities. This is a key priority area of environmental management for all municipalities.

Performance Area	Code	Who	Indicator	Core/ Peripheral	Type	Practicality
Air Quality	AQ1	Local A, B	Is there an adopted Air Quality Management Plan?	Core	Compliance	Pragmatic
	AQ2a AQ2b	Local A, B	% of licensed industries which did not comply with licence conditions. % of these for which there was enforcement action by the authority.	Core	Output	Pragmatic
	AQ3	Local A, B	% of key pollutants (as identified for the local areas) monitored according to the specifications in the National Air Quality Framework.	Core	Output	Pragmatic
	AQ4a AQ4b	Local A, B	Ambient concentrations of key pollutants.  Degree of exceeding the national standards for ambient concentrations of key pollutant.	Core	Outcome	Ideal (not yet practical for smaller municipalities).
	AQ5a AQ5b	Local A, B	Number of air quality related complaints received by local authorities (number of complaints/year). % of these for which there was an enforcement action.	Core	Output	Pragmatic
	AQ6	Local A, B	Number of staff responsible for monitoring air quality.	Core	Input	Pragmatic

#### D2.4.1.2 Climate Change/Greenhouse Gases

This is an issue of concern for many municipalities, but it was not identified as an area which was core for them to measure. Nor, in many cases would it be possible for municipalities to provide such information. As stated in Chapter C3.1.3 and Toolkit D5 a Climate-Neutrality Strategy is to be developed for the Municipality as a whole. The implementation of this strategy would be mandatory on all municipalities and the private sector.

#### D2.4.1.3 Noise Pollution

This is a local government matter under Schedules 4b and 5b of the Constitution and is also covered under the Air Quality Act. Indicators were developed for this issue – but these were not considered ‘core’ indicators as information on noise pollution was not considered important for aggregation to the national level. The two ‘peripheral’ indicators are however provided below for information.

Performance Area	Code	Who	Indicator	Core/ Peripheral	Type	Practicality
Noise Pollution	NP1a	Local A, B	Number of noise pollution related complaints received by the local authority. % of these complaints for which there was enforcement action.	Peripheral	Output	Pragmatic
	NP1b					

#### D2.4.1.4 Waste Management

Waste and waste management in general is seen as one of the core mandates of municipalities under Schedules 4b and 5b of the Constitution (this makes refuse removal, refuse dumps and solid waste removal a local government matter) and under the White Paper on Integrated Pollution and Waste Management and the Environmental Conservation Act. Provincial government also has responsibility for certain waste issues and therefore indicators to be reported on by the Municipality have also been included. This performance area has been divided into three sub-areas, namely waste generation (data on amount of waste generated in an area), waste services (performance indicators for provision of services), and waste/reduction and management (which includes such issues as recycling, landfill sites, etc.).

##### a) Waste Generation

Performance Area	Code	Who	Indicator	Core/ Peripheral	Type	Practicality
Waste Generation	WG1	Local	General waste produced per capita per year.	Core	Outcome / SoE	Pragmatic
	WG2	Local	Hazardous waste produced per sector per year.	Core	Outcome / SoE	Pragmatic

##### b) Waste Services

Performance Area	Code	Who	Indicator	Core/ Peripheral	Type	Practicality
Waste Services	WS1	Local	% of households eligible for kerbside refuse removal which receive this service weekly.	Core	Output	Pragmatic

##### c) Waste Reduction and Management

Performance Area	Code	Who	Indicator	Core/ Peripheral	Type	Practicality
Waste Reduction and Management	WRM1a	Local	Number of incidents of illegal dumping.	Core	Output	Pragmatic
	WRM1b		% of incidents for which enforcement action was taken.			
	WRM2	Local	Amount (tonnes) of illegal dumping cleared by local authority.	Core	Output	Pragmatic

	WRM3	Local	Recycling: % of general waste recycled on an annual basis (mass or volume?).	Core	Output	Pragmatic
	WRM4	Local	Landfill Sites: % of municipal landfill sites licensed according to the Environmental Conservation Act.	Core	Compliance	Pragmatic
	WRM5	Local	Available landfill lifespan.	Core	Output	Pragmatic
	WRM6	Province, DWA and some locals.	% of licensed landfill sites that are being monitored for compliance (according to specification in the license).	Core	Compliance	Pragmatic

#### D2.4.1.5 Storm Water Management

This is a local government matter under Schedules 4b and 5b of the Constitution but data on the provision of storm water management was not considered of interest to DEA on a national level. Thus the indicator for this performance area is peripheral.

Performance Area	Code	Who	Indicator	Core/Peripheral	Type	Practicality
Storm Water Management	SWM1	Local	% of storm water drains that are maintained annually.	Peripheral (urban only)	Output	Pragmatic
	SWM2	Local	Number of dwellings located within the 50-year flood line.	Peripheral	Outcome – indicator for level of risk.	Ideal / Pragmatic

#### D2.4.1.6 Water and Sanitation

##### a) Water and Sanitation Services

Reporting on the provision of water supply and sanitation services is a core performance area of those municipalities (Category A, B and C) who are water service authorities. This information is of primary interest to DWA but is also collated by DPLG. The first two indicators below are already key performance indicators for municipalities. The third is an outcome indicator for provision of clean water and sanitation – but this may be accompanied by other indicators of population health related to water and sanitation which are collected by the Department of Health.

Performance Area	Code	Who	Indicator	Core/Peripheral	Type	Practicality
Water and Sanitation Services	WSS1	Local: water services authority.	% of households with access to potable water within 200m of dwelling (or on site).	Core	Output	Pragmatic
	WSS2	Local: water services authority	% of households with at least a basic levels of service as determined by the WSA service levels policy.	Core	Output	Pragmatic

	WSS3	Local	Number of reported cases of cholera (per year).	Core	Outcome	Pragmatic
	WSS4	Local	Number of reported cases of sewage spillage into water courses.		Output	Consultation required

## b) Water Quality

Monitoring of water quality in a local area is the responsibility of DWA regional offices and water utilities. However, during consultation processes for this project, it was suggested that local authorities should be aware of information on water quality and request this from DWA. A limited number of suitable water quality indicators have thus been included below.

Performance Area	Code	Who	Indicator	Core/ Peripheral	Type	Practicality
Water Quality	WQ1	DWA	% of exceeding of DWA guidelines for selected groundwater quality variables (total nitrogen, total phosphorus, conductivity and faecal coliforms).	Core	Outcome	Pragmatic
	WQ2	DWA	% exceeding of DWA guidelines for selected surface water quality variables (total nitrogen, total phosphorus, conductivity and faecal coliforms).	Core	Outcome	Pragmatic

### D2.4.1.7 Municipal Parks and Open Space

This is a local government matter under Schedules 4b and 5b of the Constitution – where local government is responsible for the provision and maintenance of municipal parks and recreational areas, which are forms of open space. However, the provision and maintenance of these areas is not a core environmental activity – but is a planning and amenity issue, unless the open space is of value for conservation. Thus the indicators developed for this area are not considered core environmental indicators apart from those which relate to spaces with conservation value. For areas with conservation value the greatest issue seems to be ‘infilling’ of such areas by development and so an indicator has been included to assess this.

To make this distinction, municipal parks and open spaces within a municipal area will have to be ‘categorized’ into those with conservation value (such as riparian areas and so on) and those that do not (for example, swing parks). Peripheral indicators are included below for information. They may be of use to municipalities for monitoring performance in provision and maintenance of amenity areas.

Performance Area	Code	Who	Indicator	Core/ Peripheral	Type	Practicality
Municipal Parks and Open Spaces.	POS1a	Local	Extent of municipal parks, recreation areas or other open spaces within the municipal area with	Core	Output	Pragmatic

	POS1b		conservation value. % of this area in-filled by development on an annual basis.			
	POS2	Local	% of dwellings which fall within a 2 km radius of a municipal park or recreational area.	Peripheral	Output	
	POS3	Local	Extent of municipal parks, recreational area or other open space per capita within the municipal area.	Peripheral	Output	
	POS4	Local	Level of community satisfaction with access to and quality of municipal parks and recreation areas (survey generated data).	Peripheral	Outcome	Ideal
	POS5	Local	% of municipal budget allocated to provision and maintenance of municipal parks and recreation areas.	Peripheral	Input	Pragmatic

#### D2.4.1.8 Nature Conservation

Biodiversity is not mentioned as a local government matter under the Schedules 4b and 5b of the Constitution. The Biodiversity Act, however, does confer some responsibility for management of biodiversity, control of invasive alien species, etc. to local government. Officially-designated local protected areas are, per definition, 'local amenities', which are a local government matter under Schedules 4b and 5b.

In addition to the obligation to provide, preserve, manage and maintain such areas under the relevant Schedules, the Protected Areas Act provides specific responsibilities to local government for the local protected areas within their boundaries. National and provincial protected areas which lie within a municipality remain the responsibility of national and provincial parks institutions.

##### a) Protected Areas

The purpose of the relevant indicators is to allow DEA to aggregate information in order to produce figures for the total area under formal protection across the country – and for the area of land indicated as of 'conservation importance'. The relevant indicators can be used to monitor performance of municipalities as it relates to recognising and officially protecting locally important areas by tracking the change in area of protected area, or the percentage cover of protected areas, within the municipal area over time.

As mentioned previously, specific indicators for this may be produced under the Protected Areas Act. The Protected Areas Act contains a requirement that all local authorities should facilitate the drafting (or address in their SDF) management guidelines for officially-designated protected areas within their jurisdiction area. This stipulation has been included as a simple compliance indicator.



Performance Area	Code	Who	Indicator	Core/ Peripheral	Type	Practicality
Protected Areas	PA1	Local (all)	Extent of municipal area under 'local protected area' status.	Core	Output	Pragmatic
	PA2	Local (all) Planning and parks Departs.	% of municipal area under local protected area status.	Core	Output	Pragmatic
	PA3	Local (all) Planning and parks Departs.	% of land of 'conservation importance' in the municipal area under local protected area status.	Core	Output	Pragmatic
	PA4	Local (all) Planning and parks Departs.	% of local protected areas with a current / adopted management plan and associated authorised budget.	Core	Output	Pragmatic
	PA5	Local	Level of user satisfaction with access to and quality of local protected areas.	Peripheral	Outcome	Ideal

## b) Invasive Alien Species

The Biodiversity Act confers a responsibility on local government to draw up plans for the monitoring, control and eradication of invasive alien species on municipal land. Thus, the performance indicators here are related to municipal land – and are not related to the invaded area in a municipality as a whole, or the clearing activity being carried out across a municipality as this will be taking place on land owned by many different people. Composite figures for this information will have to be obtained by DEA directly from Working for Water (WfW) (although in some cases, municipalities may keep such information).

Performance Area	Code	Who	Indicator	Core/ Peripheral	Type	Practicality
Invasive Alien Species	IAS1a	WfW	Extent of municipal land currently invaded by alien species.	Core	Output	Pragmatic
	IAS1b	Local (all)	% of municipal land currently invaded by alien species.			
	IAS2a	WfW	Extent of IAS cleared from municipal land (in the reporting year).	Core	Output	Pragmatic
	IAS2b	Local (all)	% of municipal land currently invaded by alien species which has been cleared.			
	IAS3	Local (all) Planning Department	Is there an adopted plan for invasive plant monitoring, control and eradication that is integrated and aligned with the IDP and SDF?	Core	Compliance	Pragmatic

### c) Species and Ecosystem Management and Change

It is not within the core mandate of municipalities to report information on the extent, management and change in species and ecosystems found within a municipal area. This responsibility falls to the relevant province. The indicators are all outcome-related and, as such, are useful benchmark indicators that can help to identify serious trends and species or ecosystems under threat.

Performance Area	Code	Who	Indicator	Core/ Peripheral	Type	Practicality
Species and Ecosystem Management and Change.	SEMC1	Province	Threatened and extinct species per taxonomic group.	Core	Outcome / SoE	Pragmatic
	SEMC2	Province	Endemic species per taxonomic group.	Core	Outcome / SoE	Pragmatic
	SEMC3	Province	Population trends of selected species.	Core	Outcome / SoE	Pragmatic
	SEMC4a SEMC4b	Province	Extent of sensitive, vulnerable, highly dynamic and stressed ecosystems in the municipal area - by ecosystem type (e.g. wetland, dunes, etc.). % of each of the above which is degraded or transformed on an annual basis.	Core	Output	Pragmatic

#### D2.4.1.9 Environmental Governance

This is one of the most important areas of environmental performance to measure. Local government has a series of obligations under the Bill of Rights, the Constitution, environmental framework legislation (such as NEMA) and sectoral legislation, to ensure that it protects the environment and that its activities and those of others are not detrimental to the environment or the environmental right of its citizens.

The IDP process identifies the environment as a 'cross-cutting issue' that must be incorporated into all elements of municipal planning. This should typically be achieved through an efficient SDF process. Indicators in this regard are divided into the sub-performance areas, namely NEMA principles, environmental planning, Agenda 21 (and other international obligations), environmental reporting; environmental education and awareness raising.

#### a) NEMA Principles

A set of indicators is required to monitor performance (of all spheres of government) in adhering to the NEMA principles. This was identified as an area of work outside the scope of this project. However, it should be possible at this stage to ask municipalities whether they have carried out an internal audit of their plans, policies and programmes in this regard.

Performance Area	Code	Who	Indicator	Core/ Peripheral	Type	Practicality
NEMA Principles	NEMA1	Local	Has the municipality audited its plans, policies and programmes for adherence to the NEMA principles?	Core	Compliance	Peripheral

## b) Environmental Planning

The following are simple compliance indicators, which measure simply whether a municipality has carried out a requirement of legislation. No indicators were developed to assess the quality of planning carried out or whether plans were implemented satisfactorily.

Performance Area	Code	Who	Indicator	Core/ Peripheral	Type	Practicality
Environmental Planning	EP1	Local (all)	Has a strategic environmental assessment of the impact of the Spatial Development Framework for the municipality been carried out?	Core	Compliance	Pragmatic
	EP2	Local (all)	For each of the following is there a current, adopted plan that is integrated and aligned with the IDP and SDF? a) Air Quality Plan. b) Integrated Waste Management Plan. c) Oil Spill Contingency Plan. d) Water Services Development Plan. e) Plan to provide access to basic water services. f) Invasive species monitoring, control, and eradication plan.	Core	Compliance	Pragmatic
	EP3	Local (all)	Is the IDP and SDF aligned with the National Biodiversity Strategy and the Critical Biodiversity Area plan?	Core	Compliance	Pragmatic

## c) Agenda 21 and Other International Obligations

Chapter A2.1 and Toolkit D4 summarise the international agreements, conventions and protocols to which South Africa is a signatory and which are to be given effect by all spheres of government. These contain many principles of participation, sustainability and so on, which if implemented, contribute to good environmental governance.

Performance Area	Code	Who	Indicator	Core/ Peripheral	Type	Practicality
Relevant agreements, conventions and protocols (refer to Chapter A2.1 and Toolkit D4).	A1	Local (all)	Has the municipality officially adopted the relevant agreements, conventions and protocols (refer to Chapter A2.1 and Toolkit D4) ?	Core	Compliance	Pragmatic
	A2	Local (all)	Is there an approved implementation plan for the agreements, conventions and protocols (refer to Chapter A2.1 and Toolkit D4) ?	Core	Compliance	Pragmatic

#### d) Environmental Reporting

Performance Area	Code	Who	Indicator	Core/ Peripheral	Type	Practicality
Environmental Reporting.	EP1	Local (all)	Has the municipality produced a current State of Environment Report?	Core	Compliance	Pragmatic

#### e) Environmental Education and Awareness Raising

Performance Area	Code	Who	Indicator	Core/ Peripheral	Type	Practicality
Environmental Education.	EEd1	Local (all)	What is the budgetary allocation (%) for environmental education and awareness raising per capita?	Core	Input	Pragmatic

### D2.5 SUMMARY OF INDICATORS

(These are all 'pragmatic' indicators – unless otherwise marked (shaded box = ideal indicators) and are all relevant to local authorities unless otherwise marked with a P\* (provincial responsibility) or DWA\* (DWA regional responsibility).

CORE INDICATORS
<b>Air/Climate</b>
Is there an adopted Air Quality Management Plan?
% of licensed industries which did not comply with licence conditions.
% of these for which there was an enforcement response by the authority.
% of key pollutants monitored according to the specifications in the National Air Quality Framework.
Ambient Concentrations of key pollutants.
Degree of exceedance of national standards for ambient concentrations of key pollutants.
Number of air quality related complaints received by the local authority (per year).
% of these for which there was an enforcement action.
Number of staff (FTEs) responsible for monitoring air quality in the municipality.

<b>Waste Management</b>
General waste produced per capita per year.
Hazardous waste produced per sector per year.
% of households eligible for kerbside refuse removal which receive this on a weekly basis.
Number of incidents of illegal dumping.
% of these incidents for which enforcement action was taken.
Amount (tonnes) of illegal dumping cleared by the local authority.
% of general waste recycled on an annual basis.
% of municipal landfill sites licensed according to the terms of the Environmental Conservation Act.
Available landfill lifespan.
% of licensed landfill sites that are being monitored for compliance (according to specification in license).
<b>Water, Sanitation and Water Quality</b>
% of households with access to potable water within 200 m of dwelling (or on site).
% of households with at least a basic level of service as determined by the WSA service levels policy.
Number of recorded cases of cholera.
% exceeding of DWA guidelines for selected groundwater quality variables (*DWA).
% exceeding of DWA guidelines for selected surface water quality variables (*DWA).
<b>Municipal Parks and Open Spaces</b>
Extent of municipal parks, recreation areas or other open spaces within the municipal area with conservation value.
% of this area infilled by development on an annual basis.
<b>Protected Areas</b>
Extent of municipal area under 'local protected area' status.
% of municipal area under local protected area status.
% of land of 'conservation importance' in the municipal area under protected area status.
% of local protected areas with a current/adopted management plan and authorised budget.
<b>Invasive Alien Species</b>
Extent of municipal land currently invaded by alien species.
% of municipal land currently invaded by alien species.
Areas of IAS cleared from municipal land (in relevant reporting year).
% of municipal land currently invaded by alien species which has been cleared (in relevant reporting year).
Is there an adopted plan for invasive species monitoring, control and eradication that is integrated and aligned to the IDP and SDF?
<b>Species and Ecosystem Management and Change</b>
Threatened and extinct species per taxonomic group (P*).
Endemic Species per taxonomic group (P*).
Population trends of selected species (P*).
Extent of sensitive, vulnerable, highly dynamic and stressed ecosystems in the municipal area (by ecosystem type) (P*).
% of each of the above which is degraded or transformed on an annual basis (P*).
<b>Environmental Governance</b>
Has the municipality audited its plans, policies, and programmes for adherence to the NEMA principles?
Has a strategic environmental assessment of the impact of the SDF for the municipality been carried out?
For each of the following, is there a current, adopted plan that is integrated and aligned to the IDP: Air Quality Plan, Integrated Waste Management Plan; Oil Spill Contingency Plan; Water Services Development Plan; Plan to provide access to basic water services; Invasive Species monitoring, control and eradication plan
Are the IDP and SDF aligned to the National Biodiversity Strategy?
Has the municipality officially adopted Agenda 21 and the other applicable international agreements and protocols?
Is there an approved implementation strategy for Agenda 21 and the other applicable international agreements and protocols?

<b>PERIPHERAL INDICATORS</b>
<b>Noise Pollution</b>
Number of noise pollution related complaints received by the local authority. % of these complaints for which there was enforcement action.
<b>Storm Water Management</b>
% of storm water drains that are maintained annually. Number of dwellings within the 50-year flood line.
<b>Beaches</b>
% of beaches with blue flag status.
<b>Municipal Parks and Open Spaces</b>
% of dwellings that fall within a 2 km radius of a municipal park or recreation area. Extent of municipal parks, recreation areas and other open space per capital within the municipal area.
<b>Level of community satisfaction with access to and quality of municipal parks and recreation areas</b>
% of municipal budget allocated to the provision of and maintenance of municipal parks and recreation areas.
<b>Protected Areas</b>
Level of user satisfaction with access to and quality of local protected areas

**TOOLKIT D3 GUIDELINES FOR DEVELOPMENT IN CULTURAL LANDSCAPES AND SCENIC ROUTES****TOOLKIT SYNOPSIS**

As described in Section B, a number of scenic routes and rich cultural resources occur throughout the Witzenberg Municipality. These collectively create contribute to an environment of high integrity in places, which in turn, forms the basis of the high-potential tourism product of the area.

However, as is generally the case in much of the Western Cape, land-use planning has, over the decades, failed to recognise the value of maintaining the integrity of the environment (not the natural and the cultural environment) as an imperative for sustainable development. Development has, to date, in many instances taken place to the detriment of the integrity of the environment. Reference is, for example, to the the irreparable damage caused by the construction of bulk power lines over the unique mountains and through the Ceres Karoo with its rugged aesthetic quality.

This toolkit provides guidelines as to how development should be planned and implemented in cultural landscapes of high value and along scenic routes.

**D3.1 CULTURAL LANDSCAPES IN WITZENBERG**

Cultural landscapes have been described as: *'the combined works of man and nature'*. It is a broad term encompassing *'landscapes, historic places, sites and built environments'* as well as recording the *'long processes of historic development'* which contribute to a sense of identity at national, regional or local level.

A cultural landscape expresses modification to a landscape. It therefore includes both 'built' townscape evolution, and historic modifications to landscapes, through land-uses like agriculture. Historic vegetation is an intrinsic and highly visible part of the cultural landscape illustrating the value and intentions of those who planted it. The following are examples of types of cultural landscapes and historic vegetation in Witzenberg Municipality, which have over time become valuable to various communities in different ways:

- a) Avenues, squares and parks surrounded and defined by historic trees often reflect old settlement and planting patterns and have enduring cultural value to the local communities.
- b) Designed and formal gardens.
- c) Places and vegetation of symbolic value, i.e. slave bell tower.
- d) Groups of trees planted for shade or as windbreaks and old water courses often reflect historic agricultural activity and provide historic depth to environments.
- e) Historic domestic architecture and gardens.
- f) Built environments that respond and draw aesthetic value from their landscape contexts.
- g) 'Buffer strips' which were planned to keep communities of different cultural groups separated, display strong characteristics of social and political power relationships.

### D3.1.1 MANAGEMENT GUIDELINES

The Witzenberg municipal area has a number of important heritage sites that needs conservation and management. The following management guidelines for Grade 2 and Grade 3 heritage sites shall apply (CWDM EMF, 2011):

- a) **Grade 2 Heritage Sites:**
- (i) Obtain a permit from Heritage Western Cape for any alterations, demolitions or changes in planning status.
  - (ii) In the case of proposed alternations, interpret historic and architectural significance in order to inform alterations.
  - (iii) Alterations should enhance rather than detract from significance.
  - (iv) Undertake minimal alteration to the original fabric.
  - (v) Ensure that alterations enhance the structures in terms of the overall character of the werf or rural settlement.
  - (vi) Implement ongoing maintenance and repair of heritage sites.
  - (vii) Restore/Reconstruct appropriately where damage or unsympathetic past alterations detract from heritage significance.
- b) **Grade 3 Heritage Sites:**
- (i) Undertake a Heritage Assessment to determine whether the site should be classified as Grade 3A, 3B and 3C Heritage Site.
  - (ii) Obtain a permit from HWC for any alterations, demolition or changes in planning status.
  - (iii) In the case of proposed alterations, interpret historic and architectural significance in order to inform alterations.
  - (iv) Implement ongoing maintenance and repair of heritage sites.
- c) **For Grade 3A**
- (i) Restore/Reconstruct appropriately where damage or unsympathetic past alterations detract from heritage significance.
  - (ii) Grade 3A considered to have Moderate to High sensitivity (lower than Grade 2).
- d) **For Grade 3B**
- (i) Retain historic fabric especially with regards to exterior of buildings.
  - (ii) Grade 3B considered to have a Moderate sensitivity (lower than Grade 2).
- e) **For Grade 3C**
- (i) Demolition may only be considered if appropriate reuse of the structure is not possible.
  - (ii) Grade 3C considered to have a Moderate to Low sensitivity (lower that Grade 3B).

### D3.2 SCENIC ROUTES

Scenic routes are essentially a premium route of municipal and provincial significance. It is a route that has been especially selected because it portrays and links some the Municipality's unique natural features, cultural characteristics and exceptional scenic areas. It provides a meaningful route for visitors, residents and tourists to experience something special and enhance their enjoyment of the Witzenberg Municipality (Tourism Western Australia, 1996).



### D3.2.1 INTRINSIC QUALITIES OF SCENIC ROUTES

Understanding and knowing the intrinsic qualities of scenic routes are integral to the conservation of these roads, and all intrinsic qualities are considered of equal importance. The intrinsic qualities that must be considered are the following (Eastern Up Regional Planning and Development Commission, 2007):

- a) **Scenic:** All elements of the landscape influence the scenic quality: landform, water, vegetation and built environment. The scenic quality is based on the existence of significant scenic views from the road and the absence of features that detract from the overall image of the road. The scenic route's features must be representative, unique, irreplaceable, or characteristic of the area.
- b) A scenic route can represent an exceptional example of a common regional landscape. All scenic routes should share three characteristics for this intrinsic quality:
  - (i) Scenic features and views should be frequent enough to give a sense of continuity to the drive along the scenic route.
  - (ii) Scenic features relate to each other, which will usually create a coherent image of the scenic route. The way in which the route relates to its environment is also important to the sense of coherence.
  - (iii) A variety of viewing opportunities enhance the experience of a scenic route. Variety can also be a function of seasonal changes, some landscapes vary dramatically throughout the year.
- b) **Natural:** Natural quality is defined by features that are both visible and relatively undisturbed by human influence. The criteria for a road to have natural intrinsic qualities are the significance of the natural resources along the scenic route, the visibility of those resources from the scenic route, and the integrity of the resources in their original state. These resources in Witzenberg include geological formations, fossils, landforms, water bodies, vegetation and wildlife. The natural features should be unique, irreplaceable, or distinctly characteristic of the area. A scenic route can still be considered for natural qualities when there is substantial human alteration if the traveller's primary impression is of a landscape with great natural beauty.
- c) **Historic:** The historic quality of the scenic route depends on the connection between the road and the individual historic resources along the corridor. The scenic route must contain enough features to create a story with a certain level of continuity and coherence. The historic story should provide a link among resources along the scenic route and a means of interpreting these resources to the visitor. The historic elements should reflect the actions of people and may include buildings, settlement patterns, and other examples of human activity. The historical significance can demonstrate an evolving historical story that links diverse events through time.
- d) **Culture:** Cultural resources are derived from the distinctive communities that influence the scenic route character. Events, traditions, food, and music provide insight into the unique qualities of the area. These cultural qualities are not necessarily expressed in the landscape. Culture encompasses all aspects of a community's life, and it may be difficult to decide what necessary to define cultural resources as intrinsic qualities. The following are aspects to consider:
  - (i) Geography: settlement patterns, climate influences on building styles, place names, stories, and legends.
  - (ii) Economy: Occupations, products, training, yearly cycles, and land-use patterns.
  - (iii) Community Life: Civic and religious buildings, institutions, festivals, customs, and rituals.

- (iv) Domestic Life: Households, housing styles, foods, gender and age roles, and family traditions.
- (v) Artist Genres: Music, customs, legends, dance, drama, games, music, art, architecture, crafts, dress, folklore, and costumes.
- e) **Archaeology:** Archaeological quality involves those characteristics that are physical evidence of historic and prehistoric human life that are visible and can be inventoried and interpreted. Archaeological evidence in Witzenberg includes ruins, rock art, prehistoric stone artefacts, structural remains, etc. The archaeological resources along the scenic route must important and accessible or be documented:
  - (i) The resources must have scientific significance. They represent resources that cannot be commonly found throughout a region or in other places across the municipal area, province or even country.
  - (ii) The physical evidence should be visible if appropriate, and extremely fragile and sensitive sites may not be appropriate as a focus of the scenic route.
- f) **Recreational:** Recreational quality can encompass many types of outdoor activities that are dependent on the natural and cultural elements of the landscape. Recreation in Witzenberg can include eco-tourism, hiking, fishing, agri-tourism, wine-tasting, cultural festivals, driving for pleasure, wildlife watching, enjoying the beauty of the scenic route of mountain pass, etc. The determination of recreational quality will depend on three factors: the significance of the recreational resources, their visibility from the scenic route, and the relationships among the resources and between the resources and the scenic route. There should be a variety of recreational opportunities along the scenic route that provide activities throughout the year for a wide range of ages and abilities. The recreational resources should be related to each other and the scenic route so they support the overall theme of the scenic route (Eastern Up Regional Planning and Development Commission, 2007).

It is essential that the standard of the proposed scenic routes in the Witzenberg Municipality are maintained at a very high level to ensure they create a perception of something 'special' and are held in high regard by everyone. Scenic routes are designated as 'scenic roads' because of their unique, intrinsic qualities. A visually pleasing road or route results in a pleasing driving experience and a positive community image. Properly protected and maintained scenic roads will enhance property values, employment, the tax base and the natural environment of the area. Additionally, it is anticipated that scenic roads will meet two crucial needs in Witzenberg<sup>3</sup>:

- **Aesthetic/Cultural Needs:** Scenic roads provide ways to conserve green space. Roads meandering through the mountains offer the driver, cyclist, hiker etc a view of solace, peace or panoramic vistas. The scenic routes pass historic and archaeological sites, reminiscent of the prehistoric to historic habitation and a cultural history.
- **Economic Needs:** The scenic routes and mountain passes provide the gateway to the Witzenberg Municipality. These routes provide visitors and tourists to historic towns, amenities such as restaurants, shops, etc, wine estate, natural resources, historic and cultural sites, nature reserves, hiking trails, over-night facilities, etc. This provides the possibility to increase the economic health and well-being of the Witzenberg Municipality.

<sup>3</sup> [http://www.marioncountyfl.org/planning/Updates/Scenic\\_Roads\\_Master\\_Plan\\_WS.pdf](http://www.marioncountyfl.org/planning/Updates/Scenic_Roads_Master_Plan_WS.pdf) - accessed on 2 April 2012.

### **D3.2.2 GUIDELINES FOR SCENIC ROUTES**

Scenic routes contribute substantially to the way in which the character of a place is experienced by both local inhabitants and tourists. They play a vital role in the local and provincial tourist industry and can thus contribute to the economic base of the area (Aikman *et al*, 2000):

#### **D3.2.2.1 Retention of Public Land Adjacent to Scenic Drives or Routes**

Existing portions of publicly held land adjacent to scenic routes, either in the form of road reserves or public open spaces, contribute substantially to the experience of mountain and views. As a matter of policy, Witzenberg Municipality should retain these portions of land or acquire them from other state or parastatal agencies. Where development pressures exist, the municipality should retain ownership and lease land with strict environmental parameters established to ensure view preservation (Aikman *et al*, 2000):

#### **D3.2.2.2 Development of Public Land Adjacent to Scenic Routes**

New development should be constructed in a sensitive manner so that important views from scenic routes are not impaired. Such development should reflect a sense of place and reinforce local identity. Innovative architectural approaches should be subjugated in favour of development that respects traditional forms and materials.

#### **D3.2.2.3 Control of Intrusive Alien Vegetation on Public Land Adjacent to Scenic Routes**

Alien vegetation in many instances blocks important views along scenic routes. It detracts from the sense of place which these routes are supposed to enhance. CapeNature with the Witzenberg Municipality should manage these alien vegetation patches and regularly destroy any exotic vegetation.

#### **D3.2.2.4 Control of Scenic Route Aesthetics**

The scenic routes in Witzenberg are essentially linear elements cutting through a variety of environmental conditions (i.e. pristine nature, significant cultural landscape, historical architecture, etc.), and can frequently be set out of scale. Every effort should be made to reconcile this potential conflict between the unchanging linear road and the ever-changing landscape. The following general objectives or guidelines for shaping and enhancing the visual experience of scenic routes (Aikman *et al*, 2000):

- a) To present the viewer with a rich, coherent, sequential form, a form which has continuity and rhythm and development, and which provides contrast, well-joined transitions and a moving balance.
- b) To clarify and strengthen the driver's (and pedestrian's) image of the environment, to present a picture which is well-structured, distinct, and as far-ranging as possible.
- c) To keep the observer's grasp of the meaning of the environment; to present an understanding of the use, history, nature or symbolism of the drive and its surrounding landscape.
- d) The primary objective is to ensure that the route is as interesting and stimulating as possible.

### **D3.2.2.5 Control of Downward Views**

As a general guideline development on the river/panoramic view/'open' side of scenic routes should not project above the back or footway level. While this protects horizontal views it does not protect downward views.

### **D3.2.2.6 Control of Upward Views**

Upward views of the for example the mountain are regarded as significant. As a general guideline, subdivisions on the upper side of scenic routes should allow long deep plots or erven to enable a staggered system of terraces, a more gradual vegetated slope than the 'canyon effect' often created, and thus the preservation of mountain views. Consideration should be given to the imposition of a condition for all developments adjacent to a scenic route that a landscape plan be formulated to indicate view preservation and enhancement and the nature of boundary walls and plantings (Aikman *et al*, 2000).

Boundary walls should have a limited height restriction (to be decided by Council) from the top of the boundary wall determined by maximum height above natural ground level should be stipulated above which no development should be allowed to occur.

### **D3.2.2.7 Control of Boundary Walls and Fencing**

Fencing, railways and gates should be visually permeable as not to affect the view materially. Controls should *inter alia* include the following (Aikman *et al*, 2000):

- a) Do not exceed a maximum height (to be decided by Council) at any of point above the nearest point on the footway of such scenic route.
- b) Have vertical elements which have a maximum distance (to be decided by Council) from any other such vertical element.
- c) Have horizontal elements which have a maximum distance (to be decided by Council) from any other horizontal element.
- d) No continuous solid material, timber, brick, vibracrete or glass, should be permitted as a boundary wall treatment on the downside of scenic routes. Low stone walls, or spaced pillars should be permitted.

### **D3.2.2.8 Control of Vegetation**

While trees and hedges can sometimes frame and emphasise a particular view or create an avenue, they can also function to screen a route from private landowners. No vegetation within the scenic reserve (i.e. the road reserve and adjoining public and private property) should be permitted to grow above footway level in such a manner that it would, in the Municipality's opinion, detrimentally impair the view from a scenic route. Similarly important landmark vegetation and tree-lined avenues require protection.

### **D3.2.2.9 Control of New, Large-Scale and Non-Residential Activities and Land Uses**

The siting and form of new, large-scale and often inappropriate land uses, primarily due to their character, mass or commercial/industrial nature, can have a negative impact on the scenic experience. The following general principles should be adhered to (Aikman *et al*, 2000):

- a) Rehabilitation of any available existing building should be considered as a preferable alternative to new development.
- b) Ridges and elevated positions should be avoided for visual and climatic reasons.
- c) Buildings should be located and designed to fit the scale of the surrounding landscape.
- d) In most instances it's preferable for new buildings to be associated with existing settlements, rather than to use isolated sites on undeveloped land.
- e) Buildings tend to blend more successfully with the landscape when aligned parallel to contours. Plating and walls can be used to tie buildings into the landscape.
- f) Platforms on sloping sites should be kept to a minimum, and new levels should be designed to fit into the surrounding landform.
- g) Outdoor spaces should be designed so that the landscape appears to flow through the site. Design themes and functions of outdoor spaces should be kept to a minimum and there should be a clear distinction between public and private space. The emphasis should be on simplicity.
- h) Materials should be appropriate for the climate, ecology, texture and scale of the site and should be capable of weathering well over time.

#### **D3.2.2.10 Landscaping Guidelines**

- a) Every effort should be to build new planting into the structure of existing vegetation. Plant communities should be established which are characteristic of the local ecology.
- b) Landscaping should be used to improve the visual quality of environmentally impoverished area.
- c) Landscaping should be used to screen service areas and help absorb them into the landscape.
- d) Planting should be used to integrate the scenic route into the landscape. Plant types should not be used to decorate the route, particularly in rural areas. They should rather reflect the indigenous flora through which the route passes.
- e) The landscape should be brought as close as possible to the essential boundary of the road.
- f) Plant communities and groupings are more important than individual species although these too are important. Planting should thus occur in colonies rather than single specimens of trees or shrubs. Uneven spacing and a mixture of different sized plants should be used to create a natural appearance (Aikman *et al*, 2000).

#### **D3.2.2.11 Signage**

Interpretive signs can be used in many types of settings along scenic routes, from visitor centres to wayside exhibits and interpretive trails. Interpretive signs provide opportunities for visitors to experience the setting while learning about the scenic route. Well-designed and well-located interpretive signs can reach a wide audience and enhance the visitor's experience and awareness of the scenic route. Interpretive signs are a popular method of interpretation. They are relatively inexpensive compared with personal visitor contact and can convey messages at the visitor's convenience since they are available any time of the day or season. The following aspects should be considered with designing signs for the scenic routes:

- a) Use the best writing and graphic design possible. Insist on professional design and consultation.
- b) Make signs attractive, inviting, and universally accessible.
- c) Signs should adhere to provincial and municipal guidelines and standards.
- d) Have a strong focal point or centre of interest.

- e) Select materials that will harmonise with the site and require minimal maintenance.
- f) Use colour to provide variety, emphasis and unity. Colour is very effective in catching the visitor's attention.
- g) Keep the sign simple and uncluttered.
- h) Install signs at heights and angles that are readable and do not obscure the feature interpreted.
- i) Make the sign the right size, no larger than necessary.

It should be noted that all structures, advertising and information signage must be erected with the permission of the Department of Transport and Public Works or the District Roads Engineer if signs are to be erected alongside proclaimed roads. Advertising and/or general signage must take due cognisance of the regulations relating to the '*Aanduiding (naamborde) van Buite-Stedelike Eiendomme*', as described in the relevant policy in terms of Advertising Adjacent to Rural Roads (Roads and Traffic Administration Branch Circular No. R15/1994).

### **D3.2.3 GUIDELINES FOR SCENIC ROUTES OR TOURISM ROUTES IN THE SETTLEMENTS**

Streets such as Church and Van der Stel in Tulbagh have great potential for tourism and recreational activities. In order for these streets to become established scenic routes or tourism corridors certain guidelines are proposed for the Witzenberg Municipality to become recognised scenic routes or streets.

It should be noted these guidelines should be read together with specific guidelines proposed for the built environment under Toolkit 5.

Urban streets play a strong role in how settlements are built and function. Implementing sustainable urban streets can create more liveable communities. With amenities and attractions closely located, individuals are more likely to utilise alternative mode choices such as walking, bus/taxi stops, and cycling; which leads to improved health of individuals and the environment. Streets busy with pedestrian and bicycle traffic are safer and strengthen a sense of community. Redeveloping baseline guidelines for street design and incorporating sustainability as a key aspect in new development and redevelopment will promote positive changes for nature, people and business.

The following guidelines are applicable to certain streets in Witzenberg Municipality to enhance their tourism, scenic and recreational value:

- a) Promote non-motorised transport (NMT) in its settlements:
  - (i) Design streets in the Witzenberg area that reduces traffic speeds so that pedestrians, cyclists and vehicles can mix safely. Provide clear routes for pedestrians and bicycles as well as for vehicles.
  - (ii) If separate cycle paths are provided indicate them with street markings or by clearly displayed and well-designed signage.
  - (iii) Ensure pedestrian and bicycle routes are direct, continuous and well-lit, and that appropriate street crossings are provided.
- b) Ensure a meaningful location in terms of movement network and urban structure (CSIR BOUTEK, 2005):
  - (i) Meeting of special streets should result in squares and local points.

- (ii) Locate buildings close to the street to increase pedestrian activity, reduce resident isolation, and foster pedestrian services such as retail outlets along streets connecting higher density developments.
  - (iii) Create a symbolic location for the special street (i.e. Church and Van der Stel Streets) through its relative location within geographic area.
- c) Increase intensity and diversity in the street reserve:
- (i) Create rhythmic and spatial progression along an axis/street via composition of activities or change in land-use.
  - (ii) Effectively design the whole reserve, including the spaces between the road surface and the building entrances. Design for and make a distinction between the following:
    1. Building zone (i.e. canopies, commercial signs, enclosed cafes and sidewalk cafes).
    2. Sidewalk zone (i.e. sewers, gratings, kerbs, urban art, benches, bicycle racks, information kiosks, trees, cycle areas, pedestrian areas, newspaper stands, refuse bins, mail boxes, planters, street lighting, bus shelters, etc.).
    3. Vehicular zone (i.e. banners, manholes, traffic signal, on-street parking, decorative lighting etc.).
- d) Define the street as a safe and unique public space:
- (i) The general pattern of buildings should help to define the street.
  - (ii) Land-uses should enliven the street and ensure surveillance of it. Parking structures should not dominate street frontages.
  - (iii) Distinguish between so-called front-and-back uses and definition, which take place within the street realm, but which differ for various urban users and cultures.
  - (iv) In pavilion-type buildings, use trees to define the street. The streetscape design should incorporate a consistent theme, strengthening the association of unrelated buildings. When a street is not strongly defined at its edges, focal points at the ends or at regular intervals – could provide a sense of place.
  - (v) Intersections and road crossings should be designed to be safe for pedestrians and vehicles. This includes the design of sidewalk and crosswalks, traffic signals and other intersection treatment.
  - (vi) Design soft mounds and plant trees separating footpaths and buildings from the road.
  - (vii) Footpaths should preferably be design adjacent to buildings that overlook them, as opposed to blank walls.
  - (viii) Where pedestrian routes cross streets, ensure visibility through landscaping and signage.
  - (ix) Modify existing leftover space to accommodate easy pedestrian crossing of streets.
  - (x) To enhance safety for pedestrian on sidewalks:
    - Minimise conflict with cars.
    - Cater for the disabled.
    - Provide sidewalks.
    - Provide parking, between road and pedestrian.
    - The busier the street, the broader the sidewalk should be.
    - Place kerb between sidewalk and street.
    - Design road to discourage speeding.
- e) Accommodate a variety of users in the street:
- (i) The effective separation of pedestrian and vehicular movement should be at a scale which encourages activity and pedestrian comfort.
  - (ii) For movement, the street should include a surface for cars, together with bicycle and pedestrian lanes.

- (iii) Other facilities to be accommodated are those for small-scale businesses (such as decorative kiosks for flowers), landscaped strips and spaces of relief and relaxation in building areas.
- f) Ensure a unified and interesting edge surface design:
  - (i) Unify street design and street frontages of buildings to create a special street with an identifiable character. New buildings should fit into the existing context and attention should be given to similar elements such as roof lines, bay windows, and window proportions.
  - (ii) A number of distinctly identifiable elements along routes should be provided, with continuity of shop fronts.
- g) Create diversity and interest:
  - (i) Pedestrian activity areas should receive special pavement treatment with coordinating materials and patterns to create a specific character for the precinct.
  - (ii) Design simple continuous routes with complex views especially pedestrian movement.
  - (iii) Planting and pavement treatment in pedestrian streets should be related to activities and uses in adjacent buildings.
  - (iv) Street landscaping, in particular, should be selected and designed according to a special theme for a given area, providing a sense of place in addition to its other amenities.
- h) Provide functional and aesthetically pleasing public furniture:
  - (i) Furniture should support the envisaged character of the street.
  - (ii) Furniture could include fountains, litter bins, bus shelters, benches, lighting, etc. depending on the context within which the street is situated.
  - (iii) Provide seating in passive areas next to active areas, to encourage people to look towards either side. Design for interaction among people sitting down and avoid conflict between people walking and sitting.
  - (iv) Appropriate levels of lighting should be used to enhance safety and accent and highlight landscaping. Access lighting, directed upwards into trees, provides low intensity, but often dramatic illumination of nearby pedestrian areas.
  - (v) Provide information through signage that is colourful, interesting and theme-based.
  - (vi) Provide adequate shelters against rain, sun and wind, if possible.
  - (vii) Provide places for waiting where change in transportation modes take place and at intersections.
  - (viii) Provide benches at bus stops or shelters. Comfortable design and location of street furniture should adhere to the needs of potential users.
- i) Create an effective hard open space system that integrates the different elements of a settlement to contribute to a meaningful urban structure:
  - (i) Provide physical, visible and perceptual connectivity between cluster and linear open spaces. Establish strong and legible linkages between various hard open spaces.
  - (ii) Ensure quality of contextual linkages through the continuation of special activities or functions.
  - (iii) Enhance structural similarity of the street through associational symbolism (personal experience) and cultural symbolism (common areas of understanding in culture) to ensure that as many people as possible can relate to the space.



### D3.2.4 SCENIC ROUTE MANAGEMENT PLAN

It is proposed that the Witzenberg Municipality prepare a comprehensive management plan for the scenic routes in its municipal area since it is critical for identifying the intrinsic qualities of the scenic route and the guide the management of resources to protect and enhance those qualities (Eastern Up Regional Planning and Development Commission, 2007).

Such a management plan should help communicate the vision to the community, potential partners and others concerned with the experience provided by the scenic route. The following components should form part of the management plan, namely:

- a) A map identifying the scenic route's boundaries and the location of intrinsic qualities and different land-uses within the scenic route.
- b) An assessment of such intrinsic qualities and of their context.
- c) A strategy for maintaining and enhancing those intrinsic qualities. All scenic routes in Witzenberg should be maintained with particularly high standard, not only for travellers' safety and comfort, but also for preserving the highest levels of visual integrity and attractiveness.
- d) A schedule and a listing of interested and affected parties' responsibilities in the implementation of the scenic route management plan, and a description of enforcement and review mechanisms, including a schedule for the continuing review of how well those responsibilities are being met.
- e) A strategy describing how existing development might be enhanced and new development might be accommodated while still preserving the intrinsic qualities of the scenic route. This can be done through design review and such land management techniques as zoning, and economic incentives.
- f) A plan to assure ongoing public participation in the implementation of scenic route management objectives.
- g) A general review of the road's safety and accident record to identify any correctable faults in the road's design, maintenance, or operation.
- h) A plan to accommodate commerce while maintaining a safe and efficient level road service, including convenient user facilities.
- i) A demonstration that intrusions on the visitor experience have been minimised to the extent feasible, and a plan for making improvements to enhance that experience.
- j) A signage plan that demonstrates how the municipality will ensure and make the number and placement of signs more supportive of the visitor experience.
- k) A narrative describing how the scenic routes will be positioned for marketing.
- l) A discussion of design standards relating to any proposed modification of the roadway. This discussion should include an evaluation of how the proposed changes may affect on the intrinsic qualities of the scenic route.
- m) A description of plans to interpret the significant resources of the scenic route.

## TOOLKIT D4 GUIDELINES FOR PREPARATION OF A CLIMATE NEUTRAL STRATEGY

### TOOLKIT SYNOPSIS

Climate change is the defining issue of our era, with sufficient scientific evidence that climate change is upon us and that it is here to stay. However, there is also evidence that it is still in our power – as individuals, businesses, cities and governments – to influence the ultimate significance of the phenomenon.

We have the choice on how to act and we can all make a difference by supporting the transition to a climate-neutral world. There is however a huge gulf between where we currently are and the extent of climate-neutrality we need to achieve in order to promote long-term sustainability. What is required is a reasonably simplistic and cost-effective approach to proceed from a vision to an implementable and sustainable climate-neutrality strategy.

This toolkit provides guidelines for the preparation of a climate-neutrality strategy that would, in combination with the SDI approach in Toolkit D8 or any comparable approach, enhance environmental sustainability and generally *'improve the state of'* as contemplated by the Witzenberg SDF. The preparation of a provincial climate-neutrality strategy is the responsibility of the Municipality, however, it is suggested that and large-scale resource user in the Municipality be required to prepare such a strategy for its own enterprise. These enterprises-specific strategies should be incorporated into the strategy to be prepared by the Municipality.

#### D4.1 DEVELOPING A CLIMATE-NEUTRAL STRATEGY

The development of a suitable strategy is a process to be implemented over a realistic timeframe and in full synergy with the SDI model, resulting in the implementation of projects at grass roots level. Figure D9 illustrates the methodology for developing a climate-neutral strategy.

The methodology is premised on the principle that climate-neutrality, sustainable development and biodiversity management are not independent issues – they are the three legs of a tightly knitted system. In short, a climate-neutrality strategy is developed in the following phases:

##### PHASE 1: CLIMATE-NEUTRAL POLICY FRAMEWORK

The vision and requirements of the subject area are considered. This is translated into a mission statement by combining it with key climate-neutral objectives. The mission statement needs to take cognizance of existing legislation, policy and international standards, from the international to the local level, in so far as they affect the climate-neutral strategy development process. The mission statement should address the following:

- a) Sustainability – with special reference to the objectives of sustainable development projects to be implemented.
- b) Mitigation and adaptation – this presents a very important area of consideration presented by the Adaptation Policy Frameworks (APF) for Climate Change, developed by the United Nations Development Programme (UNDP) on behalf of the Global Environment Facility (GEF).

- c) International knowledge base – represented by a range of international organizations, from where the frameworks summarized in Phase 2 are derived. The international organizations and protocols considered in this regard include:
- Agenda 21.
  - World Symposium on Sustainable Development.
  - Millennium Development Goals.
  - African Development Bank Extensions.
  - Millennium Ecosystem Assessment.
  - Organisation for Economic Cooperation and Development.
  - Intergovernmental Panel on Climate Change.

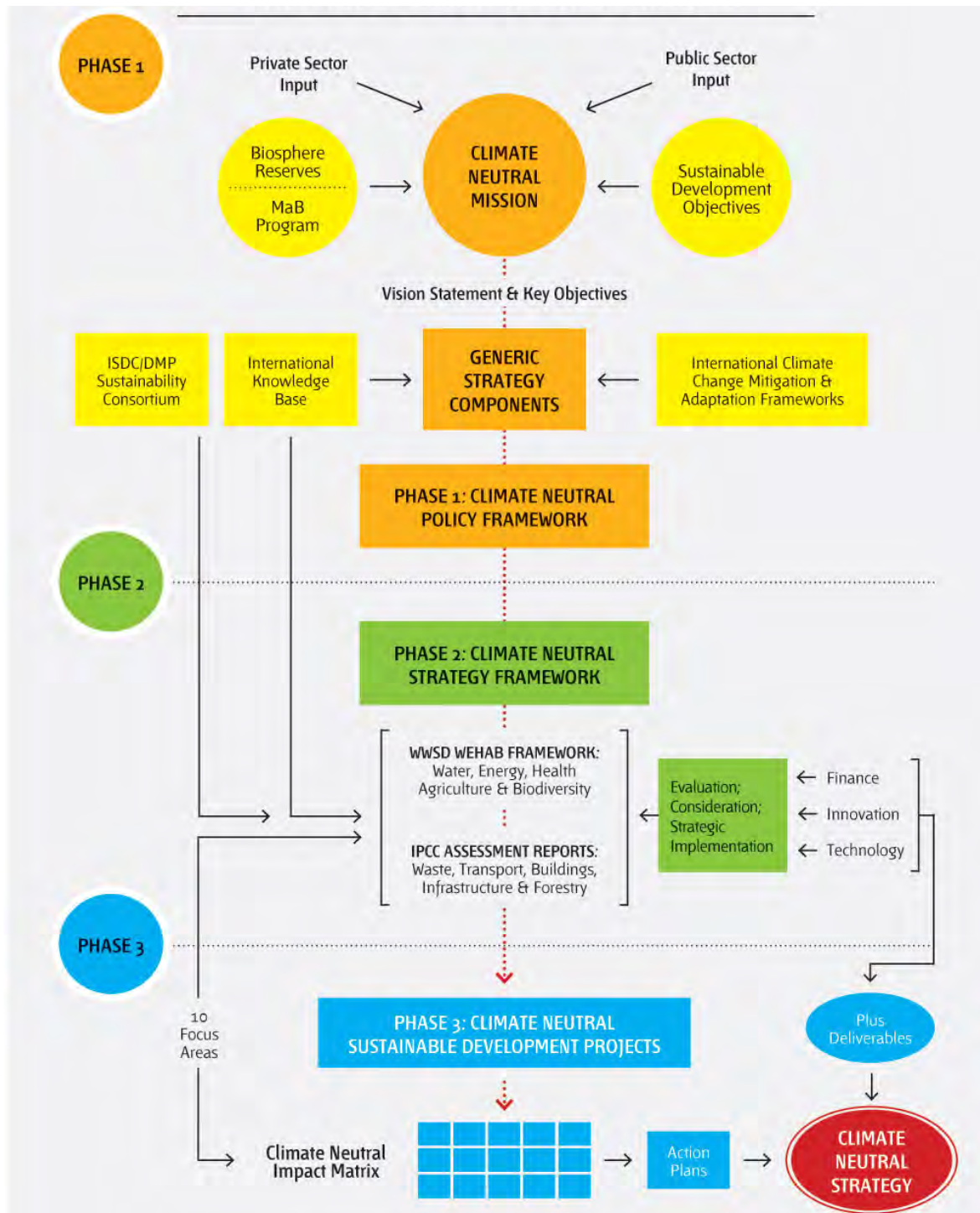


Figure D9: Methodology for developing a climate-neutral strategy

## PHASE 2: CLIMATE-NEUTRAL STRATEGY FRAMEWORK

In this phase a climate-neutral strategy framework is formulated, the aim of which is to integrate the objectives of the sustainable development project portfolio with the key climate-neutral strategy focus areas. The climate-neutral action matrix is utilized to achieve such integration. The latter is introduced in Phase 3.

In order to establish the strategy framework, the climate-neutral strategy focus areas (drivers) need to be identified first. A number of frameworks, derived from the international knowledge base, provide the extensively tested focus areas (drivers) required to develop the necessary guidelines for arriving at a suitable climate-neutral strategy.

The five key focus areas are water, energy, health, agriculture and biodiversity, which are also referred to as 'WEHAB'. The latter was the focal point of an announcement by the UN Secretary-General ahead of the World Summit on Sustainable Development (WSSD) held in Johannesburg in 2002. A further five additional focus areas have since been suggested, namely waste, transport, buildings, infrastructure and forestry.

The next step is to formulate a set of sustainable development guidelines for each focus area. Specific reference is, for example, made to the efficient use of energy in the construction and building industries as is provided for and contemplated in SANS 10400 – XA: 2011 and SANS 204: 2011. Simultaneously, an evaluation process is introduced, in which *Finance, Innovation and Technology* (FIT) considerations are evaluated and considered for introduction into the strategic development process. This is of specific importance with regard to the creation of suitable economic drivers, required for the successful integration of a project's sustainable development guidelines and the subsequent implementation as a climate-neutral strategy. Furthermore, economic drivers (agriculture, solar plants, bio fuels, property development etc.) are created in order to generate the required monetary capital from which to effectively finance the strategy.

## PHASE 3: CLIMATE-NEUTRAL SUSTAINABLE DEVELOPMENT PROJECTS

The completion of a Climate-Neutral Impact Matrix© represents the final stage of the development of a climate-neutral strategy, a process in which the selected focus areas, each with their accompanying guidelines, are integrated with respect to defined development programs, effectively delivering a range of implementable action plans. In order to generate the required cash flow from which to finance a climate-neutral strategy, it is essential that the action plans are combined with suitable economic drivers. In order to achieve this objective, FIT considerations are evaluated, considered and introduced into the strategy development process. Economic driver examples include property development, agricultural enterprises, tourism development, solar energy plants and waste water and recycling plants.

### D4.2 THE CONCEPTS OF CLIMATE-NEUTRAL COMMUNITIES AND SETTLEMENTS

Sustainable development has climate-neutrality as its ultimate goal. For this to be achieved in practice dedicated policies and strategies and action plans are to be prepared and implemented that would be measurable. A climate-neutral strategy, could help give effect to the above goal.

In practical terms, new settlements are to be designed and development with climate-neutrality as an overriding objective, and communities are to develop a culture that embraces the principles of sustainability. To develop a culture within which sustainability is embedded, it is imperative that practical effect be given to sustainable settlements and communities. New settlements should be designed to qualify as climate-neutral settlements. Communities should develop lifestyles that would be recognised for their contribution to sustainability.

For communities to succeed in promoting climate-neutrality a culture of sustainability is required as the guiding principle in the development of new, purpose-made settlements. Such culture should spread across all forms of existing settlements, whether rural or urban. This will require retrofitting of existing settlements and the planning/design and ensuring that all types of resource use conform to climate-neutral criteria. Communities everywhere should be encouraged, guided and assisted to adopt climate-neutral lifestyles and practices in order to realize the carbon neutral community ideal across the board.

**TOOLKIT D5 PLACE-SPECIFIC PLANNING AND DESIGN GUIDELINES****TOOLKIT SYNOPSIS**

The aim and rationale behind the planning, design and construction approach adopted for the Witzenberg Municipality is to maintain and, where required, restore the unique character and ambiance which people instinctively and intuitively recognise as qualitative and which instils a sense of pride, belonging and identity with those associated with the region and its component places. It is important that the image of the Witzenberg Municipality, as a uniquely diverse natural and cultural resource, be emphasised through innovative planning and design of all built structures.

The purpose of the planning and design directives put forward in this toolkit is to provide a framework within which individual buildings can be designed and constructed to ensure an integrated and harmonious architectural language for the area. The guidelines should not stifle or inhibit innovative design and/or original thought. However, the challenge lies in respecting the genius loci (spirit of place) of the area, by determining its true identity and interpreting it in ever new ways.

The guidelines are intended to assist architects, home owners, the Municipality and others involved in the design and construction of buildings to create a qualitative place which would resonate with the place, historic, craft, natural and scale qualities of the various component places of the Witzenberg.

**D5.1 PLANNING AND DESIGN FRAMEWORK**

The aim and rationale behind the planning, design and construction approach adopted for Witzenberg is to maintain and, where required, restore the unique character and ambiance, which people instinctively and intuitively recognise as qualitative and unique and which instil a sense of pride, belonging and identity with those associated with the region and its component places.

From a municipal governance perspective, the application of the design framework implies that development applications have to be evaluated against the directives summarized in the chapters below and the supplementary guidelines listed in the SDF. If a development proposal is considered inconsistent with these directives, the Municipality will inform the applicant about the nature and extent of the inconsistency and the avenues to be explored to find appropriate solutions.

The criteria, guidelines and principles summarised in the chapters below collectively provide the basis for the proposals and recommendations for the restructuring and future development of the settlements of Witzenberg.

**D5.1.1 'CRITICAL REGIONALISM' AS A PREMISE FOR PLACE-SPECIFIC PLANNING AND DESIGN**

The planning and design approach of Witzenberg is based upon the concept of 'critical regionalism'. This concept is to be adopted for the planning and design of all development in the Witzenberg Municipality.

'Critical regionalism' constitutes a sensory understanding and appreciation of the environment and its component 'things'. It promotes a return to the development of high-quality settlements that comply with the definition of '*a unique sustainable man-made environment which is in harmony with the natural environment that 'contains' it and which demonstrates the five guiding principles of 'critical regionalism'*'. Such quality is often dependent upon a specific 'sense of togetherness' and character that requires a specific scale and density. The approach is based on five basic principles that should guide the planning, design and management of development, namely (Kelbaugh, 1997).

#### **D5.1.1.1 Sense of Place**

'Sense of place' is described as the '*degree to which a place can be clearly perceived and mentally differentiated and structured in time and space by its residents, and the degree to which that mental structure connects with their values and concepts*' (Lynch, 1998).

In evaluating a sense of place, one needs to recognise that there are various 'components of sense' that, together, provide a particular environmental quality for the observer. 'Sense of place' is based upon the sensed quality of the unique 'components of sense' of a particular place, including its identity, character, structure, local climate, topography, vegetation, building materials, building practices, and local authenticity.

In practice, in the preparation and consideration of development applications (including architecture and placement of new infrastructure), it is important to ensure that the above 'components of sense' are incorporated into the planning and design. For example, this implies that development should *inter alia* reflect elements of the traditional vernacular of the area, make use of local natural building materials, and reflect a strong sense of local authenticity.

The characteristics of Witzenberg that are documented in Section B collectively create a particular sense of place. These characteristics should therefore be considered in the design process and be reflected, to the extent possible, in the planning and of any development or renewal projects.

#### **D5.1.1.2 Sense of History**

Historical precedents are a good point of departure when planning, designing and rehabilitating new places and existing areas (Kelbaugh, 1997). It is imperative that the local history, traditions and values be thoroughly studied as part of any planning process and that the planning and design of both the cultural and the natural environment should reflect these dimensions.

The history of an area should form the basis of development and land-use in any area. Developments should reflect an appreciation for the history, culture and traditions of the local people and build on the historical precedents presented by existing high quality settlements.

*Any architectural type that has stood the test of time must be doing something right in terms of responding to climate, social and cultural needs, tradition, and economy, and should, therefore, be worth copying* (Kelbaugh, 1997).

It is suggested that the elements of the traditional building form be adopted in the planning and design of new developments in Witzenberg. As such, the design of buildings is to draw from

traditional building dimensions and footprint which would, amongst other, provide for the creation of secluded courtyards and similar sheltered areas that create a specific sense of enclosure and protection against the generally harsh local climate. The traditional 'letter' architectural form of the 'I', 'T' or 'H' shape floor plan illustrated by the figure below could be applied to all new residential buildings.

The drawings below illustrate the typical application of the traditional 'letter' architectural form as suggested for development in Witzenberg.

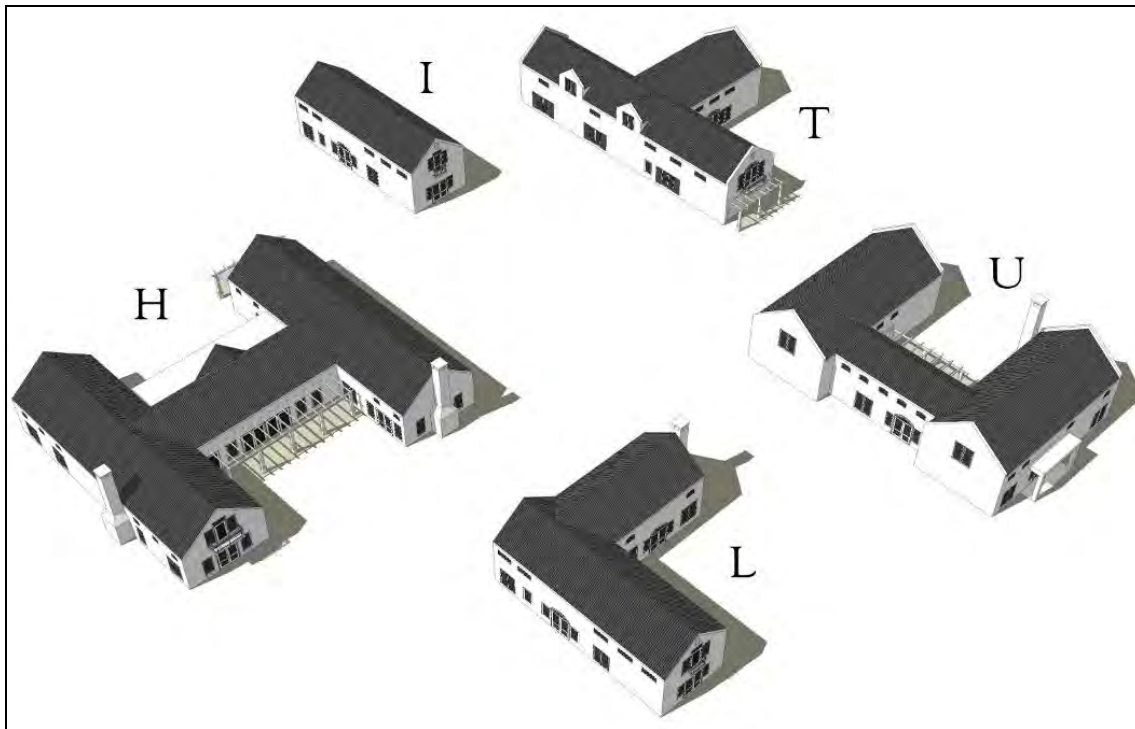


Figure D10: The traditional 'letter of the alphabet;' architectural form.

#### D5.1.1.3 Sense of Craft

*Critical regionalism builds upon a return to craftsmanship and avoids construction types, which have become less sustainable and less appropriate over most of the past century (Kelbaugh, 1997).*

The characteristics and the craftsmanship of the local people evolved in response to the challenges of nature and the needs of the historic people of the area. In order to create places where humans can live with dignity and pride, it will be necessary to revive and retain the traditional craftsmanship and to ensure that an appropriate 'sense of craft' is reflected in all development.

There is evidence of unique stone masonry, thatching and woodwork, etc. (refer, in particular, to Tulbagh and portions of the Koue Bokkeveld) which reflect a sense of craft. This should be encouraged throughout future new development and urban renewal in Witzenberg.

#### D5.1.1.4 Sense of Nature

*Nature is a good model for design because it holds the key to vitality and sustainability. It is recognised that architects, landscape planners, and urban planners can learn from the sophistication of ecological systems and that these can fulfil a meaningful role to protect*



*ecosystems, natural processes, and the symbiosis between organisms and their environment* (Kelbaugh, 1997). This can be achieved through appropriate study and developing an appreciation for the unique environmental value of a place before any planning, design and development is undertaken. Any development is to reflect an appreciation for the unique natural attributes of the environment and respond to the dominant local forces of nature. This implies that in any development there should be presumption in favour of conservation and that a premium will be placed on the conservation of natural resources, wildlife and landscape. Materials for new development should, for example, be obtained from sustainable sources, and in the design of buildings the use of energy consumption should be minimised. In addition, the following principles should be incorporated into the planning and management of any development:

- a) Minimise use of the four generic resources, namely energy, water, land and materials.
- b) Maximise resource re-use and/or recycling.
- c) Use renewable resources in preference to non-renewable resources.
- d) Minimise air, land and water pollution.
- e) Create a healthy, non-toxic environment.
- f) Maintain and restore the earth's vitality and ecological diversity.
- g) Minimise damage to sensitive landscapes, including scenic, cultural, historical, and architectural aspects.

#### D5.1.1.5 Sense of Limits

There is a need for physical and temporal boundaries to frame and limit human places and activities. There is also a need for human scale in the built environment. Kelbaugh (1997) states that *'the sense of limits also pertains to a need for psychological boundaries – ones that make life more understandable and negotiable'*.

In order to achieve the above, strategies need to be formulated and implemented to prevent the unlimited urban sprawl that characterises some of the urban and peri-urban areas. Such strategies need to reflect the ability of the natural environment to sustain development and consumptive land-use. In addition, such strategies need to ensure that the development density of human settlements is such that it would facilitate the development of places where people can live with dignity and pride. It is therefore imperative that future development in the various settlements strengthen the nodal character of such settlements (refer to the figure below) and that the designated urban edge be adhered to.

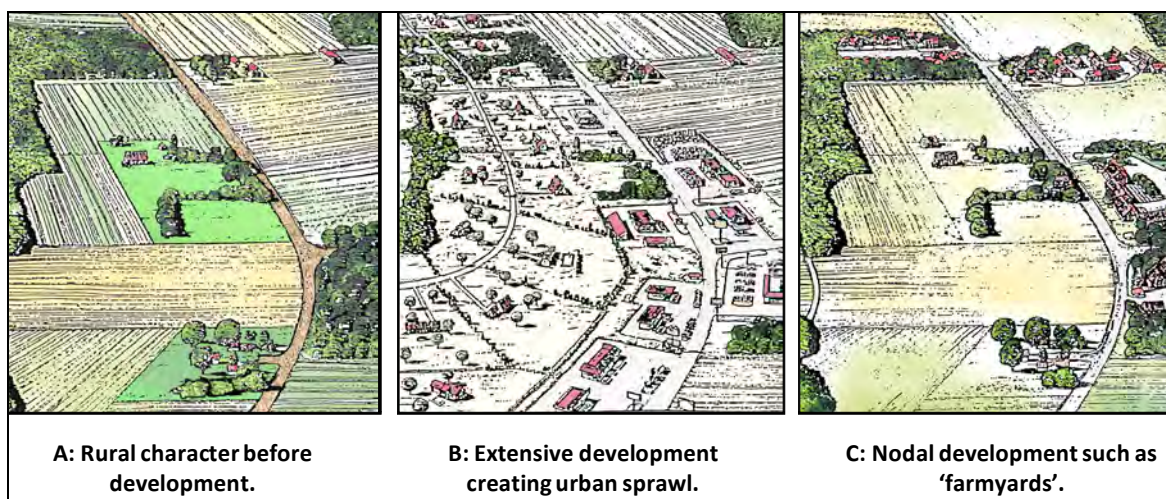


Figure D11: Desired nodal form of rural settlements (Source: PGWC, 2003).

## D5.1.2 PLANNING AND DESIGN THEORIES

During the past century our approach to urban design, which was heavily influenced by factors such as the introduction of the motor vehicle, zoning, urban sprawl and the privatization of public space, gave rise to the loss of quality urban spaces (Trancik, 1986).

‘Lost space’ is defined as ‘undesirable urban areas that are in need of redesign’, or ‘anti-space’ which make no positive contributions to their surroundings or users. Inappropriate design approaches have led to humans losing their identification with the environment within which they live and ultimately environmental destruction.

One of the major requirements is therefore to design urban environments in which individual buildings are integrated with public space, thereby creating positive urban spaces. *Designers should create site plans that become generations of context, and design buildings that define exterior space rather than to displace it* (Trancik 1986:18).

Against this background, three major theoretical approaches (theories) to spatial design in urban areas were developed, namely

- a) Figure Ground Theory
- b) Linkage Theory
- c) Place Theory

Together these three theories can provide effective strategies for integrated urban design (Trancik, 1986). They must be carefully considered in the planning and design of existing and new urban spaces and developments order to ensure that anti-space does not continue to occur in Witzenberg and that humans regain their ability to identify with their ‘place’.

To arrive at the understanding of the proposed principles for integration of urban design, it is necessary to understand the three approaches from which these principles stem.

### D5.1.2.1 Figure Ground Theory

The figure-ground theory is founded on the study of the relative land coverage of buildings as solid mass (‘figure’) to open voids (‘ground’). Each urban environment has an existing pattern of solids and voids, and through the figure-ground relationship these relationships can be manipulated by adding to, subtracting from, or changing the physical geometry of the pattern. The objective of these manipulations is to clarify the structure of urban spaces in an urban area or node by establishing a hierarchy of spaces of different sizes that are individually enclosed but ordered directionally in relation to each other.

Trancik explains that space is the medium of the urban experience and that spatial orientation is defined by the configuration of urban blocks that collectively form neighbourhoods and districts. It is the articulation and differentiation of solids and voids that make up the fabric of the city and establish physical sequences and visual orientation between places. It is therefore important that the perimeter of spaces and blocks be well articulated in order to establish positive outdoor rooms, which can be created by connecting the form of the building to the structure of the site or by turning and twisting the building’s facades (Trancik, 1986).

### D5.1.2.2 Linkage Theory

Unlike the figure-ground theory, which is based primarily on patterns of solids and voids, the linkage theory is derived from 'lines' connecting one element to another. These lines are formed by streets, pedestrian ways, linear open spaces, or other linking elements that physically connect the parts of a city. The designer applying the linkage theory tries to organize a system of connections, or a network that establishes a structure for ordering spaces. Emphasis is placed on the circulation diagram rather than the spatial diagram of the figure-ground theory. Movement systems and efficiency of the infrastructure take precedence over patterns of defined outdoor space (Trancik, 1986).

### D5.1.2.3 Place Theory

The place theory goes one step beyond figure-ground and linkage theories in that it adds the components of human needs and cultural, historical, and natural contexts. Place theory gives physical space additional richness by incorporating unique forms and details indigenous to its setting and includes history, element of time and the fit between new design and existing conditions. In place theory, social and cultural values, visual perceptions of users and an individual's control over the immediate public environment, are as important as principles of lateral enclosure and linkage (Trancik, 1986).

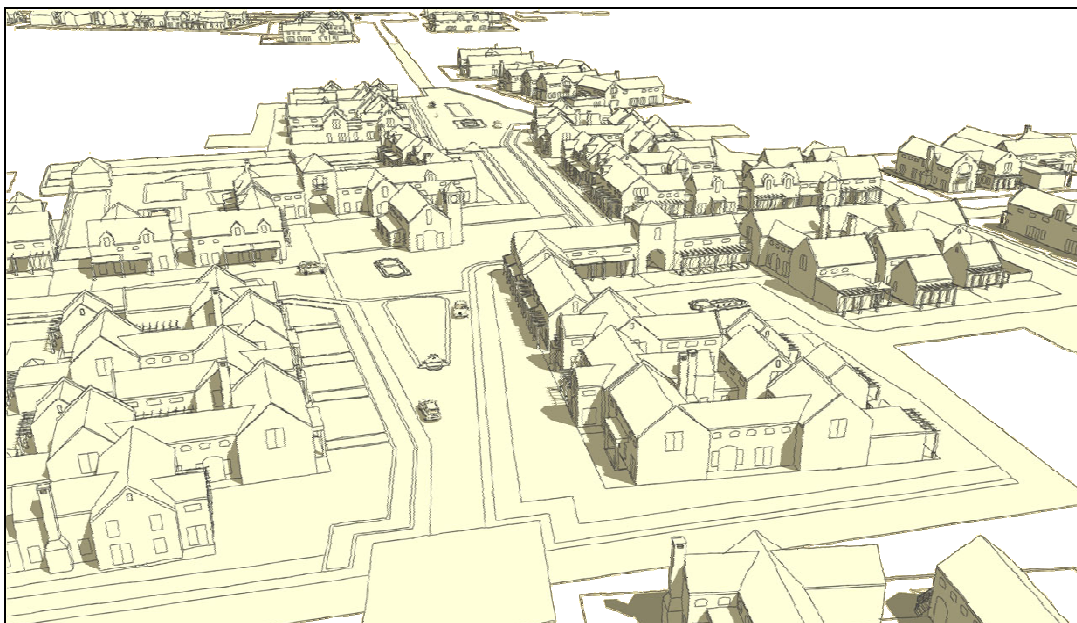


Figure D12: Combination of figure-ground, linkage and place theory.

## D5.1.3 PLANNING AND DESIGN PRINCIPLES

### D5.1.3.1 Principles for Sustainable Development and Spatial Planning

Key aspects of sustainable development are the manner in which settlements are shaped and spatially orientated in the environment, and the extent to which a balance is achieved between the three global imperatives for sustainable development.

In this regard, Moughtin (1997) states that principles of *sustainable development* would include clear objectives for a framework of urban design that emphasizes conservation of both the natural and built environment. In the development process there should be presumptions in favour of conservation, and a premium should be placed on the conservation of natural resources, wildlife and landscapes. There is a strong need to structure and restructure the built environment in a manner that promotes sustainable development. In this regard, the Witzenberg SDF draws from the views of Moughtin (1997) and provides guidelines and principles pertaining to the following aspects:

- a) Energy and the built environment: *Traditions of vernacular architecture have many lessons for those seeking sustainable forms in urban planning and design, and there is much to commend in the common sense approach to energy conservation and environmental protection practised by many builders in the past* (Moughtin, 1997). In this regard, six planning principles were identified, which would contribute towards promoting sustainable development:
- Principle No 1: Priority should be given to the conservation and reuse of buildings, infrastructure and materials.
  - Principle No 2: Use local regional building materials for construction work. Where possible, it is preferable to use materials requiring low inputs of energy in fabrication, transportation to the site, and the construction process itself. Preference should be given to materials, which are labour intensive, rather than energy intensive in their extraction, dressing and erection.
  - Principle No 3: Avoid materials that cause environmental damage leaving behind unsightly spoil heaps and quarries. The worst effects of such damage, when it occurs, should be mitigated, and new buildings should be linked with tree planting schemes in an effort to offset some of the effects of pollution caused by the manufacturing of building materials.
  - Principle No 4: Relate the building to the local environment - to reduce the amount of external wall surface; to orientate the building towards the sun; to organise the interior of the building so that a buffer of storage rooms and other similar accommodation faces south, and to arrange for conservatories or sun spaces to be sited on the north, east or west facades.
  - Principle No 5: Design buildings for flexibility so that a mix of uses can be accommodated under the same roof and so that floor plans are robust, in the sense that they can be adapted for different uses during the building's lifetime.
  - Principle No 6: Buildings should be located on public transport routes and with close connections to other parts of the existing urban infrastructure and, where possible, development should take the form of infill within existing development or on 'brown land', that is, on previously used land or wasteland.
- b) Sustainable transport: Transport, in addition to bringing benefits to society, involves large costs. Costs, such as pollution and noise are incurred directly or indirectly by the users or by those passively affected by developments, whilst other costs are the result of environmental damage (Moughtin, 1997). *'Many of these costs, particularly from road building programs and the resulting increase in traffic, have fallen on the community rather than the developers of the transport system or its users. The price signals, such as road*

*construction costs and cost of petrol, given by the transport market, because they ignore environmental costs, mislead the users into believing that personal mobility is cheaper than it really is. The depressed costs have therefore resulted in transport decisions harmful to the community'* (Moughtin, 1997). The aim of planning policies and urban design solutions must be to reduce the need for movement and to recognise that planning and designing urban forms for the reduced need for mobility, is a longer term solution to the problems facing society.

- c) **Urban metaphor:** Similar to any organic organism, a healthy urban environment is maintained only as long as the balance of its components is maintained. *'Excess growth is managed by the propagation of new colonies. The organic model for the urban area is most in tune with the concept of sustainable development when, in particular, it takes on the attributes of ecology.'* This would occur where there is a diversity in its components, which maintains the balance between the energy inputs and outputs including recycling, waste reduction and pollution levels (Moughtin, 1997).
- d) **Urban form:** Against the background of the key aspects of urban form, namely the linear urban area, the *gridiron plan* and the *highly centralised* settlement, it is contended that each may have a role to play in achieving sustainable development, and that much will depend on the circumstances in which each form is used. A public transport strategy and an ecological strategy are probably the two most important factors in determining urban form. *'Such settlements, to be effective, should be of a size determined by comfortable walking distances between activities in the settlement'* (Moughtin, 1997). It is a priority for the immediate future, to make existing urban areas more sustainable, and to seek ways in which the great suburban belts of development, which encircle most settlements, can be made less energy-intensive in terms of mobility while maintaining a good quality of life for those living there.

## **D5.2 DESIGN GUIDELINES FOR FIRST, SECOND AND THIRD ORDER TOWNS IN WITZENBERG**

All the settlements in Witzenberg Municipality have interesting historic origins, however, according to the Cape Winelands EMF no local heritage inventory has yet been specifically commissioned in the municipal area. Vast areas of the Municipality have not been surveyed, especially in Ceres and the Tankwa Karoo.

Heritage sites in the municipal area have been listed by the South African Heritage Resource Agency and are recorded in a number of secondary sources. The lack of a systematic survey of the built environment and the identification of heritage sites, in terms of the National Heritage Resources Act 25 of 1999, is evident when one looks at the representation of heritage sites in the rural areas. It is important to note that the lack of heritage sites is not an indication of an absence of sites, but rather a factor of a lack of survey material. A total number of 12 Provincial Heritage Sites and 36 Built heritage Sites have been listed as occurring in the rural area of the Witzenberg Municipality.

### **D5.2.1 DOMINANT ARCHITECTURAL VERNACULAR OF THE REGION**

The most prominent architectural vernacular in the Witzenberg municipal area is the Cape Dutch-style, especially in Church Street in Tulbagh and the surrounding homesteads of the wine estates.

Cape Dutch architecture is essentially a domestic dwelling house architecture and is derived from Dutch and North German gabled houses, but peculiar to South Africa and adapted to local conditions. It developed in the Western Cape in course of the 18th and 19th centuries and is unique in the world (van Huysteen *et al*, 1993). The Cape Dutch style has been called 'a Baroque vernacular' and buildings are carefully sited in the landscape, in the manner of Baroque manor houses or villas in Europe. The formal geometry of this siting expresses the dominance of the architecture over the natural landscape.

It is proposed that an integrated conservation strategy be developed for the historical parts of the towns which provide protection for the historical environment and the conservation-worthy buildings within it, as well as giving direction for future development and actions to enhance the town.

### **D5.2.2 GENERAL GUIDELINES**

The proposed guidelines have relevance to the larger settlements areas of Ceres/Nduli/Bella Vista, Prince Alfred Hamlet, Wolseley and Tulbagh and within which most of the historic sites in the Municipality is located.

The mentioned towns as well as their rural surroundings constitute a unique Cape Environment which is part of the cultural heritage of South Africa. The historical towns and their surrounding areas have special qualities which merit conservation.

It is essential that effective development control mechanisms and clear procedures be introduced, supported by educational material to assist developers and architects to understand the traditional architecture and patterns of place-making. The following environmental elements are crucial to the character of the streets and historical areas, and should be restored and enhanced:

- a) Public spaces (both historical and new).
- b) Tree-lined village streets.
- c) Axes and their focal buildings.
- d) Werf walls and Perimeter fencing.
- e) Green Open Spaces.
- f) Key buildings of significance.

Depending on their nature, some sites may be more critical than others. It is important for the design process to be monitored by a Committee consisting of professionals in the fields of archaeology, history, town planning and urban design, conservation architects, and community representatives. Design opportunities in the historical areas fall into four categories (KrugerRoos, 1997):

- a) Opportunities for conservation (including repair, restoration and renewal) of existing historical buildings
- b) Opportunities for new infill buildings and additions to existing historical buildings.
- c) Opportunities for the development of new public buildings, or buildings of public significance because of their focal position.
- d) Opportunities for the redevelopment of intrusive buildings in order to reduce their disruptive effect on the area

### D5.2.3 THE IMPORTANCE OF THE CONSERVATION CATEGORY

The appropriate approach to be followed when work is to be done on an existing conservation-worthy building will directly relate to its level of significance and contribution to the streetscape. Ideally, an up-to-date catalogue with a conservation grading (i.e. SAHRA grading) of all the historical buildings should be available so that owners, developers and designers are aware of the reasons for the significance of each property and the degree of care which will have to be taken when any intervention is considered (KrugerRoos, 1997).

### D5.3 SPECIFIC GUIDELINES FOR THE BUILT ENVIRONMENT

The following guidelines shall apply to public and private areas. Witzenberg Municipality should play a leading role in redevelopment and management of common areas by applying best-practice planning and conservation methods and ensuring that public works are done in a manner appropriate to the character of the area (KrugerRoos, 1997).

- a) Special Places: Public Space and Social Foci: Witzenberg Municipality should prepare conservation management plans for historical properties under its control. For instance, design frameworks should be developed for each of the public spaces and consideration should be given to appropriate and positive uses (such as periodic and permanent village markets, parking, commercial and restaurant edges) and developmental opportunities, which could potentially lead to projects being undertaken as public-private partnerships.
- b) Public planting: Trees, planting and landscaping in public places: Existing avenues of trees along streets and trees in public spaces must be maintained. Trees which die or become diseased should be replaced with similar types. The avenues should be extended wherever possible, and new ones established, where appropriate. Large garden courts and public green spaces should be retained and enhanced. Public landscaping should be appropriate to the historical character.
- c) Paving Surfaces: Stabilised laterite or a suitable paving material of a similar colour should be used wherever possible for sidewalks. Avoid laying brickwork in patterns which are not traditionally used, cobblestones or coloured paving, unless appropriate in the particular context and compatible with traditional paving use in Tulbagh, Ceres and Prince Alfred Hamlet.
- d) Street lighting: Street lighting should be understated, allowing the historical structures and spaces to be alit as focal objects. Coloured light should be avoided; white light is preferable. Existing lampposts should be retained wherever possible (and may be reproduced when appropriate). New lighting standards in the historical areas should be simple and modern, rather than pseudo-historical, and should be proportioned appropriately in relation to the existing buildings and trees.
- e) Traffic Control: Generally, every effort should be made to minimise the visual disruption of traffic control (without compromising safety) and, where possible, to adapt standard designs (e.g. for kerbs and traffic islands) to fit in unobtrusively with the historical character of the towns. Roads should be treated as simple elements in the townscape, with the minimum of painted or traffic marks on the surface.
- f) Parking: Parking requirements, as made provision for in the Witzenberg Integrated Zoning Scheme, must be adhered to. The provision of parking on the perimeter of the historical core of towns should be increased such as in Church Street, Tulbagh. In such areas, small, discreet parking areas should be provided wherever possible, with suitable planting providing screening and shade.

- g) **Street Furniture:** Street furniture such as rubbish bins, benches, planters, bus stops, drinking fountains, bollards, cycle racks, etc. – should be modern, neutral elements which do not detract from the settlements' character. The use of alien materials such as exposed-aggregate concrete, shiny metals and large advertising boards should be avoided. Paint colours should be subdued.
- h) **Signage:** The erection of signage for traffic direction and control, street names and general information should be coordinated. Where possible, signs should be sited so as not to obscure important buildings or views. Ideally, standard designs should be developed for information signs in the historical areas, in order to enhance the public realm and the area's identity.
- Traffic signs should be kept to the minimum required by legislation and necessary for safety. Signs should, where possible, be attached to buildings or trees, instead of poles.
  - Street names should be attached to buildings wherever possible, or could be alternatively be incorporated into kerbstones.
  - Where possible, coordinate the erection of information signage by consolidating information so that fewer signs are necessary, and group several signs on a single pole.

#### **D5.4 GENERAL GUIDELINES FOR THE BUILT ENVIRONMENT**

These guidelines are intended to give planners, architects, designers and other professionals a clear understanding of the appropriate response to the characteristic patterns and features of the region (KrugerRoos, 1997):

- a) **Consolidation, Subdivision, Density and Coverage:** The consolidation and subdivision of erven in the towns may impact on the character of the historical qualities and careful consideration must be given to the implications before such actions are allowed:
- (i) The historical patterns of subdivision and public rights of access must be respected.
  - (ii) The increased coverage and bulk permissible under the Integrated Witzenberg Zoning Scheme, when two or more erven are consolidated, can result in the construction of buildings which have a negative impact on the character of the area. Careful consideration must therefore be given to the physical and spatial implications of consolidation.
  - (iii) Densification should be encouraged but must be done in such a manner that respects the historical context and patterns of development.
- b) **Setback:** Traditional building lines in the historic areas vary from street to street.
- (i) New buildings should be set back the same distance as the existing historical buildings on either side.
- c) **Interface between Streets and Buildings:** The interface between buildings and the street is an important component of the character of settlements such as Ceres and Tulbagh. Traditional patterns and elements of interface which could be reinterpreted in a modern way, depending on the context, include:
- (i) Uncovered, raised stoeps, with stairs leading to the entrance and built-in benches at each end.
  - (ii) Verandahs and balconies (with modern decoration).
  - (iii) Front gardens with appropriate walls, fences or other boundary elements.
  - (iv) In commercial buildings, colonnades over the pavement.
  - (v) Do not remove historical elements of interface from existing buildings.



- d) Boundary definition: walls, fences and gates: Traditional elements which can be reinterpreted in a modern idiom include:
- (i) Plastered, whitewashed 'werf' walls with piers and copings – which vary from very simple to ornate and curvilinear in style.
  - (ii) Low walls with piers and cast iron railings.
  - (iii) Simple painted timber or wire fences.
  - (iv) Hedges.
  - (v) Avoid the following if visible from the street:
    - Any form of precast concrete.
    - Facebrick or unpainted concrete block.
    - High walls which obscure the building.
    - Removal of existing historical boundary elements (if an opening for vehicular access is required, remove the minimum length possible and make good with piers and gates).
- e) Parking: Off-street parking should generally not be provided in front of historical buildings if it involves the demolition of elements such as stoeps or verandahs, the destruction of front gardens by paving or the erection of structures which would obscure the façade. If visible from the street, parking should preferably be screened with planting. If sub-soil conditions is favourable, basement parking should be introduced in all new non-residential developments in activity corridors and CBDs.
- f) Gardens: Existing gardens should be maintained and traditional patterns of layout and planting respected. Gardens, even if relatively narrow, can provide screening to soften the effect of existing unsympathetic buildings or parking areas. With traditional boundary elements, gardens can reintroduce a sense of continuity in a street with modern interventions.
- g) Materials and finishes: Building materials used in the historical areas should be compatible with traditional materials in terms of scale, colour and texture. Materials which should be avoided (or used only with great sensitivity) include:
- (i) Facebrick, textured concrete blocks, exposed aggregate concrete, unpainted prefabricated concrete, etc.
  - (ii) Large profile roof sheeting, steel tiles, metal cladding.
- h) Colour: Colour should be used judiciously in the historical areas. In restoration projects, where there is evidence of the original colours they should be reinstated.
- i) Architectural details and decoration: Period detailing and decoration (gables, pediments, plaster mouldings, cast iron, timber, fretwork, etc.) is specific to its era. Decoration and detailing on existing buildings should be retained and maintained, but should not be exactly copied in modern buildings and extensions. Indiscriminate use of these elements leads to falsification which detracts from the value of the originals. The 'post-modern' use of exaggerated, over-scaled architectural elements should also be avoided. It is preferable to reinterpret historical detailing and decoration in an understated, modern idiom which is appropriate to the present.
- j) Signage: Signage in the historical areas should be unobtrusive and compatible with character of the building. Signs should be scaled in proportion to the building and should not obscure architectural elements. Colours and typefaces which are appropriate to the period, or which are simple and inconspicuous, should be used. Particular care must be taken in erecting signage on houses which have been converted to commercial use. Neon lights should be avoided or used with great caution.

- k) Modern fixtures on historical buildings: Modern fixtures such as TV antennae, satellite dishes, air conditioning, awnings, roof lights and solar heating panels should preferably be installed where they are not visible from the street.

#### D5.5 GENERAL GUIDELINES FOR LANDSCAPING

- a) Gardening: Gardening is enjoyed by many homeowners and their varied choices of trees and vegetation adds colour, fragrance and beauty to the gardens of the settlements. Mature and well-maintained gardens and street planting add significant value and character to individual properties and to the areas as whole. As a guide, planning planting and landscaping should incorporate the following (City of Cape Town, 2005):
- (i) Protect and enhance the planting traditions and general patterns in the specific area and/or street which have an impact on the streetscape such as avenues, front hedges, planted pergolas and feature trees.
  - (ii) Protect and retain natural features such as boulders, water courses and mature trees.
  - (iii) Retain architectural features in the garden such as historic gateways and 'werf' walls.
  - (iv) Retain existing views between the street and the front façade of the property.
- b) Appropriate vegetation in historic areas: Where possible, species should be selected which are most suitable to the environment. Other considerations for selection of a species are (City of Cape Town, 2005):
- (i) Hardiness and ability to withstand conditions such as wind and sun.
  - (ii) Ability to attract wildlife, insects and birds.
  - (iii) Ability to flower with colour and fragrance or bear fruit.
  - (iv) Ability to reflect the seasons, i.e. deciduous or evergreen (deciduous trees can bring colour and variety to the street, for example plane trees and oaks).
- Care should be taken to avoid species which are known to be fire hazards, use large amounts of water, have vigorous and aggressive roots that can damage buildings or paving, shed leaves that block drains and gutters, or species that are prone to branches breaking.
- c) Importance of Trees and Vegetation: Deliberately planted vegetation is an integral part of the cultural landscape. Different cultures have had different cultural, aesthetics, use and amenity requirements and this reflected in the different trees, patterns and historic vegetation which were planted over time. Many trees planted in historic areas were exotic trees that prospered in a Mediterranean climate, like stone pines and oak trees. The hybrid or composite qualities of historic vegetation and indigenous vegetation enriches the unique Cape cultural landscape of the Witzenberg Municipality (City of Cape Town, 2005). Existing mature trees and vegetation in the settlements of Witzenberg, especially in the heritage and historic streets and areas need care and proper management to ensure protection and conservation.

#### D5.6 GUIDELINES FOR THE RURAL LANDSCAPES IN WITZENBERG

In Witzenberg Municipality a number of smaller settlements are dotted across the rural landscape. These include *inter alia* Kluitjieskraal, Waterval, Drostdy, Breede River Station, Tulbagh Road, Prince Alfred Station, etc. These settlements are unique in their location and need to be managed and conserved accordingly.

The rural areas in the Municipality have certain intrinsic qualities that are threatened by new development. The nature of modern development is decisively different to 'historic' developments in the rural areas, and new farming methods and non-farming activities could depart radically from patterns of usage established over many years. Few landscapes are static; transformation is both inevitable and necessary, but need not to have detrimental effects on environmental quality. As such, the settlements mentioned above should not be allowed to expand beyond its current borders.

#### **D5.6.1 GENERAL GUIDELINES FOR THE RURAL LANDSCAPES**

The natural systems of the rural areas, namely the mountains, open spaces and riverine valleys, and the vegetation associated with them, are major assets to the municipality (Todeschini and Japha, 1993). The following guidelines in rural areas shall apply:

##### **a) Guidelines for Protecting Natural Systems**

- (i) The natural areas should not be allowed to be encroached upon by development.
- (ii) The natural vegetation which grows on the upper reaches of the mountain slopes (such as Fynbos) should not be disturbed by development or by planting of alien vegetation.
- (iii) Alien trees in the riverine valleys should be needlessly destroyed. Maintenance and planting of indigenous trees in these areas should be encouraged.
- (iv) Some mountain slopes form important backdrops to the views. These area visually sensitive to new building and planting projects, and should not be developed if at all possible.

##### **b) Guidelines for Cultivated Areas**

- (i) Trees, whether they occur in belts, clusters or singly, lend visually continuity to the valley at the broad scale. At a closer level they create areas with a sense of enclosure, which alternate with more open areas, thus creating sub-areas of different character. In some situations, tree planting acts as a shield to unsightly developments. The disappearance of windbreaks or clusters of trees is highly undesirable.
- (ii) Existing windbreaks should be maintained where they screen development. Windbreaks around vineyards and orchards should be maintained where at all feasible.
- (iii) Any rows, clusters or single trees of stature should not be needlessly destroyed.
- (iv) Agricultural land should be subdivided at random into suburban type erven.
- (v) Historic patterns of planting which help to screen structures from public view should be applied to all new buildings.
- (vi) Do not cut down any trees around houses unless it is absolutely necessary. Undesirable exotics may be removed.
- (vii) On wine estates in the Witzenberg area, undertake a tree planting and maintenance program if possible in order to keep the distinctive historic feel and character of Witzenberg.

##### **c) Guidelines for Historic Buildings and Structures on Farms**

- (i) If a building or complex falls into the List of Heritage Sites as indicated by SAHRA and Heritage Western Cape, specialist architectural and archaeological advice should be obtained before embarking on any alterations, additions or demolitions.
- (ii) Avoid destroying any historical and cultural fabric, and do not invent a history for a building when renovating or restoring it.

- (iii) Try use materials which match the materials of an old building when doing additions and alterations to it.
- (iv) Try not to remove old doors and windows, and use matching replacements if old joinery is irreparable.
- (v) Do not alter roof pitches or alter historic roofing elements like gutters or ridge trims.
- (vi) The appearance of a stoep is critical to the appearance of a house; old stoeps, even if they are not as old as the house itself, should be retained, whilst new stoeps of unsuitable materials and proportion should be replaced by more sympathetic variations.
- (vii) Locate garages in such a way that they do not intrude visually on old buildings.
- (viii) Do not cut down old trees around the house.
- (ix) Do use white paint as is characteristic of the Cape Dutch vernacular, or choose a muted colour.

## D5.7 OTHER GUIDELINES FOR THE RURAL LANDSCAPE IN WITZENBERG

The *Rural Land Use Planning and Management Guidelines* (PGWC, May, 2009) stipulates detailed guidelines for rural areas in the Western Cape Province. The following *inter alia* guidelines are applicable to the Witzenberg Municipality:

- a) General Rural Guidelines: Development in rural areas should reinforce farm precinct and reflect similar vernacular in terms of scale, form and design. In the absence of existing farmsteads, development should reflect compact and unobtrusive nodes, conforming to local vernacular in terms of scale, form, and design. Development of for examples 'resort' design should embrace the spatial form, movement patterns, building design and conservation and ecology of the are through:
  - (i) Maintaining the dominance of the natural and agricultural landscapes.
  - (ii) Maintaining and enhancing natural continuities of green spaces, riverine corridors and movement.
  - (iii) Maintaining dominant landscape features and their continuity (e.g. ridge lines, valleys).
  - (iv) Protecting conservation-worthy places and heritage areas (e.g. farmsteads on wine estates in Tulbagh and Wolseley).
- b) Development of the primary agricultural enterprise (e.g. citrus and wine production) to comply with existing guidelines for extensive agriculture:
  - (i) Carrying capacity.
  - (ii) Veld management and soil erosion control
  - (iii) Agricultural setback on wetlands, rivers and streams as per the Conservation of Agricultural Resources Act 43 of 1983.
- c) Development (i.e. farm diversification or 'value-adding') to be located within or peripheral to the farmstead precinct or outposts and should be accommodated in reused, converted or replaced farm buildings (i.e. existing footprint) or the target distributed areas.
- d) The location of agricultural activities will be dictated by local on-farm agro-climatic conditions (e.g. soils, slope, etc.) but wetlands, floodplains and important vegetation remnants should be kept in a natural state. Landscaping should complement the existing planting patterns.
- e) Ancillary activities should be located within or peripheral to the farmstead precinct (preferably in re-used or replaced farm buildings and disturbed areas), not on good or moderate soils, and linked to existing farm road access and the services network. Fragmentation of farm cadastral units should be prevented, and consent uses and spot

zoning employed for managing ancillary on-farm activities. Consolidation of cadastral units should be promoted, especially where farms have conservation-worthy natural remnants.

- f) New settlements: Where new settlements need to be established, careful consideration needs to be given to:
- (i) Environmental Impact Assessment (e.g. waste management).
  - (ii) Visual impact, especially on the rural landscape.
  - (iii) Historical settlement patterns and form.
  - (iv) Natural landscape and topographical form as design informants.
  - (v) Bulk and internal services feasibility and the sustainability of technologies to be adopted.
  - (vi) Provision and operation of community facilities.
  - (vii) Land tenure arrangements.
  - (viii) Settlement management and maintenance implications.
  - (ix) Affordability of beneficiaries in terms of the settlement's capital and recurrent costs.

The option of 'off-farm' settlement of farm workers in agri-villages should only be considered when this is the preferred option of target beneficiaries, and existing settlements are too far away to commute to. Agri-villages should be established in terms of the Western Cape Province's *Policy for the Settlement of Farm Workers* (2000).

New buildings and structures should conform with the massing, form, height and material use in existing settlements. When accommodating development in existing settlements the following principles should be adhered to:

- Retain the compact form of smaller settlements.
  - Maintain and enhance public spaces.
  - Reinforce the close relationship of settlements to the regional route structure.
  - Integrate new development into the settlement structure.
  - Respect socio-historical and cultural places.
- g) Rural holiday accommodation: Rural holiday accommodation should preferably make use of existing buildings or new buildings on disturbed footprints, and these should reflect the natural and heritage significance of the site. On intensive and extensive agricultural farms Bed and Breakfast establishments, lodges, guesthouses or boutique hotels, where appropriate should be located within or peripheral to the farmstead. Their buildings should complement the farm's vernacular. It should be recognised that surrounding farming activities (e.g. noise, odour, spray drift) may impact negatively on on-farm holiday accommodation. Visitors to on-farm holiday accommodation may also impact farming activities (e.g. dust from vehicles).
- h) 'Rural Housing': Selecting appropriate locations for 'rural housing' on applicable consolidated properties should be informed by a fine-scale environmental sensitivity analysis that differentiates between 'no go' areas and areas where one needs to 'touch the earth lightly'. Within 'touch the earth lightly' areas sites for rural housing should be selected that are visually unobtrusive on the landscape. Preference should be given to using previously disturbed footprints or transformed areas. Depending on what has the least impact, sites may be dispersed or clustered. The number of rural housing units permissible should be related to the size of the cadastral units being consolidated, and an upper limit should be set. Rural housing should show-case the principles of environmental sustainability in design, building materials and household technology (i.e. energy sources, waste disposal system, water sources and usage).

- i) **'On farm' settlements:** 'On farm' settlement should be consistent with the Western Cape Province's *Policy for the Settlement of Farm Workers* (2000). Where possible farm workers' dwelling units should be clustered and located in close proximity to rural movement routes. Avoid cadastral fragmentation of agricultural production areas, and respond to cultural places and settlement patterns. New dwelling units to be built consistent with the local vernacular, and where possible sustainable technologies to be adopted for services provision to dwelling units.
- j) **Tourist and Recreational Facilities:** Rural tourism and recreation facilities and activities should not compromise farm production, and be placed to reinforce the farmstead precinct. Existing buildings or disturbed footprints should preferably be used, and the farmstead or outposts should be reinforced. Buildings should respond to the farm's built vernacular. The nature and scale of facility appropriate in a particular context should be determined by considering:
- (i) The extent of the cadastral portion.
  - (ii) The sensitivity of, and impact on, the receiving environment (i.e. agricultural or natural).
- k) **Rural Business:** Place-bound rural businesses should preferably be located on the farm to consolidate the farmstead precinct, and complement the farm's operations. Farm stalls should be located either in the farmstead precinct or abutting a tourist route in the event of such route traversing the farm boundary. Facilities to avoid location on agricultural land, unless no alternative location exists. Restaurants and venue facilities should be located within the farmstead precinct and be of appropriate scale and vernacular design. Any new building in the rural area to be informed by local vernacular regarding scale, form and building materials (e.g. roadside farmstall).
- l) **Rural Industry<sup>4</sup>:** All non-place bound industry (e.g. transport contractors, dairy depots, builder's yards) should be located within, to the urban edge of settlements. All place-bound agricultural industry related to the processing of locally sourced (i.e. from surrounding farms) products, should be located with the agricultural area (e.g. winery within an intensive viticulture area). Agricultural industry, within both intensive and extensive agricultural areas, should be located adjacent to, or in close proximity to, the regional route network. Structures accommodating agri-industry should conform to local vernacular, and attention needs to be given to adequate screening.
- m) **Community Facilities and Institutions<sup>5</sup>:** Wherever practical facilities should be located in settlements. Location within the rural landscape may be required when travel distances are too far or rural population concentrations are large. The nodal clustering of rural facilities in service points should be promoted, with these points accommodating both mobile services and fixed community facilities (e.g. health, pension payments). Education facilities should be established in accordance with departmental specifications, including crèches and recreation fields.
- n) **Bulk Infrastructure Installations:** Where locations inside the urban edge are impractical, then extensive agricultural areas peripheral to settlements are preferable. Proximity to regional routes is important. Disturbed areas or land adjacent to an existing installation should be targeted. Avoid establishing installations with a large residential component in

<sup>4</sup> Rural industrial activity includes:

- (i) Processing local and regional farm products.
- (ii) Extracting minerals
- (iii) Processing natural resources
- (iv) Servicing agriculture, mining, conservation and rural tourism (i.e. service trades).

<sup>5</sup> Rural community facilities include: educational, health, assembly, religious, etc.

remote rural locations. For reasons of energy conservation, these installations need to be within or peripheral to existing settlements.

## **D5.8 SEISMIC DESIGN GUIDELINES FOR BUILDINGS IN THE WITZENBERG MUNICIPALITY**

The International Association for Earthquake Engineering (2004) states that *experience in past earthquakes has demonstrated that many common buildings and typical methods of construction lack basic resistance to earthquake forces. In most cases this resistance can be achieved by following simple, inexpensive principles of good building construction practice.*

Wium (2007) states that although South Africa is not considered a region of high seismic activity, there are nevertheless identified regions (such as in Witzenberg) where structures need to be designed for earthquake action. The challenge is not to provide overly conservative and expensive facilities, but economical and safe structures. It can be shown that appropriate detailing of structures and correct conceptual layouts will go a long way towards providing safe seismic-resistant structures in areas of moderate seismicity.

The current provisions for the design of structures against earthquake actions were introduced into the South African Loading Code for buildings in 1989 (i.e. SABS 0160[5]). The code distinguishes between two zones of earthquake activity, namely (Wium, 2007):

- Zone 1: Areas for those regions with natural seismic activity (such as in Witzenberg).
- Zone 11: Areas for those regions with mine-induced seismic activity.

The 1989 Code requires that conceptual layout of buildings in both zones follow certain recommendations, but only Zone 1 areas required seismic design of buildings for a specified nominal peak ground acceleration. In 2003, the 1989 Code was re-evaluated and incorporated into the SANS 20160 (Basis of structural design and actions for buildings and industrial structures).

### **D5.8.1 SEISMIC DESIGN GUIDELINES IN SOUTH AFRICA**

The SANS 10160-2010 Series (entitled Basis of structural design and actions for buildings and industrial structures, and consisting of Parts 1 to 8) serves as a new standard for the general principles for the structural design and similar industrial structures, and the actions (loads) to be considered. This series of standards will replace SANS 1010-1989.

*Part 4: Seismic actions and general requirements for buildings* of SANS 10160-2010 deals specifically with design guidelines and actions pertaining to the structural design of buildings in seismic active areas in South Africa. Chapters 6 to 8 of the Part 4 provides detailed description of the design of buildings in seismic areas. It is important the Witzenberg Municipality incorporate these guidelines from Part 4 of the SANS 10160-2010 into the design, layout and planning of building structures in its municipal area. The following recommendations provide valuable information which should, amongst others, be used when conceptual layout of buildings is considered in seismic-active regions (Wium, 2007):

- a) Provision of Soft Storeys: Structures in South Africa are often constructed on a bottom storey consisting of columns with no or limited shear walls, thereby forming a so-called 'soft storey' underneath stiffer upper storeys. Typical examples are parking areas underneath apartment blocks, and shopping areas under office blocks. This type of arrangement easily leads to the collapse of the 'soft storey', even under moderate

earthquakes. Ideally, structural systems should be continuous from the foundations to the top of the building.

- b) Provision and Layout of Stiffening Elements: Two shear walls in each direction are adequate. Such walls should extend to the top of the building. The shear walls should be located symmetrically and preferably at the extremities of the buildings in order to reduce and prevent torsional effects. L-shaped and U-shaped shear walls are not favourable as they are not easily designed with sufficient ductility. Rectangular sections, on the other hand are easily provided with adequate ductility. If stiffening elements which provide resistance to lateral loads are not arranged symmetrically, then torsional modes develop which can place high stresses on stiffening elements, and can also result in unwanted high lateral displacements on columns, resulting in high eccentric moments in columns.
- c) Damage by Masonry Infill Panels: Reinforced concrete frames are flexible and relatively ductile, whilst masonry panels are rigid and brittle. During an earthquake, the stiff members will carry the loads. If sufficient movement is not allowed between the structural frame and masonry infill panels, then the masonry panel will act as a stiff diaphragm which can cause high shear forces acting on columns. Column shear capacity needs to be verified as well as masonry panels which need to be verified for local damage and lateral instability. Ideally, masonry infill panels should be isolated from the structural frame, and walls should be stabilised against lateral failure.
- d) Load Bearing Masonry Structures: Buildings of masonry construction are relatively stiff and have a high first natural frequency (low period), so that their lowest modes of vibration are located in the high region of the design response spectra. Masonry structures are thus subject to high seismic forces. However, masonry construction is brittle and does not allow much dissipation of energy. Ideally, masonry structures should be reinforced with steel reinforcement. This is however not a preferred construction method in South Africa, and where necessary it is necessary to stabilise non-reinforced masonry construction with reinforced concrete shear walls. The shear walls should be dimensioned with sufficient rigidity, and must be able to resist the seismic forces by staying elastic without plastifying the reinforcement. The horizontal displacement of the structure must not exceed the possible displacement of masonry walls. Under Chapter A.5 of the SANS 10160-2010, *inter alia* the following rules for 'simple masonry buildings' apply:
- (i) The building shall be of maximum 3 storey height.
  - (ii) The plan configuration of the building shall fulfil the following conditions:
    - The plan shall be approximately regular.
    - The ratio of the overall length of the smaller to the larger plan dimension shall not be less than 0.25.
    - The area of projections or recesses from the rectangular plan shape shall not be greater than 15% of the total floor area above the level being considered.
  - (iii) The shear walls of the building shall comply with the following conditions:
    - The building shall be stiffened by shear walls arranged almost symmetrically in plan in two orthogonal directions.
    - At least for the walls in one direction, the distance between these walls shall be greater than 75% of the length of the building in the other direction.
    - At least 75% of the vertical loads shall be supported by the shear walls.
    - Shear walls shall be continuous from foundations to the top of the building.
    - Between adjacent storey heights, the difference in mass and in horizontal shear wall cross-section in both orthogonal directions shall be limited to 20%.



- (iv) The minimum sum of the cross-sectional area of horizontal shear walls (length of wall x teff) in each direction, as a percentage of the total floor area per storey shall be 2.5% for 2 storey buildings and 5% for 3 storey buildings.
- e) **Shear in Columns:** Special attention must be paid when a building structure has some columns shorter than others, as these columns will be subjected to higher bending moments and shear forces than the other columns. Short columns attract high moments due to their high rigidity, as well as high transverse shear forces. Furthermore, partial frames with rigid building elements (masonry) for example when windows are built in between columns, then this can create shear failure or high bending in columns. Infill material should only be used partially (and fully) if sufficient allowance is made for lateral movement by provision of suitable joints. The ability of the structural frame to deform must take into account the type of infill material used for non-structural panels if no joints are provided. Even small earthquakes can cause significant damage if the structural frame deforms more than what brittle panels can accommodate. The size of panel should be dictated by the relationship between storey displacements and storey height.

### **D5.8.2 OTHER CONCEPTUAL LAYOUT CONSIDERATIONS**

Pre-cast floor slab panels are often used in South Africa on load bearing masonry. Designers must pay attention to supports of these prefabricated elements in order to prevent it sliding from supports. An oversight in seismic design is often secondary elements such as façade panels. Façade elements and their fixities must be designed for horizontal accelerations.

Other specific conceptual layout considerations inter alia include (SANS 10160, 2010):

- a) Heavy roof structures such as tiled roofs are undesirable, especially on lightweight wall construction.
- b) Openings for doors and windows require care in positioning and detailing in order to obtain a uniform distribution of strength. The distribution of openings in walls should be uniform as possible. Large openings in masonry walls are undesirable, particularly in external walls near corners. Where such conditions cannot be avoided, care should be taken to ensure adequate detailing to provide lateral stability.
- c) Single storey buildings shall be so planned that there is a good distribution of bracing walls to provide adequate lateral stability. Layouts should preferably be of simple box plan, providing reasonably symmetrical resistance in two orthogonal directions. Slender wings and buildings or rooms with essentially three resisting walls, should be avoided as far as possible. Where walls cannot be avoided, care should be taken to ensure adequate detailing to provide lateral stability.
- d) Masonry gables and parapet walls shall be buttressed with transverse walls or pilasters or be reinforced to ensure lateral stability. Tall, free-standing sections be avoided. Hipped roofs are preferred to gables in areas of high seismicity.
- e) For elements that are stiffer and heavier than the rest of the buildings ensure adequate detailing to provide lateral stability. Masonry chimneys and heavy decorative panels are undesirable.

### **D5.9 REDUCING CRIME THROUGH ENVIRONMENTAL PLANNING AND DESIGN IN THE WITZENBERG MUNICIPALITY**

Reducing crime could not be the responsibility of the police alone – creating safer communities requires the committed involvement of communities, various government departments, local

government, the private sector, etc. Fighting crime also calls for a multi-pronged approach that involves law enforcement, social prevention and situational prevention (Kruger, 2005).

The notion that the physical environment can either increase or reduce the opportunities for crime is not new. The physical environment can play a significant role in influencing perceptions of safety. Certain environments can impart a feeling of safety, while others can induce fear, even in areas where levels of crime are not high. In this regard, planning and design measures can be utilised very successfully to enhance feelings of safety in areas where people feel vulnerable.

Ongoing research by the CSIR has resulted in an approach to Crime Prevention through Environmental Design (CPTED) that takes into consideration international knowledge as well as the local context and realities (Kruger, 2005). In the Witzenberg Municipality, the CPTED should be adopted to help reduce crime in the settlements and communities in order to provide a safer, secure and liveable environment for the people.

#### **D5.9.1 CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN**

According to Kruger (2005), 'Crime Prevention through Environmental Design' is defined as *'aiming to reduce the causes of, and opportunities for, criminal events and address the fear of crime by applying sound planning, design and management principles to the built environment'*.

Within the South African context, it incorporates the following:

- a) Physical planning: Planning approaches used at the strategic level.
- b) The detailed design of the different elements: For example, the movement system and roads, the public open space system, individual buildings on their separate sites, etc.
- c) The management of either the entire urban system or the different elements and precincts that make up the urban area.

It is important to note that planning, designing and managing safer environments need not necessitate additional activities, effort or resources. It may merely require emphasising particular aspects of the conventional functions of officials and professionals such as architects, urban planners and designers<sup>6</sup>. Communication between the different role-players is essential. In particular, planning and design professionals should have a closer working relationship with the SAPS.

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<sup>6</sup> CSIR: Introduction to Crime Prevention through Environmental Design (CPTED). <http://www.cpted.co.za/> - accessed on 1 August 2012.

## TOOLKIT D6 SPECIAL MANAGEMENT AREA APPROACH

### TOOLKIT SYNOPSIS

A primary overarching goal of the PSDF is to improve the general status and sustainability of both the natural and the human-made environment throughout the province. In this regard, the aim is to create positive precedents through the implementation of innovative mechanisms or strategies. The establishment of a Special Management Area (SMA) is considered as a fundamentally important mechanism in this regard, which is of relevance to landowners, authorities, planners, and developers.

An SMA provides an ideal spatial framework for the implementation of programmes such as LandCare and Conservation Stewardship. It is primarily an approach that is implemented voluntarily by landowners. However it can be required as a condition of approval where new or additional land-use rights or rezoning have been granted. In such instance the contractual agreement would *inter alia* ensure compliance with the conditions of approval. As such, the establishment of an SMA could be a viable mechanism for ensuring long-term environmental sustainability on the relevant property (or group of properties), presenting a positive precedent as is promoted by the Witzenberg SDF.

This toolkit addresses the key aspects of the SMA concept and provides guidelines pertaining to its establishment and management.

#### D6.1 WHAT IS AN SMA?

An SMA is defined as ‘an area of excellence and good practice’, where the ethos of sustainable development is served in practice. It is also a cadastral geographical unit, which is formally recognised and managed as an area where environmental sustainability is promoted in practice and in accordance with international standards for environmental sustainability. Both public and private land can be declared an SMA, and both natural, cultivated (i.e. farmland) and inhabited land can be included into an SMA (PGWC, 2003).

In an SMA, the landowner(s) will manage the environment and its resources in accordance with an Environmental Management System (EMS) or an Environmental Management Plan (EMP) that conforms to international standards for environmental management (e.g. ISO<sup>7</sup>14001).

An important aspect of the establishment of an SMA is that the landowner(s) will be required to establish a trust fund, which will ensure that the necessary financial resources are available for effective long-term management of the SMA.

Where a farm has been declared an SMA by its owner, a primary purpose of the SMA will be to provide a framework for undertaking sustainable agriculture<sup>8</sup>. In this regard, the SMA and its EMS will facilitate adherence to the following principles of sustainable agriculture:

<sup>7</sup> ISO (the International Organisation for Standardisation) is a world-wide federation of national standard bodies (ISO member bodies).

- a) Physical-biological productivity (maintain and/or improve production/services)
  - (i) Maintain existing fundamental values, technologies and structures supporting sustainable and viable agricultural enterprises.
  - (ii) Develop and apply new technologies to improve the efficiency of farming practices.
- b) Economic security (reduce production risk and uncertainty)
  - (i) Encourage local processing of farm products and the provision of local farm services to enhance the rural economy, increase the viability of agricultural production and reduce rural poverty.
  - (ii) Retain all the productive agricultural land for agricultural use.
- c) Environmental protection (protect production potential of natural resources)
  - (i) Integrate land-use planning and community participation to ensure optimum management and utilisation of natural resources.
  - (ii) All farmers are responsible and accountable for the conservation of natural agricultural resources.
  - (iii) Land-users causing unacceptable degradation of the natural environment are responsible for rehabilitation of mismanaged natural agricultural resources.
  - (iv) Real cost of natural resources must be reflected in the pricing of these resources so as to discourage abuse.
- d) Social acceptability and justice (promote/establish social acceptability)
  - (i) Ensure equitable access to resources to all communities.
  - (ii) Provide access to agriculture via land reform in accordance with environmental requirements and with full participation and consent of all the affected communities.

## **D6.2 ESTABLISHING A SPECIAL MANAGEMENT AREA**

### **D6.2.1 PUBLIC SECTOR**

It is incumbent upon government to show commitment to the promotion of IDP and SDF policy and to demonstrate, in an exemplary manner, how policy can be successfully implemented. The SMA mechanism presents the ideal opportunity for government to achieve this. Local, provincial and national government may, by formal resolution, or inter-governmental agreement, establish and manage an SMA on own accord. The public sector can establish an SMA over a specific demarcated area (such as an area around a town, i.e. commonage land). This should be undertaken in accordance with agreements with the relevant stakeholders. Such agreements could, for example, be established through the IDP process. The establishment of an SMA provides an ideal vehicle through which public-private partnerships can be arranged in order to promote environmental sustainability in general, or to facilitate a specific project.

### **D6.2.2 PRIVATE SECTOR**

In the private sector, an SMA can be established in accordance with the following guidelines:

- a) It can give effect to the statutory conditions of approval for rezoning, or the granting of new land-use rights.

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<sup>8</sup> Sustainable agriculture is an approach as well as a process through which different management and technological activities and socio-economic principles are reconciled with environmental requirements (Smyth and Dumanski, 1993).

- b) The establishment of an SMA can be ratified through a contractual agreement between the owner of a fixed property and the relevant municipality.
- c) The contractual agreement will constitute the legal framework determining the obligations of the parties involved.
- d) The contractual agreement must always provide for the SMA to be managed in accordance with an appropriate EMS, which must incorporate the landowner's obligations pertaining to the preparation and execution of all relevant requirements.

### **D6.3 PLANNING OF A SPECIAL MANAGEMENT AREA**

In the required EMS, the following fundamental aspects need to be addressed appropriately:

#### **D6.3.1 ENVIRONMENTAL POLICY**

The EMS must put forward a specific environmental policy that complements existing IDP policy and addresses local environmental requirements. Such environmental policy for a specific SMA (or group of SMAs) should be consistent with, amongst others, the following principles:

- a) Being appropriate to the nature, scale, and environmental impacts of development activities, local products, and available services. Implementation policies for a large resort complex would, for example, be different to policy for a small landholding on which a single tourist facility (e.g. a small hotel) is located. In this regard, the criteria and purpose of the applicable SPC must be considered.
- b) Ensuring the commitment of all stakeholders to continual prevention of all forms of environmental pollution.
- c) Complying with relevant environmental legislation and regulations.
- d) Providing a framework for determining and reviewing environmental objectives.
- e) Being appropriately documented, implemented, maintained, and communicated by all concerned.

#### **D6.3.2 PREPARING A SPECIAL MANAGEMENT AREA PLAN**

Specific steps must be taken to translate the environmental policy into a working plan that incorporates, amongst others, the following:

- a) Identifying the aspects of activities, products, and services that can impact on the environment and evaluating the significance of the potential environmental impacts.<sup>9</sup>
- b) Determining and incorporating any legal and statutory requirements that are applicable to the relevant environment.
- c) Establishing and incorporating any environmental objectives put forward by, amongst others, the relevant IDP and lower sphere planning frameworks.
- d) Establishing and implementing an effective Environmental Management Plan.

#### **D6.3.3 IMPLEMENTATION AND OPERATION**

Provision must be made for the implementation of appropriate environmental management standards, including the following:

- a) Defining roles, responsibilities and authorities to facilitate sustainable environmental management.

<sup>9</sup> ISO 14001 defines an environmental impact as being 'any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's activities, products or services'.

- b) Identifying training needs, and awareness and competence limitations.
- c) Providing effective communication channels between all stakeholders.
- d) Ensuring effective implementation of all EMS requirements.
- e) Providing effective control over operations.
- f) Ensuring appropriate project management and documentation control.
- g) Identifying emergency needs and providing appropriate contingency measures.

#### **D6.3.4 MONITORING AND CORRECTIVE ACTIONS**

It is of fundamental importance to implement procedures for regulating operational performance and for ensuring that objectives are being achieved. This could be achieved through the following:

- a) Monitoring and measuring all impacts of development and management actions on the environment.
- b) Establishing and implementing procedures for handling incidents of non-conformance with the EMS.
- c) Managing environmental records, including, amongst others, the results of audits and reviews and the evaluation of educational programmes.
- d) Undertaking periodic environmental audits in accordance with a formal auditing procedure.

#### **D6.3.5 MANAGEMENT REVIEW**

The EMS needs to be reviewed at set intervals to ensure its continuing appropriateness and effectiveness. Such reviewing needs to take note of the results of the environmental audits that are to be undertaken and submitted to the relevant authorities on a scheduled basis. In this regard, reference is made to the concepts of auditing and adaptive management in Chapter A8.

## TOOLKIT D7 THE SUSTAINABLE DEVELOPMENT INITIATIVE APPROACH

### TOOLKIT SYNOPSIS

The acute and urgent need to give effect to sustainable development to address poverty, inequality and unemployment and the global challenges that climate change is creating, cannot be left to government alone. The private sector, communities and individuals share responsibility with government to help promote integrated sustainable development and to address these vexing problems together.

Legislation and policy have created the opportunity for the private sector to take part in the sustainable development process and it is incumbent upon the private sector to help take the initiative and give effect to sustainable development in a practical manner.

The Sustainable Development Initiative (SDI) is presented as an approach for the practical implementation of sustainable development (i.e. *improving the state of...*) with due regard for applicable policy and legislation.

This toolkit summarises the key components of the SDI approach and how it is to be implemented as a mechanism to ensure that large-scale resource use projects unlock meaningful benefit for both the environment and the local people.

#### D7.1 WHAT IS AN SDI?

An SDI is an over-arching socio-economic development and environmental rehabilitation strategy that is enabled and funded through the utilization of the resources (capital) vested in a defined area consistent with the international definition of sustainable development. The SDI model is about helping to promote a dynamic developmental state as contemplated in the South African Constitution. Accordingly, the SDI responds, in a practical and exemplary manner, to the most critical and fundamental challenges facing the country and the globe, namely poverty, inequality and environmental degradation.

The SDI model recognises that global sustainability depends upon the successful implementation of development projects on the local scale linked to all other spheres of planning up to the international global scale. The SDI model includes a climate-neutrality strategy and action plans without which global sustainability is not possible.

#### D7.2 PILLARS OF THE SDI MODEL

The SDI model stands on three pillars, namely:

##### PILLAR 1: FINANCE

Sustainable Development has to be financed. The employment of monetary capital is the conventional method considered necessary for this purpose. However, to ensure the stability of the capital resources that are required for sustainable development, it is imperative that a broader view pertaining to capital and finance be adopted.

Financing sustainable development entails the employment of monetary capital together with three other forms of capital i.e. environmental capital, infrastructural capital and social capital. The four forms of capital must be strategically incorporated into a single form of capital that would be considered bankable by financial institutions. In the SDI model this is referred to as sustainability capital or sustainability finance. A key strategic requirement for successful sustainable development is therefore to create sustainability capital in the project planning process that is bankable and ensuring that such capital would be employed in a sustainable manner.

It is imperative to establish an organisational structure that would include a sustainability fund to facilitate and administer the employment of capital to fund the economic drivers of sustainable development. Economic drivers for sustainable development are diverse and could include property development, solar or bio-fuel energy plants etc. Property development in particular can serve as a major primary economic driver for the implementation of sustainable development. Property development can unlock capital to support, in a meaningful and sustainable manner, economic growth, social development and environmental rehabilitation.

Development can only be optimised through positive economic intervention within a framework of an integrated development plan and strategy. In order to optimise the potential of the economic drivers of sustainable development, the SDI model builds upon the principle that an SDI, for any given area, must be supported by projects to be implemented in terms of specific programmes. Projects should ideally promote the comparative economic advantages of the region or the area within which the SDI is undertaken.

## **PILLAR 2: COMMUNITY PARTICIPATION, INCLUSIVITY AND HUMAN WELL-BEING**

The SDI model builds on the principle of inclusivity. This implies that the planning, implementation and management of an area should be an on-going inclusive process that gives meaningful consideration to the changing and dynamic interests, needs and values of the people that live in the area and that have an interest in ensuring a prosperous future for the area. In this regard, it is important that the following should result from an SDI:

- a) Continuing participation, representation and involvement of stakeholders in the SDI area.
- b) Creating adequate and appropriate opportunities during the inception phase of the SDI planning, and thereafter, for community participation in decisions that may affect the area.
- c) Consideration of, and agreement on, the values which would form the basis of the SDI and the associated projects.
- d) Developing and utilising the skills and capacities of the people living in the area (especially previously disadvantaged people, and women) in the planning and implementation of the SDI and its projects.
- e) Encouraging on-going involvement of local people in the programmes identified for the SDI.
- f) Recognising that historic injustices need to be addressed in a practical and sustainable manner as a matter of high priority. In particular, recognition needs to be given to the rights of local previously disadvantaged people to share in the benefits that development brings to the area in a spirit of partnership.

The SDI model is based upon, and gives effect to, the Community Public Private Partnerships Programme (CPPP) of the Department of Trade and Industry, which targets private partners with the aim to position community initiatives/enterprises as ideal repositories for corporate social



investment. CPPPs allow the public sector to achieve value for money by accessing private sector capital, resources and skills, thereby obtaining the benefits of innovation, risk transfer and improved quality and service spheres.

The inclusivity approach provides for the participation and involvement of local communities in the planning, implementation and management of the SDI through an appropriate community-based organisational structure. Accordingly, a Treasury Trust (i.e. a Public Benefit Organisation {PBO}) should be established to serve as the overarching entity that ensures that the SDI and its associated projects are wisely managed, co-ordinated and implemented in the spirit of partnership with all concerned. The Treasury Trust is to be supported by a structure of programme PBOs that manage and control the interests of the various beneficiaries of the SDI.

### **PILLAR 3: ENVIRONMENTAL REHABILITATION AND CONSERVATION**

The SDI model supports the principle that biodiversity conservation is a prerequisite for sustainable development. It accepts that, for biodiversity conservation to succeed, the maintenance of environmental integrity (as defined by ecological, economic and social criteria) must be one of the primary determinants of land-use planning and development. The SDI model is accordingly founded on the principles of NEMA, namely:

- a) Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.
- b) Development must be socially, environmentally and economically sustainable.
- c) Sustainable development requires the consideration of all relevant factors including:
  - (i) that the disturbance of ecosystems and loss of biological diversity; pollution and degradation of the environment; disturbance of landscapes and sites that constitute the nation's cultural heritage are avoided, or, where they cannot be altogether avoided, are minimised and remedied;
  - (ii) that waste is avoided, or where it cannot be altogether avoided, minimised and re-use or recycled where possible and otherwise disposed of in a responsible manner;
  - (iii) that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;
  - (iv) that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;
  - (v) that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and
  - (vi) that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.

## **D7.3 KEY ASPECTS OF THE TREASURY TRUST**

### **D7.3.1 FUNCTIONS**

In order to enable the Treasury Trust to achieve its goals in this regard, it would initially have to have full control over the administration of the funds and assets, which will be made available to the lower tier entities. Once the lower tier entities have been established, the role of the Treasury Trust would be scaled down to that of a conduit that collects and receives the contractual

contributions from the core project (i.e. economic driver) and distributes these to the relevant beneficiaries in a predetermined ratio. In addition, the key functions of the Treasury Trust include the following:

- a) Conclusion of agreements that are to provide a sustained income for the structure of PBOs or trusts.
- b) Establishment and registration of empowerment organisations in accordance with the input and co-operation of the relevant stakeholders.
- c) Facilitation of the appointment of trustees representing the interests of the various stakeholders.

### D7.3.2 FUNDING

The Treasury Trust is funded through the following:

- a) A contribution to the Treasury Trust of a predetermined percentage of the value of the initial sale of all residential properties in a residential-type development.
- b) A contribution to the Treasury Trust of a predetermined percentage of the value of all subsequent property sales, in perpetuity, in accordance with a condition registered in the title deeds.
- c) A contribution to the Treasury Trust of a predetermined percentage of all property sales (non-residential).
- d) A contribution to the Treasury Trust of a predetermined percentage of profits of all other operations, including mining, industrial, wind power enterprises, etc.

### D7.3.3 BENEFICIARIES

The PBOs are the main beneficiaries of the Treasury Trust as illustrated below. These entities are established in partnership and in close co-operation with the relevant stakeholders, the objective being to ensure that benefits are delivered to the rightful beneficiaries and be managed in a transparent and equitable manner.

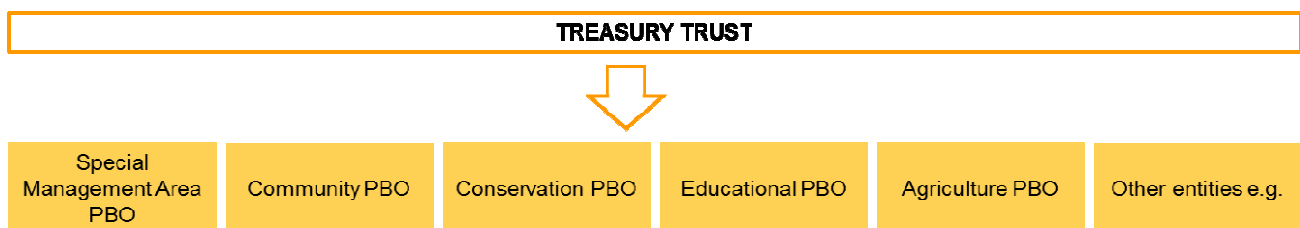


Figure D13: SDI organisational structure incorporating the Treasury Trust and possible PBOs.

The SDI approach does not provide for one-sided grants, or transfers, of funds from the core project to any stakeholder. In practice, an application and motivation (including a business plan) has to be submitted to the Treasury Trust for consideration and funds would be disbursed to the relevant PBO (the applicant) in terms of a contract.

All the PBOs (or trusts), including the Treasury Trust, will be registered in terms of Section 13(5) of the Non-profit Organisations Act 71 of 1997. Each trust will apply in its own capacity for exemption from income tax in terms of Section 30 of the Income Tax Act 57 of 1962.

## D7.4 IMPLEMENTATION OF THE SDI MODEL

An SDI is planned and implemented in accordance with six distinct steps or components that are applied in a cyclic sequence (refer to the summary and the figure below). The steps are as follows:

- Component 1: This constitutes the formulation of a vision for the SDI project. Having regard for the central objective of an SDI, this has to be founded on ethical values, with sustainability as the central objective. An appropriate organisational structure (e.g. PBO) should ideally be established early in the process to ensure inclusivity. The vision is then given effect through the following:
- Component 2: Formulation of strategies to unlock, align and re-invest the resources (capital) vested in the SDI area. The rationale for such strategies is that sustainable development has to be financed and monetary resources (money) alone cannot achieve this. The SDI strategically aligns monetary, environmental, infrastructural and social capital into a form of capital that is bankable and that can be used to finance sustainable development. The main purpose is to create economic drivers that would generate funds for the financing of both human well-being and the integrity of the natural environment. Innovative planning and design is a critical dimension for the optimization of sustainable outcomes.
- Component 3: This includes the consideration of the desirability of the SDI project proposals in terms of all relevant scales, from the international to the local, and in terms of the applicable legislation, policy, and the spatial and design dimension. Qualitative place making through urban, architectural and landscape architectural design is considered an imperative for human well-being and is therefore an inextricable component of sustainable development. Accordingly, this is a critical dimension of the SDI model.
- Component 4: This constitutes use of the various forms of capital to fund projects under defined programmes. These are to be planned and implemented in accordance with clear guidelines which collectively address the key socio-economic and environmental needs of the SDI area. The SDI programmes are defined as strategic clusters of related activities that together achieve a specific goal.
- Component 5: This constitutes the measurement and assessment of the performance of the SDI and its projects in terms of the criteria of efficiency and justice. This should be undertaken in context of statutory and policy requirements pertaining to need and desirability.
- Component 6: The final step is the implementation of the SDI through an adaptive management strategy in terms of an ISO 14001 Environmental Management System (EMS) that embodies continual improvement of all aspects of the SDI. As state previously, the various steps are undertaken in an on-going cyclic sequence, which means that they are subject to on-going performance scrutiny and evaluation and continual improvement for the duration of the SDI.

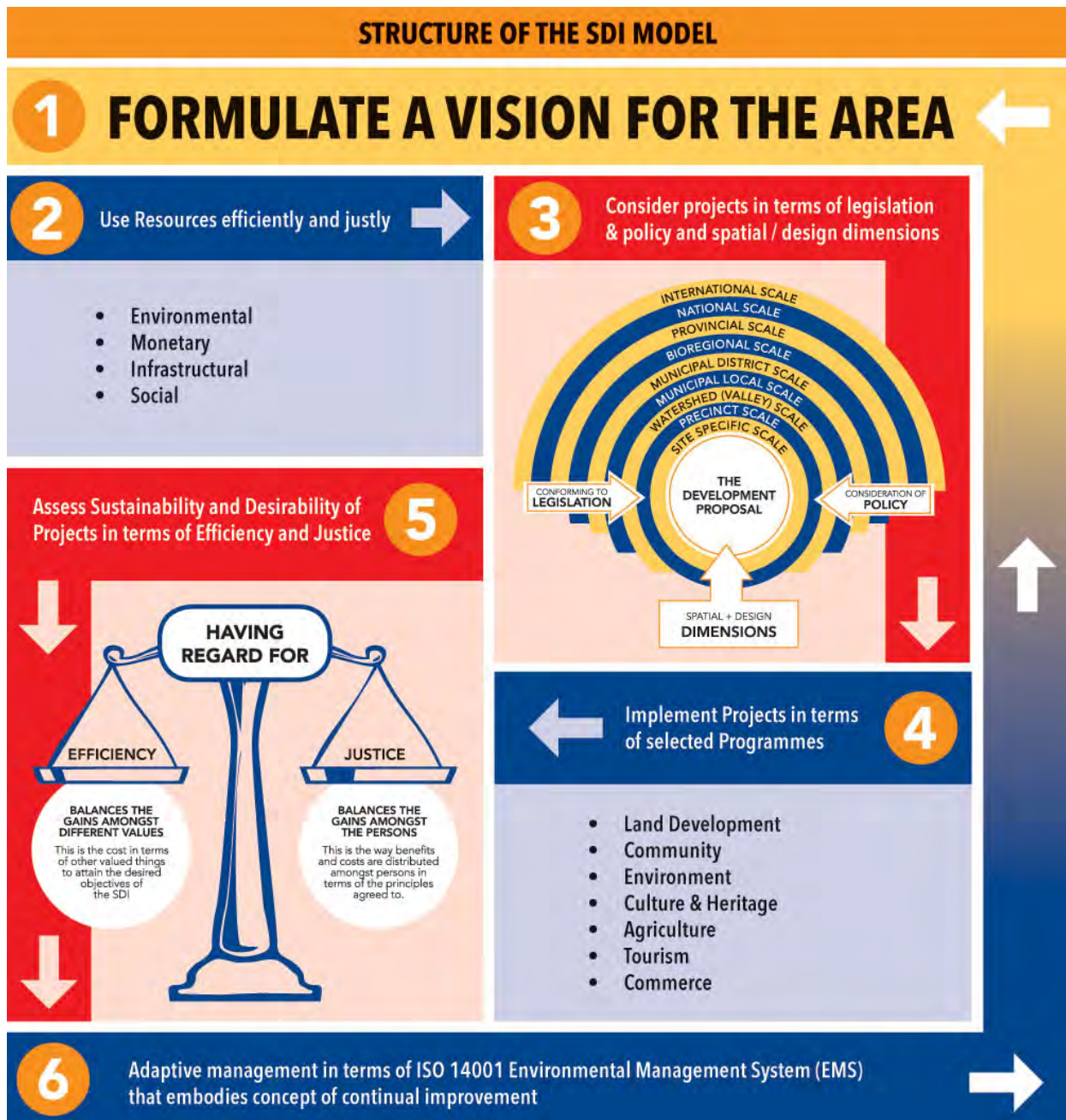


Figure D14: The Structure of the SDI Model

**D7.5 SUSTAINABILITY AND BANKABILITY OF SDI PROJECTS**

A key dimension of the SDI is innovative and sustainable funding which is to be provided through bankable projects. Component 2 of the SDI model provides for the alignment and integration of the four forms of capital in a manner which could be bankable. Sustainability, as it relates to funding, is described as the stabilising point between the three dimensions of the triple bottom line, i.e. economic efficiency, environmental integrity and human well-being (social justice), each of the elements contributing to an on-going sustainable equilibrium. Typically the individual ‘weight’ of each of the three elements varies across a portfolio of sustainability projects. It is therefore likely that the sustainability investment spectrum, corresponding to a specific portfolio, will range from highly quantitative (and therefore more likely to be immediately bankable) to highly qualitative (and therefore more challenging to be bankable), as shown by Figure D14.

Bankability is defined as the assessment of a project that provides the investor with a competitive rate of return over a short or extended period of time (e.g. 1 to 30 years), incorporating an acceptable risk profile to the investor, while also capable of providing short-term liquidity when required.

Monetary capital constitutes an appropriate selection of amongst others, private equity, venture capital, corporate finance, project finance and possibly donor funding and philanthropy. The challenge in sustainability finance is to provide suitable investment structures that will deliver bankable sustainability project portfolios with full accounting of the individual contributions of natural, environmental, infrastructural and social capital to the portfolio.

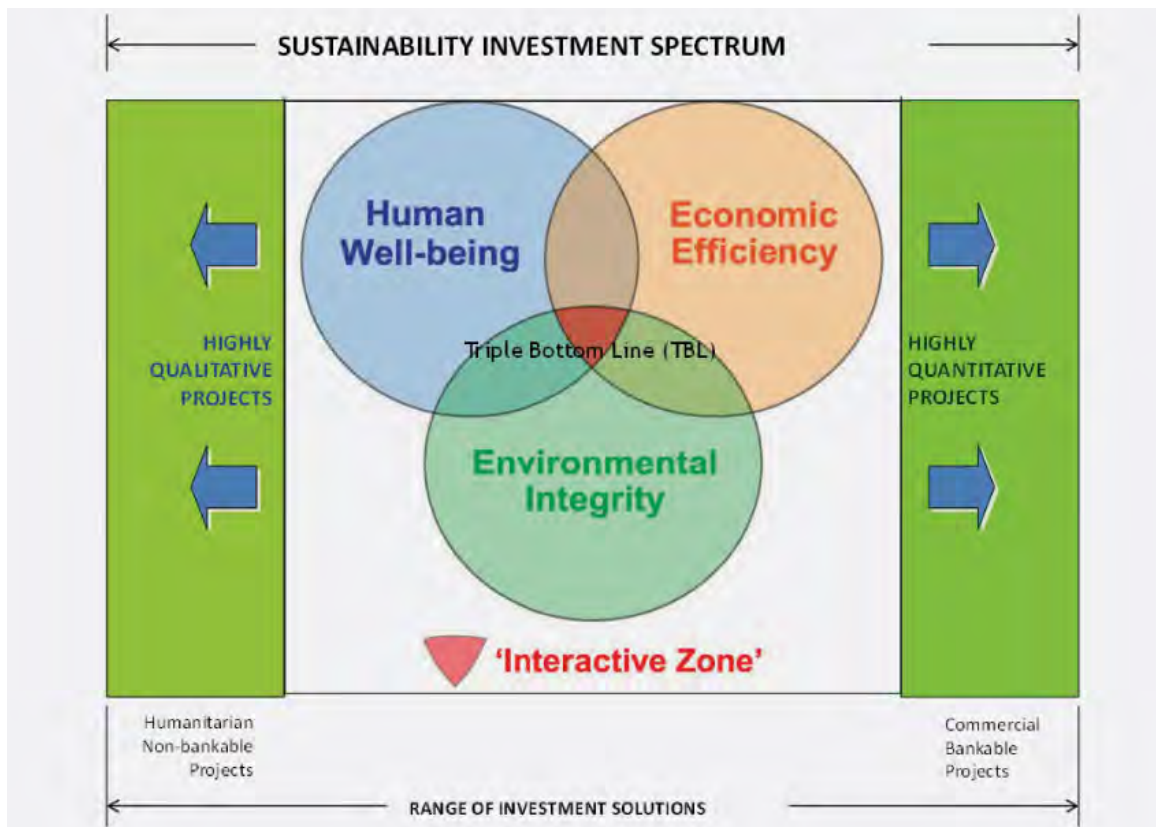


Figure D15: Achievement of sustainability and bankability (ISDC London).

### D7.5.1 A VISION FOR SUSTAINABILITY FINANCE

The vision for sustainability finance is as follows:

*Globally utilise financial market driven-mechanisms for the delivery of sustainable development solutions, focusing on and providing the following:*

- *sustainable communities with the financial capability to alleviate poverty and inequality and to develop more sustainable lifestyles;*
- *a variety of countermeasures against climate change (including 'clean energy' and the reduction, retention and removal of carbon);*
- *biodiversity protection mechanisms in conjunction with biosphere reserves and other integrated land-use initiatives and through the application of bioregional planning; and*
- *development of innovative solutions, incorporating state of the art technology, in a range of focus areas underpinning the duality of sustainable development and climate change (e.g. water conservation, energy efficiency, health, agriculture, forests and other ecosystems, waste management, sustainable buildings/industry/transport).*

## D7.6 SUSTAINABILITY INVESTMENT PLATFORM (SIP)

ISDC developed the concept of the Sustainability Investment Platform (SIP) in order to provide a specialised environment enabling the effective application of sustainable finance and its various functions, in particular, addressing the various forms of capital. The primary aim of the SIP is to provide the broad investment community with an attractive and competitive sustainability project portfolio, with the sustainability finance as its 'currency'. The overall objectives of the SIP relate to the following (refer to Figure D15):

- a) Quantitative:
  - (i) To achieve a highly competitive rate of return for the overall project portfolio.
  - (ii) To provide appropriate sustainability orientated hedging instruments.
  - (iii) To allow investors with competitive facilities e.g. early liquidity and exit opportunities.
- b) Qualitative:
  - (i) Each of the projects in the sustainability project portfolio has a clear set of objectives in support of the vision.
  - (ii) A further consideration in each project is the opportunity to establish a benchmark/icon standard, also incorporating transferability and scalability to other future projects.

### D7.6.1 COMPONENTS OF THE SIP

The SIP incorporates the following:

- a) Financial Instruments: In order to provide the necessary risk protection to the potential investor, a variety of financial instruments are available. These are adjustable in order to address a broad range of qualitative issues while meeting the investment requirements of investors.
- b) Sustainability Investment Models: This constitutes a methodology and process to define and unlock value pertaining to qualitative sustainability issues, into structured projects, followed by the quantification of the defined and unlocked value in financial terms.
- c) Sustainability Investment Fund: A Luxembourg-based and regulated fund, incorporating fund related financial/technical specialist support.
  - (i) Fund custodianship: Investments are in care of a well-established banking group.
  - (ii) Fund administration: Providing investors with a monthly Net Asset Value analysis.
  - (iii) Investment management: Expert management ensuring that invested funds are fully utilized.
  - (iv) Fund management: Specialised project management dedicated to the various aspects of the fund structure.
  - (v) Fund structuring: Specialised legal advice ensuring that investors have the necessary benefits e.g. tax structuring relative various geographic areas.
  - (vi) Investment liaison: On-going communication with investors.
  - (vii) Advisory Committee: A list of members worldwide with banking or technical expertise and a common focus on sustainability.

## TOOLKIT D8 PROCEDURE FOR DEMARCATION OF NEIGHBOURHOOD AREAS

### TOOLKIT SYNOPSIS

One of the greatest challenges facing planning authorities is to ensure that planning frameworks and planning processes are designed and managed in a manner that promotes enthusiastic public participation. A decisively important aspect that needs to be addressed is to ensure that the physical scale of the planning area must be such that the residents of that area would identify with it to the extent that they would be encouraged to actively take part in its planning and management. Together with appropriate scale, it is also imperative that institutional structures are created which would ensure effective decision-making and implementation of policy. Residents of an area should be convinced that it is worthwhile to take part in the planning of the area within which they live.

The bioregion offers an appropriate scale for regional planning. However, the bioregion is not the final planning unit within which planning and management should take place. A place-specific planning approach suggests that there should be smaller, finer-grain spatial planning units, which can serve as building blocks for the bioregion and its planning and management. From this, it follows logically that there is a need to recognise smaller local-level planning units (areas) within the bioregion, which are demarcated in a manner that effectively incorporates the interests of local communities in the affairs that affect them directly. Ideally, such local planning areas should be demarcated for the bioregion as a whole and should be contiguous.

The process of determining the parameters of neighbourhood areas and other small planning units is a key component of municipal governance in terms of the Municipal Systems Act. This toolkit provides guidelines for determining neighbourhood areas and other small planning units.

### D8.1 THE DELIMITATION RATIONALE

Moughtin (1997) states that the delimitation of neighbourhoods, districts, etc. is essential for achieving sustainable development. *The process of the division of the settlements is most effective in promoting sustainable development when these divisions of the settlements are legitimised politically and when their elected councillors are given a mandate to protect and enhance the quality of the local environment* (Moughtin, 1997). It is suggested that the latter view be considered against the background of the objectives of both the Municipal Structures Act and the Municipal Demarcation Act, particularly with regard to the role wards and ward councillors and ward committees can play in the future.

The delimitation of bioregions and neighbourhood areas are of immense significance considering the fact that the municipalities are generally so large that people are not able to identify with them on a human level (therefore, the sense of belonging to such areas is generally weak). Furthermore, many towns have lost their municipal status, increasing the potential for apathy within communities in respect of the planning and management of their places. The establishment of neighbourhood areas on the district level (which can encompass a town and its immediate hinterland) will encourage people to participate in the IDP process in a more meaningful and constructive manner because they would identify with such areas very strongly.

In addition to providing for finer-grain planning units, the neighbourhood area and its planning and management will ensure that planning frameworks and processes are designed and managed in a manner, which would promote enthusiastic and effective public participation. The neighbourhood areas will ensure that the physical scale of the planning area is such that the residents of that area would identify with it to the extent that they would be encouraged to actively take part in its planning and management.

Key elements of defining neighbourhood areas are intensive public participation and the compilation of sectoral maps including *inter alia* maps of church wards, community wards, municipal wards, agricultural union and farmers' society wards, and rural security areas. A fundamentally important aspect of the public participation is to define the meaning that places have for the people that live in those places. In this regard, the people of the planning area need to develop a phenomenological understanding of their environment in order to contribute effectively to its planning and management.

## **D8.2 DELIMITATION OF NEIGHBOURHOOD AREAS**

It needs to be stressed that the demarcation and management of neighbourhood areas should always be considered in the context of the larger area, or region, within which they are located. Special attention should be given to the creation of institutional mechanisms to encourage public participation and active involvement of municipalities in the planning and management of such neighbourhood areas and the region as a whole. Neighbourhood areas, therefore, need to be identified for the entire surface area of a district and/or bioregion.

It is proposed that the establishment of rural and on-farm settlements be considered on a neighbourhood area level and in accordance with the principles and goals of the IDP.

### **D8.2.1 DELIMITATION CRITERIA**

The following criteria are put forward for the delimitation of neighbourhood areas. These criteria are in accordance with the delimitation criteria for bioregions and comply with place-specific planning principles:

- a) Local municipality jurisdiction areas: Neighbourhood areas should fall within (not crossing the boundaries of) a Category B Municipality in order to simplify political responsibility for the implementation of plans and proposals. Because the Ward Areas of the Category B Municipalities, as determined by the Demarcation Board, are generally not consistent with the criteria for neighbourhood areas, and do not seem to follow any consistent logic, these boundaries need not be taken into account in the delimitation of neighbourhood areas.
- b) Property boundaries: The boundaries of neighbourhood areas should follow cadastral boundaries in order to facilitate public participation (i.e. which property owners / tenants should belong to which neighbourhood area committee), planning and management.
- c) Boundaries of ecosystems: Where applicable, neighbourhood areas should correspond with catchment area boundaries, which also represent one of the key bioregional delimitation criteria.
- d) Natural and man-made barriers: Boundaries of neighbourhood areas should correspond with natural barriers (e.g. mountains and rivers) as well as built barriers (e.g. roads) in order for the area to form a functionally cohesive unit.
- e) Common character: Neighbourhood areas should correspond with areas that have a common character and identity, determined by physical characteristics such as topography,



space, form, detail, symbol use, etc. This is in accordance with the requirements of a place-specific planning approach, in terms of which people need to identify with a particular place for it to be regarded as their home and, therefore, for them to feel a sense of pride and concern towards it.

- f) Manageable size: Neighbourhood areas should be of a size that has a manageable complexity of issues for the resources available.
- g) Central places: In accordance with a place-specific planning approach, neighbourhood areas should, as far as possible, be centred around places, or development nodes, that function as the centre of the particular area.
- h) Functional areas: Neighbourhood areas should correspond with areas that function as a unit in terms of the sharing of amenities and infrastructure for logistical planning purposes.
- i) Cohesiveness of communities: Neighbourhood areas should correspond, as far as possible, with relatively homogeneous community groupings. This is to ensure that the norms and values of communities, which guide their decision-making on the planning and future development of their neighbourhood areas, are relatively similar. Neighbourhood area advisory committees should, in co-operation with one another, advise the relevant municipality on the refinement of the boundaries of their respective neighbourhood areas. In addition to the above delimitation criteria, the boundaries of existing church wards and farmers' associations should also be taken into account.
- j) Neighbourhood area precincts: One of the fundamental purposes of establishing a neighbourhood area is to create planning units which people would relate to on a personal and neighbourhood community level. Whilst the neighbourhood area is probably the smallest practical planning unit a local municipality would establish for integrated development planning purposes on the bioregional level, it seems advisable to provide for even smaller units for internal neighbourhood planning purposes. In the latter regard it is suggested that each neighbourhood area be divided into a number of neighbourhood precincts that are consistent with specific physical characteristics such as topographical features, areas demarcated by main roads, small settlements etc. (refer to Chapter C6 and Toolkit D13). The neighbourhood precincts could then also serve as a basis for electing the members of a neighbourhood area advisory committee.

### **D8.3 NEIGHBOURHOOD AREA ISSUES, POLICIES AND ACTION PLANS**

The neighbourhood area level of planning provides an appropriate level for identifying and addressing a number of developmental needs, or issues, in conjunction with the local community. Development issues specific to a neighbourhood area, in terms of the vision for its future development, as well as district-wide issues, which could be addressed on a neighbourhood level, should, accordingly, be identified for each neighbourhood area. Amongst others, the following issues and types of actions could be addressed on a neighbourhood area level:

- a) Minimizing resource use: This includes the following:
  - (i) Community-level recycling, i.e. the reclamation and re-use of wastes (e.g. composting, use of waste water, etc.).
  - (ii) Maximizing people's access while minimizing the use of fossil fuel and other non-renewable resources.
  - (iii) Promoting the establishment of fuel-efficient, movement-minimizing living environments.
- b) Creating employment that reduces poverty and supports resource conservation: The creation of jobs from recycling should improve the lives of poorer groups, whilst also promoting resource conservation. Provision should be made for market gardening (or

small-scale agricultural production) which could be central to the livelihoods of poorer households.

- c) Providing minimum basic services to all: The public participation opportunities provided by neighbourhood level planning should facilitate more accurate determination of the service requirements and priorities of a particular local community and how these needs can best be addressed in that particular context.
- d) Generating finance for sustainable development: Neighbourhood level planning should promote the mobilization of community resources for low-income housing and neighbourhood area development (e.g. finance for community, or neighbourhood level, services and infrastructure such as water provision, sanitation, health care, etc.). Innovative community actions to meet development needs and reduce resource consumption should be supported.
- e) Meeting citizen's health needs and ensuring a healthy environment: Communities should investigate means of providing health care and emergency services within limited municipal budgets. Domestic violence could be prevented through community mobilization.
- f) Transport-minimizing: This could be promoted through bringing employment opportunities close to public transport nodes and residential areas.

#### **D8.4 SPATIAL PLANS FOR NEIGHBOURHOOD AREAS**

Spatial plans should be drawn up according to the envisaged roles of neighbourhood areas, whilst giving physical form to policy proposals. Such must be guided by higher level development plans, e.g. the IDP and SDF. The SPCs that have been designated on a bioregional level should be refined and fine-tuned on a neighbourhood area level. Neighbourhood plans could also put forward alternative proposals, where it can be demonstrated that IDP proposals are inappropriate.

The following aspects need to be addressed in spatial plans for neighbourhood areas (refer to the spatial structuring elements in Toolkit D13):

- a) A green system where development should not be allowed, or will be more tightly controlled for a variety of reasons, including ecological, hazards, production, recreation and place-making reasons.
- b) Location of settlement areas in accordance with development pattern characteristics of the neighbourhood area.
- c) Nature and configuration of the transportation system.
- d) Location and nature of social community facilities.
- e) Location and nature of utility and emergency services.

**TOOLKIT D9 PRE-APPLICATION CHECKLIST****TOOLKIT SYNOPSIS**

The purpose of this toolkit is to facilitate a coherent application procedure that would enable both the proponents and the responsible functionaries to prepare and process land-use applications in a coherent and cost-efficient manner.

As stated in Chapter C8.1.2 applications for a change in land-use must commence with a pre-application checklist, the purpose of which is to:

- a) Document the key aspects of the proposed development.
- b) Enable the Municipality to provide guidance pertaining to the planning, EIA and application process to follow.
- c) Enable the proponent to prepare a rational and coherent proposal and associated application.
- d) Promote institutional integration and collaboration.

Applications for approval of large-scale consumptive resource use activities must include a comprehensive *Project Development Framework*, which must include *inter alia* the following:

- (i) Detailed description of the proposed project.
- (ii) Graphic illustrations of the nature and extent of the proposed project.
- (iii) Proposals pertaining to how effect would be given to the objectives cited under Chapter C9.1.1.
- (iv) Proposals pertaining to how the detrimental impacts of the proposed project would be mitigated.

The *Project Development Framework* will serve as a basis for the EIA to be undertaken in terms of NEMA and for assessing the desirability of the project in an integrated, holistic and informed manner.

The checklist is to be completed by the proponent and submitted to the Municipality as a basis for discussions regarding the desirability of the proposed project and the processes to follow as it relates to application, adjudication and implementation.

The checklist has to address at least the aspects listed below.

**PRE-APPLICATION CHECKLIST: LARGE-SCALE DEVELOPMENT**

**SECTION A: DESCRIPTION OF CORE BUSINESS AND SECTOR**

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**SECTION B: SITE AND PROJECT CONTEXT**

**B1 PROPERTY DETAILS**

Erf / Erven / Farm No.		Portion No. (of farm)	
Street Address:			
Suburb:			
GPS Coordinates:		S	E
Zoning:		Extent	m <sup>2</sup> /ha
Spatial Planning Category:			
Title Deed No:		Restrictive conditions?	
Registered Servitudes:			

**B2 PROPOSED PROJECT**

**Resource(s) to be utilised:**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**SECTION C: INFRASTRUCTURE REQUIREMENTS**

Description	Demand	Current Status	Gap and means to address
1 Transport: Road Rail			
2 Water: Volume Location Quality			
3 Effluent: Volume Quality Recycle			
4 Energy: Need Source			
5 Hazardous products: Volume Rating Disposal			
6 Communication: Need Source Location			

**SECTION D: HUMAN CAPITAL REQUIREMENTS OF INVESTMENT**

## a) Employee profile

	Permanent Staff	Temporary Staff
Number of labourers: un- and semi-skilled:		
Number of skilled blue-colour/technical employees:		
Number of highly skilled, specialised white-colour employees:		
Skills to be translocated to the Municipality:		
Skills pool to be generated in the Municipality:		

## b) Human resource competency development programme:

## c) Training and education investment:

## d) Innovation and research investment:

**SECTION E: COMPLIANCE WITH LEGISLATION AND POLICY**

<b>Government Sphere</b>	<b>Applicable Statutes &amp; Policy &amp; Compliance</b>
National	
Provincial	
District	
Local	

**E.1 SDF CONTEXT**

a) Designated Spatial Planning Category:	
b) Applicable Land-use Guidelines:	

**SECTION F: NEED AND DESIRABILITY**

<b>QUESTION</b>	<b>EVALUATION</b>
<u>Question 1:</u> Is the land-use considered within the timeframe intended by the SDF?	
<u>Question 2:</u> Should the development occur here at the relevant point in time?	
<u>Question 3:</u> Does the community/area need the activity and the associated land-use concerned?	
<u>Question 4:</u> Are the necessary services with appropriate capacity currently available or must additional capacity be created to cater for the development?	

<p><u>Question 5:</u> Is the development provided for in the infrastructure planning of the municipality?</p>	
<p><u>Question 6:</u> Is the project of national importance?</p>	
<p><u>Question 7:</u> Is the development the best practicable environmental option for the relevant land/site?</p>	
<p><u>Question 8:</u> Would the approval of the relevant application compromise the integrity of the existing IDP and SDF as agreed to by the relevant authorities?</p>	
<p><u>Question 9:</u> Would the approval of the relevant application compromise the integrity of the existing environmental management priorities for the area?</p>	
<p><u>Question 10:</u> Do locational factors favour the proposed land-use at the relevant site?</p>	
<p><u>Question 11:</u> How will the activity or the land-use associated with the activity to be applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)?</p>	
<p><u>Question 12:</u> How will the development impact on people's well-being?</p>	
<p><u>Question 13:</u> Will the proposed activity or the land-use associated with the activity to be applied for, result in unacceptable opportunity costs?</p>	
<p><u>Question 14:</u> Will the proposed land-use result in unacceptable cumulative impacts?</p>	

**SECTION G: ENVISAGED KEY IMPACTS**

- a) Estimated production value:

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- b) Estimated export value:

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- c) Estimated capital investment:

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- d) Envisaged environmental impact:

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**SECTION H: APPLICATION PROCESSES**

Would the proposal require any of the following?

<b>APPLICATION</b>	<b>YES</b>	<b>NO</b>	<b>STATUS</b>
Environmental Impact Assessment (i.t.o National Environmental Management Act, 107 of 1998):			
Waste Licence (i.t.o National Environmental Management: Waste Act, 59 of 2008):			
Heritage Impact Assessment (i.t.o. Heritage Resources Act, 25 of 1999):			
Rezoning (i.t.o. applicable planning legislation):			

**SECTION I: IMPACT MITIGATION STRATEGIES**

- a) Proposal regarding Environmental Mitigation Strategy that complies with the SDF:

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- b) Proposal regarding Community Benefit Strategy that complies with the SDF:

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- c) Exit Strategy if the proposed project were to fail or reach its productive life cycle.

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## CONCLUSION TO THE WITZENBERG SPATIAL DEVELOPMENT FRAMEWORK

The Wizenberg SDF is a bold and sincere attempt of the Witzenberg Municipality and all stakeholders to facilitate the restructuring of urban and rural space to reflect the aspirations of the people of the Municipality. The spatial legacies of land-use tend to be much more enduring than social, economic or political factors which either have short life spans or are highly mobile in terms of people moving to places of greater economic opportunities. Without focussed and effective intervention the spatial legacy of the past will prevail.

Thus, the SDF attempts to simultaneously address objectives of social justice, economic efficiency and environmental sustainability. It provides policies intended to remedy gaps in action and implementation. Such policies comply with the applicable international agreements, conventions and protocols, and national legislation and policy pertaining to land-use planning and sustainability.

The SDF is to be implemented through a series of actions, including the following:

- a) Integration and cooperation of sectoral institutions (refer to Chapter A5.1).
- b) Co-operative governance at all spheres of government (refer to Chapter A5.1).
- c) Linking project funding to the SDF (refer to Chapter C6.2 and Toolkit D14).
- d) Gearing up the institutional capacity of the Municipality to manage and monitor spatial planning (refer to Chapter C10 and Toolkit D17).
- e) Enhancing spatial planning practices supported by efficient information management (refer to Chapter C1.4 and Toolkit D3).
- f) Stakeholder training, mentorship and capacity building.
- g) On-going performance monitoring, auditing, and continual improvement through adaptive management (refer to Chapter C10 and Toolkit D17).

The Witzenberg Municipality is not only a provincial and national asset, but also one of significant international value. It is imperative for these values to be reflected and emphasised in the management of this unique part of the world. Accordingly, the SDF is to help create a developmental state in the Witzenberg. The planning and management of the Municipality has the potential to evolve into an exemplary model that can make a significant contribution to the improvement of an understanding of how to promote and give effect to sustainable development and sustainability as is contemplated in Chapter A3.

In conclusion, the SDF is not about solving problems and challenges for the people of the Witzenberg, but rather about creating circumstances for the people to fulfil this task in a manner that acknowledges the uniqueness and value of each person and place in the Municipality.

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Wium, J., 2007: Conceptual design of structures for seismic loads. In *Civil Engineering*, March 2007, 15(3).

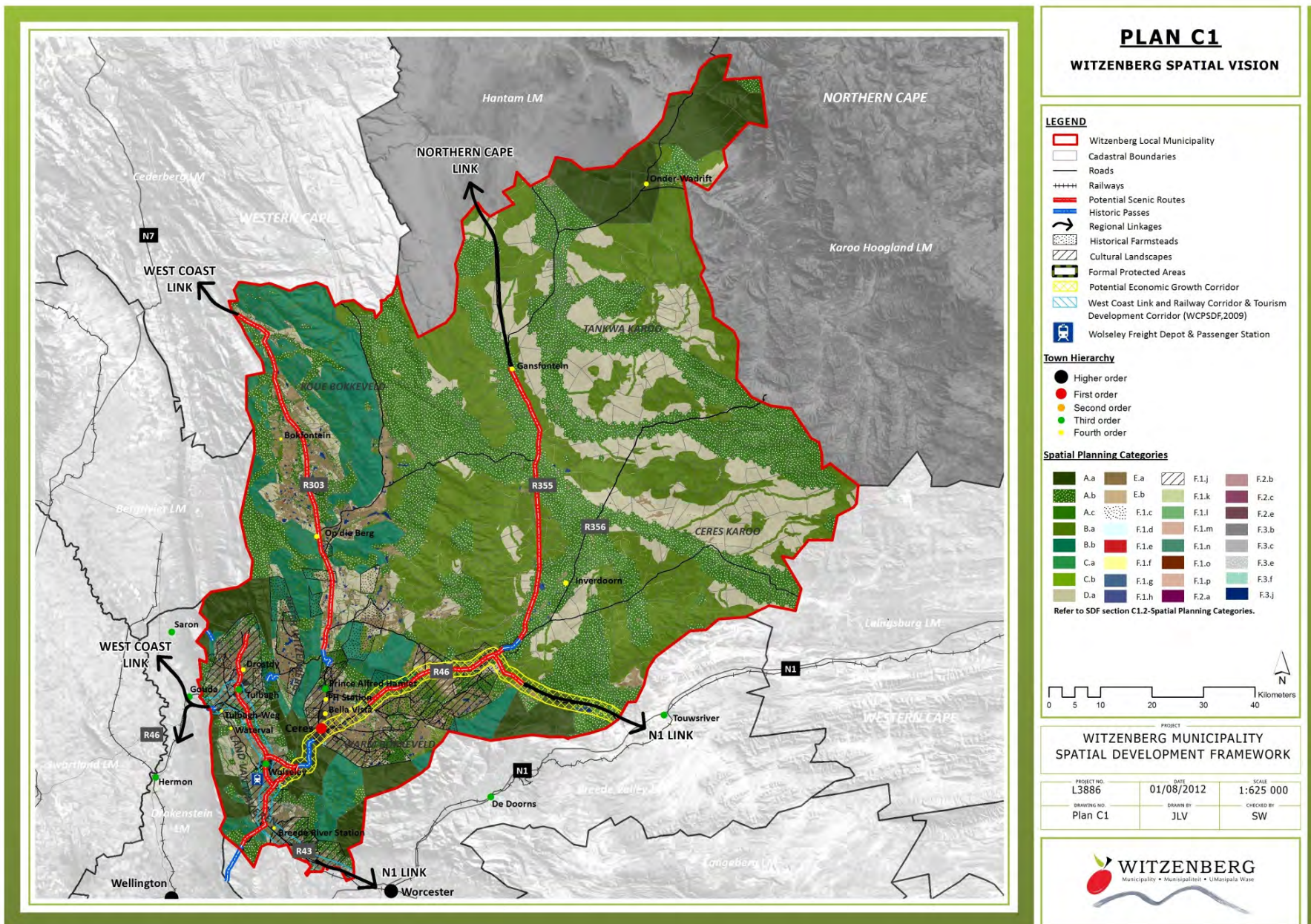
World Resources Institute (WRI), IUCN, and UNEP., 1992: *Global Biodiversity strategy: Guidelines for action to save, study and use earth's biotic wealth sustainably and equitably*. Washington: World Resources Institute.

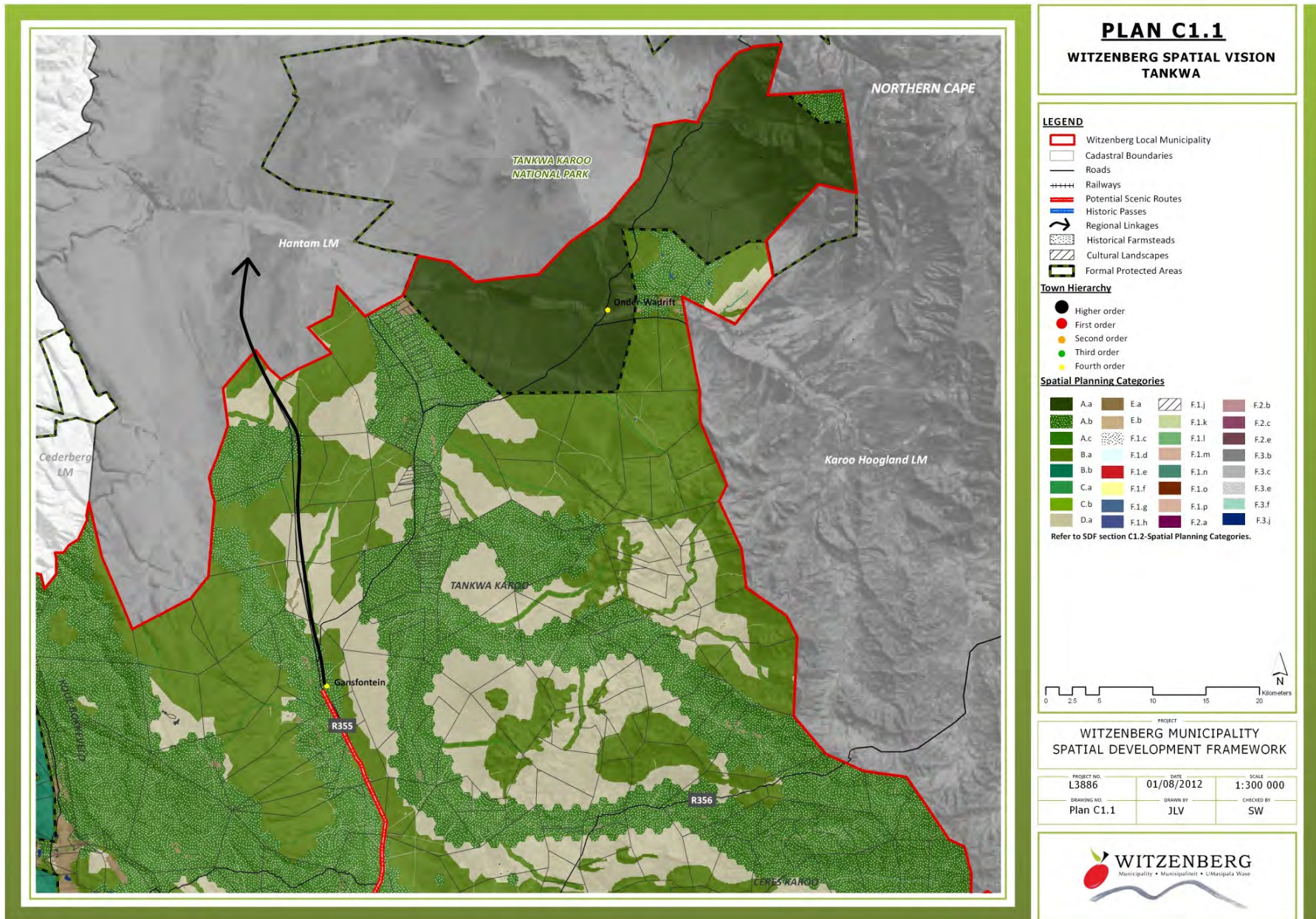
# ANNEXURE 1

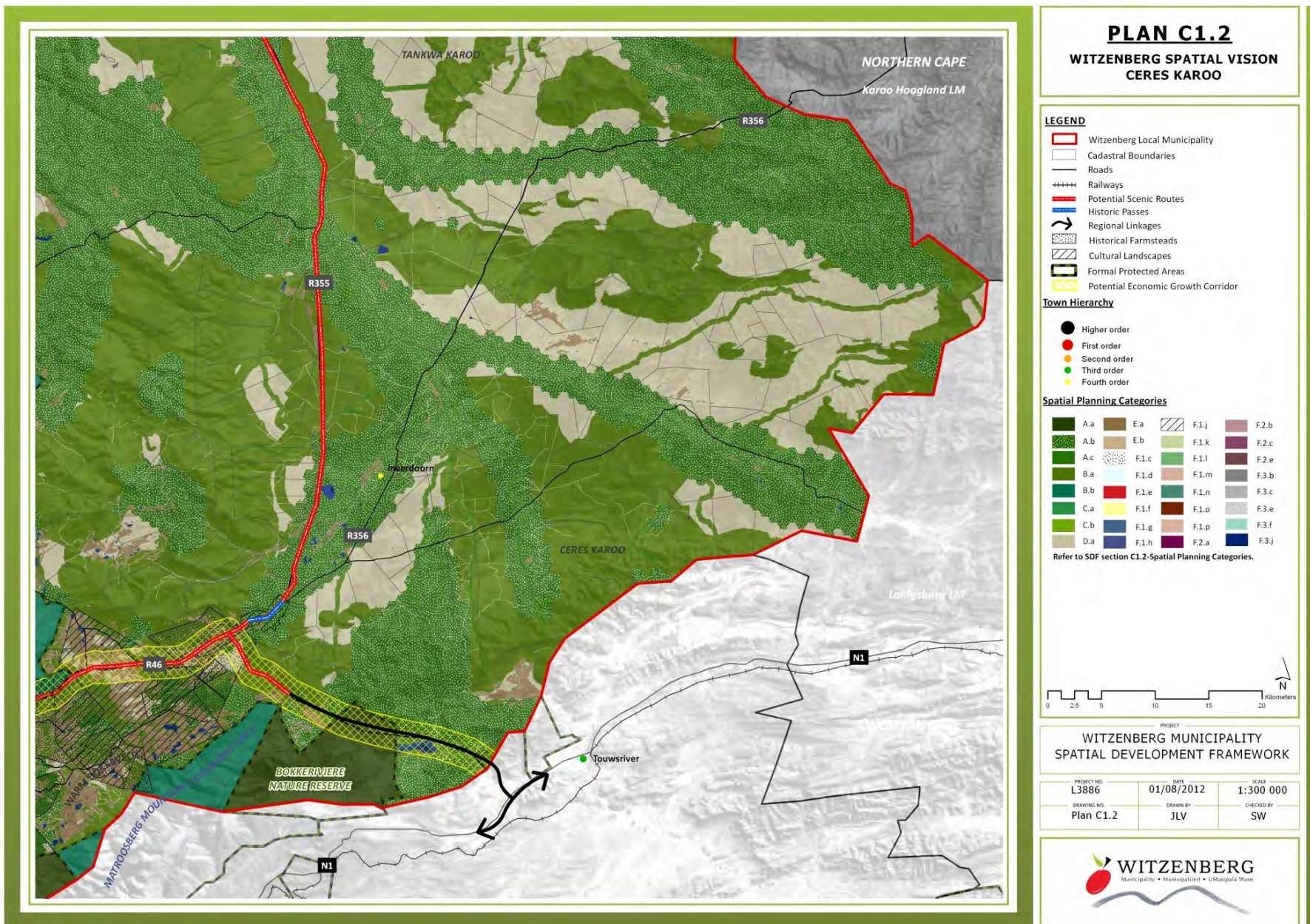
## Spatial Plans

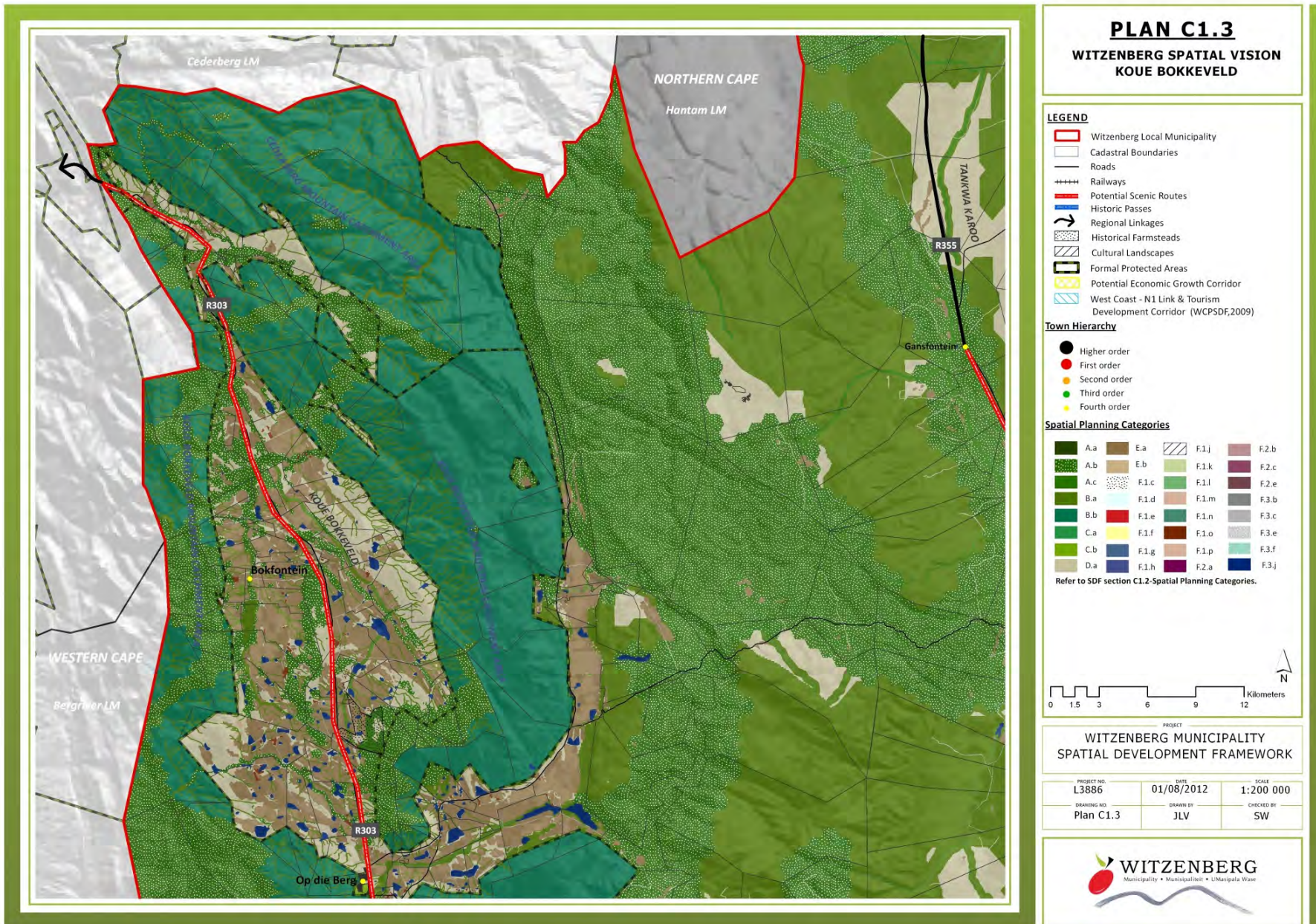
- C1 Witzenberg Composite Plan (Spatial Vision)
- C2 Spatial Plan: Biosphere Reserves
- C3 Spatial Plan for Witzenberg as a Regional Pivot
- C4 Spatial Plan for Tourism
- C5 Spatial Plan for SPC A-D: Natural Environment
- C6 Spatial Plan for SPC E: Agricultural Areas
- C7 Settlements: Investment Typology
- C8 Spatial Plan for SPC F2: Industrial Areas
- C9 Spatial Plan for SPC F3: Surface Infrastructure



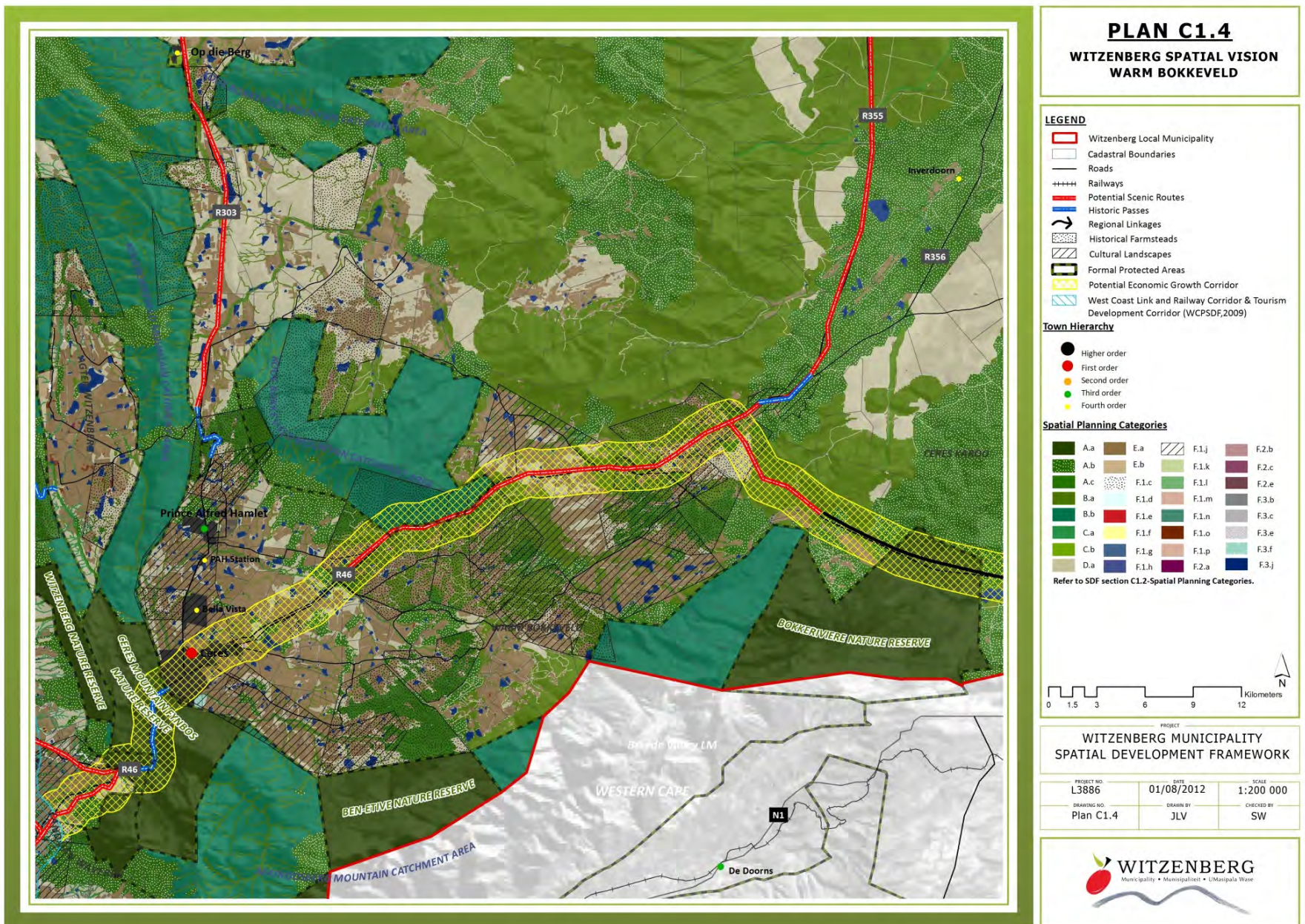


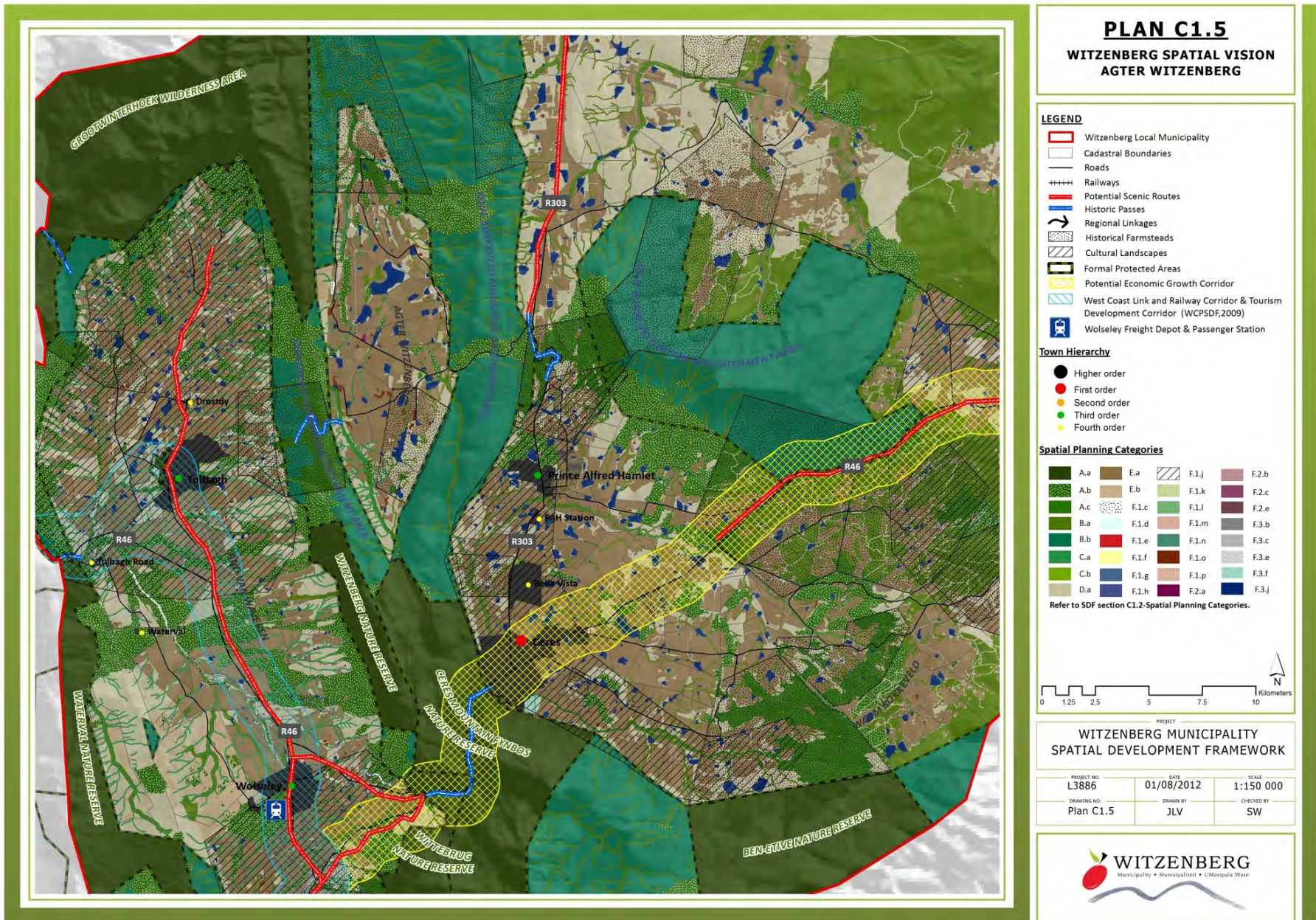












## PLAN C1.5 WITZENBERG SPATIAL VISION AGTER WITZENBERG

- LEGEND**
- Witzenberg Local Municipality
  - Cadastral Boundaries
  - Roads
  - Railways
  - Potential Scenic Routes
  - Historic Passes
  - Regional Linkages
  - Historical Farmsteads
  - Cultural Landscapes
  - Formal Protected Areas
  - Potential Economic Growth Corridor
  - West Coast Link and Railway Corridor & Tourism Development Corridor (WCPDF, 2009)
  - Wolseley Freight Depot & Passenger Station

- Town Hierarchy**
- Higher order
  - First order
  - Second order
  - Third order
  - Fourth order

**Spatial Planning Categories**

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<span style="display: inline-block; width: 15px; height: 15px; background-color: #008000; border: 1px solid black;"></span> A.b	<span style="display: inline-block; width: 15px; height: 15px; background-color: #D2691E; border: 1px solid black;"></span> E.b	<span style="display: inline-block; width: 15px; height: 15px; background-color: #90EE90; border: 1px solid black;"></span> F.1.k	<span style="display: inline-block; width: 15px; height: 15px; background-color: #800080; border: 1px solid black;"></span> F.2.c
<span style="display: inline-block; width: 15px; height: 15px; background-color: #008000; border: 1px solid black;"></span> A.c	<span style="display: inline-block; width: 15px; height: 15px; border: 1px dotted black;"></span> F.1.c	<span style="display: inline-block; width: 15px; height: 15px; background-color: #90EE90; border: 1px solid black;"></span> F.1.l	<span style="display: inline-block; width: 15px; height: 15px; background-color: #800080; border: 1px solid black;"></span> F.2.e
<span style="display: inline-block; width: 15px; height: 15px; background-color: #008000; border: 1px solid black;"></span> B.a	<span style="display: inline-block; width: 15px; height: 15px; border: 1px dotted black;"></span> F.1.d	<span style="display: inline-block; width: 15px; height: 15px; background-color: #90EE90; border: 1px solid black;"></span> F.1.m	<span style="display: inline-block; width: 15px; height: 15px; background-color: #800080; border: 1px solid black;"></span> F.3.b
<span style="display: inline-block; width: 15px; height: 15px; background-color: #008000; border: 1px solid black;"></span> B.b	<span style="display: inline-block; width: 15px; height: 15px; background-color: red; border: 1px solid black;"></span> F.1.e	<span style="display: inline-block; width: 15px; height: 15px; background-color: #90EE90; border: 1px solid black;"></span> F.1.n	<span style="display: inline-block; width: 15px; height: 15px; background-color: #800080; border: 1px solid black;"></span> F.3.c
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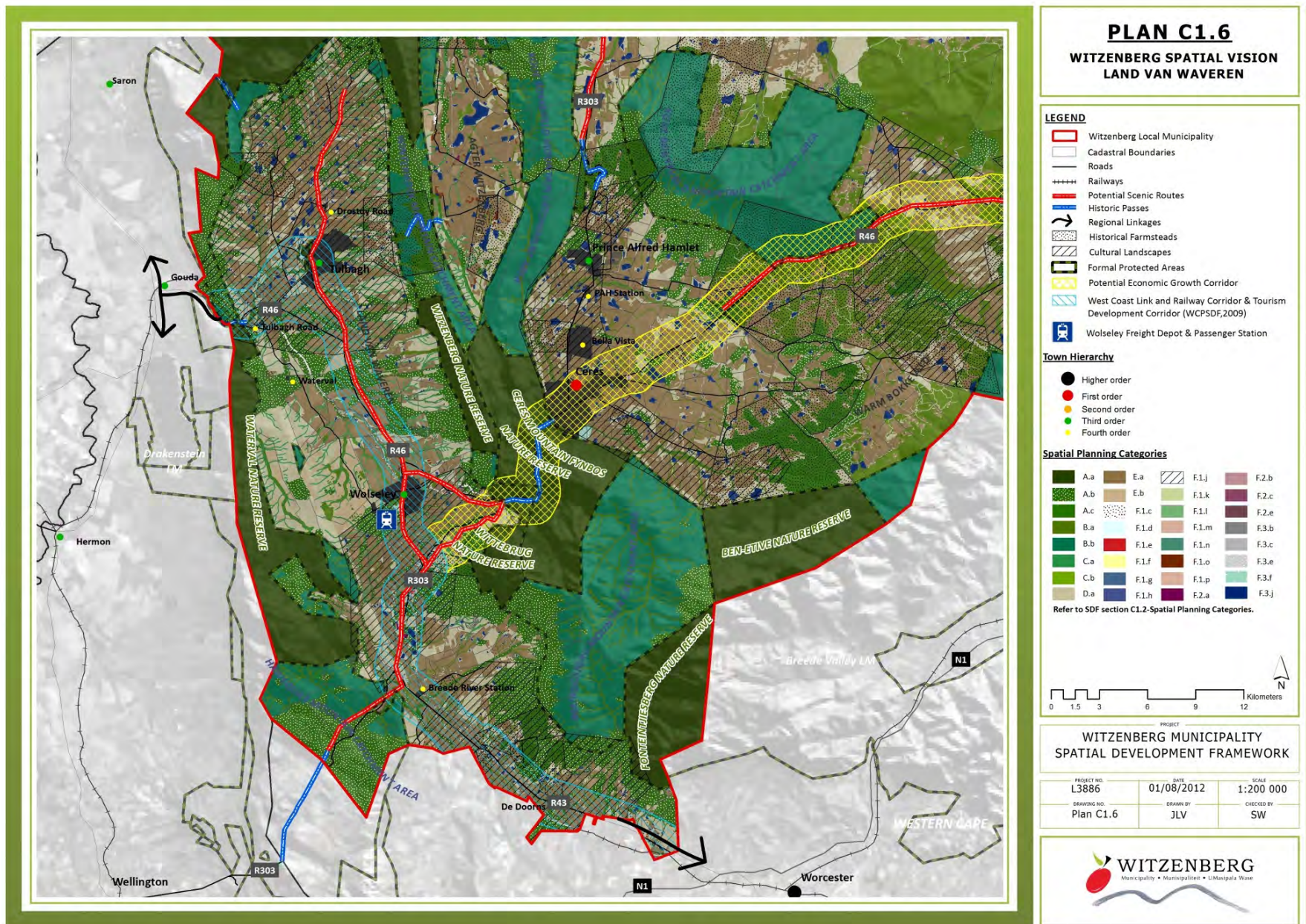
Refer to SDF section C1.2-Spatial Planning Categories.

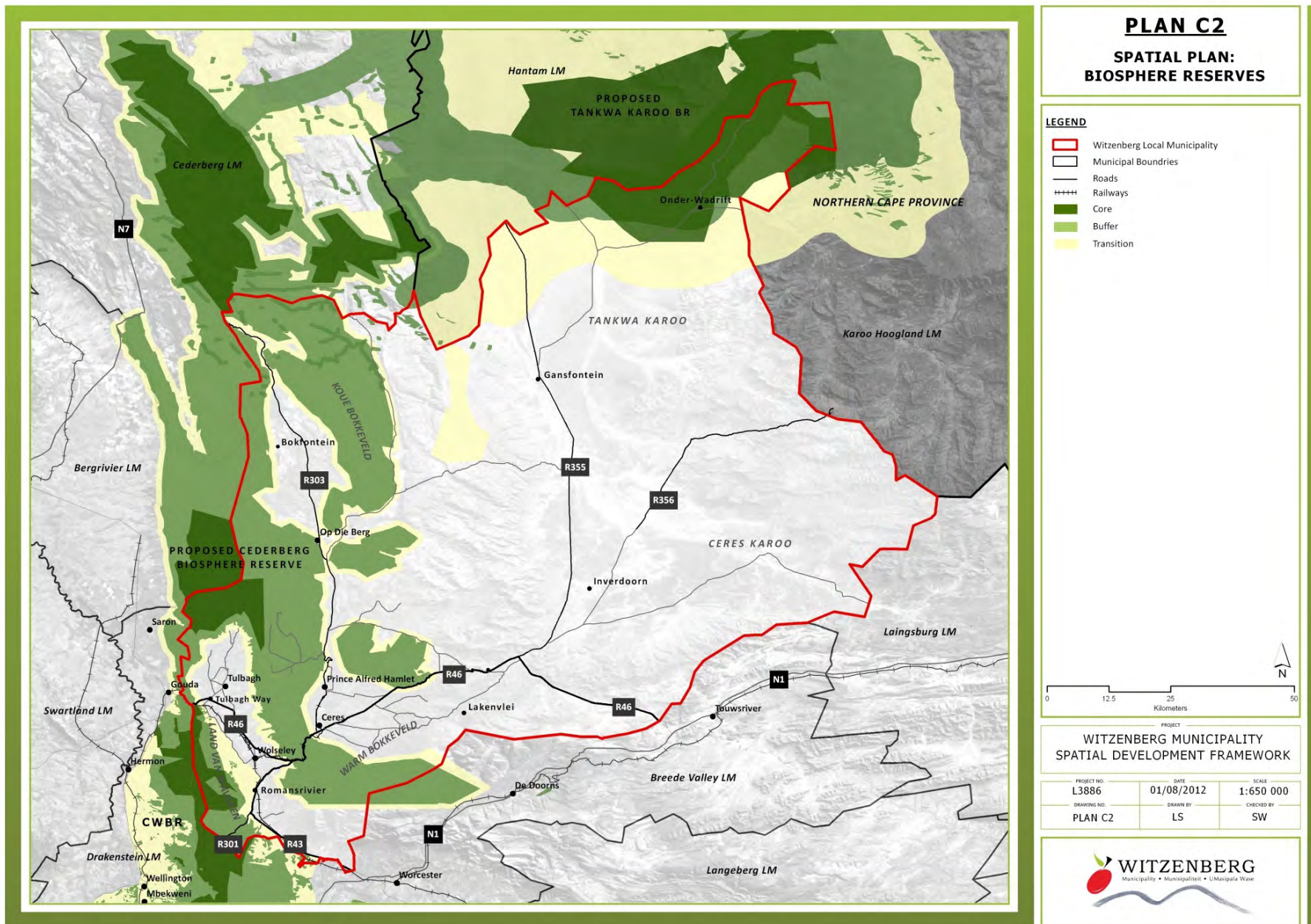


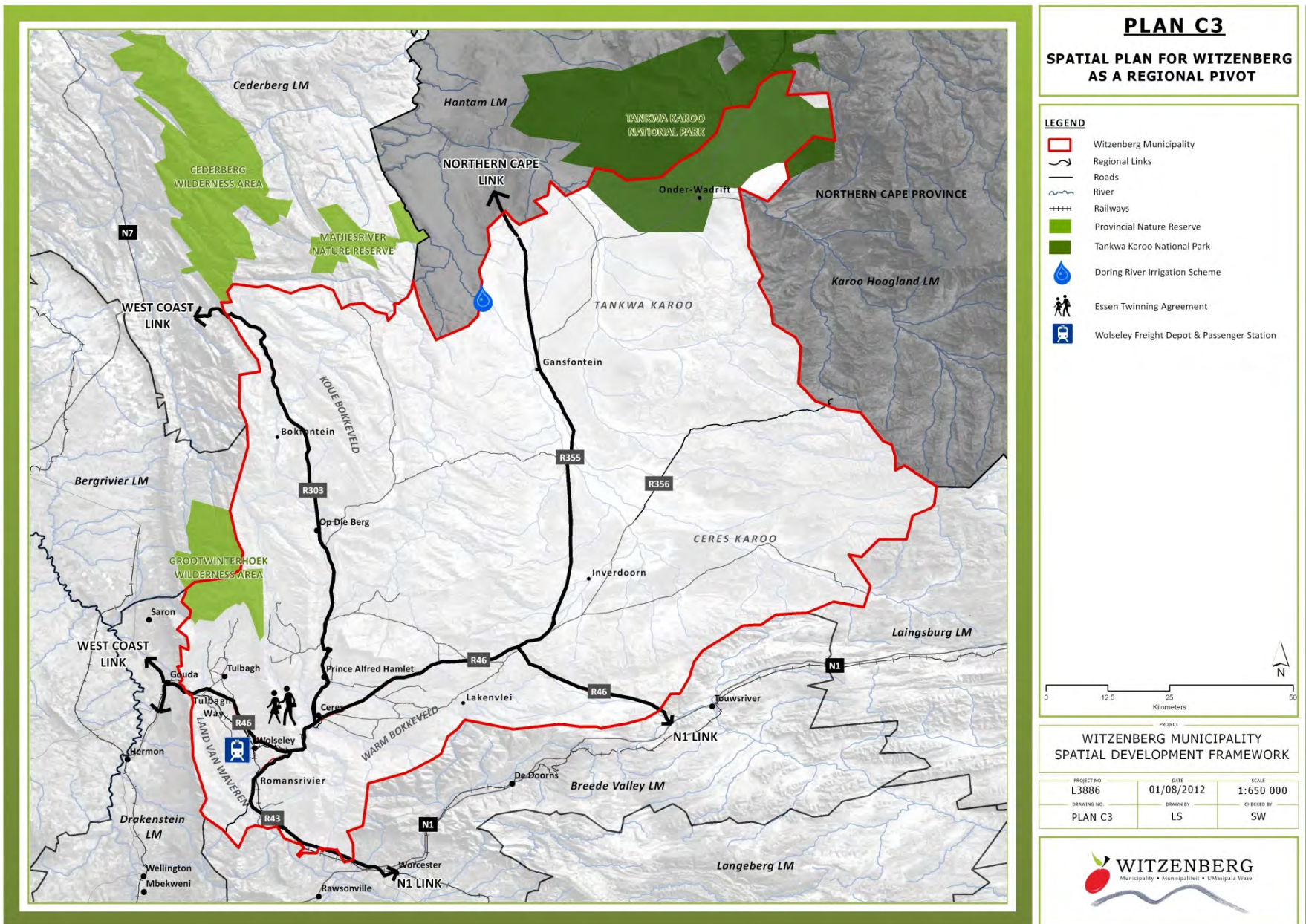
PROJECT  
**WITZENBERG MUNICIPALITY  
SPATIAL DEVELOPMENT FRAMEWORK**

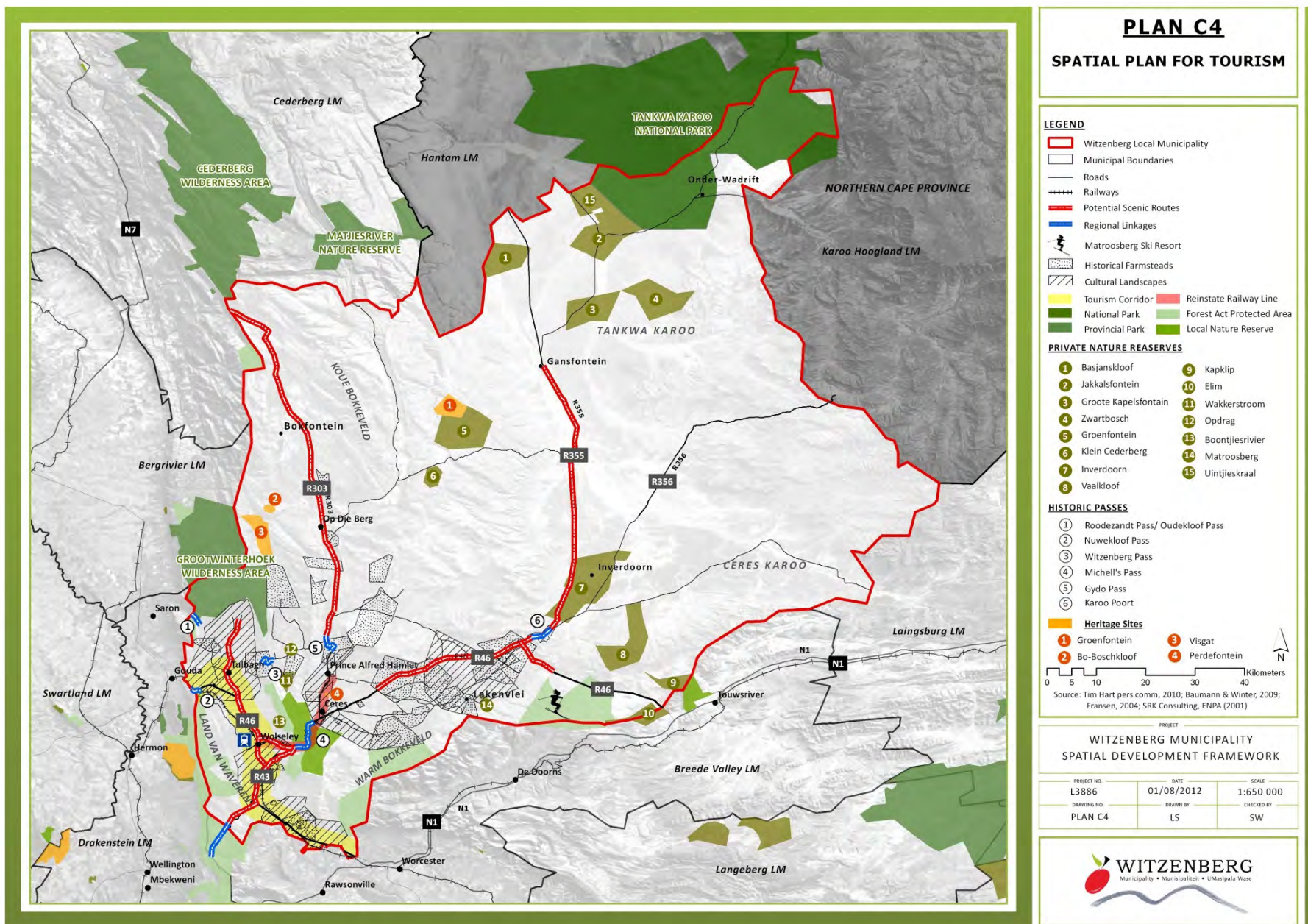
PROJECT NO. L3886	DATE 01/08/2012	SCALE 1:150 000
DRAWING NO. Plan C1.5	DRAWN BY JLV	CHECKED BY SW

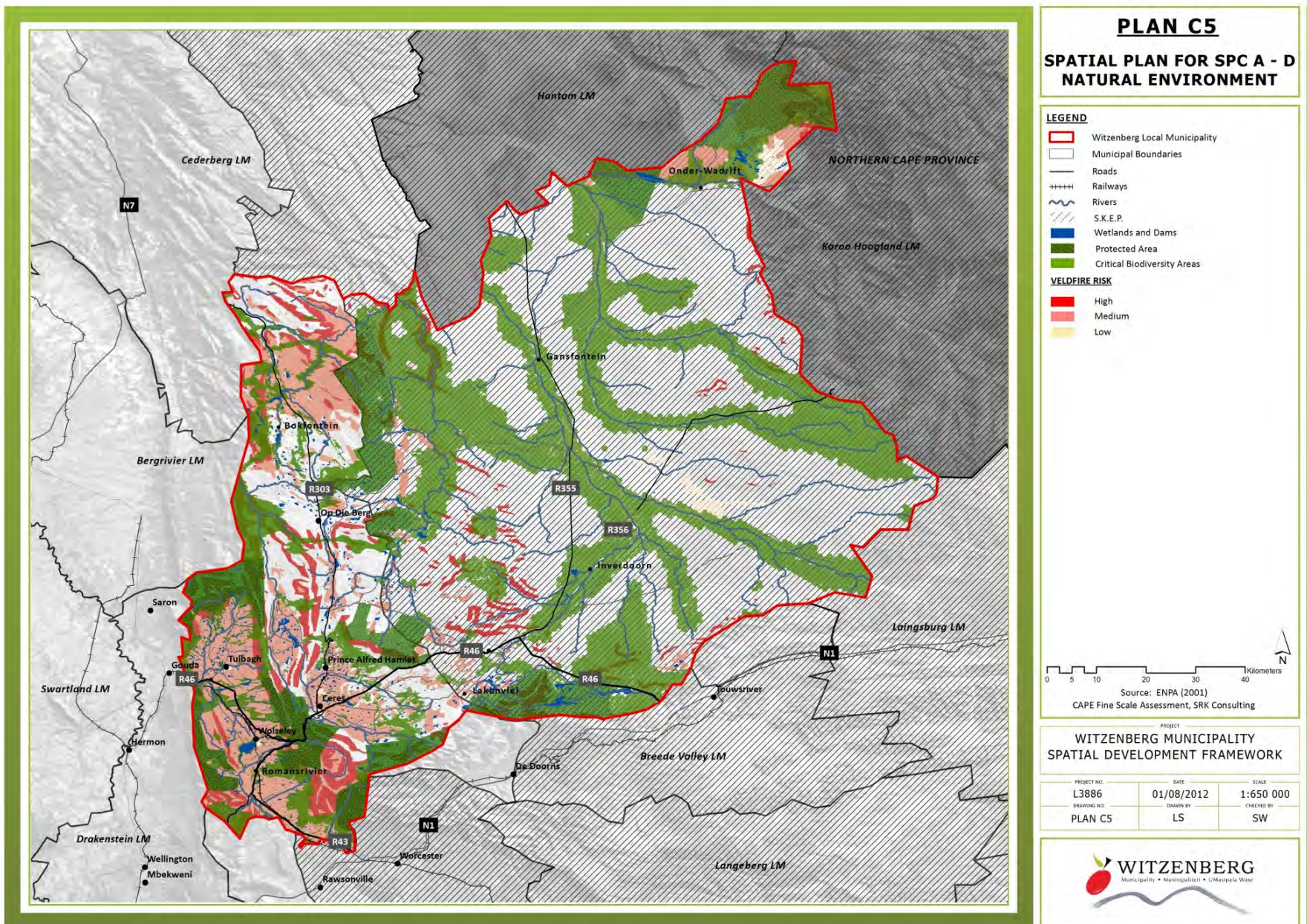


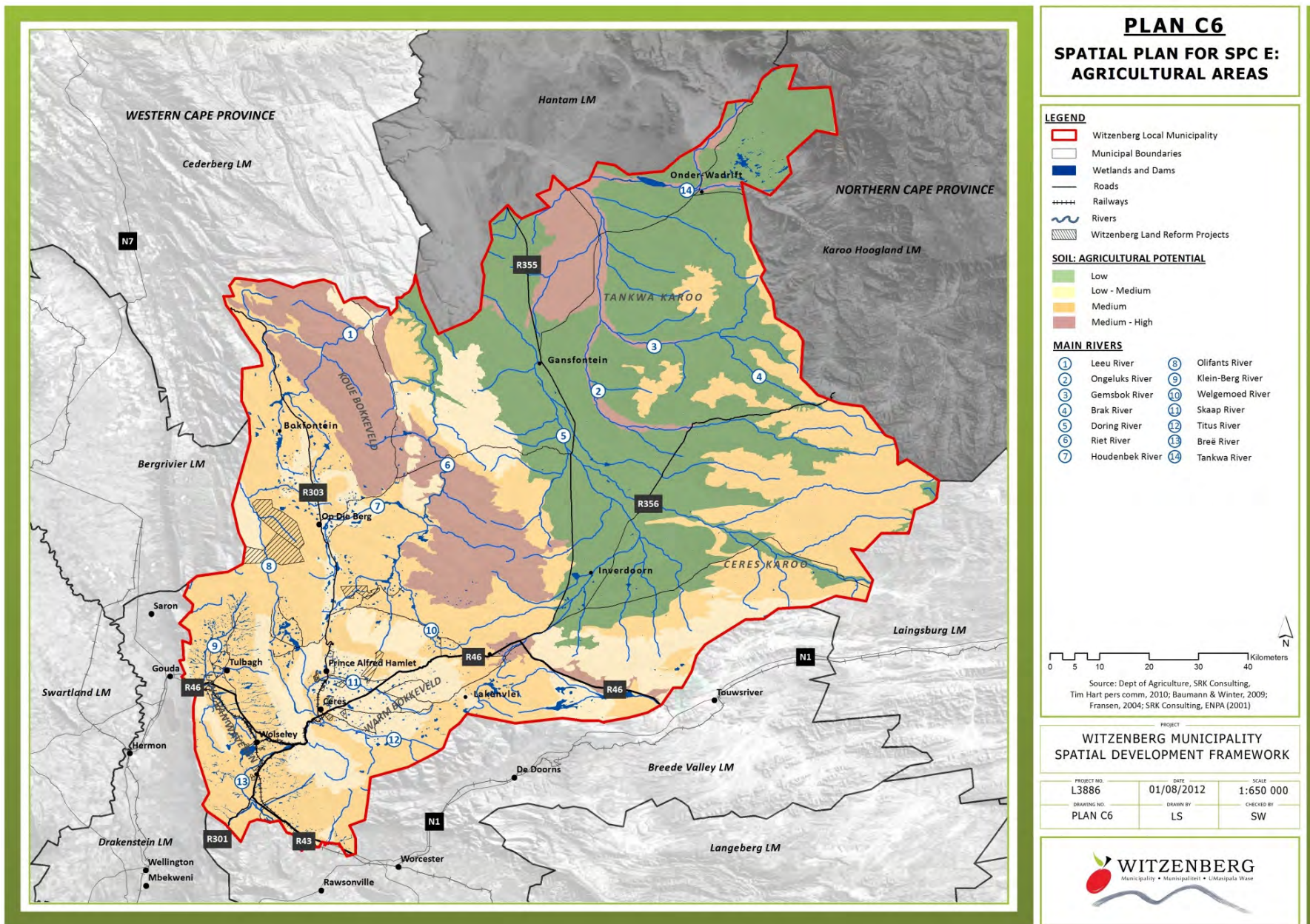




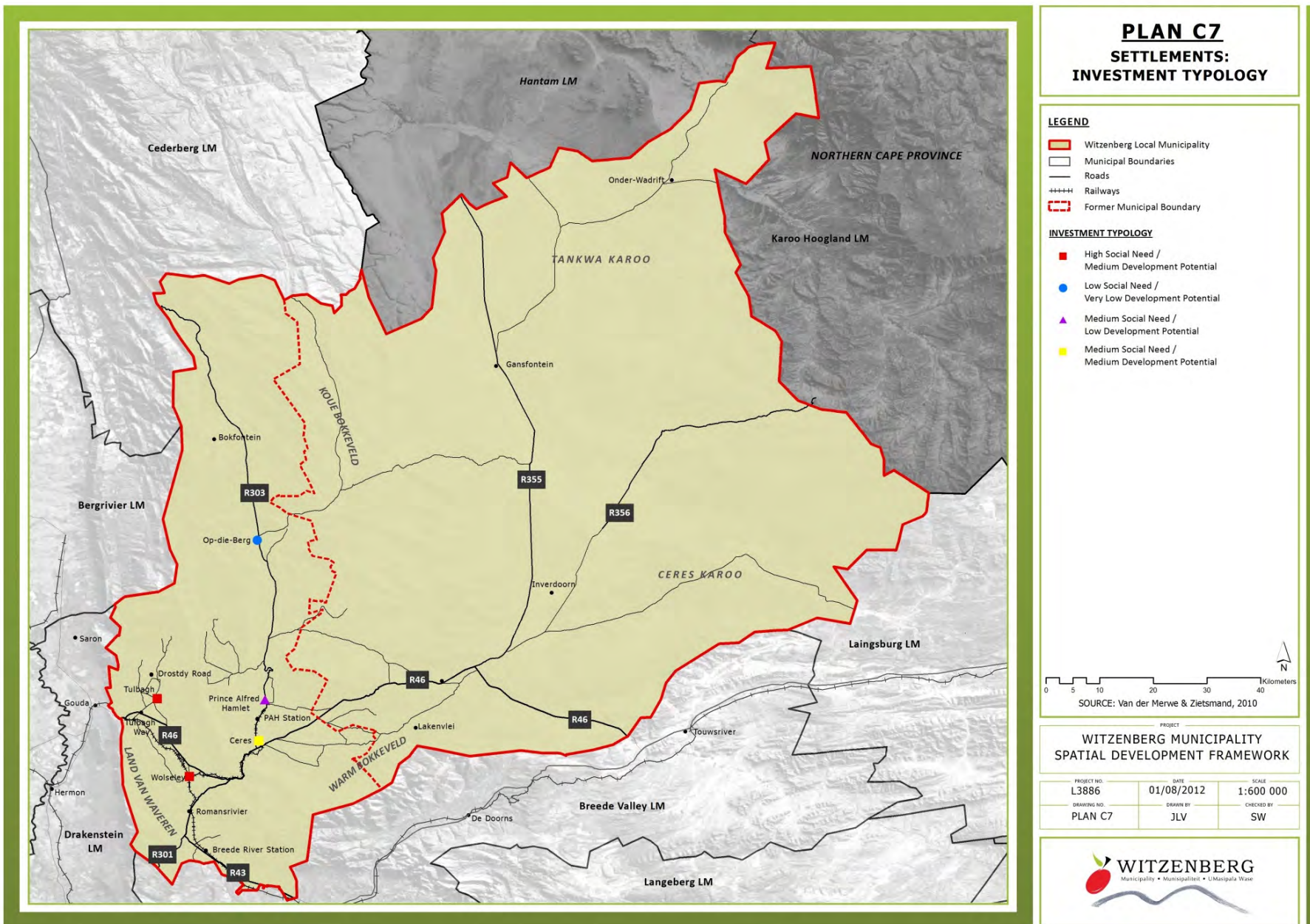






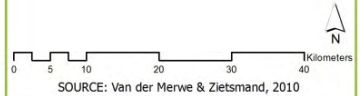






### PLAN C7 SETTLEMENTS: INVESTMENT TYPOLOGY

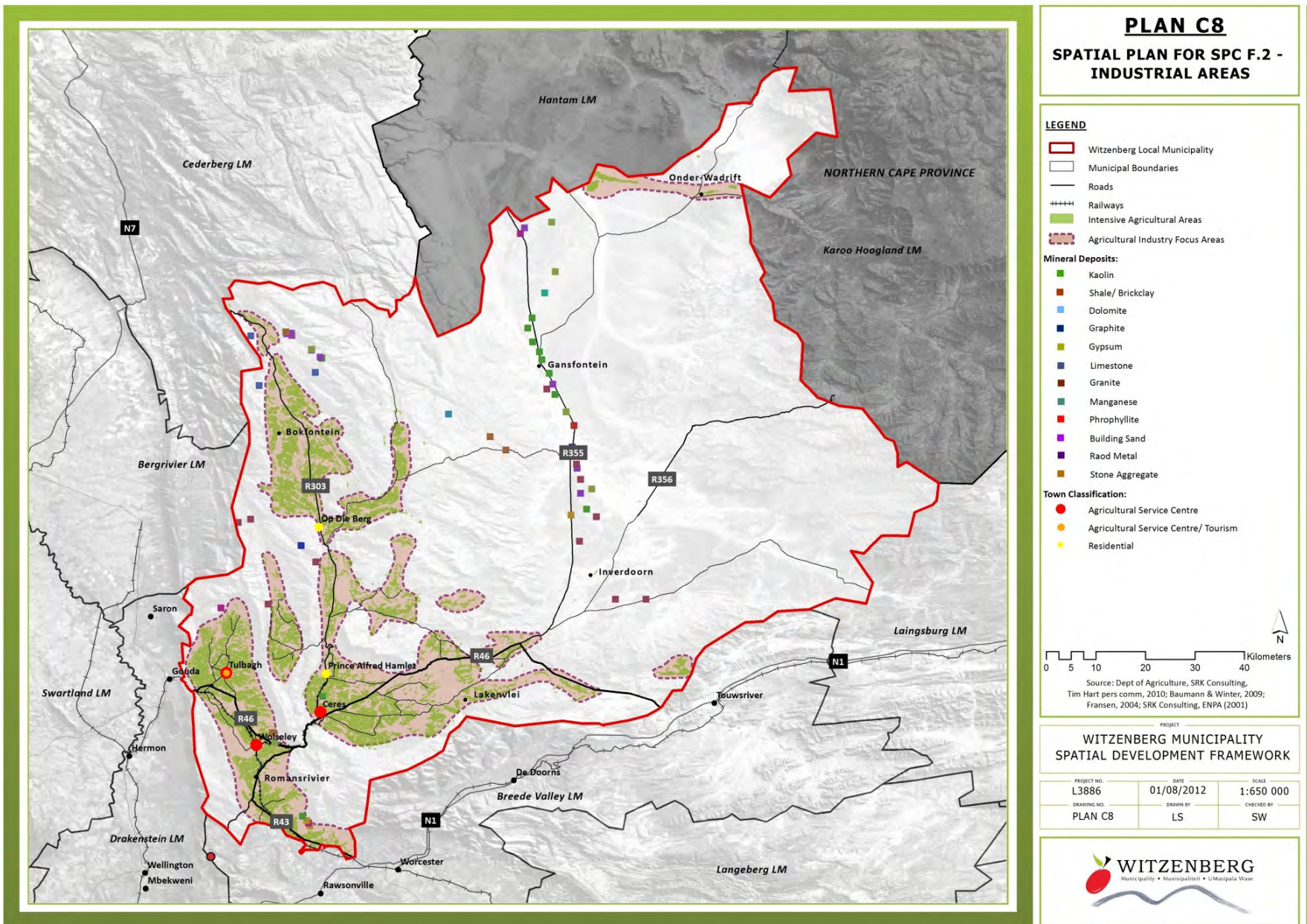
- LEGEND**
- Witzenberg Local Municipality
  - Municipal Boundaries
  - Roads
  - Railways
  - Former Municipal Boundary
- INVESTMENT TYPOLOGY**
- High Social Need / Medium Development Potential
  - Low Social Need / Very Low Development Potential
  - ▲ Medium Social Need / Low Development Potential
  - Medium Social Need / Medium Development Potential



PROJECT  
**WITZENBERG MUNICIPALITY  
SPATIAL DEVELOPMENT FRAMEWORK**

PROJECT NO. L3886	DATE 01/08/2012	SCALE 1:600 000
DRAWING NO. PLAN C7	DRAWN BY JLV	CHECKED BY SW





### PLAN C8

#### SPATIAL PLAN FOR SPC F.2 - INDUSTRIAL AREAS

**LEGEND**

- Witzenberg Local Municipality
- Municipal Boundaries
- Roads
- Railways
- Intensive Agricultural Areas
- Agricultural Industry Focus Areas

**Mineral Deposits:**

- Kaolin
- Shale/ Brickclay
- Dolomite
- Graphite
- Gypsum
- Limestone
- Granite
- Manganese
- Phrophylite
- Building Sand
- Raod Metal
- Stone Aggregate

**Town Classification:**

- Agricultural Service Centre
- Agricultural Service Centre/ Tourism
- Residential

N

0 5 10 20 30 40 Kilometers

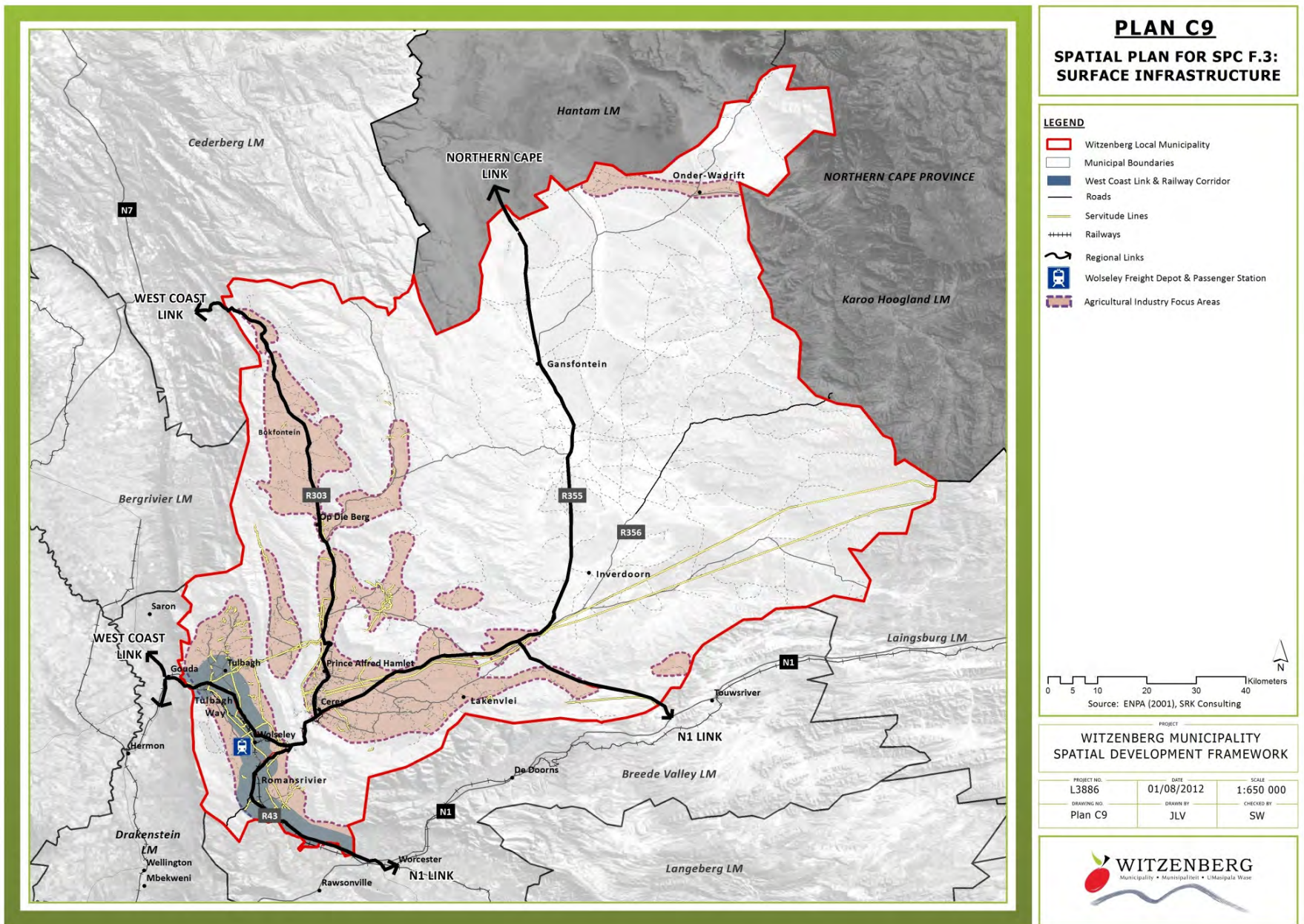
Source: Dept of Agriculture, SRK Consulting, Tim Hart pers comm, 2010; Baumann & Winter, 2009; Franssen, 2004; SRK Consulting, ENPA (2001)

PROJECT

**WITZENBERG MUNICIPALITY  
SPATIAL DEVELOPMENT FRAMEWORK**

PROJECT NO.	DATE	SCALE
L3886	01/08/2012	1:650 000
DRAWING NO.	DRAWN BY	CHECKED BY
PLAN C8	LS	SW



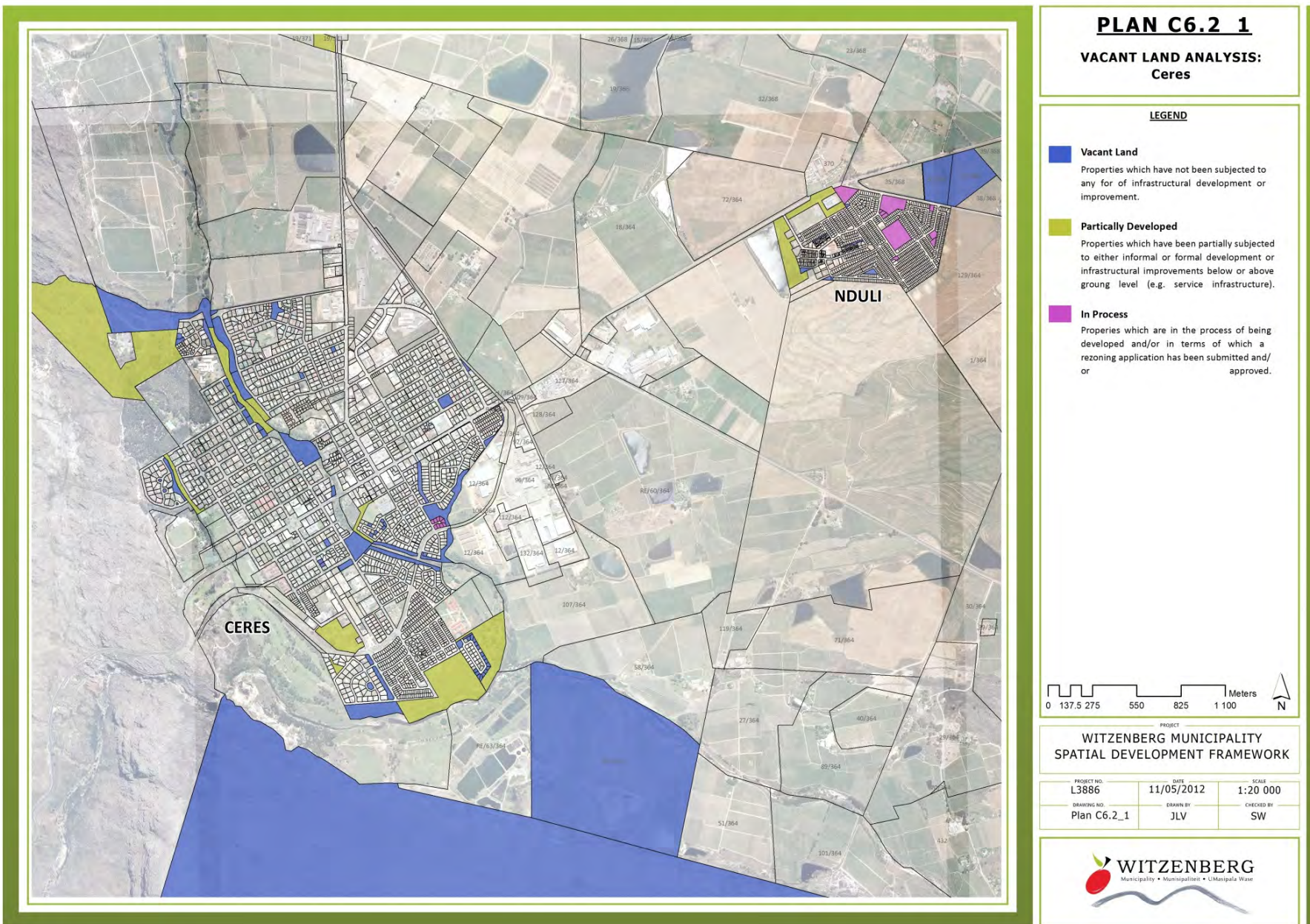


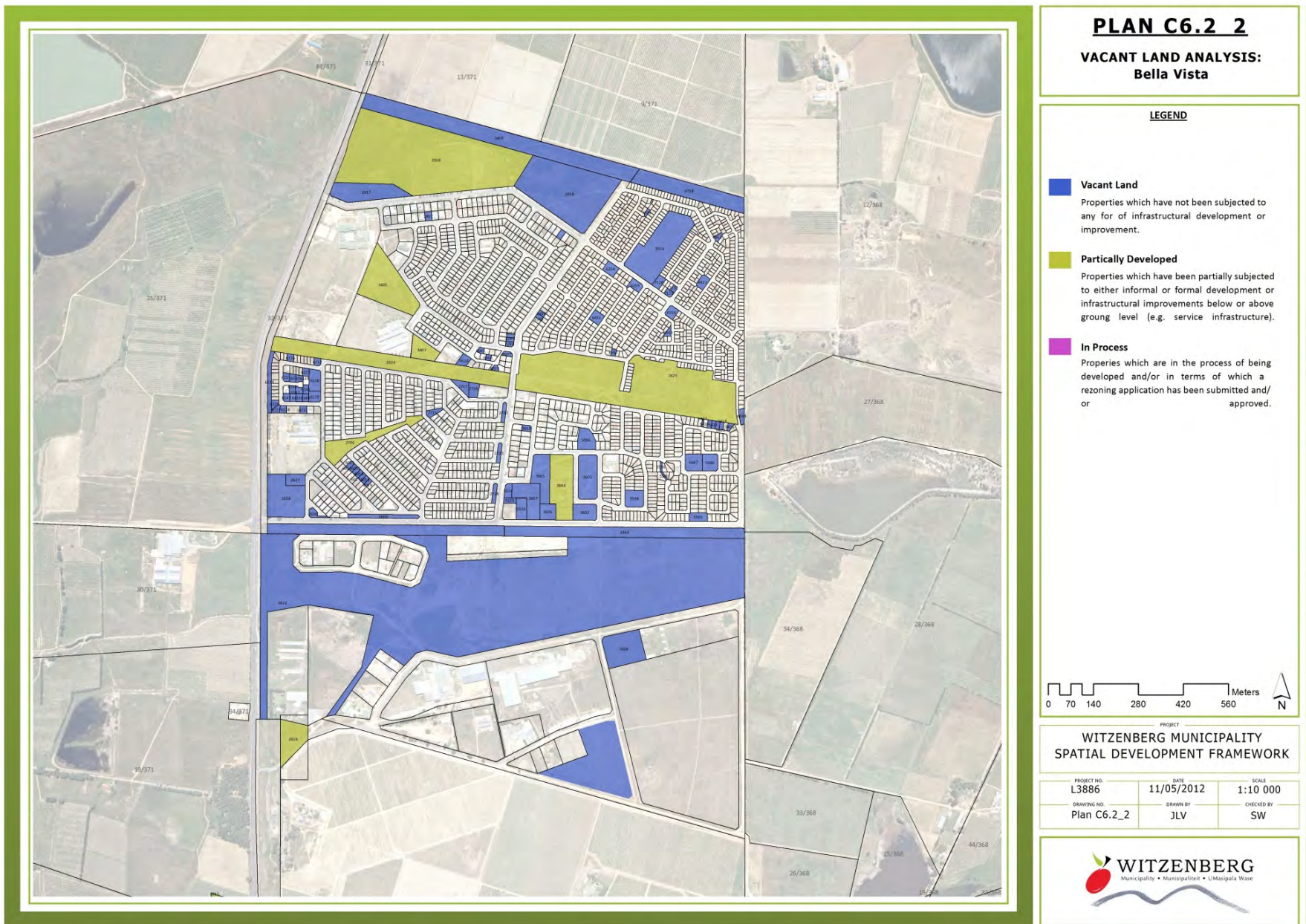
# ANNEXURE 2

## Vacant Land Analysis

Plans C6.2-1 – C6.2-6







**PLAN C6.2 2**  
**VACANT LAND ANALYSIS:**  
**Bella Vista**

**LEGEND**

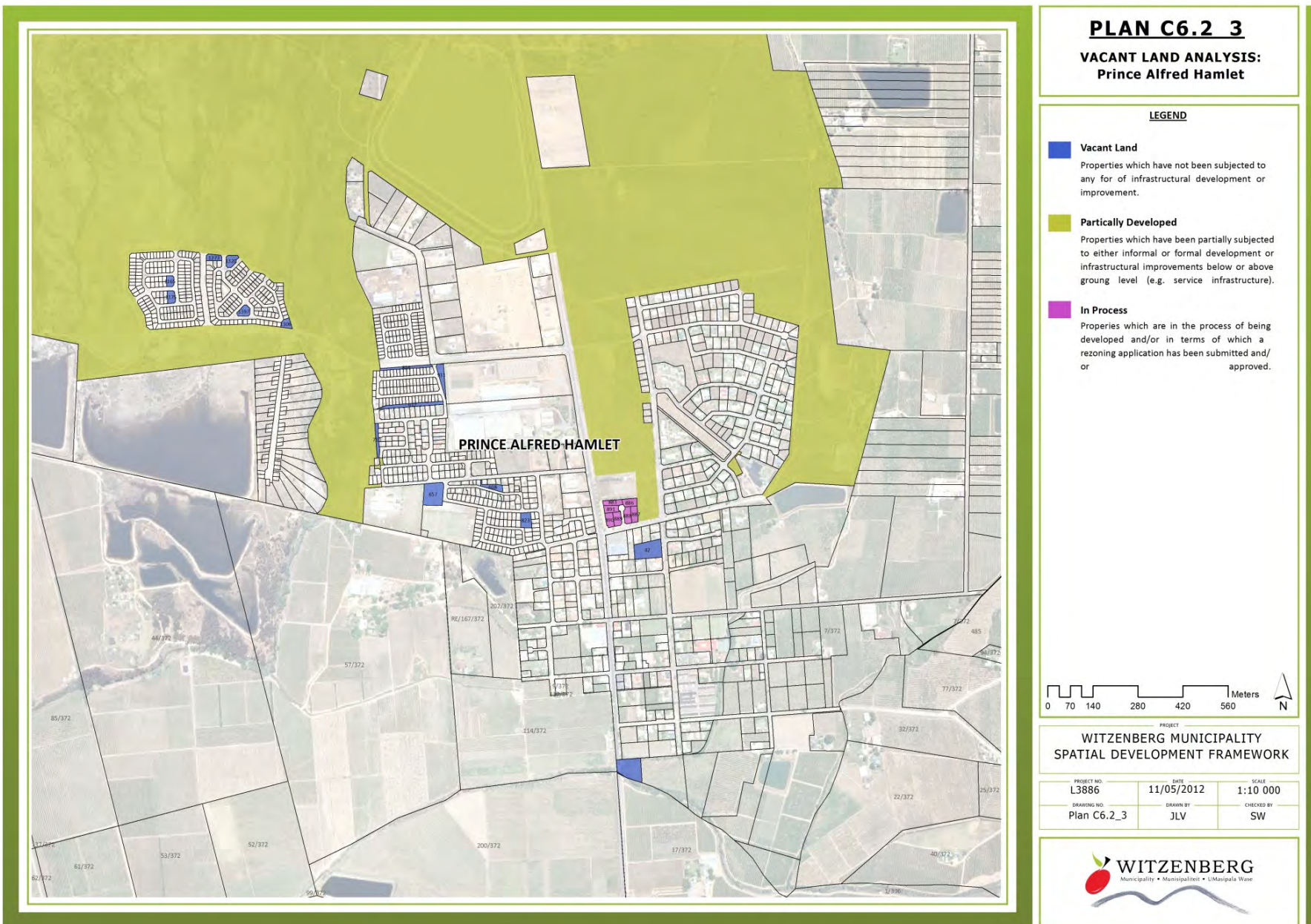
- **Vacant Land**  
 Properties which have not been subjected to any for of infrastructural development or improvement.
- **Partially Developed**  
 Properties which have been partially subjected to either informal or formal development or infrastructural improvements below or above ground level (e.g. service infrastructure).
- **In Process**  
 Properties which are in the process of being developed and/or in terms of which a rezoning application has been submitted and/or approved.

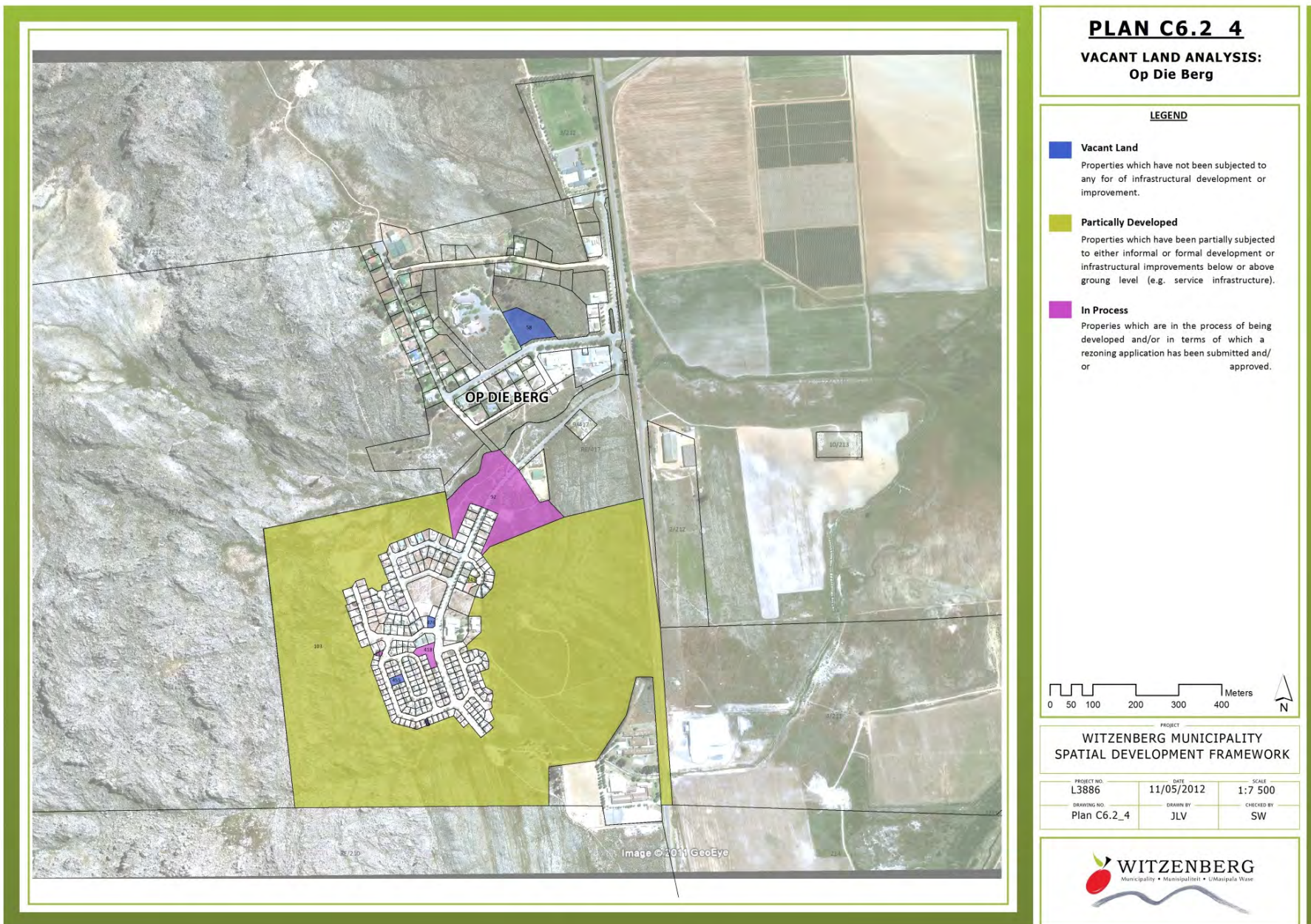


PROJECT  
**WITZENBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**

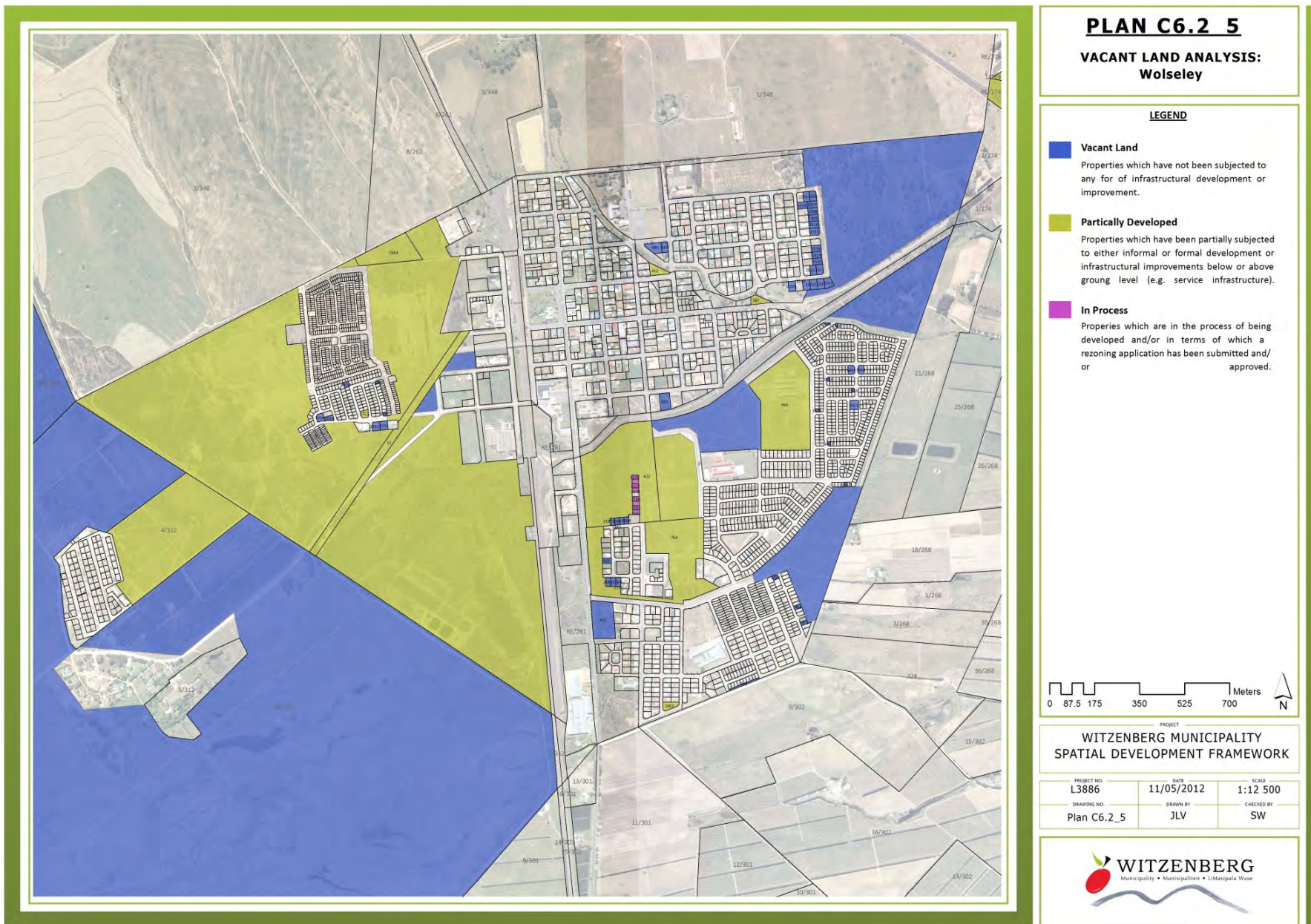
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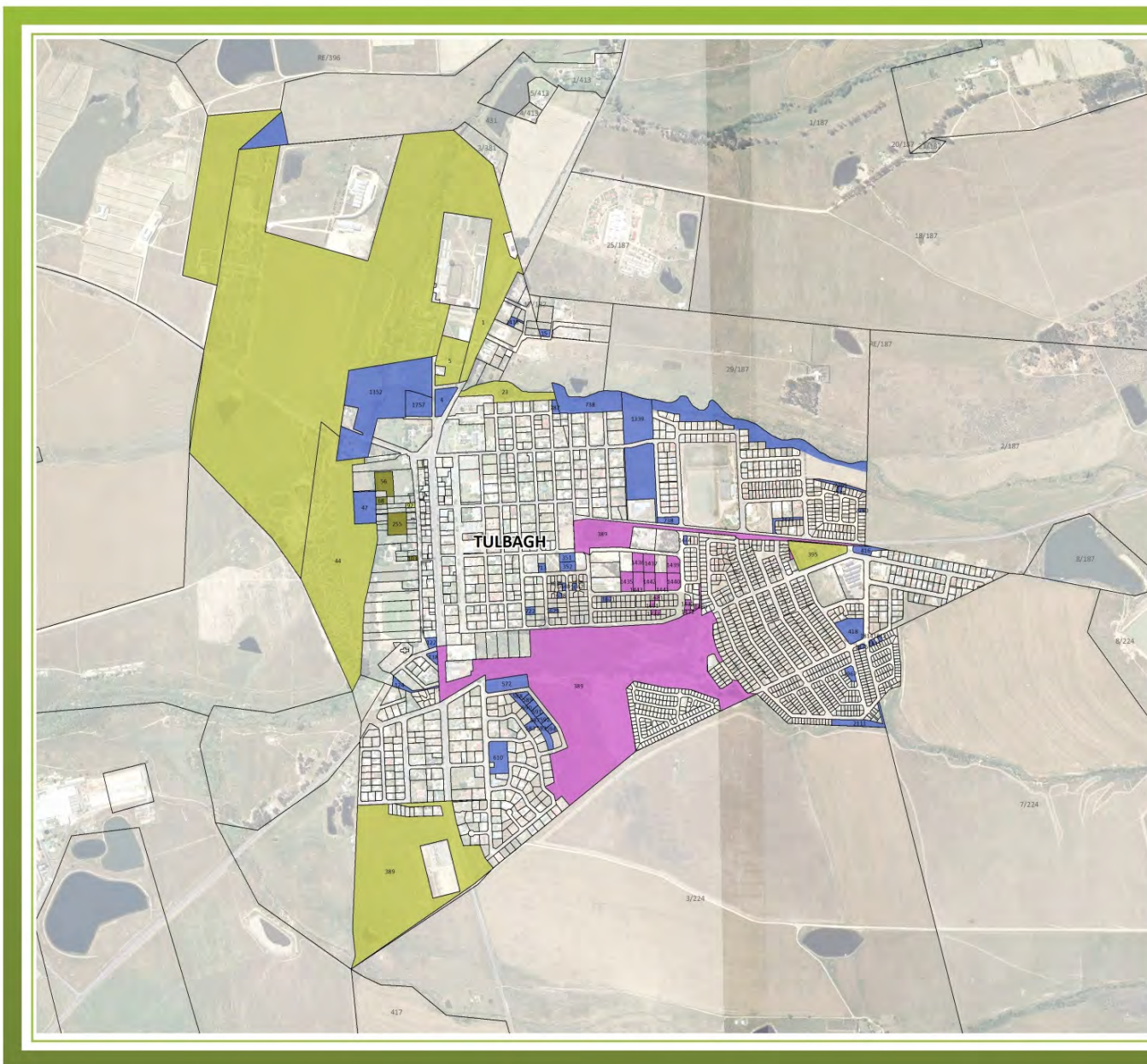








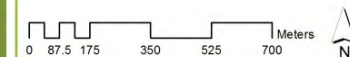




**PLAN C6.2 6**  
**VACANT LAND ANALYSIS:**  
**Tulbagh**

**LEGEND**

- Vacant Land**  
 Properties which have not been subjected to any for of infrastructural development or improvement.
- Partly Developed**  
 Properties which have been partially subjected to either informal or formal development or infrastructural improvements below or above ground level (e.g. service infrastructure).
- In Process**  
 Properties which are in the process of being developed and/or in terms of which a rezoning application has been submitted and/or approved.



PROJECT  
**WITZENBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**

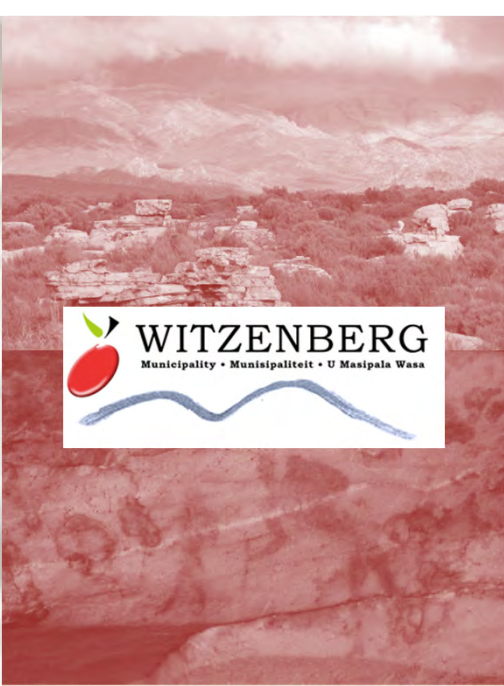
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DRAWING NO. Plan C6.2_6	DRAWN BY JLV	CHECKED BY SW

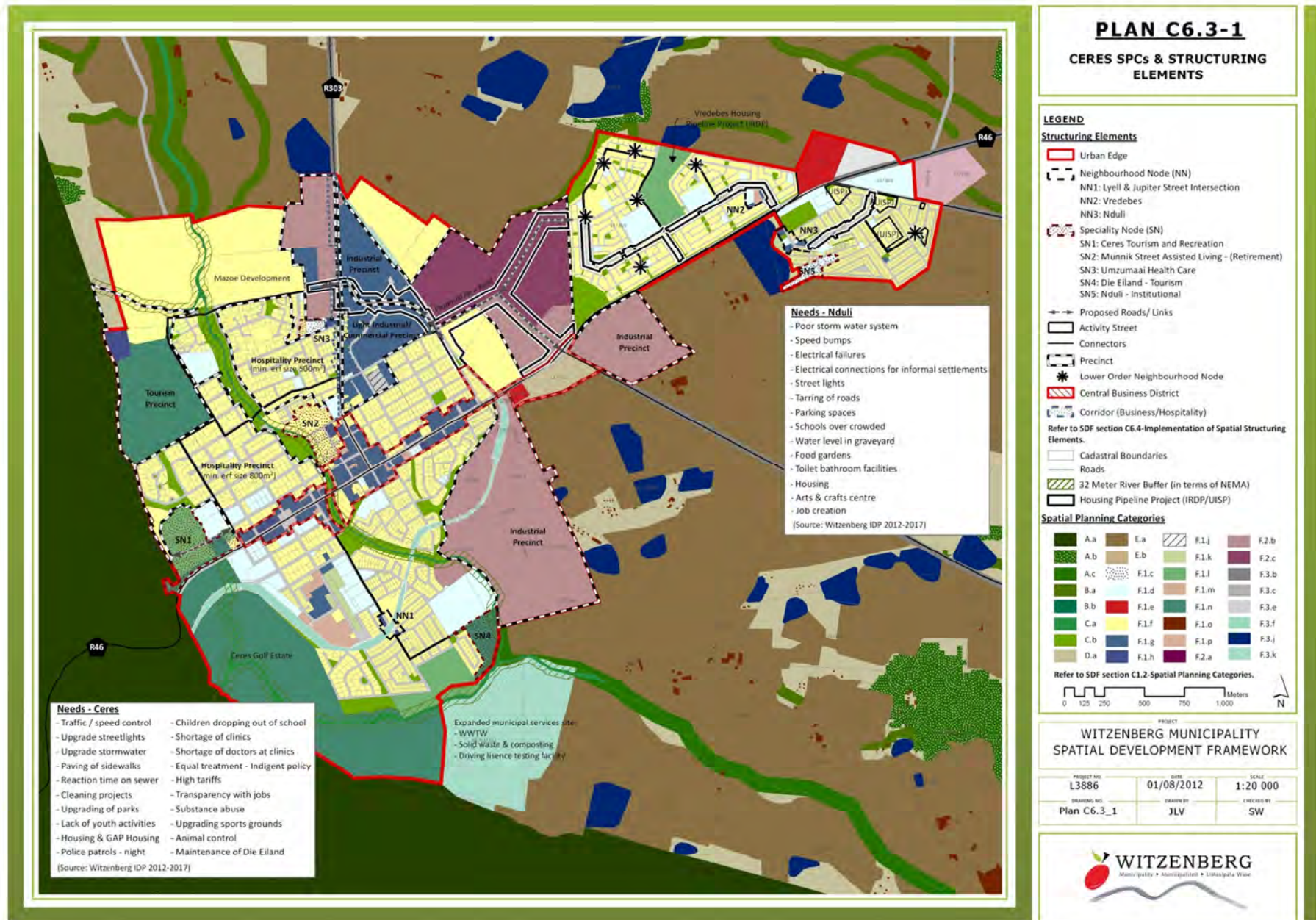


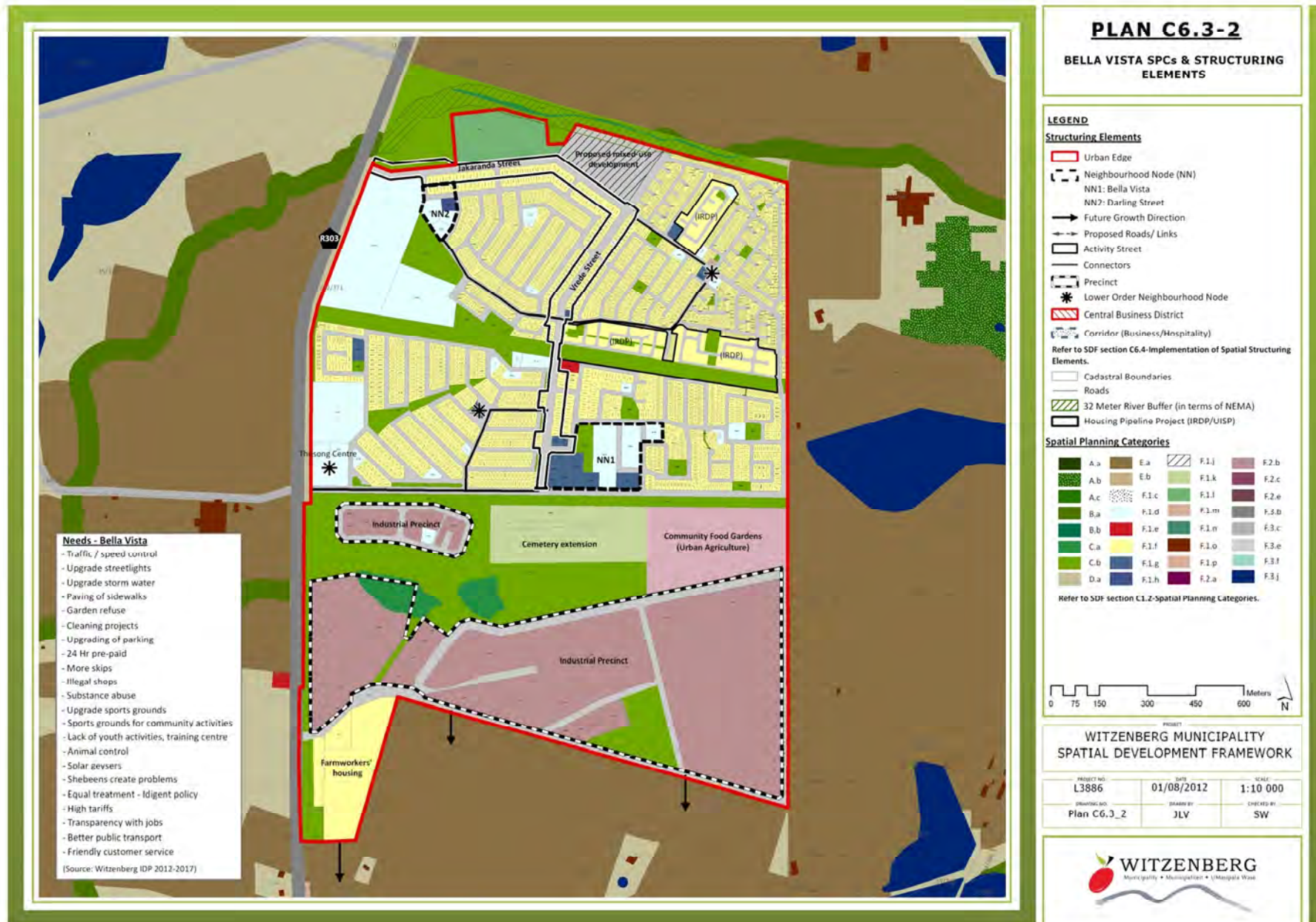
# ANNEXURE 3

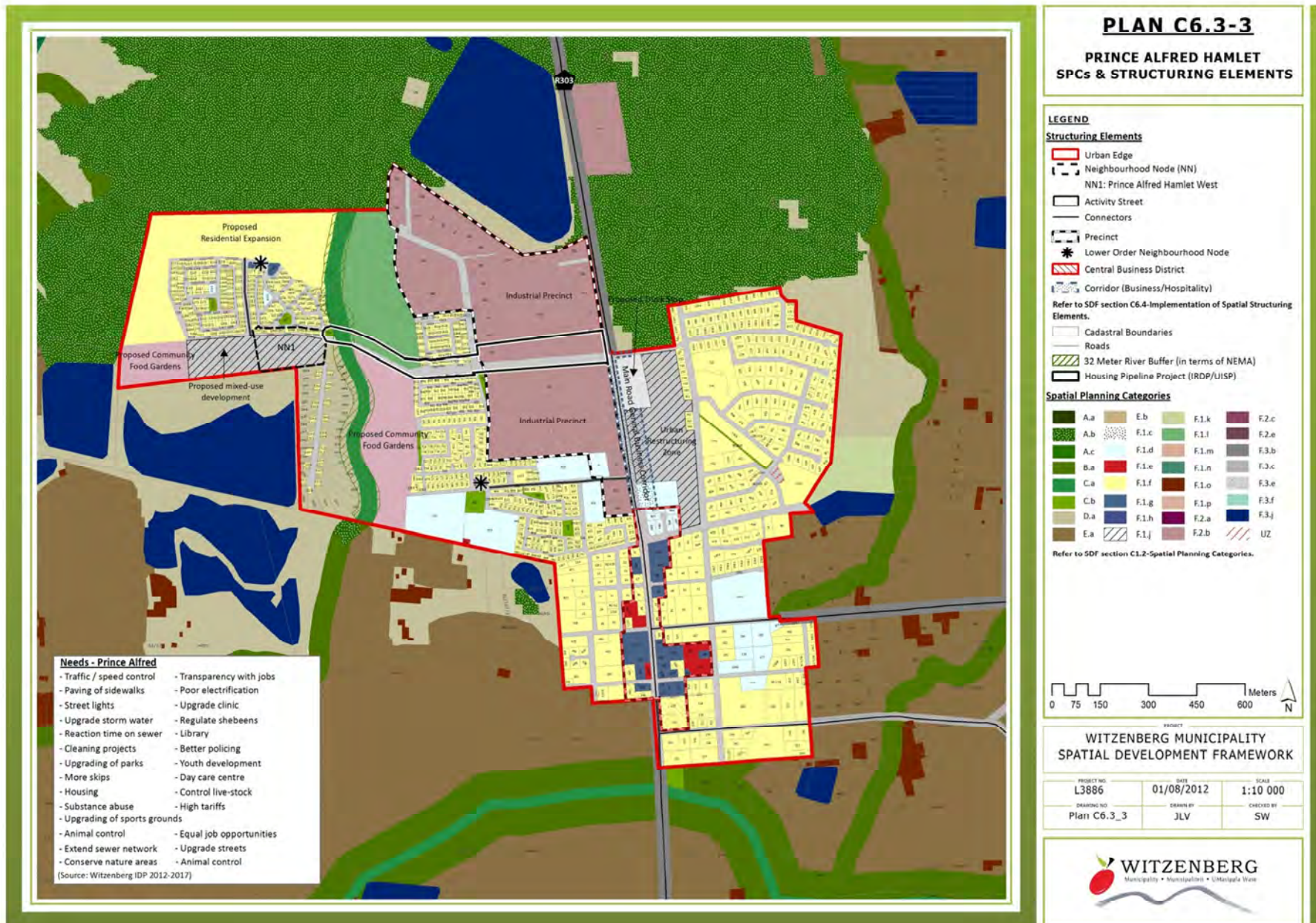
## Spatial Structuring Elements

Plans C6.3-1 – C6.3-6

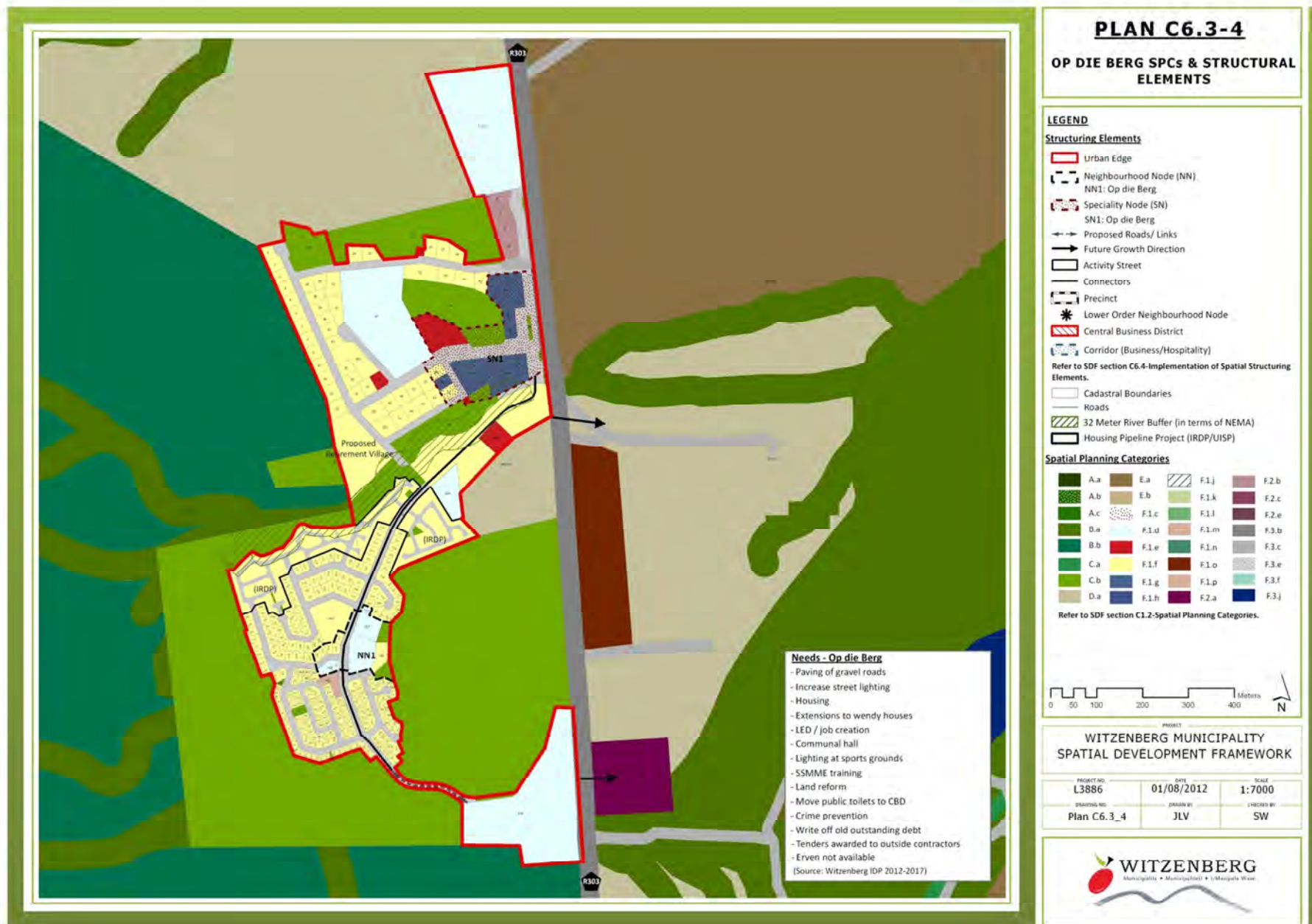


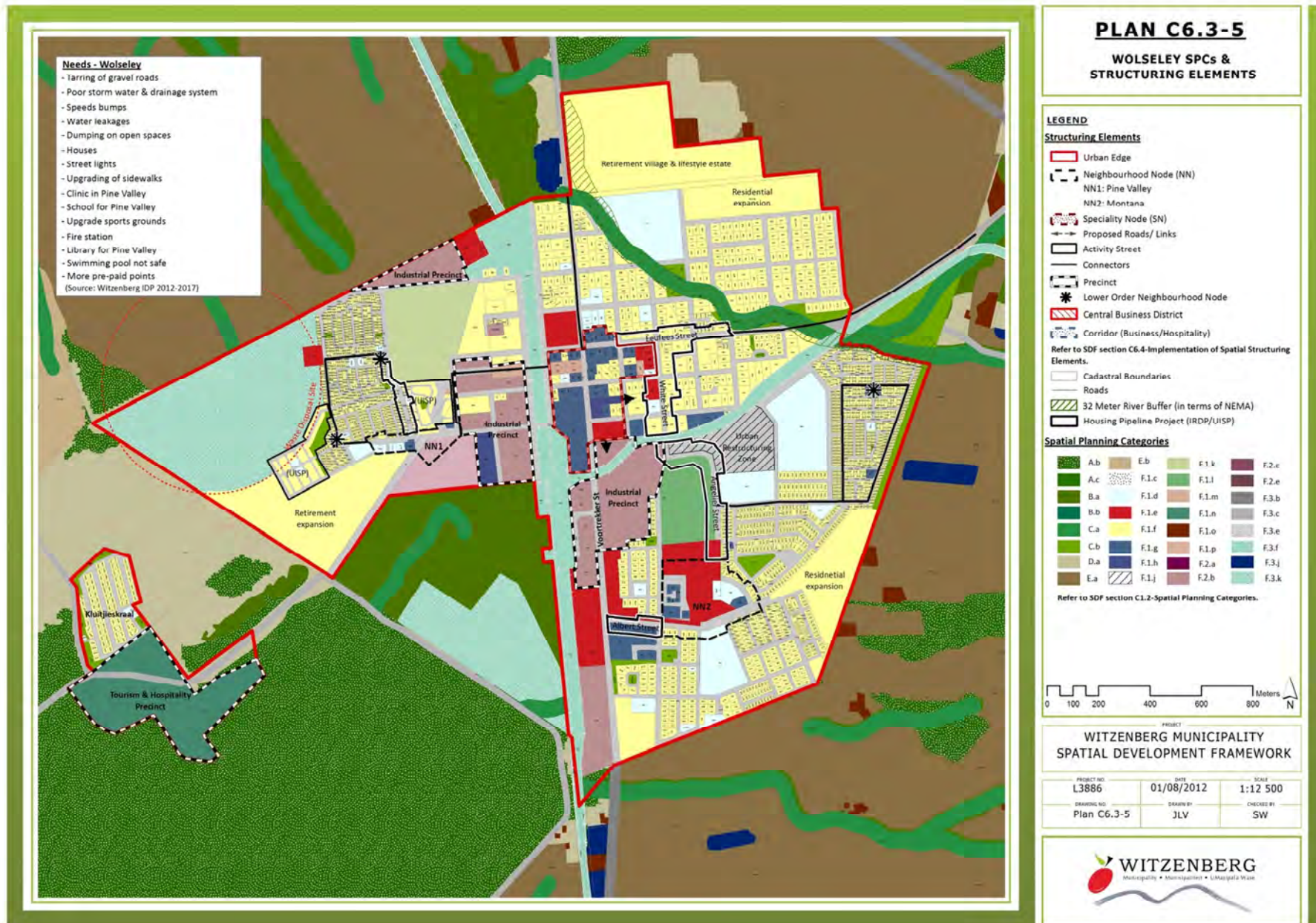




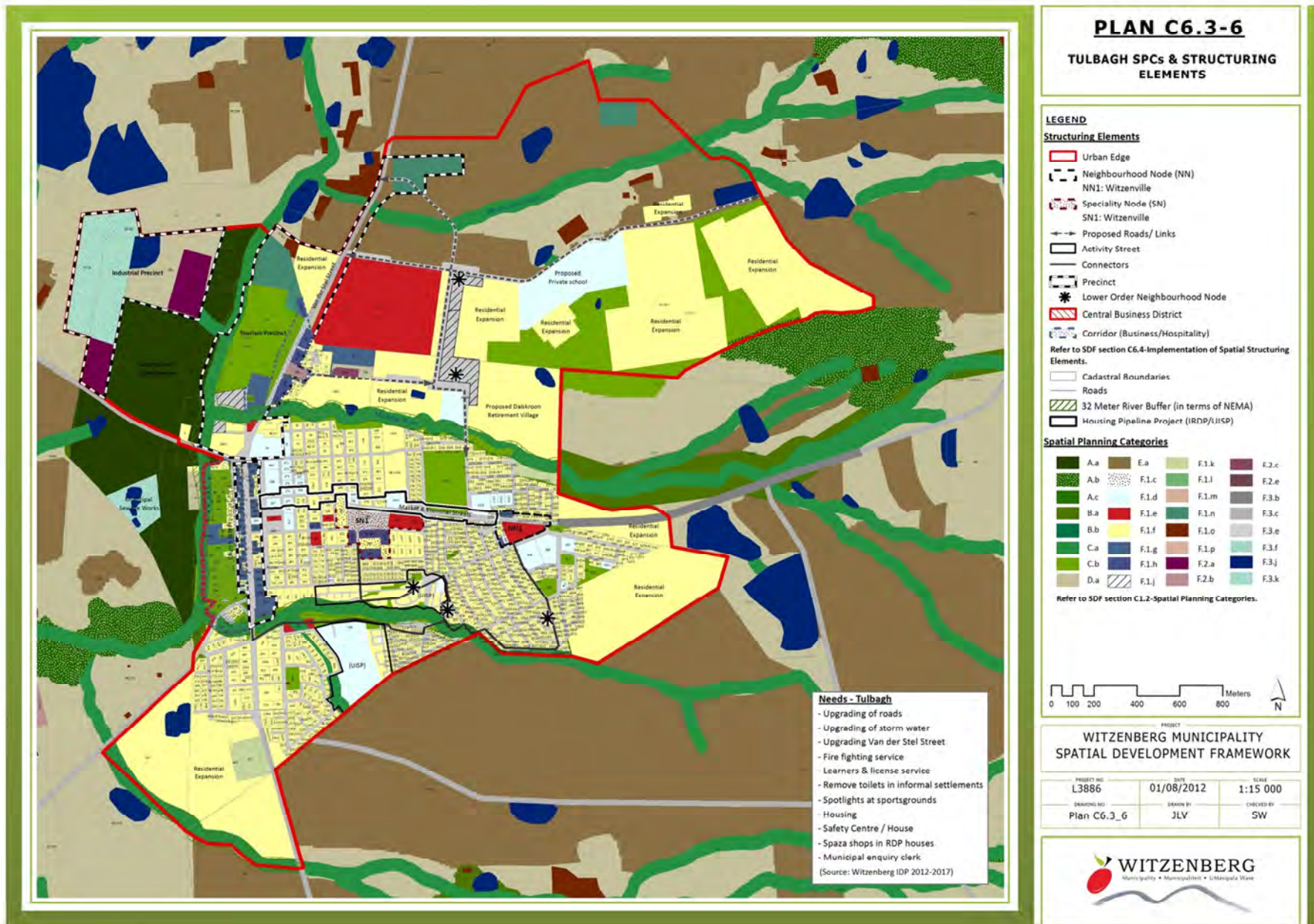


- Needs - Prince Alfred**
- Traffic / speed control
  - Paving of sidewalks
  - Street lights
  - Upgrade storm water
  - Reaction time on sewer
  - Cleaning projects
  - Upgrading of parks
  - More skips
  - Housing
  - Substance abuse
  - Upgrading of sports grounds
  - Animal control
  - Extend sewer network
  - Conserve nature areas
  - Transparency with jobs
  - Poor electrification
  - Upgrade clinic
  - Regulate shebeens
  - Library
  - Better policing
  - Youth development
  - Day care centre
  - Control live-stock
  - High tariffs
  - Equal job opportunities
  - Upgrade streets
  - Animal control
- (Source: Witzenberg IDP 2012-2017)







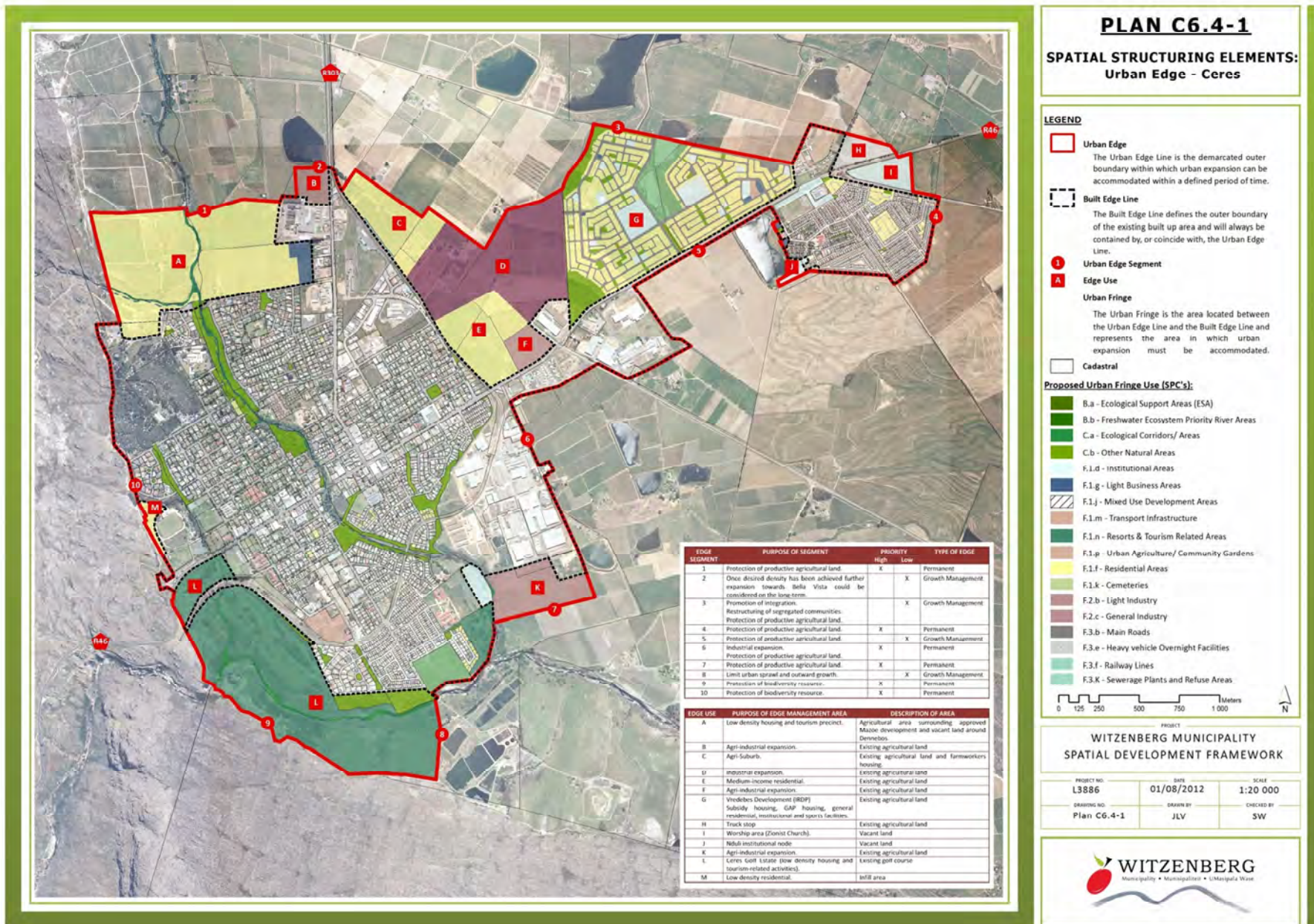


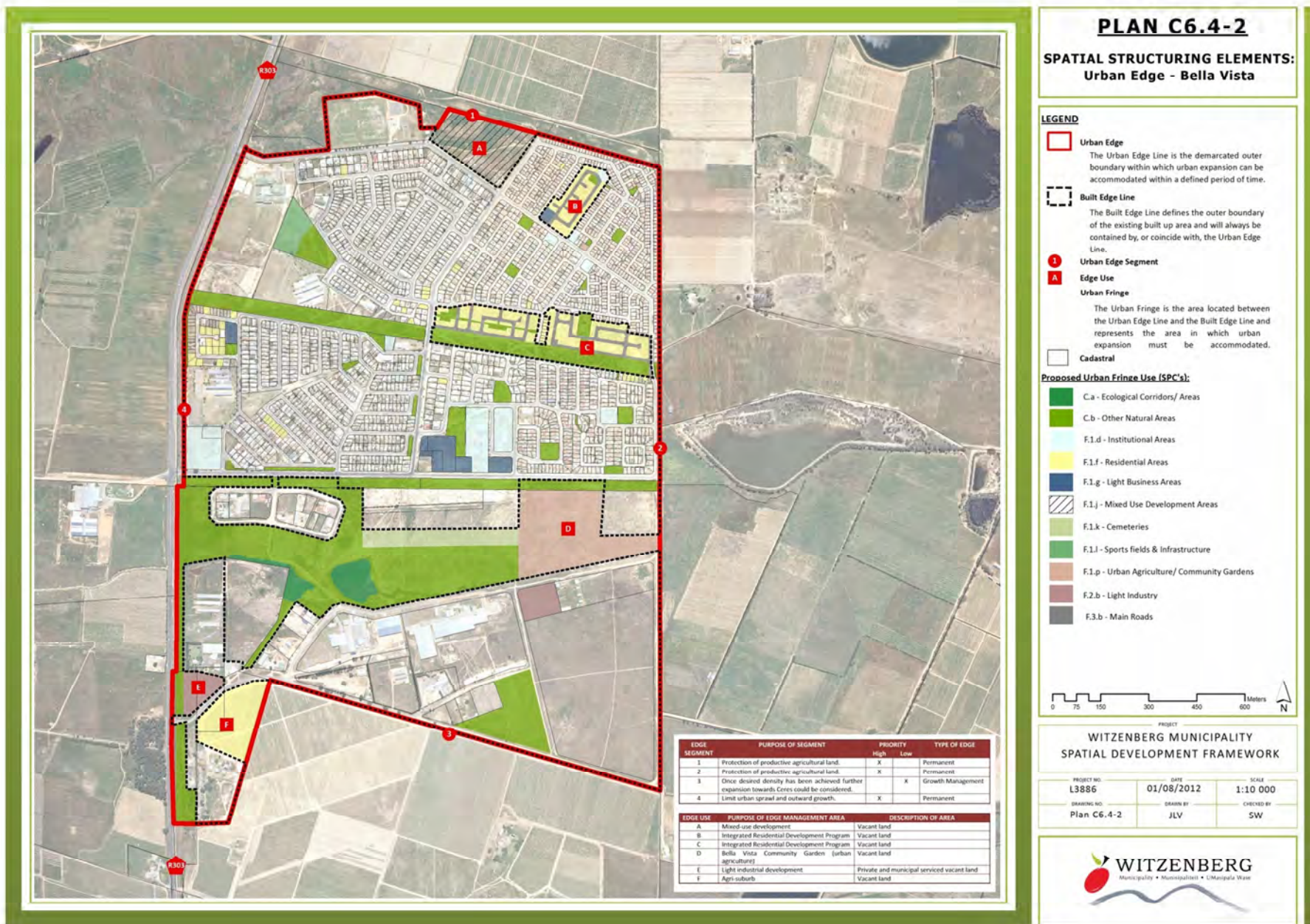
# ANNEXURE 4

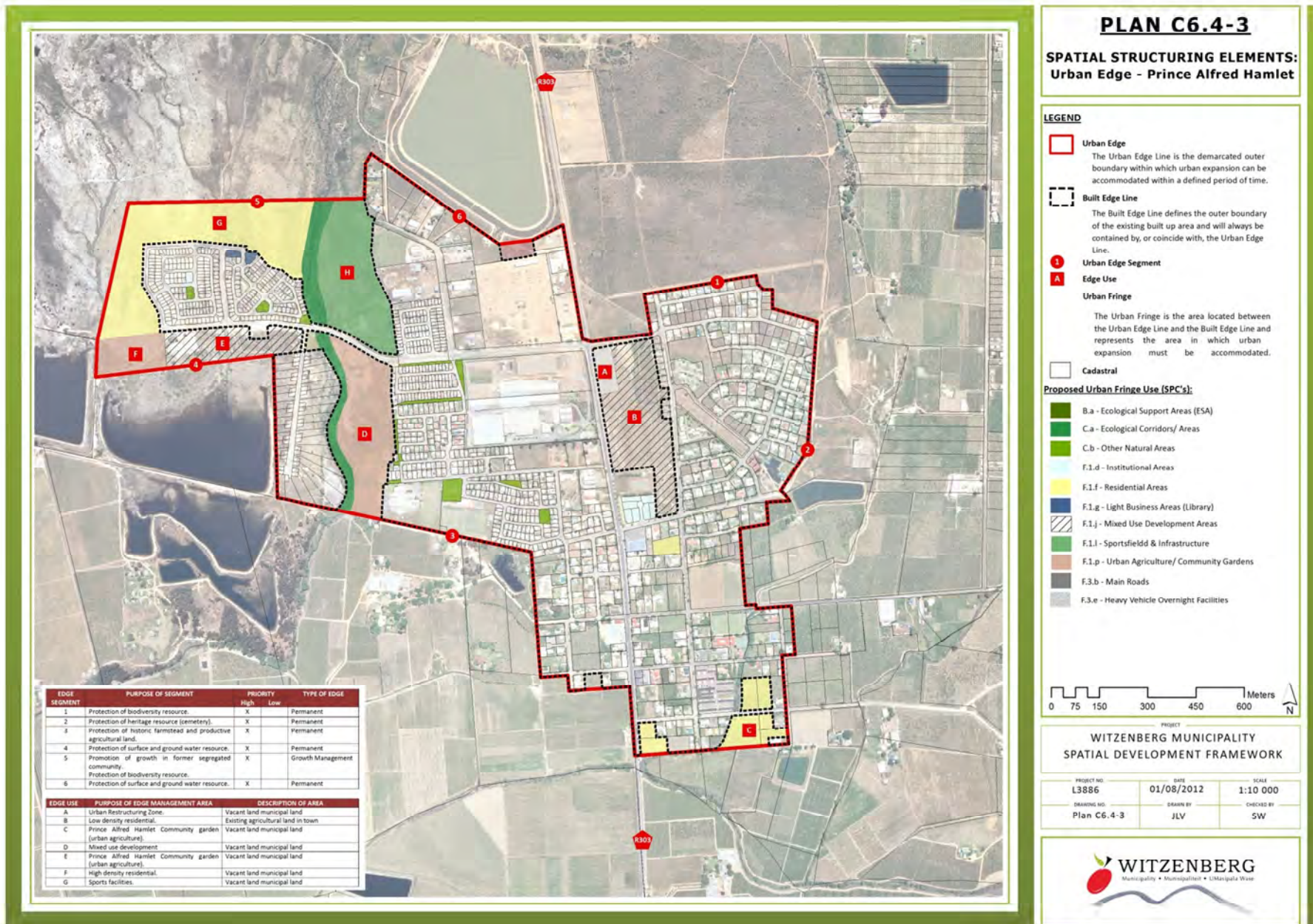
## Spatial Structuring Elements – Urban Edges

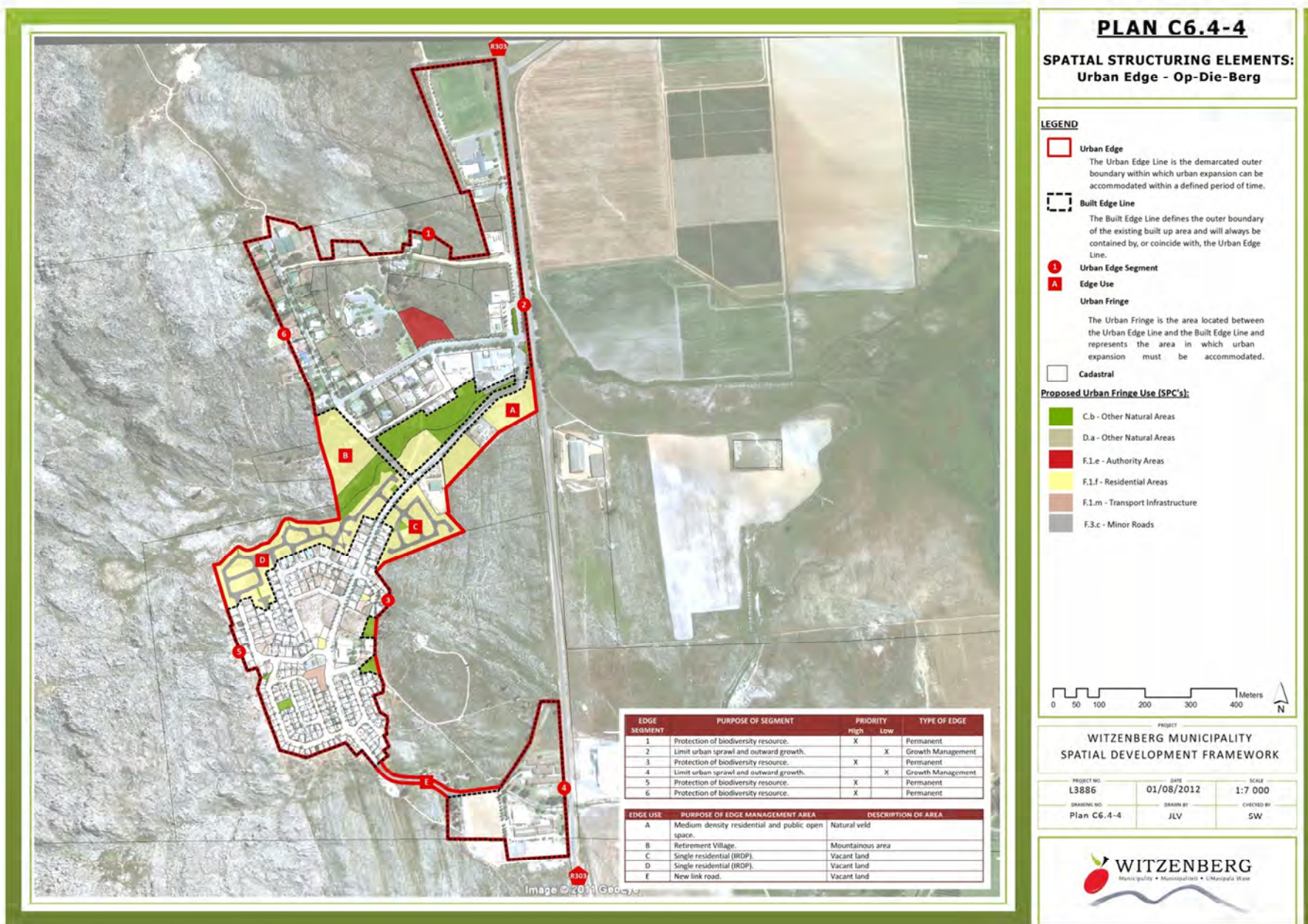
Plans C6.4-1 – C6.4-6

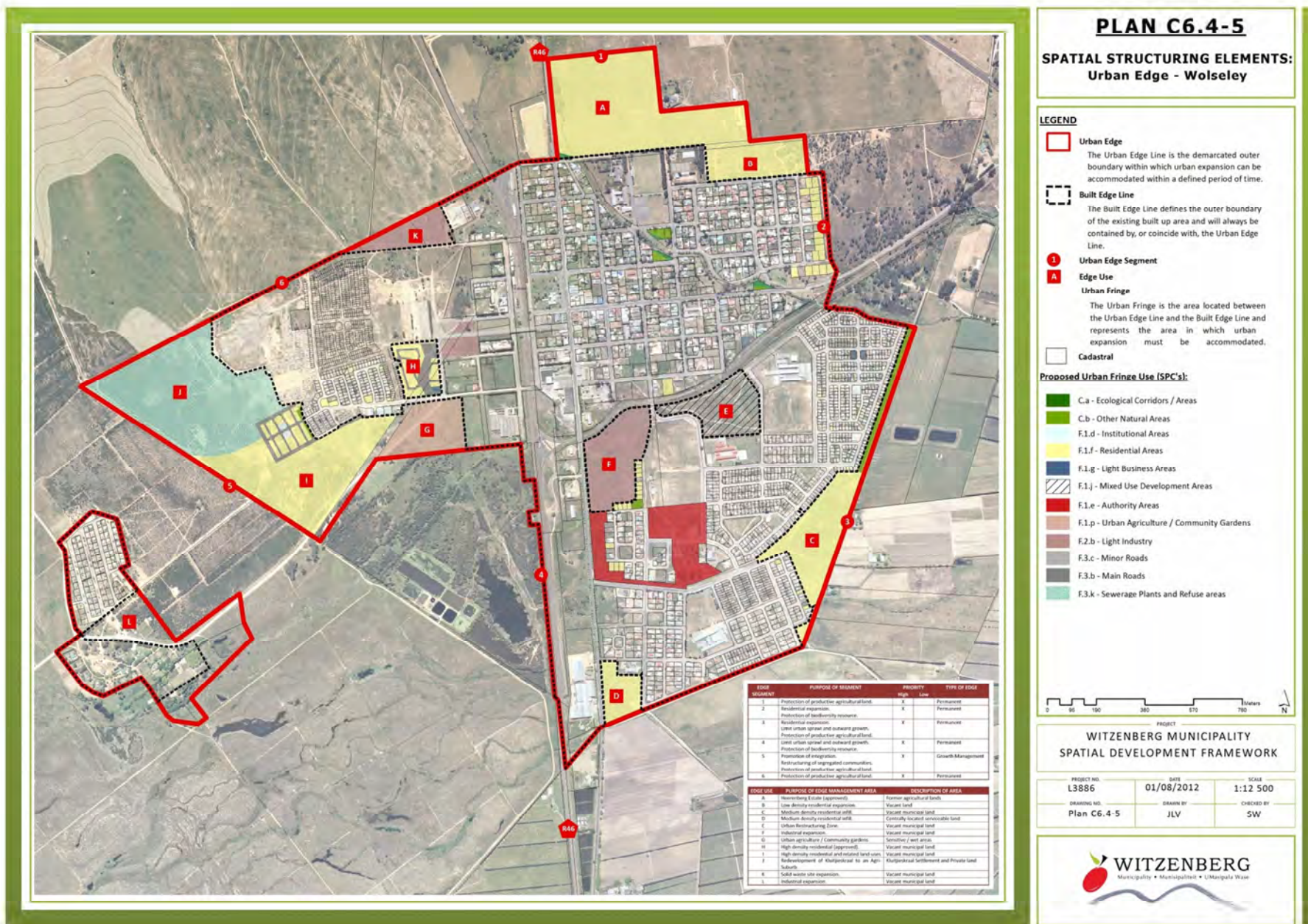












### PLAN C6.4-5 SPATIAL STRUCTURING ELEMENTS: Urban Edge - Wolseley

**LEGEND**

**Urban Edge**  
The Urban Edge Line is the demarcated outer boundary within which urban expansion can be accommodated within a defined period of time.

**Built Edge Line**  
The Built Edge Line defines the outer boundary of the existing built up area and will always be contained by, or coincide with, the Urban Edge Line.

**Urban Edge Segment**

**Edge Use**

**Urban Fringe**  
The Urban Fringe is the area located between the Urban Edge Line and the Built Edge Line and represents the area in which urban expansion must be accommodated.

**Cadastral**

- Proposed Urban Fringe Use (SPC's):**
- C.a - Ecological Corridors / Areas
  - C.b - Other Natural Areas
  - F.1.d - Institutional Areas
  - F.1.f - Residential Areas
  - F.1.g - Light Business Areas
  - F.1.j - Mixed Use Development Areas
  - F.1.e - Authority Areas
  - F.1.p - Urban Agriculture / Community Gardens
  - F.2.b - Light Industry
  - F.3.c - Minor Roads
  - F.3.b - Main Roads
  - F.3.k - Sewerage Plants and Refuse areas



PROJECT  
**WITZENBERG MUNICIPALITY  
SPATIAL DEVELOPMENT FRAMEWORK**

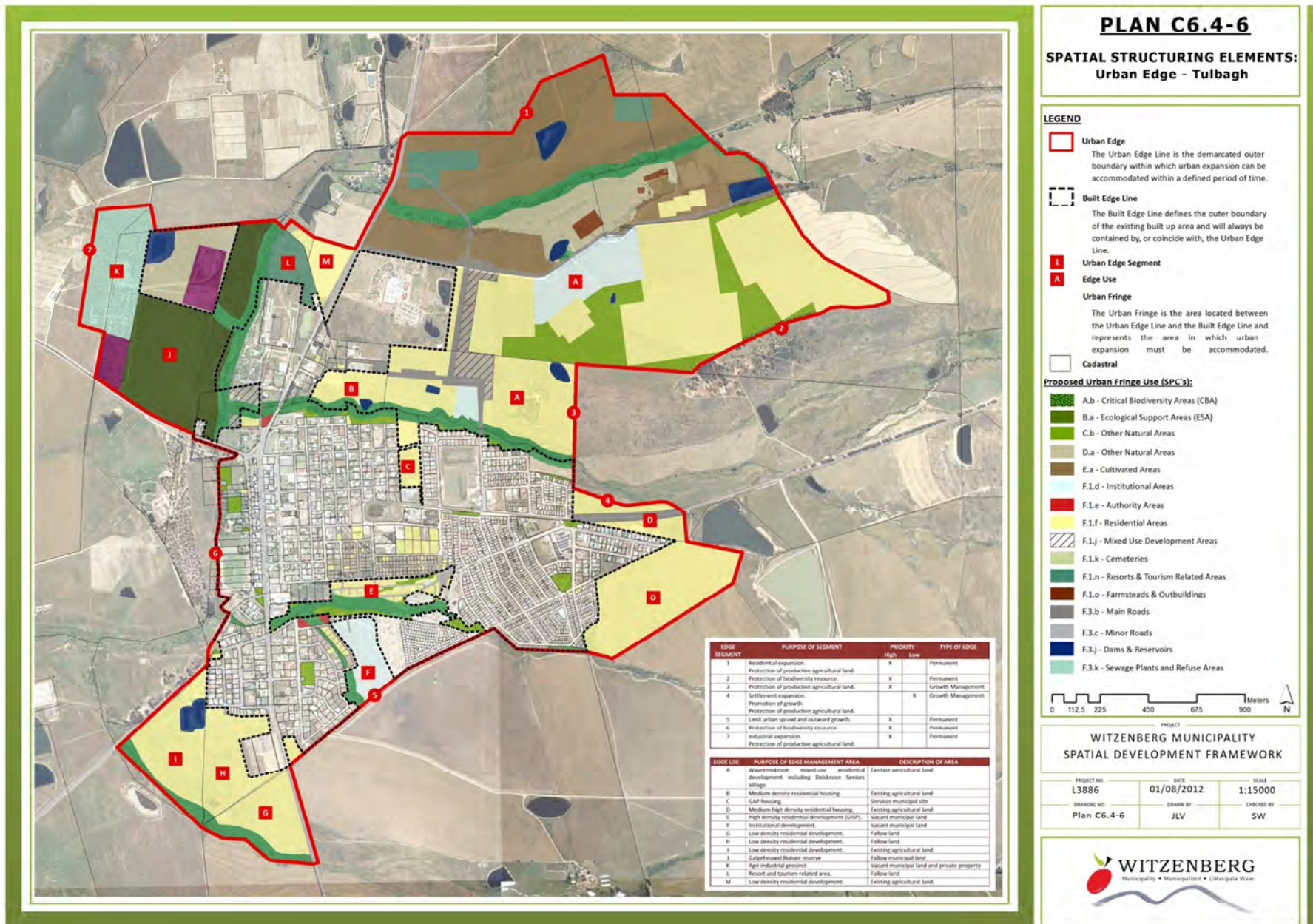
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DRAWING NO. <b>Plan C6.4-5</b>	DRAWN BY <b>JLV</b>	CHECKED BY <b>SW</b>



EDGE SEGMENT	PURPOSE OF SEGMENT	PRIORITY	TYPE OF EDGE
1	Protection of productive agricultural land	High	Permeable
2	Residential expansion	High	Permeable
3	Protection of biodiversity reserves	High	Permeable
4	Limit urban sprawl and outward growth, Protection of productive agricultural land	High	Permeable
5	Limit urban sprawl and outward growth, Protection of biodiversity reserves	High	Permeable
6	Promotion of integration, Restructuring of segregated communities, Protection of productive agricultural land	High	Growth Management
7	Protection of productive agricultural land	High	Permeable

EDGE USE	PURPOSE OF EDGE MANAGEMENT AREA	DESCRIPTION OF AREA
A	Hamlet-style residential expansion	Former agricultural lands
B	Low density residential expansion	Vacant land
C	Medium density residential use	Vacant municipal land
D	Medium density residential use	Centrally located serviced land
E	Urban Restructuring Zone	Vacant municipal land
F	Industrial expansion	Vacant municipal land
G	Urban agriculture / Community gardens	Service/ retail sites
H	High density residential (apartments)	Vacant municipal land
I	High density residential and related land uses	Vacant municipal land
J	Redevelopment of Multi-tenanted and Private Land	Multi-tenanted Settlement and Private Land
K	Small scale site expansion	Vacant municipal land
L	Industrial expansion	Vacant municipal land



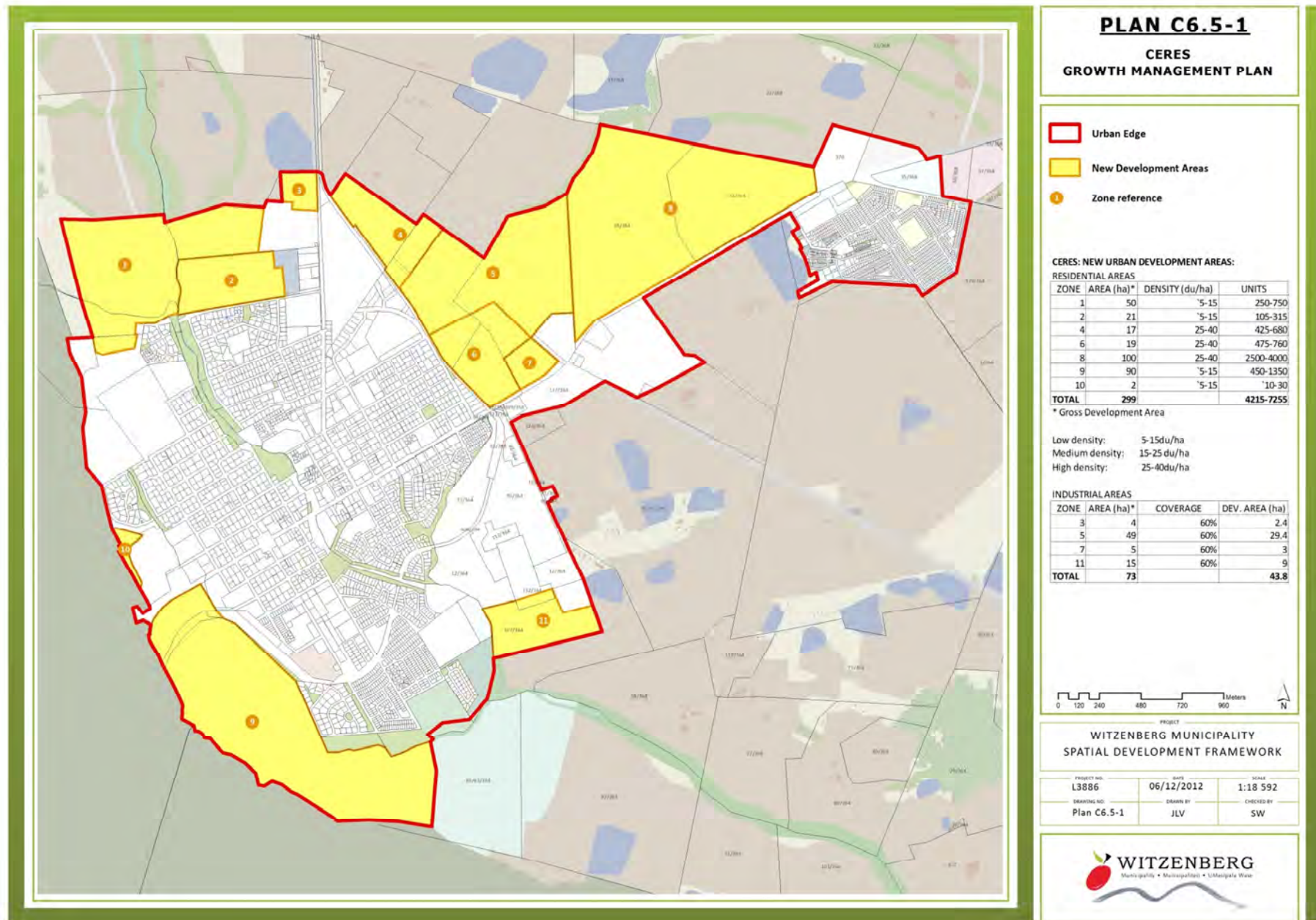


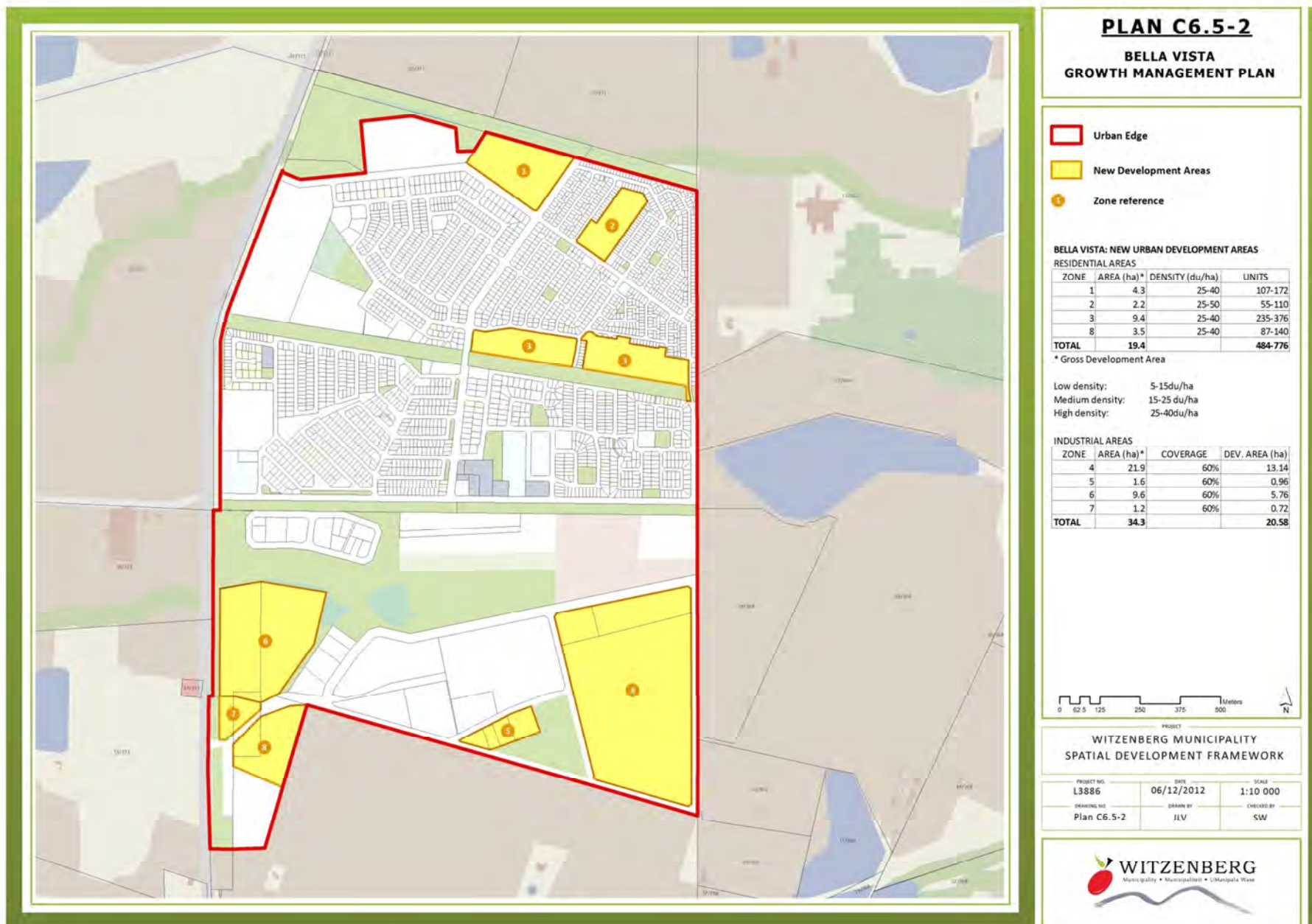
# **ANNEXURE 5**

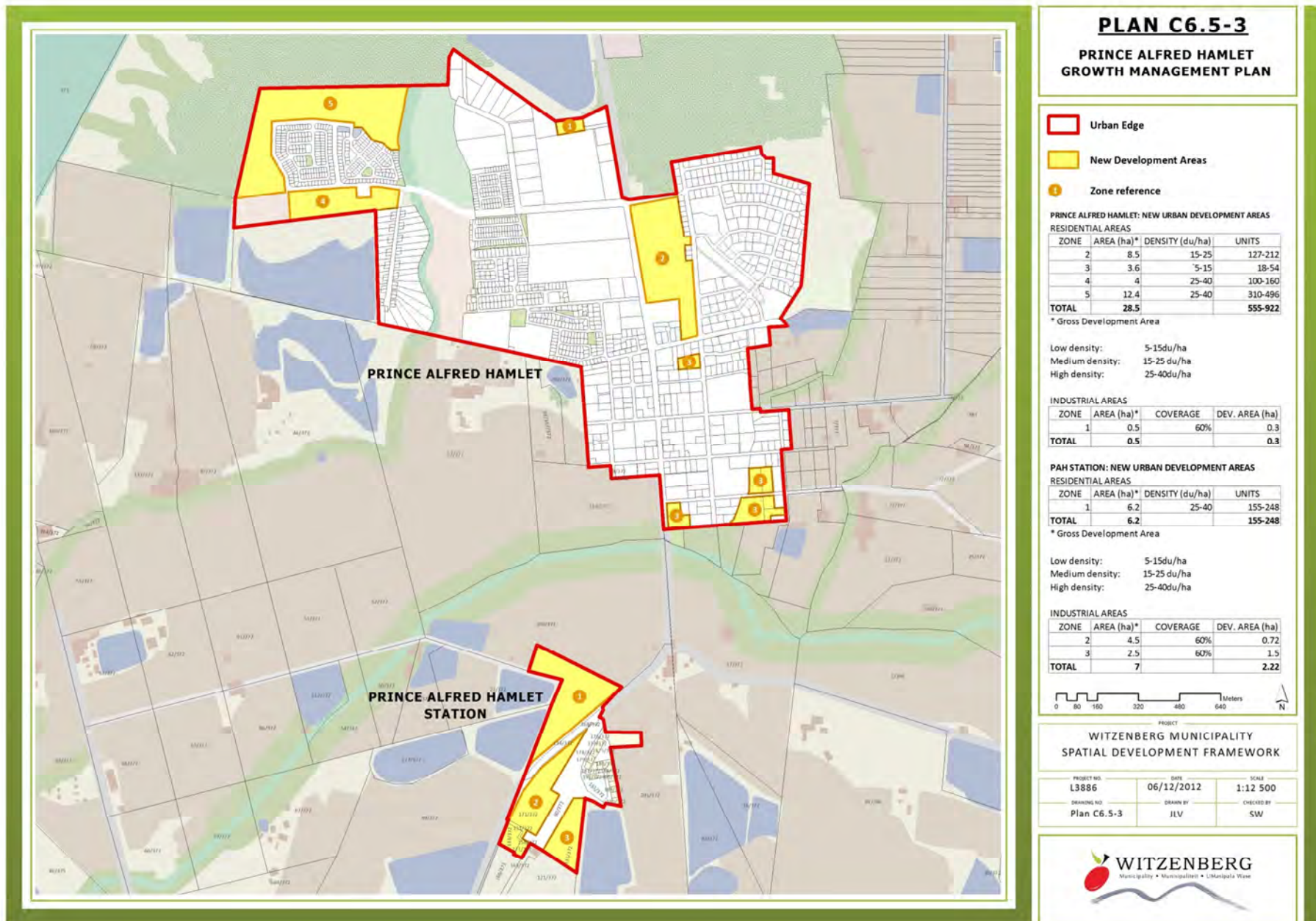
## **Growth Management Plans**

Plans C6.5-1 – C6.5-6









### PLAN C6.5-3 PRINCE ALFRED HAMLET GROWTH MANAGEMENT PLAN

- Urban Edge
- New Development Areas
- Zone reference

**PRINCE ALFRED HAMLET: NEW URBAN DEVELOPMENT AREAS**

RESIDENTIAL AREAS			
ZONE	AREA (ha)*	DENSITY (du/ha)	UNITS
2	8.5	15-25	127-212
3	3.6	5-15	18-54
4	4	25-40	100-160
5	12.4	25-40	310-496
<b>TOTAL</b>	<b>28.5</b>		<b>555-922</b>

\* Gross Development Area

Low density: 5-15du/ha  
 Medium density: 15-25 du/ha  
 High density: 25-40du/ha

**INDUSTRIAL AREAS**

ZONE	AREA (ha)*	COVERAGE	DEV. AREA (ha)
1	0.5	60%	0.3
<b>TOTAL</b>	<b>0.5</b>		<b>0.3</b>

**PAH STATION: NEW URBAN DEVELOPMENT AREAS**

RESIDENTIAL AREAS			
ZONE	AREA (ha)*	DENSITY (du/ha)	UNITS
1	6.2	25-40	155-248
<b>TOTAL</b>	<b>6.2</b>		<b>155-248</b>

\* Gross Development Area

Low density: 5-15du/ha  
 Medium density: 15-25 du/ha  
 High density: 25-40du/ha

**INDUSTRIAL AREAS**

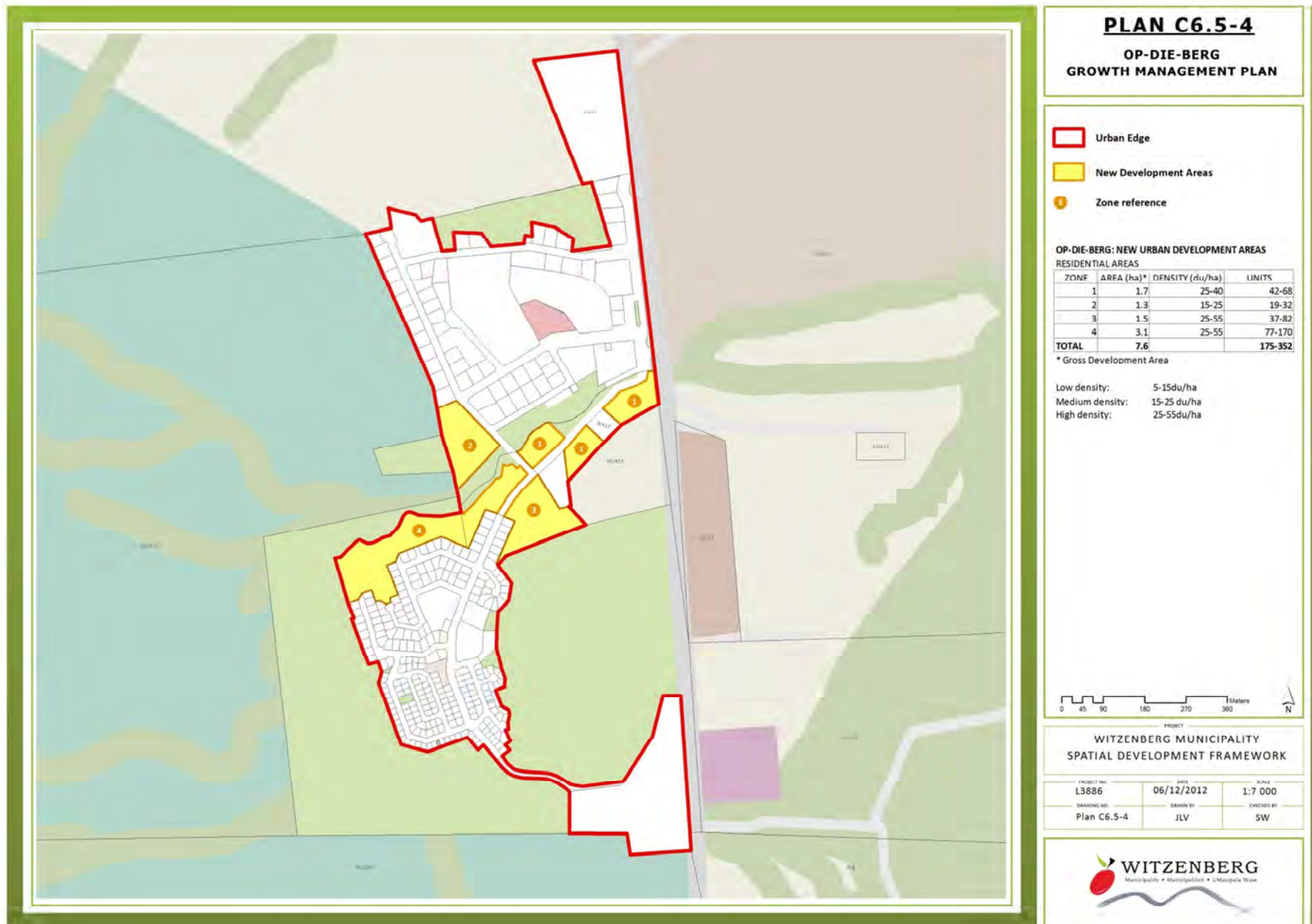
ZONE	AREA (ha)*	COVERAGE	DEV. AREA (ha)
2	4.5	60%	0.72
3	2.5	60%	1.5
<b>TOTAL</b>	<b>7</b>		<b>2.22</b>

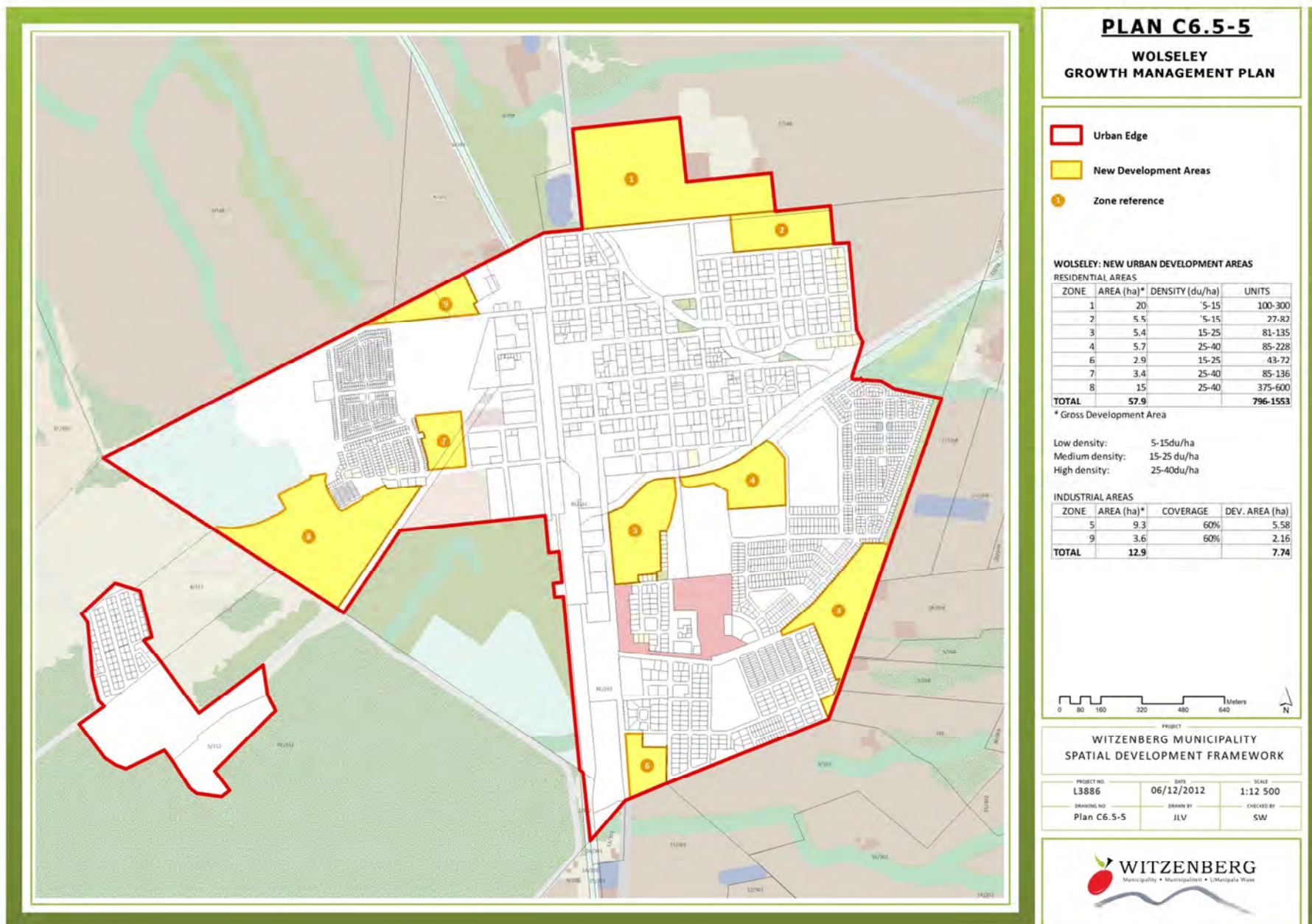


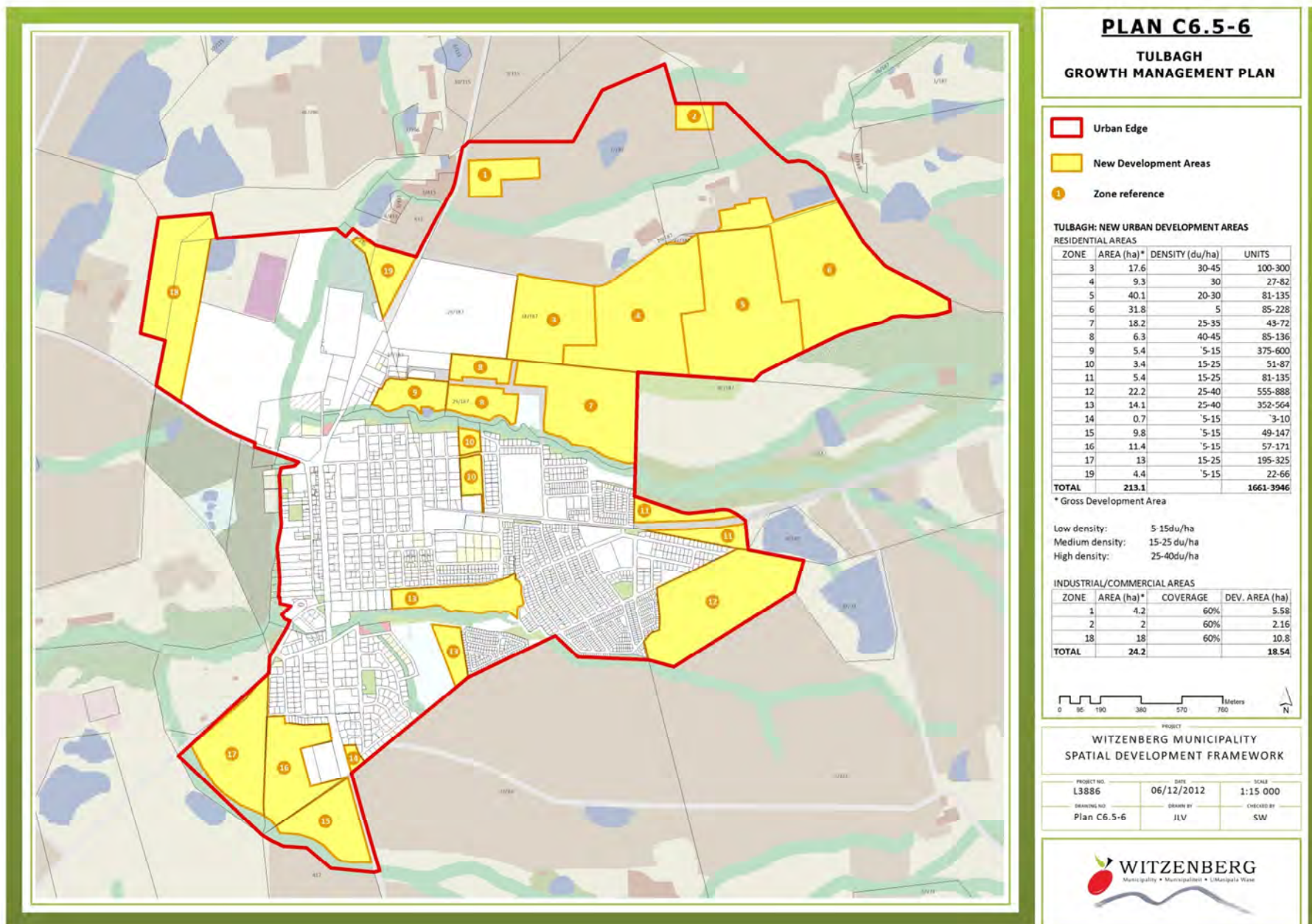
PROJECT  
**WITZENBERG MUNICIPALITY  
SPATIAL DEVELOPMENT FRAMEWORK**

PROJECT NO. L3886	DATE 06/12/2012	SCALE 1:12 500
DRAWING NO. Plan C6.5-3	DRAWN BY JLV	CHECKED BY SW











# DENNIS MOSS PARTNERSHIP

Architects • Urban & Regional Planners • Environmental Planners  
Landscape Architects • Urban Designers

## WITZENBERG SPATIAL DEVELOPMENT FRAMEWORK FINAL PHASE RESPONSE ON COMMENTS

### 1 DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM

Department of Rural Development and Land Reform  
63 Strand Street  
Nedbank Centre, 6t floor  
CAPE TOWN 8000

(Attention: Me L. Bruiners)

#### COMMENTS AND RESPONSES: FINAL CONSULTATIVE DRAFT SDF

NO.	COMMENT	RESPONSE
<b>GENERAL COMMENTS</b>		
1	There is still a lot of theory within the document that is not always necessary. It was noted previously that all of these “definitions and descriptions” should rather be placed in an Annexure at the end of the SDF. The flow of the document does not always seem to be in a logical order and it becomes difficult to follow from the Status Quo how the urban edges were drawn up and what Status Quo information has been used to come up with the proposals.	<p>The Service Provider is of the view that the current format is adequate and that the flow of the document is logical.</p> <p>The Service Provider is of the view that the current amount of theory is correct as it forms a fundamental part of the SDF. A large section of the theory has been omitted or reduced based on previous comments.</p> <p>The “definitions and descriptions” are an integral part to the SDF and the Service Provider is of the view that it should be part of the Table of Contents as is the case with standard documentation format practice.</p>
	The current document leads the reader	The section dealing with the demarcation of



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SW vd Merwe, Pr Sci Nat, NHD (Nature Conservation) SACNASP • JMH Lackay, Pr S Arch, T MIArch • PJ Niemann, Pr Arch, B Arch (UFS) MIArch, CIA



	heaving to page back and forth in order to get a specific section e.g. the demarcation of urban edges would have fitted more appropriately in Section C as opposed to being part of the toolkit that can be used for further information	urban edges for town and settlements in the Witzenberg Municipality has been moved to Section C to be dealt with under Chapter C6: <i>Facilitating Development of urban Areas</i> .
<b>SECTION A</b>		
1	Section A1.1 is referred to as a user's guide but there is no explanation as to the boxes and the difference in colours of the boxes that is found throughout the document.	Noted and an explanation has been provided.
2	The 1 <sup>st</sup> paragraph on page 6 refers to the SDF being applicable from 1 April 2012. It was indicated in previous comments that this statement should be omitted as the SDF will be applicable from the date of approval and already the date mentioned has lapsed.	Noted and has been amended as requested.
3	Taking into consideration the issues around constitutionality of the DFA it should be noted that the principles of SPLUMB should also be taken into consideration.	Noted and the principles of the SPLUMB have been included in the Draft SDF. The DFA has been omitted from the Draft SDF.
4	Section A8.7 has been listed under Section A8.10(k) and is thus duplicated.	Noted and has been amended as requested.
5	There is no mention of the alignment with the National Development Plan: Vision 2030 taking into consideration that the SDF is a forward planning document.	Noted and the National Development Plan: Vision 2030 has been included in the Draft SDF. .
6	The section under Provincial legislations/policies makes no reference to the 12 Provincial Strategic Objectives of the Western Cape. These are the priorities for the province and should be highlighted taking into consideration that the PSDF is currently being reviewed.	Noted and the 12 Provincial Strategic Objectives of the Western Cape has been included in the Draft SDF.
7	Section A10.2 should be updated to reflect the latest 2012/13 IDP of the District.	Noted and has been amended as requested.
8	Section A10.5 – It should be verified whether the process of the EMF has not been concluded. If so this section should be reflecting the current status of the EMF and proposed date of completion.	Noted. The EMF was finalized by SRK Consulting however the EMF is currently in the process for approval at the Cape Winelands District Municipality and then it needs to be approved by the MEC.
9	It is not clear where the Greater Cederberg	Noted, however it is clearly indicated on

	Biosphere Corridor is aligning through the municipal area. Map 1 has a shade of green that cannot be seen within the municipal area.	Map 18.
10	Section A10.9.2 does not show any relevance to the area that is being focused on. This information will confuse readers as it creates an impression that this municipality falls within the Central Karoo District. This section should only make reference to the Cape Winelands Biodiversity Assessment and also indicate linkage with Section A10.9.3	Noted and has been amended as requested.
11	Section A.11 needs to be updated to reflect the status in the current IDP.	Noted and has been updated as requested.
12	Reference to Volume 2 and 3 on page 45 can be confusing as this is the Final SDF and does not form part of the previous volumes. This should provide the overall vision of what needs to happen within the area.	Noted.
13	In many cases the implications for Witzenberg includes all of the 'subsections' within a particular Act or Policy and there is no summary as to the implication in the local context. It is merely a "copying" of what is stated in the legislation/policies.	Noted. The Service Provider is of the view that the SDF should be aligned with all these applicable Acts and Policies. Furthermore, the implication to the local context is explained by stipulating the applicable section or chapter of an Act and Policy that is important to the Witzenberg Municipality. This ensures correct alignment of the Municipality to the applicable legislation and policy.
<b>SECTION B</b>		
1	The initiatives indicated in page 75 have been discussed in Section A and need not be duplicated. The map does not indicate where these initiatives are located and the policy background has been given that these are prevalent in the area. The section should focus on the current state in space.	Noted. Furthermore, the Service Provider is of the view that the particular Section focus on the 'current state in space' as the data was received from the Cape Winelands EMF and SANBI BGIS which are the latest information sources.  Reference is made to the applicable map (i.e. Map 18) to clear the confusion.
2	Map 20: Are all the vegetation types listed in the legend prevalent within the study area? If this is not the case the vegetation types that are not applicable should be omitted	All the vegetation types are present in the Witzenberg municipal area, and the data was received from the Cape Winelands EMF which provided the latest information of

	from the legend as this creates the impression that all of those are present in the area.	the vegetation types present in the region.
3	It would be more useful if Maps 20 and 21 are overlaid to give an indication of the location of threatened species on top of the type of vegetation.	Noted and has been amended as requested.
4	Is Map 22 and Table B6 on page 63 representing the same information? The provincial nature reserve seems to be located in only one area and it needs to be clear that all of these indicated in the table is located in the one area as indicated on the map.	Noted and has been amended as requested.
5	Reference should be given to the densification principles in order to guide proposed development.	Noted and has been amended. Refer to Section C6.4: Implementation of Spatial Structuring Elements in the Draft SDF.
6	There is a lot of focus on the environment and a lack of the human element. There is no reflection in the report as to the public participation process that was done and the issues that were raised during these sessions and how it was addressed in the formulation of the proposals.	Noted. The Service Provider is of the view that the human element has been sufficiently addressed in the SDF document.  Noted. The Service Provider has provided a Stakeholder Participation Report that deals with the public participatory process and issues/comments that were raised during meetings and the public open days.
<b>SECTION C</b>		
1	Sections C1.3 and C1.4 makes reference to SPISYS that has to be implemented and administered by the Provincial Government. It needs to be highlighted that the SPISYS system is not currently being implemented in the Western Cape. This is a system that has been adopted by the Northern Cape and Free State Provinces. It could not be made compulsory for this province as there has to be agreement as to what the needs for the province are. This is also an initiative from DRDLR and is not legislated in terms of the SPLUMB. There are other legislations and committees (e.g. CSI) that deals with spatial information.	Noted. The approved <i>Manual for the Application of Bioregional Planning in the Western Cape Province</i> (DEADP, 2003) makes provision for a Spatial Planning Information System for Western Cape Province. This proposed Spatial Planning Information System is very similar to the proposed SPISYS. The Service Provider is of the view that since SPISYS is an initiative of the DRDLR and that the Spatial Planning Information System proposed by the Bioregional Planning Manual which is very similar to the SPISYS should be adopted by the Western Cape Province as well as the Witzenberg Municipality.

		It is noted that SPISYS is not legislated in terms of the SPLUMB.
2	There is a lot of background information on certain strategies which becomes very confusing as it is not clear what exactly is the strategy and guidelines that are proposed for Witzenberg specific issues. The strategies proposed should be linked to the spatial proposals that have been drafted in order to provide the municipality with an implementation plan. In many instances the strategies highlighted reflects some “policy” that is in place and are being replicated.	Noted. The Service Provider is however of the view that the strategies and guidelines proposed are clearly defined, and that strategies proposed are aligned and linked to municipal plans and policies.  Furthermore, strategies are not replicated. The strategies proposed in the SDF are referenced to existing municipal sectoral plans and frameworks of the Witzenberg Municipality.
<b>SECTION D</b>		
1	This section in general does not give any explanations as to the reasons for the proposed areas for residential, industrial etc. expansion. Although there is an indication as to what types of edges and development should be in the proposed areas there is no background information indicating the current backlogs and projections for future growth to back-up the proposals.	Noted and has been amended as requested. Refer to Chapter C6.5.
2	Page 290: There is no indication of the needs for residential and industrial expansion. There should be an indication of the housing needs and projections to explain the urban edges that have been proposed. It would also assist if there is an indication of approved applications, submitted applications and proposed areas of future growth. As an example, G is an application that is in process but A, D and F is not clear or indicating how many housing opportunities are being created with these proposals.	Noted and has been amended as requested. Refer to Chapter C6.5.
3	Page 293: It is not clear why D is included in the urban edge as it is indicated as a mountainous area and as public open space. There should be some explanations to clarify.	Noted and has been amended.
4	Page 295: The need for residential development based on the current backlogs and the projected growth should be	Noted and has been amended.

	indicated in order to substantiate the amount of land highlighted for residential purposes. The area indicated as C shows it as sensitive land yet it is proposed for housing.	
5	Toolkit D6 should not be part of Section D as this information is crucial as to how the actual proposals came into being. It would be more user-friendly if this section was included in Section C to give the overall picture. Section D refers to the “additional information” that could be referred to for more information and things that are optional to the municipality e.g. SDI approach. The urban edge demarcation is however a critical factor in terms of the formulation of the future proposals for the municipality.	Noted and has been amended as requested. Refer to Chapter C6.5.
<b>CONCLUSION</b>		
1	The DRDLR needs to highlight that the general flow of the document is not very user-friendly taking into account that the SDF should be used by everyone. It is not clear from the document what the purpose of the “toolkit” is as it was indicated as having the background descriptions and explanations to specific issues that the reader could use as his/her own pace if they want to familiarise themselves with this information. Important information such as the demarcation of urban edges does not belong in a toolkit but as part of the main document of the method that has been followed to come up with the development proposals.	<p>Noted. The Service Provider is of the view that the layout of the final SDF is user-friendly and will serve the desired need as a spatial planning tool that could be used by all.</p> <p>Toolkits in Section D refer to user’s ‘manuals’ to inform the application of the SDF. The Toolkits are prepared to be user-friendly and easy to understand.</p>

Department of Environmental Affairs and Development Planning  
 Environmental and Spatial Planning  
 1<sup>st</sup> Floor, 1 Dorp Street.  
**CAPE TOWN 8001**

(Attention: Me T. de Waal)

COMMENTS AND RESPONSES: FINAL CONSULTATIVE DRAFT SDF		
NO.	COMMENT	RESPONSE
<b>URBAN EDGES</b>		
1	<p>While the methodology for determining urban edges is put forward in Section D6 of the Draft SDF (page 288), the Department is of the opinion that the urban edges for the individual towns and settlements (Section D6.2) have not been adequately motivated and substantiated in the Draft SDF. The urban edges proposed in the Draft SDF allow approximately 1 268ha of land within the 'urban fringe'. This raised the following concerns:</p> <ul style="list-style-type: none"> <li>• The amount of land within the 'urban fringe' excludes vacant and underutilized land that falls within the current built up area. The total of 1 268ha is therefore not an accurate reflection of the amount of developable land available within the urban edge.</li> <li>• The Department is of the opinion that the development demand of this extent has not been substantiated in the Draft SDF. The Draft SDF states that the current demand for subsidised and farmworker housing amounts to 10 000 dwelling units for the entire municipality. The current demand for other activities (such as industrial activities, middle and high include housing, amongst others) has not been adequately substantiated in the Draft SDF.</li> <li>• The Department questions whether the 1 268ha of land available within the 'urban fringe' is currently serviced, or can be serviced by the Municipality within the current and two or three</li> </ul>	<p>Noted and has been amended as requested. Refer to Chapter C6.5.</p> <p>Noted and has been amended as requested. Please refer to Chapter C6.5.</p> <p>Noted and has been amended as requested. Please refer to Chapter C6.5.</p> <p>It should be noted that the SDF does make provision for the servicing of sites. Furthermore, the current sites are being serviced by the Municipality and the servicing of proposed sites have been</p>

	<p>functions IDP cycles. This is further reinforced by comments raised by the Municipality, on the 5<sup>th</sup> March 2012, which questioned whether certain 'strategic sites' (included in Volume 3) which fell within the 'urban fringe', could be serviced by the Municipal budget allocated in the current IDP.</p>	<p>discussed with the Municipality.</p>
2	<p>In light of the concerns raised above, the Department finds it difficult to accept the proposed urban edges as depicted in the Draft SDF. In an attempt to gain further insight into the logic/rationale behind the delineation of the urban edges, the Department, in conjunction with the DRDLR, met with Mr. Hennie Taljaard (Witzenberg Municipality Town Planner) on the 18<sup>th</sup> June 2012. It was hoped that a meeting with Mr Johan Swanepoel (Witzenberg Municipality Engineer) could be arranged to discuss the edges further however this was not possible due to time constraints and other commitments.</p>	<p>Please refer to Chapter C6.5.</p>
3	<p>General comments:</p> <p>a) The plans provided do not differentiate between the land available for urban development and the land available for public parks, cemeteries, buffer zones, community gardens, and other municipal open space areas. Land available for urban development, such as built up area, should be depicted as a different colour than the land set aside for public open space.</p> <p>b) The plans provided depict vacant land, partially developed land, and land in the process of being developed as green. On the same plan, green is utilized to depict the buffer zone which lines the river corridor. This is deemed to be confusing and misleading.</p> <p>c) The Draft SDF does not indicate how the vacant land, partially developed land, and land in the process of being developed will be utilized to accommodate the required future growth of the municipality. Instead, the</p>	<p>Noted, however, the Plans in the SDF have been prepared to differentiate between all the different land-uses.</p> <p>Noted, however, the Plans (i.e, Plan C6.2_1 to Plan C6.2_6) of the Vacant Land Analysis have been prepared to only illustrate three zones, namely: Vacant Land (Blue), Partially Developed (Green), and In Process (Light Purple). These Plans do not illustrate buffer zones etc.</p> <p>Plans C6.4_1 to C6.4_6 were prepared to illustrate approved developments and also strategic land that integrates the goals of densification and infilling.</p>

	<p>Draft SDF proposes the development of sites situated on the urban periphery before the adoption of policies that promote urban infilling and densification.</p> <p>d) The Department is of the opinion that the Draft SDF does not adequately motivate for the need to include such a large amount of land (approximately 1 268ha) within the 'urban fringe'. Nor has the Draft SDF adequately substantiated that the Municipality plans to provide the necessary services to this land within its current and future Integrated Development Plan (IDP) budgeting allocations.</p> <p>e) The Draft SDF indicates the priority of each segment of the edge. Given that the urban edge delineation is so wide, it is not necessary to prioritize segments of the edge for future expansion.</p> <p>f) The Department cannot support the development of any land parcel which encourages urban sprawl and reinforces the resultant Apartheid urban structure.</p>	<p>Please refer to Chapter C6.5.</p> <p>The SDF is aligned with DEA&amp;DP's <i>Settlement Restructuring: An Explanation Manual (March, 2009)</i> and the <i>Provincial Urban Edge Guidelines (December, 2005)</i>.</p> <p>Noted.</p>
4	<p><u>Ceres:</u></p> <p>The comments below refer to the delineation of the urban edge as depicted on Plan C6.4-1 Spatial Structuring Elements: Urban Edge – Ceres.</p> <p><b>Site A:</b> With the exclusion of Erf 1880, Site A must fall outside the urban edge.</p> <p><b>Site F:</b> Until the Draft SDF sufficiently motivates for the development of Site F, it should fall outside the urban edge.</p> <p><b>Site J:</b> Site J should fall outside the urban edge as the development of this site does not actively promote integration with Ceres.</p> <p><b>Site C:</b> Site C is allocated for an agri-village. By definition, an agri-village cannot be included within an urban edge. If it is within the urban edge, it is regarded as an agri-suburb.</p>	<p>Noted</p> <p>Site A has been amended and reduced in size. Please refer to Chapter C6.5.</p> <p>The urban edge has been <u>amended to exclude</u> Site F.</p> <p>The urban edge has been <u>amended to exclude</u> Site J.</p> <p>Site C: has been amended as requested and is referred to as an agri-suburb.</p>



<p>5</p>	<p><u>Bella Vista:</u></p> <p>The comments below refer to the delineation of the urban edge as depicted on Plan C6.4-2 Spatial Structuring Elements: Urban Edge – Bella Vista.</p> <p><b>Site E:</b> Site E will accommodate a cemetery. This site should be depicted appropriately on the plan, as a public open space.</p> <p><b>Site G:</b> to fall outside the urban edge.</p> <p><b>Site A &amp; B:</b> to fall outside the urban edge.</p> <p><b>Site I &amp; H:</b> Until the Draft SDF sufficiently motivates for the need to develop of these sites and the ability of the Municipality to service these sites, they should fall outside the urban edge.</p>	<p>Noted.</p> <p>Site E has been amended and excludes the existing cemetery and only includes the remaining property.</p> <p>Site G has been included. Please refer to Chapter C6.5.</p> <p>Site A has been removed as requested, but Site B has been included. Please refer to Chapter C6.5.</p> <p>Sites I and H have been amended as requested.</p>
<p>6</p>	<p><u>Prince Alfred Hamlet:</u></p> <p>The comments below refer to the delineation of the urban edge as depicted on Plan C6.4-3 Spatial Structuring Elements: Urban Edge – Prince Alfred Hamlet.</p> <p><b>Site I:</b> Should be depicted on the plan as public open space relating to the river corridor.</p> <p><b>Site E:</b> Should be depicted on the plan as public open space relating to the river corridor.</p> <p><b>Site C:</b> Should be depicted on the plan as public open space relating to recreational activities, sports field.</p> <p><b>Site D:</b> Should fall outside the urban edge.</p> <p><b>Site A:</b> Should fall outside the urban edge.</p> <p><b>Sites H, G &amp; F:</b> The Draft SDF has not sufficiently motivated the development of these sites. Due to the location of these sites on the extreme westerly edge of the town, the Department is of the opinion that the development of the sites does not actively promote integration. The Department does however acknowledge that an informal settlement currently occupies a portion of these sites.</p>	<p>Noted.</p> <p>Site I: Please refer to Chapter C6.5.</p> <p>Site E: The Witzenberg IDP and at the public open day at Prince Alfred Hamlet, the need for land to accommodate community gardens was expressed. Please refer to Chapter C6.5.</p> <p>Site C has been amended as requested.</p> <p>Site D has already residential zoning rights.</p> <p>Site A has been amended as requested.</p> <p>Sites H, G &amp; F has already design concepts for further expansion.</p>

<p>5</p>	<p><u>Op-die-Berg:</u></p> <p>The comments below refer to the delineation of the urban edge as depicted on Plan C6.4.-4 Spatial Structuring Elements: Urban Edge – Op-die-Berg.</p> <p><b>Site A:</b> Should fall outside the urban edge.</p> <p><b>Sites F &amp; D:</b> Are situated on very steep mountain slopes. Only a portion of these sites can be developed. The urban edge should reflect this.</p> <p><b>Site C:</b> Should be depicted on the plan as public open space relating to the river corridor.</p>	<p>Noted.</p> <p>Site A has been amended as requested.</p> <p>Site F has been amended as requested although a housing project has been approved as part of the Municipality’s housing pipeline.</p> <p>Site D: Please refer to Chapter C6.5.</p> <p>Site C has been amended as requested.</p>
<p>6</p>	<p><u>Wolseley:</u></p> <p>The comments below refer to the delineation of the urban edge as depicted on Plan C6.4-5 Spatial Structuring Elements: Urban Edge – Wolseley.</p> <p><b>Sites H &amp; L:</b> Should be depicted on the plan as public open space as a community garden and solid waste expanse site.</p> <p><b>Site J:</b> Should either be depicted on the plan as public open space or it should fall outside the urban edge. The Draft SDF has not sufficiently motivated for the need to develop this site. Furthermore, the development of this side does not actively promote integration the town as a whole.</p> <p><b>Site K:</b> Should fall outside the urban edge as the development of this side does not actively promote integration of the town as a whole. The cluster of erven situated to the extreme west should fall outside the urban edge.</p> <p><b>Site C:</b> Should fall outside the urban edge.</p> <p><b>Site B:</b> The eastern strip of Site B should fall outside the urban edge.</p>	<p>Noted.</p> <p>Site H has been amended as reflected by the guidelines in the DEA&amp;DP’s <i>Settlement Restructuring: An Explanation Manual (March, 2009)</i> and the <i>Provincial Urban Edge Guidelines (December, 2005)</i> to exclude sewerage works.</p> <p>Site L is depicted because it is the expansion of the solid waste site.</p> <p>Site J already has design concepts for Pine View.</p> <p>Site K has been amended as requested.</p> <p>Site c has been amended as requested.</p> <p>Site B has been amended as requested.</p>
<p>7</p>	<p><u>Tulbagh:</u></p> <p>These comments below refer to the delineation of the urban edge as depicted on Plan C6.4-6 Spatial Structuring Elements: Urban Edge – Tulbagh.</p> <p><b>Site D:</b> Should fall outside the urban edge.</p>	<p>Site D has not been removed. (Please refer to Chapter C6.5).</p>

	<p><b>Sites J &amp; K:</b> Should be depicted on the plan as public open space related to a nature reserve.</p> <p><b>Site A:</b> Only the portions of Site A which will accommodate urban development should be depicted on the plan in yellow. The areas allocated for public open space should be depicted appropriately on the plan.</p> <p><b>Sites D, I, H &amp; G:</b> Require further information.</p>	<p>Sites J &amp; K has been amended as requested.</p> <p>Site A has been amended as requested.</p> <p>Sites D, I, H &amp; G: Please refer to Chapter C6.5.</p>
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### IMPLICATIONS OF THE SPATIAL PROPOSALS

1	<p>The Draft SDF does not contain a section dedicated to presenting the spatial proposals. Instead the proposals are imbedded in the document which, in the opinion of the Department, reduces the overall usability of the document. This is particularly true when potentially conflicting and/or aligning proposals presented in different sections of the report.</p> <p>The Department is of the opinion that the Draft SDF does not adequately explore the implications of the spatial proposals presented in the report.</p>	<p>The Service Provider is of the view that spatial proposals such as the ‘Structural Elements’ can not be divorced from Section C6 which refers to SPC F.1: Urban Areas. All the rest of the proposals are combined in Chapter C6.5.</p> <p>The Service Provider is of the view that the spatial proposals are adequately represented on the various Plans.</p>
2	<p>The majority of the proposals included in the Draft SDF focus on the larger settlements (i.e. Ceres, Wolseley, Tulbagh, Bella Vista, Op-die-Berg, and Prince Alfred Hamlet) with little attention given to the smaller, rural hamlets and surrounding rural areas. The Department acknowledges that the Draft SDF attempts to understand the functional relationships between towns, and between towns and the rural hinterland in the contextual analysis of the Municipality.</p> <p>However, the Draft SDF fails to develop appropriate strategies and guidelines which can be implemented by the Municipality to ensure that these functional relationships are strengthened over time. In addition, the Draft SDF fails to develop appropriate strategies and guidelines on how the smaller, rural hamlets and surrounding areas should</p>	<p>Noted and has been amended as requested.</p>

	<p>be tackled by the Municipality in the future.</p> <p>The Department is of the opinion that the inclusion of more specific planning interventions for the hamlets and surrounding rural areas in the Draft SDF is a lost opportunity which could have provided clear guidance to the Municipality when dealing with the development and conservation of these areas.</p>	
3	<p>One of the proposals for the six key settlements is the delineation of the urban edges. While this aspect is dealt with above, it must be reiterated that the Draft SDF does not indicate whether the Municipality is able to provide services to the 1 268ha of land situated within the 'urban fringe'.</p> <p>The Executive Summary clearly states that the urban edge line is the outer boundary for development within a defined period. However, the extent of this period has not been defined in the main body of the Draft SDF. In addition, the Draft SDF indicates that the urban edge contained in the Draft SDF comprises edge segments that are flexible.</p> <p>Furthermore, there is no indication of the prioritization of site servicing and the financial burden (both upfront and on-going maintenance costs) this will place on the Municipality.</p>	<p>Noted and has been amended as requested. Please refer to Chapter C6.5. The SDF is aligned with DEA&amp;DP's <i>Settlement Restructuring: An Explanation Manual (March, 2009)</i> and the <i>Provincial Urban Edge Guidelines (December, 2005)</i>.</p> <p>Please refer to Chapter C6.5. The SDF is aligned with DEA&amp;DP's <i>Settlement Restructuring: An Explanation Manual (March, 2009)</i> and the <i>Provincial Urban Edge Guidelines (December, 2005)</i>.</p> <p>It should be noted that the SDF does make provision for the servicing of sites. Furthermore, the current sites are being serviced by the Municipality and the servicing of proposed sites have been discussed with the Municipality.</p>
4	<p>One of the proposals depicted on Plan C1: Witzenberg Spatial Vision is the Potential Economic Growth Corridor. The Corridor is depicted as uniform buffer zone with the R46 as the centre line. The Draft SDF does not provide clear guidance on:</p> <ol style="list-style-type: none"> <li>The extent of the corridor buffer zone.</li> <li>The type of development that should be encouraged and/or allowed to occur in the corridor buffer zone.</li> <li>The approach the Municipality should adopt when dealing with potential conflicting development proposals for</li> </ol>	<p>Noted. Please refer to Chapter B6 and Section C.</p>

	the corridor buffer zone. d)	
<b>CORRIDORS WHICH RUN INTO NEIGHBOURING MUNICIPALITIES</b>		
1	As mentioned above, Plan C1: Witzenberg Spatial Vision shows a Potential Economic Growth Corridor. This Economic Growth Corridor ends on the boundary of Witzenberg Municipality without acknowledging how it relates to the neighbouring municipality of the Breede Valley.	Noted and has been amended as requested.
2	Furthermore, the West Coast – Worcester Link, depicted on Plan C1: Witzenberg Spatial Vision, has not been included, or even referred to, in the Draft SDF. This is deemed to be major gap in the Draft SDF.	Noted and has been amended as requested.
<b>GENERAL COMMENTS</b>		
1	Plan C1: Witzenberg Spatial Vision depicts the Spatial Planning Categories (SPCs), and SPC sub-categories, for the entire Municipality. The Department is of the opinion that depicting the SPC sub-categories is confusing at this scale due to the closeness of the colours included in the key. It is proposed that only the major SPCs be represented at this scale.	It should be noted that on Plan C1: Witzenberg Spatial Vision only the Core, Buffer, Intensive Agriculture and main Urban SPCs are illustrated which are the mostly the major Spatial Planning Categories. In order to provide more clarity and detail; Plan C1 has been subdivided into 6 sub-plans (i.e. Plan C1.1. Tankwa, Plan C1.2 Ceres Karoo, Plan C1.3 Koue Bokkeveld, C1.4 Warm Bokkeveld, C1.5 Agter Witzenberg, and Plan C1.6 Land van Waveren) whereby every sub-plan focuses on a specific area of the Witzenberg Municipality.
2	According to Plan C1: Witzenberg Spatial Vision, Bokfontein, Inverdoorn, PAH Station, Bella Vista and others, are depicted as High Order Towns. It is crucial that final editing of the Draft SDF corrects these and other errors which could have serious implications on the Municipality.	Noted and has been amended as requested.
3	As stated previously, the Department acknowledges that the Draft SDF is the product of Municipality and should therefore be shaped by the wishes and needs of	The Sustainable Development Initiative (SDI) and Special Management Area (SMA) have been placed in Section D: Users' Toolkit in order to separate them from the

	<p>Witzenberg Municipality. It therefore acknowledges that the inclusion of the Sustainable Development Initiative (SDI) model of financing sustainability and the Special Management Areas (SMAs) is at the discretion of the Municipality. Despite this, the Department feels it is necessary to highlight its concern around the inclusion of these tools in the body of the Draft SDF. On previous occasions, the Department suggested that these tools be removed from the main body of the report and included as an annexure to the Draft SDF as 'options' for sustainability management.</p>	<p>main body of the document. It should be noted that the Toolkits serve as a manual for the interpretation and implementation of key concepts and proposals put forward in the document, and to inform the implementation thereof.</p> <p>Through the public participatory process it was evident that a great willingness was shown to implement the SDI approach with development proposals and applications.</p>
<b>CONCLUSION</b>		
1	<p>As mentioned earlier, the comments provided above do not duplicate the comments provided by this Department in letter dated 8<sup>th</sup> March 2012. However many of the comments contained in the above mentioned letter still remain.</p>	<p>Noted and has been addressed.</p>

### 3 ROAD NETWORK MANAGEMENT

Department of Transport and Public Works  
Road Network Management  
9 Dorp Street; Room 335  
**CAPE TOWN 8000**

(Attention: Me S Strydom)

<b>COMMENTS AND RESPONSES: FINAL CONSULTATIVE DRAFT SDF</b>		
<b>NO.</b>	<b>COMMENT</b>	<b>RESPONSE</b>
<b>RESPONSIBLE ROAD INSTITUTIONS</b>		
1	<p>To date this Branch is unaware if it has been approached regarding the Branch's road infrastructure maintenance and upgrading programmes and projects for inclusion in the Witzenberg Municipality's SDF. (Page 136 of F4.4.4. Service Standards: Roads and Streets and page 74 of Table C2 Urban Development Strategies Volume 3). .</p>	<p>The Witzenberg SDF has been in the process for over a year and all interested and affected parties were properly notified of the SDF process.</p> <p>It should be noted that it seems the comments received from the Road Network Management Branch were prepared on the previous Volume 1, 2 and 3 of the Witzenberg SDF and not the requested Final Consultative Draft of the Witzenberg SDF that was made available for comment</p>

		for period from 4 June until 13 August 2012.
2	<p>After a thorough review of the First Draft of the SDF, it is recommended that further detail on the responsible institutions for the roads network in the Municipality is required. The differences between the Municipal Road Authority and their street network and the Provincial Proclaimed Road Authority and its ownership of most of the rural road network needs to be clarified.</p> <p>In summary the rural road network in the Witzenberg Municipality consists of Proclaimed Provincial roads and under the authority and ownership of the Provincial Roads Authority. In addition it also must be kept in mind that all of the towns and settlements in the Municipality would have some proclaimed roads within their urban edges and developed area. A typical example of a proclaimed road in a town is the main road that runs through many of them in the rural areas. All the streets other than the proclaimed road network in the Witzenberg Municipality as the agent of the Department of Transport and Public Works maintains some of the provincial road network.</p> <p>Further clarification is also needed regarding the section of the draft document regarding the roads shown in the Witzenberg Integrated Development Plan (Page 74 of Table C2 Urban Development Strategies, Volume 3). The responsible institution for the road strategies as stated in the point, is not the Witzenberg Municipality and thus can not be included in their IDP budget.</p>	<p>Noted and has been amended as requested.</p> <p>Noted and has been amended as requested.</p> <p>Noted and has been amended as requested. It should be noted that Volume 3 was a previous draft of the SDF, and it was already amended in the Final Consultative Draft Witzenberg SDF which was for comment during the period of 4 June until 13 August 2012.</p>
<b>ACTIVITY CORRIDORS</b>		
1	This Branch suggests that the proposed Activity Corridors Policy Guidelines (D4.1, page 47 of Volume 2), the proposed policy guidelines for General Business Corridors	Noted. The SDF does not propose development in the road reserves.

	(page 50 of Volume 2) and the proposed Activity Streets Policy Guidelines (D5.1, page 55 of Volume 2) be reviewed. The main motive for this suggestion is that it must be kept in mind that all proclaimed roads are subject to an average road reserve width of 25m, (which can vary considerably depending on the specific road), with all proposed access points to these roads, as well as all structures, within the road reserve having to be approved by the Provincial Road Authority.	
2	In addition the <i>Road Access Guidelines (September, 2002)</i> are applicable for all proclaimed roads. The road access requirements need to be included in the spatial development proposals. These Guidelines seek to provide a balance between the demands for access and the need to protect the road infrastructure development, while at the same time ensuring adequate mobility in support of economic development of the area. As such, the guidelines would ensure that the safety and mobility functions of the road network would not be compromised.	Noted and has been amended as requested.
<b>CULTURAL LANDSCAPES</b>		
1	The Branch noted that in order to strengthen environmental and the cultural resources (F2 Scenic Routes and Passes, Potential Scenic Routes, Volume 1, page 100), the proposed SDF proposes to record, survey and declare a number of scenic routes (page 40 in Volume3) on the proclaimed provincial road network in the Witzenberg Municipal area. As scenic routes have spatial implications, this Branch would be supportive of any efforts to develop a policy or guidelines in respect of identification and development of scenic routes. Identification and development of scenic routes could contribute to the economic growth of the region. Since 'scenic routes' would have impacts on this Branch's efforts to provide the required guidelines for access control and the setting of priorities for maintenance	<p>Noted. Please refer to Toolkit D3 that deals with guidelines for development in cultural landscapes and scenic routes.</p> <p>Noted. No official policy has yet been prepared for scenic routes in the municipal area. It is proposed under Chapter A6.1 that a Municipal Tourism Strategy and Plan should be prepared, which should include directives for scenic route management.</p> <p>The importance of the Road Network Management Branch to the preparation of a scenic route policy is noted. The Witzenberg Municipality must conduct a full participatory process and the Road Network Management Branch should be included as an interested and affected party.</p>



	and upgrading of the proclaimed roads, it is proposed that their identification and recognition be in terms of overcrowding management guidelines or policies.	
2	The need for management guidelines or policies would have to be reflected in the Integrated Tourism Plan as well as the IDP as part of the strategies for the area. In addition it is a requirement that a full public participation process for the development of management guidelines or policies must be undertaken. This Branch as an affected party must be part of the participatory process when management guidelines or policies are drawn up. In addition this Branch would also provide any assistance required when drawing up policy for the integration of scenic routes with proclaimed road network of the abutting municipalities.	<p>Noted. Please refer to Toolkit D3 that deals with guidelines for development in cultural landscapes and scenic routes.</p> <p>Noted. In order to prepare management guidelines or policies for the integration of scenic routes with the proclaimed road network of the abutting municipalities a public participation process must be undertaken with the Road Network Management Branch as an interested and affected party.</p>
3	It must be noted that structures, advertising and information signage must be discussed with the District Roads Engineer in Paarl before being erected alongside any proclaimed roads. In addition the planning and construction of any stop-off and viewing points along the proclaimed road network has to adhere to certain standards and regulations. This Branch also has concerns regarding the benefits of a proposal to allow for informal trading in stop-off and viewing points. In regard to the proclaimed road network, it must be pointed out that the Roads Ordinance 19 of 1976 does not have the authority to allow for informal trading in stop-off and viewing points in the road reserves.	Noted and amended as requested.
<b>SPATIAL ANALYSIS</b>		
1	The proposed maps and plans presented in the First Draft on the whole do not present a detailed or clear indication of the differences between the existing and planned spatial development planning especially in regard to land use. They do not provide this Branch with the spatial analysis of the towns and	Noted and amended as requested. Please refer to Chapter 6.5.

	settlements of the Municipality. It is also unclear how the proposed urban edges of the towns and settlements were determined as no detail was provided.	
2	As such this Branch needs to be able to be clearly informed of spatial growth trends, including where the prominent growth patterns are, as well as issues with spatial implications, such as where the needs for education, health facilities are needed and other development needs.	Noted. Please refer to Chapter 6.5.
3	It was noted that only a few vacant sets of land in or near the town were identified for spatial development proposals. These were of such a prescriptive and detailed nature yet such complex forms of development provided that this Branch would find it difficult to provide recommendations as regards to the provincial roads network integration with the municipal streets at the level of a SDF.	It should be noted that the departure point for vacant land was conducted through the <i>Vacant Land Analysis</i> of the Witzenberg Municipality. Furthermore, other strategic land was identified to meet certain goals.  The urban edges in the SDF are aligned and comply with DEA&DP's <i>Settlement Restructuring: An Explanation Manual (March, 2009)</i> and the <i>Provincial Urban Edge Guidelines (December, 2005)</i> .
4	These shortcomings could have serious implications for the prioritization of the maintenance and upgrading of the Provincial Roads infrastructure in future. In addition provision of clear spatial analysis in the SDF will aid the promotion of integrated transport and land-use planning through the provision of technical input for the transport components of development planning for all road networks in the Municipality.	Noted.
<b>STRATEGIES</b>		
1	This Branch is pleased to see that an effort has been made to include in the Integrated Transportation Plan (Section C2.6, pages 61-62, Volume 3), many excerpts from the Local Transport Plan, for the formulation of the Urban Development Strategies (Page 64, Volume 3). In particular the Objective and first Strategy in the "Key Issue No. C2(b): Essential Urban Development" has been introduced. This should provide the	Noted.

	Municipality as well as all the affected sector departments with a more inclusive and comprehensive infrastructure planning tool for integrated and strategic planning.	
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#### 4 ANTON LOTZ TOWN AND REGIONAL PLANNING

Anton Lotz Town and Regional Planning  
P.O. Box 51799  
Waterfront 8002  
**CAPE TOWN 8000**

(Attention: Mr Anton Lotz)

COMMENTS AND RESPONSES: FINAL CONSULTATIVE DRAFT SDF		
NO.	COMMENT	RESPONSE
<b>PREVIOUS COMMENTS</b>		
1	Plan C6.3-6 for Tulbagh refers to the Ceres Urban Edge under Structuring Elements in the legend.	Noted and amended as required.
2	We note that Rem Erf 1365 and Erf 2455 to the west of Farm 187/29 have been earmarked for higher density housing. The western portion of Farm 187/29 should have a similar identification as this section of the site will also include a denser housing profile.	Noted. The areas in question have all been earmarked for residential purposes irrespective of housing densities.
3	Designation F.1.f allows Residential Areas for Farms 187/18 and 187/29. We would like to confirm that this spatial planning category does allow for residential related uses such as small-scale retail, office and recreational uses to form part of the precincts. This is particularly pertinent for the section of Farm 187/18 along the western edge of the prison where a mixed-use environment is envisaged along the public road to be constructed as part of the development. This portion is incorrectly designated as a narrow band of agriculture.	Noted regarding the western edge. The rest of the areas are just indicated as primarily residential areas in yellow shading. Further details regarding special uses in such areas should be dealt with on a local level with the municipality.
4	To the south of the private school there should be a further residential block as per the development plan submitted for consideration.	Noted and has been amended as requested.
5	The L-shaped entrance facility as shown on Plan C6.3-6 in the western corner of Rem farm 187 inside the proposed urban edge will include the winery, equestrian facilities as	Noted has been amended as requested. The designation has been changed to F.1.n which refers to 'Resort and Tourism Related

	well as commercial facilities such as retail, tourist-related retail (i.e. gallery, etc.). It is questioned whether the F.1.o designation Farmsteads and outbuildings is broad enough to allow the development intent of this node.	Areas’.
6	On Plan C6.4-6 the designation for Area B should refer to retirement village and higher density housing.	Noted. The designation for Area B is broad and does not designate different types of densities.
<b>COMMENTS AND SUGGESTIONS</b> <b>(A concept plan was attached)</b>		
1	We concur with the idea of establishing environmental management areas, <i>inter alia</i> to protect water quality and indigenous vegetation and to promote natural habitats for local flora and fauna with the flood plain of the Malkops and Meulstroom Rivers and their tributaries. The Meulstroom and Malkops Rivers as well as the Renosterveld Reserve will play an important role in the extension of the MOSS as part of this development.	Noted.
2	The Waverenskroon concept recognises the significance of the primary north-south scenic route, as one of the main ways in which the string sense of place of the sub-region is experienced. It strengthens it by the creation of a tourist-related node (consisting, <i>inter alia</i> , of a hotel, a winery, wine-tasting and meeting place, with related facilities such as restaurants, spa and picnic space as well as nursery), abutting the route. This complex will be carefully designed to create the northern gateway into the town and to provide the town with a pronounced sense of arrival. This node together with the indicated hotel and guesthouse precinct extend the Van der Stel Street tourism precinct towards the north. We propose the Van der Stel Street corridor to be classified as part of the tourism precinct.	Noted and amended as requested.
3	It is felt the SDF does not go far enough in strengthening the importance of Van der Stel Street as a scenic route. The weakest part of this experience is towards the centre of the town. While Church Street is one of the best	Please refer to Chapter B2.5.5 in Section B and Toolkit D3.

	<p>small town streets in the Western Cape, the main road is excessively wide relative to the height of the buildings on its edges. We believe that this central zone should be subject to a focused urban design/landscape project. With intelligent and creative design and landscaping, we believe that it is possible and desirable to transform this entire precinct into one of the most memorable small town experiences in the Western Cape. It is important that the sites between the prison and the town, as well as in future possibly the street edge of the prison site be encouraged to develop appropriate tourism-related mixed-use development. Landscaping, walk ways, bicycle paths, bus/taxi stops must be implemented along Van der Stel Street to upgrade this route.</p>	
4	<p>We concur with the idea of strengthening the Steintal corridor as a vibrant mixed-use zone. The Waverenskroon concept builds on this by creating a secondary north-south connector which traverses and integrates of the town, all of which are made highly accessible. Commercial activities will take the form of living over work space and will be geared to a niche market. In no way will it compete with the existing business hub. The north-south connector route between the entrance of the development and the Steintal Corridor could in future play an important role in integration of the town with possibilities of mixed-use development and the development of local nodes (lower order neighbourhood nodes or specialty nodes) and public spaces happening and growing at strategic locations. In the short term this link over the Malkops River will be in the form of a footbridge.</p>	Noted.
5	<p>We are also considering the inclusion of larger agricultural properties along the Malkops River and on the edge adjacent to the sawmill which will relate to the urban agriculture ideals of the SDF</p>	Noted.

Department of Mineral Resources  
 09 Atterbury House, Cnr of Lower Burger and Riebeeck Street  
**CAPE TOWN 8019**

(Attention: Mr M.J. Koen)

<b>COMMENTS AND RESPONSES: FINAL CONSULTATIVE DRAFT SDF</b>		
<b>NO.</b>	<b>COMMENT</b>	<b>RESPONSE</b>
<b>COMMENTS</b>		
1	Heading of Comment: ‘Proposed Draft Spatial Development Framework, situated in the District of Ceres’.	It should be clearly stated and understood that the Witzenberg Spatial Development Framework is prepared not only for the ‘District of Ceres’ but for the entire Witzenberg Municipality which includes Ceres and all other settlements and their rural areas.
2	<p>Please note that for this Department to comment on this development we will need the following additional information:</p> <ul style="list-style-type: none"> <li>(i) 1:50 000 Locality Plan.</li> <li>(ii) List of farms/erven.</li> </ul>	<p>It is important to note that Spatial Development Framework for Witzenberg does not refer to or entail a specific development proposal. A Spatial Development Framework provides guidelines and directives to help decision-makers under the land-use planning statutes to determine the desirability of proposed developments by considering whether or not it is socially, economically and ecologically sustainable.</p> <p>In terms of Chapter 5 of the Municipal Systems Act 32 of 2000, each local authority in South Africa is required to compile an Integrated Development Plan (IDP) for its area of jurisdiction.</p> <p>Under Section 26(e) of the Municipal Systems Act 32 of 2000 it is required that a part of the IDP is the preparation of a Spatial Development Framework. A Spatial Development Framework reflects the spatial implication and vision combining the IDP and the budget together spatially.</p> <p>A Spatial Development Framework has the</p>

		status of a statutory plan, and serves to guide and inform all decisions made by the Municipal Council on spatial development and land-use management in the applicable area of jurisdiction.
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## 6 WEST COAST DISTRICT MUNICIPALITY

West Coast District Municipality  
58 Long Street  
**MOORREESBURG 7310**

(Attention: Me D Kotze)

### COMMENTS AND RESPONSES: FINAL CONSULTATIVE DRAFT SDF

NO.	COMMENT	RESPONSE
<b>COMMENTS</b>		
1	I refer to your letter dated 12 June 2012 notifying the West Coast District Municipality of the availability of the Witzenberg Draft SDF. You are hereby informed that the West Coast District Municipality has no comment on the Draft SDF.	The Service Provider kindly appreciates the notification of the West Coast District Municipality.

## 7 DEPARTMENT OF AGRICULTURE

Department of Agriculture  
Land Use Management  
3<sup>rd</sup> Floor, Main Building, Muldervlei Road  
**ELSENBURG 7607**

(Attention: Mr C. van der Walt)

### COMMENTS AND RESPONSES: FINAL CONSULTATIVE DRAFT SDF

NO.	COMMENT	RESPONSE
<b>COMMENTS</b>		
1	I discussed the latest draft SDF of Witzenburg with DEA&DP (i.e Tania de Wall and Laurel Robertson) and raised the Western Cape Department of Agriculture's (WCDOA) concerns around the urban edges. We agreed that DEA&DP would also comment on behalf of the WCDOA's, as our concerns around the urban edge delineations are the same. For this reason it was not deemed necessary to write separate comments.	Noted.  The Service Provider kindly appreciates the notification of the Department of Agriculture.  The Service Provider did receive comments from DEA&DP (Ref: E17/3/4/3-CW4) regarding the Final Consultative Draft of the Witzenberg Spatial Development Framework. The comments from DEA&DP

		are addressed under Chapter 2 above of this report.
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## 8 DEPARTMENT OF ECONOMIC DEVELOPMENT AND TOURISM

Department of Economic Development and Tourism  
Regional and Local Economic Development  
80 Georges Mall  
**CAPE TOWN 8001**

(Attention: Mr M. Lakay)

COMMENTS AND RESPONSES: FINAL CONSULTATIVE DRAFT SDF		
NO.	COMMENT	RESPONSE
<b>COMMENTS</b>		
1	One of the general strategies indicated in the draft Spatial Development Framework is to promote LED in the rural area. It is important to note that the Witzenberg municipality has an adopted LED strategy with clear key result areas, to be considered. The proposed SDF should especially consider the National LED Guidelines, to ensure that an enabling environment for economic/business activity is established and contributing to the Municipality's plans for local economic development.	Noted.  Important information of the adopted LED strategy for the Witzenberg Municipality has already been included in the SDF.  A reference and description of the National LED Guidelines has been included in the SDF. Please refer to Chapter B5.
2	The department wishes to draw the attention to the two provincial initiatives, the Rural Economic Assistance Fund (REAF) and RED Door mentioned in the draft SDF on page 75. These initiatives are not in existence anymore and could therefore not be identified as future key initiatives to promote LED in the area.	Noted and has been amended as requested.



CapeNature (Attention: Me K. Maree)  
 Scientific Services  
 Newlands Driver, Kirstenbosch Botanical Gardens, Centre for Biodiversity Conservation, Office 5  
**CLAREMONT 7740**

COMMENTS AND RESPONSES: FINAL CONSULTATIVE DRAFT SDF		
NO.	COMMENT	RESPONSE
<b>BIODIVERSITY COMMENTS AND RECOMMENDATIONS</b>		
1	<p>Section B2.3: We suggest making use of the NFEPA's, CBAs, Fine-scale Biodiversity Planning Project (FSP) Aquatic Ecosystem Guidelines and Olifants-Doring Reserve Determination study undertaken by Blue Science for this section. We also suggest referring to the original documents and not just those sections referenced in the SRK report as there is most likely additional information which might be relevant to this project.</p> <p>a) FEPA's should be used first to identify priority areas for conservation, or where best management practices should be applied. FEPA's are of particular importance with the identification of catchments that are priorities for ecological reserve determination (in conjunction with DWA targets) as well as fish sanctuaries which represent priority areas for fish conservation.</p> <p>b) CBA Maps should however be used in conjunction with the NFEPA products, especially within the provincial and municipal context, as CBAs provide a finer-scale informant for identifying important freshwater areas, e.g. CBA Maps should be used to prioritise action within FEPA sub-catchments which are also Ecological Support Areas (ascertained from the CBA Maps).</p> <p>c) The FSP Aquatic Ecosystem Guidelines are considered the most detailed, correct and relevant guidelines for the specific aquatic ecosystems found within large portions of this municipal area and</p>	<p>Noted and has been addressed. Please refer to Chapter B2.3 in Section B and Chapter C4.1.5 in Section C.</p> <p>Noted.</p> <p>Noted.</p> <p>Noted.</p>

	<p>should be referenced with regards to proper management of these ecosystems.</p> <p>d) As the above products will indicate, the Olifants-Doring catchment is particularly important for indigenous fish conservation which does not appear to be highlighted in Section B2.3.</p> <p>e) Similarly, it is important that the SDF highlight the importance of rehabilitating those sub-quaternal catchment which have been highlighted by the products as important for rehabilitation as well as ensure that those rivers which are currently in a good state remain in a good state.</p>	<p>Noted. Please refer to Chapter B2.4.2 in Section B.</p> <p>Noted.</p>
2	<p>Section B2.4.4: This section refers to 'Priority Areas for conservation planning' according to the 2007 IDP (Figure B1, page 86). What is not known is how these sites were identified and whether or not they are still relevant when considering the level of subsequent conservation planning which has occurred within the municipal area. It seems most unlikely that any further conservation planning will need to happen within the municipality. We therefore request that you provide a good explanation as to why 'priority attention should be given towards more planning' within the area and why the current Critical Biodiversity Area Maps are not deemed adequate.</p>	<p>Noted and has been amended. This section has been omitted since these priority areas are not indicated or referred to in the 3<sup>rd</sup> Generation Witzenberg IDP 2012-2017.</p>
3	<p>Section C1.1: We suggest amending the objectives of the SDF as highlighted in (a) to specifically include an aim of safeguarding the important underlying the important underlying green infrastructure of the municipality in order to support sustainable development.</p>	<p>Noted. Has been amended as requested.</p>
4	<p>Section C.1.2: The cross-walking between the CBA Maps categories and the SDF categories are mostly according to our recommendations. The only concern is that of the Mountain Catchment Areas which have been classified as B.b. This category is of a lower importance than the CBAs (A.b) or Ecological Support Areas (B.a). What is</p>	<p>Noted. Has been amended as requested.</p>

	important to note though is that within the MCAs, there are CBAs and ESAs. We therefore request that CBAs within MCAs are assigned A.b and the ESAs within MCAs are assigned B.a and only the remaining areas within the MCA are assigned the proposed B.B category.	
5	The composite Plan C2.3 should therefore to be amended accordingly (we do however apologise for possible interpretation inaccuracies based on the scale of the images).	Noted. Has been amended as requested.
6	Page 197 refers to CBA1 and CBA2 categories which are irreplaceable or important respectively. How were the CBA categories distinguished from one another and what definitions were adopted? The definitions also refer to being 'in intact' – is this fully intact or largely intact and how was it determined?	Noted. The distinguished categories of the Critical Biodiversity Areas 1 and 2 were defined according to guidelines provided by SANBI BGIS, CAPE and DEA&DP.
5	Section C4.1.4: (a) We see no reason as to why the preparation of a dedicated biodiversity conservation plan for the municipality should be prioritized. The CBA Maps should meet all objectives of such as proposed biodiversity plan.	Noted. Amended as requested and has been omitted from SDF document.
6	Section C4.1.5: It is unlikely that the spatial plan needs to include parts (c) or (g), as they have, to a large degree, been replaced by the CBA maps.	Noted. Amended as requested and has been omitted from SDF document.
7	Section D5.6.1: Page 283 (a) (iii) reads 'trees in riverine habitat should be needlessly destroyed' which we assume should read 'alien trees'.	Noted. Has been amended as requested.
8	Finally we would like to better understand how overlaps will be addressed in the composite maps. Have all Other Natural Areas been assigned a minimum of a C.b status? Does this imply that no natural land has been earmarked for settlement expansion? Are no CBAs also important expansion areas? At the scale of the images it is impossible to interrogate the exact cross-walking and we therefore request more detail on this please.	Noted. All 'Other Natural Areas' have been assigned a C.b status. The expansions proposed are not in sensitive areas and natural land should not be impacted by any urban development. However any expansion should undergo the normal environmental processes and be subjected to ground-truthing to establish what the impact is on the 'natural areas'.

National Treasury

(Attention: Mr. V. Mbunge)

Local Government Budget Analysis: Intergovernmental Relations

<b>COMMENTS AND RESPONSES: FINAL CONSULTATIVE DRAFT SDF</b>		
<b>NO.</b>	<b>COMMENT</b>	<b>RESPONSE</b>
<b>GENERAL COMMENTS</b>		
1	Has the Municipality submitted this Draft SDF to the department of Cooperative Governance as the lead Department in IDP given that the SDF is a component of the IDP?	The draft SDF was made available for the all interested and affected parties between 4 June and 13 August 2012.
2	Can the municipality provide us with the rating of its IDP?	Please contact the Witzenberg Municipality to provide the necessary information regarding the rating of the IDP.
3	The municipality recognizes the environmental concerns and has addressed them as well as the socio-economic concerns.	Please refer to Section B of the SDF.
4	Relevant Planning and Development principles are recognised but it remains to be seen what projects and budgeting is going to be developed coming from these projects.	Noted. The SDF is aligned with the Witzenberg IDP 2012-2017 which describes the various projects with their respective budget analysis. Furthermore, the SDF is aligned with 'Housing Pipeline' of the Witzenberg Municipality which includes all housing projects proposed for the municipal area.
5	Given the identified uses, the SDF should address the issues of adequate infrastructure and the planning thereof (i.e. roads, electricity, and storm water).	The issues of adequate infrastructure and the planning thereof have been addressed in the SDF and are aligned with municipal sectoral plans and strategies. Please refer to Section B and Section C of the SDF.
6	Are these the only projects that the municipality aims to achieve and are these annual projects or not?	Please contact the Witzenberg Municipality to provide the necessary information regarding projects, etc.
7	The municipality should also provide an indication of previous targets achieved so that one gets a sense of the spatial transformation since the last SDF of the municipality was prepared.	Please contact the Witzenberg Municipality to provide the necessary information regarding targets that were achieved.
8	The municipality to provide an overall sense	The SDF in the process to be finalized, and

	of how this SDF was received by its Council.	only when it is completed will it be able to rate how the SDF will be received by Council. Please contact the Witzenberg Municipality.
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**DENNIS MOSS PARTNERSHIP**



# DENNIS MOSS PARTNERSHIP

Architects • Urban & Regional Planners • Environmental Planners  
Landscape Architects • Urban Designers

## WITZENBERG SPATIAL DEVELOPMENT FRAMEWORK FINAL PHASE STAKEHOLDER PARTICIPATION REPORT

### 1 PUBLIC AND STAKEHOLDER GROUPS

Consultation and communication with stakeholders comprised an integral component of the Witzenberg Spatial Development Framework (SDF). The preparation of the SDF has been informed by public and stakeholder input at various points of process, as prescribed by the Land Use Planning Ordinance 15 of 1985 and the Local Government: Municipal Systems Act 32 of 2000. A comprehensive public and stakeholder consultation process was undertaken to:

- a) Raise awareness about the Witzenberg SDF development process.
- b) Source the most relevant and latest data for inclusion in the assessment and reports.
- c) Present initial findings of the different Volumes of the SDF and the draft consultative SDF.
- d) Solicit comments on the draft Volumes of the SDF and the consultative draft SDF.
- e) Provide feedback on the results of the process.

To optimise the efficiency of the public and stakeholder consultation process, different groups of stakeholders were identified, who were engaged at different stages of the process:

- (i) Project Working Group (PWG): Comprised of the Service Provider (i.e. Dennis Moss Partnership) and the representatives of the Witzenberg Municipality which deals with the day-to-day project management of the SDF.
- (ii) Project Management Committee (PMC): Representatives of the Witzenberg Municipality, Department of Rural Development and Land Reform, Department of Environmental Affairs and Development Planning, Cape Winelands District Municipality and the Service Provider formed this committee that dealt with the overarching project management and supervision of the project.
- (iii) Project Steering Committee (PSC): This Committee included representatives and stakeholders from the Witzenberg Municipality, Department of Rural Development and Land Reform, Department of Environmental Affairs and Development Planning, Cape Winelands District Municipality, Service Provider and Sectoral Representatives of Witzenberg Municipality and other relevant representatives identified as required. The Project Steering Committee verified and endorsed recommendations and comments of the Project Management Committee.



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Directors: DF Moss, URP [SA] BA M [URP] M SAPI • GC de Klerk, URP [SA] B Econ M [URP] M SAPI • M Le Roux-Cloete, Pr Arch, BAS, B Arch [UCT], MIArch, CIA  
SW vd Merwe, Pr Sci Nat, NHD (Nature Conservation) SACNASP • JMH Lackay, Pr S Arch, T MIArch • PJ Niemann, Pr Arch, B Arch [UFS] MIArch, CIA

- (iv) Key Stakeholders that included representatives of other government departments as well as organisations and/or institutions that have jurisdiction in the area and have provided and/or verified information to be used in drafting the SDF.
- (v) The general public includes all stakeholders that might be interested in and/or affected by the SDF project, and includes representative bodies such as ratepayers' associations, heritage committees and other local organisations.

The public consultation process followed for the Witzenberg SDF was in line with the requirements as stipulated in the Land Use Planning Ordinance 15 of 1985 and Municipal Systems Act 32 of 2000.

## **2 MEETINGS AND WORKSHOPS**

### **2.1 PROJECT WORKING GROUP**

Various meetings and discussions were held on an on-going basis through the entire SDF process with representatives of the Witzenberg Municipality and representatives of the Service Provider.

### **2.2 PROJECT MANAGEMENT COMMITTEE**

The PMC was established during the Project Inception Phase, with the first PMC meeting held in Cape Town on 6 April 2011. The purpose of the meeting was to introduce the project team, discuss the proposed approach to be followed pertaining to the preparation of the SDF, prepare and refine the official schedule of the time frame and payment framework, as well as identifying key issues and information sources.

Furthermore, it was discussed and agreed upon that the Project Management need to have about 2 to 3 weeks for a comment period for each phase as set-out in the Project Plan. At this meeting, the Service Provider explained and described what the Inception Phase report entailed and discussed the way forward pertaining to the SDF process etc.

It was also stipulated that meetings between the PMC and PSC need to be separated. It was agreed upon that it was important to have meetings with the PMC and PSC at different venues. The *Service Level Agreement* was signed and agreed upon on 28 October 2011 by all representatives of the PMC.

### **2.3 PROJECT STEERING COMMITTEE**

Through the SDF process a number of meetings were held through the various stages of the Witzenberg SDF process. It also included a meeting on 5 March 2012 at an IDP Forum workshop with the PSC, Municipal Council, and sectoral representatives of the Witzenberg Municipality. The most recent meeting of the PSC was on 29 May 2012.

## **2.4 KEY STAKEHOLDERS**

A number of meetings and discussions were held with key stakeholders to inform the drafting of the SDF. Meetings included *inter alia* with representatives of the various sectoral departments of Witzenberg Municipality, Department of Agriculture, Department of Rural Development and Land Reform, etc. and private investors or property developers.

## **2.5 GENERAL PUBLIC**

The general public were invited to comment on the consultative draft SDF which was formally advertised and had time to voice their opinion. This included all interested and affected parties that might be interested in the SDF process.

# **3 ADVERTISEMENTS AND RELEASE OF DOCUMENTS FOR COMMENT**

## **3.1 COMMENT PERIOD FOR GENERAL PUBLIC**

The consultative draft SDF of May 2012 was formally advertised for public scrutiny and/or comment by the Witzenberg Municipality in the *Witzenberg Herald* on 1 June 2012. Members of the public were requested to submit written comment on the draft SDF between 4 June and 4 July 2012 to the Municipal Manager. The draft SDF was also available for download on the official website of the Witzenberg Municipality. Copies of the consultative draft SDF were available at public libraries and offices of the Witzenberg Municipality, throughout all of the major towns within Witzenberg.

Public open days were held from 4 to 8 June 2012 with representatives of the Service Provider and the Municipality present to assist the public and other interested and affected parties with comments and queries. The public open days were held at the following designated venues:

- 4 June 2012: Ceres, Ceres Town Hall
- 5 June 2012: Tulbagh, Tulbagh Chamber Hall
- 6 June 2012: Wolseley, Wolseley Chamber Hall
- 7 June 2012: Prince Alfred Hamlet, Prince Alfred Hamlet Town Hall
- 8 June 2012: Op-die-Berg, Op-die-Berg Aksent Hall

## **3.2 COMMENT PERIOD FOR PROJECT MANAGEMENT COMMITTEE AND PROJECT STEERING COMMITTEE**

Commenting periods for the various volumes of the draft SDF were determined and agreed upon by the PSC. Nonetheless, in order to accommodate requests by Government Departments, institutions and organisations, at the time, the commenting periods were extended and a certain degree of leeway applied to accommodate deadlines.

The respective volumes of the draft SDF were made available for the PMC and PSC during each phase, as indicated by the Project Plan, on CDs, hard copies. The documents were also uploaded on the website of the Witzenberg Municipality, and a FTP File was generated on the website of Dennis Moss Partnership to access the respective documents. The commenting periods of the respective volumes of the draft SDF were as follows:



ACTIVITY	TIMEFRAME	RESPONSIBLE COMMENTING AUTHORITY
<b>Volume 1: 1<sup>st</sup> draft</b>	27 July to 11 August 2011	PMC
<b>Volume 1: 2<sup>nd</sup> draft (Updated with previous comments)</b>	28 October to 2 November 2011 (Period was extended to 7 November 2011)	PMC
<b>Volume 1: 3<sup>rd</sup> Consultative draft</b>	18 November to 9 December 2011 (Presentation to PSC on Volume 1 on 18 November 2011)	PSC
<b>Volume 1: Approved on 20 January 2012</b>		
<b>Volume 2 and Volume 3 (Simultaneous submission as agreed upon by Project Plan and PMC)</b>	27 January to 24 February 2012 (Comments received on 7 March 2012)	PMC
<b>Volume 2 and Volume 3</b>	5 March to 10 April 2012 (Presentation to IDP Forum on 5 March 2012 and Presentation to PSC on 12 March 2012)	IDP Forum and PSC
<b>1<sup>st</sup> Consultative draft SDF (All three Volumes incorporated into a single document as agreed to on 11 April 2012 by DRDLR, Witzenberg Municipality and Service Provider)</b>	11 May to 25 May 2012 (Presentation to PSC on 29 May 2012 - comments received during latter meeting were incorporated into the Final Consultative draft SDF)	PMC and PSC
<b>Final Consultative draft SDF</b>	4 June to 4 July 2012	Public and I&APs
<b>Final Consultative draft SDF</b>	4 June to 13 August 2012 (included commenting period as prescribed by LUPO)  Comments received up to 5 September 2012  Received and accepted comments after 13 August 2012	Number of Government departments and institutions

Attached under Annexure 1 are the comments received and minutes relating to the meetings held with the PMC, PSC, and public open days.

It is certified that all stakeholders have been provided with adequate opportunities to become involved in the drafting of the Witzenberg SDF as required by the Service Level Agreement. The Service Provider has, at own cost, undertaken additional information meetings and allowed for extended commenting periods.

A handwritten signature in dark ink, appearing to read 'Dennis Moss', is positioned above the company name.

**DENNIS MOSS PARTNERSHIP**

# **ANNEXURE 1: MINUTES**

## **WITZENBERG SPATIAL DEVELOPMENT FRAMEWORK**

### **STAKEHOLDER PARTICIPATION PROCESS**

**4 to 8 June 2012**

**15h00 – 19h00**

On Friday 1 June 2012 an advertisement appeared in the Witzenberg Herald, notifying members of the public of the Spatial Development Framework (SDF) drafting process Witzenberg Municipality is currently involved with. Members of the public were informed of the purpose of the SDF and the legislation in terms of which the SDF is being prepared.

The notice furthermore informed the reader of the locations where the SDF could be viewed, the intended public open days and the period within which comments may be submitted.

The sections below provide a summary of the comments made during the mentioned open days that were held in the respective towns in Witzenberg.

#### **1 MINUTES OF PUBLIC OPEN DAYS**

Dennis Moss Partnership was represented by the following persons that facilitated the public open days at the designated venues:

- Jacques Volschenk
- Alexander Rehder
- Louis Schlechter

**CERES:  
CERES TOWN HALL  
4 JUNE 2012**

**Attendance:** No person of the public or any other stakeholder attended the public open day.

**Comments:** No comments were received.

**TULBAGH:  
TULBAGH CHAMBER HALL  
5 JUNE 2012**

**Attendance:**

- Councilor John Veschini

**Comments:**

1. It was commented that no new industrial nodes or areas should be allocated for Tulbagh. More than half of Tulbagh's industrial services (i.e. services, large warehouses, storages, etc.) are not in use and have not been for 15 years. Furthermore, the land allocated for

industrial uses will have a major visual impact due to its site's elevation. Wolseley is regarded as one of the industrial hubs of the Witzenberg Municipality. Industrial development or proposed industrial areas should rather be planned for Wolseley and Tulbagh Road in order to grow their local economy and ensure job growth opportunities.

2. It was suggested to protect, improve and expand the 'green lung' (i.e. river corridor) running through Tulbagh from west to east, as is the case in Ceres. This will promote the natural sense of the town and attract more tourists.
3. Tulbagh is a rural settlement and should also be promoted as such. It is important to keep this 'rural sense of place' character in Tulbagh and its surrounds. Tulbagh should be promoted and seen as a destination where visitors can relax and enjoy the rural beauty of the area. Most development proposals should be focused to promote this rural tourism setting of Tulbagh.
4. Tulbagh should be developed and be regarded as the new Franschhoek in Witzenberg. It should become a very important tourist attraction for Witzenberg and should be developed in a manner that benefits tourism to the maximum.
5. The proposed 'higher density housing' area north of the Malkops River should not be allowed and the area should be earmarked for medium and lower density residential purposes. Tulbagh does not have a high density housing development.
6. Any future development proposals and projects, especially in the eastern parts of Tulbagh, should expand in an organic manner and not in a too structured manner. This will ensure that Tulbagh keeps its rural character. In fact, any east-bound development should be for low density development purposes.
7. A major issue in Tulbagh is the high unemployment levels, low tax base, etc. Seasonal workers need to become more productive and help to expand the economic base of Tulbagh.
8. Investment is needed in Tulbagh and therefore it is critical that the best land is protected and used to attract investment of developers. The existing tax base is too small to keep Tulbagh's economy going.
9. Tulbagh needs services such as plumbing, panel beaters etc, low-key industries that could potentially provide employment for the poor communities. Tulbagh needs interventions with regards to production and manufacturing services.
10. Reinstate the caravan park or let the municipality sell the land or swap it for another portion of land. The land upon which the caravan park is located could be subdivided and sold to increase the municipal tax base.
11. Noise pollution is a problem in Tulbagh, especially the noise originating from the sawmill.
12. It was suggested that the urban edge of Tulbagh be greatly expanded in the south, and to include the Sagtevei farm and the proposed Schalkenbosch golf estate development within the urban edge. The Sagtevei farm is an ideal area for low density development, and for an 'agri-village'-type development. These areas have low agricultural potential and are ideally suitable for residential development. Furthermore, the urban edge should be expanded on the eastern side of Tulbagh.
13. The lack of participation of the public in the SDF process could be that people in general are just apathetic, and indifferent.

**WOLSELEY:  
WOLSELY CHAMBER HALL  
6 JUNE 2012**

**Attendance:**

- Delphine de Jager
- Sandile Mbane
- Anthony Silberberg

**Comments:**

1. Are there any land reform projects earmarked for Wolseley?
2. It was commented that people were not aware of the SDF-process and that people should make an effort to be part of the process since it is an important aspect of municipal planning and development. If more people are part of the SDF process, better management and planning could be achieved in the Municipality.
3. A number of issues were raised relating to **Tulbagh** and not *Wolseley per se*.
  - i) It was questioned whether the proposed Waverenskroon development was really necessary for the town:
    - a) Is there enough water for the development?
    - b) Where will people work that live in the development? There are no jobs or employment opportunities in Tulbagh as it is?
    - c) Will this development provide an economic impetus for Tulbagh and its people?
    - d) Is there an access road or linkage from Market Street across the river to Waverenskroon?
  - ii) In general, for any new and proposed development in Tulbagh and its surrounds, where and who will provide the water?
  - iii) Witzenberg Municipality destroyed the beautiful caravan park, which, in turn, destroyed the town's tourism sector. The caravan park was a stunning and popular tourist attraction for many years – it should be reinstated and be developed to its former glory.
  - iv) It was suggested that before investing any new developments in Tulbagh, it would wise to invest in the caravan park.
  - v) Get tourism flourishing again, expand accommodation infrastructure and encourage people to admire the beauty of Tulbagh and its surrounding natural beauty. Motorcyclists form a valuable market for the tourism industry in Tulbagh.

**PRINCE ALFRED HAMLET:  
PRINCE ALFRED HAMLET TOWN HALL  
7 JUNE 2012**

**Attendance:**

- Jos Khan
- Peter Wolfaardt
- Adrian Wolfaardt
- Lesley Wolfaardt

- Martin Smith
- Pietie Wolfaardt
- Stefan du Plessis

### **Comments**

1. Generally, the proposals and quality of the SDF maps were well-received by all stakeholders. All stakeholders were impressed by what is proposed for Prince Alfred Hamlet and the municipality as a whole, and that the distinctive rural character of the town will not be compromised.
2. Stakeholders were impressed by the research and information-gathering process that manifested on the respective plans.
3. It was reported that that only a few people knew about the SDF process. The attendees however committed themselves to notify more people of the process in order to enhance the value of the SDF.
4. It was recommended that the Ceres Museum be contacted to obtain additional information on the cultural landscapes and historic sites, which might not be included on a database of heritage authorities such as HWC and SAHRA. It was reported that Witzenberg has a number of valuable geological formations and a great number of historic farmsteads that are of historic value and also important for the tourism industry.
5. It was commented that the railway system be reinstated between Wolseley and Ceres, and that the railway could be a great asset to the Municipality. The railway would be ideal for the movement of industrial produce, passengers, tourism amenity, etc.
6. The importance of tourism in Prince Alfred Hamlet and the Municipality as a whole was highlighted and requested that the SDF should emphasize this. It was stated that the potential of tourism in in Witzenberg is under-utilized. For instance, the AfrikaBurn festival in the Tankwa Karoo attracts a great number of tourists that drive through Prince Alfred Hamlet. These tourists should also be 'channeled' to Prince Alfred Hamlet for a longer period of time.
7. At least three more crèches are needed in Prince Alfred Hamlet.
8. The proposed community food gardens received high acclaim amongst the participants.
9. It is important that Prince Alfred Hamlet does not loose its rural and unique sense of place. In order to maintain and enhance this sense of place, the principles of critical regionalism and place-specific planning is ideal for future planning of the area.
10. One of the major issues in Prince Alfred Hamlet and Ceres is the lack of a designated parking area (i.e. truck stop) for large vehicles or trucks. Such a designated truck-stop also needs overnight facilities.
11. The proposed toll gate corridor will have a major impact on the routes that trucks and vehicles will use through the Witzenberg Municipality.
12. The identified 'economic growth corridor' on Plan C1 was well-received by stakeholders, as this corridor is already used by more trucks to avoid the weight bridge. The proposed toll gate will ensure that more people will use the identified corridor.
13. The importance of the R355 was emphasized and it was questioned whether this road would be tarred or remain as a gravel/sand road.
14. The identified urban egde for Prince Alfred Hamlet was well-received and all stakeholders supported the notion that no further industrial expansion is needed for Prince Alfred Hamlet and that the area allocated for industrial activities is sufficient.

**OP-DIE-BERG:  
OP-DIE-BERG AKSENT HALL  
8 JUNE 2012**

**Attendance:** Only one person attended the open day in Op-die-Berg.

**Comments:**

1. The attendee was amazed by the extent of the SDF in terms of area and key aspect that it aims to address.
2. Interest was expressed in the housing deliverables at Op-die-Berg, especially the projects that forms part of the housing pipeline programme. The stakeholder was in agreement that no land for further expansion of the town is available, other than private agricultural lands.

## WITZENBERG SPATIAL DEVELOPMENT FRAMEWORK

### PROJECT STEERING COMMITTEE (PSC) MEETING: MINUTES

29 May 2012

10:30

WITZENBERG MUNICIPALITY, MUNICIPAL BOARDROOM, VOORTREKKER STREET, CERES

ITEM	DISCUSSION
Opening & Welcoming	<p>Mr. Hennie Taljaard chaired the meeting and welcomed everybody. He gave a short history of the project and mentioned that a number of meetings were held with DMP and the Witzenberg Municipality regarding the Spatial Development Framework (SDF). He also stipulated that the SDF went through a commenting period over the last 3 months that was thorough and that key issues were addressed. Furthermore, he was very content with the progress that was made with the SDF and with the comments received that were incorporated into the SDF. He also stipulated the following:</p> <ul style="list-style-type: none"><li>• All municipal managers were invited, and only Adriaan Hofmeester apologized. He was disappointed that so few of the managers attended the meeting. Also he stated that it is important that managers and councilors attend these meetings as their input and/or comment is valuable to the SDF process.</li><li>• He noted that a public notice will appear in the <i>Witzenberg Herald</i> regarding the public participatory process and for the public to comment on the SDF. The commenting period will run from 4 June until 4 July 2012. The open days or public meetings will be held between 4 and 8 June 2012. Documents of the SDF will be made available at all libraries in the Witzenberg Municipality and the SDF could be downloaded from Witzenberg Municipality website.</li></ul> <p>Mr. Taljaard stated that he hoped that the SDF will be finalized in the next couple of months before the end of 2012. It all depends on the additional comments to be received from provincial departments, and when DEADP approved the SDF.</p>
Attendance & Apologies	<p>All parties present introduced themselves. An attendance register was circulated for signatures.</p> <p><b><u>Members present:</u></b></p> <ul style="list-style-type: none"><li>• Me. Melodie Campbell (DRDLR)</li><li>• Mr. Ashley Ravidutt (DRDLR)</li><li>• Me. Nomfundo Mkhize (DRDLR)</li><li>• Mr. Hennie Taljaard (Witzenberg Municipality)</li><li>• Mr. David Frost (DOCS)</li><li>• Me. Laurel Robertson (DEADP)</li></ul>



	<ul style="list-style-type: none"> <li>• Me. Charlotte Mackenzie (Witzenberg Municipality)</li> <li>• Mr. Ryan van der Merwe (Witzenberg Municipality)</li> <li>• Mr. Johnny Jacobs (Witzenberg Municipality)</li> <li>• Mr. Prins Carlo (Department of Health)</li> <li>• Me. Jennie Samson (DRDLR)</li> <li>• Mr. SW van der Merwe (DMP)</li> <li>• Mr. Schalk van der Merwe (DMP)</li> <li>• Mr. Jacques Volschenk (DMP)</li> <li>• Mr. Alexander Rehder (DMP)</li> </ul> <p><b><u>Apologies:</u></b></p> <ul style="list-style-type: none"> <li>• Mr. Adriaan Hofmeester (IDP Manager)</li> <li>• Me. Leona Bruiners (DRDLR)</li> </ul>
Purpose of the Meeting	Discussion and presentation of the first Consultative Draft of the Spatial Development Framework for the Witzenberg Municipality.
Presentation by DMP of the Consultative Draft Witzenberg SDF	<p>Presentation was made by SW van der Merwe.</p> <ul style="list-style-type: none"> <li>• Mr. van der Merwe also mentioned that it is disconcerting that most managers and councilors did not attend the meeting. He also stated that it is a problem that has been encountered from the inception of the SDF.</li> <li>• The presentation was an overview of the SDF process to date, what the SDF entails in terms of structure and content, and what progress has been made to date.</li> <li>• It was stated that further discussion of the respective plans will be encouraged at the public meetings and that the public and other stakeholders can comment through the allotted commenting period that runs over a month.</li> <li>• Mr. van der Merwe mentioned that the SDF, in its current form, is a product of the last 3 months during which valuable input and comment were received from all stakeholders.</li> <li>• Mr. van der Merwe categorically thanked everyone that commented on the SDF and stated that the comments were well-received and incorporated into the First Consultative Draft.</li> <li>• Mr. van der Merwe stated that the SDF should be a short and concise document as requested by Mr. Taljaard and Me. Bruiners, which would also be a workable product to be used by all managers, councilors and other stakeholders.</li> </ul>

<p>Comments and Questions</p>	<p>The following comments and questions were received on the presentation.</p> <ul style="list-style-type: none"> <li>• Mr. Taljaard was impressed with the progress of the SDF, and was very much appreciative of the quality of maps and the document itself. He commented that the SDF was on the right track and will be a handy document for the Witzenberg Municipality.</li> <li>• Mr. Frost had a number of comments regarding the SDF, namely:       <ol style="list-style-type: none"> <li>1. He liked the document. It was very professional and was pleased with its format.</li> <li>2. He was concerned of lack of representation of the councilors and municipal managers, and also the absence of provincial officials attending the meeting.</li> <li>3. He commented that the SDF should incorporate issues such as community safety, urban design pertaining to crime prevention, traffic calming, etc.</li> <li>4. He wanted to know if the IDP and SDF are running concurrently. It was commented that SDF is closely aligned to the IDP, however, the SDF commenced when the IDP for Witzenberg was already starting. But, the 3<sup>rd</sup> Generation IDP for Witzenberg will be incorporated into the SDF.</li> <li>5. He referred to the revival of the railway system and its importance to the Witzenberg area.</li> <li>6. He referred to the PSO3 Strategy of Department of Transport and Public Works of the Western Cape to be incorporated into the SDF. This strategy is about increasing access to safe and efficient transport. It is important to link transport and community safety in the SDF.</li> <li>7. He is preparing comments on the SDF that will be forwarded to the service provider.</li> <li>8. He had questions regarding the projected population growth and how will this impact public transport, etc. Are there guidelines pertaining to traffic calming, non-motorized Transport (NMT), etc.?</li> </ol> </li> <li>• <u>Mr. van der Merwe responded to the questions and statements:</u> <ol style="list-style-type: none"> <li>1. Mr. van der Merwe thanked Mr. Frost for his positive critique and comments, and stated they are very helpful and will be addressed in the SDF.</li> <li>2. The SDF is a concise product and document and does give strategies on numerous aspects of the Witzenberg Municipality. It is proposed that the SDF will create linkages to Mr. Frost's strategies and guidelines as the SDF is powerful document when it is approved. An approved SDF gives power to corporate governance which ultimately ensures that all applicable policy and legislation should be adhered to, which will include the PSO3 strategy. Reference will therefore be made to the relevant strategy in the SDF so that when the SDF is approved, the Witzenberg Municipality and all other responsible parties should give effect to the PSO3 and other policies.</li> </ol> </li> </ul>
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	<p>3. Mr. van der Merwe stated that the SDF has been in the process for the last 13 months, and it is a pity that Mr. Frost only now entered the process as his comments are valuable and appreciated.</p> <ul style="list-style-type: none"> <li>• Me. Robertson explained that in the 3<sup>rd</sup> generation IDPs more emphasis will be placed on the importance of the SDF. She also explained the significance of the proposed Spatial Planning and Land Use Management Act (SPLUM) and the proposed Land Use Planning Act (LUPA) with regards to the preparation of an SDF. Both of these proposed Acts are still in draft format. It is noted that an SDF is an important document and policy. Furthermore, LUPA will eventually be the act in terms of which an SDF will be approved.</li> <li>• Me. Robertson also stated that the SDF should include 'every component of life'. Mr. Taljaard responded that an SDF should include most aspects of the municipality and to include everything will take so much time before it will be approved. Furthermore, he stated that stakeholders can comment on the SDF but that the timeline should be respected. He again stated that he was very happy with the progress made so far with the SDF, and that SDF should be finalized as soon as possible.</li> <li>• Mr. Johny Jacobs stated that two centralized waste sites are planned for the Cape Winelands District Municipality, one on either side of the mountain. Mr. David Frost responded by questioning what the impact on transport infrastructure, recycling, etc. might be. He suggested that the railways be used to ship waste to certain parts of the province.</li> <li>• Mr. Frost stated that more credit should be given to the railway system and better management should be instituted pertaining to railways in the Witzenberg area.</li> <li>• Me. Robetson stated that she and Mr. Taljaard would, on a separate occasion, discuss specific aspects with regard to the urban edge delimitation, but commented on the overall quality of the current SDF.</li> <li>• Me. Charlotte Mackenzie stated that she is only interested in the land that should be made available in Tulbagh and Wolseley to accommodate backyard dwellers. The specific land parcels was pointed out to Me. Mackenzie who accepted it as such.</li> </ul>
Information Distribution	<p>It was confirmed that the public meetings would be held at the following venues and dates from 15:00 in the afternoon to 19:00 in the evening:</p> <ol style="list-style-type: none"> <li>a) 4 June 2012: Ceres.</li> <li>b) 5 June 2012: Tulbagh.</li> <li>c) 6 June 2012: Wolseley.</li> <li>d) 7 June 2012: Prince Alfred Hamlet.</li> <li>e) 8 June 2012: Op-die-Berg.</li> </ol>

	<p>The public meetings would be in the form of an open day which would encourage members of the public to scrutinize the draft SDF on their own time. The open day would also aim to encourage members of the public to engage more freely with the service provider and municipality and to voice their concern. Maps will be printed and displayed at these venues in aid to illustrate the various land-use proposals.</p>
<p>The Way Forward</p>	<p>The deadline of the 4<sup>th</sup> of July 2012 was confirmed for the submission of comments to the municipality.</p> <p>In addition to the 30-day commenting period for the general public, it was brought under the attention of the chairman that state Departments would have an addition 30 days within which to submit their comments. The closing date for state Departments are effectively 4 August 2012.</p> <p>Once all comments have been collated, assessed and considered, it will be incorporated into the SDF and then finalized for submission to the Witzenberg Council for approval in terms of the Local Government: Municipal Systems Act, 32 of 2000. Once approved, the SDF will be forwarded to the MEC: Local Government, Environment and Planning for approval in terms of the Land Use Planning Ordinance 15 of 1985.</p>

## WITZENBERG SPATIAL DEVELOPMENT FRAMEWORK

### MINUTES OF THE MEETING OF 11 APRIL 2012

10:30

OFFICES OF THE DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM, 63 STRAND STREET, CAPE TOWN

ITEM	DISCUSSION
1. Opening and Welcome	Me. Leona Bruiners from the Department of Rural Development and Land Reform (DRDLR) welcomed all parties to the meeting which was requested by Dennis Moss Partnership.
2. Attendance	<ul style="list-style-type: none"><li>• DRDLR (Me. Leona Bruiners)</li><li>• Witzenberg Municipality (Mr. Hennie Taljaard)</li><li>• Dennis Moss Partnership – Service Provider (Mr. SW van der Merwe)</li><li>• Dennis Moss Partnership – Service Provider (Mr. Jacques Volschenk)</li></ul>
3. Discussion	<p>The purpose of the meeting was to discuss procedural and strategic issues emanating from the process to date. The following aspects were raised and discussed:</p> <ul style="list-style-type: none"><li>a) Update on the process since the IDP Forum meeting of 5 March 2012.</li><li>b) Consultation and public participation.</li><li>c) Ownership of the SDF.</li><li>d) Timeline and way forward.</li></ul> <p><b>a) <u>Update of the process</u></b></p> <p>Mr. Jacques Volschenk from Dennis Moss Partnership reported on the process since the IDP Forum meeting of 5 March 2012.</p> <p>He referred to a memorandum of 3 April 2012 prepared by Dennis Moss Partnership which, in detail, described the actions that took place since 5 March 2012. These actions included a presentation of the completed volumes of the SDF to the Witzenberg Council on 12 March 2012 and interaction with several Departmental Managers.</p> <p>Reference was also made to the distribution of the draft volumes of the SDF to the various Councilors for comment and input.</p> <p>Mr. Hennie Taljaard commented that the Councilors were provided with a CD of the draft volumes of the SDF and that they were requested to submit their comment by Friday 20 April 2012.</p> <p><b>b) <u>Consultation and public participation</u></b></p> <p>Mr. SW van der Merwe questioned to what lengths the service provider should go to consult with Departmental Managers and interested parties</p>

	<p>in general. Examples were provided of several occasions where the service provider requested parties to contact them.</p> <p>Mr. Taljaard mentioned that he was satisfied with the consultation to date, especially in lieu of the Councilors' involvement. The matter was considered closed.</p> <p><b>c) <u>Ownership of the SDF</u></b></p> <p>The matter of ownership of the SDF was raised by Mr. van der Merwe. He questioned who the SDF is being prepared for, Witzenberg or the Provincial Government of the Western Cape. DMP had been under the impression that Witzenberg Municipality wanted a dedicated and place-specific SDF which materially complies with the PSDF but which is not a watered-down version of the latter. Mr. Taljaard reiterated that the Witzenberg SDF has to be a dedicated and place-specific SDF and committed himself to defending this stance as may be required.</p> <p><b>d) <u>Timeline and way forward</u></b></p> <p>Given the additional requests and consultation, it was jointly decided that the final draft SDF be made available on the <b>11<sup>th</sup> of May 2012</b>. An executive summary would also be made available on this date.</p> <p>The Project Steering Committee (PSC) would then be awarded two weeks to study the final draft and submit their comments by the <b>25<sup>th</sup> of May 2012</b>.</p> <p>During the following week, on either <b>28 or 29 May 2012</b>, the PSC meeting would take place in a location to be arranged between Witzenberg Municipality and the DRDLR.</p> <p>It was proposed that the final draft SDF then be advertised and the public informed of information sessions to be held in the week of <b>4 – 8 June 2012</b> in Ceres, Tulbagh, Wolseley, Prince Alfred Hamlet and Op Die Berg. The service provider will assist with the preparation of the advertisement of the information sessions.</p> <p>With regard to the amended timeline, Me. Bruiners recommended that Dennis Moss Partnership draft a letter to the DRDLR requesting them for additional time to complete the project. This request should be based on the additional requests received and consultation sessions held, which had not been part of the original project plan and timeline.</p>
4. Closure	<p>Mr. van der Merwe briefly explained what the final draft SDF would entail and how the three volumes of the present draft SDF would be incorporated into a single document.</p> <p>Me. Bruiners expressed her satisfaction with the structure and content of</p>

	<p>the final SDF as explained.</p>
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The meeting closed at 12:00.

## WITZENBERG SPATIAL DEVELOPMENT FRAMEWORK

### PROJECT MANAGEMENT COMMITTEE (PMC) MEETING: MINUTES

28 October 2011

10:00

DRDLR, 63 Strand Street, Nedbank Centre, 6<sup>th</sup> floor, Cape Town

ITEM	DISCUSSION	RESPONSE / ACTIONS TO BE TAKEN
Opening & Welcoming	Leona Bruiners welcomes everyone.	
Attendance & Apologies	<p>An attendance register was circulated for signatures.</p> <p><u>Members present:</u></p> <ul style="list-style-type: none"> <li>– Leona Bruiners (DRDLR)</li> <li>– Raudhiyah Dien (DEADP)</li> <li>– Nomfundo Mkhize (DRDLR)</li> <li>– Bulelwa Semoli (DRDLR)</li> <li>– Hennie Taljaard (Witzenberg Mun)</li> <li>– Tania De Waal (DEADP)</li> <li>– Laurel Robertson (DEADP)</li> <li>– Nomfundo Mkhize (DRDLR)</li> <li>– SW van der Merwe (DMP)</li> <li>– Tania Volschenk (DMP)</li> <li>– Alexander Rehder (DMP)</li> </ul> <p><u>Apologies:</u></p> <ul style="list-style-type: none"> <li>– Quinton Balie (CWDM)</li> <li>– Emmanuel Jeje (DRDLR)</li> </ul>	Attendance register attached as Annexure 1 to PMC Meeting 28 October 2011 Minutes.
Adoption of PMC Meeting 11 Aug 2011 Minutes	<p>Minutes to be adopted subject to the following amendments:</p> <ul style="list-style-type: none"> <li>– Page 2: <i>General Comments</i>: It should read as follows: The comments of the “<i>review</i>” of the PSDF will only be finalized after the Witzenberg SDF. However, the approved PSDF 2009 is valid and the principles stated in the PSDF 2009 should be applied in the Witzenberg SDF.</li> <li>– Page 2: <i>Cross-Boundary Relationships</i>: The letter / memo prepared by DMP regarding cross-boundary relations between the neighbouring municipalities (i.e. Northern Cape municipality, etc.) and the Witzenberg Municipality is an on-going process and should be addressed at the appropriate time. It is important to include the West Coast District Municipality as part of the</li> </ul>	<p>DMP to amend 11 Aug 2011 PMC Meeting Minutes.</p> <p>Amended minutes attached as Annexure 2 to PMC Meeting 28 October 2011 Minutes.</p>



	<p>cross-boundary relationship with the Witzenberg Municipality.</p> <ul style="list-style-type: none"> <li>– Page 3: DEADP did receive the letter from DMP regarding the LUPO process.</li> <li>– Page 3: DMP has received the Critical Biodiversity Area maps.</li> </ul>	
LUPO Process	<ul style="list-style-type: none"> <li>– Quick discussion on the LUPO process to be followed.</li> <li>– DEADP requests amendments to the official letter sent by Witzenberg Municipality.</li> <li>– Short discussion in re approval of SDF in terms of the Municipal Systems Act (MSA) or LUPO – which is the ‘superior’ legislative framework? The MSA will approve a SDF on a national level whilst LUPO will approve a SDF on provincial level. DEADP stated that the issue is currently been addressed by the Department and it’s an ongoing debate although it has not been tested.</li> </ul>	DMP to revise LUPO letter to DEADP via Witzenberg Municipality.
Comments & Issues on 2 <sup>nd</sup> Draft Witzenberg SDF Vol 1	<p><u>Discussion in re DMP’s response on comments received on the 1<sup>st</sup> Consultative Draft Witzenberg SDF Volume 1</u></p> <p>(Comments 4, 5, 6, 8, 10, 12, 17, 24, 25, 33, and 39 of the ‘Response on Comments’ received deals with restructuring of Volume 1)</p> <ul style="list-style-type: none"> <li>– <u>Comment 1:</u> No problem.</li> <li>– <u>Comment 2:</u> Has been addressed. The content of Volume 1 does comply with the guidelines and requirements of the Inception Phase Report.</li> <li>– <u>Comment 3:</u> The Volume 1 is too bulky and incorporates too much theory which may confuse the reader. However, it is important to include a section on theory because this forms the basis for the other Volumes to follow and provides the necessary support for the rationale of the SDF.</li> <li>– <u>Comment 7:</u> It was stated that the general principles of the DFA must be highlighted in Volume 1. However, there is no merit to highlight the principles of only one piece of legislation, because then the principles of all relevant legislation frameworks need to be highlighted. As stated the Witzenberg Municipality is obliged to adopt all fundamental principles contained in relevant legislation.</li> </ul>	Concluded that these principles are important as they are site-specific and written specifically for Witzenberg Municipality.

	<ul style="list-style-type: none"> <li>- Discussions were held regarding Section A2.2 of Volume 1 on the fundamental principles of the Witzenberg SDF. These are general principles based upon a number of different legislation frameworks, and incorporates different legislative frameworks and policies. H Taljaard confirmed that these principles are important and referred to the importance of the 'due process' principle.</li> </ul>	<p>H. Taljaard and other PMC members to work through principles and comment before 2 November 2011 as to whether they should be kept or not.</p> <p>Omit sentence <i>'The SDF is based on fundamental principles derived from applicable government policy and legislation such as NEMA'</i>.</p> <p>Delete Draft Spatial Planning and Land Use Management Bill needs to be removed from Volume</p>
	<ul style="list-style-type: none"> <li>- <u>Comment 9:</u> Replace 'human well-being' with 'social equity'.</li> <li>- <u>Comment 11:</u> It is important to stipulate how the policies and legislative frameworks have implications for the Witzenberg Municipality. It is suggested that only a sentence or paragraph be added to each policy and/or legislative framework in order to explain its applicability to the Witzenberg Municipality.</li> <li>- <u>Comment 13:</u> Approved.</li> <li>- <u>Comment 14:</u> Approved.</li> <li>- <u>Comment 15:</u> DEADP suggested that statements made on behalf of Municipality, i.e. sentences on page 47 to page 48 in Volume 1 that state that the "Witzenberg Municipality <i>supports</i> the principle...", be re-worded. E.g. it could read "it's a legal requirement...". However, H Taljaard preferred the current format of the sentences – 'strong statement'.</li> <li>- <u>Comment 16:</u></li> <li>- <u>Comment 18:</u> The issue regarding land reform is currently being addressed by DMP and DRDLR.</li> <li>- <u>Comment 19:</u> DMP did request the 3 CRDP status quo reports although no response</li> </ul>	<p>Concluded that H Taljaard to provide clarity regarding such statements throughout SDF by 2 November 2011.</p> <p>Concluded that H Taljaard to provide comment regarding this matter by 2 November 2011.</p>

	<p>was attained from DRDLR. However, at the meeting the three CRDP status quo reports were saved on a CD and given to DMP.</p> <ul style="list-style-type: none"> <li>- <u>Comment 20</u>: A short description should be given on the functional relationships between the towns and the relationships between the towns and the rural/agricultural land. However, it will be comprehensively addressed in Volume 2.</li> <li>- <u>Comment 21</u>: A short description should be given on the cross-boundary functional relationships. However, it will be comprehensively addressed in Volume 2.</li> </ul>	
	<ul style="list-style-type: none"> <li>- <u>Comments 22</u>: The Spatial Planning Categories (SPCs) of Figure D3 on page 29 must be aligned with the SPCs of Figure E9 on page 99. In other words the SPCs should be aligned with EMF and the PSDF. DMP has amended as requested. Although, DEADP suggested that SPC D, E and F as illustrated by Figure D3 fall under a SPC named 'Settlements'. This requires a new numbering system for the SPC table.</li> <li>- <u>Comment 23</u>: Refer to Comment 22.</li> <li>- <u>Comment 26</u>: Has been addressed.</li> <li>- <u>Comment 27</u>: Accepted.</li> <li>- <u>Comment 28</u>: Accepted.</li> <li>- <u>Comment 29</u>: Accepted.</li> <li>- <u>Comment 30</u>: Accepted.</li> <li>- <u>Comment 31</u>: Refer to Comment 7.</li> <li>- <u>Comment 32</u>: Removed from Volume 1.</li> <li>- <u>Comment 34</u>: The guidelines, principles and indicators of the EMF will not be replaced. The 'Environmental Constraints and Development Plan' is another mechanism to indicate and to determine where and what type of development can be undertaken. It is based upon a vacant analysis study for the Witzenberg Municipality.</li> <li>- <u>Comment 35</u>: Accepted. The EMF informs the categories for development suitability in accordance with the PSDF principles.</li> <li>- <u>Comment 36</u>: Accepted.</li> <li>- <u>Comment 37</u>: Accepted.</li> <li>- <u>Comment 38</u>: Accepted.</li> <li>- <u>Comment 40</u>: Refer to Comment 11.</li> <li>- <u>Comment 41</u>: Refer to Comment 11.</li> </ul>	<p>DEADP to provide new SPC numbering system by 2 November 2011 taking into consideration of the sub-sub-categories.</p>

	<ul style="list-style-type: none"> <li>- <u>Comment 42</u>: Accepted.</li> <li>- <u>Comment 43</u>: Accepted.</li> </ul>	
Comments and Issues	<p><u>Comments &amp; Issues relating to suggestions made by PMC pertaining to restructuring of Volume 1 (suggestions attached as Annexure 3):</u></p> <ul style="list-style-type: none"> <li>- <u>Section A2.1</u>: It was suggested that this section be removed from Volume 1, although it is an important section that supports the creation of a ‘developmental state’ in the Witzenberg Municipality. These are general statements for the future planning of the Witzenberg Municipality, especially the ‘broadening of the economic base’ which implies the growing of the economy in the municipal area. Comment was made on the ‘application of new technologies that is not being applied in production process’ –_this may refer to the use of renewable energy sources, etc.</li> <li>- DEADP made a comment that the heading is slightly misleading and maybe this section should only refer to the generic function of a SDF.</li> <li>- <u>Section A2.2</u>: Refer to Comment 7 above.</li> <li>- <u>Section A2.4</u>: The service provider agreed that the section on ‘adjudication of applications’ be removed and dealt with in the land-use management section, but not in Volume 1.</li> <li>- <u>Section B1</u>: The service provider noted that the Provincial Growth and Development Strategy be replaced with the Provincial Strategic Objective/Plan.</li> <li>- <u>Section B2</u>: Accepted by the service provider.</li> <li>- <u>Section B1.2</u>: It was accepted that the model for financing sustainable development be shifted to Volume 3 of the Witzenberg Municipality.</li> <li>- <u>Section B1.3</u>: Refer to Section B1.2.</li> <li>- <u>Section B1.4</u>: It was noted by the service provider to delete the duplication of triple bottom line.</li> <li>- <u>Section B1.5</u>: It was suggested to delete this section but the service provider feels that it is important to leave this section.</li> </ul>	<p>Concluded that H Taljaard to provide clarity regarding this matter by 2 November 2011.</p> <p>Concluded that DEADP will comment in detail regarding this matter by</p>

2 November 2011.

The importance of private/public partnerships is important to achieve a state of sustainable development.

- DEADP commented that section belongs in an IDP and not in SDF.
- Section C: It was agreed that the heading “Planning *principles* adopted for the SDF” be replaced by “Planning *approach* adopted for the SDF”.
- Discussion was held regarding bioregional planning and the placement of certain headings of Section D. Bioregional planning is the gist of the Volume 1. It was agreed that the current format of heading be left unchanged, but a relook of this Section is suggested.
- Section D: It is suggested to maybe include the sections of Biosphere Reserves, and System of Protected Nature Areas in Volume 3.
- Section D.2: It was agreed to include this section in Volume 2.
- Section D.3: This section on ensuring appropriateness of municipal boundaries is important for bioregional planning, and the establishment of bioregions. It was agreed to reshuffle this section and maybe include it as part of Section D1.
- Section D.4.4: It is suggested and agreed that this section be included in Volume 3 as models for establishing integrated land management areas.
- Section D.5: It is suggested and agreed that this section be included in Volume 3 as an optimal strategy.
- Section E: It is suggested that the International programs and conventions, and maybe national legislative and policy frameworks be included as an Annexure in Volume 1.
- Section E1.2.1: Include this section on the Cape Winelands Biosphere Reserve under District level.
- Section E.3.3: The Provincial Growth and Development Strategy should be replaced by Provincial Strategic Objective/Plan.
- Section E3.4: It was suggested that this section be replaced by the “rural land use planning and management guidelines” but

	<p>it was agreed that these rural guidelines will be supplemented to this section.</p> <ul style="list-style-type: none"> <li>– <u>Section E5:</u> Include the Human Settlement Plan for the Witzenberg Municipality from the Cape Winelands District Municipality as prepared by MCA Planners.</li> <li>– <u>Section F:</u> DEADP, DRDLR and Witzenberg Municipality have not completed commenting on 2nd Consultative draft of Volume 1.</li> <li>– <u>Section F, Map 4 on page 104:</u> Does not indicate Ward 5.</li> <li>– It was suggested by DEADP that under section F4.2.1 the number of hospitals, beds and clinics available in the Witzenberg Municipality be included.</li> </ul>	Comments relating to Section F and other sections of Volume 1 to be submitted to service provider by 2 November 2011
Discussions <i>in re</i> Project Plan	<ul style="list-style-type: none"> <li>– DMP discussed with DRDLR that the National SDF Guidelines are only guidelines and not an official Act.</li> <li>– Concluded that the project plan is still on track with the agreed time frame.</li> <li>– DMP informed PMC that the draft data sets of the EMF will only be available in middle November 2011, after which it will be open for discussion and public scrutiny. The final data-sets of the EMF will only be available by January 2012.</li> <li>– L. Bruiners agreed to go on with the available project plan and agreed that certain data will be lacking in the different Volumes before the end of 2011 since the final data of the EMF will only be available in beginning 2012.</li> <li>– The <u>Service Level Agreement</u> was.</li> </ul>	
Information distribution	<ul style="list-style-type: none"> <li>– DMP is currently preparing a hand-out brochure for the Witzenberg Municipality describing the SDF process. This is to be distributed to the public and other interested and affected parties at the public meetings.</li> <li>– Discussions were held regarding the roller banner explaining the SDF process of the Witzenberg Municipality. This roller banner will be present at all public meetings.</li> </ul>	
Dates for PSC Meeting	<ul style="list-style-type: none"> <li>– 18 November and 22 November 2011 were suggested for 1<sup>st</sup> PSC Meeting.</li> </ul>	L Bruiners to confirm date for 1 <sup>st</sup> PSC Meeting by 4 November 2011.
Way Forward	<ul style="list-style-type: none"> <li>– It was agreed that all other comments</li> </ul>	

	<p>relating to Volume 1, 2<sup>nd</sup> Consultative draft be provided by 2 November 2011.</p> <ul style="list-style-type: none"> <li>– The advert for the Witzenberg SDF should include a reference that the Witzenberg SDF replaces the Cederberg SDF.</li> <li>– The final amendment SDF of Volume 1 will be given to H Taljaard which will be presented to the Witzenberg Municipality Council.</li> </ul>	
Closure	<ul style="list-style-type: none"> <li>– SW van der Merwe thanked all PMC members for their constructive input into the drafting of the Witzenberg SDF.</li> <li>– L Bruiners closed the 2<sup>nd</sup> PMC meeting.</li> </ul>	

## WITZENBERG SPATIAL DEVELOPMENT FRAMEWORK

### PROJECT MANAGEMENT COMMITTEE (PMC) MEETING: MINUTES

11 August 2011

09:00

DENNIS MOSS PARTNERSHIP, STELLENBOSCH

ITEM	DISCUSSION	RESPONSE / ACTIONS TO BE TAKEN
Opening & Welcoming	SW van der Merwe welcomes everyone.	
Attendance & Apologies	<p>An attendance register was circulated for signatures.</p> <p><u>Members present:</u></p> <ul style="list-style-type: none"> <li>– Leona Bruiners (DRDLR)</li> <li>– Emmanuel Jeje (DRDLR)</li> <li>– Nomfundo Mkhize (DRDLR)</li> <li>– Bulelwa Semoli (DRDLR)</li> <li>– Hennie Taljaard (Witzenberg Mun)</li> <li>– Tania De Waal (DEADP)</li> <li>– Makhegu Mabunda (DEADP)</li> <li>– Laurel Robertson (DEADP)</li> <li>– Qiton Balie (CWDM)</li> <li>– SW van der Merwe (DMP)</li> <li>– Tania Volschenk (DMP)</li> <li>– Alexander Rehder (DMP)</li> </ul>	
Purpose of the Meeting	<ol style="list-style-type: none"> <li>1. Discussion of key matters as it relates to the 1<sup>st</sup> Consultative Draft of Volume 1 of the Witzenberg Spatial Development Framework (SDF).</li> <li>2. Discussion of recent developments, i.e.:               <ol style="list-style-type: none"> <li>a) Amendment of the Witzenberg Municipal Area</li> <li>b) Alignment of Witzenberg IDP and SDF processes.</li> </ol> </li> </ol>	<p>This is noted by PMC.</p> <p>Concluded by PMC that SDF and IDP processes can be aligned. This however has implications for the SLA and project plan.</p> <p>DMP to revise project plan and discuss amendment of SLA with L Bruiners (DRDLR).</p>



<p>Comments and Issues</p>	<p><u>Comments &amp; Issues relating to 1<sup>st</sup> Consultative Draft of Witzenberg SDF Volume 1:</u></p> <p style="text-align: center;"><b>GENERAL COMMENTS</b></p> <ul style="list-style-type: none"> <li>- The review of the PSDF will only be finalised after the Witzenberg SDF.</li>   <li>- It is important to include issues and aspects of the approved 4/6 Cederberg Spatial Development Framework (2002). An area of the Cederberg Spatial Development Framework does fall in the Witzenberg SDF, and needs to be incorporated into the Witzenberg SDF.</li> </ul> <p style="text-align: center;"><b>INTEGRATED DEVELOPMENT PLANNING</b></p> <ul style="list-style-type: none"> <li>- It is important to merge the IDP meetings with SDF meetings since the IDP meetings are better attended.</li> <li>- Furthermore, the SDF process should be aligned with IDP meetings as the municipal area of the Witzenberg has grown extensively and it includes new areas, new communities, etc. This has a huge impact on the Census data for the Witzenberg SDF, etc.</li> </ul> <p style="text-align: center;"><b>CROSS-BOUNDARY RELATIONSHIPS</b></p> <ul style="list-style-type: none"> <li>- It is important to have cross-boundary relations with the neighbouring municipalities of the Northern Cape, such as Hantam and Karoo Hoogland.</li> <li>- This is a provincial issue, and DEA&amp;DP should facilitate this process.</li> </ul>	<p>Concluded that 2009 PSDF to be used in drafting of the Witzenberg SDF.</p> <p>Concluded that Cederberg SDF be amended and re-advertised for the purposes of withdrawing that portion of the Cederberg SDF represented by the Witzenberg SDF.</p> <p>DMP to prepare Memo via DRDLR (L Bruiners) to Witzenberg Municipality (H Taljaard) providing background information relating to SDF process and way forward. This is to be discussed by Mr Taljaard with the Municipal Manager.</p> <p>Concluded that DMP is to prepare a memo on behalf of DEA&amp;DP (for attention – Tania de Waal) relating to the facilitation and promotion of the cross-boundary relationships between the Western Cape and Northern Cape through the Witzenberg SDF.</p> <p>Concluded that this is an ongoing matter which will be addressed at an appropriate time.</p>
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	<p style="text-align: center;"><b>GET MORE PEOPLE INVOLVED</b></p> <ul style="list-style-type: none"> <li>- It is requested that more people from the Witzenberg Municipality be involved in the SDF-process such as tourism, business, engineering services, etc.</li> </ul>	<p>Witzenberg Mun's mailing list to be provided to DMP.</p>
	<p style="text-align: center;"><b>CAPE WINELANDS EMF</b></p> <ul style="list-style-type: none"> <li>- It is very important that the Witzenberg SDF be aligned with the Cape Winelands EMF.</li> <li>- Also be aligned with the Spatial Planning Categories of the EMF.</li> </ul> <p style="text-align: center;"><b>SPATIAL PLANNING CATEGORIES</b></p> <ul style="list-style-type: none"> <li>- It is important that the SPCs of the PSDF be incorporated into the Witzenberg SDF</li> <li>- However, the SPCs of the Bioregional Planning Manual currently incorporated into the Witzenberg SPCs are different. Both policy documents were approved by the Provincial Government.</li> <li>- It is important that the Witzenberg SDF incorporate the SPCs of both policy documents. However, a problem arises due to the fact that the Bioregional Manual makes provision for Intensive and Extensive Agriculture categories, while no provision is made in the PSDF for extensive agriculture.</li> <li>- The question is posed if the 'sub-categories of the SPCs' as indicated in the Bioregional Planning Manual may be used for the Witzenberg SDF.</li> <li>- Can different shadings be used to include the SPCs of the Bioregional Planning Manual although they are not same as the SPCs in the PSDF?</li> <li>- The SPCs used in the Witzenberg SDF should be same as the SPCs as indicated in the PSDF and Cape Winelands EMF.</li> <li>- Another option is to amend the SPCs and through the public participation process indicate which SPC category is applicable to the Witzenberg SDF. For instance, Extensive Agriculture as indicated in the Bioregional Planning Manual cannot be classified as Buffer 2 as indicated by the SPC classification of the PSDF. This issue needs to be clarified.</li> </ul>	<p>DMP &amp; SRK are meeting on 24 August 2011 to discuss alignment.</p> <p>Concluded that Table 2 and Figure 10 be amended to make provision for the main categories of the PSDF and EMF.</p>
Way Forward	<ul style="list-style-type: none"> <li>- Critical Biodiversity Area (CBA) mapping has</li> </ul>	

	<p>been done for the old DMA area and it is included in the 2<sup>nd</sup> Consultative Draft Document.</p> <ul style="list-style-type: none"> <li>- Everyone is afforded another 2 to 3 weeks to work through 1st Consultative Draft of Vol 1.</li> <li>- 1st Consultative Draft to be amended and presented for approval to the Steering Committee on a date to be confirmed by DRDLR.</li> <li>- SLA and payment schedule to be amended in consultation with DRDLR and DMP.</li> <li>- DMP to draft notification letter on behalf of Witzenberg Mun to DEADP in terms of LUPO.</li> </ul>	<p>Final comments to reach DMP no later than 31 August 2011. PSC Meeting to be confirmed by DRDLR.</p>
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