

# EDUMBE SPATIAL DEVELOPMENT FRAMEWORK

FINAL - SDF 2018/2019



# TABLE OF CONTENTS

<b>SECTION A: INTRODUCTION</b>	<b>10</b>
<b>CHAPTER 1: BACKGROUND AND PURPOSE</b>	<b>10</b>
INTRODUCTION	10
PURPOSE OF THE REPORT	10
WHAT IS A SPATIAL DEVELOPMENT FRAMEWORK	11
LEGAL AND POLICY IMPERATIVES	11
RELATIONSHIP WITH OTHER PLANS	12
DEFINING THE STUDY AREA	13
STRUCTURE OF THE DOCUMENT	14
STUDY OBJECTIVES	15
<b>SECTION B STATUS QUO</b>	<b>17</b>
<b>CHAPTER 2: STATUS QUO OF eDUMBE MUNICIPALITY</b>	<b>17</b>
2.1 LEGISLATIVE ENVIRONMENT	17
2.1.1 South African constitution and principles of sustainable development (No. 108 of 1996)	17
2.1.2 Municipal Systems Act (No. 32 of 2000)	18
2.1.3 National Environmental Management Act (No 107 of 1998)	19
2.1.4 Social Housing Act (No. 16 of 2008)	20
2.1.6 The KwaZulu-Natal Heritage Act (No 4 of 2008)	23
2.1.7 SPATIAL PLANNING AND LAND USE MANAGEMENT ACT NO 16 of 2013 (SPLUMA)	23
2.2. POLICY ENVIRONMENT	24
2.2.1 Provincial Growth and Development Strategy 2016	24
2.2.2. National Spatial Development Perspective	28
2.2.3. The New Growth Path	30
2.2.4. National Development Plan 2030	32
2.2.5. The Comprehensive Rural Development Programme Framework	36
2.2.6 Social Housing Policy	37
2.2.7 Provincial Spatial Economic Development Strategy (PSEDS)	40
2.2.8 National Spatial Development Perspective (NSDP)	41
2.2.9. Sustainable Development Goals	49
2.3. Conclusion	53
<b>CHAPTER 3: THE PHYSICAL ENVIRONMENT</b>	<b>54</b>
3.1. THE NATURAL ENVIRONMENT/STRATEGIC ENVIRONMENTAL ASSESMENT	54
3.1.1 Topography	54
3.1.2 Slope Analysis	54
3.1.3 Geology	55
3.1.4. Soils	60
3.1.5. Water Catchment	62
3.1.6 Climate	68
3.1.7 Open Space and Conservation	69
3.1.7.1 Irreplaceability Analysis	71
3.1.8. Vegetation	73
3.2 THE HUMAN ENVIRONMENT	76

3.1.1. Land Tenure	76
3.1.2. Population Density	76
3.1.3. Human Footprint	85
3.1.4. Broad Municipal Land Use	85
3.1.5. Cultivated land	85
<b>3.2. INFRASTRUCTURE</b>	<b>90</b>
3.2.1. Electricity Network	90
3.2.2. Public Transportation	90
3.2.3. Access to Water	95
3.2.4. Access to Sanitation	96
<b>3.3. Social Environment</b>	<b>101</b>
3.1.1. Access to Healthcare facilities	101
3.1.2. Access to Educational facilities	106
3.1.3. Access to Community Facilities	109
<b>3.3. Human Settlement</b>	<b>117</b>
3.3.1 Predominantly Scattered Low-Density Rural Settlements	117
3.3.2 Peri – Urban and Semi –Urban Settlement	118
3.3.3 Urban Settlements	118
<b>3.4. Financial Environment</b>	<b>121</b>
3.4.1. Tourism	124
3.4.2. Agriculture	127
3.4.3. Mining	131
<b>3.5 Provincial SDF</b>	<b>134</b>
3.5.1. Principle of Sustainable Communities	136
3.5.2. Principle of Economic Potential	137
3.5.3. Principle of Environmental Planning	137
3.5.4. Principle of Sustainable Rural Livelihoods	137
3.5.5. Principle of Spatial Concentration	138
3.5.6. Principle of Local Self-Sufficiency	138
3.5.7. Principle of Co-ordinated Implementation	139
3.5.8. Principle of Accessibility	139
3.5.9 Principle of Balanced Development	139
<b>Chapter 4: Paulpietersburg CBD</b>	<b>141</b>
<b>4.1 Background</b>	<b>141</b>
<b>4.2 CBD Survey</b>	<b>143</b>
4.2.1 Time in operation	143
4.2.2 Annual Turnover	144
4.2.3 Number of employees	144
4.2.4 Customers	145
4.2.5 General concerns of businesses	145
<b>4.3 CBD Zonings</b>	<b>146</b>
<b>4.4 Land use analysis</b>	<b>148</b>
<b>4.5 Overall CBD Development and Function</b>	<b>150</b>

<b>SECTION C: DEVELOPMENT VISION, STRATEGIES &amp; OBJECTIVES</b>	<b>152</b>
<b>CHAPTER 5: SPATIAL REPRESENTATION OF THE IDP</b>	<b>152</b>
<b>5.1 Municipal Development Vision</b>	<b>152</b>
5.1.1 Status of the IDP on District and Local levels	152
5.1.2 Spatial Interpretation of the IDP Vision	152
5.1.3 Spatial Alignment between District and Local Development Vision	153
<b>5.2 Municipal Development Mission</b>	<b>154</b>
<b>5.3. Municipal Development principles and strategies</b>	<b>155</b>
<b>5.4. Long term Spatial Vision</b>	<b>162</b>
<b>5.5 Spatial Development Objectives and Strategies</b>	<b>162</b>
5.5.1 SPATIAL JUSTICE	162
5.5.2 Spatial sustainability	164
5.5.3 Spatial Efficiency	166
5.5.4 Spatial Resilience	167
5.5.5 Good Administration	167
<b>5.6 Spatial Development Objectives</b>	<b>170</b>
<b>CHAPTER 6: DELINEATION OF THE URBAN EDGE</b>	<b>171</b>
<b>6.1 Understanding the Concept</b>	<b>171</b>
<b>6.2. Concerns Commonly Underpinning Urban Edge Policies</b>	<b>173</b>
6.2.1 Eradicating Sprawl and Promoting Urban Compaction	173
6.2.2 Protecting Important Elements within Urban Settlements	175
6.2.3. Promoting Small-Scale Agriculture	175
6.2.4. Managing Urban Wastes	176
6.2.5. Issues of Sustainability and Recycling	177
6.2.6. Co-ordination of Line and Point Bulk Services to Achieve Efficiencies	177
6.2.7. Avoiding Hazards	177
<b>6.3 Synthesis</b>	<b>178</b>
<b>6.3. Guidelines for Delineating the Urban Containment Edge</b>	<b>179</b>
<b>6.5 Guidelines for defining where Development should not go</b>	<b>180</b>
6.5.1. Principles	180
<b>6.6 Conclusion</b>	<b>183</b>
<b>CHAPTER 7: SPATIAL DEVELOPMENT CONCEPT</b>	<b>186</b>
<b>7.1 INTENDED FUTURE LAND USES</b>	<b>186</b>
7.1.1 Conservation/ Eco-Tourism/Environmental Management zones	186
7.1.2 Agricultural Areas	188
7.1.3 Infill areas	189
7.1.4 Residential areas	190
7.1.5 Development area requirements for expansion	191
<b>7.2 DEVELOPMENT CORRIDORS</b>	<b>192</b>
7.2.1. Regional Development Corridor	193

7.2.2. Secondary Development Corridor	193
7.2.3. Tertiary Development Corridor	194
7.2.4. Lower Order Corridors	195
7.2.5. Agricultural Corridors	195
<b>7.3 SERVICE CENTRE AND ACTIVITY NODES</b>	<b>196</b>
7.3.1 Primary Municipal Node	197
7.3.2 Secondary Municipal Node	199
7.3.3 Tertiary Municipal Nodes	201
<b>7.4. Rural Settlement Clusters</b>	<b>207</b>
<b>7.5. Guideline for planning of facilities</b>	<b>207</b>
<b>CHAPTER 8: GUIDELINES FOR THE LUMS</b>	<b>215</b>
<b>CHAPTER 9: ALIGNMENT OF SPATIAL PLANS</b>	<b>226</b>
<b>9.1. ZULULAND DISTRICT MUNICIPALITY SDF</b>	<b>226</b>
Alignment indicator	227
Alignment status	227
Development corridors	227
Cross boundary influences	227
Cross boundary corporation	227
Potential conflicting issues	227
<b>9.2. MKHONDO LOCAL MUNICIPALITY SDF</b>	<b>227</b>
Alignment indicator	228
Alignment status	228
Development corridors	228
Cross boundary influences	228
Cross boundary co-operation/	228
50km cross border area along border	228
Potential conflicting issues	228
<b>9.3. ABAQULUSI LOCAL MUNICIPALITY SDF</b>	<b>228</b>
Alignment indicator	229
Alignment status	229
Development corridors	229
Cross boundary influences	229
Cross boundary corporation	229
Potential conflicting issues	229
<b>9.4. EMADLANGENI LOCAL MUNICIPALITY SDF</b>	<b>229</b>

Alignment indicator	230
Alignment status	230
Development corridors	230
Cross boundary influences	230
Cross boundary corporation	230
Potential conflicting issues	230
<b>9.5. uPHONGOLO LOCAL MUNICIPALITY SDF</b>	<b>230</b>
Alignment indicator	231
Alignment status	231
Development corridors	231
Cross boundary influences	231
Cross boundary corporation	231
Potential conflicting issues	231
<b>CHAPTER 10: IMPLEMENTATION PLANNING</b>	<b>234</b>
<b>10.1. RESOURCE TARGETING</b>	<b>235</b>
<b>10. The way forward</b>	<b>238</b>
<b>11 Conclusion</b>	<b>239</b>

<b>FIGURES</b>		
Figure 1	Link between SDF, IDP and the Budget	12
Figure 2	Frischgewacht Clinic	105
Figure 3	Princess Mhlosheni Clinic	105
Figure 4	Sibecko Medical Centre	106
Figure 5	Educational Facilities	109
Figure 6	Community Hall	113
Figure 7	The following is a schematic representation of the concept	175

<b>GRAPHS</b>		
Graph 1	Population Growth	79
Graph 2	Average Household Size	81
Graph 3	Gender Distribution	82
Graph 4	Age Distribution	83
Graph 5	Income Levels	84
Graph 6	Monthly Household Income per Ward	85
Graph 7	Sectoral Growth In GVA For eDumbe Municipality	126
Graph 8	9 Principles Of The PGDS	140
Graph 9	Time In Operation	148
Graph 10	Annual Turnover	148
Graph 11	Number Of Employees	149
<b>MAPS</b>		
Map 1	Regional Locality	14
Map 2	KZN SDF	30
Map 3	Classification of poverty/need	46
Map 4	Service Centres	47
Map 5	Development/ Activity Nodes	48
Map 6	Agricultural Potential	49
Map 7	Industrial Development	50
Map 8	Tourism Development	51
Map 9	Natural Environment - Topography	55
Map 10	Natural Environment – Geological Map	56
Map 11	Natural Environment – Lithology	57
Map 12	Natural Environment - Slope Analysis	58
Map 13	Soils	60
Map 14	Natural Environment – Water Catchment	66
Map 15	Wetlands	67
Map 16	Mean Annual Precipitation	70
Map 17	Natural Environment – Open Space/ Conservation	74
Map 18	Natural Environment – Critical Biodiversity	76
Map 19	Human Environment – Land Reform Areas	86
Map 20	Human Environment – Population Density	87
Map 21	Human Environment – Human Footprint	90
Map 22	Human Environment – Broad Municipal Land Use	91
Map 23	Human Environment – Cultivated Land	92
Map 24	Transportation – Vehicle Trips	95
Map 25	Infrastructure – Electricity	96
Map 26	Infrastructure – Transport Nodes	97
Map 27	Infrastructure – Access to Water	101
Map 28	Rural Dwellings Distance to Water Infrastructure	102
Map 29	Infrastructure – Access to Sanitation	103

Map 30	Social – Access to Hospitals	107
Map 31	Social – Access to Clinics	108
Map 32	Social – Access to Primary Schools	111
Map 33	Social – Access to Secondary Schools	112
Map 34	Settlement Classification Map	124
Map 35	Social Needs Map	128
Map 36	Financial – Tourism	131
Map 37	Financial – Agricultural Potential	136
Map 38	Financial - Mining	137
Map 39	Provincial SDF: Zululand District	139
Map 40	Paulpietersburg CBD Boundary	147
Map 41	Zoning Map	153
Map 42	Land Use map	155
Map 43	Proposed urban EDGE MAP: Paulpietersburg/Dumbe	189
Map 44	Proposed urban EDGE MAP: Bilanyoni/Mangoshuto	190
Map 45	PPB/Dumbe – Primary Node	203
Map 46	Bilanyoni/Mangosothu – Secondary Node	205
Map 47	Luneburg – Tertiary Node	207
Map 48	Balmoral – Tertiary Node	209
Map 49	Tholakele – Tertiary Node	210
Map 50	Ophuzane – Tertiary Node	212
Map 51	Proposed Facilities	215
Map 52	Zululand District Municipality SDF	220
Map 53	Mkhondo Local Municipality SDF	221
Map 54	Abaqulusi Local Municipality SDF	222
Map 55	Emadlangeni Local Municipality SDF	223
Map 56	uPhongolo Local Municipality SDF	224
Map 57	Proposed eDumbe SDF	233
<b>TABLES</b>		
Table 1	Wards and Councillors	13
Table 2	Spatial Development	15
Table 3	Hierarchy of nodes	29
Table 4	Climatic Patterns	68
Table 5	Veld management characteristics and requirements of main veld types:	76
Table 6	Population Growth from 2004 till 2010	78
Table 7	Population Distribution	80
Table 8	Gender Distribution	81
Table 9	Age Concord	83
Table 10	Household Electricity	93
Table 11	Distribution Of Taxi Routes Per Local Municipality In The Zululand District	93



Table 12	Average Number Of Taxi Trips Per Taxi In The Zululand District By Local Authority	94
Table 13	Operational Taxis In The Zululand District Municipal Area And Local Authorities	94
Table 14	Water	99
Table 15	Sanitation	100
Table 16	Available Clinics	106
Table 17	Educational Facilities	109
Table 18	Sector Contribution to GDP (Constant 2000 Prices)	125
Table 19	Sectoral growth in GVA for eDumbe Municipality	125
Table 20	Transport Mode	151
Table 21	Paulpietersburg Town Planning Scheme	152
Table 22	Strategic Documents used	158
Table 23	KPA's	163
Table 24	SPLUMA principles applied to eDumbe municipality	167
Table 25	SPLUMA principles applied to eDumbe municipality	169
Table 26	SPLUMA principles applied to eDumbe municipality	170
Table 27	SPLUMA principles applied to eDumbe municipality	171
Table 28	SPLUMA principles applied to eDumbe municipality	173
Table 29	Conservation Orientated Projects	192
Table 30	Development on Agricultural land	194
Table 31	Housing Projects	196
Table 32	Land Requirement for Rural Demographic Expansion	197
Table 33	Classification on Nodes	202
Table 34	Facilities in PPB/Dumbe	204
Table 35	Facilities in Bilanyoni/Mangosothu	206
Table 36	Facilities in Luneburg	208
Table 37	Facilities in Balmoral	209
Table 38	Facilities in Tholakele	211
Table 39	Facilities in Ophuzane	212
Table 40	Guideline for planning of facilities	214
Table 41	Guideline for Developing LUMS	217
Table 42	Alignment with Zululand SDF	221
Table 43	Alignment with Mkhondo SDF	222
Table 44	Alignment with Abaqulusi SDF	223
Table 45	Alignment with Emadlangeni SDF	224
Table 46	Alignment with uPhongolo SDF	225

## SECTION A: INTRODUCTION

### CHAPTER 1: BACKGROUND AND PURPOSE

#### INTRODUCTION

The Spatial Development Framework (SDF) provides strategic guidance for the spatial restructuring of the eDumbe municipal area. It indicates where certain types of developments should or could take place, how these areas relate to other areas, and what development standards should apply. The aim of this review of the municipality's Spatial Development Framework is to:

- Confirm the general principles and guidelines of the 2018 SDF
- Ensure alignment of municipal IDP and related projects with the spatial reality of the study area.
- Ensure alignment with the Provincial Growth and Development Strategy
- Give direction and take into account the need for and compatibility of land uses;
- Confirm the Urban Edge in line with COGTA's Guidelines
- Provide an Urban Design Framework for the upliftment and increased functionality of the primary node's Central Business District (CBD)

#### PURPOSE OF THE REPORT

The purpose of the Spatial Development Framework as a land use management tool is to plan, direct and control development but it does not provide land use rights. It forms part of the existing land use management process of the municipality and provides the necessary policies at local level in order to ensure the application of the development principles of sustainability, integration, equality, efficiency and fair and good governance in order to create quality of living, investors' confidence and security of tenure.

The purpose of this Credible Status Quo Report is to ensure that all internal and external factors that may have an influence on the spatial development of the municipality are taken into consideration.

### WHAT IS A SPATIAL DEVELOPMENT FRAMEWORK

The spatial management of growth in urban and rural environments due to rapid urbanization rates and the subsequent impact on resources was previously done through the Guide Plans and Structure plans. These took the form of rather inflexible master plans which were underpinned by the principles of discrimination and separate development. The new democratic government, post 1994, adopted a new system of spatial planning described in principle in the Development Facilitation Act and Municipal Systems Act. This new system had two components to it. The first was an indicative plan or Spatial Development Framework (SDF) that was intended to show desired patterns of land use, directions for future growth, indicate the alignment of Urban Edges, and depict special development areas. The impact of SDFs was limited to providing policy to guide and informing land development and management. They did not change or confer real rights on land. The second component was the Land Use Management System (LUMS). This is similar to a town planning or zoning scheme. In many instances where they haven't been replaced or repealed these still take the place of LUMS. In contrast to SDF's LUMS have a binding effect on the development rights attributed to land and confer real rights on properties. Because development in Municipalities is dynamic and responds to changing socio-economic and environmental circumstances, it is impossible to predict the exact requirements of development rights in every instance; therefore, LUMS may be amended from time to time to take into account these changing circumstances. This is normally achieved through the processing of rezoning, subdivisions and removal of title deed restrictions applications. It is in these instances where SDF's play an important role in guiding appropriate future change and helping to guide motivations as to the need and desirability, or not, of proposed land use changes.

### LEGAL AND POLICY IMPERATIVES

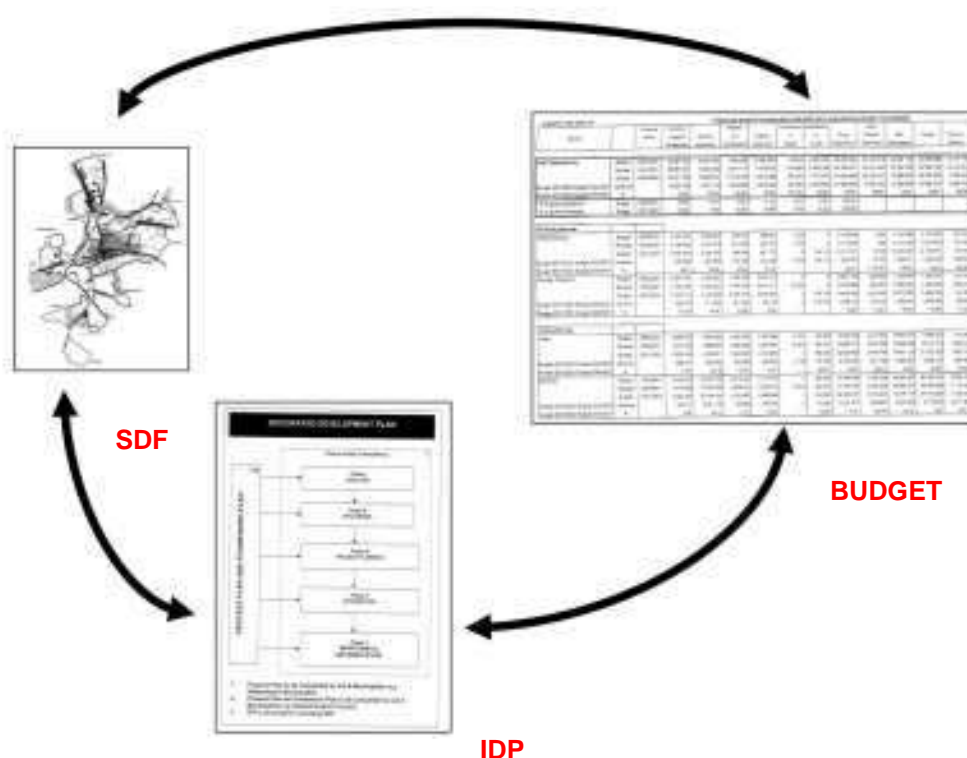
Within the limitations of a SDF as laid down by the Local Government Municipal Systems Act, 2000 (Act 32 of 2000) i.e. that it should be a guiding and informing document and does not confer real rights on land, it is intended that the SDF should be a binding document endorsed by Municipal Council and approved by the Provincial Administration as part of the Municipality's IDP. Without this endorsement it will be difficult for the recommendations to

have any meaningful impact on future development patterns in the area. The essential elements, which should be included into a local spatial development framework, are guided by a legal framework provided in terms of existing legislation, including the Constitution of South Africa, Governmental policies including the White Paper on Local Government, and Local Governmental Acts, including the Municipal Structures Act and Municipal Systems Act, determining roles and responsibilities of the municipal sphere of Government.

The influence of the legislative and policy environment on the SDF will be discussed in more detail in Chapter 2 of this document.

### RELATIONSHIP WITH OTHER PLANS

The SDF links the development objectives taken from the Integrated Development Plan (IDP) and the Budget of the particular municipality. Therefore, the SDF becomes the spatial presentation of the IDP objectives that guide projects funded through the budget of the local municipality. This link between the SDF, IDP and Budget is shown in Figure 1 below:



**Figure 1: Link between SDF, IDP and the Budget.**

## DEFINING THE STUDY AREA

The Terms of Reference for the project indicates that the whole of KZN261 better known as eDumbe Local Municipality will form the study area with certain specific focus points as indicated in paragraph 1.1 of this document. It also includes the cross border strip on the border areas (50 km) into Mpumalanga and KZN as determined by the MEC agreements and the integration area with other Zululand Municipalities. eDumbe Municipality is situated in the north-western part of KwaZulu-Natal. It covers a geographical area of 1 947 km<sup>2</sup> and is home to a population of about 101 607. The municipal area of jurisdiction is demarcated into 8 wards which is predominantly rural in nature. Furthermore, the eDumbe Municipal area comprises of 52 settlements in total, which includes 48 dispersed rural settlements, 3 urban areas and one major town. The major town/urban centre is Paulpietersburg/Dumbe while the main secondary node is known as Bilanyoni.

**Table 1: Wards and Councillors**

Ward Nr.	Councillor	Area (Sq. km)	Households	Population	Settlements
1	Cllr N D Mngomezulu	776.227	1952	13201	14
2	Cllr DD Maseko	47.125	3275	22149	3
3	Cllr S T Hlatshwayo	39.610	2610	17651	3
4	Cllr S J Kunene	11.891	2195	14845	2
5	Cllr J B Mthethwa	76.220	1731	11707	7
6	Cllr DF Sukazi	197.654	1848	12498	17
7	Cllr MS Zulu	642.933	1475	9975	15
8	Cllr HH Vilakazi	151.131	1861	12586	6

**Map 1: Regional Locality****STRUCTURE OF THE DOCUMENT**

This document represents the draft Status Quo analysis of eDumbe municipality and provides an in depth contextualizing of the municipal area. The factors that may have an impact on the way the municipality develops in future are identified. In the process the assessment focused on the legislative mandate, the natural environment, human environment, physical environment, social resources and economic drivers.

The Status Quo analysis is undertaken as a process to identify the key issues which will needs to be addressed in the implementation framework to be developed. It is thus foreseen that the information in the report will be amended and improved as further role-players engagements continue.

STUDY OBJECTIVES**Table 2: Spatial Development**

<b>PRIORITY SPATIAL DEVELOPMENT OBJECTIVE ISSUE</b>	
<b>1. Spatial Fragmentation</b> <b>e.g. Paulpietersburg and Dumbe</b>	<ul style="list-style-type: none"> <li>➡ To create a well-structured, efficient and sustainable node.</li> <li>➡ To correct historically distorted spatial development patterns</li> <li>➡ This issue refers to the fact that the characteristic settlement pattern prevailing in most at an overall scale, the area is broken up between larger urban settlements and small towns.</li> <li>➡ Within the towns and settlements themselves, development has occurred in a spatially fragmented way. This fragmented pattern of spatial development is costly to service and maintain, and also imposes significant costs on the residents of the area, making access to services and socio-economic opportunities more difficult.</li> <li>➡ Emphases is put on the integration areas between respective provinces along the border as areas where cross pollination of activities, services and various projects can take affect to benefit previously distorted development patterns as prioritised by the Respective MEC's as development initiatives areas.</li> </ul>
<b>2. Rapid and Unmanaged Urbanization</b> <b>e.g. Bilanyoni and Mangosothu</b>	<ul style="list-style-type: none"> <li>➡ To provide adequate land and services for urban areas (existing and new) communities.</li> <li>➡ This issue refers to the fact that the area has, over the last few years, experienced a rapid growth in lower socio-economic settlements within the built areas and, more especially, on the fringes of existing settlements</li> </ul>
<b>3. Low density Settlements</b> <b>e.g. Ophuzane and Mapayphini</b>	<ul style="list-style-type: none"> <li>➡ To create higher density settlements</li> <li>➡ This issue refers to the fact that development within the lower socio-economic settlements has been of a</li> </ul>

low density, with settlements comprising of large residential sites sprawling over wide areas and consuming valuable land resources.

- ➡ Moreover, when associated with the fragmented spatial pattern of development noted above, the phenomenon of settlement sprawl imposes additional costs in the provision of effective services, and reduces the likelihood of such services being rendered in a way that is affordable both to the provider and the consumer.

#### **4. Uncoordinated Spatial Development e.g. Paulpietersburg and Dumbe**

- ➡ To achieve environmentally sustainable and spatially coordinated sectoral practices.
- ➡ Here the issue is related to the fact that many decisions that result in spatial development or have an impact on existing development are taken by a range of different authorities, often without consulting each other.
- ➡ This results in developments that are not planned in an integrated manner and gives rise to problems, ranging from environmental impacts that are unacceptable, to developments that are not serviceable within a short period of time.
- ➡ To create a imaginary 50km strip along the border of the Province with Mpumalanga where co-ordination and development integration will get priority relating to services provision and similar other projects.



## SECTION B STATUS QUO

### CHAPTER 2: STATUS QUO OF EDUMBE MUNICIPALITY

#### 2.1 LEGISLATIVE ENVIRONMENT

The SDF is guided by, amongst others, the following pieces of Legislation and Policies at a National and Provincial Level:

- ➡ South African Constitution and Principles of Sustainable Development
- ➡ The Municipal System Act (MSA)
- ➡ The National Environment Management Act (NEMA)
- ➡ Social Housing Act (SHA)
- ➡ The KwaZulu-Natal Heritage Act (1997)
- ➡ The Provincial Growth and Development Strategy (PGDS)
- ➡ Provincial Spatial Economic Development Strategy (PSEDS)
- ➡ Spatial Planning and Land Use Management Act

##### **2.1.1 South African constitution and principles of sustainable development (No. 108 of 1996)**

Chapter 7 of the Constitution deals with *local government* and section 152 deals with the *objectives of local government*. It indicates that these objectives are:

- ➡ To provide democratic and accountable government for local communities;
- ➡ To ensure the provision of services to communities in a sustainable manner;
- ➡ To promote social and economic development;
- ➡ To promote a safe and healthy environment; and

- ➡ To encourage the involvement of communities and community organizations in the matters of local government.

### 2.1.2 Municipal Systems Act (No. 32 of 2000)

Section 23 (1) of the Act indicates that a municipality must undertake developmentally-orientated planning and Section 24 (1) indicates that planning undertaken by the municipality must be aligned with and compliment plans of other municipalities and organs of state.

Section 26 of the Act indicates that a core component of an IDP is a SDF which must include the provision of basic guidelines for a land use management system for the municipality.

Section 35 of the Act also indicates that a SDF contained in an IDP prevails over a plan as identified in Section 1 of the Physical Planning Act (No. 125 of 1991).

Regulation GN796 OF 2001 promulgated in terms of the Act outline the following requirements for a SDF:

*“A spatial development framework reflected in a municipality’s integrated development plan must:*

- a) give effect to the principles contained in Chapter 1 of the Development Facilitation Act, 1995 (Act 67 of 1995);*
- b) set out objectives that reflect the desired spatial form of the municipality;*
- c) contain strategies and policies regarding the manner in which to achieve the objectives referred to in paragraph (b), which strategies and policies must-*
  - i. indicate desired patterns of land use within the municipality;*
  - ii. address the spatial reconstruction of the municipality; and*
  - iii. Provide strategic guidance in respect of the location and nature of development within the municipality.*

- d) *Set out basic guidelines for a land use management system in the municipality;*
- e) *Set out a capital investment framework for the municipality's development programmes;*
- f) *Contain a strategic assessment of the environmental impact of the spatial development framework;*
- g) *Identify programmes and projects for the development of land within the municipality;*
- h) *Be aligned with the spatial development frameworks reflected in the integrated development plans of neighboring municipalities; and*
- i) *provide a visual representation of the desired spatial form of the municipality, which representation-*
  - i) *must indicate where public and private land development and investment should take place;*
  - ii) *must indicate desired or undesired utilization of space in a particular area;*
  - iii) *may delineate the urban edge;*
  - iv) *must identify areas where strategic intervention is required; and*
  - v) *must indicate areas where priority spending is require.*

These legislative requirements provide a clear framework for the development of the èDumbe SDF and provide a legislative checklist for its contents.

### **2.1.3 National Environmental Management Act (No 107 of 1998)**

The National Environmental Management Act (No. 27 of 1998) was drawn up to provide 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-coordinating environmental functions exercised by organs of state; and to provide for matters connected therewith.

Section 28 of the Act that falls within Chapter 7 – Compliance, Enforcement and Protection can be related to future developments. Part 1 of the Chapter focuses on environmental hazards and Section 28 relates to the duty care and redemption of environmental damage. Section 28 provides that every person who causes, has caused, or may cause, significant pollution or degradation of the environment, must take reasonable measures to prevent such pollution or degradation from occurring, continuing or reoccurring or, insofar as such harm to the environment is authorized by law or cannot reasonably be avoided or stopped, to minimize and rectify such pollution or degradation of the environment.

#### **2.1.4 Social Housing Act (No. 16 of 2008)**

The Social Housing Act of 2008 was drawn up to establish and promote a sustainable social housing environment; to define the functions of national, provincial and local governments in respect of social housing; to provide for the establishment of the Social Housing Regulatory Authority in order to regulate all social housing institutions obtaining or having obtained public funds; to allow for undertaking of approved projects by other delivery agents with the benefit of public money; to give statutory recognition to social housing institutions; and to provide for matters connected therewith.

In giving priority to the needs of low and medium income households in respect of social housing development, the national, provincial and local spheres of government and social housing institutions must-

- a) Ensure their respective housing programmes are responsive to local housing demands, and special priority must be given to the needs of woman, children, child-headed households, person with disabilities and the elderly;
- b) Support the economic development of low to medium income communities by providing housing close to jobs, markets and transport and by stimulating job opportunities to emerging entrepreneurs in the housing services and construction industries;

- c) Afford residents the necessary dignity and privacy by providing the residents with a clean, safety and healthy environment;
- d) Not discriminate against residents on any of the grounds set out in section 9 of the constitution, including individuals affected by HIV and AIDS;
- e) Consult with interested individuals, communities and financial institutions in all phases of social housing development;
- f) Ensure the sustainable and viable growth of affordable social housing as an objective of housing policy;
- g) Facilitate the involvement of residents and key stakeholders through consultation, information sharing, education, training and skills transfer, thereby empowering residents;
- h) Ensure secure tenure for residents in social housing institutions, on the basis of the general provisions governing the relationship between tenants and landlords as set out in the rental housing act, 1999 (Act No. 50 of 1999), and between primary housing co-operatives and its members as set out in the co-operatives Act. 2005 (Act No.14 of 2005);
- i) Promote:
  - i. an environment which is conducive to the realization of the roles, responsibilities and obligations by all role-players entering the social housing market;
  - ii. training opportunities for stakeholders and interested parties who wish to enter the social the social housing market;
  - iii. the establishment, development and maintenance of socially and economically viable communities to ensure the elimination and prevention of slums and slums conditions;
  - iv. social, physical and economic integration of housing development into existing urban or town areas through the creation of quality living environments

- v. medium to higher density in respect of social housing development to ensure the economical utilization of land and services;
- vi. the provision of social, community and recreational facilities close to social housing development ;
- vii. the expression of cultural identity and diversity in social housing development;
- viii. the suitable location of social housing stock in respect of employment opportunities;
- ix. the conversion of upgrading of suitable residential and non-residential buildings for social housing use;
- x. incentives to social housing institutions and other delivery agents to enter the social housing market;
- xi. an understanding and awareness of social housing processes;
- xii. transparency, accountability and efficiency in the administration and management of social housing stock;
- xiii. best practices and minimum norms and standards in relation to the delivery and management of social housing stock;
- xiv. the provision of institutional capacity to support social housing initiatives;
- xv. the creation of sustainable, viable and independent housing institutions responsible for providing, developing, holding or managing social housing stock and;
- xvi. the use of public funds in a manner that stimulates or facilitates private sector investment and participation in the social housing sector.

### **2.1.6 The KwaZulu-Natal Heritage Act (No 4 of 2008)**

Apart from provisions in the act that allow for the proclamation and listing of individual buildings, the act also allows for the protection of groups of buildings forming a conservation area and it provides for the general protection of buildings that are over sixty years in age.

Section 34 (1) of the act states that “No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority”.

Under Section 26 (1) the Act deals with demolitions, additions and alterations. Section 19 deals with Heritage Landmarks, Section 20 with Provincial Landmarks. Section 22 deals with the opening of a Heritage Register, and Section 23 deals with Heritage Conservancies.

Section 51 of the act allows for a fine and imprisonment for a period not exceeding two years or both such imprisonment and fine of anyone contravening Section 31 (1) of the Act.

### **2.1.7 SPATIAL PLANNING AND LAND USE MANAGEMENT ACT NO 16 of 2013 (SPLUMA)**

The SPLUMA seeks to provide a framework for spatial planning and land use management. This framework presents the monitoring, coordination, review of the spatial planning and land use management system and efficient spatial planning.

The bill allows for:

1. Policies, principals, norms and standards for development.
2. Address past spatial and regulatory imbalances
3. To promote greater consistency and uniformity in the application procedures and decision making by authorities responsible for land use decisions and development applications
4. To provide for the facilitation and enforcement of land use and development measures

5. To supply for the inclusive, developmental, equitable and efficient spatial planning at the different spheres of the Government.

The SPLUMA also requires each Municipality to develop a single land use scheme within 5 years of the act coming into operation. This scheme shall replace any current scheme the Municipality may have adopted.

The eDumbe Municipality has been awarded grant funding by KZN COGTA to develop a single land use scheme for the 2017/2018 financial year.

The Municipality has complied by gazetting SPLUMA by-laws.

The following are the principles of the SPLUMA of which the eDumbe SDF encompasses;

- Spatial Justice
- Spatial Sustainability
- Efficiency
- Good Administration

## **2.2. POLICY ENVIRONMENT**

### **2.2.1 Provincial Growth and Development Strategy 2016**

The purpose of the PGDS is to:

- focus on a clear vision for the Province;
- promote vertical, horizontal and spatial alignment;
- mobilise all development partners to achieve predetermined development objectives and targets; and
- Build on the strengths and opportunities of the Province, while addressing weaknesses and threats.



The provincial vision as contained in the PGDS:

***“By 2035 KwaZulu-Natal will be a prosperous Province with a healthy, secure and skilled population, living in dignity and harmony, acting as a gateway to Africa and the World.”***

The Strategic Goals for the province as indicated in the document:



Source: PGDS 2016

The implementation of Vision and Strategic Goals aspire to lead to:

- Position the Province as a Gateway to South Africa and Africa
- Human & Natural Resources

- Safe, Healthy & Sustainable Living Environments
- Healthy Educated Communities
- Employable people are employed
- Basic Services
- More equitable Society
- World Class Infrastructure
- Investors' Confidence
- Skilled Labour Force
- Focus on People centeredness.
- Strong & Decisive Leadership
- Foster Social Compacts

The PGDS identified a hierarchy of nodes for the province defined as follows:

**Table 3: Hierarchy of nodes**

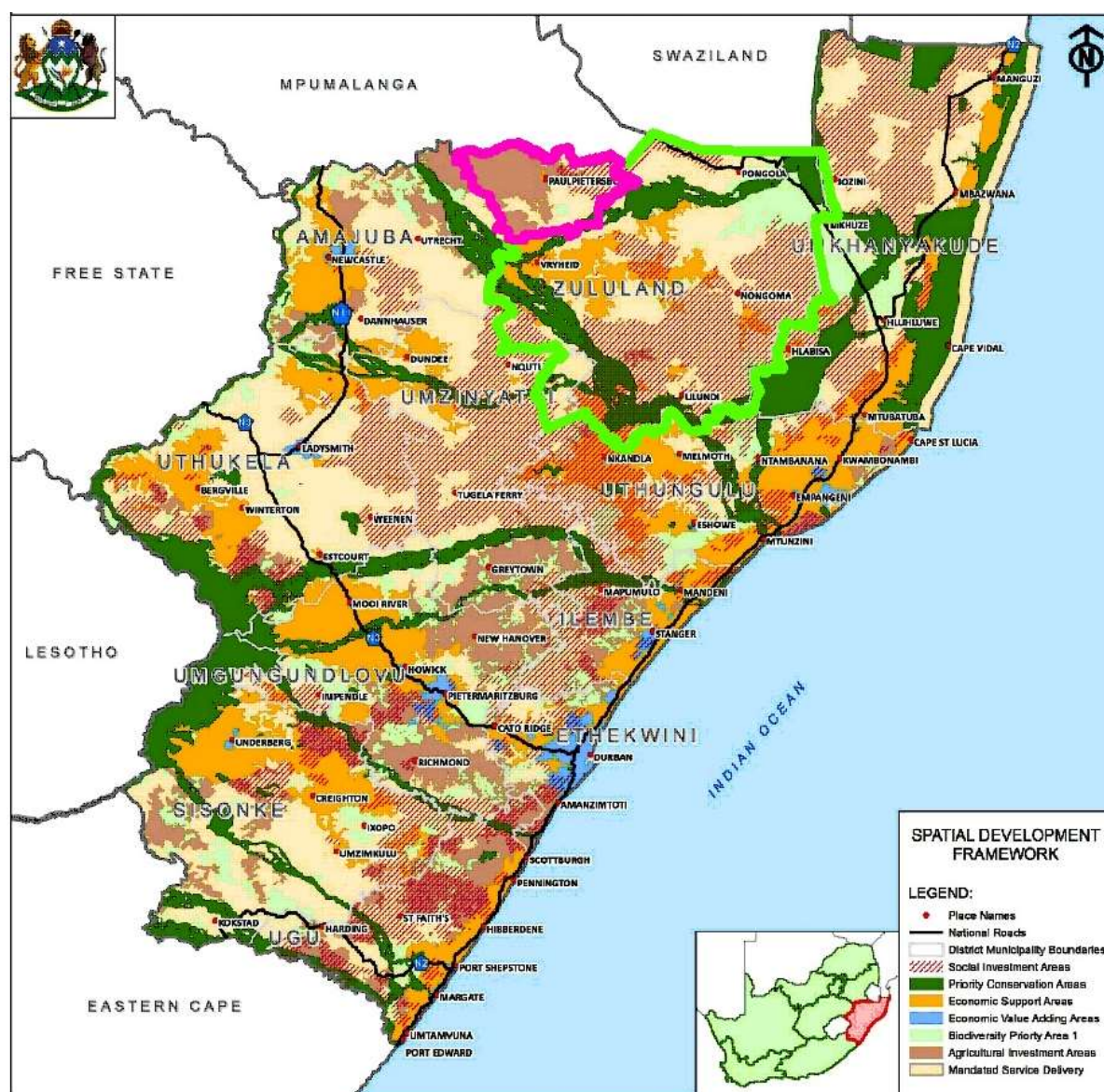
<b>Primary Node</b>	Only eThekweni is classified as a Primary Node within the Provincial Context as an urban centre with very high existing economic growth and the potential for expansion thereof. Provides service to the national and provincial economy.
<b>Secondary Nodes</b>	Richards Bay/ Empangeni, Msunduzi, Newcastle and Port Shepstone has been identified as provincial Secondary Nodes and thus urban centres with good existing economic development and the potential for growth and services to the regional economy.
<b>Tertiary Nodes</b>	These nodes are mainly centres which should provide service to the sub-regional economy and community needs and is represented by the following towns such as Pongola, Vryheid, Ulundi, Dundee, Ladysmith, Estcourt, Howick, KwaDukuza, Ixopo, Scottburgh, Hibberdene, Kokstad, Margate.
<b>Quaternary Nodes</b>	These nodes are mainly centres which should provide service to the local economy and community needs and is represented by 31 towns, such as but not limited to: Nongoma, Nkandla, Eshowe, Bergville, <b>Paulpietersburg</b> , etc.

### Rural Service Centres

The proposed rural service centres are envisaged to serve as the lowest level of provincial nodes and could typically be established around existing traditional administration centres as well as other accessible rural points identified as periodic markets. These will be identified in consultation with the district municipalities and should serve as first access to basic services within rural areas.

The information used to compile a SDF for the province was based on environmental sensitivity, social need, economic potential and accessibility. The use of these informants leads to the compilation of a spatial representation of the provincial SDF.

**Map 2: KZN SDF**



The provincial SDF identified the following intervention areas on which the Integrated Provincial Infrastructure Plan will be based:

- ➡ Social Investment areas
- ➡ Priority Conservation areas
- ➡ Economic Support areas
- ➡ Economic value adding areas
- ➡ Biodiversity Priority areas
- ➡ Agricultural investment areas
- ➡ Mandated Service Delivery
- ➡ Cross border Provincial Integration area and priority strip

It is the intention that District and Local municipalities align their respective SDF's with the provincial plan to structured and sensible development that work towards a common goal and ensure that development on local level does not take place in an ad hoc silo on its own.

### **2.2.2. National Spatial Development Perspective**

The Policy Co-ordination and Advisory Services (PCAS) in the Presidency produced a National Spatial Development Perspective (NSDP) that was endorsed by Cabinet in March 2003.

The National Spatial Development Perspective (NSDP) guides government in implementing its programmes. The NSDP is built on four basic principles. These are:

- Principle 1: Rapid economic growth that is sustained and inclusive is a pre-requisite for the achievement of poverty alleviation
- Principle 2: Government spending on fixed investment should be focused on localities of economic growth and / or economic potential in order to gear up private sector investment, stimulate sustainable economic activities and create long-term employment opportunities

Principle 3: Where low economic potential exists investments should be directed at projects and programmes to address poverty and the provision of basic services in order to address past and current social inequalities

Principle 4: In order to overcome the spatial distortions of Apartheid, future settlement and economic development opportunities should be channeled into activity corridors and nodes that are adjacent to or link the main growth centers in order for them to become regional gateways to the global economy. This includes the 50km wide trans Provincial border area Where development will be co-ordinated on MEC level.

**The National Spatial Development Vision reads as follows:**

“South Africa will become a Nation in which investment in infrastructure and development programmes support Government growth and development objectives:

- By focusing economic growth and employment creation in areas where this is most effective and sustainable
- By supporting restructuring, where feasible, to ensure greater competitiveness
- By fostering development on the basis of local potential
- By ensuring that development institutions are able to provide basic needs throughout the country.”

The NSDP identifies Core Regions and Spatial Economic Linkages outside the country’s three main Metropolitan Areas.

The clustering of economic activities in areas with high potential for economic development provides regional competitive advantages. At the same time, where feasible, economic benefits from those growth sectors which are not dependant on clustering should be spread to those parts of the municipality where relatively low economic potential exists.

### 2.2.3. The New Growth Path

The New Growth Path starts by identifying where employment creation is possible, both within economic sectors as conventionally defined and in cross-cutting activities. It then analyses the policies and institutional developments required to take advantage of these opportunities.

In essence, the aim is to target our limited capital and capacity at activities that maximize the creation of decent work opportunities. To that end, we must use both macro and micro economic policies to create a favorable overall environment and to support more labor-absorbing activities. The main indicators of success will be jobs (the number and quality of jobs created), growth (the rate, labor intensity and composition of economic growth), equity (lower income inequality and poverty) and environmental outcomes.

To achieve profound changes in the structure of savings, investment and production, the government must steadily and consistently pursue key policies and programmes over at least a decade. Moreover, the state must coordinate its efforts around core priorities rather than dispersing them across numerous efforts, however worthwhile, that do not contribute to a sustained expansion in economic opportunities for our people. These are the core characteristics of a developmental state.

The requisite policy stability and coherence will be supported by effective social dialogue that helps establish a broad consensus on long-run policy goals and a vision for the country, and facilitates the necessary trade-offs and sacrifices by ensuring a visibly fair distribution of the benefits from growth. Engagement with stakeholder representatives on policy, planning and implementation at national, sectoral and local levels is central to achieving coherent and effective strategies that are realized without endless debates and delays. That, in turn, means government must both strengthen its own capacity for engagement and leadership, and re-design delivery systems to include stakeholders meaningfully.

Long-term structural change also requires phasing to establish the preconditions for success over time. In the case of employment, for instance, the steps that the state can take vary over time:



1. In the very short run, the state can accelerate employment creation primarily through direct employment schemes, targeted subsidies and/or a more expansionary macroeconomic package.
2. Over the short to medium term, it can support labor-absorbing activities, especially in the agricultural value chain, light manufacturing and services, to generate large scale employment. Government can provide effective inducements to private investment in targeted sectors principally by prioritizing labor-absorbing activities for the provision of appropriate and cost-effective infrastructure, regulatory interventions that effectively address market and state failures, measures to improve skills systems, and in some cases subsidies to production and innovation.
3. In the longer run, as full employment is achieved, the state must increasingly support knowledge- and capital-intensive sectors in order to remain competitive.

This inherent phasing means that in the medium term the state must focus on facilitating growth in sectors able to create employment on a large scale. But it should not neglect more advanced industries that are crucial for sustained long-run growth. Government must encourage stronger investment by the private and public sectors to grow employment-creating activities rapidly while maintaining and incrementally improving South Africa's core strengths in sectors such as capital equipment for construction and mining, metallurgy, heavy chemicals, pharmaceuticals, software, green technologies and biotechnology. These industries build on our strong resource base and our advanced skills and capacity in some economic sectors.

The connection between economic and social measures needs to be further strengthened. In addition to their important social goals, basic and secondary education plays a critical role in long-run equality, access to employment and competitiveness. So does investment in health, including effective measures to address HIV/AIDS. Government has prioritized health and education investment and delivery.

Apartheid left South Africa with an extraordinary spatial divergence between the economic centers of the country, linked to the metro areas, and the densely settled rural areas of the former Bantustans, which have very limited economic resources and investments. Within metros, too, there are vast disparities and spatial challenges, with townships located far from

most employment opportunities. A core task for the New Growth Path is to break with this legacy through a coherent approach to spatial development backed by strong investment in infrastructure and the identification of viable and sustainable opportunities for historically disadvantaged regions. Rural development will necessarily depend largely on links to the main urban areas.

It is acknowledged that while urbanization will continue, a significant share of the population will remain in rural areas, engaged in the rural economy. Enhancing rural employment requires finalization of a spatial perspective that sets out the opportunities available and the choices that we must make in order to lay the basis for aligning government spending, infrastructure and housing investment and economic development initiatives. In addition, government must do more to support small-scale agriculture, including through community food gardens and marketing and service coops as well as accessible banking facilities.

#### **2.2.4. National Development Plan 2030**

The National Development Plan aims to eliminate poverty and reduce inequality by 2030. South Africa can realize these goals by drawing on the energies of its people, growing an inclusive economy, building capabilities, enhancing the capacity of the state, and promoting leadership and partnerships throughout society.

The National Planning Commission's *Diagnostic Report*, released in June 2011, set out South Africa's achievements and shortcomings since 1994. It identified a failure to implement policies and an absence of broad partnerships as the main reasons for slow progress, and set out nine primary challenges:

1. Too few people work
2. The quality of school education for black people is poor
3. Infrastructure is poorly located, inadequate and under-maintained
4. Spatial divides hobble inclusive development
5. The economy is unsustainably resource intensive



6. The public health system cannot meet demand or sustain quality
7. Public services are uneven and often of poor quality
8. Corruption levels are high
9. South Africa remains a divided society.

South Africans from all walks of life welcomed the diagnostic as a frank, constructive assessment. This led to the development of the draft national plan, released in November 2011. Building on the diagnostic, the plan added four thematic areas: rural economy, social protection, regional and world affairs, and community safety.

The plan focuses on the critical *capabilities* needed to transform the economy and society. Achieving these capabilities is not automatic, nor will they emerge if the country continues on its present trajectory. Rising levels of frustration and impatience suggest that time is of the essence: failure to act will threaten democratic gains. In particular, South Africa must find ways to urgently reduce alarming levels of youth unemployment and to provide young people with broader opportunities.

Progress over the next two decades means doing things differently. Given the complexity of national development, the plan sets out six interlinked priorities:

- Uniting all South Africans around a common programme to achieve prosperity and equity.
- Promoting active citizenry to strengthen development, democracy and accountability.
- Bringing about faster economic growth, higher investment and greater labour absorption.
- Focusing on key capabilities of people and the state.
- Building a capable and developmental state.
- Encouraging strong leadership throughout society to work together to solve problems.

While the achievement of the objectives of the National Development Plan requires progress on a broad front, three priorities stand out:

- ➡ Raising employment through faster economic growth
- ➡ Improving the quality of education, skills development and innovation
- ➡ Building the capability of the state to play a developmental, transformative role.

A sustainable increase in employment will require a faster-growing economy and the removal of structural impediments, such as poor-quality education or spatial settlement patterns that exclude the majority. These are essential to achieving higher rates of investment and competitiveness, and expanding production and exports. Business, labour, communities and government will need to work together to achieve faster economic growth.

Social cohesion needs to anchor the strategy. If South Africa registers progress in deracialising ownership and control of the economy without reducing poverty and inequality, transformation will be superficial. Similarly, if poverty and inequality are reduced without demonstrably changed ownership patterns, the country's progress will be turbulent and tenuous.

Longer term interventions from the local authority need to take cognizance of the following:

- ➡ Promote mixed housing strategies and more compact urban development to help people access public spaces and facilities, state agencies, and work and business opportunities.
- ➡ Invest in public transport, which will benefit low-income households by facilitating mobility.

For infrastructure that supports human settlements (housing, water, sanitation, roads, parks and so on) the picture is unnecessarily complicated. The planning function is located at local level, the housing function is at provincial level, and the responsibility for water and electricity provision is split between those responsible for bulk services and reticulation. In practice, these arrangements do not work. In general, human settlements are badly planned, with little coordination between those installing water reticulation infrastructure and those responsible for providing bulk infrastructure.

Responsibility for housing should shift to the level at which planning is executed: the municipal level. The plan sets out recommendations for effective urban development.

Local government faces several related challenges, including poor capacity, weak administrative systems, undue political interference in technical and administrative decision-making, and uneven fiscal capacity. The Commission believes that within the framework of the Constitution, there is more room for the asymmetric allocation of powers and functions and for more diversity in how developmental priorities are implemented. To achieve this, longer-term strategies are needed, including addressing capacity constraints, allowing more experimentation in institutional forms and working collaboratively with national and provincial government.

Reshaping South Africa's cities, towns and rural settlements is a complex, long-term project, requiring major reforms and political will. It is, however, a necessary project given the enormous social, environmental and financial costs imposed by existing spatial divides. The Commission proposes a national focus on spatial transformation across all geographic scales. Policies, plans and instruments are needed to reduce travel distances and costs, especially for poor households. By 2030, a larger proportion of the population should live closer to places of work, and the transport they use to commute should be safe, reliable and energy efficient. This requires:

- Strong measures to prevent further development of housing in marginal places
- Increased urban densities to support public transport and reduce sprawl
- More reliable and affordable public transport and better coordination between various modes of transport
- Incentives and programmes to shift jobs and investments towards the dense townships on the urban edge
- Focused partnerships with the private sector to bridge the housing gap market.

Rural areas present particular challenges. Policies are required to bring households in these areas into the mainstream economy. There are rural areas, however, where transport links

are good and where densification is taking place in the absence of effective land-use management and urban governance. These require urgent interventions.

### **2.2.5. The Comprehensive Rural Development Programme Framework**

The Comprehensive Rural Development Programme (CRDP) is aimed at being an effective response against poverty and food insecurity by maximizing the use and management of natural resources to create vibrant, equitable and sustainable rural communities. The strategic objective of the CRDP is therefore to facilitate integrated development and social cohesion through participatory approaches in partnership with all sectors of society.

The vision of the CRDP is to create vibrant, equitable and sustainable rural communities include:

- contributing to the redistribution of 30% of the country's agricultural land;
- improving food security of the rural poor;
- creation of business opportunities, de-congesting and rehabilitation of over-crowded former homeland areas; and
- Expanding opportunities for women, youth, people with disabilities and older persons who stay in rural areas.

The ultimate vision of creating vibrant, equitable and sustainable rural communities will be achieved through a three-pronged strategy based on:

- a coordinated and integrated broad-based agrarian transformation;
- strategically increasing rural development; and
- An improved land reform programme.

**Agrarian transformation** is the rapid fundamental change in the relations of land, livestock, cropping and community. It will focus on, but is not limited to, the establishment of rural business initiatives, agro industries, co-operatives, cultural initiatives and vibrant local markets in rural settings, the empowerment of rural people and communities (especially women and youth), and the revitalization of old, and revamping of new economic, social, and information and communication infrastructure, public amenities and facilities in villages and small rural towns.

**Rural development** is about enabling rural people to take control of their destiny, thereby dealing effectively with rural poverty through the optimal use and management of natural resources. It is a participatory process through which rural people learn over time, through their own experiences and initiatives, how to adapt their indigenous knowledge to their changing world.

**Land reform** is a national priority and is further entrenched in Section 25 (4) of the Constitution of the Republic of South Africa, 1996 (Act No.108 of 1996). A three-pronged land reform programme aiming at *tenure reform, restitution and land redistribution*, was launched in 1994. In relation to the CRDP, the land reform agenda will focus on reviewing the Restitution, Redistribution and Tenure Reform Programmes. In relation to Restitution, the focus will be on expediting the processing of settled claims and the settlement of outstanding claims. In addition, the work of the Land Claims Commissions will be rationalized within the Department of Rural Development and Land Reform. The focus of the Redistribution and Tenure Reform Programmes will be to develop less costly alternative models of land redistribution while reviewing legislation and policies that apply to both programmes.

## 2.2.6 Social Housing Policy

**The primary objectives of the Social Housing Programme include:**

- ➡ Contributing to the national priority of restructuring South African society in order to address structural, economic, social and spatial dysfunctional ties and imbalances to achieve Government's vision of an economically empowered, non-racial, and integrated society living in sustainable human settlements.

- ➡ Improving and contributing to the overall functioning of the housing sector and in particular the rental sub-component, as far as social housing is able to contribute to widening the range of housing options available to the poor.

**The most important elements of urban restructuring include:**

#### ➡ **Spatial Restructuring**

Spatial restructuring is necessary to address the needs of the urban poor (most black), who are located far away or completely excluded from the economic opportunities. The majority of these people also have limited or inadequate access to housing. Therefore; it is necessary to restructure the town by means of identifying appropriately located land for the provision of social housing, where places work, live, and play can be created.

#### ➡ **Economic Restructuring**

Economic restructuring will occur when social housing is used as a tool for economic revitalization of poorly performing cities or towns. Introduction of social housing in economically underperforming cities has had a positive impact in a number of cities world-wide. The number of fully completed houses will determine the scale and number of sustainable jobs created during construction. The end result will be an empowered population, which is able to use the building skills to make a living whilst creating sustainable human settlements.

#### ➡ **Social Restructuring**

Social housing can be used as a tool to create stable social environments that integrate with town with the rest of the LM. This also means the creation of a “sense of place” where residents have a sense of belonging and feel secured.

Social housing can also be used to achieve social integration amongst people of different racial groups and backgrounds.

**The Guiding Principles for Social Housing include:**

- ➡ Promoting urban restructuring through the social, physical, and economic integration of housing development into existing areas.
- ➡ Promoting establishment of well-managed, quality rental housing options for the poor.
- ➡ Responding to local housing demand.
- ➡ Delivering housing for a range of income groups, in such a way as to allow social integration and financial cross subsidisation.
- ➡ Supporting the economic development of low income communities in a number of ways.
- ➡ Fostering the creation of quality living environments for low-income persons.
- ➡ Promoting a safe, harmonious, and socially responsible environment both internal to the project and in the immediate urban environs.
- ➡ Promoting the creation of sustainable and viable projects.
- ➡ Encouraging the involvement of private sector where possible.
- ➡ Facilitating the involvement of residents in the project and/or key stakeholders in the broader environment.
- ➡ Ensuring secure tenure for the residents of projects, on the basis of the general provisions for the relationship between residents and landlords as defined in the Housing Act, 1997 and the Rental Act, 50 of 1999.
- ➡ Supporting mutual acceptance of roles and responsibilities of tenants and social landlords, on the basis of the general provisions for the relationship between residents and landlords as defined in the Rental Act, 50 of 1999, the Co-operatives Act, 91 of 1981c, as well as the Social Housing Act, 16 of 2008.
- ➡ Facilitation, support and driven by all spheres of government.

- ➡ Ensuring transparency, accountability and efficiency in the administration and management of social housing stock.
- ➡ Promoting the use of public funds in such a manner that stimulates and/or facilitates private sector investment and participation in the social housing sector and cross border co-ordination of existing and new projects.

Operating within the provisions of the Constitution, 1996, the Public Finance Management Act, 1 of 1999, the Preferential Procurement Policy Framework Act, 5 of 2000, and other statutory procurement prescripts.

### **2.2.7 Provincial Spatial Economic Development Strategy (PSEDS)**

The KwaZulu-Natal Spatial Economic Development Strategy (PSEDS) was formulated in 2007 as a spatial economic assessment of the areas of need and potential within the province. The PSEDS is intended as a guide to service delivery within the cluster to achieve the goals set in ASGI-SA to halve poverty & unemployment by 2014.

The PSEDS sets out to: Focus where government directs its investment and development initiatives; capitalize on complementarities and facilitate consistent and focused decision making; bring about strategic coordination, interaction and alignment;

The PSEDS recognises that: Social & economic development is never uniformly distributed; apartheid created an unnatural distortion of development and this distortion must be addressed. The PSEDS has been developed in order to achieve the objectives of ASGISA within the framework of the NSDP and the PGDS and aims to achieve the following:

- ➡ Eradication of extreme poverty and hunger;
- ➡ Promotion of gender equality & empowerment of women;
- ➡ Reduction in child mortality;
- ➡ Improvement of maternal health;
- ➡ Combating HIV-AIDS, malaria and other diseases;



- ➡ Ensuring environmental sustainability;
- ➡ Developing a global partnership for development;
- ➡ Sustainable governance and service delivery;
- ➡ Sustainable economic development and job creation;
- ➡ Integrating investment in community infrastructure;
- ➡ Developing human capability;
- ➡ Developing comprehensive response to HIV-AIDS;
- ➡ Fighting poverty & protecting vulnerable groups in society.
- ➡ Creating a Provincial 50km integration strip along the provincial border where project planning funding and implementation will be Co-ordinated.

The PSEDS prescribed that èDumbe can achieve some of its economic and financial needs by focusing on agriculture and tourism industries

### **2.2.8 National Spatial Development Perspective (NSDP)**

The National Spatial Development Perspective (NSDP) guides government in implementing its programmes in order to achieve the objectives of ASGISA of halving poverty and unemployment by 2014. The NSDP is built on four basic principles. These are:

- Principle 1: Rapid economic growth that is sustained and inclusive is a pre-requisite for the achievement of poverty alleviation
- Principle 2: Government spending on fixed investment should be focused on localities of economic growth and / or economic potential in order to gear up private sector investment, stimulate sustainable economic activities and create long-term employment opportunities

Principle 3: Where low economic potential exists investments should be directed at projects and programmes to address poverty and the provision of basic services in order to address past and current social inequalities

Principle 4: In order to overcome the spatial distortions of Apartheid, future settlement and economic development opportunities should be channeled into activity corridors and nodes that are adjacent to or link the main growth centers in order for them to become regional gateways to the global economy.

The sectors of the provincial economy which will drive the growth of the province and address unemployment and poverty are the following sectors:

- ➡ Agriculture – including agri-industry (with opportunities to impact considerably on the economic needs of the poor through Land Reform)
- ➡ Industry, including heavy and light industry and manufacturing
- ➡ Tourism, including domestic and foreign tourism<sup>1</sup>
- ➡ Service sector including financial, social, transport, retail and government

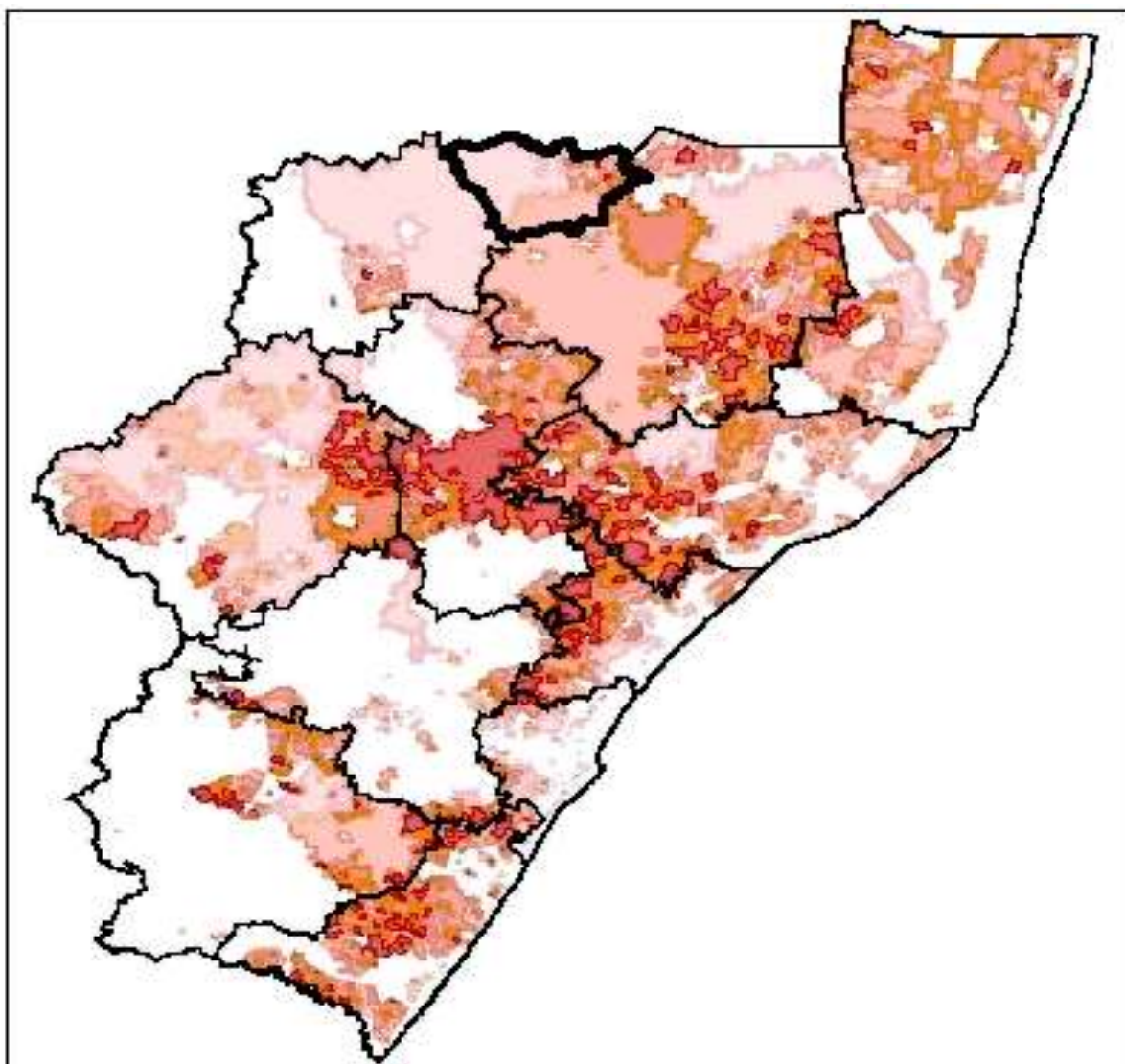
Supporting all these sectors is of course the critical issue of water and energy provision. Water and electrification were identified as critical levers for the province's economic and social development. The logistics and transport sector (including rail) in the services sector are also important sub-sectors underpinning growth in all four sectors.

A classification of potential for the entire province and as it relates to eDumbe Municipality is shown in the following brief overview:

#### ***2.2.8.1 Classification of poverty/need***

Poverty levels measure the proportion of persons living below a certain living standard. Areas of high poverty thus have a large proportion of their population living below the poverty level. The highest levels of poverty and need are mainly concentrated within those areas previously forming part of the KwaZulu homeland. The poverty levels in the province are illustrated in the following map. It can be seen that eDumbe municipality has poverty levels that increase from the western part of the area to the eastern part.

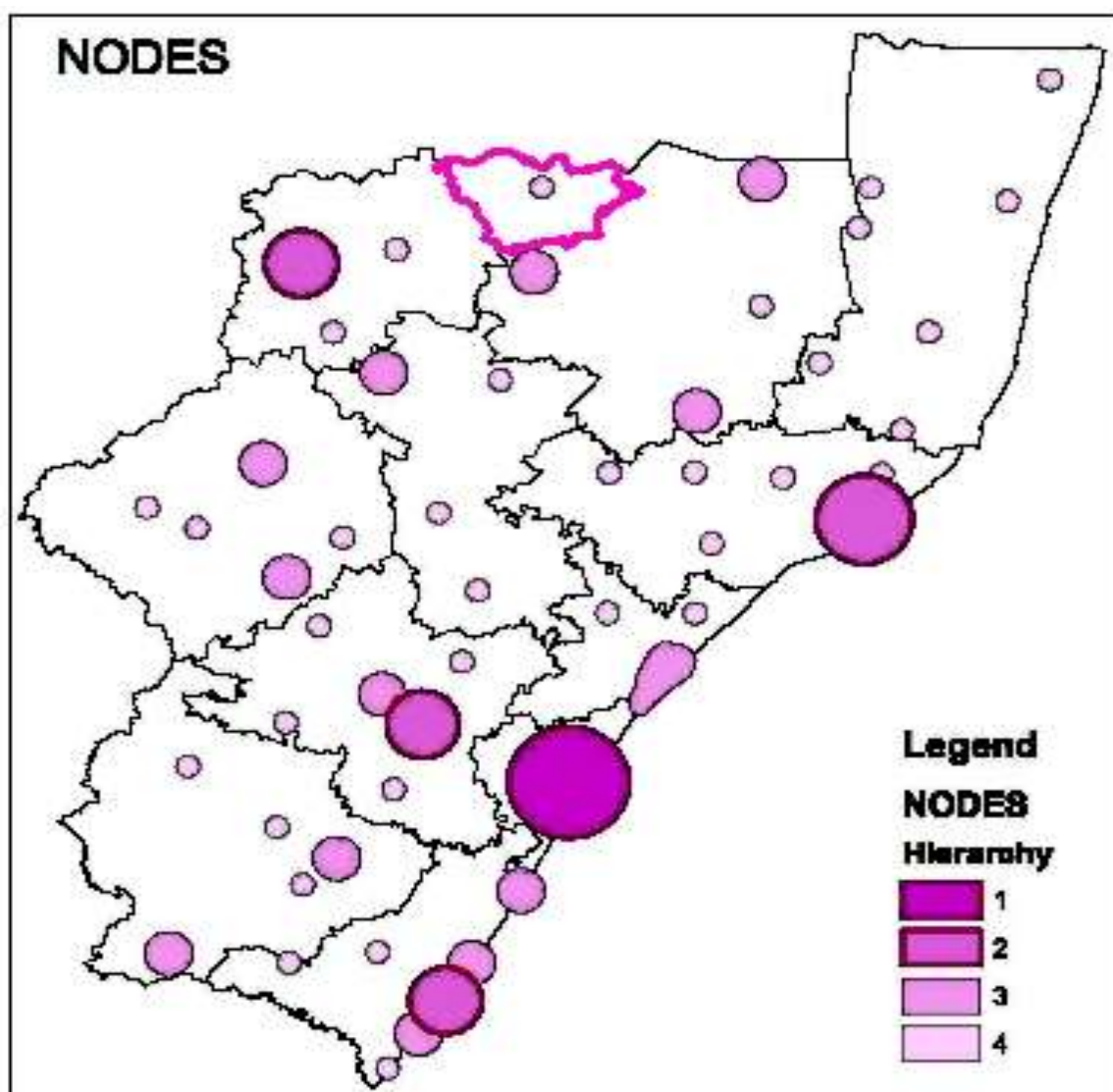
***Map 3: Classification of poverty/need***



### 2.2.8.2. Service Centres

The Provincial Spatial Economic Development Strategy takes the implications of the importance of the service sector in most districts into account. Many of the smaller rural centers and towns represent important centers of service, and particularly government activity. The PSEDs builds on the concept of developing a comprehensive network of centers throughout the province which would support the delivery of services. Services delivered would be determined by various nodes according to a hierarchy of places. In identifying the hierarchy of places existing service centers are strengthened but, more importantly, new or emerging service centers are developed. The Paulpietersburg node is identified as a smaller rural centre in terms of the Provincial Context.

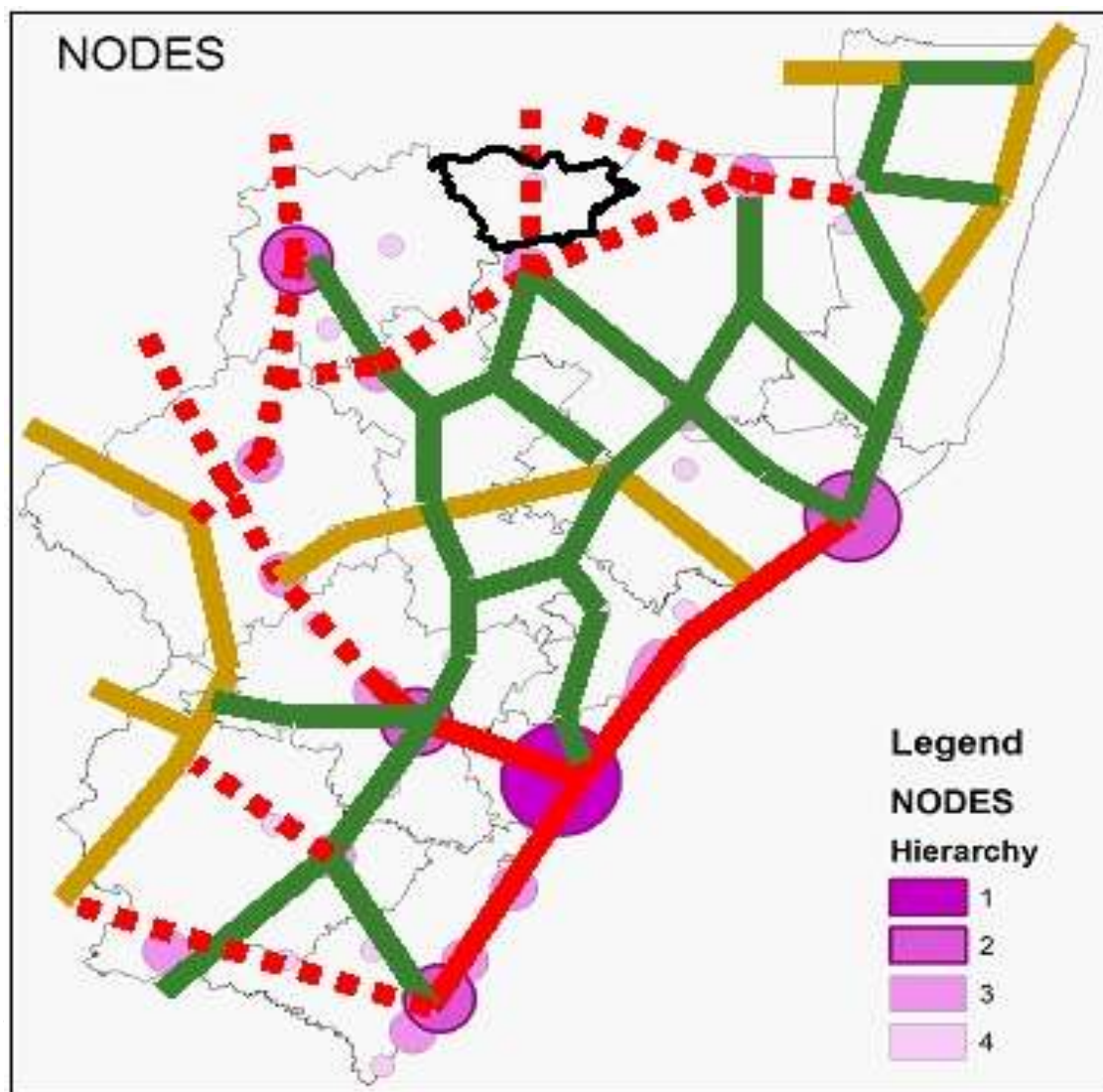
**Map 4: Service Centres**



### 2.2.8.3. Development/Activity Corridors

Economic development opportunities should be channelled into activity corridors and nodes that are adjacent to or link the main growth centers. The PSEDs thus does not attempt to identify a functional hierarchy of transport logistics corridors or routes throughout the province. Instead it focuses its attention on activity/development corridors. These development corridors are not intended to be the basis for a transport logistics network. It is however essential that the development corridors are adequately served by appropriate transport and logistics infrastructure.

The eDumbe area is served by an existing extension of an agriculture corridor that connects Richards's bay to Vryheid.

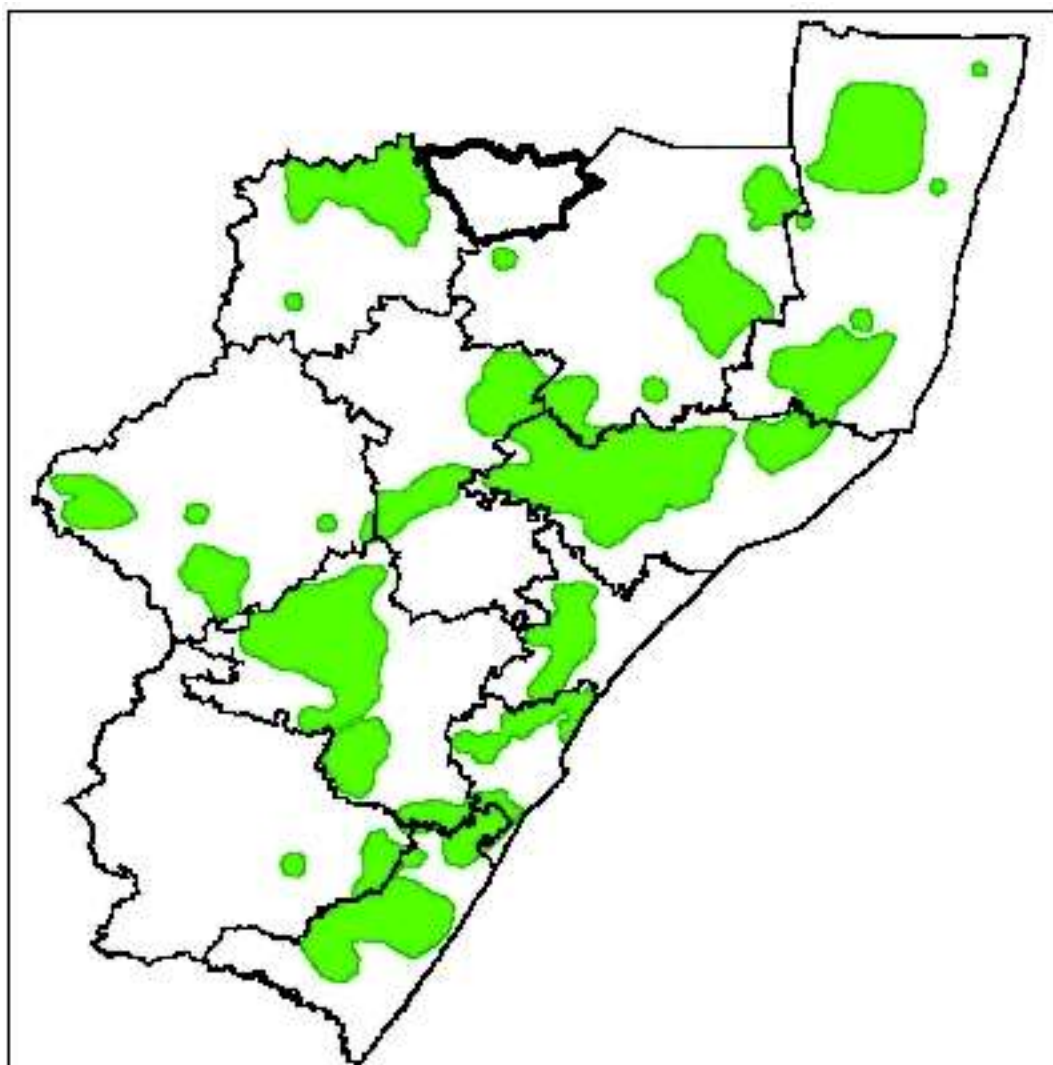




This sector is key to addressing poverty in the province since most areas of poverty are rural. Its contribution to the provincial economy is currently small but it has the potential to increase this contribution significantly if its full potential were realized. The commercial agriculture sector is the major employer in the majority of municipalities and forms the economic anchor of these municipalities. Subsistence agriculture is by far the most important source of sustenance for rural households. In order to achieve a reduction of unemployment and poverty the challenge is to grow and transform the commercial agricultural sector.

The accompanying map depicts areas in the province which have been identified with the highest potential agricultural and agri-processing potential. Although the eDumbe Municipality has not been identified as having significant agricultural importance it is still the most important sector for the local economy.

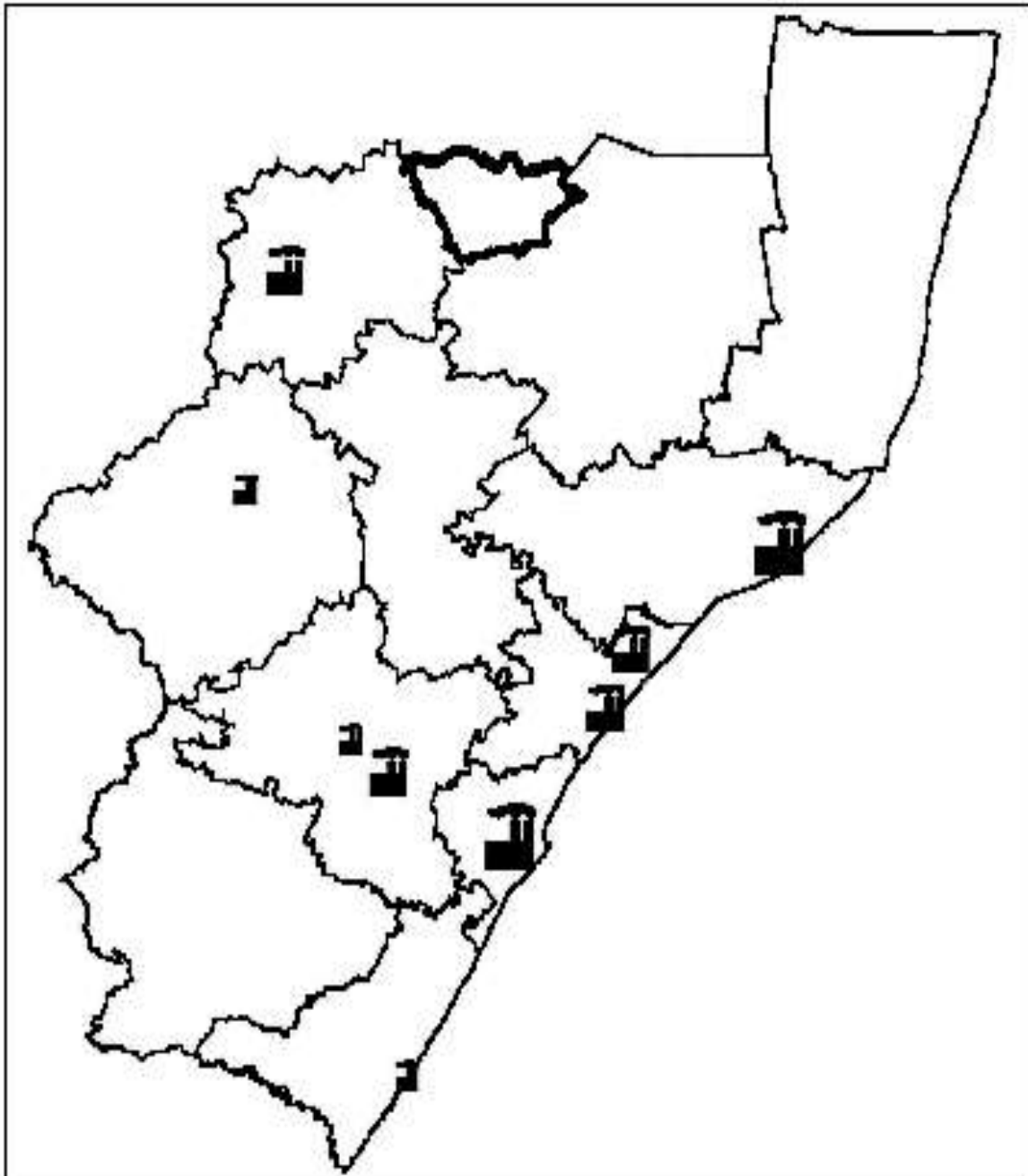
**Map 6: Agricultural Potential**



#### **2.2.8.5. Industrial Development.**

The municipality's LED plan has identified manufacturing as a crucial sector and this sector need to be supported even if it does not feature on a provincial scale. The long term implications, growth potential and barriers to industrial development need to be seriously considered.

#### **Map 7: Industrial Development**

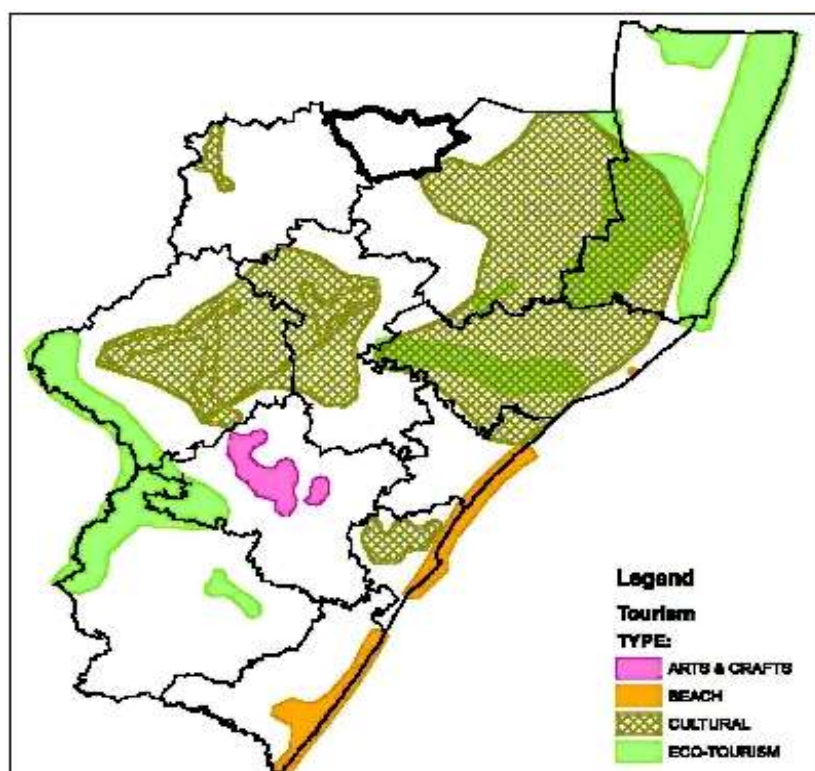


### 2.2.8.6 Tourism Development

The primary tourism potential within the province is in the beach tourism cultural tourism and eco-tourism markets. The areas of national tourism importance within the province are the Southern Zululand and Dolphin Coast, the Elephant Coast and surrounds, the greater Pietermaritzburg and Durban region, and the Drakensberg region. The tourism products of provincial importance are:

- Arts & crafts routes in Midlands Meander and Albert Falls Amble
- Durban, south coast and north coast beach tourism linked to cultural tourism in the interior
- Drakensberg region
- Greater St Lucia & surrounding big five reserves
- Zulu Heritage & Cultural Trail
- Battlefields Route

**Map 8: Tourism Development**





It can be seen from the map that the municipality does again not feature on a provincial scale but the municipality possess of specific traits which comply with the tourism products of provincial importance and as such should be promoted and linked to reap the benefits of the tourism industry. The issues highlighted in paragraph 3.6.1 should be critically pursued.

### 2.2.9. Sustainable Development Goals

The Sustainable Development Goals (SDGs) are an intergovernmental set of aspiration Goals with 169 targets which are an improvement to the Millennium Development Goals (MDGs). The SDG framework is all about dealing with key systematic barriers to sustainable development such as inequality, unsustainable consumption patterns, weak institutional capacity, and environmental degradation that the MDGs did not pay attention too. The SDGs consist of 17 Goals, all of which may not apply to eDumbe Municipality. The table below outlines each target in relation to the strategies developed by the Municipality and the implications of them on the Municipality.

No.	Sustainable Development Goal	Municipal Strategy	Implications on the Municipality
1.	End poverty in all its forms everywhere	To promote and preserve a safe and healthy environment	These strategies aim to direct development and growth in priority areas which are poor and underserved settlements. By doing so, the goal is to alleviate poverty and empower communities with better services and opportunities.
		Safeguard sustainable livelihoods and food security to alleviate poverty	
2.	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	To ensure efficient and sound Strategic and Spatial municipal planning.	
		Safeguard sustainable livelihoods and food security to alleviate poverty	
		Unleashing Agricultural Potential	
3.	Ensure healthy lives and promote well-being for all at all ages	To provide Sustainable Human Settlements to people of eDumbe Promote youth, disabled, elderly & women	This in turn will lead to the Municipality having all citizens living harmoniously, in turn decreasing the amount

		Safeguard sustainable livelihoods and food security to alleviate poverty	of unrest within the Municipality.
4.	Ensure inclusive and equitable quality education and promote life-long learning opportunities for all	Safeguard sustainable livelihoods and food security to alleviate poverty Enhancing health of communities and citizens Enhancing public safety and security Promote youth, disabled, elderly & women To reduce the impact of HIV/AIDS To promote sports development To promote arts & culture	
5.	Achieve gender equality and empower all women and girls	To ensure that staff councillors and the community are exposed to capacity building initiatives Promote youth, disabled, elderly & women	Oppression in all its forms will be diminished, making the Municipality open to equal opportunity for women.
6.	Ensure availability and sustainable management of water and sanitation for all	Improve accessibility in all wards To provide Sustainable Human Settlements to people of eDumbe To practice in a safe and adequate environment.	A well maintained and well run Municipality with basic services provided to all. This will require the municipality to lobby for funding ad projects to achieve this. Infrastructure will have to be upgraded and long term planning put into place.
7.	Ensure access to affordable, reliable, sustainable, and modern energy for all	Improve accessibility in all wards To improve the current electrical network To practice in a safe and adequate environment.	
8.	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	To formalise the informal economy/sector	
		Promoting SMME, Entrepreneurial and Youth Development Enhance the Knowledge Economy	
9.	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.	Improve accessibility in all wards Refurbish existing Roads in rural & urban areas	

10.	Reduce inequality within and among countries	Promote youth, disabled, elderly & women	Oppression in all its forms will be diminished, making the Municipality open to equal opportunity for all.
11.	Make cities and human settlements inclusive, safe, resilient and sustainable	Safeguard sustainable livelihoods and food security to alleviate poverty Enhancing health of communities and citizens Enhancing public safety and security Promote youth, disabled, elderly & women To reduce the impact of HIV/AIDS To promote sports development To promote arts & culture	Crime to be reduced, access to all services for all citizens, better standards of living, improved options to all.
12.	Ensure sustainable consumption and production patterns	Consumer protection to be followed t all times, improved customer service.	Systems need to be in place in which people are allowed to indicate their dissatisfaction on services, without the need for violent protesting. This could reduce the amount of protesting within the Municipality.
13.	Take urgent action to combat climate change and its impacts	Promote usage of alternate energy sources Protection of environmentally sensitive areas A Disaster Management Plan that is responsive	A resilient Municipality, a recent and relevant Disaster management Plan in place which indicates mitigation factors and risk reduction. Identifying areas of risk and planning for disastrous situations.
14.	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Not Applicable to the Edumbe LM	N/A
15.	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land	Promote usage of alternate energy sources Protection of environmentally sensitive areas A Disaster Management Plan that is responsive	Municipality to Map out Environmental areas of concern and plan accordingly. The SDF needs to be comprehensively

	degradation and halt biodiversity loss	To promote harmonious & co-ordinated land uses to achieve sustainable environment To ensure effective management of current and desirable land uses	reviewed and an SEA to be developed.
16.	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	To promote harmonious & co-ordinated land uses to achieve sustainable environment To ensure effective management of current and desirable land uses	Crime to be reduced, access to all services for all citizens, better standards of living, improved options to all. Systems need to be in place in which people are allowed to indicate their dissatisfaction on services, without the need for violent protesting. This could reduce the amount of protesting within the Municipality. An open and Transparent Municipality.
17.	Strengthen the means of implementation and revitalize the global partnership for sustainable development.	To promote harmonious & co-ordinated land uses to achieve sustainable environment To ensure effective management of current and desirable land uses	By reviewing the SDF and developing the Single Land Use Scheme, this allows for investment opportunities, in which land is regulated and resources are identified.

## **2.3. CONCLUSION**

The Spatial Development Framework for èDumbe Municipality must be aligned with the National and Provincial Policies and principles to ensure integration and alignment. This will ensure the acceptance of the municipality's strategies and projects and the eventual funding thereof by the various external funding agencies. The municipality needs to take this opportunity to promote itself as a gateway to the province with the necessary support and assistance from the Provincial focus. The strengthening of the municipality's spatial form and the focus on the primary node's CBD need to be driven as regional priorities to strive for the Provincial Vision 2035.

## CHAPTER 3: THE PHYSICAL ENVIRONMENT

### 3.1. THE NATURAL ENVIRONMENT/STRATEGIC ENVIRONMENTAL ASSESMENT

#### 3.1.1 Topography

eDumbe municipality is spread over an area with quite different topographic characteristics from the mountainous area with steep valleys in the east to the plateaus and gently undulating land in the west. The general topography can be described as follows:

- The high mountainous country of the Elandsberg and Ngcaka scarps in the east of the area. These are the steeply sloping scarp edges of what Turner (in Phillips, 1973) has termed the Baleleberg-Skurweberg Plateau at altitudes of 1 700 m or more.
- The undulating plateau of the Makateeskop and Ndondlowlwane plateau at altitudes of about 1 200 - 1 500 m.
- The dissected plateaus of the Piensrand and Mahlone areas of mainly rolling to rugged relief at altitudes of 1 000 - 1 200 m.
- The Upper Pongola and Bivane valleys of gently undulating land at altitudes mainly of 900 – 1 200 m.
- A shelf of undulating land above the lower Pongola valley or gorge at an altitude of 800 – 900 m in the vicinity of Hartland Mission.
- The lower Pongola and Bivane Valleys of deeply incised and rugged terrain at altitudes of 500 - 900 m.

#### 3.1.2 Slope Analysis

The municipality is situated in an area with relatively steep slopes that makes a large area of the municipality not suitable for development and settlement. This situation also makes the municipal area highly susceptible to erosion of topsoil and silting in dams. The protection of these areas should be high on the municipality's list and the identification of sensitive areas where development should not take place need to be considered.

### 3.1.3 Geology

These physiographic features are closely related to the underlying geology as follows:

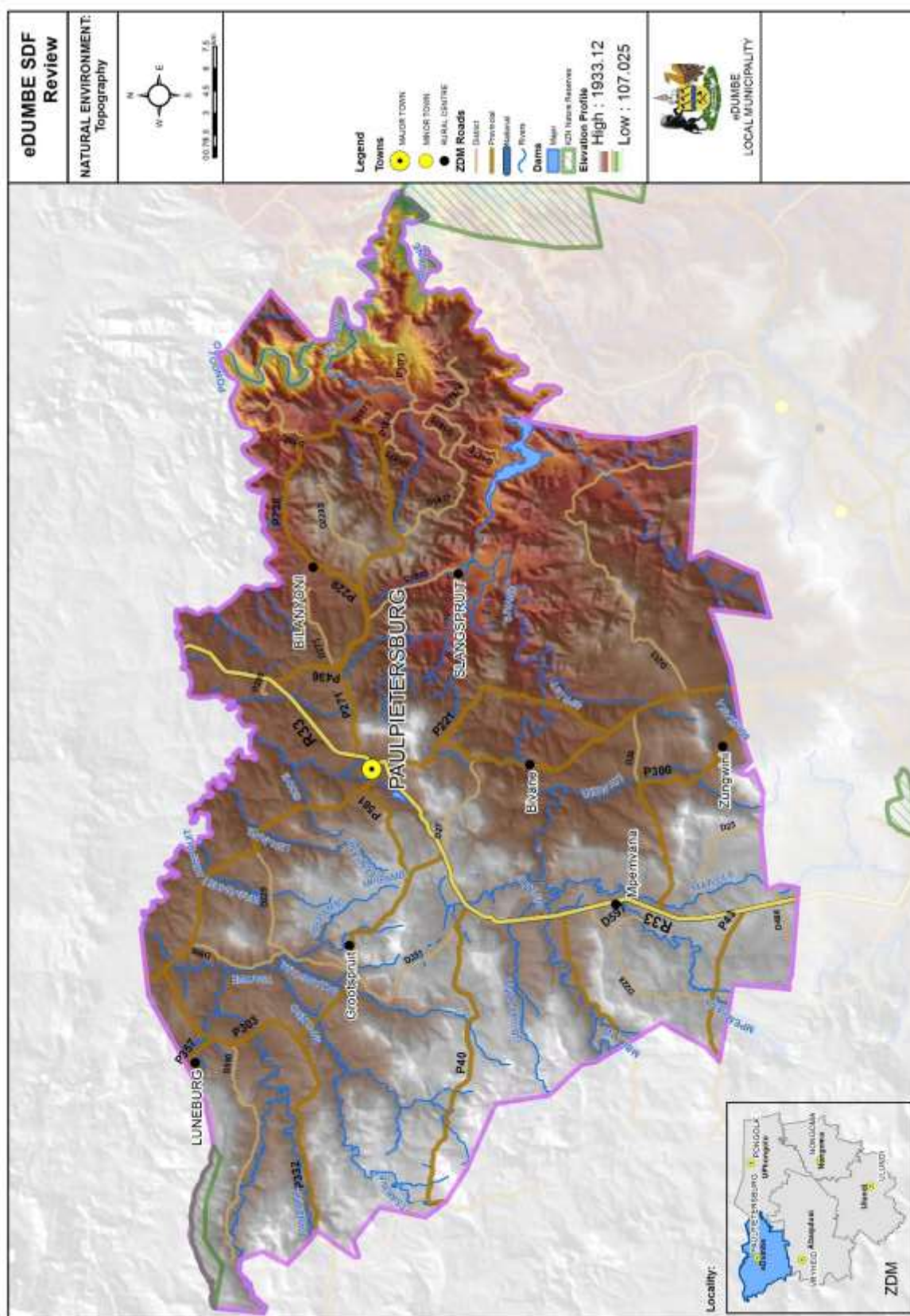
- ➡ On the Elandsberg and Ngcaka scarps: mainly dolerite and shale's.
- ➡ On the Makateeskop and Ndlondlolwane plateau and adjacent scarps: mainly sandstones and shale's of the Vryheid formation with some coal and with large intrusions of dolerite.
- ➡ On the dissected Piensrand and Mahlone plateau: mainly basic volcanic rocks like basalt, diorite and gabbros.
- ➡ On the Hartland shelf: mainly basalt, shale and quartzite.
- ➡ In the upper Pongola and Pivane valleys: mainly granites rocks.
- ➡ In the lower Pongola and Pivane valleys: mainly metamorphic rocks like quartzite and schist's.

The municipal area is divided into 5 lithology areas of import. The Shale and Granite prevalent in the eastern part of the municipality lends itself the best for development. The Basalt is a very hard base and makes development and the installation of services difficult and thus expensive.

The Tilite in the southern portion can be an indication of underlying clays that necessitates special measures for foundations when development should take place. The quartzite in the eastern portion of the municipality may be positive for potential development dependent on the underlying solidity of the formation.

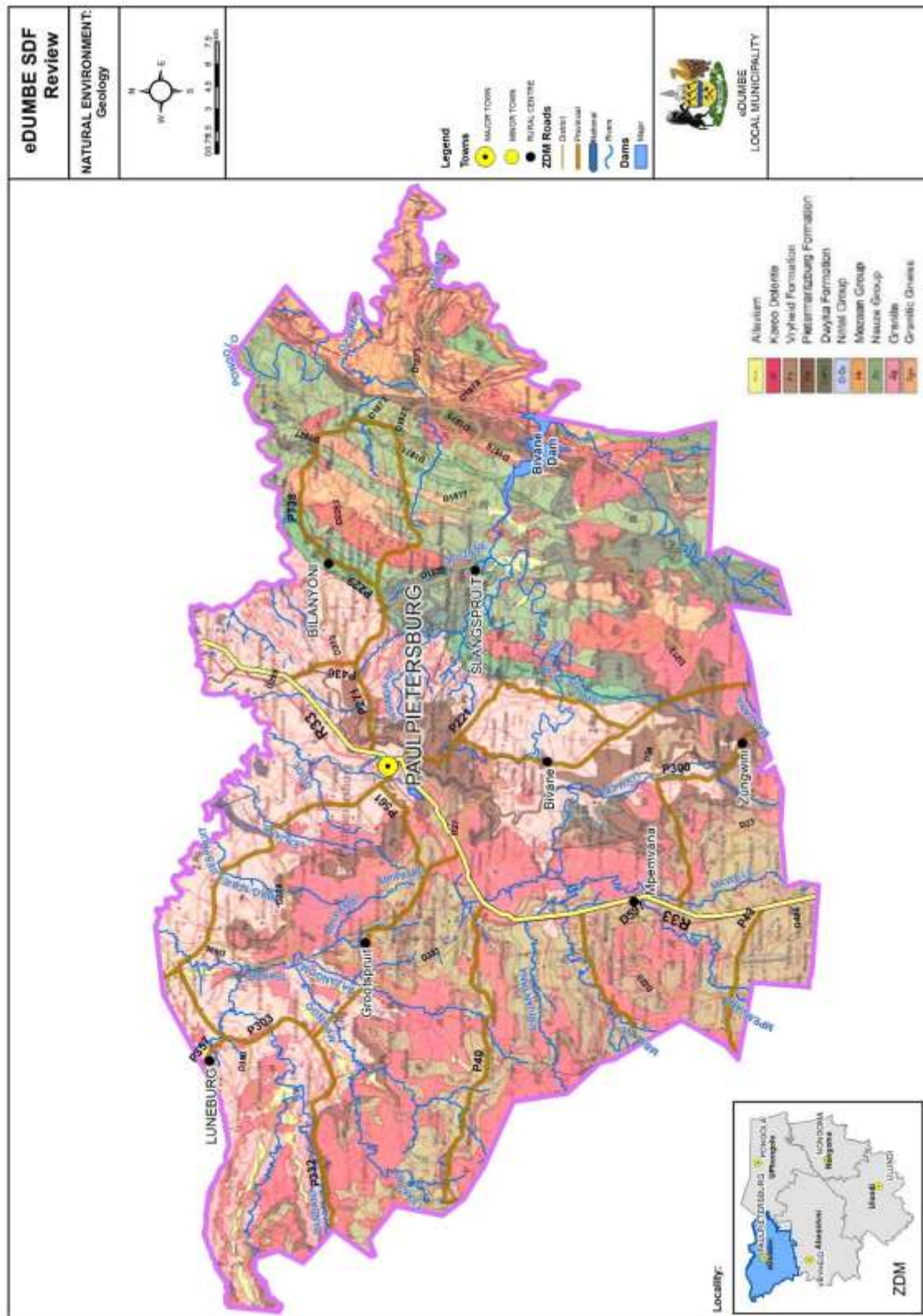
Cognizance should be given to the fact that this broad overview does not negate that site specific geotechnical investigations need to be done prior to any development.

**Map 9: Natural Environment - Topography**

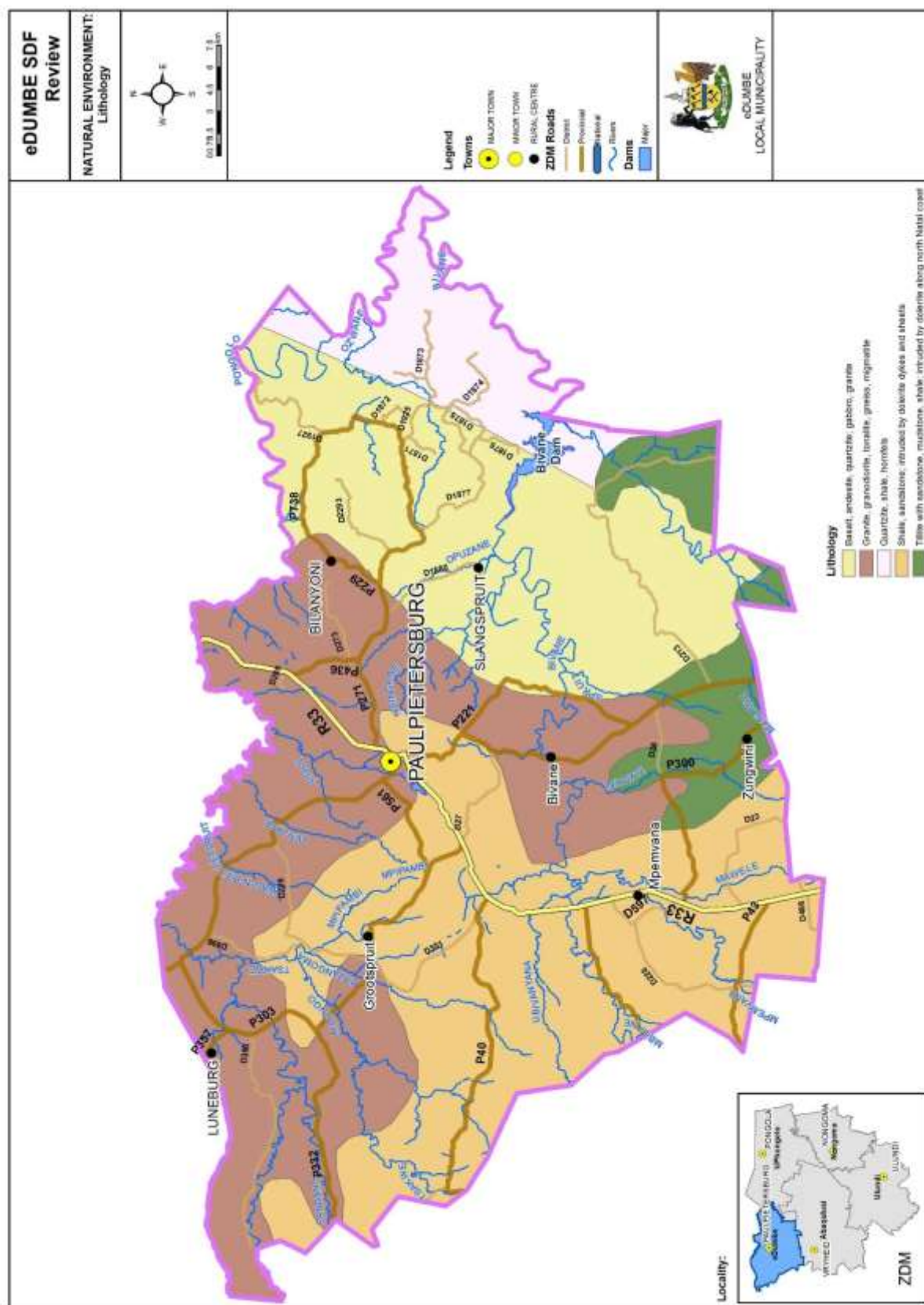




**Map 10: Natural Environment – Geological Map**



### **Map 11: Natural Environment – Lithology**







### 3.1.4. Soils

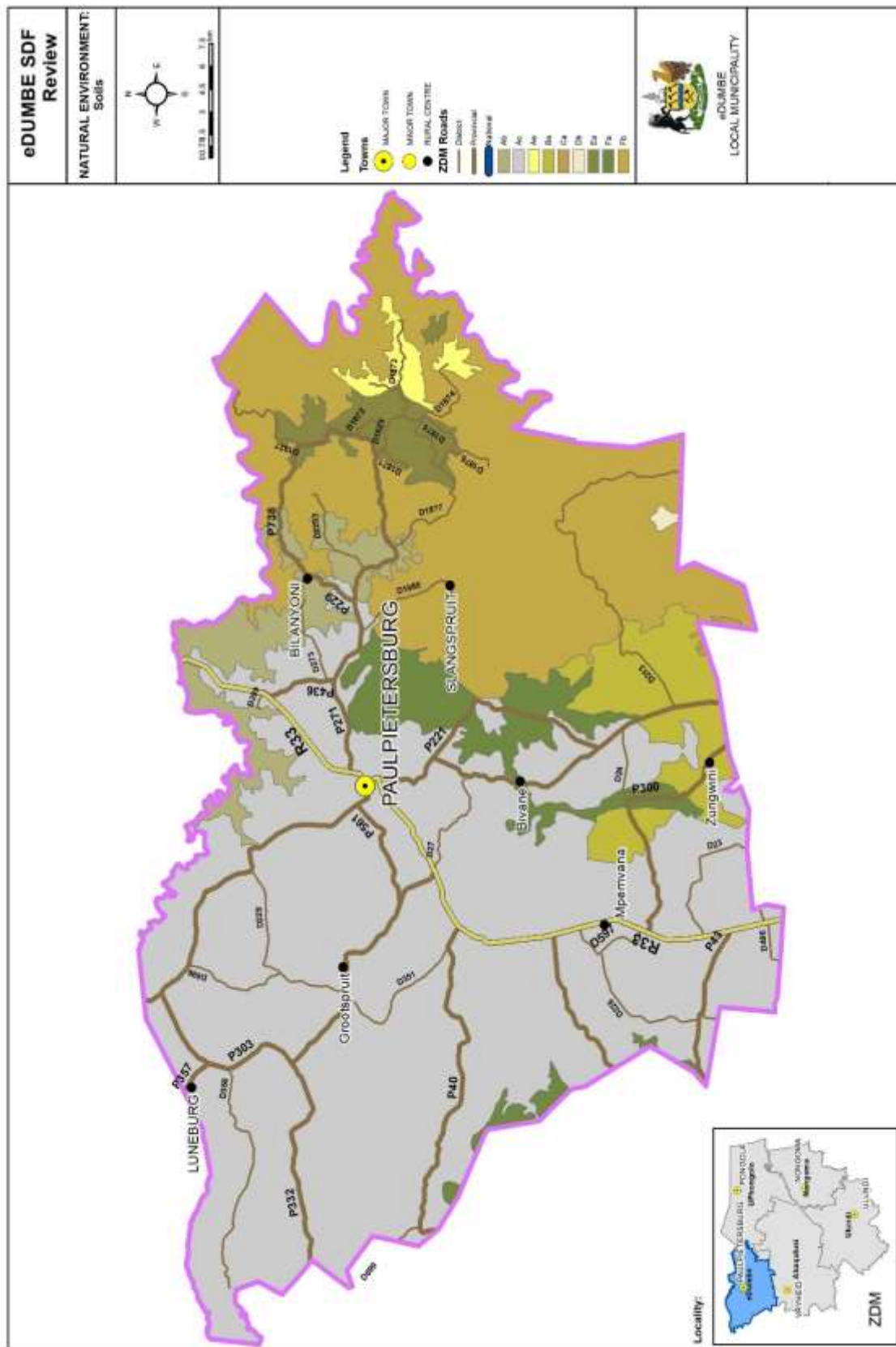
The overall soil pattern in the study area has been strongly influenced by two dominant soil forming factors: climate and parent material.

In the higher rainfall areas above 800 mm per annum like the Elandsberg scarp and the Makateeskop plateau the soils tend to be deep, well-drained, fine-textured and leached with somewhat sandier textures where derived from sandstone or granite but more clayey where formed from dolerite. In terms of the South African Soil Classification system the most common soils are those of the Clovelly and Hutton forms in gently-sloping upland areas with Glenrosa soils on steeper slopes and Katspruit or Cartref soils in vleis and depressions.

Most upland soils on the Makateeskop plateau and the Upper Pongola and Bivane valleys are high potential arable soils being generally deep and well-drained with good physical properties. Chemically, however, these soils tend to be leached, due to the high rainfall, and therefore acid and low in plant nutrients. They may consequently need to be limed and to have their nutrient status built up by appropriate fertilizer treatments. When this is done they are highly productive cropping soils.

In the drier areas, where mean annual rainfall is below 800 mm, the soils are generally shallower and less leached, often with strongly structured subsoils of poor permeability. Typical soil forms in these areas are those of the Hutton, Shortlands and Avalon forms among the better upland soils but often with undesirable duplex soils of the Valsrivier, Swartland, Sterkspruit and Estcourt soils in depressions and seepage zones. Dark-coloured heavy clays of the Arcadia and Bonheim forms are also common on the basic rocks.

These drier climate soils, because they are less leached, tend to have higher levels of plant nutrients than in the high rainfall areas but often to have less desirable physical properties such as restricted subsoil permeability and poor moisture holding characteristics. Careful soil selection is therefore especially important in these areas.

**Map 13: SOILS**

### 3.1.5. Water Catchment

The e'Dumbe Municipality is very well watered with many perennial rivers and streams and a large number of farm dams. A major impoundment on the Bivane River, the Bivane Dam is also partially within the area. There are also a large number of perennial springs and several important wetland areas that need to be protected.

The main rivers draining the area are the Pongola river and its main tributaries the Pandana, Bazangoma, Lenjane, Mahashini, Mandlana, Ntombe, Bilanyoni, Nkemba and Ozwana rivers; and the Bivane river and its larger tributaries: the Opuzane, Gwakamakazi, Nsingani, Mbinkulu, Ncwayi, Mpemvana, Mbilane, Mawele and Bivanyana rivers and Balladon Spruit.

All of these rivers are potentially capable of providing water for irrigation within the area. The irrigation potential of the area will, however, tend to be determined by three main considerations:

- The amount of water available from river flow during the dry season (the period of low flow, usually in August - September).
- Whether there are constraints on the use of such water due to commitments to downstream users e.g. the irrigation farmers downstream of the Paris Dam.
- Whether there are suitable soils within economic reach of the various rivers.

There should be demarcation of the 1:100 flood lines for all watercourses to control future development within these zones. The prohibiting of all future development within this area should be subject to Environmental Impact Assessment (EIA'S).

It must be stressed that wetlands identified over and above these maps should be subject to the same guidelines:

- (i) Infilling, drainage and hardened surfaces (including buildings and asphalt) should not be located in any of the wetland zones (i.e. permanent, seasonal and temporary) such activities generally result in significant impacts on a wetland's hydrology, hydraulics and biota and on the goods and services wetlands provide.

- (ii) Hardened surfaces and erven should be located at least 15 m outside of the outer boundary of the seasonal/permanent zone (Note: if the width of the outer temporary zone is greater than 15m and Item 1 above is met then this requirement would automatically be met). The seasonal and permanent zones generally have surface water for extended periods. In the case of seasonal zones, it may be for most of the wet season and in the case of permanent zones, it may be throughout the year. A buffer is required between areas potentially generating non-point source pollution and such areas characterized by surface water.
- (iii) Extension to the buffer in localized areas should also be included to minimize the impact of concentrated storm water run-off into the wetland. Storm water outflows should not enter directly into the wetland. A predominantly vegetated buffer area at least 20m wide should be included between the storm water outflow and the outer boundary of the wetland, with mechanisms for dissipating water energy and spreading and slowing water flow and preventing erosion. This buffer is particularly important when the catchments feeding the storm water drain comprises predominantly hardened surfaces. Extensive hardened surfaces in the catchments and storm water drains significantly increase the intensity of storm water runoff, which increases the risks of erosion in a wetland. In addition, urban storm water runoff is often polluted. A buffer is therefore required to reduce the energy and erosive power of the storm water and to decrease the level of pollutants in the runoff before it enters the wetland.
- (iv) Where the wetland has a particularly high biodiversity value, further buffering may be required, the width of which would depend on the specific requirements of the biota. This should be determined in consultation with Ezemvelo KZN Wildlife. The value of a wetland for biodiversity derives not only from features of the wetland but also from the quality of natural, non-wetland areas adjacent to the wetland, as many wetland dependent species such as the giant bullfrog (*Pyxicephalus adspersus*) require both wetland and non-wetland habitat.

- (v) If a road crossing is planned in a wetland, first seek an alternative route. If this is not available then ensure that the road has minimal affect on the flow of water through the wetland (e.g. by using box culverts rather than pipes). Do not lower the base level of the wetland or any stream passing through the wetland. Ensure an adequate buffer is present to deal with run-off from the road (see Item 3 above). During construction, minimize disturbance of the wetland at and adjacent to the road crossing site. Road crossings may potentially greatly modify local water flow patterns in a wetland. In addition to having a damming or draining effect on the flow upstream of the road, roads which do not allow for the adequate passage of water may concentrate flow downstream, increasing the erosion hazard and drying out this portion of the wetland. A lowering of the base level increases the gradient in the wetland, thereby increasing the speed of water flow and its erosive potential and the extent to which it contributes to lowering the water table.
- (vi) Where a road runs alongside a wetland and it intercepts natural hill slope runoff into the wetland, the road should be set back from the boundary of the wetland by at least 20m and feed-off points should be included at frequent intervals along the road (at least every 100m) and the outflows of these should conform to the requirements of the storm water outflows (given in Item 2 above). A road running alongside a wetland can strongly affect the natural hill slope runoff into the wetland by intercepting this runoff and concentrating it in localized entry points. The fewer the feed-off points into the wetland and the less protected they are, the more severe this effect will be.
- (vii) Where development (e.g. hardened surfaces, infilling and drainage) in a wetland is unavoidable then the resulting impacts must be mitigated. In many cases, off-site mitigation may be the only means of achieving satisfactory mitigation. The cumulative loss of wetlands in South Africa is already very high and the continued net loss of wetlands needs to be prevented. Invasion of a wetland by alien plants may considerably reduce the integrity of a wetland.
- (viii) Where any disturbance of the soil takes place in a wetland, clear alien plants which establish and follow up for at least 2 years thereafter. Disturbance of a wetland favors the establishment of alien plants, which require long-term control.



- (ix) Where the infiltration rate of a wetland's catchments is naturally high and the wetland is maintained predominantly by groundwater input, at least 60% of the wetland's catchments should remain as permeable surfaces in a residential area and preferably at least 30% in an industrial/commercial area. Where the level of development is very high, reduced surface runoff can be promoted through mechanisms such as porous pavements (The inclusion of these mechanisms in areas dominated by hardened surfaces is generally sound catchments management practice and should be encouraged widely). Failure to maintain groundwater input to a predominantly groundwater-fed wetland will considerably alter the hydrological regime of the wetland, thereby compromising its integrity.
- (x) The onus is on the developer to identify and delineate all wetlands in the project area at a finer scale depending on the proposed development. Mapping at a minimum scale of 1: 10 000 is generally required. In order to account for the impact of a development adjacent to a wetland, it is essential that the boundary of the wetland be mapped. Any wetlands identified on the ground should be delineated and mapped by the municipality on an ongoing basis.
- (xi) Any development must comply with the requirements of the National Water Act. Through the concept of the "ecological reserve", this act makes provision for ensuring water of acceptable quantity and quality for maintaining the ecological functioning of wetlands and river systems. While wetlands assist in enhancing water quality, they should not be relied upon as an easy substitute for addressing pollution at source, as this may lead to serious impacts to the wetland systems.
- (xii) Access to wetlands by off-road vehicles, man and livestock, should be as far as possible prevented.
- (xiii) Development within the flood line or within 32m of a river or stream should be avoided and vegetation in this zone should be conserved





### 3.1.6 Climate

There are some 18 official weather-recording stations in the area, but only one of these, Paulpietersburg, also records a full range of climatic data i.e. temperatures, relative humidity, cloud cover, precipitation, thunder, hail and frost. As the Weather Bureau now charges for access to its climatic records and as no budget was available for this cost, it has not been possible to have access to this basic information. Instead, the climatic data provided by the Department of Agriculture (Camp, 1995) for those of their Bio resource units which fall within the area have had to be used.

These suggest the following climatic patterns for the physiographic units.

**Table 4: Climatic Patterns**

Physiographic Unit	Representative Bioresource Units	Mean Annual Climatic data				Combined Climatic limitations
		Rainfall (mm)	Temp. (°C)	Evap. (mm)	Frost risk	
Elandsberg and Ngcaka scarps	Yd 3	1 070	15,1	1 790	Severe	Moderate
Makateoskop & Ndlondloli-wane plateaux	Yc 2	918	16,8	1 868	Moderate	Slight
	Xc 1a	859	16,4	1 823		
Piensrand and Mahlone plateaux	Wc 3a	800	17,2	1 864	Light	Slight
	Uc 3b	744	17,8	1 864	Light	Moderate
UpperPongola & BivaneValleys	Wc 3a	800-900	17,2	1 864	Light	Slight
Hartland Shelf	Vc 5	797	18,4	1 905	Light	Moderate
LowerPongola & BivaneValleys	T Ub 1	678	19,2	1 923	Occasional	Severe

From an agricultural point of view the important aspects of these climates are:

- ➡ The good rainfall of those areas with a mean annual rainfall of 800 mm or more (800 mm is normally taken as the threshold value for reliable dryland cropping).
- ➡ The risk of frost which is severe on the Elandsberg plateaux but elsewhere light to moderate.
- ➡ The mean annual temperatures which increase by some 4°C within the area and the related factor of increasing evaporation with decreasing altitude.

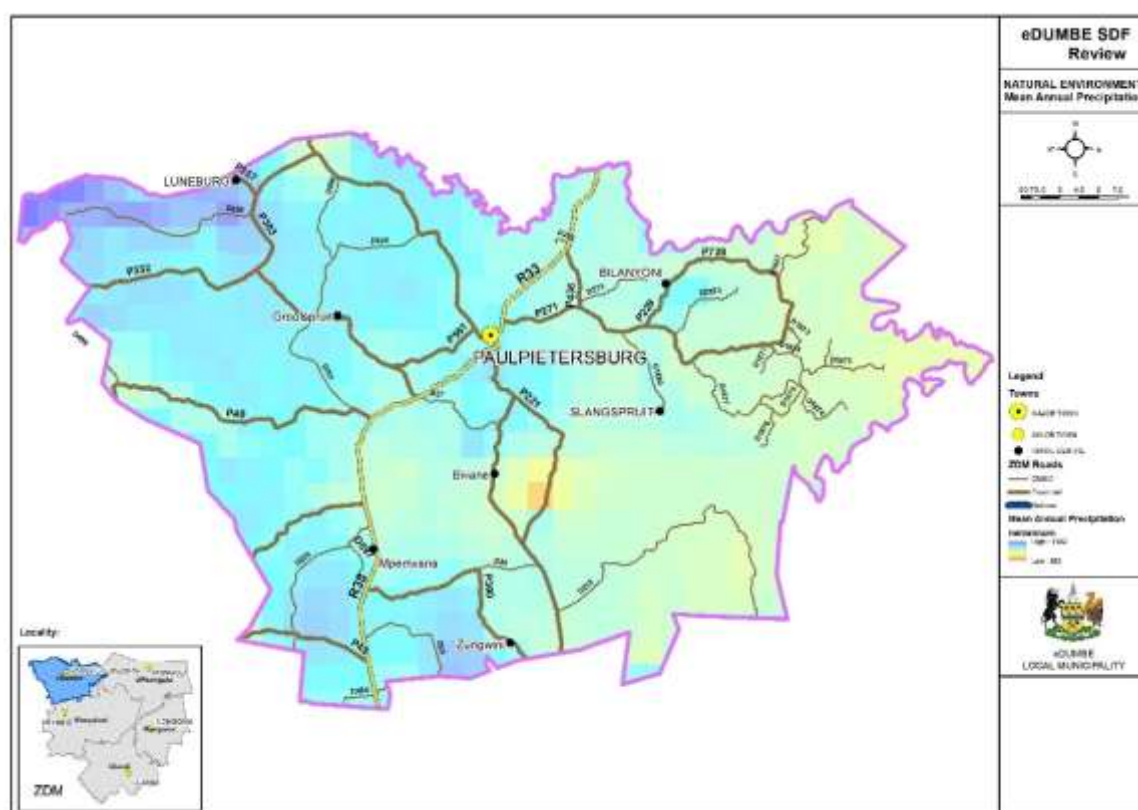


Overall, it may be said that BRUs Yd 3, Yc 2, Xc 1a and Wc 3a are good agricultural climates, though Yd 3 has a rather short summer followed by a severe winter. The other climates: Uc 3b, Vc 5 and T Ub 1 are all rather too dry for good cropping.

According to Phillips= Bio-climatic classification of Natal (Phillips, 1973) there are 4 Bioclimatic units in the area.

- ➡ 4a: the Highlands to Sub-montane sub-humid climate over the Elandsberg.
- ➡ 6a: the Moist Upland climate of the Makateeskop, Ndondolwane and Pienstrand plateaux and the upper valleys of the Pongola and Bivane rivers.
- ➡ 8: the Dry Upland climate on the Mahlone plateau and the Hartland shelf.
- ➡ 10c: the Interior Lowland climate in the Lower Pongola and PivaneValleys.

**MAP 16: ANNUAL PRECIPITATION**



### 3.1.7 Open Space and Conservation

South Africa has ratified the International Convention on Biological Diversity, which commits the country, including KwaZulu-Natal, to develop and implement a strategy for the conservation, sustainable use and equitable sharing of the benefits of biodiversity.

In terms of the Constitution of South Africa, KwaZulu-Natal has responsibility for the function of nature conservation in the province, except for national parks, marine resources and national botanical gardens, and concurrent responsibility for the environment.

The Biodiversity Bill also requires Provincial Authorities together with the Department of Environment and Tourism, to compile and implement a 'Bioregional Plan' for the province that ensures that a minimum area of each bioregion with all its representative ecosystems is protected. The results of such a planning process have both strategic planning value as well as reactive value in the event of a change in land use being proposed. Thus, the opportunity arises to have a significant input into the environmental component of the Municipal Integrated Development Plans, and via this mechanism make a meaningful and positive contribution to environmentally sensitive development in the province.

In essence important areas of environmental significance need to be identified to protect and preserve valued ecosystems, natural habitats and special case areas in order to minimize negative impacts. In terms of land use management, the specific ecosystems and vegetation communities that require environmental management are wetlands, grasslands, and indigenous forests that contain the habitats of important species. It should be noted that environmental management need not be limited to the protection/preservation but also areas may be identified for opportunities that a particular environment may provide such as the rehabilitation of wetlands, eco-tourism opportunities etc.

One of the development issues in the municipality is the promotion of LED through agriculture and tourism. There are also various projects associated with settlement growth through the implementation of Land Reform and Housing programmes. Therefore it is essential that while accommodating these challenges, environmental assets associated with the municipality are not undermined.

### 3.1.7.1 Irreplaceability Analysis

#### **Critical Biodiversity Areas [CBAs]**

As per Ezemvelo KZN Wildlife's Zululand Biodiversity Sector Plan (2016), [BSP]Critical Biodiversity Areas [CBAs] are natural or near natural landscapes that are considered critical for meeting biodiversity targets and thresholds, and which safeguard areas required for the persistence of viable populations of species and the functionality of ecosystems.

The CBA areas described in the mapping hereafter relate to both CBD Irreplaceable and CBA Optimal land which are defined within the Ezemvelo KZN Wildlife Biodiversity Sector Plan Report as follows:

- **CBA Irreplaceable land:** Areas considered critical for meeting biodiversity targets and thresholds, and which are required to ensure the persistence of viable populations of species and the functionality of ecosystems.
- **CBA Optimal land:** Areas that represent an optimised solution to meet the required biodiversity conservation targets while avoiding areas where the risk of biodiversity loss is high Category driven primarily by process but is also informed by expert input.
- **ESA Ecological Support Areas:** Functional but not necessarily entirely natural areas that are required to ensure the persistence and maintenance of biodiversity patterns and ecological processes within the critical biodiversity areas. The area also contributes significantly to the maintenance of ecological infrastructure.
- **ESA Ecological Support Areas: Species Specific:** Terrestrial modified areas that provide a support function to a threatened or protected species, for example agricultural land.





### 3.1.8. Vegetation

According to the Bioresearch Group classification of the vegetation of KZN by Camp (1996) as used by the Department of Agriculture, there are 5 main veld types in the area as follows:

- ➡ Moist Highland Sourveld (MHS) on the Elandsberg plateau and scarp.
- ➡ Moist Transitional Tall Grassveld (MTTG) on the Makateeskop and Ndondolwane plateaus and the Upper Pongola and Pivane valleys. This is the prevalent veld type in the municipality and lends itself to agricultural practices.
- ➡ Moist Tall Grassveld (MTG) on the Piensrand plateau in the east.
- ➡ Dry Tall Grassveld (DTG) on the Mahlone plateau and the Hartland shelf.
- ➡ Dry Zululand Thornveld (DZT) on the lower, more incised parts of the Pongola and Bivane valleys. This veld type is not beneficial towards normal agricultural practices.

The Table below summarizes the main characteristics and management requirements of these various veld types.

**Table 5: Veld management characteristics and requirements of main veld types:**

	MHS	MTTG	MTG	DTG	DZT
Average grazing capacity (Ha per AU*)	1,6	1,8-2,1	2,5	3,4-4,2	3,7-4,6
Permissible burning dates	1/8-30/9	1/8-30/9	1/8-30/9	15/8-31/10	15/7-30/9
Recommended grazing cycle	30	30	42	63	63
Period of stay for 4 camp system	10	10	14	21	21
Period of absence for 4 camp system	20	20	28	42	42

	MHS	MTTG	MTG	DTG	DZT
Length of grazing season (days)	250	250	275	300	300
Recommended frequency of rest	1 in 4 years	1 in 4 years	1 in 4 years	1 in 4 years	Assess on site

*An AU or Animal Unit is defined as the grazing equivalent of a 450 kg steer which consumes 10 kg of dry matter a day.*

Although the natural vegetation at the higher altitudes is, or was, mainly grassland much of it is now under plantations of wattles, gum and pine. That much of the area has been found to be suitable for forestry is not surprising as Acocks (1975) considers that most of this area was originally under forest or scrub forest. Where the veld remains it is dominated by *Hyparrhenia hirta* but with the associated species varying according to veld type.



## 3.2 THE HUMAN ENVIRONMENT

### 3.1.1. Land Tenure

Land Tenure in the municipal area can be classified in 5 major groups, namely:

- a) Land reform areas
- b) Government owned land
- c) Urban Cadastral
- d) Traditional Authority areas
- e) Private Land

The land in the municipal area is predominately in private ownership and is used for either commercial farming or forestry purposes. The land in the eastern part belongs to the government and Traditional Authorities; this is also the land with the highest population density and most settlements.

### 3.1.2. Population Density

The municipality has a fairly low average population density with the expected high density areas of the primary node and the traditional authority areas. This pattern has a positive effect on service delivery as the higher the density the more economical can service delivery be done.

#### ***Population Growth:***

**Table 6: Population Growth from 2011 till 2016**

District and Local Municipality	Municipal sub-category	2015 Grants and subsidies received as a % of Total income	2011							
			Total Population			Youth (15-34 Years)			Youth Proportion	Persons aged 20 years+ who have completed grade 12
			Male	Female	Total	Male	Female	Total		
KZN 261 eDumbe	B3	72.0%	38 447	43 605	82 053	13 562	15 006	28 568	34,8	10 282

District and Local Municipality	2015 Grants and subsidies received as a % of Total income	2016								
		Total Population			Youth (15-34 Years)			Youth Proportion	Sex Ratio	Persons aged 20 years+ who have completed grade 12
		Male	Female	Total	Male	Female	Total			
KZN 261 eDumbe	72.0%	42 232	47 382	89 614	16 095	17 666	33 761	37,7	89,1	13 184

eDumbe has experienced positive population growth between 2011 and 2016, with the youth proportion

### ***Population Distribution***

A further breakdown in terms of population distribution of eDumbe area is provided in the table and diagram below.

**Table 7: Population Distribution**

Enumeration area type	Geography	
<b>Formal residential</b>	KZN261: eDumbe	21,646
	Total	21,646
<b>Informal residential</b>	KZN261: eDumbe	1,886
	Total	1,886
<b>Traditional residential</b>	KZN261: eDumbe	37,962
	Total	37,962
<b>Farms</b>	KZN261: eDumbe	20,345
	Total	20,345
<b>Total</b>	KZN261: eDumbe	81,839
	Total	81,839

Source: \* Census (2011)

**Graph 2: Population Distribution**

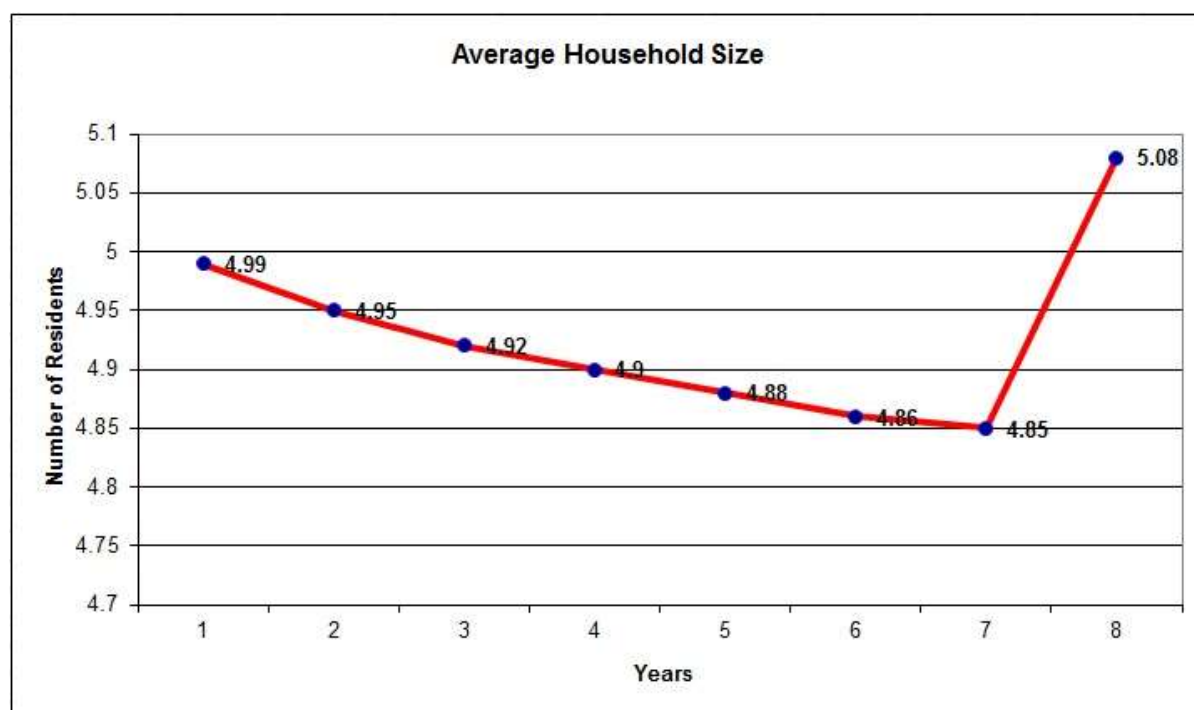
**Source:** \* Census (2001) and ZDM Aerial Photograph (2007)

The above table and the diagram shows that only 26% of the municipality's population lives in an urban areas while 74% lives in the rural surroundings of the municipality in a form or rural village, spread and farms. This factor has severe implications on actual service delivery and the cost thereof. It also implies that the large number of the general public of èDumbe municipality is far from the formal economy with its concomitant employment opportunities. Due to the impact of HIV/AIDS which is a world concern, population growth is expected to decline over the next 20 years.

This trend must be considered in the planning and delivery of new services.

**Average Household Size**

2004      2005      2006      2007      2008      2009      2010      2011

**Graph 2: Average Household Size**

Source: Quantec (2011)

**Gender Distribution**

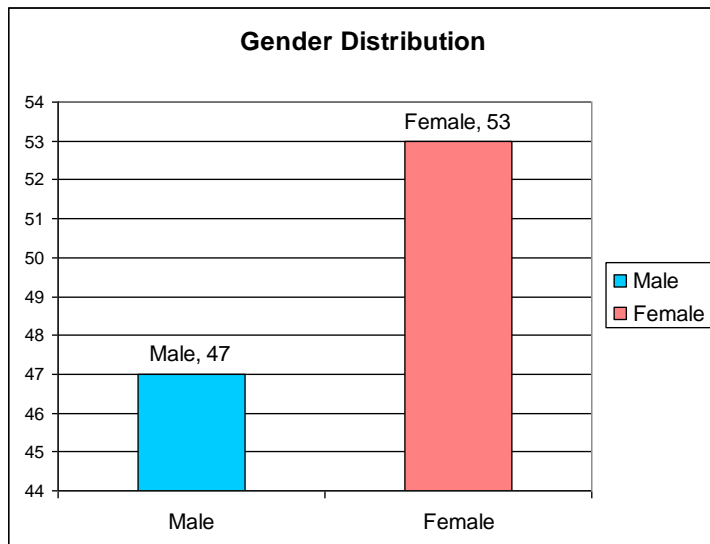
The following table and diagram indicates that a large population group is dominated by females with 53% of the municipality's population while males constitutes only 47%.

**Table 8: Gender Distribution**

Gender	
Male	38,447
Female	43,605
Total	82,053

Gender	
Male	46.90%
Female	53.10%

Source: Census 2011

**Graph 3: Gender Distribution**

The disproportion in terms of gender distribution across the area has a number of implications for planning. Some of the general planning aspects to be considered when planning under these conditions include:

- ➡ The exact health and welfare needs of women;

- The needs of women in planning for economic development and job creation;
- Sport and cultural activities especially applicable to this group

This will also have an impact on the potential raise of the municipal population as the life expectancy of woman in KZN is estimated by Statistics SA to be less than 50 years and the prevalence of HIV amongst women are higher than amongst men of the same age group.

### ***Age Distribution***

The following diagram illustrates the age distribution in conjunction with the gender groups.

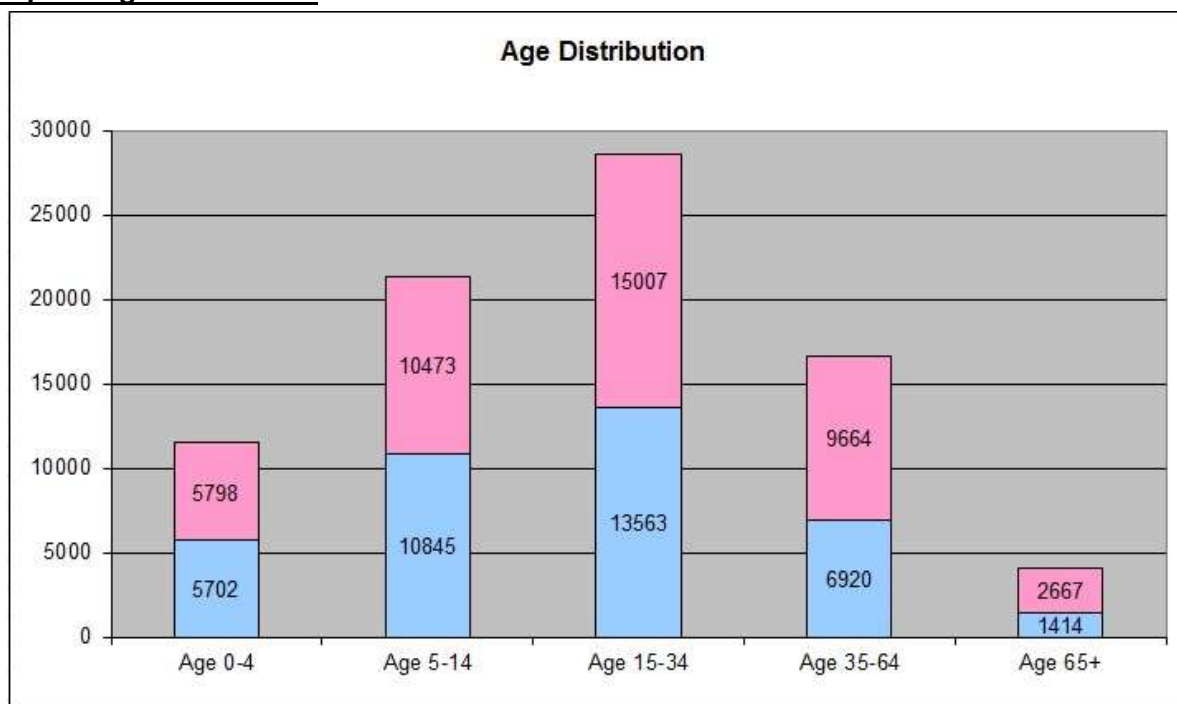
**Table 9: Age Concord**

<b>Age Breakdown</b>	
<b>Age: 0 – 4</b>	11500
<b>Age: 5 – 14</b>	21308
<b>Age: 15 – 34</b>	28570
<b>Age: 35 – 64</b>	16594
<b>Age: Over 64</b>	4081
<b>Total</b>	82053

<b>Age Breakdown</b>	<b>Male</b>	<b>Female</b>
Age: 0 – 4	5702	5798
Age: 5 – 14	10845	10473
Age: 15 – 34	13563	15007
Age: 35 – 64	6920	9664
Age: Over 64	1414	2667
<b>Total</b>	<b>38444</b>	<b>43609</b>

**Source:** Census 2011.



**Graph 4: Age Distribution**

**Source:** Census 2011.

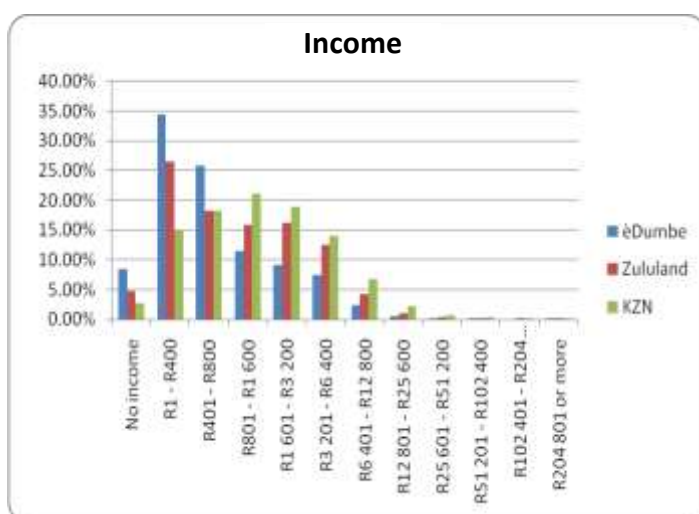
The age distribution in the eDumbe Local Municipal is dominated by the potential labour force. 55% of the population falls in the independent group while ages 0-14 and over 64 consist of 45%, classified as dependant.

We can see here that the municipality should pay more attention to creating work opportunities, also to creating more educational facilities to cater for the second biggest age group 5-14 years. The youth group mostly dominates the population.

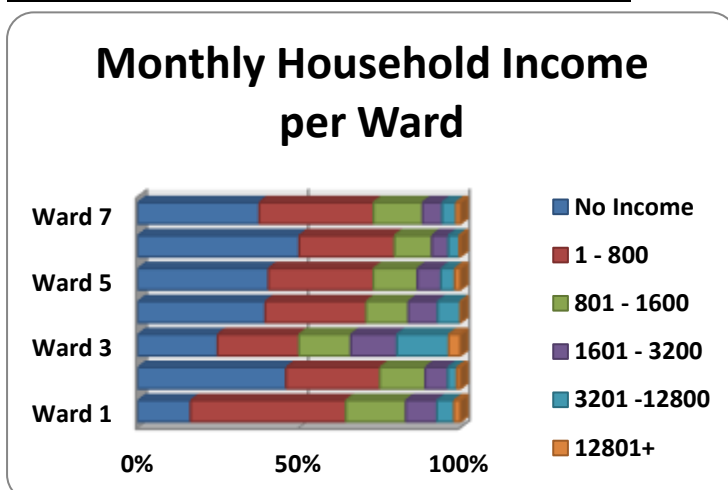
The municipality needs to take following points into consideration:

- ➡ Job opportunities
- ➡ Educational facilities
- ➡ Social and recreational facilities

The following information as in the municipality's IDP

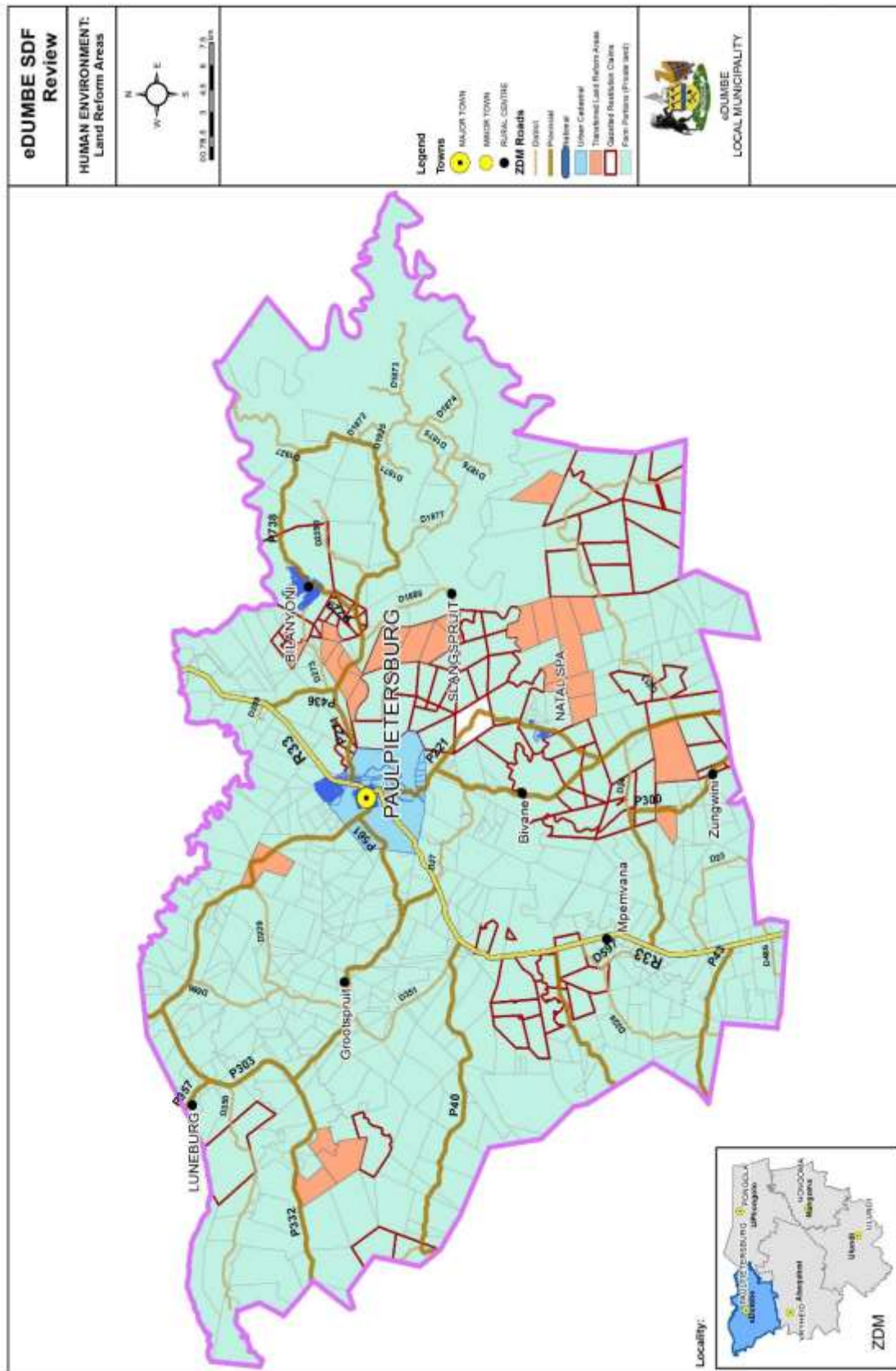
**Graph 5: Income Levels**

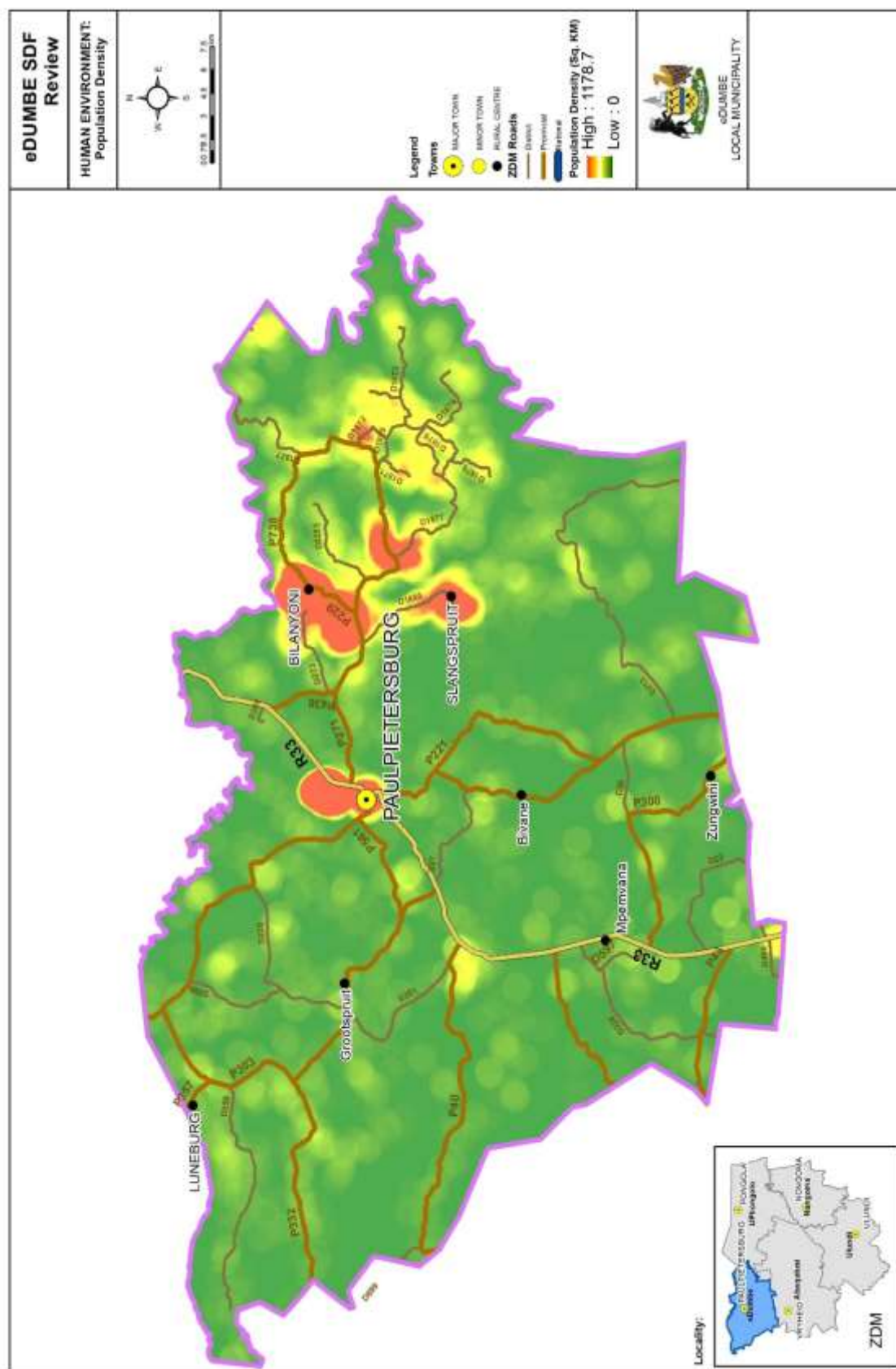
Source: eDumbe IDP 2012/2013

**Graph 6: Monthly Household Income per Ward**

Source: eDumbe IDP 2012/2013

Low income levels are a result of low levels of employment in the municipality. According to the 2006 ZDM Data there are 13 524 unemployed people in the region. The unemployment rate is determined by expressing the number of unemployed people as a percentage of the economically active population, i.e. the total population that of working age (15 – 65) that is available for work and is either employed or unemployed. eDumbe's unemployment rate is 57% according to Census 2001 data. This is very high but is representative of a broader regional problem; the unemployment rate of the Zululand District Municipality is even higher at 61%. Both of these statistics are significantly higher than KZN's 39% and points to the scarcity of employment opportunities available in eDumbe. 46% of those who are not working in eDumbe cited being unable to find work as their major reason for being unemployed.

**Map 19: Human Environment – Land Reform Areas**

**Map 20: Human Environment – Population Density**

### **3.1.3. Human Footprint**

The human footprint in the municipality has been derived from the household count of the Zululand District Municipality where all households were captured from 2008 aerial photographs. The correlation with the population density is obvious but this map drills down to a less general level and indicates the overall population/household distribution.

### **3.1.4. Broad Municipal Land Use**

The accompanying map indicates at first glance that grasslands and forestry are the predominant land use of the municipal area. The other noteworthy uses are cultivated land, Natural bushveld, dense rural settlements and formal settlements. This Land Use Pattern together with the environmental and slope information needs to dictate the spatial development form of the municipality as the basis of the eventual SDF.

### **3.1.5. Cultivated land**

The western part of the study area is characterized by plantations and annual commercial crops on either dryland or irrigated. The eastern part where ownership is predominately traditional authority and government is characterized by subsistence agricultural on the periphery of the areas of highest population density.

Large commercial timber companies: Timber Companies - The land use on these properties is one of large scale timber plantations of wattle, gum and pine. Only the very steep or stony land and water courses or other poorly-drained areas are left unplanted.

The standard of production is generally high.

Large scale private commercial farmers: The land use here varies somewhat from farm to farm but is usually built around three main enterprises: timber production, cropping (mainly to maize) and livestock production, often with all three land uses on the same farm but in other cases with the farmer specializing in only one enterprise e.g. dairy or poultry.

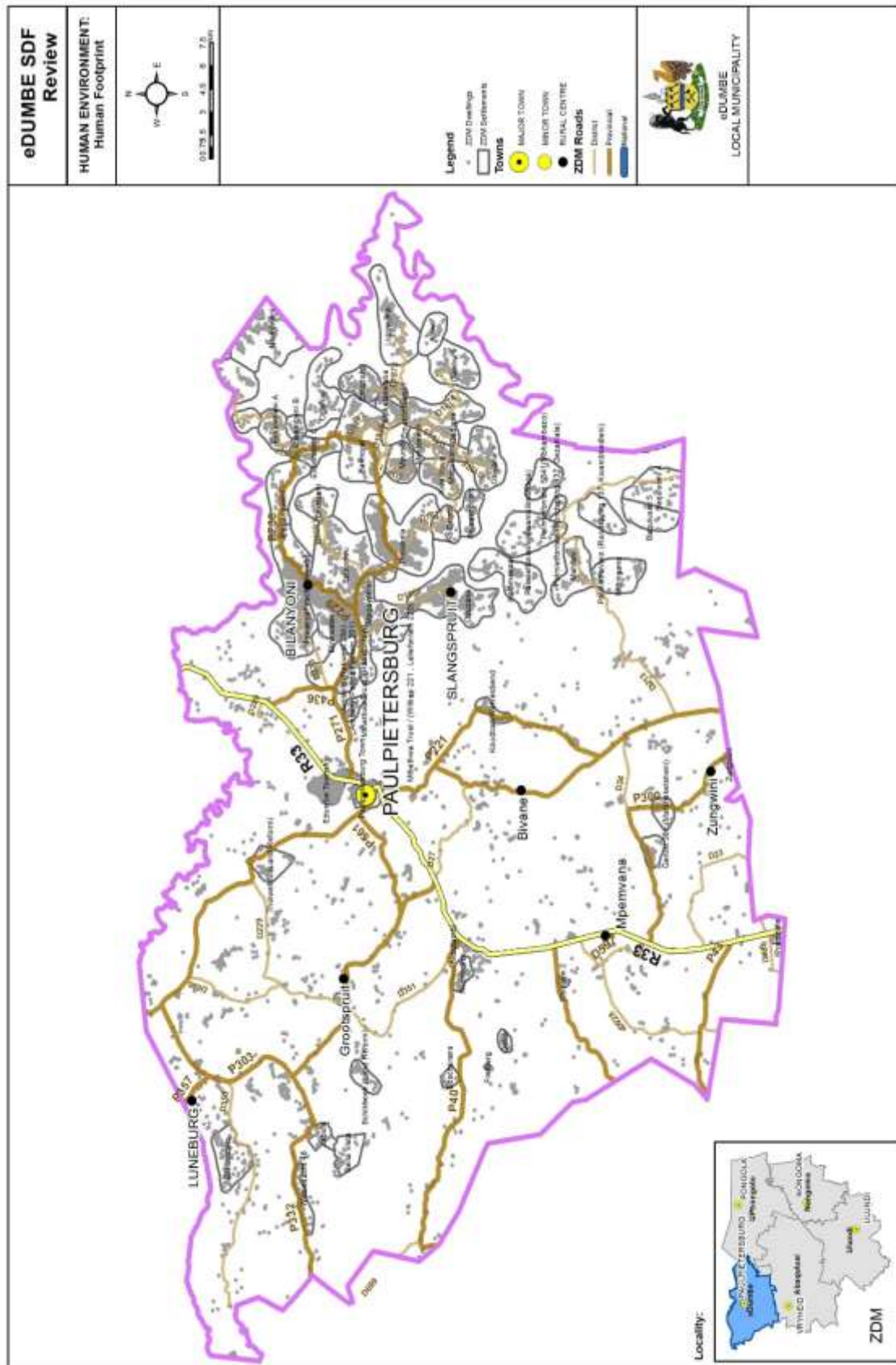
The standards of production and resource conservation are generally fair to good.

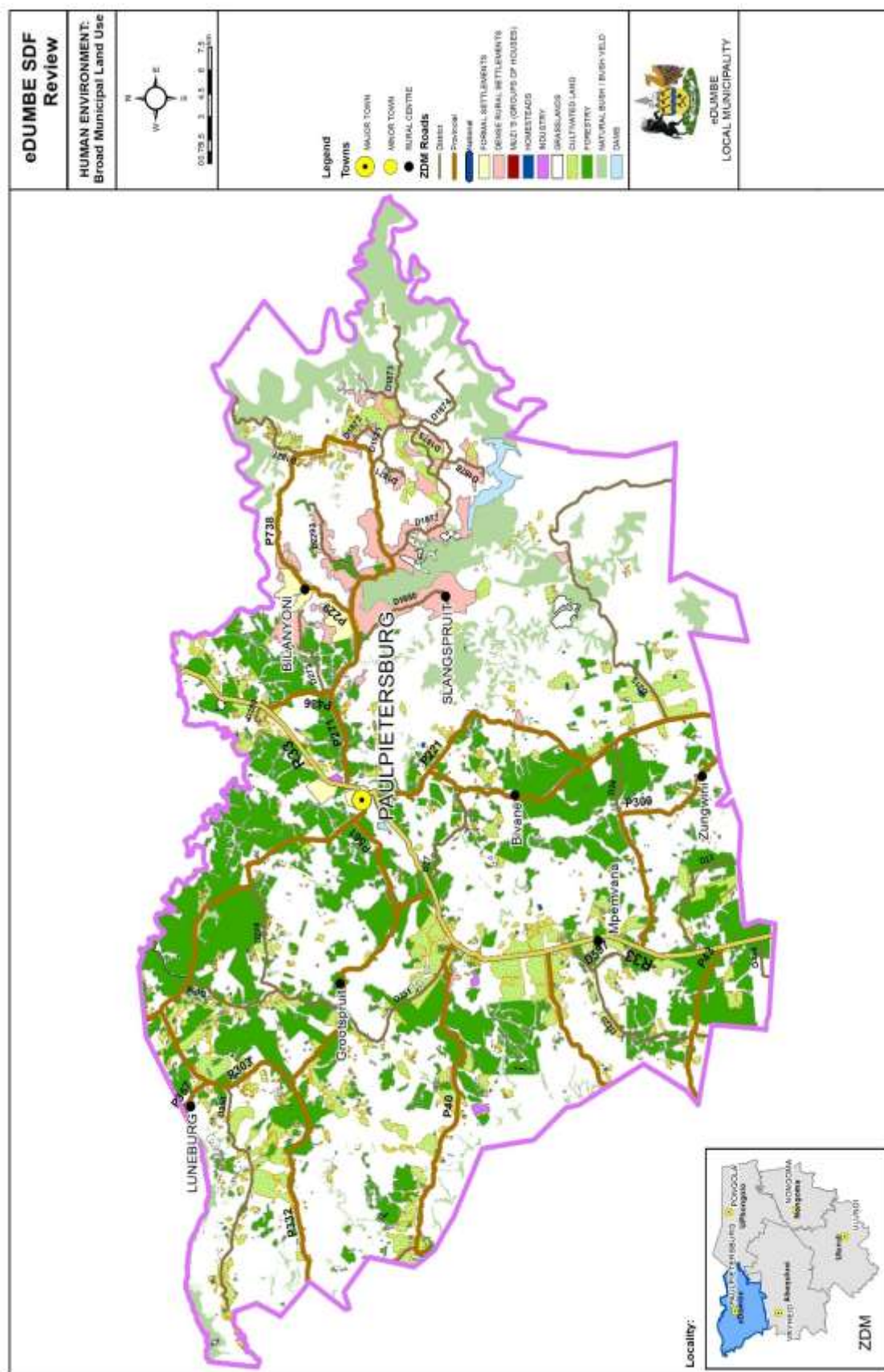
Tribal area farmers: The general pattern of land use in these areas is one of crop production by the individual land holders on their individual arable allotments which vary in size from a hectare or less to several hectares. Maize is the main crop. This is combined with livestock production on the communal grazing land. The livestock production usually takes the form of traditional patterns of cattle and goat rising based almost entirely on veld grazing.

Standards of production are hampered by financial constraints and lack of adequate training and equipment in the case of cropping, and by inadequate nutrition during winter and dry spells in the case of the livestock enterprises. Resource conservation also suffers from overstocking of the grazing land and poor crop stands and inadequate conservation structures on the crop land.

Farmers on the land reform projects: The pattern in these areas is broadly similar to that in the tribal areas but with generally lower livestock numbers and human populations per unit of area and hence less pressure on the resources. Most of the land reform projects also benefit from having been reasonably well conserved in the past.



**Map 21: Human Environment – Human Footprint**

**Map 22: Human Environment – Broad Municipal Land Use**





## 3.2. INFRASTRUCTURE

### 3.2.1. Electricity Network

The households in the municipality are relatively well provisioned with electricity. The IDP indicates the following:

**Table 10: Household Electricity**

Electrified		
Household	Population	Percentage %
8596	58135	57%
Household	Population	Percentage %
4492	30379	30%
Household	Population	Percentage %
1930	13053	13%

The electricity network map indicates that the network covers the most densely populated areas. The indications from the IDP are that some households, although close to the network, are not yet serviced. The availability of the network at the most densely populated areas is positive for service delivery as a large number of households can be reached within a relative short distance and thus cost effective and efficient.

### 3.2.2. Public Transportation

Information in relation to the public transport network is sourced from the Zululand District Municipality's Public Transportation Plan that was done in 2009.

**Table 11: Distribution Of Taxi Routes Per Local Municipality In The Zululand District**

DISTRIBUTION OF TAXI ROUTES PER LOCAL MUNICIPALITY IN THE ZULULAND DISTRICT		
Local Municipality	Number of routes	% in relation to ZDM
Abaqulusi	53	25.4
eDumbe	24	11.5
Nongoma	23	11.0
Ulundi	88	42.1
uPhongolo	21	10.0
<b>Total ZDM</b>	<b>209</b>	<b>100.0</b>

Route utilisation surveys for the taxis were conducted for the all captured main routes for the following peaks:

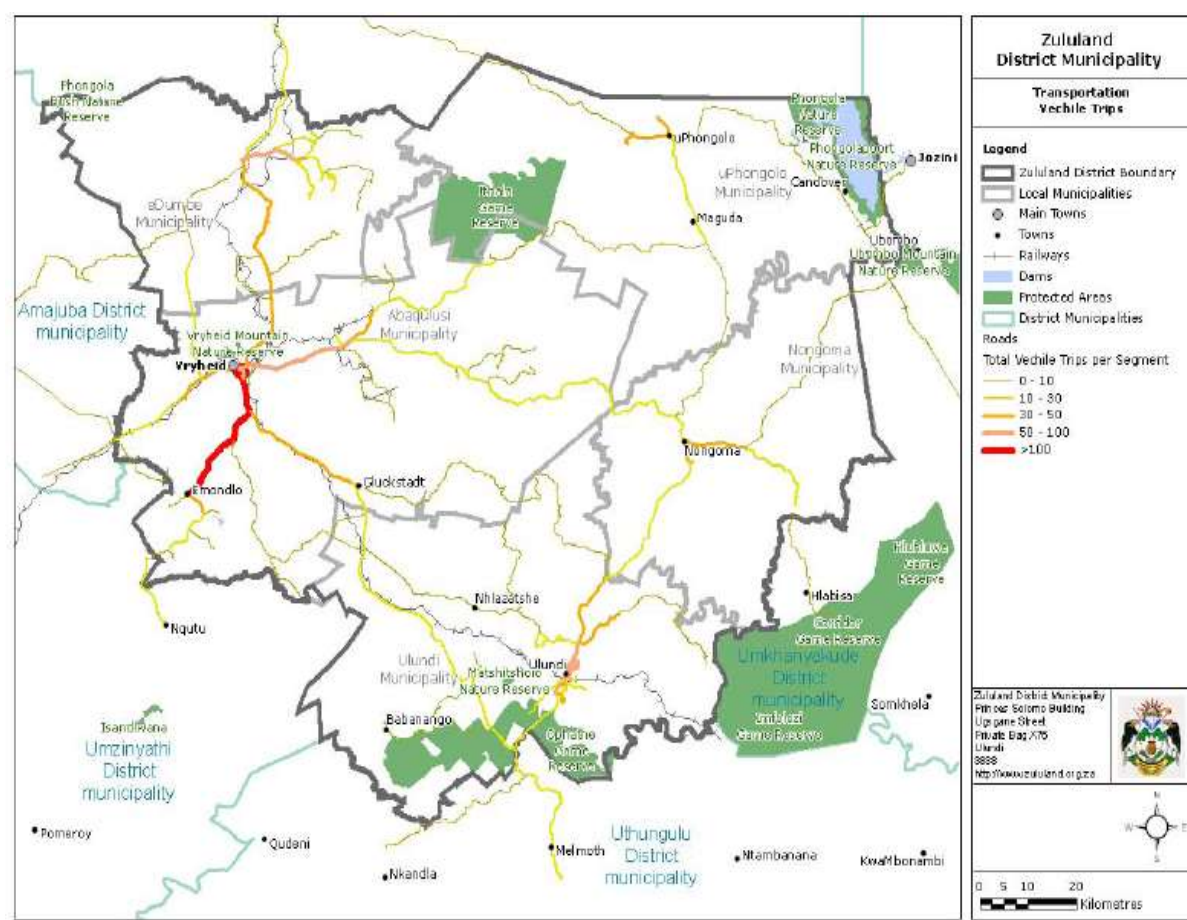
- a) AM Peak from 06:00 to 09:00
- b) PM Peak from 15:00 to 18:00

**Table 12: Average Number Of Taxi Trips Per Taxi In The Zululand District By Local Authority**

AVERAGE NUMBER OF TAXI TRIPS PER TAXI IN THE ZULULAND DISTRICT BY LOCAL AUTHORITY		
LOCAL AUTHORITY	AM PEAK (06:00 TO 09:00)	PM PEAK (15:00 TO 18:00)
eDumbe	1.0	1.5

**Table 13: Operational Taxis In The Zululand District Municipal Area And Local Authorities**

OPERATIONAL TAXIS IN THE ZULULAND DISTRICT MUNICIPAL AREA AND LOCAL AUTHORITIES	
Local Authority	Number of taxis
eDumbe	122
ZDM	1305

**Map 24: Transportation – Vehicle Trips**

The above map clearly indicates that the routes between Bilanyoni/Paulpietersburg and between Paulpietersburg/Vryheid carry the most traffic, namely 30-50 Total Vehicle Trips per segment.

The following map indicates the public transport pick up and drops off points in the eDumbe municipal area. This map indicates that public transport is well presented in the area and that passengers have relatively short distances to commute between households and points where public transport is available. In the whole of the local municipality 197 public transport facilities have been identified, only three of which are paved and seven of whose condition of facilities may be considered fair. Only five of these public transport facilities are formal and the majorities are informal stopping points along routes, usually at junctions or intersections.







### 3.2.3. Access to Water

The access to water is thoroughly discussed in the municipality's IDP and is therefore not repeated in the SDF insofar as the SDF forms part of the IDP. The main issues are just touched on and highlighted in this document.

The Zululand District Municipality has developed the Waters Services Development Plan (WSDP) and adopted the RDP standard for water supply by establishing the rudimentary water supply process to expedite the supply of water to all by ensuring that every settlement has access to a minimum of 5L/person/day within 800m walking distance. The rudimentary schemes are a temporary measure which is aimed at reducing the water backlog while establishing the bulk regional schemes in the whole municipal area.

The accompanying map indicates the level and access to water in the Municipal area. It can be seen that the bulk of households are serviced to at least the rudimentary standard of some form of potable water within 800m; while the urban areas are serviced to above RDP standard.

- The current capacity of the rising main line from the existing weir in the Pongola River to the existing Water Treatment Works at Frischgewaagd Township is 2ML/day. (Supplies Frischgewaagd and Mangosuthu with raw water)
- The Current capacity of the existing Water Treatment works at Frischgewaagd town is 3ML/day.
- New networks were installed at Frischgewaagd during 2007/2008. The water demand was reduced from the maximum possible supply of 2ML/day to 0.7ML/day.
- The balance of the water (1.3ML/day) is consumed by Mangosuthu (with only 20% of the population of Frischgewaagd). High water losses are evident.
- The construction of new networks at Mangosuthu is currently being constructed. Construction includes metered yard connections and consumers will be restricted to 200 litres per household. Consumers will be able to register for a higher level of service, but will be billed for the balance. The estimated cost to complete the

networks at Mangosuthu is R31M. Currently funding of only R6M per year is available.

- ➡ In the near future Frischgewaagd will also be restricted to 200 litres per day, with the option to register and pay for a higher level of service.
- ➡ Once the networks at Mangosuthu are completed, a new rising main line from the Pongola weir to Frischgewaagd will be constructed.
- ➡ The Frischgewaagd Water Treatment Works will be relocated to the Pongola River Weir.
- ➡ Treated water will be distributed to Ezimbomvu, Tholakela, Mangosuthu and Opuzane.

**Table 14: Water**

WATER	None or Inadequate	Rudimentary	Communal standpipes	Yard connections	Total
		<RDP	RDP	>RDP	
Urban	0	0	0	6 162	6 162
Rural	2 763	949	1104	4 033	8 849

Source: ZDM WSDP 2010/2011

### 3.2.4. Access to Sanitation

Sanitation in the rural areas of éDumbe is being provided in the form of dry-pit VIP toilets as per the rural sanitation RDP standards which embraces at least 1 dry-pit VIP toilets per households. The strategy is to implement these rural sanitations simultaneously with the roll-out of water services. This will ensure a most effective impact with health and hygiene awareness training.

The sanitation backlog has been addressed to a large extend during the past 5 years. The bucket system has been completely eradicated and most households within the municipal area currently have access to sanitation at a RDP standard. Most of the households within éDumbe municipality are having access to pit latrine form of ventilation as 78% of household are still having pit latrine with and without ventilation.



***The sanitation system that is the flush toilets largely found in ward 3 Paulpietersburg is currently a problematic system since it is a septic tank system.*** The municipality has played a fundamental role is eradicating the bucket system but still need to do away with the septic tank system which creates a very unhealthy atmosphere the people of éDumbe.

**Table 15: Sanitation**

**Source:** ZDM WSDP 2010/2011

SANITATION	None Inadequate	or Rudimentary <RDP	Communal standpipes	Yard connections	Total
			RDP	>RDP	
Urban	0	0	595	5 567	6 162
Rural	962	7 743	144	0	8 849

The accompanying map indicates that most households in the area have access to at RDP level sanitation facilities.







### 3.3. SOCIAL ENVIRONMENT

The social environment takes a broad look at the existing availability and access to social services such as schools and hospitals. Not all facilities will be taken into consideration but the facilities indicated in the national and provincial policies will be focused upon.

#### 3.1.1. Access to Healthcare facilities

The Municipality's 2018 IDP indicates the following: There are at present 7 clinics in the municipal area of which the Dumbe Community Health Centre is the best equipped for primary health care. Services of this facility include the following:

- General medicine,
- An ambulance service,
- Maternity and ante natal care,
- Childcare,
- Family planning
- Immunization against TB and venereal diseases.
- Mental health care
- X-Ray services
- Laboratory services
- Dental
- Mortuary
- Physio/Occupational health
- Outpatient Services
- Orthopaedic Service
- Emergency Unit



**Figure 2: Frischgewacht Clinic**

There are also **14 mobile** clinics operating in the rural areas. According to the information obtained from the Community Health Centre this service is expected to be expanded in the future. Thus although the municipal area is fairly well serviced in terms of primary health care there is a distinct lack of any higher order health functions. The closest hospital is situated in Vryheid which makes it virtually inaccessible to people living in the municipality's deep rural areas. Vryheid is approximately +- 50 Kilometers away from eDumbe.

The households who's distance is further then 5km from Clinic is considered as a backlog, therefore **8 Clinics** are required and for every 100 000 people 1 hospital facility should be provided, therefore **1 hospital** is required for eDumbe.

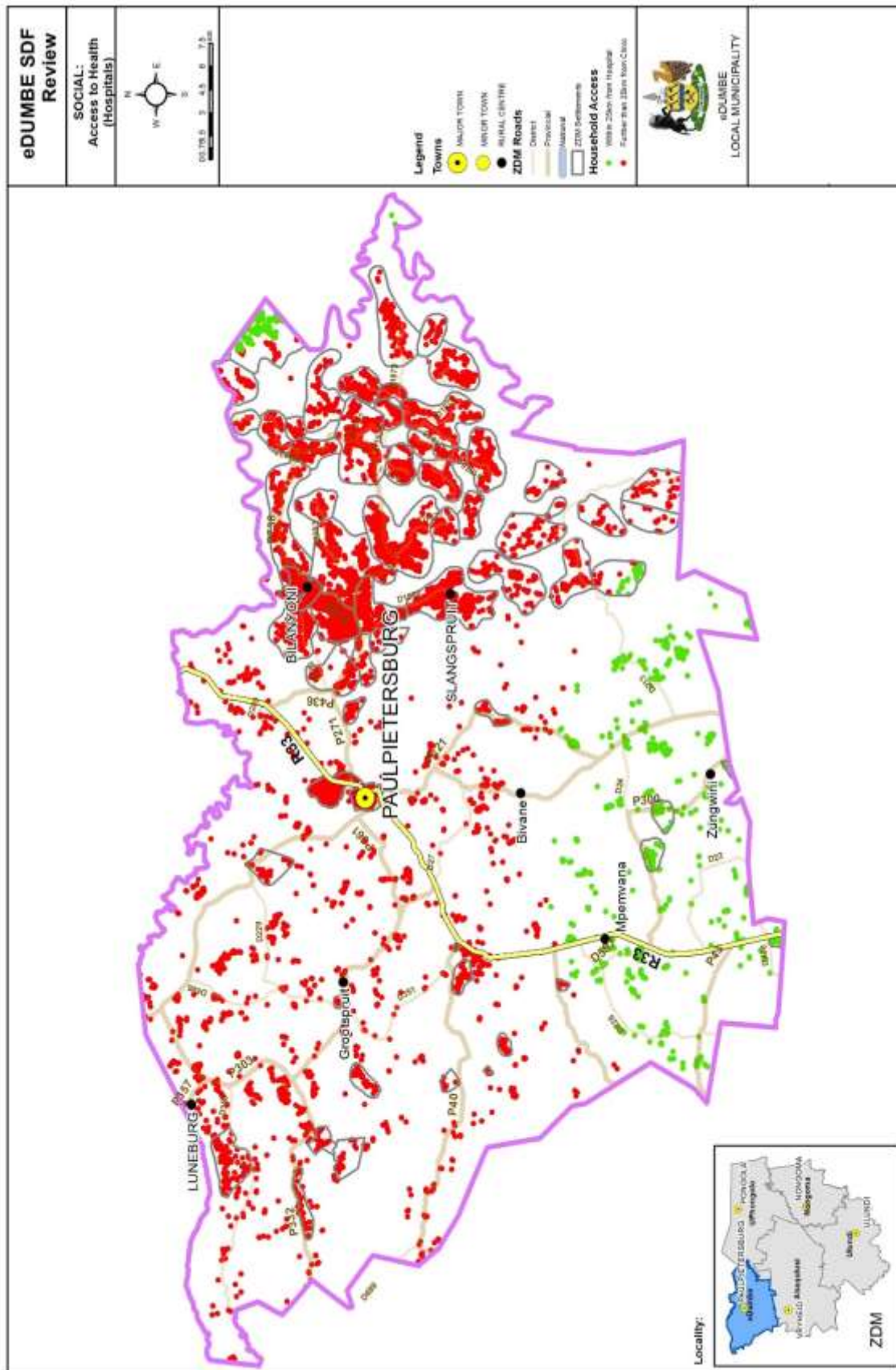
**Figure 3: Princess Mhlosheni Clinic**

**Figure 4: Sibecko Medical Centre**

The accompanying maps indicate the access of households within 25km of a hospital and within 5km from a clinic.

**Table 16: Available Clinics**

Clinic Name	Ward	Year build	Number of Staff	Number of Beds
Luneburg Clinic	1	1998	3	4
Longridge Colliery Mine	1		0	0
Paulpietersburg town	3		6	4
eDumbe Community Healh centre	3	2004	50	40
Bilanyoni Clinic	4	1973	15	5
Princess Mhloseni Clininc	5	1998	11	3
Hartland Clinic	6		14	3
Ophuzane Clinic	8	1992	7	5

**Map 30: Social – Access to Hospitals**





### 3.1.2. Access to Educational facilities

The municipality's IDP indicates the generally low levels of education of residents over 20 years old that exist in eDumbe. Seventeen percent of the population has no schooling at all; 5% have a matric and only 1.5% possesses any sort of higher education. These averages are generally in line or tend to be slightly better than for the district municipality; however they lag behind provincial averages.

The number of educational facilities is reflected in the following table and the actual access to both primary and secondary facilities are indicated in the accompanying maps. The access is based on the locality of households within a distance of 5km from a school. The departmental guideline of 3500 people per primary school and 8000 people per

secondary has not been taken into consideration because the purpose of this document is to provide a broad overview of the municipal area.

**Table 17: Educational Facilities**

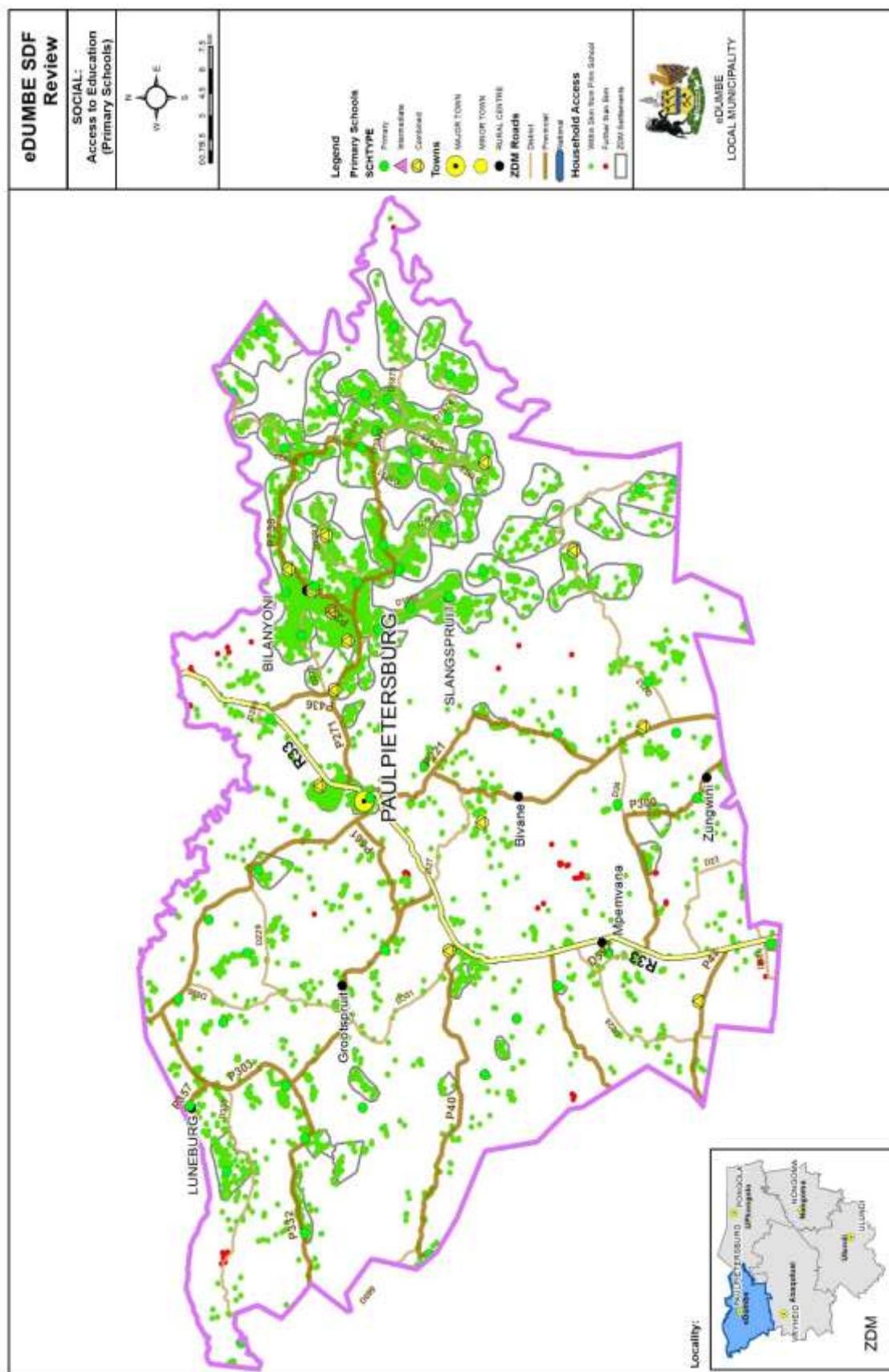
Facility	Number
Crèche (Formal and Informal)	30
Primary School	72
Secondary School	17
Combined School	5

Source: Department of Social Dev. & Education

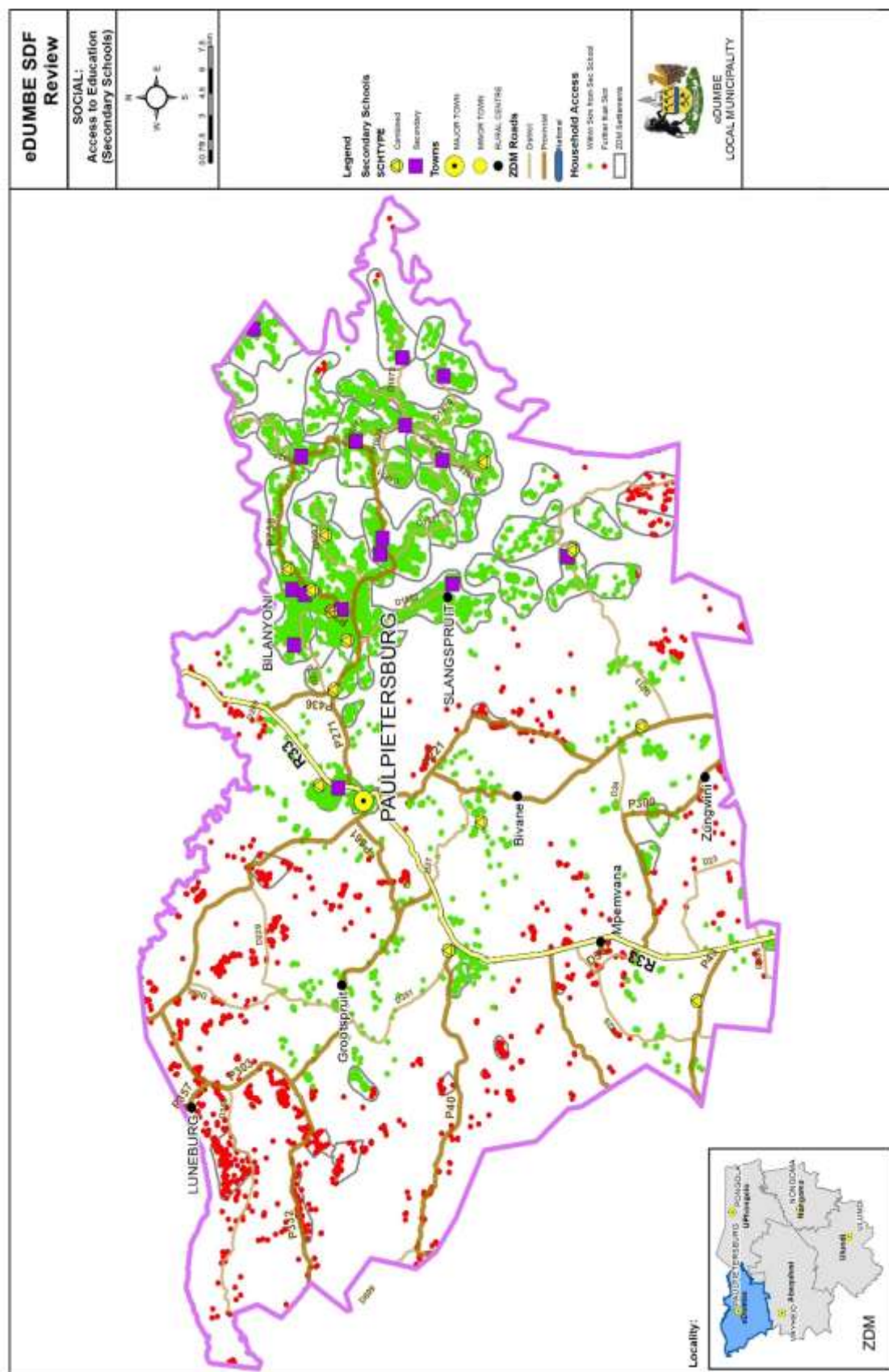
Based purely on the distance factor it is clear that they are well provided for with regards to primary facilities but that there is a obvious shortage in regard to secondary facilities.

Figure 5: Educational Facilities



**Map 32: Social – Access to Primary Schools**



**Map 33: Social – Access to Secondary Schools**

### 3.1.3. Access to Community Facilities

During the period 03 September 2012 to 07 September 2012 the project team did an in situ audit of facilities in the following areas:

- ➡ Bilanyoni
- ➡ Tholakele
- ➡ Ophuzane
- ➡ Mangosothu

The result of this audit was as follows:

#### ***Information for Bilanyoni – 03/09/2012***

##### **Educational Facilities:**

###### **Crèche:**

1. Zizameleni
2. Qhubekani
3. Bilanyoni

###### **Primary School:**

1. Bilanyoni Primary
2. Isihlangusikazulu Primary
3. Amandlakazulu

(Construction in progress)

###### **Combined:**

1. Embizeni Combined School

###### **High School:**

1. Kanye kanye High School
2. Ikwasa High School

##### **Health Facilities:**



Figure 6: Community Hall

1. Frischgewacht Clinic

**Worship:**

1. Catholic Church
2. Lutheran Church
3. Jehova's Witness
4. Joba Zion Church
5. NG Kerk
6. No name church \* 2

**Institutional:**

1. Embizeni Municipal Storage facilities
2. Embizeni Community Hall
3. Bilanyoni Municipal Offices
4. Bilanyoni Municipal Taxi Offices
5. Bilanyoni Community Hall
6. Municipal Public Ablutions
7. Department of Social Development
8. Proposed Public Library

**Sports & Recreation:**

1. Embizeni Combined Court
2. Sports field (next to Kanye Kanye High School)
3. Sports field (between Kwangwanyane and Bilanyoni)
4. Bilanyoni Stadium

**Transport Facilities:**

1. Ekhuthuleni Main Bus stop
2. Bilanyoni Taxi rank

**Tuck Shops: (Tuck Shops/ General Dealers/ Tavern/ Hardware's)**

1. Freedom Square and Car wash
2. Buhlebuyeza General Dealer
3. iSule General Dealer
4. Polina Cheap Store
5. Enjoy Coca-cola Tuck Shop
6. Feros Tuck Shop

7. Bafana Bafana Tuck shop
8. Why not tuck shop
9. Sizanani General Dealer
10. Makhanya General Dealer
11. Isibani Sezwe Store
12. Unknown Tuck Shop
13. Thuthukani Mazulu Butchery
14. Unknown Tuck shop
15. Sizabantu Store
16. Faheema General Store
17. Mzamo Tuck Shop
18. Ethembeni General Dealer
19. Zamokuhle
20. Sipheamandla Store
21. Qedumona Liquor Store
22. Vusisizwe General Dealer
23. Siyathuthuka Blocks for sale
24. Take it easy market and hair cut
25. Ekuthuleni General Dealer
26. Bilanyoni Beer Hall
27. Bhekabayeza Bottle Store
28. Ingqayizivele Restaurant
29. Phola Tavern
30. Zama Store
31. Lindumusa Store
32. Kwamaziphathe General Dealer
33. Bonani General Dealer and Hardware
34. Junction Tavern Fast Food
35. Nolis Tavern
36. Hair Salon
37. Kholys Hair Salon
38. Mr. Cheap Tuck Shop

- 39. Ayoba Tuck Shop
- 40. Phakamani Store
- 41. Newco Upholstery

**Service Stations:**

- 1. Bp Service Station

**Cemetery**

- 1. Bilanyoni Cemetery

**Services:**

- 1. Amanyamande Funeral Services
- 2. 2 Standard Bank Access Points

***Information For Tholakele – 04/09/2012***

**Tuck Shops/ General Dealers/ Tavern**

- 1. Area Mechanic
- 2. Osizweni General Dealer
- 3. Geesh Tuck Shop
- 4. Sizabantu Store
- 5. Mdlalose's Corner
- 6. Verdriet General Dealer
- 7. Elna Trading Store And Standard Back Access Point
- 8. Themba's Tuck Shop And Tavern
- 9. Siyanqoba General Dealer

**Education Facilities**

**Crèches**

- 1. Abakusasa Day Care Crèche And Pre-School
- 2. Sicelimpumelelo Crèche

**Primary Schools**

- 1. Siphilaza Primary School
- 2. Tholakele Primary School
- 3. Sizodela Community Primary School



4. Esiyalweni Primary School

**Combined Schools**

1. Kampunzi Combined School

**High Schools**

1. Magubulundu Junior Secondary School
2. Khanyiselizulu High School

**Health**

1. Emohlosheni Clinic
2. Tholakele Community Care Centre

**Institutional**

1. Tholakele Traditional Court
2. Lutheran Church
3. Mzomusha Post Office/ Boxes
4. Tholakele Community Hall
5. Unknown Church
6. Unknown Church

**Agricultural Activities**

1. Ekuthuleni Agricultural Project
2. Community Garden

**Open Space**

1. Sports Ground (Opposite Sps)
2. Open Space (Opposite Tps)

**Cemeteries**

1. Cemeteries Opposite The Community Hall
2. Cemetery 2

***Information For Mangosuthu – 04/09/2012***

**Educational Facilities:**

**Creche:**

1. Siyaphambili Crèche
2. Little Nation Day Care Centre
3. Bambanani Crèche

**Primary School:**

1. Mthonjeni Public School

**Combined School:**

1. Nhlakanipho Combined School (Gr 1 – 9)

**High School:**

1. Muziwesiwe High School

**Institutional:**

1. Mangosuthu Cemetary (Located Behind Sports Field)
2. Mangosuthu Driving School (Learners Licence Only)

**Sports & Rcreation:**

1. Mangosuthu Sports Field

**Tuck Shops: (Tuck Shops/ General Dealers/ Tavern/ Hardwares)**

1. Thulubona Tuck Shop
2. Intobeko Store
3. No Name Tuck Shop
4. Tuck Shop & Hiring
5. Madela Store
6. Fruit & Veg City
7. Coca-Cola Tuck Shop
8. Thuli's Tuck Shop
9. Abbasi Tuck Shop
10. Tuck Shop (Located Opposite Nhlakanipho Combined School)
11. Mangosuthu General Dealer
12. Siyabonga Store
13. Siyozi Tuck Shop
14. Schaba Car Wash
15. Ds Lowest Price Shop
16. Olwandle Tavern

17. Intersection Car Wash
18. Zamokuhle General Dealer
19. Easy Beat Tuck Shop & Tavern
20. Noukloof General Dealer
21. Noukloof Furniture & Hardware

### ***Information for Ophuzane -05/09/2012***

#### **Tuck Shops/ General Dealers/ Tavern**

1. Unknown Tuck Shop
2. Zakhele Supermarket And Tavern
3. Buthelezi Civils
4. Qedindlala Supermarket And Tavern
5. Communal Stores Or Communal Storage Facilities
6. Zenzele General Dealer
7. Ahmed General Store
8. Sonqobasimunye General Dealer
9. Sd Tuck Shop
10. Unknown Tuck Shop
11. Endendende General Dealer

#### **Education Facilities**

##### **Primary Schools**

1. Vukuzame Primary School
2. Ophuzane Primary School
3. Imbuthuma Community Primary School
4. Zicabange Primary School

##### **High Schools**

1. Kwamnyayiza High School

#### **Health**

1. Ophuzane Clinic

**Institutional**

1. Ophuzane Community Church
2. Ophuzane Traditional Court
3. Ophuzane Post Boxes
4. Nazareth Church

**Agricultural Activities**

1. Sawmill Storage Facility
2. Ophuzane Community Garden

**Transport**

1. Ekuphumuleni Taxi/ Bus Stop

**Sport And Recreation**

1. Ophuzane Sport Field

**Cemetery**

1. Ekuphumuleni Cemetery

**Community Hall**

This information will be verified against the available GIS information and used during the Analysis phase of the project.

The locality of pension payout points need to be further investigated as these points normally can be the focus point for informal markets and concomitant progressive development.

### 3.3. HUMAN SETTLEMENT

The municipality's IDP and current SDF describe the municipality's settlement pattern as follows:

Apart from the urbanized areas of èDumbe (Paulpietersburg/Dumbe, Bilanyoni, and Mangosuthu Village) the settlement patterns of the municipal area reflect a predominantly rural character. The dispersed settlement patterns in the municipal area create challenges around basic service delivery backlogs. The area can be described as follows:

#### 3.3.1 Predominantly Scattered Low-Density Rural Settlements

Settlements are loosely scattered throughout the entire municipal area (especially on the western parts of the municipality) and they surround communal grazing, forestry, crop production and grasslands. Settlement density appears to be directly correlated to accessibility (increased accessibility – increased density).

Spatially, settlements density appears to be lower, the further the location from the main road axis and its feeder roads. This is also supported by demographic information which clearly indicates that population density declines the further one moves away from the main transport routes. Levels of services are generally low, with the majority of residential structures being self-built.

Apart from a few trading stores and agricultural activities there is generally little sign of economic activities outside of the urbanized areas. The rural settlements mainly serve as residential areas with a limited economic base. Inhabitants are predominantly dependent on external sources of income and social and welfare grants. The continuous low-density sprawl of these rural settlements and poor planning of the past, which results in more productive agricultural land being taken up, can be regarded as one of the main reasons for the development of the agriculture sector in èDumbe.

The key issues relating to tenure and settlement in the region are:

- ➡ Competition for land.

- ➡ Competing uses of land (productive agriculture vs. subsistence agriculture/residential)
- ➡ Access to affordable infrastructure

This emphasizes the need for appropriate land reform planning and spatial planning intervention to resolve the rural problems.

### 3.3.2 Peri – Urban and Semi –Urban Settlement

Bilanyoni and Mangosothu areas can be classified as semi urban.

**Bilanyoni:** The Bilanyoni area (initially known as Frischgewaagd) was originally established in the 1960's as a rural "Closer Settlement". Land Use planning in Bilanyoni was formalized in 1999/2000 with the approval of Conditions of Establishment which included land use controls in terms of the Less Formal Townships Establishment Act, Act No. 113 of 1991. This formalized area has been included as part of the Urban Scheme It is located some 20 km north-east of Paulpietersburg/Dumbe.

**Mangosothu:** Mangosothu Village lies to the immediate southwest of Bilanyoni. While initiatives were undertaken towards the formalization of Mangosothu Village, there were no township layouts available from the Surveyor Generals Office. A Development Framework Plan was prepared for the area in 2001, in terms of which potential erven and zoning were proposed and brought through in the draft Urban Scheme proposals dated April 2004.

### 3.3.3 Urban Settlements

The eDumbe Municipality is comprised of the town Paulpietersburg, the industrial area, Dumbe Mountain and substantial town lands to the south and west. The Paulpietersburg area been classified as a Primary Urban Node in terms of its location and economic opportunities.

This urban center serves as a link between the areas outside of eDumbe and the expansive commercial agriculture as well as the dispersed rural settlements located at the peripheral areas with marginal economic development potential.

In comparison to the surrounding hinterland, towns generally have a higher level of social and infrastructure services, higher concentrations of administrative and business infrastructure and hence, towns normally fulfill the role of service centre to the surrounding hinterland.

For the purpose of this report the above will be taken into consideration as well as the categories of settlement that is used by the ZDM. The Settlement pattern In terms of the ZDM categories is indicated in the accompanying map. It is clear that most settlements are falling in the “Rural – Scattered Low Density” Bracket.

This pattern is significant when the recent policy of the Department of Human Settlements is taken into consideration where the principle of densification rather than sprawl is promoted. The National Development Plan 2030 specifically states:

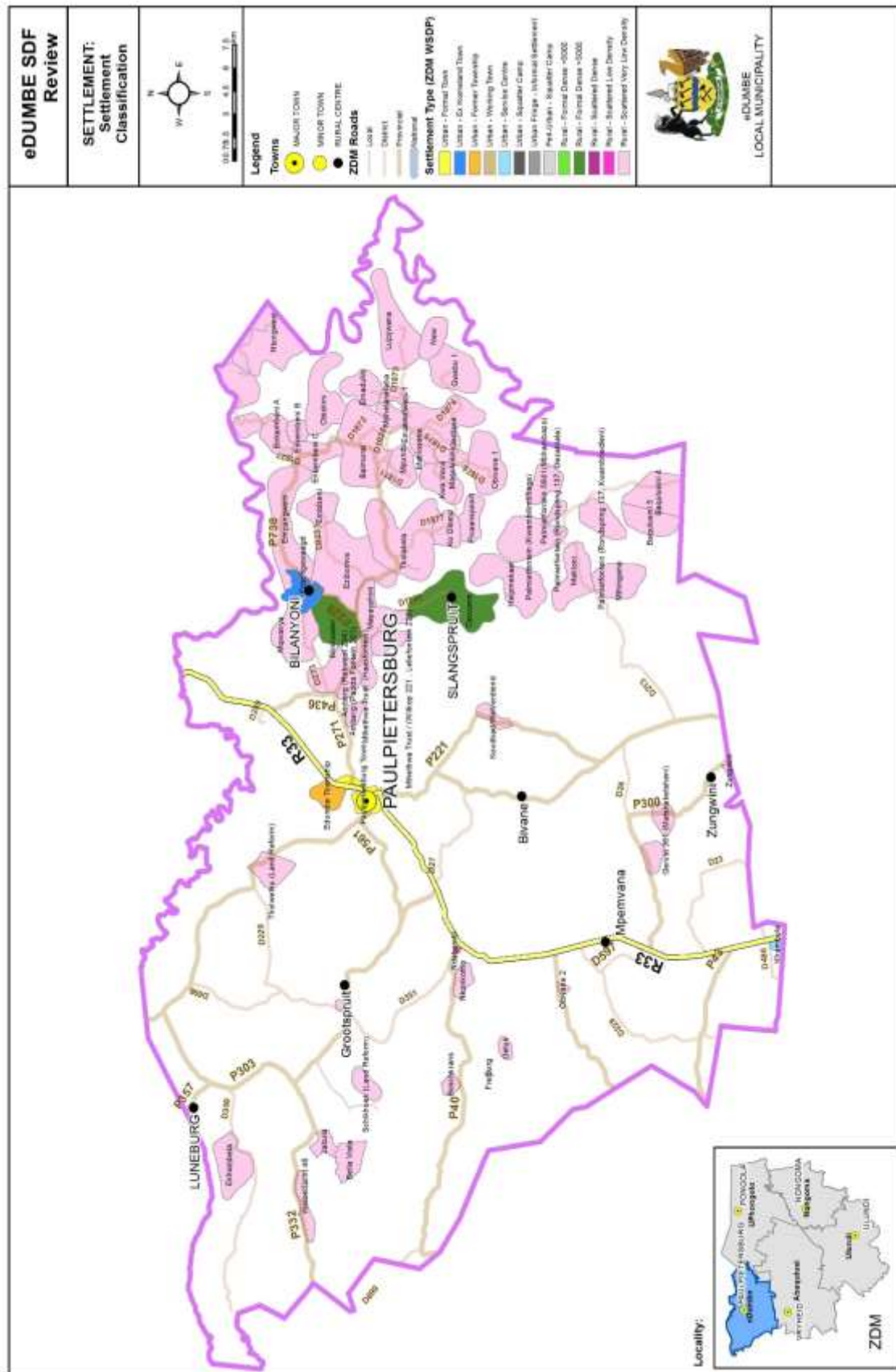
This requires:

- ➡ Strong measures to prevent further development of housing in marginal places
- ➡ Increased urban densities to support public transport and reduce sprawl

The future spatial form of the municipality will need to give serious consideration to this declaration as it is mainly a turnabout from the practical reality currently taking place in the rural areas.



Map 34: Settlement Classification Map



### 3.4. FINANCIAL ENVIRONMENT

The financial environment and various indicators is described in the municipality's IDP and extracted from the 2006 LED report. The intention of this report is not to repeat what has been done already. This document will focus on the sectors which were identified as potential drivers in the 2006 document and also in the provincial SDF document, thus sectors which have a regional spatial influence.

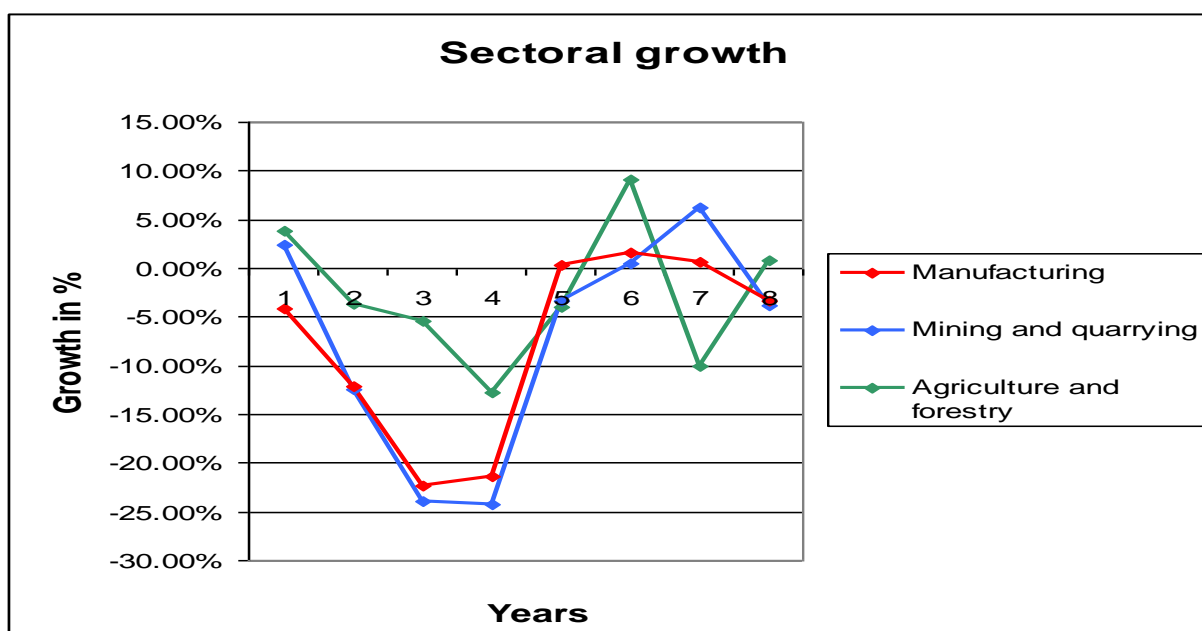
**Table 18: Sector Contribution to GDP (Constant 2000 Prices)**

	<i>eDumbe</i>		<i>Zululand DM</i>		<i>KZN</i>	
	1996	2004	1996	2004	1996	2004
<b>Agriculture, forestry &amp; fishing</b>	28.54	22.42	13.62	12.96	6.03	<b>5.15</b>
<b>Mining</b>	20.41	14.76	12.27	6.41	3.13	<b>1.61</b>
<b>Manufacturing</b>	6.72	8.07	8.85	10.22	24.19	<b>23.66</b>
<b>Electricity and water</b>	0.42	0.49	1.72	1.15	3.17	<b>2.45</b>
<b>Construction</b>	3.84	6.44	2.12	2.89	2.88	<b>2.42</b>
<b>Wholesale &amp; retail trade; catering &amp; accommodation</b>	10.65	15.38	10.13	11.54	13.16	<b>15.82</b>
<b>Transport and communication</b>	2.01	1.82	7.41	9.38	11.57	<b>14.20</b>
<b>Finance and business services</b>	7.09	9.93	11.01	15.18	14.95	<b>16.61</b>
<b>Community, social and other personal services</b>	5.44	7.39	6.38	7.01	5.92	<b>6.20</b>
<b>General government services</b>	14.87	13.30	26.49	23.27	15.01	<b>11.90</b>
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Source: eDumbe IDP

**Table 19: Sectoral growth in GVA for eDumbe Municipality**

Sector	2003	2004	2005	2006	2007	2008	2009	2010	Ave Growth
Agriculture and forestry	3.90%	-3.60%	-5.50%	-12.80%	-4.00%	9.10%	-10.00%	0.80%	-2.80%
Mining and quarrying	-1.50%	-8.90%	-18.50%	-11.50%	0.60%	-8.60%	16.20%	-4.70%	-4.60%
Manufacturing	-6.60%	0.40%	1.60%	2.90%	3.70%	1.10%	-5.50%	0.50%	-0.20%

**Graph 7: Sectoral Growth in GVA for eDumbe Municipality**

Source: DEDT calculations based on Quantec data (2011)

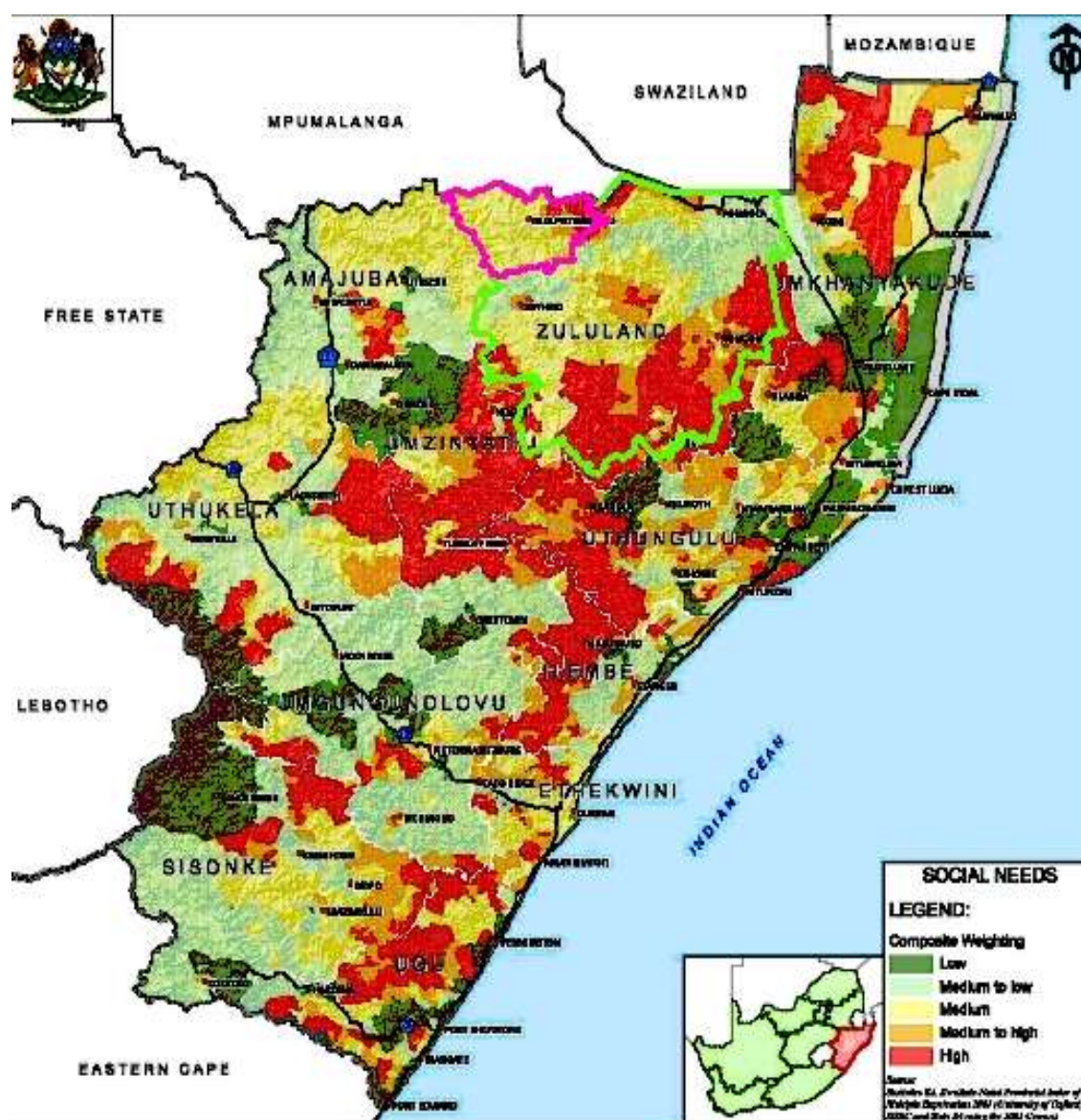
A disturbing pattern within eDumbe is the overall decline of agricultural in the past 8 years. This is of concern because Agriculture is the second biggest sector within the municipality. This negative trend, however, appears to be spread across sectors, with half the sectors recording negative growth rates on average over the period. The only sectors which have shown significant growth over the period are the Finance sector and the Wholesale and Retail Trade Sector.

The KwaZulu-Natal Provincial Government annually prepares a Deprivation Index which ranks municipalities in terms of their comparative levels of deprivation. The index is a composite of several elements which includes:

- ➡ Income levels
- ➡ Employment
- ➡ Health
- ➡ Education
- ➡ The Living Environment
- ➡ Crime

The combination of the above aspects is called the Multiple Deprivation Index. The Multiple Deprivation Index for KwaZulu-Natal is depicted below, with the eDumbe Local Municipality depicted in Pink within the Zululand District Municipality which is marked in Black. The eDumbe Local Municipality has a medium level of deprivation, with the urbanised areas around Paulpietersburg having a medium to low level of deprivation. The Eastern Boundary has a medium to high level of deprivation. Please refer to the image below for a depiction of the KZN Multiple Deprivation Index. Developed as part of the Provincial Growth and Development Strategy 2011

**Map 35: SOCIAL NEEDS MAP**



### **3.4.1. Tourism**

The following extract from the IDP describes the municipality's tourism rationale:

Increasing significance is being placed on this sector in the context of South Africa given this sector's potential as an income and employment generator. The main thrust of the Zululand District Municipality's strategy for developing tourism in the region is to improve tourism infrastructure in conjunction with uplifting local communities. Zululand as a tourist attraction has many opportunities available to it. A study by Ecotourism of tourist perceptions showed that 70 to 90% of the tourists that visited KZN came to experience the climate, wildlife and landscape. Over 50% of foreign tourists interviewed said they would like to have a meaningful experience of Zulu heritage and culture. Thus the district of Zululand is well placed within the tourist market in terms of its attractions and what it can offer as a tourist destination.

Currently 50% of tourists to èDumbe are German, attracted by their cultural heritage and the unique historical German character of the area. Recently the study area has also been seeing more Dutch tourists, in the line of about 360 a year [Zululand LED]. The study area has a Publicity Association and has good facilities in terms of tea gardens, restaurants and lodges. èDumbe can provide not only scenic surroundings and quaint towns with character and interesting architecture but also has a number of cultural and eco-tourism attractions. These various attractions can be marketed together as a complete experience. Nearby attractions include game reserves, the battlefields and dams. The study area also has various community tourism initiatives, for example rural tours to Bilanyoni. The rural market atmosphere that develops naturally on pension pay days could also be promoted to tourists [Zululand LED]. The Country Culture Crescendo was an innovative promotional initiative in conjunction with the town of Vryheid where various tourist events and attractions would be co-coordinated and organized for a two week period, ensuring there was something for tourists to do or see every day. This needs to be restarted.

**Currently the established tourist attractions in the area are:**

- ➡ The unique German culture and festivals, especially in the Luneburg area.
- ➡ The quaint town of Paulpietersburg with interesting architecture and historical significance with a guided dorp trail of the historical buildings
- ➡ The Natal Spa – a resort whose main attraction are its hot sulphur springs but which also offers a range of activities including horse riding, tennis and bird tours.
- ➡ It offers the desired Zulu cultural experience with a number of traditional Zulu kraals and villages that tourists can visit.
- ➡ There is much potential for eco-tourism although not all of the study area's eco-tourism attractions are adequately developed. However there is the Dumbe Mountain (which hosts paragliding events, has a walking trail and abundant birdlife); Bivane Dam, another rich birding area; the Engodini Mountain Crater which has a 4x4 trail, and the nearby Ithala game reserve.

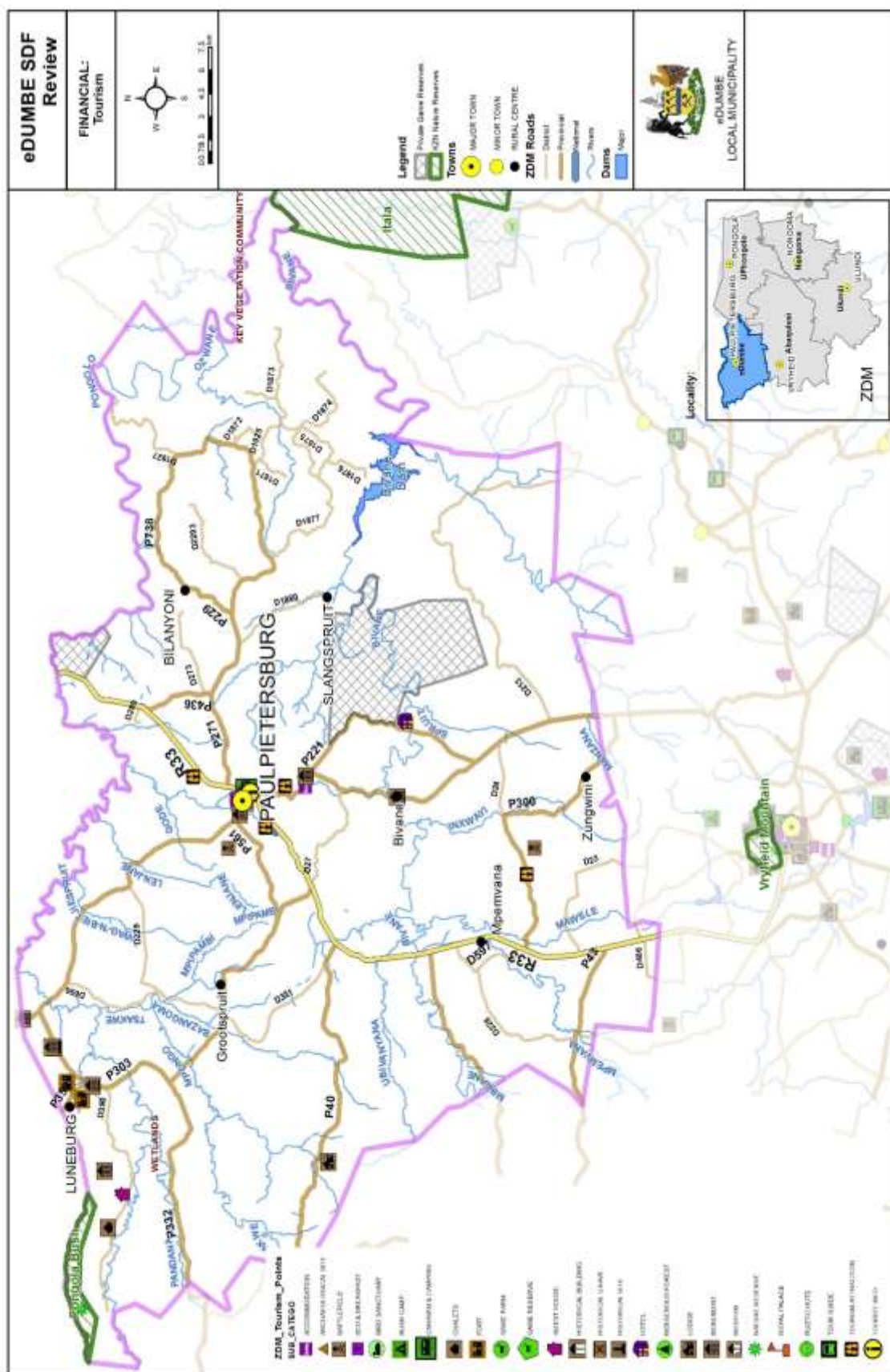
It is a good birding area, with Natal Spa and Bivane Dam both included on the Zululand Birding Route.

The municipality has a rich diversity of tourism related opportunities but it seems that at the moment that only facility that actually draws “stay over” tourists is Natal Spa. The following opportunities need to be seriously investigated:

- ➡ The tourism potential of the Bivane dam and surroundings
- ➡ A potential access to Ithala Game reserve through the municipal area
- ➡ Upgrading and marketing of the Pongola Bush nature reserve and the possible link with the Wakkerstroom Birding route.
- ➡ The expansion of facilities at Natal-Spa e.g. the development of a golf estate



Map 36: Financial – Tourism





### 3.4.2. Agriculture

As per the KZN Agricultural Land Potential Categories report drafted in 2013 by the Department of Agriculture, Forestry and Fisheries as well as the Department of Agriculture and Environmental Affairs, Agricultural potential is based on the potential of the specific land parcel for cultivation and/or grazing purposes.

The overarching management mechanism (apart from legal provisions) in the province in this regard is the KZN Agricultural Land Categories Spatial Decision Support tool which aims to guide and assist municipalities with the compilation of various planning documents such as the IDPs, SDFs and Land Use Management Schemes (LUMS), but also to give direction to prospective developers when proposing land use change.

The information relates particularly to:

- All land, including demarcated State land, land located in a former homeland or TBVC state including land under the Ingonyama Trust Land Act that has not yet been permanently transformed (built up, mining, quarries, waterbodies), but excluding national and provincial proclaimed conservation areas and irrespective of its current zoning or position within a zoning scheme or related planning document;
- Land that is currently utilized for agricultural purposes (either cultivated or grazing land); or
- Land that has the potential to be used for sustainable agricultural production.

The following agricultural potential categories apply in KZN:

- **Category A: Irreplaceable**

Category A land is viewed as very high to high potential agricultural land that should be retained exclusively for agricultural use so as to ensure national food security.

- **Category B: Threatened**

Land with in Category B is viewed as moderate to high potential agricultural land and has the potential to be used sustainable, with few limitations to agricultural production.

- **Category C (Primary agricultural land use)**

Land within this Category is regarded as moderate to low agricultural potential, on which significant interventions will be required to achieve viable and sustainable food production, although agriculture is still the majority land use in the rural landscape.

- **Category D (Secondary agricultural land use)**

Parcels categorized in this Category are regarded as low agricultural potential. This land requires severe interventions to enable sustainable agricultural production.

- **Category E Mixed land use**

Land within this Category is regarded as limited to no agricultural production potential and depending on the location, may have a high conservation or tourism status and every effort should be made to limit degradation of the natural agricultural resources. Large areas of the municipality have land which falls in the high to moderate potential class. The soil quality and climate lends itself to intensive agricultural practices in most of these areas.

The overall soil pattern in the study area has been strongly influenced by two dominant soil forming factors: climate and parent material.

In the higher rainfall areas above 800 mm per annum like the Elandsberg scarp and the Makateeskop plateau the soils tend to be deep, well-drained, fine-textured and leached with somewhat sandier textures where derived from sandstone or granite but more clayey where formed from dolerite. In terms of the South African Soil Classification system the most common soils are those of the Clovelly and Hutton forms in gently-sloping upland areas with Glenrosa soils on steeper slopes and Katspruit or Cartref soils in wetlands and depressions.

Most upland soils on the Makateeskop plateau and the Upper Pongola and Bivane valleys are high potential arable soils being generally deep and well-drained with good physical properties. Chemically, however, these soils tend to be leached, due to the high rainfall, and therefore acid and low in plant nutrients. They may consequently need to be limed and to have their nutrient status built up by appropriate fertilizer treatments. When this is done they are highly productive cropping soils.

In the drier areas, where mean annual rainfall is below 800 mm, the soils are generally shallower and less leached, often with strongly structured subsoil's of poor permeability. Typical soil forms in these areas are those of the Hutton, Shortlands and Avalon forms among the better upland soils but often with undesirable duplex soils of the Valsrivier, Swartland, Sterkspruit and Estcourt soils in depressions and seepage zones. Dark-colored heavy clays of the Arcadia and Bonheim forms are also common on the basic rocks.

These drier climate soils, because they are less leached, tend to have higher levels of plant nutrients than in the high rainfall areas but often to have less desirable physical properties such as restricted subsoil permeability and poor moisture holding characteristics. Careful soil selection is therefore especially important in these areas

éDumbe Municipality has the highest potential for rain fed agriculture and consists largely of commercial forestry farming. In the communal areas of this municipality there is potential for small holder forestry, but this has not yet been developed mainly because of distances to markets (Siyaphambili report). Small holder forestry is also constrained by the inability to obtain new permits for forestry from the Department of Water and Forestry (DWAF). Thus although the markets, land and entrepreneurs are in place, environmental concerns inhibit the growth of this industry.

Agriculture is well established and quite diverse in éDumbe and represents the greatest portion of economic activity. The agricultural potential of éDumbe area ranges from areas of high potential in the eastern half to low and very restricted areas in the western edges of the municipality which is where the majority of the population is located. The commercial farming areas have high potential with regards to both crop production and livestock farming and a wide range of agricultural products can be produced within the municipal area. Major farming activities include maize, sugarcane and livestock farming. There is an increasing trend in éDumbe towards game farming. Wagendrft is a well know game ranch that is popular with foreign tourists. There are also bird farms that breed and sell birds for the export market as well as a diverse range of other products that are being farmed.

éDumbe area also has extensive forestry, another important contributor to the economy. The two major forestry firms in the area are Mondi and Central Timber Cooperative Limited, growing gum, wattle and pine. Despite the numerous timber plantations in the area there is currently very little beneficiation or value adding done to the primary products within the municipality. Downstream opportunities should be identified and explored for their ability and potential to create more jobs in this sector. The potential for small holder forestry development such as out-grower programmes should also be investigated. Communal areas in Simdlangentsha that were suitable for small scale timber production were identified but nothing was done to develop this project as the area was considered to be too far from the pulp mill in Richards Bay.

Small scale agricultural farming also needs to be promoted and developed in order to provide job opportunities and create sustainable livelihoods. Community gardens are a popular way of reducing poverty and organizing women. The Department of Agriculture's Xoshindla Programme and the current Premiers' programme named one home, one garden are aimed at establishing community gardens and small scale farming with irrigation schemes. Therefore there is a need to provide small scale farmers with equipment such as tractors, generators and irrigation equipment, better access to seeds and fertilizers and support for small farmers. There was a proposal for a Farmers Support Office to be established. Support for small farmers can lead to job creation and the development of SMME's. The KZN Department of Agriculture and Environmental Affairs has recently established a number of support programmes directed at the agriculture sector, with particular focus on the development of co-operatives.

On the other hand, the Zululand District Municipality has also established a farming support programme called 'Ukuzakha nokuzenzela' which is aimed at assisting households, cooperatives, emerging farmers with equipment and material such as tractors and seeds. Amakhosi has extensively benefited from this programme. This can be seen within the context of the Provincial Growth and Development Strategy (PGDS) to fight poverty and unemployment in KZN. The five key areas in which support will be focused are the provision of animal handling facilities, irrigation interventions, fencing, shed storage and water provisioning.

A Local based business (Penvaan Feeds) has approached the municipality to seek assistance with the establishment of an abattoir to produce pork that will be distributed locally and internationally. The company is also assisting local community members with the establishment of sustainable piggeries which will provide the product to the abattoir. This example of sustainable livelihood development through locally available resources can be made applicable to virtually any agricultural related sector.

All of the above indicates the role of agricultural based business in the area and the future role it can play in strengthening the local economy to give effect to the national and provincial development policies. It is therefore of paramount importance that the municipality is actively involved in the protection of good quality agricultural land through its IDP, SDF and LUMS.

### **3.4.3. Mining**

Mining activities in éDumbe Municipal area has decreased tremendously in the mid 1990's mainly due to the closure of mines as a result of open market in coal mining and agriculture. There are five existing mines in the municipal area, however they are all closed down which contributes negatively to the economy of éDumbe. Opportunities still exist for the small scale mining, these opportunities include: mine rehabilitation; engineering support; equipment maintenance and support; and preparing environmental management plans. éDumbe Municipality together with the Zululand District Municipality has identify a need to develop a mining sector plan as a top priority.



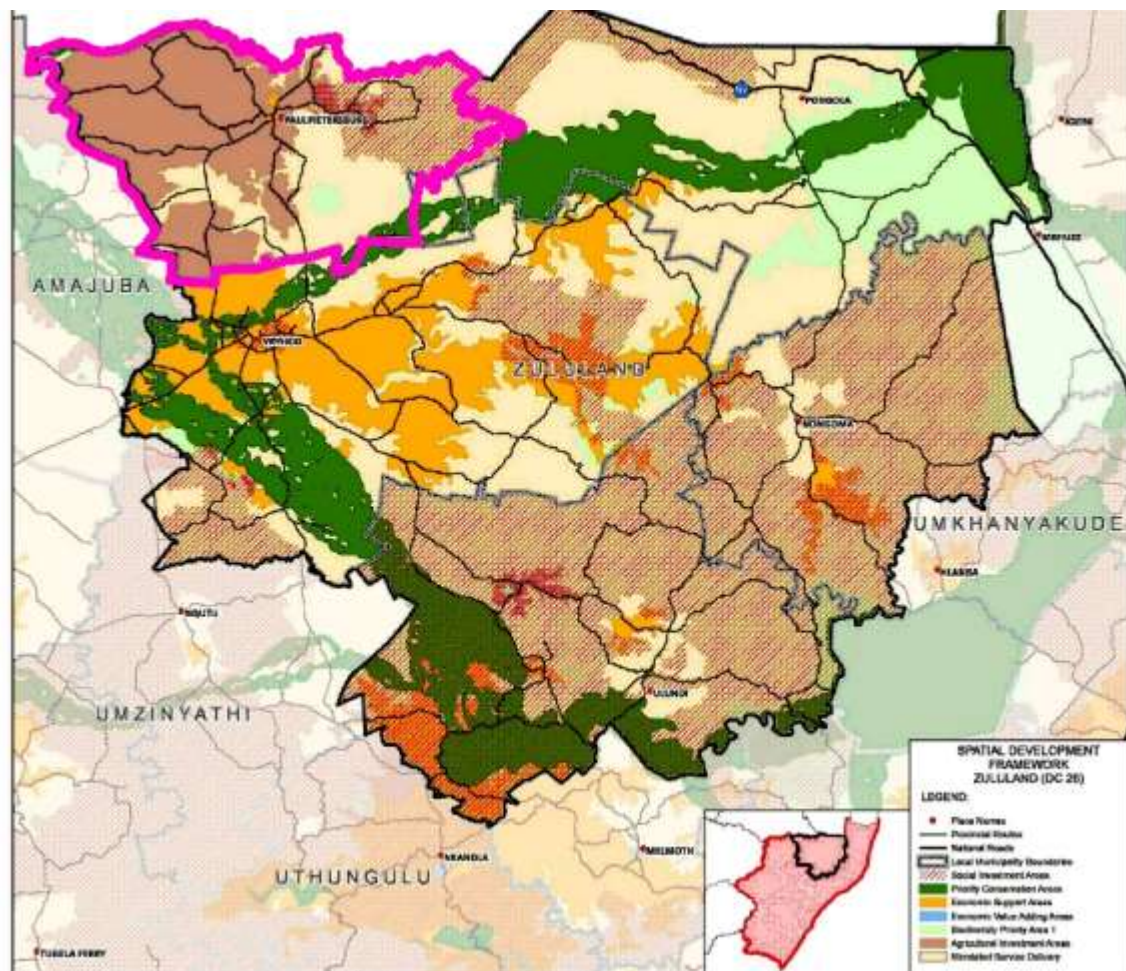




### 3.5 PROVINCIAL SDF

The 2012 Draft Provincial SDF applied the following classification to the various spatial structures in the study area:

- ➡ The Paulpietersburg/èDumbe node is identified as a Quaternary Node which is defined as a center which should provide service to the local economy and community needs. Nongoma is designated with the same status in the ZDM area.
- ➡ The road linking Vryheid and Paulpietersburg and further on to the provincial boundary is designated as an Existing Corridor.
- ➡ The central part of the municipal area is earmarked as “Mandated Service Delivery” where the municipality needs to fulfil its normal role as service provider.
- ➡ The larger western part is earmarked as “Agricultural Investment Area” where the municipality need to play an active role to ensure that progressive agricultural related investment and development take place. The municipality also need to ensure that the high potential agricultural land is protected in terms of the relevant legislation to ensure production security.
- ➡ The eastern part of the area is indicated as “Social investment Areas” This is practically the Tribal Authority land and it depicts the high levels of poverty and need for intervention in these areas.
- ➡ There is also Isolated pockets of “Biodiversity Priority Area 1” and as well as a small portion of the “Priority Conservation Area” linking eDumbe with uPhongolo to the east and Abaqulusi to the south-west.

**Map 39: Provincial SDF: Zululand District**

The KwaZulu-Natal Provincial Spatial Development Plan further developed nine (9) Principles to guide development in the Province which will enhance the provisions of the SPLUMA. The relationship between the two sets of principles is depicted further in the document. The nine principles of the PGDS are depicted in the diagram below.

**Graph 8: 9 Principles of the PGDS**

The following nine spatial principles underscores the general spatial intentions of the PGDS and serves as provincial guiding principles which should ideally be pursued within all levels of spatial planning at district and local level in alignment with the provincial spatial development strategy.

### **3.5.1. Principle of Sustainable Communities**

The Principle of Sustainable Communities promotes the building of places where people want to live and work. Again the sense of Quality of Living refers to the balance between environmental quality, addressing social need and promoting economic activities within communities.

Often communities within the rural context of KwaZulu-Natal are not located in the areas with perceived highest economic potential.

Where low economic potential exists planning and investments should be directed at projects and programmes to address poverty and the provision of basic services in order to address past and current social inequalities towards building sustainable communities.

### **3.5.2. Principle of Economic Potential**

The Principle of Economic Potential aims to improving productivity and closing the economic performance gap between the various areas of KwaZulu-Natal towards economic excellence of all areas. Rapid economic growth that is sustained and inclusive is seen as a pre-requisite for the achievement of poverty alleviation.

The principles further promotes the consideration of spatial needs for Economic Competitiveness (Potential) by proposing an asset based spatial approach based on unique advantages and opportunities within various areas. An essential component of this principle is the engagement of the private sector in the refinement and spatial economic needs of any particular zone / area.

### **3.5.3. Principle of Environmental Planning**

The Principle of Environmental Planning (Bioregional Planning) refers to understanding and respecting the environmental character (potential and vulnerability) and distinctiveness of places and landscapes and promoting balanced development in such areas.

The PGDS supports environmental planning as the fundamental methodology on which spatial planning should be based. Thus, rather than being a reactionary barrier to commenced development, the environment is seen as an enabling primary informant to spatial planning and development. Environmental planning can be defined as land-use planning and management that promotes sustainable development. The environmental planning methodology involves the use of Broad Provincial Spatial Planning Categories to reflect desired land use.

### **3.5.4. Principle of Sustainable Rural Livelihoods**

The Principle of Sustainable Rural Livelihoods considers rural areas in a way which is integrated with other decision making associated with the Sustainable Livelihoods frameworks. This principle requires that spatial planning consider the locality and impact of human, physical, natural, financial and social capitals of an area and spatially structure these in support of each other.

Another aspect of this principle is promoting spatial planning in a continuum where rural areas are not addressed as completely separate entities to urban centres, but rather a gradual change in landscape with the potential progression of rural areas to more closely resemble the service standards and quality of living achieved in some urban contexts.

### **3.5.5. Principle of Spatial Concentration**

The Principle of Spatial Concentration aims to build on existing concentrations of activities and infrastructure towards improved access of communities to social services and economic activities. In practical terms this promotes concentration along nodes and corridors with multi-sectoral investment i.e. roads, facilities, housing etc. This is envisaged to lead to greater co-ordination of both public and private investment and result in higher accessibility of goods and services to communities while ensuring more economic service delivery.

This principle will further assist in overcoming the spatial distortions of the past. Future settlement and economic development opportunities should be channeled into activity corridors and nodes that are adjacent to or link the main growth centres in order for them to become regional gateways.

### **3.5.6. Principle of Local Self-Sufficiency**

The Principle of Local Self-Sufficiency promotes locating development in a way that reduces the need to travel, especially by car and enables people as far as possible to meet their need locally.

Furthermore, the principle is underpinned by an assessment of each areas unique competency towards its own self-reliance and need to consider the environment, human skills, infrastructure and capital available to a specific area and how it could contribute to increase its self-sufficiency.

### **3.5.7. Principle of Co-ordinated Implementation**

The Principle of Co-ordinated Implementation actually projects beyond spatial planning and promotes the alignment of role-player mandates and resources with integrated spatial planning across sectors and localities. Essentially the principle suggests that planning-implementation becomes a more continuous process and that government spending on fixed investment should be focused on planned key interventions localities.

The principle ultimately also proposes a move towards more developmental mandate definitions of the various departments away, from single mandates to enable the spatial alignment of growth and development investment.

### **3.5.8. Principle of Accessibility**

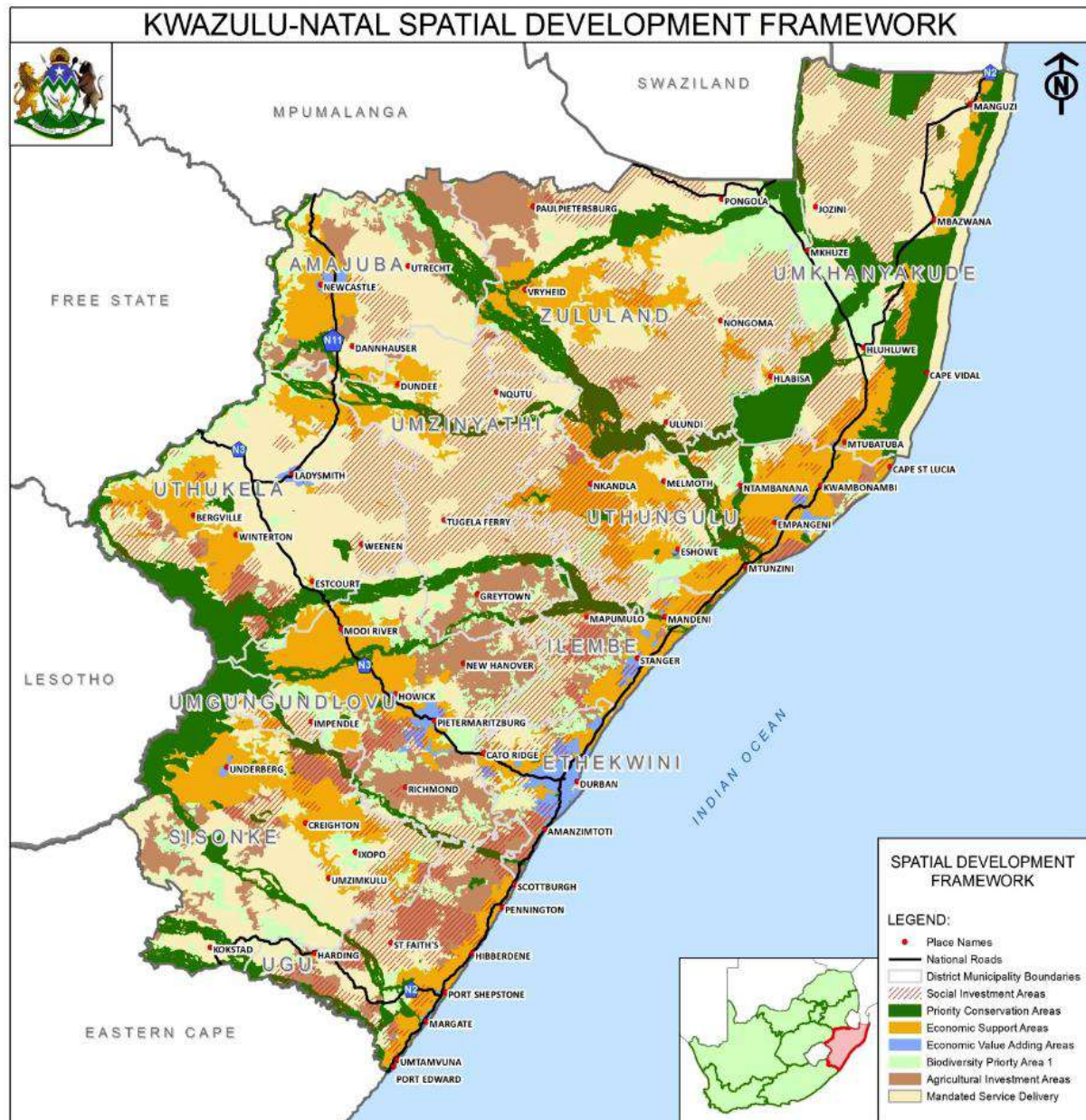
The Principle of Accessibility simply promotes the highest level of accessibility to resources, services, opportunities and other communities. This is intrinsically linked to transportation planning and should consider localized needs for the transportation of people and goods by various modes of transport as guided by the scale and function of a region. At a provincial level there is a strong correlation between the most deprived areas and poor regional accessibility to those areas. In addressing accessibility at provincial and local level, the need for possible new linkages, the upgrade in the capacity of existing linkages and the suitable mix of modes of transport should be considered.

### **3.5.9 Principle of Balanced Development**

The Principle of Balanced Development promotes the linking of areas of economic opportunity with areas in greatest need of economic, social and physical restructuring and regeneration at all spatial scales. In practical terms the principles sought to find a balance between the potentially competing land uses by understanding the relationship and integration between major dimensions within the province and promoting a synergetic mixture of land uses in support of each other at various spatial scales.



**Draft KZN Spatial Development Framework (2016):**





## Chapter 4: Paulpietersburg CBD

### 4.1 BACKGROUND

The Central Business District (CBD) of Paulpietersburg serves the whole municipal area. Paulpietersburg town is a secondary order node in relation to Vryheid and Piet Retief where some higher order services and facilities are available and is situated equidistant from the two. The town centre accommodates a hive of activities, people and traffic, taking place in a typical ribbon development fashion along Hoog and Mark Streets (both streets forming part of the R33).

It appears as the result of relatively unmanaged and uncoordinated growth, while at the same time not accommodating all activities required. The Paulpietersburg CBD Spatial Plan is expected to provide a guide for the future development of the CBD accommodating all existing activities.

Based on an analysis of the present development in terms of physical, social, environmental, economic and institutional issues, the framework is expected to provide concrete proposals resulting in:

- ➡ Improved functionality of the CBD
- ➡ A more attractive urban environment
- ➡ Environmental improvement
- ➡ More efficient public transport
- ➡ Better urban management
- ➡ Improved safety and security
- ➡ The creation of new investment opportunities
- ➡ Protection from competing out of town development

The urban design component of the framework is expected to focus primarily on the status quo analysis, conceptual approaches and design and development guidelines covering the following aspects

- ➡ Land form
- ➡ Built environment
- ➡ Movement and accessibility
- ➡ Permeability
- ➡ Legibility and visibility
- ➡ Uniqueness
- ➡ CBD extent and entrances etc
- ➡ Movement guidelines
- ➡ Land use guidelines
- ➡ Public space guidelines
- ➡ Urban form guidelines

In overall terms the urban design framework is based on 3 levels of study area, i.e.

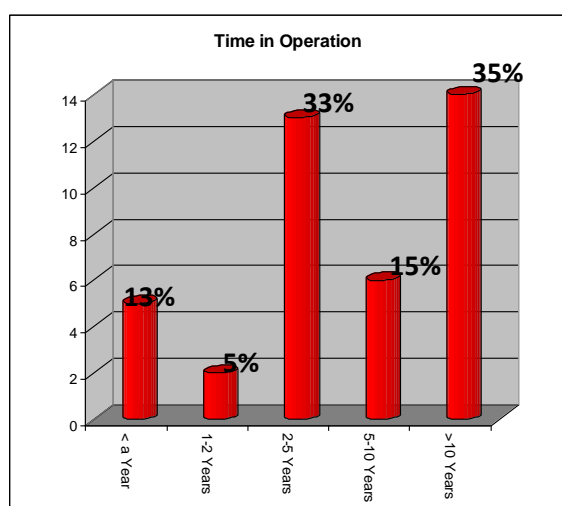
1. THE CBD itself extends from the southern entrance to the town along the R33 to the Municipal offices in the north and eastward along the R33 to the edge of the build-up area. This is the area for which detailed urban design proposals will be established. The CBD Boundary is indicated in blue on the following maps.
2. THE TOWN OF Paulpietersburg forming the local context within which the CBD is located and which is expected to inform extent and contents and for which the CBD represents a local service centre
3. THE MUNICIPALITY OF eDumbe for which the CBD represents the primary service and support centre and which informs primarily the contents of the CBD and its activities as well as its linkage to the remainder of the municipality.

**Map 40: Paulpietersburg CBD Boundary**

## 4.2 CBD SURVEY

During the week of 03 to 07 September 2012 questionnaires were completed by businesses in the CBD with the assistance of 2 COGTA interns. The result of the survey is presented here.

### 4.2.1 Time in operation

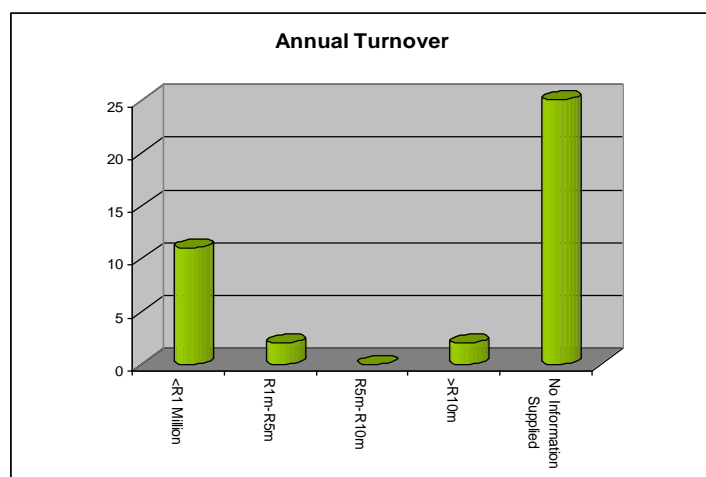
**GRAPH 9: TIME IN OPERATION**

50% of the businesses in Paulpietersburg are in existence for longer than 5 years while 35% are in existence for longer than 10 years. This means that the commercial environment in the CBD is sustainable. Even the 33% of concerns which are In operation over the medium

Term of 2-5 years indicate that there are opportunities for commerce and services In the CBD.

#### 4.2.2 Annual Turnover

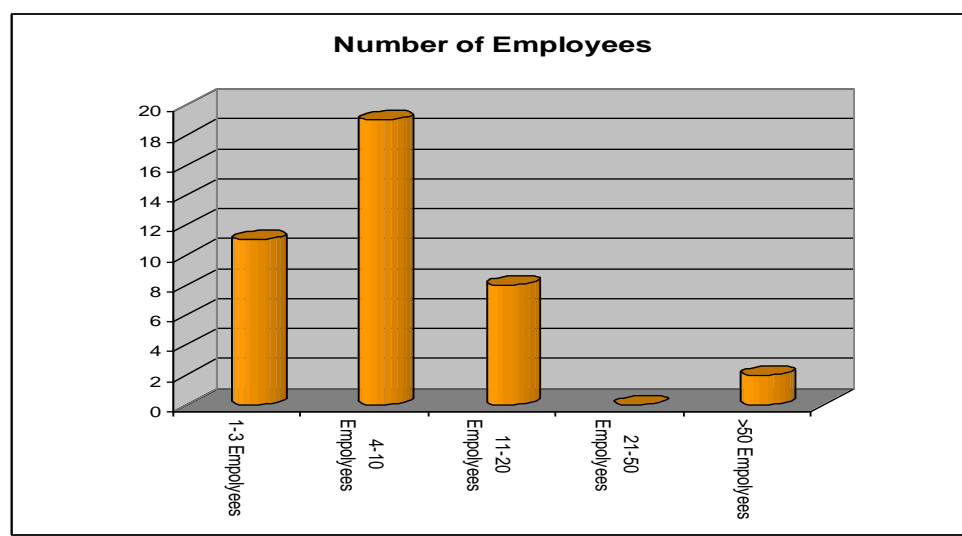
**Graph 10: ANNUAL TURNOVER**



62 % of the interviewed businesses did not provide the required Information. The businesses which Participated indicated that 27% have an annual turnover of less Than R 1 million. Due to the large Number of concerns not answering this information cannot be used As indicative of the average Business in the CBD.

#### 4.2.3 Number of employees

**Graph 11: NUMBER OF EMPLOYEES**



47% of the businesses provide job opportunities to an average of 4 to 10 people while 95% of the participants have 20 and less employees. This is an indication that the average business in Paulpietersburg's CBD falls in the small and medium scale.

#### 4.2.4 Customers

As expected from an area such as this CBD only 3% of the customers are not from within the municipal area while 33% are local from Paulpietersburg and Dumbe. This leaves of the participants who indicated that their customers come from no specific area but from all over the municipality and beyond.

The results for the survey on mode of transport used to visit the CBD indicate the following:

<b>Table: 20 Transport Mode</b>	<b>Percentage use</b>
<b>Pedestrians</b>	<b>0</b>
<b>Taxi</b>	<b>22</b>
<b>Bus</b>	<b>0</b>
<b>Private Vehicle</b>	<b>20</b>
<b>No Information</b>	<b>5</b>
<b>All of the above modes</b>	<b>53</b>
<b>Total</b>	<b>100</b>

The fact that no responded indicated that the clients make use of bus transport needs to be verified.

#### 4.2.5 General concerns of businesses

The following General comments and concerns were forthcoming from the respondents:

- ➡ Electricity supply and cuts
- ➡ Road conditions
- ➡ Water cuts
- ➡ Daytime Sewerage Operations

These are issues that need to be addressed by the municipality that will lead to an enabling environment for the businesses in the CBD.

### 4.3 CBD ZONINGS

The Paulpietersburg Town Planning Scheme is applicable to the CBD district of the town.

**Table 21: Paulpietersburg Town Planning Scheme**

Zoning	Number of properties	Free Entry uses	Coverage	FAR	Parking Requirements
General Commercial 1	52	Bus and taxi rank Commerce workshop Hawkers Home business Hotel Office building Public office Restaurant Service industrial Shop Warehouse	80%	1.5	1 per 30m <sup>2</sup> gross shop area 1 per 65m <sup>2</sup> gross office area
Transitional Zone: General Commercial	21	Dwelling house	50%	0.5	1 per 30m <sup>2</sup> gross shop area 1 per 65m <sup>2</sup> gross office area
Garage	6	Garage Hawkers	70%	-	one suitably located car space for every 50m <sup>2</sup> or major portion thereof of floor area and a loading and off-loading area with suitable access to the satisfaction of the local authority
Public Utilities	11	Bus and Taxi rank Community Facilities Education Building Hawkers Institution	50%	1	Education: 1/ 20 Children Hall:1/6 Seats Church 1/6 Seats No fixed seats: 1/23m <sup>2</sup> Public Office: 15 public spaces

Worship					
Public Buildings and Institutions	1	Local Government	-	-	1 per 65m <sup>2</sup> gross office area
Transitional Zone: General Residential	3	Dwelling Medium density Housing Residential Building	30%	0.5	1 per dwelling unit
Special Zone 2	2	Bus and Taxi Rank Hawkers Shop Garage	50%	1	1 per 30m <sup>2</sup> gross shop area
Public Open Space	1	<p>1. This land is reserved as open space for the use and enjoyment of the Public, once such area is in local authority ownership.</p> <p>2. Works as described in the Local Authorities Ordinance no 25 of 1974, Sections 208 and 264, Sub-sections (14-20) and 27 are permitted and may include public parks and gardens, recreational grounds, zoological gardens and similar such uses.</p>			



## 4.4 LAND USE ANALYSIS

The town of Paulpietersburg is situated in ward 5 of the municipality. Significant land uses in the CBD and surroundings primarily include:

Commercial development: This includes the commercial Banks and various small businesses.

Formal and Informal Retail activity: Large supermarket chain (Spar), hardware store, local Take-away and bottle stores, informal market stalls, etc.

Residential: Higher and medium density close to the CBD and the provision of related services and infrastructure.

Education: Primary School

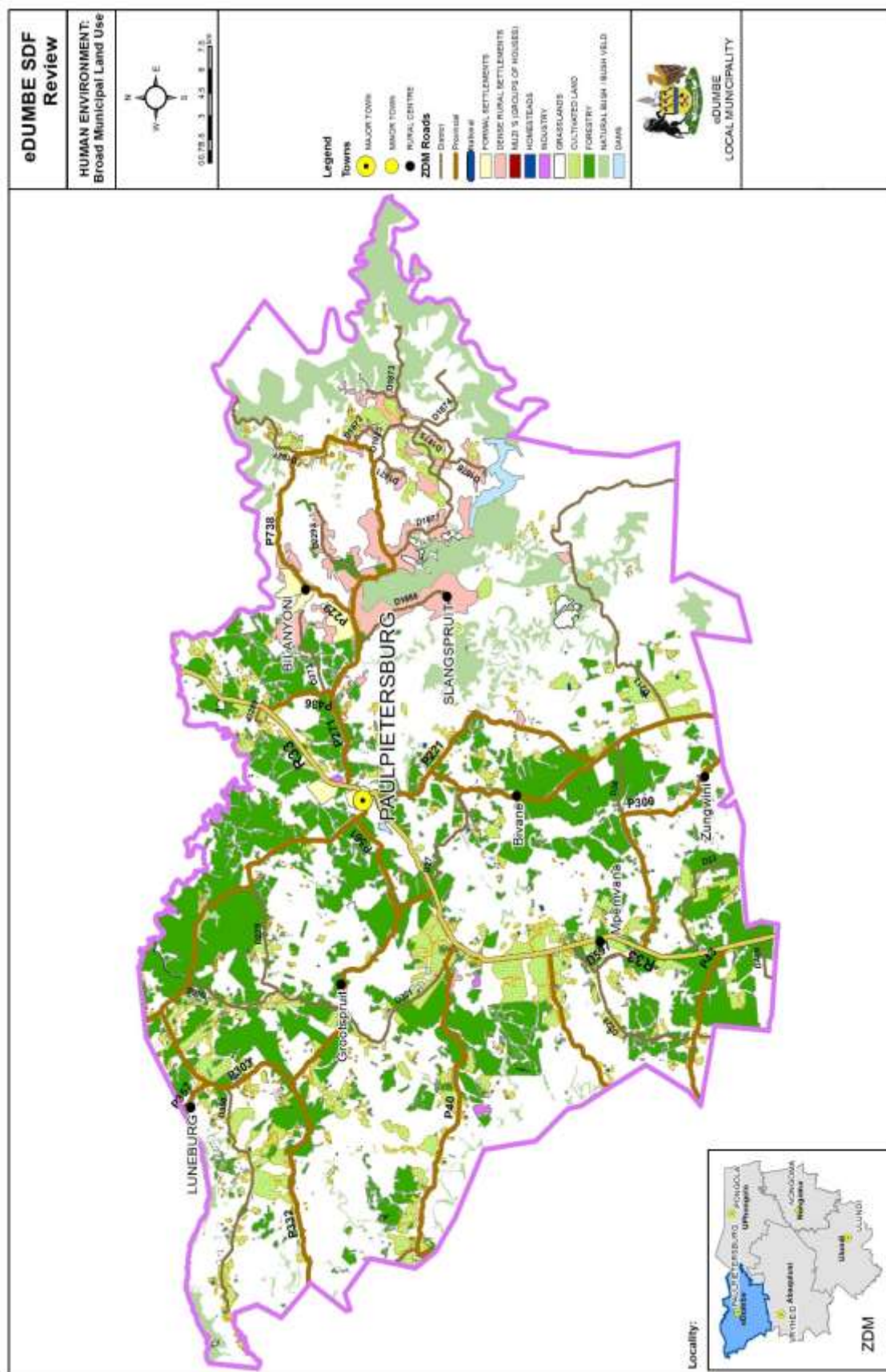
Offices: Micro finance lenders, insurance brokers, doctors, lawyer, estate agent.

Civic Services: Local Municipality, Library, Police Station and various government departments.

Light industrial: Plumbing and construction companies.

Recreational: 9 hole golf course, cricket field, school sports grounds

Hospitality: A number of local B&B's, a tourism information centre.

**Map 42: Land Use map**

The land uses in the CBD is structured is such a way that Commercial activities are concentrated mostly to the east and south of the R33 with a distinct civic related area in the north western part of the CBD. The historical open space in the CBD is under-utilized and need to be incorporated into the establishment of civic space in the CBD.

**It should be noted that the eDumbe Local Municipality was awarded grant funding from KZN COGTA for the development of a Single Land Use Scheme. The project was initiated in October 2017 and is currently in the Land Use Survey and Public Participation phase after certain setbacks. The service provider appointed to develop the scheme is Black Cubans Investments.**

#### **4.5 OVERALL CBD DEVELOPMENT AND FUNCTION**

Paulpietersburg represents the centre of the eDumbe Municipality. As such it is expected to provide all higher order facilities supporting the population of the wider region. At the same time the CBD will also function as a secondary and tertiary centre for the surrounding areas.

From an urban design point of view in particular it is expected that the CBD provides a functional and attractive public environment which, while accommodating the various functions, represents the needs, traditions, and expectations etc of the surrounding community as well as representing the nature of a rural town. In overall terms it is expected that growth requirements can be accommodated within the area if it is accepted that a redevelopment process will include presently un- and underdeveloped areas within and adjacent to the present CBD.

**REGIONAL ACCESSIBILITY:** In order to fulfill the function of a regional centre, accessibility from that region is of prime importance. In the case of the CBD the functioning of the R33 as regional linkage, also within the CBD, needs to be substantially improved. Various short and long term solutions may have to be considered.

**COMMERCIAL / BUSINESS DEVELOPMENT** In terms of commercial and business development the CBD also functions as the centre for a wider region. Relevant economic investigations are expected to guide potential growth requirements. Again, it is expected that additional development will be accommodated within the CBD area.

**MARKET** Appropriate space needs to be established to create a more substantial and functional market. More traditional market arrangements, accommodating animals etc may have to be created elsewhere.

**FACILITIES, AMENITIES AND CIVIC FUNCTIONS** Forming the primary centre of the municipality, as well as a potential node for surrounding tourism activities etc, the CBD is expected to accommodate a range of facilities, amenities, administrative functions, tourism amenities etc. It is expected these can be appropriately accommodated within the CBD regeneration.

**RECREATIONAL DEVELOPMENT** The above is also relevant to higher order recreational facilities which, to the extent possible, should be located adjacent to and visible from the CBD.

**RESIDENTIAL DEVELOPMENT** It is expected that the CBD will ultimately accommodate a range of higher density residential and mixed use development.

## SECTION C: DEVELOPMENT VISION, STRATEGIES & OBJECTIVES

### CHAPTER 5: SPATIAL REPRESENTATION OF THE IDP

#### 5.1 MUNICIPAL DEVELOPMENT VISION

##### 5.1.1 Status of the IDP on District and Local levels

The following strategic documents are used as basis of analysis for the formulation of the èDumbe Spatial Development Framework.

**Table 22: Strategic Documents used**

Sector Plan	Status
èDumbe Municipality IDP 2017-2021	Adopted 2017
Zululand District Municipality IDP 2017-2021	Adopted 2017

##### 5.1.2 Spatial Interpretation of the IDP Vision

The purpose of evaluating the Vision and Mission of the Local Authority is to highlight the components of these statements that need to be spatially interpreted. The Municipality needs to be made aware of the implications of the spatial statements to allow them to prepare and evaluate a proper course of action. These spatial implications will be manifested within the Spatial Development Framework being compiled.

The Current Vision of èDumbe Municipality reads as follows:

**“By 2026 èDumbe Municipality will be economically viable to provide adequate services to its communities.”**

The New Vision of èDumbe Municipality reads as follows:

**“By 2030 èDumbe will be a liveable, economically progressive municipality and a gateway to KwaZulu Natal”**

The two main concepts that come from the above vision are Local Economic Development, and community development. These two concepts are interrelated and should you achieve economic development, community development should follow automatically. Economic initiatives and products being produced/sold, no matter where they are situated (in terms of city or province) have to have the optimum locality to provide access to the markets they target. It is therefore necessary to determine what the capabilities within the municipality is with regards to land and resources, and whether the spatial locality of the initiatives provides access to markets or not. If you lack access to markets, and proper marketing is not done, it is not feasible to produce, no matter how big the demand is. One of the objectives of the Spatial Development Framework is to determine the optimum localities for investment and economic initiatives to be located to capitalise on the comparative advantages that is offered by a specific location. Spatial distribution of facilities will be linked to the spatial distribution of spatial needs, but in the sense that it will be provided where a large concentration of similar needs exist to ensure cost effective provision of services.

### **5.1.3 Spatial Alignment between District and Local Development Vision**

The Zululand District Municipality Vision reads as follows:

***“We are the Zululand Region and proud of our heritage. We are mindful of the needs of the poor and we seek to reflect the aspirations of our communities. We are committed to responsible and accountable actions, tolerance and concern for racial harmony, the protection of our environment, and the strengthening of the role of women and youth. We will strive to improve the quality of life in Zululand by providing sustainable infrastructure, promoting economic development and building capacity within our communities.”***

As a subordinate authority to the District Municipality, development policies of èDumbe Local Municipality should be aligned to that of the district to ensure that the goals and development visions are the same. There is definite alignment between the Development Vision of the District Municipality and that of èDumbe Local Municipality. The Districts development Vision is much more comprehensive than that of èDumbe Municipality, but the aspects of integrated development is reflected within both development Visions.

That will become evident when comparing the above Development Vision to that of eDumbe, as depicted in the following section.

## 5.2 MUNICIPAL DEVELOPMENT MISSION

The Current Municipal Mission:

**“eDumbe Municipality seeks to improve its economic base by exploring the unique industrial, agricultural and tourism potential within its jurisdiction while protecting the natural resources for succeeding generations.”**

The New Municipal Mission:

**“eDumbe Municipality seeks to create a healthy, safe environment with economically active communities through promotion of sustainable infrastructure development while unlocking agricultural and tourism potential.”**

Emanating from the broader development vision established in the Integrated Development Plan, the physical and spatial development vision is suggested to provide the following guidance:

- ➡ The future development of the eDumbe Municipality will be structured such as to provide upliftment of and involvement in the economic and social development of all sectors of the community.
- ➡ The future development will ensure that the natural resources of the municipality, which form the basis for much of the existing and potential economic development, are appropriately protected and maintained.

The above notions address the provision of services to the whole community, as well as the integration of the community which implies physical integration of the communities. Spatial planning will therefore dictate that the various towns, if possible at all, will grow towards each other. The integration of communities will in the long run ensure cost effective provision and maintenance of services.



Access to all basic services requires equal provision of services without prejudice but certain considerations must be kept in mind, which relates to the issues of the Spatial Service Costs Differentiation, spatial concentration of services, and the spatial sustainability/efficiency of services, which again relates to cost effectiveness of services with regards to implementation & maintenance. “Cost implications” is THE major consideration when looking at the distribution and provision of services with the emphasis on maintenance of these facilities.

High development and maintenance costs combined with a very limited budget available it is very difficult to maintain extensive infrastructure systems that are underutilised. It might therefore be necessary to say that not everybody can have the same level of services. It must however be kept in mind that it is the municipalities’ responsibility to provide in the basic needs of the communities such as access to water, but a definite decision needs to be taken on what level of services will be implemented, and where a concentration of services will be provided to form a node where cost effective services can be provided.

Poverty eradication and successful economic initiatives goes hand in hand, with the economic initiatives leading the way. It is imperative to determine what comparative advantages are presented by the area and the locality, and how to harness these opportunities. The SDF will identify the optimum localities for investment and economic development, to uplift the communities, and provide access to the global economy.

The spatial development framework will contribute to the balanced physical development of the municipality by:

- ➡ Establishing a spatial development structure
- ➡ Guiding the management of future development,
- ➡ Accommodating development pressures and additional investment,
- ➡ Maintaining and further developing the economic potential of the municipality,
- ➡ While protecting and integrating the natural environment of the area.

### **5.3. MUNICIPAL DEVELOPMENT PRINCIPLES AND STRATEGIES**

To ensure the realisation of the Vision and Mission Statements, the eDumbe Municipality developed certain strategies, which are linked to the five national Key Performance Areas (KPA's) which are:

- ➡ Basic Service Delivery;
- ➡ Local Economic Development (LED);
- ➡ Good Governance and Public Participation;
- ➡ Institutional Development and Transformation; and
- ➡ Municipal Financial Viability and Management.

The Municipality has also added the following 2 KPA's to complete the list:

- ➡ Community and Social Services Development
- ➡ Spatial and Environment

***These KPA's and their corresponding strategies are outlined in the table below.***

**Table 23: KPA's**

KEY PERFORMANCE AREA: MUNICIPAL TRANSFORMATION AND INSTITUTIONAL DEVELOPMENT	
Strategic Focus Area	Objectives
1. Municipal Policies	To ensure that the municipality has in place all the relevant prescribed policies, strategies and by-laws
2. Capacity building & Skills development	To ensure that staff as well as councillors are exposed to capacity building initiatives
3. Performance Management	To establish a Performance Management unit
4. Vacant posts	Ensure critical posts are filled
5. Employment equity	To ensure that the municipality is compliant with labour laws
6. Municipal Website	To have a website that is easily accessible and informative
7. Record Management	To have a fully functional and effective record system
8. MTAS	To have a MTAS that addresses the municipality's critical issues
KEY PERFORMANCE AREA : BASIC SERVICE DELIVERY & INFRASTRUCTURE DEVELOPMENT	
Strategic Focus Area	Objectives
1. Roads	Improve accessibility in all wards
	Refurbish existing Roads in rural & urban areas
2. Electricity	To improve the current electrical network
3. Sustainable Human Settlements	To provide Sustainable Human Settlements to people of eDumbe
4. Refuse Removal (solid waste)	To facilitate the effective and efficient removal of solid waste
5. Cemeteries	To ensure that there is sufficient burial space and that cemeteries are well kept
6. Community Facilities	To ensure the community is well equipped with services and facilities

KEY PERFORMANCE AREA: LOCAL ECONOMIC DEVELOPMENT AND SOCIAL DEVELOPMENT	
Strategic Focus Area	Objectives
1. Job Creation	Enhance Industrial Development through Trade & Investment
	Expansion of Government-led Job Creation Programmes
	Promoting SMME, Entrepreneurial and Youth Development
	Enhance the Knowledge Economy
2. Fighting Poverty	To Alleviate poverty
3. Natural Resources	Unleashing Mining Potential
	Unleashing Agricultural Potential
	To promote sustainability & ensure protection of municipal natural resources and heritage sites
4. Tourism & Marketing	To market the municipality and its opportunities that it offers
5. Informal economy	To formalise the informal economy/sector
KEY PERFORMANCE AREA : GOOD GOVERNANCE, COMMUNITY PARTICIPATION AND WARD COMMITTEE SYSTEM	
Strategic Focus Area	Objectives
1. Fraud and Corruption	Eradicate fraud and corruption
2. Communication and relationship building	Strengthen & Improve Communication & relations internally and externally (including IGR)
3. Customer care and satisfaction	Improve current customer satisfaction
4. Government & Admin meetings	To ensure that all municipal statutory bodies are fully operational, functional & effective
5. IDP	Promote integrated development planning
6. Poverty, Social Welfare & food security	Safeguard sustainable livelihoods and food security
	To alleviate poverty
7. Health care	Enhancing health of communities and citizens
8. Public Safety & Security	Enhancing public safety and security
9. Special Groups	Promote youth, disabled, elderly & women
10. HIV/AIDS	To reduce the impact of HIV/AIDS

11. Sport development	To promote sports development
12. Arts and culture	To promote arts & culture
<b>KEY PERFORMANCE AREA: FINANCIAL VIABILITY &amp; MANAGEMENT</b>	
<b>Strategic Focus Area</b>	<b>Objectives</b>
1. Revenue	To improve revenue collection
2. Expenditure	To ensure compliance of the MFMA in terms of section 63 & be a debt free municipality
3. SCM	To ensure compliance of chapter 11 of MFMA
4. Asset Management	To have a complete & effective asset register
<b>KEY PERFORMANCE AREA : CROSS-CUTTING INTERVENTIONS</b>	
<b>Strategic Focus Area</b>	<b>Objectives</b>
1. LUMS	To promote harmonious & co-ordinated land uses to achieve sustainable environment
2. SDF	To ensure effective management of current and desirable land uses
3. Land Reform	To ensure that the process of land reform is fast tracked
	To ensure that the land re-institution programme is of an advantage to the beneficiaries
4. GIS	To establish a GIS Unit within the municipality
	To ensure that all GIS data is accessible and readily available to the municipal departments in a sustainable manner
5. Energy Usage	Promote usage of alternate energy sources
6. Land usage	Ensure sustainable usage of land
7. Disaster Management	A disaster man. Plan that is responsive

Source: eDumbe IDP 2017/18

Some of the aspects depicted in the table above, has spatial implications that needs to be considered and are briefly discussed below. This once again highlights the need to identify nodal areas of investment, and encourage the movement of people to these areas where they can be provided with services.

According to policy municipal projects will only be funded when they are depicted in the IDP. This indicates that the projects underwent a thorough public participation process, and that it is aligned with the growth direction the municipality wants to take. The chances of lobbying successfully for funds increase exponentially if the local strategic documents are aligned with the Provincial Growth & Development Strategy, as well as with the National Spatial Development Perspective and municipalities should be able to source funds from provincial as well as national departments. The terms of reference for this document refers to the regeneration of the CBD and the delineation of the Urban Edge, although these concepts are not indicated in the IDP's strategies as indicated in the table above.

The regeneration of a CBD will attract investment to a municipality due to aesthetical value, which lures people to these areas. To attract investment, the municipality will have to develop incentive schemes which will lure the initial investors. CBD regeneration with the purpose of attracting external investors is very much dependant on access routes and development corridors passing through the town, and providing access to external markets.

The implementation of a land use management scheme is necessary to manage the implementation of the spatial development framework and to ensure that land rights and developments are managed properly, and comply with all legislative requirements laid down by the various developmental laws.

The following is a table identifying some of the cross cutting needs in line with the goal, strategies and programmes;

Needs	Goals	Strategies	Programmes
Historic and current rural land use patterns outside of Paulpietersburg/Dumbe Town do not support principle of efficiency.	Regulated land covering the entire eDumbe Municipality with the development and implementation of a Single Land Use Scheme	- Develop a Single Land Use Scheme in order to regulate the area as well as attract investment.	- The Department of KZN COGTA has awarded the Municipality with grant



Economic investment mainly in Paulpietersburg/Dumbe town.	and comprehensive SDF which will attract sustainable and long term investment within the town of Paulpietersburg/Dumbe . This will in turn identify nodes and corridors indicating long term planning, as well as existing misused and unused Municipal Land and identify environmentally sensitive areas as well as disaster prone areas.	<ul style="list-style-type: none"> <li>- The land Use surveys and land audit will identify all land within the municipality and what it is being used for and who it is owned by.</li> <li>- Develop a relevant comprehensive SDF</li> <li>- Engagements with SMMEs, local business owners, enterprises, etc, in order to lobby for funding and investment within the Municipality.</li> <li>- Nodal areas to be focused for development to take place, densification in nodal areas.</li> <li>- Mapping of all Disaster prone areas and identifying risk factors and implementing mitigation measures</li> </ul>	<ul style="list-style-type: none"> <li>- funding in order to develop a Single Land Use Scheme.</li> <li>- See project list at the end of the document.</li> </ul>
General lack of clear nodal clustering is contributing to inefficient spatial structure.			
Lack of Implementation of Schemes in Townships			
Poor Environmental Management			
Natural Disaster Prone Areas			
Shortage of Municipal Land			
Unavailability of Wall to Wall Scheme			



## 5.4. LONG TERM SPATIAL VISION

**“By 2030 eDumbe will be a liveable, economically progressive municipality and a gateway to KwaZulu Natal”**

## 5.5 SPATIAL DEVELOPMENT OBJECTIVES AND STRATEGIES

The municipal Development Objectives are mainly orientated and aligned to National Key performance areas (KPA's) as indicated in paragraph 5.3 of this document.

The following tables depict the strategies set out by the municipality that have aspects that can be spatially manifested. These strategies can be identified and categorised by the 5 principals indicated in the Spatial Planning and Land Use Management Bill, 2011 (SPLUMA):

### 5.5.1 SPATIAL JUSTICE

#### ***SPLUMA Principles***

- ➡ past spatial and other development imbalances are redressed through improved access to and use of land;
- ➡ Spatial Development Frameworks and policies at all spheres of government address the inclusion of persons and areas that were previously excluded, with an emphasis on informal settlements, former homeland areas and areas characterized by widespread poverty and deprivation;
- ➡ spatial planning mechanisms, including land use schemes, include provisions that enable redress in access to land and property by disadvantaged communities and persons;
- ➡ land use management systems are inclusive of all areas of a municipality and specifically include provisions that are flexible and appropriate for the management of disadvantaged areas, informal settlements and former homeland areas;

- ➡ land development procedures will include provisions that accommodate access to secure tenure and the incremental upgrading of informal areas; and
- ➡ where a planning tribunal considers an application before it, the planning tribunal's exercise of discretion may not be impeded or restricted on the ground that the value of land or property is affected by the outcome of the application;

***Table 24: SPLUMA principles applied to eDumbe municipality***

Spatial Issues	Effects	Strategies
Many communities in the eastern part do not have easy access to services and economic opportunities found in Paulpietersburg/Dumbe and other nodes.	It is expensive and time consuming for poor rural families to move to places of employment and social facilities.	1. Provision, upgrading and maintenance of key distribution routes and link roads to corridors.
Clear and uneven distribution of employment opportunities exist between Paulpietersburg/Dumbe node and most of the rural areas.	Limited employment opportunities and access to land results in a downward poverty spiral.	2. Promotion of economic activities in closer proximity to the rural unemployed.
Public facilities and services are being scattered across community areas rather than grouped together at access points, although this is emerging in some areas.	If community facilities are scattered in different locations then the thresholds (number of people needed) to promote local development activities and access to opportunities is decreased.	3. Clustering of social and community facilities at more accessible points within rural service nodes.
While economic integration occurs to some extent in the Town Centre, for the most part economic barriers continue to prevail. (E.g.	High degrees of segregation between places of work and home and uneven access to social and economic activities within the total eDumbe area	4. Promotion of private sector investment in rural areas within diverse economies.
		5. Spatial focus of resources to areas of greatest need to redress inequalities in services standards and quality of life.
		6. Equitable protection and support of rights to and in land.

very limited economic investment in outer laying areas) Priority to the 50km integration Provincial Border area must be given relating to projects in the area.

Co-Ordinate projects such as provision of services etc to reach optimal usage of financial resources.

7. Promote participatory and accountable spatial planning and land use management within all areas of eDumbe Municipality.
8. Spatial Focus of land uses and resources to balance development and protect environmental services which contributes to quality of life
9. Focus on Spatial integration Initiative of MEC.

### 5.5.2 Spatial sustainability

#### *SPLUMA Principles*

- ➡ promote land development that is within the fiscal, institutional and administrative means of the country;
- ➡ ensure protection of the prime and unique agricultural land, the environment and other protected lands and the safe utilisation of land;
- ➡ promote and stimulate the effective and equitable functioning of land markets;
- ➡ consider all the current and future costs to all parties for the provision of infrastructure and social services in land developments;
- ➡ promote land development in locations that are sustainable and limit urban sprawl;
- ➡ result in communities that are viable;

***Table 25: SPLUMA principles applied to eDumbe municipality***

<b>Spatial Issues</b>	<b>Effects</b>	<b>Strategies</b>
<p>Insufficient maintenance of existing physical infrastructure.</p> <p>Conservation worthy and sensitive areas are being lost to other competing land uses in the majority of rural areas.</p> <p>Daily rural living activities are contributing to localised water pollution.</p> <p>Current lack of land management in rural settlements, the clearing of natural vegetation, conversion of agricultural land and inadequate storm water provisions have high costs for remedial and mitigation actions, e.g. damage to roads and houses after heavy rains.</p>	<p>The people in outlying rural areas have low per capita income, which often means that full services are unaffordable and this leads to non-payment which is financially unsustainable for the municipality and the rural poor.</p> <p>Once disrepair reaches a critical point complete reconstruction is required at a greater cost.</p> <p>Pollution impacts on human health and living conditions and limits future agricultural and tourism development potential, with implications for export competitiveness, and health costs.</p>	<ol style="list-style-type: none"> <li>1. Protection and use of natural hydrological systems.</li> <li>2. Plan service standards in line with economic and environmental affordability.</li> <li>3. Conservation and maintenance of infrastructure and resources are better than replacement.</li> <li>4. Fragmented spatial structure causes rural sprawl and should be countered within parameters of rural culture.</li> <li>5. Improved land management measures to control potential conflicts are required.</li> <li>6. Protect productive land for agricultural purposes.</li> <li>7. Identify and promote alternative infrastructure solutions within landscape of municipality.</li> <li>8. Provision of cost effective services which can be maintained</li> <li>9. Protection of the environment during service delivery</li> <li>10. Ensure that LED projects are located where its sustainability is ensured and in areas of greatest need.</li> </ol>

### 5.5.3 Spatial Efficiency

#### ***SPLUMA Principles***

- ➡ land development optimizes the use of existing resources and infrastructure;
- ➡ decision-making procedures are designed with a view to minimizing negative financial, social, economic or environmental impacts; and
- ➡ development application procedures are efficient and streamlined and time frames are adhered to by all parties;

***Table 26: SPLUMA principles applied to èDumbe municipality***

Spatial Issues	Effects	Strategies
Historic and current rural land use patterns outside of Paulpietersburg/Dumbe Town do not support principle of efficiency.	The poor condition of certain vital distribution routes is costing the local rural communities in terms of time and money.	1. Provision, upgrading and maintenance of key distribution routes.
Economic investment mainly in Paulpietersburg/Dumbe town.	Effective transport service is hampered by road conditions which impacts on accessibility of opportunities for the rural poor.	2. Stimulation of Paulpietersburg CBD and Rural Service nodes to promote sufficient market thresholds.
General lack of clear nodal clustering is contributing to inefficient spatial structure.	The fluctuation of subsistence agricultural production causes an increased pressure on urban economic opportunities within èDumbe and an evident poverty trap.	3. Phased Planning around bulk capacities to ensure more cost effective developments.
Lack of structured spatial economic strategy and/or coordination to guide private investment.	The location of housing options mainly in rural areas means long and expensive journeys to work and social facilities.	4. Promotion of economic opportunities in close proximity to residential functions (where sustainable).
	Economic investment occurs on an ad hoc basis and is scattered by sporadic opportunities.	5. Planning alignment with surrounding municipalities and sector strategies.

### 5.5.4 Spatial Resilience

#### ***SPLUMA Principles***

- ➡ Flexibility in spatial plans, policies and land use management systems is accommodated to ensure sustainable livelihoods in communities most likely to suffer the impacts of economic and environmental shocks;

***Table 27: SPLUMA principles applied to èDumbe municipality***

<b>Spatial Issues</b>	<b>Effects</b>	<b>Strategies</b>
The éDumbe Community aims to preserve the rural culture and rural nature of the municipality as a key distinguishing factor.	A dualistic and sometimes conflicting situation arises where the preservation of the rural nature could hamper economic development or vice versa.	1. Enhance regional identity and unique character of place by the incorporation of rural standards in spatial planning.
The current predominant rural character often perpetuates a monogamous, ineffective economic landscape.	The lack of spatial diversity negatively affects living quality, economic opportunity as well as a justification for public investment.	2. Encourage mixed land use in interaction with each other at a scale and intensity that will contribute to economic development. 3. Stimulation of rural service nodes to promote sufficient mark thresholds 4. Support economic activities in rural areas to ensure sustainable activities. 5. Ensure Continuation of rural livelihoods through integration with urban economic activities.

### 5.5.5 Good Administration

***SPLUMA Principles***

- ➡ All spheres of government ensure an integrated approach to land use and land development that is guided by the spatial planning and land use management systems as embodied in this Act;
- ➡ No government department may withhold their sector input or fail to comply with any other prescribed requirements during the preparation or amendment of Spatial Development Frameworks;
- ➡ The requirements of any law relating to land development and land use are met timeously;
- ➡ The preparation and amendment of spatial plans, policies, land use schemes as well as procedures for development applications, to include transparent processes of citizen participation and all parties to have the opportunity to provide inputs on matters affecting them; and
- ➡ Policies, legislation and procedures must be clearly set out and inform and empower citizens



**Table 28: SPLUMA principles applied to eDumbe municipality**

<b>Spatial Issues</b>	<b>Effects</b>	<b>Strategies</b>
<b>Lack of integrated Development</b>	<b>Scattered housing provision leads to settlement pattern that cannot be serviced cost-effective.</b>	<b>1. Ensure an integrated approach to land use and land development.</b>
<b>Slow and ineffective processing of Development Applications</b>	<b>Increase the cost of development and investors thus select other areas for investment.</b>	<b>2. Ensure participation and buy-in from Sector Departments and parastatals during plan preparation and application evaluation.</b> <b>3. The requirements of any law relating to land development and land use are met timeously</b> <b>4. Spatial plans, policies, land use schemes as well as procedures for development applications, to include transparent processes of citizen participation.</b> <b>5. Ensure institutional capacity for both technocrats and decision makers to guarantee adherence to legislative time frames.</b> <b>6. Each application should be treated on its merits and that rational reason underpins decisions</b>

These challenges are crosscutting in nature and needs to be addressed within all the development sectors identified, within all of the development priorities as well as within all geographical areas of the municipality; urban as well as rural settings. Thus these three spatial challenges will form the basis of the entire Spatial Development Framework in order to achieve the municipal development vision.

## 5.6 SPATIAL DEVELOPMENT OBJECTIVES

The following Spatial Objectives have been identified for eDumbe Municipality:

- ➡ Demarcate areas where development should not be allowed
- ➡ Establish the Urban Edge and identify for infill development
- ➡ Provide guidelines for the upliftment and increased functionality of the primary node's Central Business District (CBD)
- ➡ Establish a hierarchy of nodes
- ➡ Formalise emerging urban settlements
- ➡ Develop rural service centres in district nodes (emerging urban settlements)
- ➡ Provision and upgrading of infrastructure to address backlogs
- ➡ Develop a uniform Land Use management System.
- ➡ Support Land Reform Projects and Security of tenure
- ➡ Promote a variety of housing typologies and densities in and around identified nodes

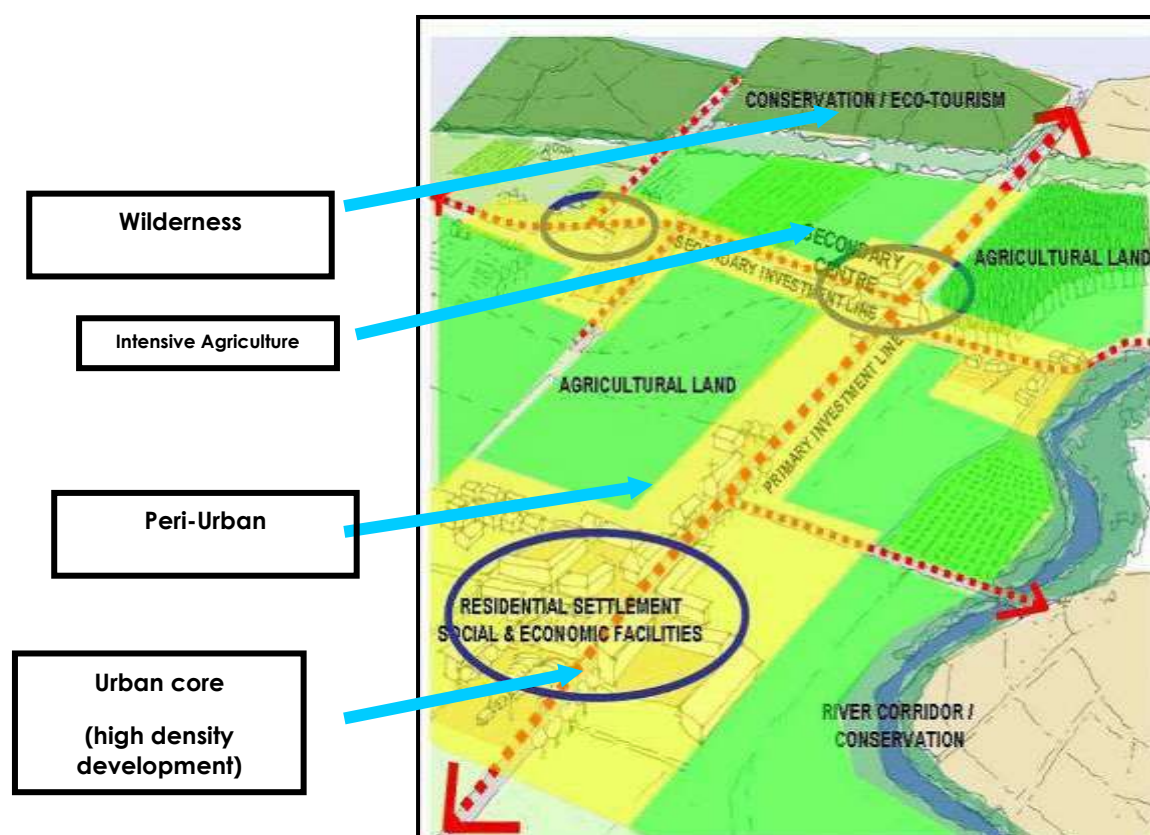
## CHAPTER 6: DELINEATION OF THE URBAN EDGE

### 6.1 UNDERSTANDING THE CONCEPT

Guideline 5 from COGTA's Provincial Planning Guidelines dated July 2009 is titled "Defining Limits on Settlement Expansion: The issue of the Urban Edge". This Guideline will be applied to the eDumbe Municipal area to define the three fundamental landscapes of the study area and to underpin the spatial development of the municipality. The three fundamental landscapes of society can be defined as:

1. Urban
2. Rural
3. Wilderness

**Figure 7: Urban Edge Concept**



There is considerable confusion about the concept of ‘the urban edge’. In large part, this stems from the fact that, in the rhetoric surrounding the concept in policy and planning arenas, different reasons for its application are confused and conflated.

There are two main concerns around which use of the concept is advocated:

- ➡ increasing intensification within urban cores in order to gain the benefits of densification and urban agglomeration; and
- ➡ The need to maintain a dynamic balance between the three fundamental landscapes of society: wilderness, rural and urban.

These different concerns require two different kinds of spatial definition:

- ➡ the first involves the definition of a containment edge to define the limits of the urban core;
- ➡ The second involves determining where, and what forms, development should not be allowed beyond the containment edge.

It defines three zones (peri-urban, rural and wilderness) and suggests appropriate responses to these. It then outlines a methodology by which ‘no go’ development areas should be defined.

This section of the document is concerned with issues relating to the ‘urban edge’. It should be noted from the outset that the term ‘urban’ is not particularly useful in this context, as it is used loosely in everyday language and is not easy to define.

*Urban refers to function. It refers to settlements, the economic base of which is not primarily based on the primary sector, particularly agriculture. Even here, there is blurring. Parts of the economy of almost all settlements are directed towards providing some goods and services for their agricultural hinterlands. Conversely, relatively few are entirely based on this function.*

*The term ‘urban’ is issued as a short-hand to refer to all agglomerated settlements which are not directly based on working the land. The issue of the urban edge is applicable to almost all of these.*

One important reason why urban edge policies have been relatively ineffective has been that the one instrument (the definition of an urban edge) has been applied to attempt to resolve a number of different problems, all valid and important in their own right, but which collectively cannot be resolved through the use of a single policy instrument. The result has been confusion about how the edge should be delineated. Without a convincing conceptual basis for delimitation, authorities have frequently been unable to withstand the pressure from developers for increased rights and change.

It is undeniable that the concerns underpinning the need for urban edge definition are valid and that the definition of an urban edge is important. This document seeks to provide guidelines to strengthen the definition and use of the policy instrument. It does not seek to replace judgment and thought by absolute rules, for judgment will always be required. Land owners have the right to apply for increased land-use rights on any land parcel. It is a legal requirement that their applications be treated with administrative fairness.

This, in turn, requires that each application be treated on its merits and that rational reason underpins decisions. This document seeks to provide a basis for arguing a logical position, and to outline a method through which local and provincial authorities can engage in a process of edge definition.

## **6.2. CONCERNS COMMONLY UNDERPINNING URBAN EDGE POLICIES**

### **6.2.1 Eradicating Sprawl and Promoting Urban Compaction**

It is a common cause that sprawl is a major problem facing most South African settlements, formal and informal, large and small. Inter alia, it has the following consequences:

- ➡ It results in the extensive destruction of agricultural and wilderness land and places of high amenity;
- ➡ It results in very low densities which make the delivery of viable and efficient public transportation virtually impossible;
- ➡ It is extremely inefficient in terms of the use of utility services;

- ➡ It results in the inadequate provision of social and commercial facilities, since thresholds are too low to create acceptable levels of provision;
- ➡ It results in places which are extremely expensive and inconvenient in which to live;
- ➡ It actively militates against the creation of small-scale economic activity, because of a lack of vibrant local markets;
- ➡ It makes the co-ordination of point and line services difficult;
- ➡ It aggravates key societal problems of poverty, inequality and unemployment, since it is frequently the poor who are differentially affected and who often live on the outskirts of these settlements.

Given these consequences, there is a powerful case to be made for combating urban sprawl vigorously.

In the case of South Africa, it is a matter of the utmost urgency. A recent United Nations Habitat Report (October, 2008) listed South African towns and cities as the most inefficient in the world. From an urban edge perspective, however, two interrelated, but different sets of issues underpin these problems:

#### ***6.2.1.1. Achieving a Dynamic Balance between the Landscapes of Society***

A feature of settlement formation and growth is that this balance is being destroyed: the urban is seen as the dynamic element and it spreads out like a cancer, devouring all rural and wilderness landscapes in its path.

*One of the greatest planning challenges in South Africa is to reverse this mind-set: to view rural and wilderness landscapes as the positive dimensions and to allow these to inform the pattern and path of lateral urban growth.*

#### ***6.2.1.2. Achieving Greater Urban Efficiencies***

The second issue relating to the control of sprawl is to increase settlement density. This requires restrictions on the lateral expansion of settlements in order to promote inward urban development and densification.

The lateral expansion of settlements cannot be prevented entirely or in perpetuity. The consequences of a policy which put a restriction on lateral expansion in all directions will be:

**Short term:**

- a) increased land speculation,
- b) slowed rates of land release and
- c) inevitable increases in land prices (with highly negative social consequences); and,

**Longer term:**

- a) An inevitable breach of the cordon, in non-predictable and potentially negative ways.

The task therefore, becomes one of defining paths of least damaging (in ecological and landscape terms) possible future urban expansion. Further, edge policies may be necessary to increase densities, but they are not sufficient. Policies of encouraging higher density infill programmes on un-and under-developed sites, particularly in structurally significant locations, are also necessary.

### **6.2.2 Protecting Important Elements within Urban Settlements**

These include cultural and heritage landscapes, as well as important ecological areas, within the containment boundary. This implies that responsible urban management requires not one boundary but a family of firm boundary lines, of decreasing hierarchical significance, within the settlement itself.

### **6.2.3. Promoting Small-Scale Agriculture**

In the face of high levels of unemployment and poverty and, for many, inadequate access to food, it is clearly sensible in South Africa to promote small farmer programmes vigorously.

Two factors make the issue of small farmer promotion particularly pertinent in South Africa at this time.

- a) Food security.



Internationally, an increasing number of people have inadequate access to food, in the face of globally manipulated market forces. The call for local food production to combat this, and thus to increase security, is growing rapidly.

- b) National land restitution and redistribution policies based on small-farmer programmes.

It is becoming increasingly clear that these programmes cannot succeed if they are located in the deep periphery, away from necessary support. In particular, easy and cheap access to the markets represented by agglomerated settlements is essential.

The history of agriculture in South Africa abounds with examples of small farmers involuntary going out of business because of burgeoning sprawl and thin local markets. The successful introduction of small farmer programmes therefore demands a permanent, proximate relationship (a fixed edge) between dense urban markets and small producers.

#### **6.2.4. Managing Urban Wastes**

A repeating problem in the management of settlements is the treatment of urban wastes, such as sewage and solid wastes. Frequently, facilities for this have two characteristics:

- ➡ They are space extensive; they need large parcels of land;
- ➡ They are noxious or, at least, nuisance-creating.

The traditional management way of dealing with these has been to place them beyond the (then) urban fringe on geologically suitable sites. In the face of rampant urban sprawl, urban development soon overtakes them, with two profoundly negative consequences: they create a lasting nuisance for the new settlement areas which are proximate to them; and they are massively destructive of the fine grain of the surrounding settlement – they create obstacles or barriers which interfere with the structural logic of any new settlement.

These problems can be resolved if there is a permanently fixed containment edge, behind which these bulk services can be located

### **6.2.5. Issues of Sustainability and Recycling**

Related to this is the issue of, recycling wastes productively, as far as is possible. Of particular importance in a water-scarce country such as South Africa is the location of sewerage plants. In a dry region such as Kwa-Zulu- Natal, sewerage treatment plants are potential generators of large amounts of (irrigable), partially treated wastes.

The challenge is to recycle waste water to potentially productive agricultural land at a cost which makes recycling viable. Again, for this to occur there needs to be a fixed-edge between productive land and urban markets, behind which bulk sewerage works can be located.

### **6.2.6. Co-ordination of Line and Point Bulk Services to Achieve Efficiencies**

International precedent shows that the positive impact of line and point services is greatly enhanced when they are co-ordinated. For example, the developmental potential of the provision of water to a site is much greater if that site also has power. Similarly, the impact of a new regional hospital is massively reduced if it has neither water nor power.

Despite this, there is little service co-ordination in South Africa at this time. Services are supplied by different providers who largely react to new demands: they occur outside of any plan for settlement expansion. Yet, potentially, the provision of services (the 'hidden land of the capital web') has enormous power to attract and direct development, and control over service capacities is a potentially powerful instrument of settlement control.

For service co-ordination to occur there must be a clear vision of where development should be promoted and where it should not: there must be the definition of clear urban edges which define paths of possible future expansion.

### **6.2.7. Avoiding Hazards**

An argument that is increasingly heard in favour of the definition of urban edges is the prevention of the spread of hazards, particularly fire and floods. This is receiving growing attention since the recent tragic events in Australia in 2009. In these instances, 'edge' is seen as a buffer or protective device at the interface between potential sources of hazard and settlement.

## 6.3 SYNTHESIS

This approach to planning reverses the common planning and management practice of trying to determine where development should go: rather it focuses on the question of where development definitely should not go. The answer to this is largely informationally and settlement structurally-driven.

The discussion on reasons for defining limits to development suggests that it is useful to consider development potential zonally. Four zones, with each zone 'buffering' the next, suggest themselves:

### **(i) An urban core within the demarcation line.**

Within this, high intensity development should be encouraged, in order to promote the benefits which can (with good design) result from this (1).

### **(ii) A peri-urban zone.**

This is a zone adjacent to the urban core, within which there is a gradual intensification of agriculture. Some development can occur within this zone, but subject to stringent conditions.

- 1) It must ensure the continuing dominance of agriculture. By definition, the form of development must be that of 'beads' – small pockets which are integrated with existing regional or sub-regional movement infrastructure.
- 2) Within the zone, intensification of agriculture in response to the influence of proximate urban markets should be allowed.
- 3) New development must be structurally appropriate – it must respond to historic patterns of movement and settlement.
- 4) The form of development must be appropriate: it must reflect qualities of homestead and village – not suburbia.
- 5) It must respect the dictates of the natural and cultural landscape.
- 6) It must bring with it public benefits.

**(iii) An intensive agricultural zone.**

No development should occur within this, except in special cases related to agricultural activity or providing access to wilderness areas (for example, eco-tourist based). Here development should only occur in small pockets which conform to the principles of the 'agricultural superblock (see below) – settlements which reinforce historical patterns of regional movement.

**(iv) Wilderness.**

No permanent development should be allowed within this zone.

**6.3. GUIDELINES FOR DELINEATING THE URBAN CONTAINMENT EDGE**

There is no 'scientific' way of defining these containment edges: they require strong administrative actions to defend them. A number of factors contribute to the delineation of the line.

1. The delineation needs to be informed by important characteristics of the natural environment. A useful tool is to compile a map identifying composite natural resources and character - contributing elements in the settlement region. Wherever possible, the edge definition should co-inside with natural barriers (water courses, steep slopes, vegetation of significance and so on).
2. Since the central purpose of these edges is to compact urban development in order to achieve greater urban efficiencies, to be effective the line should be drawn as close to the edge of the existing built-up area as possible.

The line should be defensible in terms of the logic of the internal structure of the existing settlement. As a rule of thumb, the line should not be more than 1.5 kilometers – a reasonable walking distance – from the closest point or line of more intensive urban activities (places of work, retailing and community facilities.)

A number of points need to be made about the process of delimitation.

- ➡ Firstly, the defining edge should not be continuous. By omission, it should define paths of future lateral spread which, in turn, allow for a rational pattern of future government spending on utility and social infrastructure. As a general principle new urban development should occur on the worst land in terms of agricultural productivity and amenity: urban development should be used to improve the total landscape.
- ➡ Secondly, within these paths of future lateral expansion, sprawl should be strongly discouraged. Development should not be suburban but should take more urban, higher density forms. Further, 'leap-frog' sprawl should be discouraged. As far as is possible, new development should be contiguous with the existing built edge.
- ➡ Thirdly, the definition of edges should not follow existing cadastral boundaries. It should form a strong geometric edge. Straight, not wavy, lines should be encouraged.
- ➡ Fourthly, the edge should be made physically, not just administratively determined. Buildings should occur hard against the edge and open-ended street networks, which encourage further lateral spread, should be disallowed.
- ➡ Fifthly, wherever appropriate, the edge should be reinforced through the creation of fire-breaks and more intensive forms of agriculture which should be encouraged to occur hard against the edge.

## **6.5 GUIDELINES FOR DEFINING WHERE DEVELOPMENT SHOULD NOT GO**

### **6.5.1. Principles**

Four central principles should guide this determination:

- ➡ Avoid locating new built development on land of medium to high agricultural and amenity value;
- ➡ Avoid fragmentation of rural and wilderness landscapes;

- ➡ Avoid fragmentation, or a scatter of 'pockets', of development: ensure that new development responds to, and reinforces, the logic of regional and sub-regional infrastructure (the principle of 'structural reinforcement');
- ➡ Maintain the dominance of agricultural and wilderness landscapes outside of the urban cores.

All four of these are central to the important landscape and heritage principle of authenticity, which, in turn, underpins all landscapes of quality. International precedent shows that in all landscapes of quality, there is an identifiable logic to the locational pattern of settlements. Settlement does not take the form of random pockets: it follows a structural logic which is strongly informed by the nature of (particularly) movement (the pattern of access) and other forms of sub-regional infrastructure which logically follow movement.

The methodology which is necessary to define these zones where development should not go involves a number of steps.

- ➡ The collation of relevant information by appropriate information category;
- ➡ The overlay of the different layers, to produce, a map of composite informants and constraints;
- ➡ The translation of this product into a map showing 'no-go', 'tread lightly' and 'possible development' parcels;
- ➡ Super-imposition of the settlement and movement structural logic to determine which of the 'possible' development areas should be allowed.

A number of different settlement forms occur within Kwa-Zulu Natal including:

- ➡ Mixed-use towns and cities, both large and small;
- ➡ Rural hamlets;
- ➡ Spontaneous (frequently informal) settlements, both urban and rural;
- ➡ Historical apartheid settlements with little or no economic function;
- ➡ Settlements developed through customary systems.

The way of thinking, and the approach, outlined here are applicable in some form to all these settlement forms.

At the heart of the issue are four central principles:

- (i) Settlement systems should be authentic (in the sense that they have a clear purpose and an economic base which is responsive to that purpose). The South African landscape (including that of Kwa-Zulu Natal) is peppered with settlements which are not authentic – which have been brought into being purely for ideological or political reasons. As a general rule, no new development should be encouraged in relation to these.
- (ii) The need to determine where development should not go (on the grounds of the characteristics of both natural and cultural landscapes). Every settlement must determine this for the land under its jurisdiction. Without this, there can be no rational planning or management of either urban or rural areas.
- (iii) The need to apply rigorously the principle of structural reinforcement. All new development must contribute to a reinforcing system which brings benefit to those already on the landscape. New development cannot be randomly scattered, according to the self-interest of a limited number of people. This lies at the heart of the planning and management of rural and urban areas.
- (iv) The need to promote settlement compaction in order to achieve urban efficiencies and economies of agglomeration. This is clearly more applicable in the case of larger urban settlements than small rural ones. Nevertheless, the requirement to use land efficiently and wisely lies at the heart of sustainable approaches to settlement-formation.



## 6.6 CONCLUSION

The guidelines outlined here argue that the definition of 'the urban edge' in fact requires demarcations of two very different kinds:

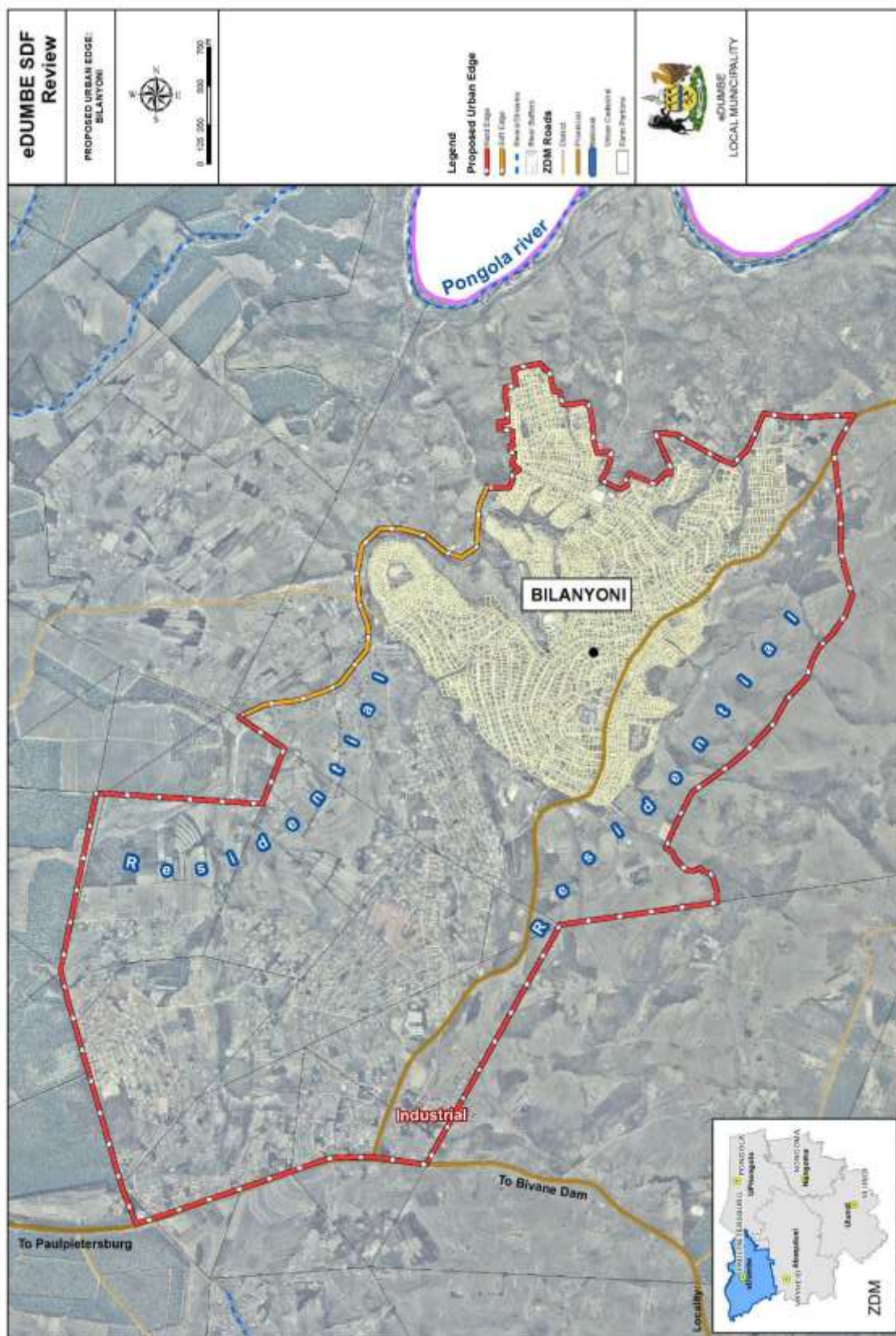
- An inner edge or containment: The purpose of this is to achieve greater urban efficiencies and, to this end, it must be accompanied by urban infill programmes concentrating primarily on structurally significant locations. The delineation of this edge is determined by internal structural considerations relating to the existing settlement itself.
- The definition of where development should not go. This is necessary to maintain a synergistic balance between wilderness, rural and urban landscapes. The logic of this edge definition derives from two sources.
  - Substantive information relating to natural systems, issues of heritage and the cultural landscape and historical settlement and infrastructural investment patterns.
  - The logic of existing regional and sub-regional infrastructure, particularly in the form of existing patterns of settlement and movement.

Within these delineation forms, all other concerns underpinning the arguments for 'an urban edge' can be accommodated.

- The protection of important elements within settlements;
- The promotion of small-scale agriculture;
- The responsible management of bulk infrastructure;
- Issues of sustainability and re-cycling;
- The co-ordination of and point bulk services and the achievement of future urban efficiencies with the inclusion of the 50km Border strip where cross pollination can take place on resources and funding to reach ultimate resource use to communities benefits. Integration on MEC level will result in service delivery optimisation beneficial over borders.
- Control over hazards, such as fire.





**Map 44: Proposed urban EDGE MAP: Bilanyoni/Mangoshuto**

## CHAPTER 7: SPATIAL DEVELOPMENT CONCEPT

### 7.1 INTENDED FUTURE LAND USES

#### 7.1.1 Conservation/ Eco-Tourism/Environmental Management zones

It is critical for the development of a sustainable Spatial Development Framework to identify environmentally sensitive areas in order to direct and manage intensive development away from such areas. The eDumbe Spatial Development Framework considers both formally registered conservation areas as well as additional potential/future conservation worthy areas.

Areas of environmental concern include the following:

- Wetlands and watercourses,
- Areas prone to soil erosion,
- steep slopes,
- archaeological sites and
- tourism assets

Rural Settlement with no adequate water and sanitation are also of big concern. In general the following areas were identified as future conservation areas.

- All formally registered Nature Reserves)
- Minset Data as Overlain on the Conservation Criteria Map, Depicting Mandatory Reserve Areas.
- All river and stream areas, Wetlands & Dams in excess of 1 Ha with a 30m buffer around the boundary.
- Riverine buffer areas. A conceptual buffer of 30m from entreline was utilised.
- Selected slope areas that is intersected by rivers.
- Indigenous forests.

The resulting analysis identifies various riverine areas distributed throughout the municipality. Although not many formal protected areas exist the following areas have been identified by the eDumbe IDP as significant environmental conservation areas. Interesting to note is the high number of wetlands located in the central area of the Municipality, which is situated within the highest value agricultural land. The wetland area stretches from the Pongola River in the North to the Abaqulusi boundary in the south.

Although wetlands need to be protected, it is an indication of the availability of water which could be used for irrigation schemes, or at least effective small scale cultivation. The subsistence farming patterns coincides with the locality of the wetlands.

Very few conservation orientated projects could be sourced from the IDP and other sector reports. These projects have been depicted in the table below.

**Table 29: Conservation Orientated Projects**

Project Name	Project Description	Project Status
1. Pongola Bush Nature Reserve Development	Undertake a feasibility study and business plan to develop this reserve which has a rich and diverse bird life. The development will relate to fencing, access roads, tourist facilities and accommodation, with plans to integrate the neighboring Ekombela community into the economic and profitable activities of the reserve.	Business Plan and Feasibility study is complete.  Process to source funding has begun.
2. Expansion of Ithala Game Reserve	Undertake a strategic plan to plan out the first phase of the expansion of the reserve which will be into the eDumbe, Abaqulusi and uPhongolo local municipalities. In eDumbe the expansion will be the access road via ward 7 in Mahloni	Negotiations are on-going between Ithala and Dept. of Transport.
3. Unlock Bivane Dam's tourism potential.	Enter into an agreement with Impala Water Users Association regarding the utilisation of the dam. Source funding to undertake a feasibility study and business plan to unlock the tourism potential of Bivane Dam.	New
4. Development Corridor Wakkerstroom/Volksrust	Feasibility study looking at the development of this corridor	New
5. Dumbe Mountain Chalets	Business plan and feasibility study, obtain funds for Development	New
6. Dumbe Dam Development	Source funding for Guest house/hotel	New
7. Mkabayi Kajama Homesteads	Source funding for feasibility study & business plan	New
8. Mbizeni Hot Springs	Source funding for feasibility study & business plan	New
10. Provincial Border 50 km strip area	Identify projects and obtain funds from MEC. OFFICE	New

There are a number of people already living within the newly identified Environmental Management Zones, due to their need for water. The intention is not to force people from these areas, but to make them aware of the dangers of living close to rivers, which includes flood risks, and the risk to contaminate water which leads to cholera. Due to the previous mentioned, national laws restrict occupation of land closer than 30m from rivers and other water sources, and therefore the Municipality cannot condone any future development within 30m of any water source.

### **7.1.2 Agricultural Areas**

The intention is to identify and to distinguish between cultivated land (commercial and subsistence) as well as high Potential Agricultural Land, which gives input into the identification of future expansion of agricultural activities.

Agriculture is the primary sector in the municipal area with relation to job creation and as the economic base of the area. This means that the municipality needs to support the sector and in collaboration with the department of Agricultural and Environmental Affairs create circumstances to protect the land and promote value adding to the products of the area.

The Provincial Spatial Economic Development Strategy identified an agricultural corridor traversing the Municipality. This provides opportunities for expanding of agro processing facilities as well as beneficiation opportunities to be explored.

The parameters used to determine the best potential agricultural land:

- High Potential Agricultural Land of areas larger than 20 Ha,
- Good Potential Agricultural Land of areas larger than 20 Ha,
- Intensive and Extensive Agricultural Activities larger than 20 Ha,
- Cultivated land larger than 20 Ha,
- Rainfall higher than 500 mm per annum

The criteria of 20Ha were used, as the Department of Agriculture does not consider anything less than 20 ha as a viable unit. Subdivisions less than 20Ha will therefore not be allowed.

**Table 30: Development on Agricultural land**

Needs	Strategies	Interventions
1. Capitalise on Agricultural opportunities	Facilitate <b>rural economic development</b> through the promotion of SMME's, creating opportunities for small scale farmers and through the development and Co-ordinating an Integrated Poverty Alleviation Program	<ul style="list-style-type: none"> <li>➤ Packaging of feasibility studies and business plans LED initiatives</li> <li>➤ Staging Awareness campaigns on "1 home, 1 garden" concept to promote subsistence farming</li> <li>➤ Implement UNSRDP ("Ukuzakha Nokuzenzela Sustainable Rural Development Programme)</li> </ul>
	Food Security Project	<ul style="list-style-type: none"> <li>➤ Provide ploughing assistance to local small scale farmers for subsistence use</li> <li>➤ Siyavela Project Group Goat Farming Bilanyoni Ward 4</li> <li>➤ Vegetable Production</li> <li>➤ Poultry rearing</li> </ul>
2. Unleashing Agricultural Potential	To develop an agricultural sector plan	To develop an agricultural sector plan Review & Implement agricultural sector plan

### 7.1.3 Infill areas

èDumbe Municipality identified an urban edge as part of this SDF which has been clearly defined and need to be taken further through the municipality's Land use management scheme. The urban edge facilitates a planned environment while protecting the natural environment so as to promote sustainable development. The urban edge intends to ensure that ad hoc development will not have a negative impact on planned development. Further, it facilitates the efficient delivery of services and infrastructure. It is proposed that future urban uses are contained within the existing urban areas and development first seeks to densify and infill the existing urban areas. Urban Sprawl and the concomitant high cost of service delivery should be discouraged vehemently in éDumbe Municipality.



The land use management scheme is not adopted as yet, and the concept urban edge needs to be incorporated into the final adoption of the LUMS by the municipality.

#### **7.1.4 Residential areas**

Various areas have been earmarked for Urban Infill through the identification of developable land with the following characteristics:

- Land that is Unoccupied;
- Land that is not cultivated or used for any agricultural purposes;
- Land that is classified as undisturbed by the “2005 land cover data from Ezemvelo Wildlife”, should enjoy protection. This is mitigated by only earmarking land adjacent to existing residential areas.
- Land larger than 25ha (accommodate 100 families)
- Situated adjacent to existing residential areas.
- Land with slopes of less than 1:3
- Land close to services

The most significant areas for infill are situated in the Paulpietersburg/Dumbe Urban Edge area, as well as in the east within the Bilanyoni/Mangosothu Urban Edge. Various other settlements have potential for expansion as far as land potential is concerned. It must be kept in mind that although the land potential allows for residential expansion, infill development and compact residential areas is preferable over wide expanding residential areas.

This allows for more cost effective implementation of infrastructure. The goals of compact residential areas and urban infill developments are to promote sustainable, functional and integrated settlement patterns in order to:

- Discourage low density urban sprawl;
- Generate social and economic opportunities for people; and
- Promote easy accessibility to opportunities.

In turn it also has an effect on maximizing resources efficiency through:

- Ensuring the protection of the available environmental resources within a municipality;
- Protection of productive land for agricultural purposes;

As indicated above, only land in excess of 25ha is identified for residential development in areas outside the urban Edge. The Department of Housing will seldom, if ever, fund projects less than 100 units. Traditional standards for erf sizes are 2,500m<sup>2</sup> which is large enough to accommodate the traditional extended families. These portions of land also need to be situated in close proximity to current settlements with existing infrastructure, or in an area where the new development will create densities in the existing settlement which will justify the provision of services. Map 57 indicates the areas where residential development should be encouraged.

**Table 31: Housing Projects**

Project	Number of beneficiaries	Status	Implementing Agents
<b>Tholakele Rural Housing Project</b>	1 000	Social Compact signed	Fideco Homes
<b>Ophuzane Rural Housing Project</b>	1 000	Social Compact signed	To be appointed
<b>Mangosothu Housing Project</b>	1 000	Social Compact signed	UmpHEME Developers
<b>Ekhombela Housing Project</b>	147	Social Compact signed	PDNA
<b>Dumbe Phase 3 Housing Project</b>	600	Conditional Approval has been agreed and obtained.	PDNA

Source: eDumbe 2012/13 IDP

### 7.1.5 Development area requirements for expansion

The purpose of this section is to depict the land requirements for residential expansion over a 5 year period until the following review of the SDF.

The process followed involves the rudimentary calculation of area required per household (at prevalent densities) and multiplying this figure with the estimated additional population growth per year.

The purpose of this section is to depict the land requirements for residential expansion over a 5 year period until the following review of the SDF. The process followed involves the

rudimentary calculation of area required per rural household (dwelling) at the average density per household for existing land area occupation (0.1963ha / household) and multiplying this figure with the estimated additional household growth per year.

The existing count for rural households is 8 981, obtained from the 2010 household count obtained from Zululand District Municipality. The total occupied land at present is therefore estimated at 1 762.97 ha. Based on the 2006 rural household count obtained from Zululand District Municipality for eDumbe rural areas, there is an annual household growth of 3.4%. The spatial data analysis on land available for rural demographic development shows a total of 56,513 ha.

The following table summarises the above details, showing the estimated annual land requirement for rural demographic expansion:

**Table 32: Land Requirement for Rural Demographic Expansion**

Year	Rural Households	Household Growth Rate per annum	Annual additional land requirement (0.1963ha/hh)	Accumulative occupied land (ha)
2006	7 906			
2010	8 981	3.40%		34 002.000
2013	9 929	3.4%*3	186.006	34 188.006
2014	10 266	3.40%	66.265	34 254.271
2015	10 615	3.40%	68.518	34 322.790
2016	10 976	3.40%	70.848	34 393.638
2017	11 349	3.40%	73.257	34 466.894

## 7.2 DEVELOPMENT CORRIDORS

The major structuring element for determining the existing and future concentration of development, activity and investment in the eDumbe Municipality consists of an access and movement hierarchy that has been established through the major internal and external national and provincial linkages.

In rural, provincial and national contexts, corridors range in scale depending on function and categorisation of the transportation route that forms the basis of the corridor. Corridors carry the flows of people and trade into and around the nodes connected through the corridor. These flows of people and trade make a corridor function, and should form an integral part of the corridor planning and development processes.

The key advantage of a corridor as a spatial structuring element, and tool for economic growth, is that it has the potential to link areas of higher thresholds (levels of support) and economic potential, with those that have insufficient thresholds. This allows areas that are poorly serviced to be linked to areas of opportunity and benefit with higher thresholds.

### **7.2.1. Regional Development Corridor**

The Primary Development Corridor is the provincial road (R33) which links Paulpietersburg/Dumbe to Vryheid in the south and Piet Retief in the north. The corridor is the main trade and transportation route which links up with the R34 and the National Route (N2). This corridor provides a critical link to major provincial centres such as Durban, Mpumalanga and Gauteng.

### **7.2.2. Secondary Development Corridor**

The primary focus of these corridors is to link places of economic opportunity with places of residence. Development can be encouraged at appropriate locations along these corridors.

Secondary Corridors in the Municipal area are as follows:

1. The P227 and P229 which links Paulpietersburg with Bilanyoni/Mangosuthu and further with the smaller settlements distributed in the eastern part of the municipality.
2. The P 221/ 34-4, this route leads to P46-1 to the South which provides access to Vryheid, Nongoma and the Tourism points of Natal Spa, the Mountain of Wonders and the historical Kruger Bridge.

Interventions envisaged in this area relate to:

- ➡ Tarring of roads which will provide transport services access to the remote regions, and open up additional economic opportunity in opening the areas. Accessibility is of key importance.
- ➡ Developing a localised Corridor Development Strategies which will focus on spatial structure, infrastructure provision and attracting both public and private sector investment.
- ➡ Ensure multimodal transport integration occurs along these roads at key points.

### **7.2.3. Tertiary Development Corridor**

Tertiary corridors link areas and lower order settlements within the municipalities to the secondary and tertiary nodes. These are generally slower moving corridors in terms of social interaction and economic activities. The following routes in eDumbe fulfill the role of Tertiary Corridors:

1. D1880 – This corridor leads to Ophuzane which falls under the Mtetwa Traditional Authority area. This corridor is of great significance as it is also a tourism route since it gives access to the Paris Dam which is identified as an Eco-Tourism area.
2. D1871 – This route leads to Mahlosini which falls within the Dhlamini Traditional Authority
3. D24 – This route link the R33 and the P 34-4 it leads past Zungwini and the Holkrans Historical site.
4. D22 and D597 – These routes leads to Penvane
5. D350 -This route provide access to Ekhombela and the Pongola Bush nature Reserve
6. D1876 and D 1877- This route is the access route to Bivane Dam and once the tourism related development is initiated thee route should be maintained to a good standard.

### 7.2.4. Lower Order Corridors

These corridors ensure linkages between settlements and serve as strategic areas for the location of public facilities and webs of settlement. They are not demarcated on the maps as there are a large number of such access routes, which do not provide vital strategic information, or require to be strategically evaluated within this spatial development framework.

### 7.2.5. Agricultural Corridors

The main source of income and job opportunities in the municipal area is Agriculture and the area has much potential for further agricultural development and value adding opportunities. This is evident from the fact that the Provincial Spatial Economic Development Strategy (PSEDS) identified an important regional Agricultural Investment Area traversing the Municipality.

The components of the identified corridor consist of the following roads:

- The P45 linking Paulpietersburg to Luneburg
- The P303 linking the R33 with Luneburg and Mkhondo Municipal area in Mpumalanga Province.
- The P40, P43, P44 and P332 Providing linkage from the intensive agricultural and forestry area to the Emadlangeni and Newcastle areas and the subsequent markets.

Public interventions envisaged in this area relate to:

- Establishing / Expanding Agro-Processing facilities:  
Additional income generating opportunities are needed within areas of economic need. Agro processing, especially within an area situated on an agricultural corridor provides the potential for additional income. Agro Processing entails the turning of primary agricultural products into other commodities for market thus, beneficiation of primary agricultural commodities.
- To involve communities in agro processing the following option can be considered:

Establishing small-scale, appropriate and sustainable processing/value adding businesses that are flexible require little capital investment and can be carried out in the home without the need for sophisticated or expensive equipment.

- ➡ Expansion of trade opportunities – formal and informal

### 7.3 SERVICE CENTRE AND ACTIVITY NODES

A hierarchical system of nodes is proposed, based on existing levels and patterns of development, and the distribution of future development and transport linkages, to ensure optimum accessibility to goods and services through equitable distribution. The various nodes are distinguished in terms of whether they are:

- ➡ Existing and to be maintained at that level
- ➡ Existing at a lower level and to be extended and consolidated into a higher level node

Paulpietersburg/Dumbe is identified as a quaternary node in terms of the Provincial SDF but it is the primary node for service delivery and availability of facilities in the municipal area. The economy of èDumbe Municipality, as is the case with most rural municipalities in KwaZulu-Natal, operates on a marginalized economic level, and cannot be compared to larger municipal areas with large population numbers, and stronger more vibrant economies.

The classification of nodes as indicated in the following table is therefore applicable only to the èDumbe Municipal Area and the different order nodes cannot be compared with similar classified nodes of more affluent municipalities like the adjacent Abaqulusi and Mkhondo municipalities.

**Table 33: Classification on Nodes**

Primary Municipal Node	Secondary Municipal Node/Rural Service Center	Tertiary Municipal Node/RSC Satellite
Paulpietersburg/Dumbe	Bilanyoni/Mangosothu	Luneburg
		Balmoral
		Ophuzane
		Tholakele



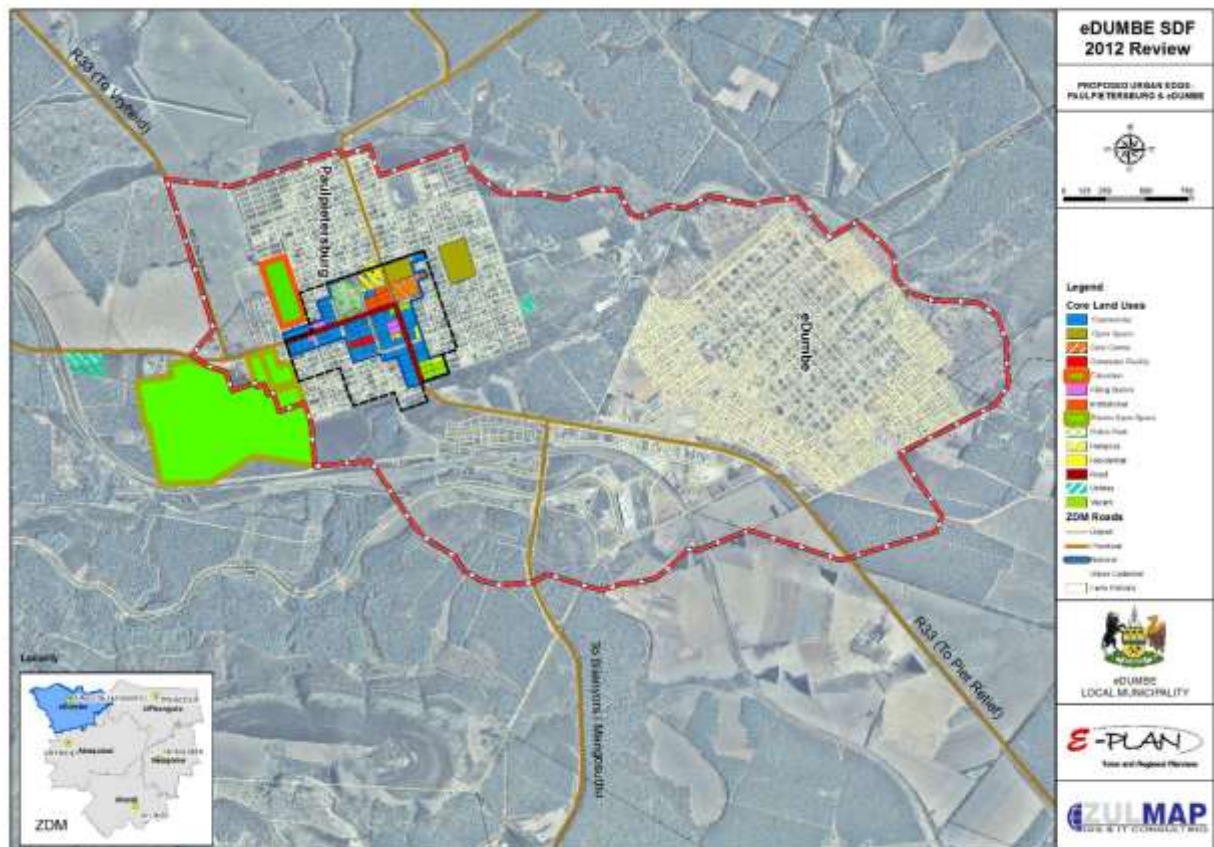
Rural Settlement Clusters have been identified as an indication of large groupings of population. Limited services are provided at these locations, which should be serviced through the Tertiary/RSC Satellite Nodes. The sections below propose a number of facilities to be provided according to the standards as highlighted in 7.4 Standards for Provision of Services. Conceptual localities have been marked for all proposed facilities to depict the area where the facility should be provided. Specific sites must still be obtained through negotiations with land owners, and according to principles which allows for maximum accessibility to the community.

### **7.3.1 Primary Municipal Node**

Paulpietersburg/Dumbe is the main nodal area and the most densely populated settlement in éDumbe Local Municipality, and as such is the only Primary Node within the municipality. This is the main centre of the local municipality, serving generally a radius of 25 km with most services and activities required at the local municipality level. This is the point with the highest accessibility within the municipality and provides accessibility on regular basis via public transport to the rural hinterland. It serves as the main activity node for commercial and administrative activities. In order to service the large population concentration, development efforts are focused on economic development & service provision, job creation, government services and provision of basic services.

This node consists primarily of Ward 3 and according to the 2011 Census the following is therefore applicable:

- ➡ Area: 39.69km<sup>2</sup>
- ➡ Households: 2 610
- ➡ Population: 17 651

**Map 45: PPB/Dumbe – Primary Node**

The priority initiative for the node should be to develop a waterborne sewage system in collaboration with the Zululand District Municipality. The provision of a proper sewage system will enable the densification and the development of multi-storey buildings in the node.

The following initiatives should be supported in the node:

- Industrial development based on the agro-economy
- Commercial development
- Decentralization point for local administration of provincial and local government services
- Higher order social and commercial services
- Integration with major urban centres such as Piet Retief and Vryheid
- Housing development

As the primary node in the municipal area the table depicts the status of Paulpietersburg/Dumbe.

**Table 34: Facilities in PPB/Dumbe**

Existing Facilities		Planned Facilities	Proposed Facilities	
Pre-School	11	Dumbe Phase 3 Housing 600 units	Primary School	3
Primary School	3	eDumbe Shopping centre	Secondary School	1
Secondary School	2	Middle Income Housing Provision	Tertiary Education (FET)	1
ABET/ Training Centre	1	Petrol Filling station	Hospital	1
		Bonamanzi/Dumbe Dam Hotel	Fire Station	1
Library	2	FET/Nursing College	Emergency Service Facility	1
Clinic	1	Informal Traders Center/Market		
Magistrate Court	1	Pig Abattoir		
CHC	1			
Police Station	1			
Civic Center	1			
Community Hall	2			
Old Age Home	1			
Pension Pay Point	1			
Post Office	1			
Post Boxes	1			
Sport complex (incl Swimming pool)	1			
Sport Field	3			
Bus Service on Regular basis	1			
Taxi rank and/or Bus Depot	1			

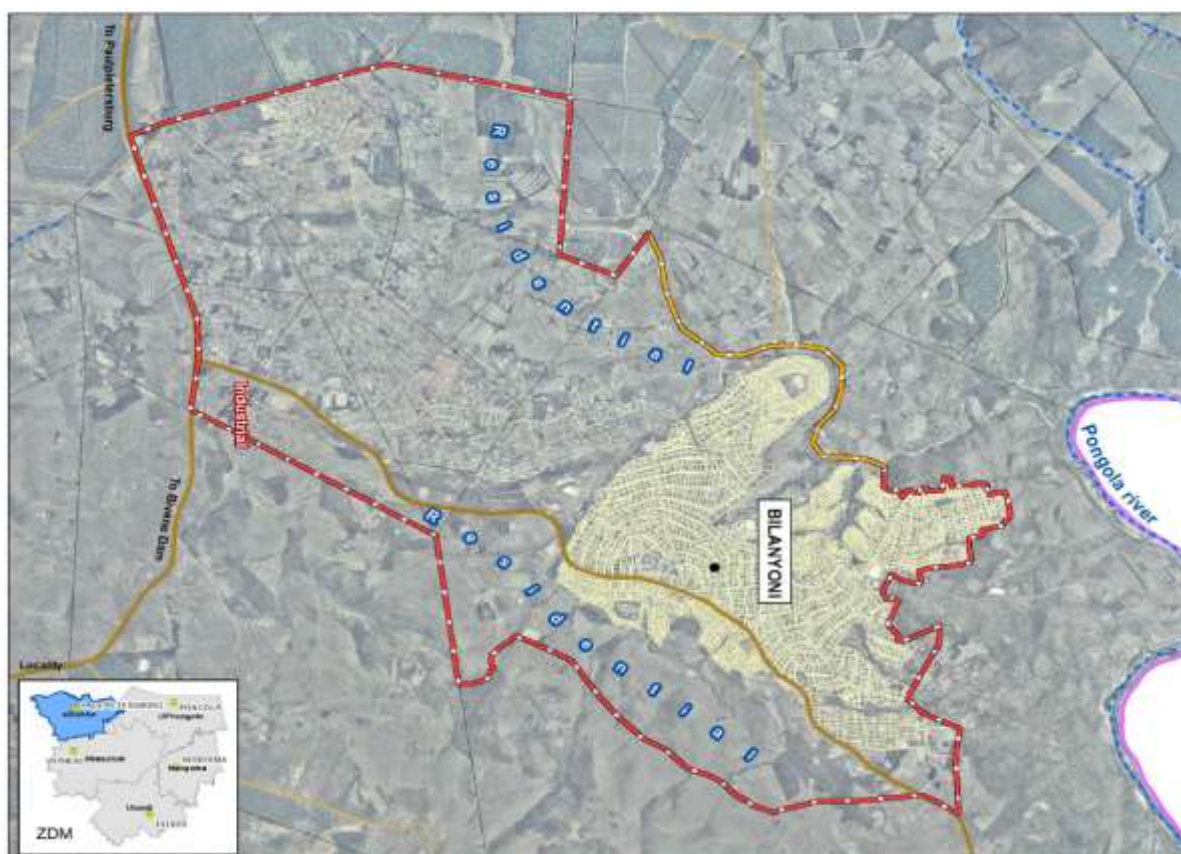
### 7.3.2 Secondary Municipal Node

The Secondary Municipal Node is the Bilanyoni/Mangosothu area 20 km to the east of the primary node. Bilanyoni is a formally established town whiles the adjacent Mangosothu is an informal settlement that urgently need to be formalised and incorporated into the Bilanyoni node. The 2 areas effectively functions as a unit and for development and service delivery purposes should be treated as such. The Bilanyoni area (initially known as Frischgewaagd) was originally established in the 1960's as a rural "Closer Settlement".

Land Use planning in Bilanyoni was formalised in 1999/2000 with the approval of Conditions of Establishment which included land use controls in terms of the Less Formal Townships Establishment Act, Act No. 113 of 1991. This formalised area has been included as part of the Urban Scheme It is located some 20 km north-east of Paulpietersburg/Dumbe.

Mangosuthu Village lies to the immediate southwest of Bilanyoni. While initiatives were undertaken towards the formalisation of Mangosuthu Village, there were no township layouts available from the Surveyor Generals Office. A Development Framework Plan was prepared for the area in 2001, in terms of which potential erven and zoning were proposed and brought through in the draft Urban Scheme proposals dated April 2004.

**Map 46: Bilanyoni/Mangosothu – Secondary Node**



These order nodes perform a variety of functions including administration, service delivery and limited commercial activity. Being service centres, they serve as focus points for a range of services, which is provided to the adjacent rural areas, and typically have basic engineering infrastructure, together with community facilities, schools, commercial facilities, local markets, transportation nodes and basic public administrative functions and small scale industrial and administrative activities.

These centres are growing and should be encouraged to develop. It is therefore necessary to encourage the implementation of capital projects within these areas. As the Secondary node in the municipal area the table depicts the status of Bilanyoni/Mangosothu with regards to the provision of services and facilities to the rural hinterland.

**Table 35: Facilities in Bilanyoni/Mangosothu**

Existing Facilities		Planned Facilities	Proposed Facilities	
Pre-School	12	Retail Facility in Mangosothu	Primary School	5
Primary School	7	Retail Facility in Bilanyoni	Secondary School	2
Secondary School	4	Mangosothu Housing Project 1000 units	Clinic	6
ABET/ Training Centre	3	Mangosothu Filling Station	Library	1
Clinic	1	Youth centre	Post Office	3
Police Station	1	Mangosothu Community Hall	Post Boxes	2
Community Hall	3		Sport complex (incl. Swimming pool)	1
Pension Pay Point	2		Bus Service on Regular basis	1
Sport Field	8		Taxi rank and/or Bus Depot	1
			Emergency Service Facility	1
			Thusong Centre	1

This node contains quite a large population, and has a very urbanized and organised character as can be seen from the image above.

### 7.3.3 Tertiary Municipal Nodes

The Rural Service Centre Satellite nodes are typically located in underdeveloped areas and emerging settlements where population densification is occurring. They have basic administrative functions and the services they provide are highly localized. These include such as schools, postal services, pension pay points, public phones, informal markets, transport facilities and limited commercial enterprises.



In areas under the auspices of Traditional Authorities these nodes usually is the seat of the Traditional Administration Centre or Traditional Court.

As the lowest nodal order, these centres are normally located on or near transportation routes, which provides access to higher order nodes.

### **7.3.3.1 Luneburg**

#### **Map 47: Luneburg – Tertiary Node**



Luneburg is situated in Ward 1 in the northern central area of the municipality, on the boundary between eDumbe and Mkhondo Municipalities. It is situated next to the P357 road which links the node to the surrounding farming and forestry areas. Luneburg is different from the other three Tertiary nodes in the sense that it is not situated in a highly populated area but in an area with extensive agricultural activities. Very few people are residing in close proximity to this node, and as such no densification is proposed. The table below depicts the situation in the node pertaining to facilities.

**Table 36: Facilities in Luneburg**

Existing Facilities		Planned Facilities	Proposed Facilities	
Clinic	1	Ekombele Housing Project 147 units	Post Boxes	1
Primary School	1		Pension Pay Point	1
Sport Field	1		Bus Service on Regular basis	1
			Taxi rank and/or Bus Depot	1
			Pre-School/Crèche	1

**7.3.3.2 Balmoral****Map 48: Balmoral – Tertiary Node**

The settlement of Balmoral is situated on the boundary of wards 5 and 6 of èDumbe municipality. The settlement is at the intersection of the P738 and D1872 and fulfils the role of a tertiary service centre to the rural hinterland and the scattered villages to the east and south. The P783 is a ring road on the summit of the escarp with a start and end point at the turn off to Bilanyoni/Mangosuthu. There is a typically rural settlement pattern prevalent in the area with large sites containing umuzi's and some subsistence agriculture. The settlement has limited services and development of tertiary level services should be promoted at Balmoral.



**Table 37: Facilities in Balmoral**

Existing Facilities	Planned Facilities	Proposed Facilities	
Clinic	1	Primary School	1
Community Hall	1	Post Boxes	1
Sport Field	1	Mobile Police Station	1
Primary School	1	Pension Pay Point	1
		Bus Service on Regular basis	1
		Taxi rank and/or Bus Depot	1
		Upgrade Sport field	
		Pre-School/Crèche	1

**7.3.3.3 Tholakele**

Tholakele is situated in the central eastern area of the municipality in ward 5 and at the intersection of P271 and D1877. This settlement is situated on the road to Bivane Dam and as such will reap the benefits when the tourism potential of the dam is unlocked and facilities are provided at the dam. The D1877 links with the D1866 which provides access to Bivane Dam, the proposed upgrade of these roads will benefit Tholakele and its hinterland by making services and products more easily accessible.

Tholakele is well developed and a growing node with the prospect of an additional 1000 housing units to be developed in the near future. This will have the effect that the households are increased by a 1000 with the concomitant higher order services and facilities threshold.

The table below depicts the facilities status at the settlement.

**Table 38: Facilities in Tholakele**

Existing Facilities	Planned Facilities	Proposed Facilities	
Clinic	2	Tholakele Rural Housing Project 1000 units	Mobile Police Station 1
Crèche	2	School Upgrade - Kwampunzi Primary	Bus Service on Regular basis 1
Primary School	4		Taxi rank and/or Bus Depot 1
Secondary School	2		Pension Pay Point 1
Post Boxes	1		
Traditional Court	1		
Sport Field	1		
Community Hall	1		

**Map 49: Tholakele – Tertiary Node****7.3.3.4 Ophuzane**

Ophuzane is situated at the southern boundary of the Traditional Authority area close to the Bivane River and on the D1880 road. The settlement is close a private game reserve that can provide possible job opportunities for the residents of the area. The settlement is fairly well provided with facilities necessary in a tertiary node. The 1000 housing units proposed to be developed will put pressure on the available facilities. Therefore the development of sufficient facilities for the number of residents being serviced by the node need to be promoted by the municipality.

**Map 50: Ophuzane – Tertiary Node**

**The table below depicts the facilities status at the settlement.**

**Table 39: Facilities in Ophuzane**

Existing Facilities		Planned Facilities	Proposed Facilities	
Clinic	1	Ophuzane Crèche	Mobile Police Station	1
Primary School	4	Ophuzane Rural Housing Project 1000 units	Pension Pay Point	1
Secondary School	1		Crèche	2
Post Boxes	1			
Bus Service on Regular basis	1			
Taxi rank and/or Bus Depot	1			
Traditional Court	1			
Sport Field	1			
Community Hall	1			

## 7.4. RURAL SETTLEMENT CLUSTERS

These rural settlement clusters are situated around, and serviced by the above mentioned service nodes. No services exist at these areas, as they represent very small groupings of households. They are however depicted on the Spatial Development Framework.

➡ Holspruit	➡ Ntungweni	➡ Mapayphini
➡ Bhadeni	➡ Lujojwana	➡ Ekhombela
➡ Zuigwini	➡ Obishini	➡ Mpemvana
➡ Penvaan	➡ Enkembeni	➡ Mthingana
➡ Grootspuit	➡ Mpundu	➡ Mahloni
➡ Mahlosini	➡ Ezibomvu	➡ Obivane

## 7.5. GUIDELINE FOR PLANNING OF FACILITIES

This table was assembled to highlight the number of facilities in each node and point out where which facilities are needed, agreeing with the standards as set out in the Guidelines for Planning of Facilities in KwaZulu-Natal.

There are 82053 people in eDumbe according to the census done in 2011; the number of facilities needed is calculated consequently with the number of people living in each node.



Table 40: Guideline for planning of facilities

Facility	Threshold Standards (1 facility/mr. of people)	Access Standard	Total Facilities required	Facilities provided	Additional Facilities proposed	PPB/ Dumbé	Bilangoni Mangosho	Balmoral	Ophuzane	Tholakele
<b>Education</b>										
Pre-School (incl Crèche & day care)	5 000	Walking distance	16	57	[41]					
Primary School	3 000	15 km/20 min travel	27	85	[38]	3	5	1		
Secondary School	6 000	5km/walking Distance	14	18	[4]	1	2			
ABET/ Training Centre	Need	Combined with other community facilities		11	[11]					
Tertiary Education (excluding University)	100 000		1	0	1	1				
Library	50 000	Access via Public Transport	2	2	0		1			
<b>Health</b>										
Clinic	5 000	Access via Public Transport	16	7	9		6			
Clinic Mobile				2	[2]					
Hospital	50 000	Within nodal Area close to Major Public Transport Route	1	0	1	1				
<b>Safety and Security facilities</b>										
Magistrate Court	1/Town	Within Primary Node	1	1	0					
Fire Station	60 000	High access routes	1	0	1	1				
Emergency services facility	25 000	High access routes	3	0	3	1	1			
Community safety centre	200 000	Nodal Area	1	0	0					
Police Station	50 000	Within accessible nodal areas	2	2	0					
Mobile Police Station	25 000	Need	3	0	3			1	1	1
<b>Social</b>										
Orphanage	200 000	Within accessible nodal areas	1	0	0					
Civic Center	1	Within Primary Node	1	1	0					
Thusong Center	1	Within accessible nodal areas	1	0	1		1			
Community Hall	20 000	Within accessible nodal areas	4	10	[6]					
Old Age Home	1/Town	Within Primary Node	1	1	0					
Pension Pay Point	Need	30 min Travel		17			1	1	1	1
Post Office	11 000	1 km/20 min walking distance	7	1	6		3			
Post Boxes	16 500	500m/10 min walking distance	5	1	4		2	1		
Traditional Admin Center	Authority			3						
<b>Sport and Recreation</b>										
Sport complex (incl Swimming pool)	50 000	Nodes	2	1	1		1			
Sport Field	12 000	Clustered with Schools	7	35	[28]			1 (Upgrade)		
<b>Transport</b>										
Bus Service on Regular basis	1/Node	Nodes	1	5	[4]		1	1	1	1
Taxi rank and/or Bus Depot	1/Node	Nodes	1	3	[2]		1	1	1	1

## CHAPTER 8: GUIDELINES FOR THE LUMS

A Spatial development framework forms part of a larger Land Use Management System, which consist of a number of components which includes the following:

- Spatial Development Framework
- Land Use (Planning) Schemes
- Rates database
- Cadastral and property (registration) database
- Valuation system
- Information regarding the provision of infrastructural services
- Property ownership and tenure
- Environmental management system
- Transportation management system
- Information system GIS

The purpose of a Spatial Development Framework (SDF) is to inform the development of a Land use Management Scheme. The SDF provides best-use scenarios for use of land, and it is the function of the Land Use Management Scheme to regulate these land uses. An SDF therefore does not change the rights of properties but gives guidance and direction for growth of a municipality. It is however necessary to align the Land Use Management Scheme with the Spatial Development Framework to ensure that the objectives of the SDF are met.

Where the SDF provides direction for expansion of specific land uses or the restriction of development within other areas, the purposes of Land Use Management Scheme is to manage the use of the land in order to ensure a healthy living environment, where the environment is safe to live in. It is also necessary to provide social amenities (including social facilities, and services) to ensure a convenient living environment. Through evaluation of conservation resources the SDF also addresses the efficient utilisation of scarce natural resources.

According to COGTA's Guidelines a Land Use management Scheme should address the following aspects:

1. Land Use Zones (Based on land uses identified within the SDF)
2. Statements of Intent for use Zones

3. Management Areas and Management Plans required for applicable areas of the land use scheme, together with such Land Use Matrices as may be required to identify the land uses permitted or prohibited.
4. Development Control Templates with permissions, conditions, limitations or exemptions, subject to which such developments may be permitted.
5. Definition of Terminology
6. Procedures regarding application, consent, appeal, etc.
7. Land Use Scheme Maps, Management Area Overlays and Management Plans to spatially depict the land use rights.

The guideline indicates that to process to develop a LUMS can be as follows:

**Table 41: Guideline for Developing LUMS**


STEPS	ACTIONS	OUTCOME
1. <b>What is the institutional capacity for preparing a land use scheme?</b>	<ul style="list-style-type: none"> <li>• Develop an information system that functions efficiently, both internally and externally to the organization.</li> <li>• Establish and or confirm a planning section / spatial planning unit in your organisation. <ul style="list-style-type: none"> <li>• Appoint staff in the unit / or consultants taking into consideration the empowerment of the municipality.</li> </ul> </li> </ul>	Functioning Planning Unit
2. <b>What is the status quo within a Municipality?</b>	<ul style="list-style-type: none"> <li>• Conduct the information audit to get an indication of the following: <ul style="list-style-type: none"> <li>➤ No. of TPS, R293 and Amakhosi areas included in the Municipality;</li> <li>➤ Clarity and accuracy of tenure, cadastral and mapping information.</li> <li>➤ Existing sectoral plans and policy guidelines. (Transportation, environment, housing, etc.).</li> <li>➤ Financial resources and budgeting.</li> </ul> </li> </ul>	A clear picture of information gaps and the level of consultation required.





	<ul style="list-style-type: none"> <li>Identify the level of community consultation required (Consultation Plan).</li> </ul>	
3. <b>What type of a Land Use Scheme (LUS) do you need?</b>	<ul style="list-style-type: none"> <li>Prepare a Strategic Land use Framework which will include the following:</li> <li>Strategic issues identified in the IDP and its SDF.</li> <li>Identify pressure points (areas needing urgent attention).</li> <li>Identify the LUS level for various parts of the municipality (Elementary, primary, comprehensive or rural level).</li> <li>Decide on the type of Land Use Scheme you prefer by doing either or a combination of the following:</li> <li>Translate the existing zones into a LUS without a review or consolidation.</li> <li>Partially translate, consolidate or align different schemes and extend such schemes to areas where there is no land use management.</li> <li>Undertake a detailed review of zones, land uses and controls in all current schemes with a view to creating a single scheme.</li> </ul>	An agreement on the type of a Land Use Scheme that the Municipality wishes to prepare.
4. <b>How to prepare a Land Use Scheme?</b>	<ul style="list-style-type: none"> <li>Council resolves to prepare a LUS in accordance with a new LUMS using appropriate legislation (once available).</li> <li>Address information gaps (if necessary).</li> <li>Formulation of the Statement of Intent (SOI) for large or special areas of the LUS based on the objectives of the municipal IDP.</li> <li>Identify the zones, districts and appropriate development control.</li> </ul>	A Municipal Land use Scheme comprising of a Plan, a Land Use Table (Matrix) and a table of development control (Land Use Template)
5. <b>What is the Road to Approval of the LUMS?</b>	<ul style="list-style-type: none"> <li>Circulate the LUS for public comments within a legislated time period.</li> </ul>	An approved Land Use Scheme to guide land use

	<ul style="list-style-type: none"><li>• Amend the LUS by incorporating the received public comments.</li><li>• Table the LUS (reports and maps) to Council and Amakhosi or a structure comprising of the two for final approval.</li><li>• Submission to DTLGA for comments and or assessment.</li></ul>	management within a municipal area.
--	--	-------------------------------------


**The following table are some of the proposed land uses that may be used in the scheme:**

ZONE CATEGORY / PARENT TYPE	INFORMANTS	POSSIBLE ZONING	LAND USE INTENTIONS / STATEMENT OF INTENT
<b>Environmental Service Zones</b> 	Protected Area;	Active Open Space	A zone that provides part of the sustainable open space system which includes independent or linked open space areas, and permits only limited and specific developments
	CBA:	Public Open Space	
	Irreplaceable;		
	CBA: Optimal;		
	Ecological Support Areas; Aquatic Ecological Support Area;	Private Conservation	The primary purpose of this zone is to afford protection to areas in private ownership which are deemed to be of conservation significance.
		Nature Reserves	A zone that is intended to demarcate formally managed public and private Conservation areas, such as Nature Reserves and Amenity Reserves.
		Nature-and Culture- based Tourism	A zone that is intended to manage the development of land and buildings for eco-tourism and nature-based tourism development. The main focus will be on accommodation in the form of lodges, conference facilities, caravan and tented accommodation and eco-educational facilities; outdoor recreation and participatory travel experience, to both natural as well as to cultural environments, that contribute to the sustainable use of these environments, respect the integrity of the host


			communities, and which produce economic opportunities that contribute to the long-term Conservation of the resource base, and reinforce the concept that Conservation can bring meaningful benefits.
<b>Agriculture Zones</b> 	Modified Areas; Existing plantations outside of proposed Environmental services zone Land suited to grazing or game farming. Agricultural land Categories	Agriculture 1 ( <i>Agricultural Land categories : A – irreplaceable</i> )	A zone that provides for land and buildings where the primary activity is both intensive and extensive agricultural production of crops, livestock or products.
		Agriculture 2 ( <i>Agricultural Land categories : B – irreplaceable</i> )	A zone that provides for land used for low intensity and small scale agricultural practices in association with other related uses in Traditional Authority areas, and may include market gardening, wood lots, the production of small areas of crops such as sugar cane and livestock.
		Urban Agriculture	A zone that provides for land located in urban areas for agricultural purposes, utilized for small scale agricultural production, market gardening, horticulture, aquaculture, the keeping of limited livestock and community gardens.
		Amasimu and izivande ( <i>Rural Agriculture</i> )	These uses are for agricultural purposes and are used to support life in rural areas.

<b>Civic and Social</b>  	Permanently transformed areas.	Education (Private and Public)	A zone that provides for a full range of educational facilities, including infants, pre-primary, primary, secondary, tertiary and adult education and training with associated buildings and recreational facilities.
		Institution	A zone that is intended for land and buildings for the accommodation and care of the aged, hospital, sanatorium, clinic convalescent home places of safety and orphanages.
		Worship	A zone that is intended for land and buildings to be used as a church, chapel, oratory, synagogue, mosque, temple, Sunday school, and other places of public devotion, but does not include a funeral chapel.
		Public Buildings	A zone that is intended for buildings erected and used for National, Provincial and municipal administration and services.
		Cemetery	A zone that is intended for public and private cemeteries, memorial parks, and funeral chapel. Note that crematoria are usually considered through the Consent procedure.
		Amathuna	Amathuna provide land for burial purposes. Two types of burial systems exist in rural areas and these are household and communal cemeteries. Traditional –culture and customs –regulates household burials, while the municipality by-laws regulate the communal cemeteries.

<b>Residential</b>  	Permanently transformed areas.	Residential Only	A zone that is intended to promote the development of primarily detached dwelling units, but does permit multi-family dwellings, and where a limited number of compatible ancillary uses which have a non-disruptive impact on a neighbourhood amenity may be allowed.
		Imizi	This is a residential land use used primarily for shelter in Traditional Council Areas. It hosts other land uses for livelihood such as burial, izivande (household gardens), izinqolobane, izibaya and amathuna (household graves).
		Izigodlo	While primarily used for royal residence, izigodlo often serve as administrative and recreational zones hosting traditional rites and festivities such as ukuhlolwa kwezintombi (virginity testing). These are solely regulated by royal families and the location of these is largely informed by traditional considerations for safety and security.
		Residential Only : Medium Density	A zone that is intended to promote the development of attached and detached dwelling units as part of a larger planned residential development.
		Residential Only : High Density	A zone that is intended to promote the development of multi-unit residential units for a wide range of residential accommodation at a high density, together with a mix of activities to cater for broader community needs.

		Smallholdings (Residential Estate)	A residential estate and small holding zone sets aside land for housing and related urban-scale agriculture where the number and magnitude of ancillary land use types are limited to provide for local every day employment and service needs.
		Tourist Residential	A zone that is intended to promote the development of tourist related residential uses.
<b>Mixed Use</b> 	Permanently transformed areas.	Core Mixed Use	A zone that is intended to provide for the use of retail, entertainment, offices, residential, public facilities and related commercial uses at high intensities that comprise a Town Centre.
		Medium Impact Mixed Use	A zone that provides for a restricted range of commercial activities, workshops, offices, restaurants, residential development at medium intensities of development and with limited impacts.
		Low Impact Mixed Use	A zone that provides for a limited range of commercial activities, offices, restaurants, residential development at residential level intensities of development and with limited impacts.
		Offices	A zone that provides for the development of distinct office areas adjacent to other forms of commercial / residential development



<b>Industry</b>  	Permanently transformed areas.	Extractive Industry/Quarrying and mining	<p>A zone that comprises land used for the extraction of minerals or raw materials and associated business operations, including sand and stone, in compliance with a permit from the relevant authority.</p> <p>Adjacent land uses must be compatible with this use which typically has a high-impact on amenity. Additionally, this zone provides for the interim uses including but not limited to timber yards, outdoor storage, plant nurseries, etc, which do not impair the long-term ability to extract and process mineral resources.</p>
		General Industry	<p>A zone that permits manufacturing uses which are generally compatible with other manufacturing uses.</p> <p>As a cumulative industrial zone, it would permit a combination of light manufacturing uses found in other zones and more intensive manufacturing uses that would normally be considered incompatible with sensitive land uses.</p> <p>Warehousing of materials considered non-noxious or non-hazardous are permitted in buildings in this zone. Outdoor storage, as an ancillary use, may be permitted in the zone, subject to certain restrictions involving the amount of area permitted on a lot, setbacks, screening, and possibly the type of materials permitted to be stored outdoors, i.e. via a Consent procedure.</p>

		Light Industry	<p>A zone that permits manufacturing uses which are compatible with land uses permitted in adjacent more sensitive land use zones, such as residential, mixed use and open space zones. As a light industrial zone, it would permit manufacturing activities that usually do not involve significant vibration, noise, odour, or high volume of automobile and truck traffic. Warehousing of materials considered non-obnoxious or non-hazardous are permitted in buildings in this zone, with possible conditions. Outdoor storage, as an ancillary use, would be extremely limited if not outright prohibited.</p> <p>Office uses would be permitted with conditions in this zone, i.e. via a Consent procedure.</p>

**It should be noted that the eDumbe Local Municipality was awarded grant funding from KZN COGTA for the development of a Single Land Use Scheme. The project was initiated in October 2017 and is currently in the Land Use Survey and Public Participation phase after certain setbacks. The service provider appointed to develop the scheme is Black Cubans Investments.**

## CHAPTER 9: ALIGNMENT OF SPATIAL PLANS

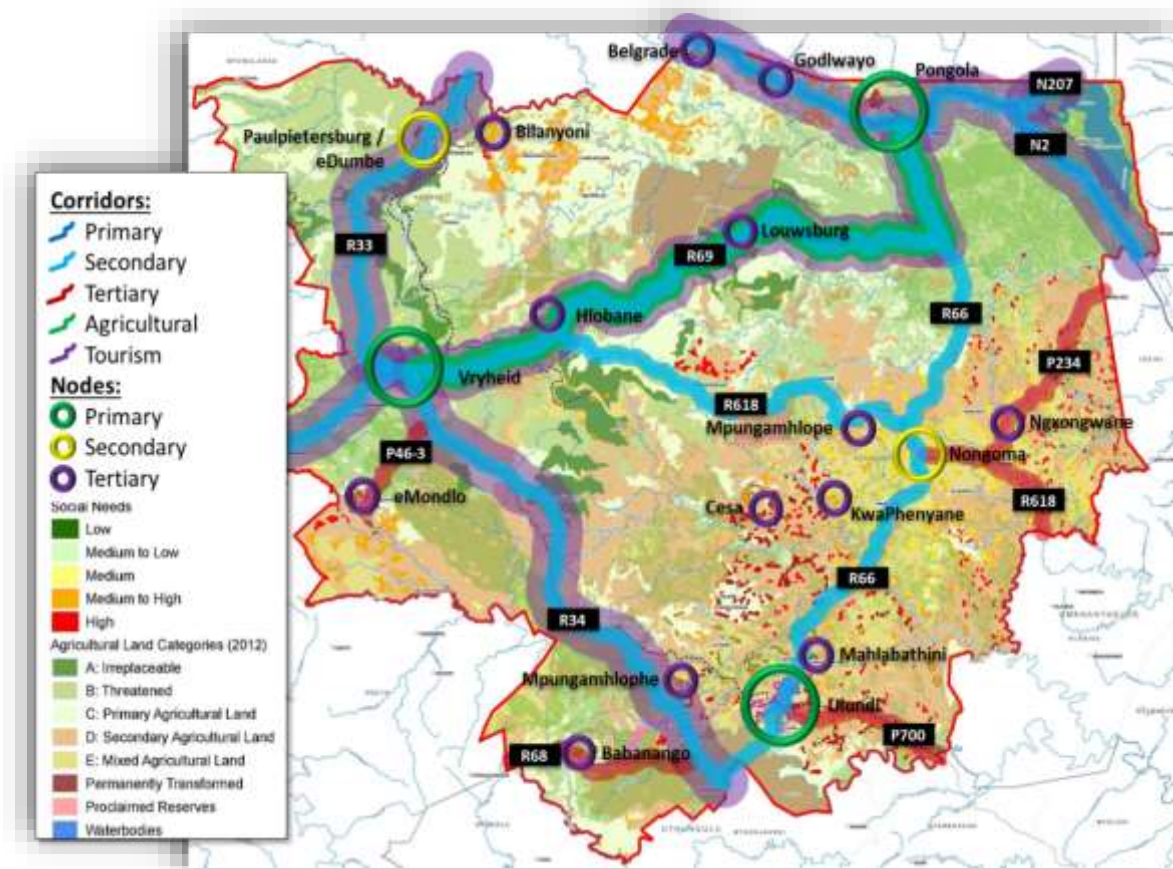
eDumbe Local municipality falls within the area of the Zululand District Municipality and it shares boundaries with four local municipalities namely:

- Abaqulusi Local Municipality
- uPhongolo local Municipality
- Emadlangeni Local Municipality
- Mkhondo Local Municipality (Mpumalanga Province)( This affects the 50km cross border area initiative of the Provincial MEC's)

### 9.1. ZULULAND DISTRICT MUNICIPALITY SDF

The figure below depicts the Zululand District Municipality SDF

**Map 52: Zululand District Municipality SDF**



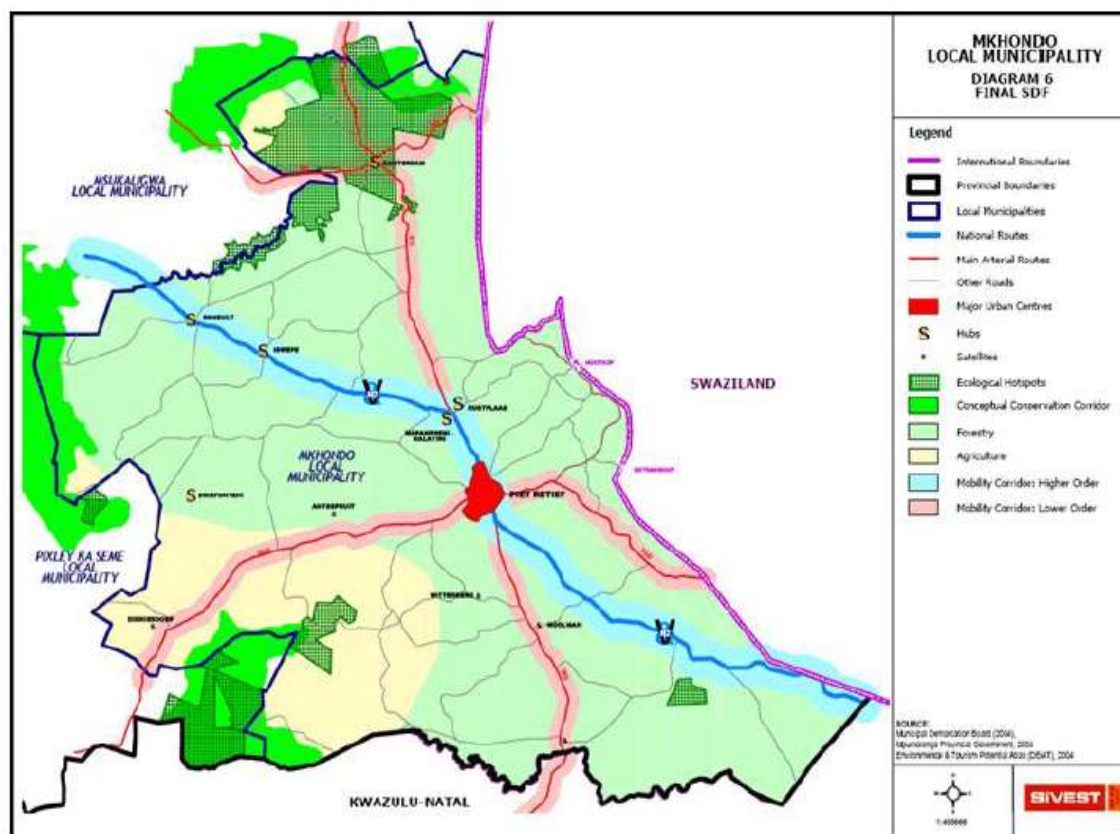
Source ZDM SDF (2017)

**Table 42: Alignment with Zululand SDF**

Alignment indicator	Alignment status
Development corridors	The r33 is indicated as a priority road and in this aspect the linkages on both levels are aligned.
Cross boundary influences	N/a as èdumbe falls within the area of influence of the zdm sdf
Cross boundary corporation	N/a as èdumbe falls within the area of influence of the zdm sdf
Potential conflicting issues	The zdm sdf identifies the priority road and the western part of the municipality but no attention is given to the protection of agricultural land and the areas of highest population density in the eastern sector. The ithala/ngotje development node is highlighted but the potential expansion of ithala and the influence of unlocking the tourism and environmental potential of bivane dam is not taken into consideration.

## 9.2. MKHONDO LOCAL MUNICIPALITY SDF

The figure below depicts the Mkhondo Local Municipality SDF

**Map 53: Mkhondo Local Municipality SDF**

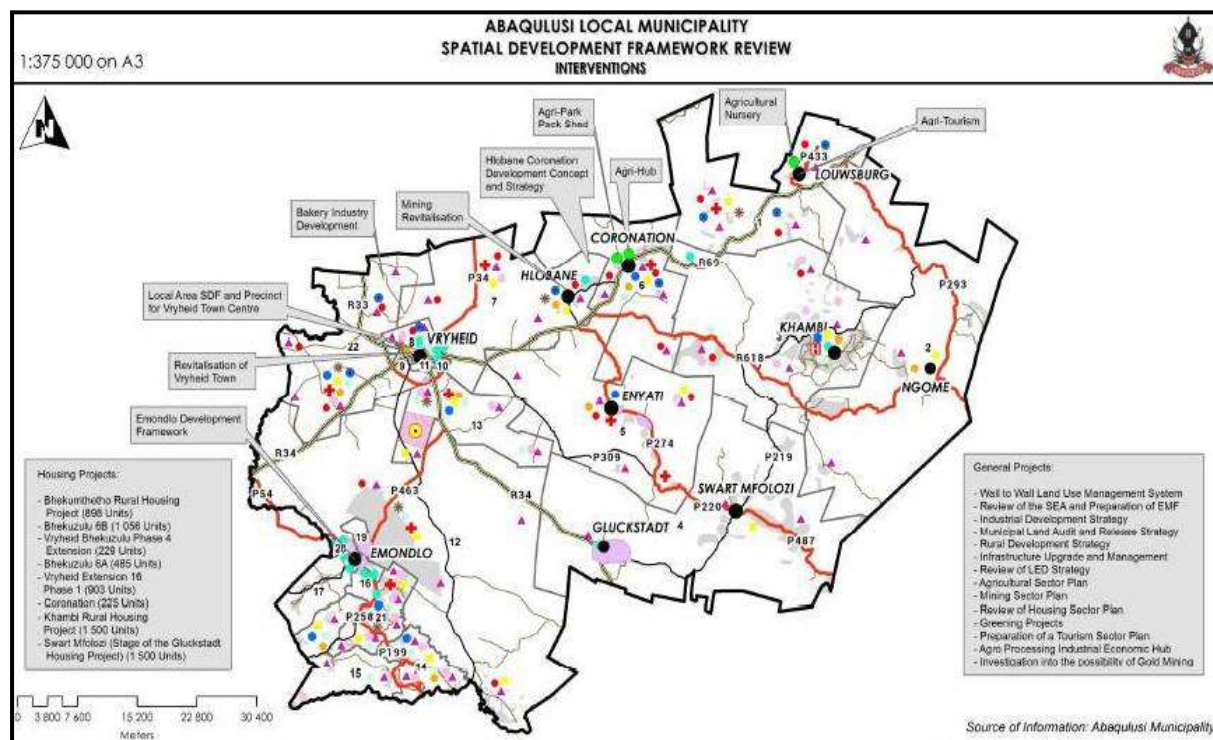
Source Mkhondo 2012/13 IDP

**Table 43: Alignment with Mkhondo SDF**

Alignment indicator	Alignment status
<b>Development corridors</b>	The r33 is identified as mobility corridor- lower order though it is not indicated in the sdf as of any particular importance
<b>Cross boundary influences</b>	There seems to be cross boundary influence at the ridges of the escarpment where pongola bush nature reserve is and across the boundary an ecological hotspot and conceptual conservation corridor.
<b>Cross boundary co-operation/</b>	The management and maintenance of the r33 need to be coordinated. The corridor is indicated as of a lower order for mkhondo but it is of crucial importance for edumbe and act as a gateway into kzn. The municipalities need to coordinate the management and utilization of the corridor.
<b>50km cross border area along border</b>	Further to this affect must be given to the mec initiative by identifying projects that communities can jointly be sharing on despite the physical border indicators in such a manner that resources and funding is ultimately shared and optimally applied and used.
<b>Potential conflicting issues</b>	None apparent

### 9.3. ABAQULUSI LOCAL MUNICIPALITY SDF

The figure below depicts the Abaqulusi Local Municipality SDF

**Map 54: Abaqulusi Local Municipality SDF**

Source Abaqulusi 2016/2017 SDF



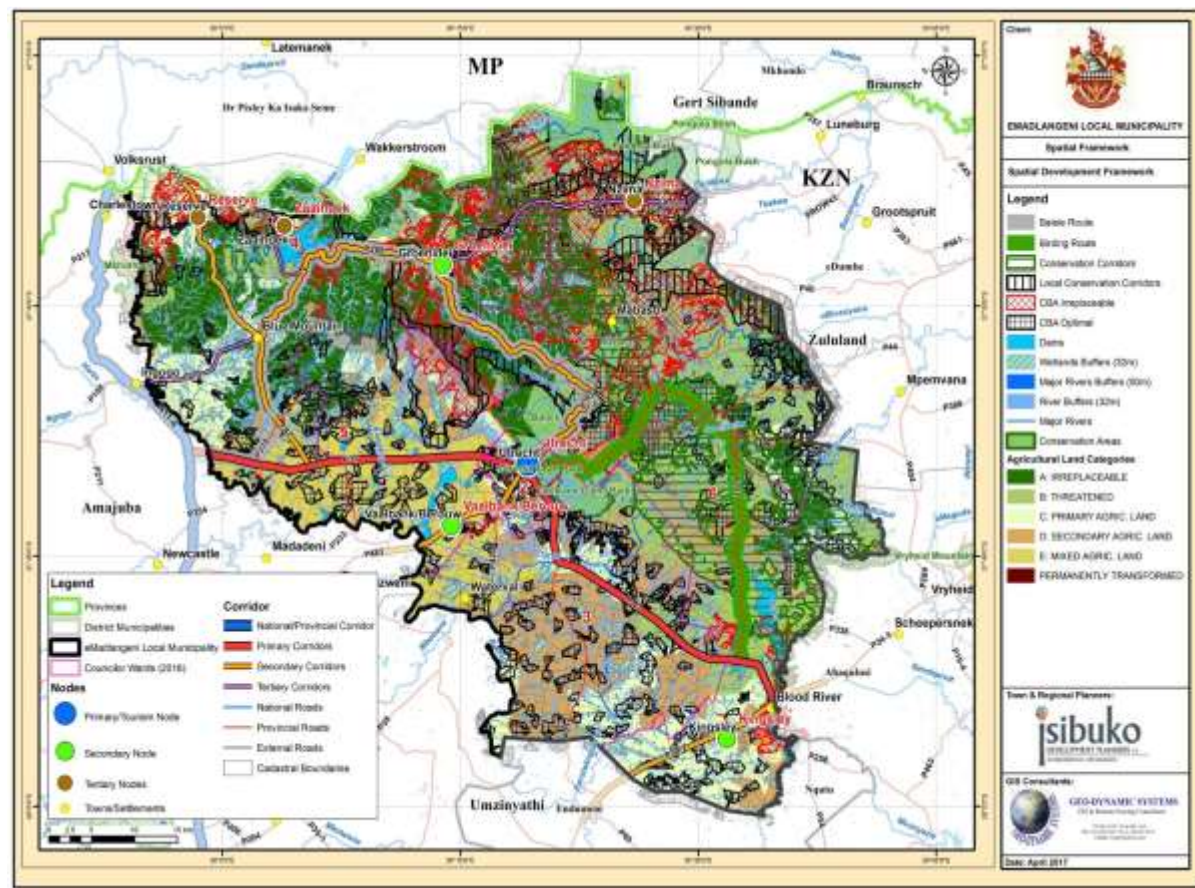
**Table 44: Alignment with Abaqulusi SDF**

Alignment indicator	Alignment status
Development corridors	No development corridors identified. Road linkages exist and is indicated.
Cross boundary influences	The access to the available facilities at bivane dam is through abaqulusi municipality. There is no apparent cross boundary service delivery issues
Cross boundary corporation	The municipalities need to cooperate regarding the maintenance of the r33 and also on the issue of unlocking the potential of bivane dam. Vryheid serves as the major economic and service centre for the residents of èdumbe municipality therefore strong linkages need to be established.
Potential conflicting issues	None apparent

## 9.4. EMADLANGENI LOCAL MUNICIPALITY SDF

The figure below depicts the Emadlangeni Local Municipality SDF

**Map 55: Emadlangeni Local Municipality SDF**



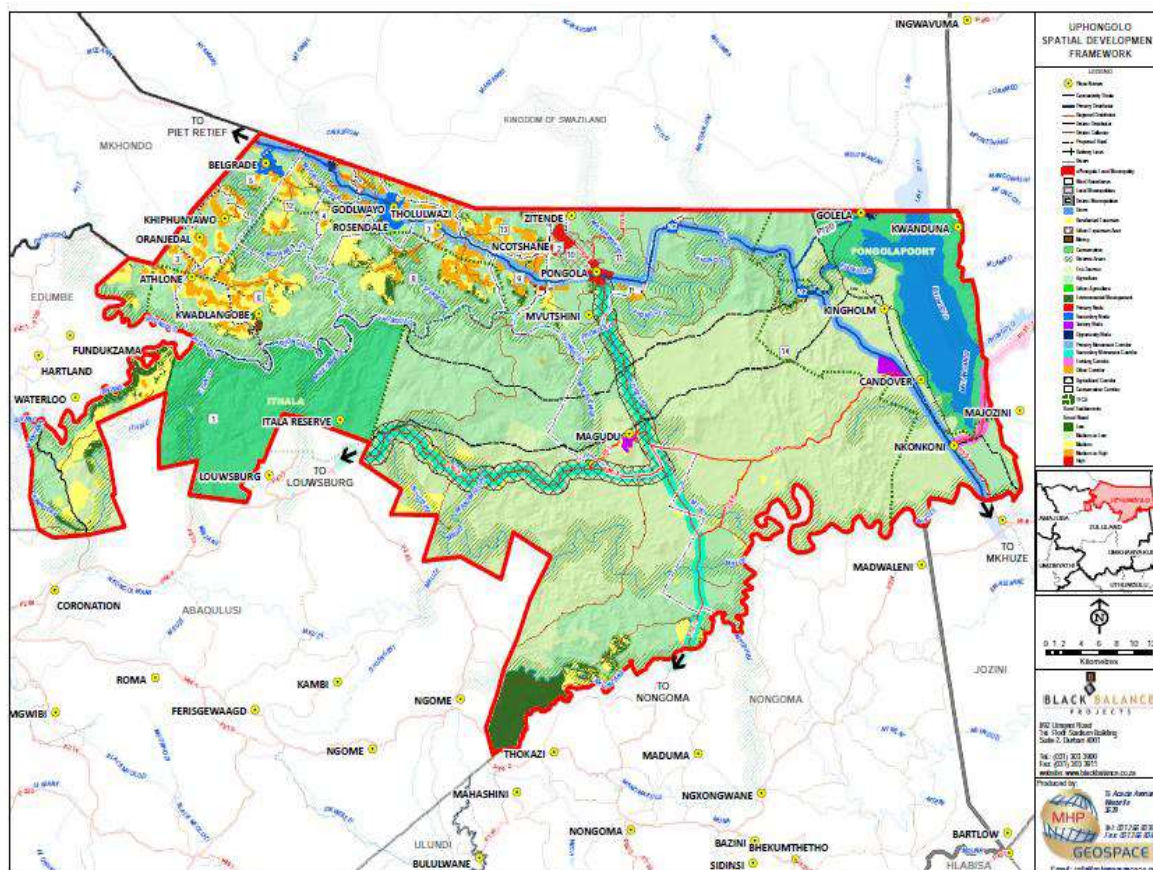
Source Emadlangeni Final SDF 2017/2018

**Table 45: Alignment with Emadlangeni SDF**

Alignment indicator	Alignment status
<b>Development corridors</b>	The p332 is indicated as a tertiary transport corridor in the sdf and as an agricultural corridor in the edumbe sdf. The linkage is particularly with regards to timber farming and this linkage is highlighted in the pseds.
<b>Cross boundary influences</b>	The north-eastern portions of emadlangeni municipality have strong linkages with the edumbe municipality. Many farmers own farms in both municipalities and many of the residents in the north-eastern portion of the municipality shop in the paulpietersburg.
<b>Cross boundary corporation</b>	The municipalities need to coordinate the management and utilization of the p332 corridor.
<b>Potential conflicting issues</b>	None apparent

## 9.5. UPHONGOLO LOCAL MUNICIPALITY SDF

The figure below depicts the uPhongolo Local Municipality SDF

**Map 56: uPhongolo Local Municipality SDF**

Source uPhongolo IDP 2017



**Table 46: Alignment with uPhongolo SDF**

<b>Alignment indicator</b>	<b>Alignment status</b>
<b>Development corridors</b>	There is no development corridors linking the 2 municipalities
<b>Cross boundary influences</b>	The environmental protection zone along the pongola river is indicated in the provincial sdf and is a cross boundary influence. The future expansion of ithala game reserve will also impact on both municipalities.
<b>Cross boundary corporation</b>	The municipalities need to coordinate the management and utilization of the tourism potential.
<b>Potential conflicting issues</b>	Bivane dam: the dam was built by the impala water users association based in pongola. The purpose of the dam is to act as a reservoir for the irrigation scheme around pongola. The dam is situated in edumbe municipality with the wall and user rights in uphongolo and the access to the facilities through abaqulusi.

**The following are the activities taking place around the eDumbe border;**

#### **MKHONDO LOCAL MUNICIPALITY**

- The R33 is identified as Mobility Corridor- Lower Order though it is not indicated in the SDF as of any particular importance
- There is a Cross Boundary Influence at the ridges of the escarpment where Pongola Bush nature reserve is and across the boundary an ecological hotspot and Conceptual Conservation Corridor. Forestry is also one of the main activities along the border.
- The management, utilization and maintenance of the R33 needs to be coordinated between the affected Municipalities. The Corridor is indicated as of a Lower order for Mkhondo, but it is of crucial importance for eDumbe and acts as a gateway into KZN.
- The projects underway between these two municipalities are to provide electricity to areas that do not have access to this necessity and the trans-boundary alignment between Mpumalanga (Mkhondo) and eDumbe.

This creates the way for additional projects on the ripple effect to be planned and funded on a similar shared basis by the two municipalities within the 50 km Cross border strip identified by the MEC'S as an development initiative area where project funds can be accessed to benefit communities across Municipal and Provincial Borders.

- The above statement benefits all Municipalities mentioned and helps build good relationships.

#### **ABAUQULUSI LOCAL MUNICIPALITY**

- The R33 is indicated as a Primary Corridor in the Abauqulusi SDF similar to eDumbe Municipality. The P221 is indicated as a Secondary corridor while the eDumbe SDF categorizes it as an Access corridor
- The access to the available facilities such as primary water source, active recreation, bass fishing and the Ithala Challenge Canoe Marathon at Bivane Dam is through Abauqulusi Municipality. There are no apparent cross boundary service delivery issues
- The municipalities need to cooperate regarding the maintenance of the R33 and also on the issue of unlocking the potential of Bivane Dam. Vryheid serves as the major economic and service centre for the residents of eDumbe municipality therefore strong linkages need to be established.
- There are no apparent implications/ conflict between the Abauqulusi Municipality and eDumbe borders.

#### **EMADLANGENI LOCAL MUNICIPALITY**

- The P332 is indicated as a Tertiary Transport corridor in the Emadlangeni SDF and as an Agricultural corridor in the eDumbe SDF. The linkage is particularly with regards to timber farming and this linkage is highlighted in the PSEDS.
- The north-eastern portions of Emadlangeni municipality have strong linkages with the eDumbe municipality. Many farmers own farms in both municipalities and many of the residents in the north-eastern portion of the municipality shop in the

Paulpietersburg. This is of an advantage to people since they receive the goods and services that they need and the municipalities hence acquire revenue due to this linkage.

- The Municipalities need to coordinate the management and utilization of the P332 corridor.
- There are no apparent implications/ conflict between Emadlangeni Municipality and eDumbe borders.
- The only project underway currently is to try and get proper and clear cellphone coverage between these two municipalities. This project is helping in building good relationships.

#### **uPHONGOLO LOCAL MUNICIPALITY**

- There is no Development corridors linking the two municipalities, but between uPhongolo and Mkhondo the N2 National Route exist which T off towards E-Dumbe and its timber Industrial Factories at Comondale.
- The Environmental Protection Zone along the Pongola River is indicated in the Provincial SDF and is a cross boundary influence. The future expansion of Ithala game reserve will also impact on both municipalities.
- The Municipalities need to coordinate the management and utilization on the tourism potential.
- Bivane Dam: the dam was built by the Impala Water Users Association based in Pongola. The purpose of the dam is to act as a reservoir for the irrigation scheme around Pongola. The dam is situated in eDumbe Municipality with the wall and user rights in uPhongolo and the access to the facilities through Abaqulusi.
- Trans- Boundary project in place between uPhongolo and Mkhondo.
- 25km radius between KZN and Swaziland. Problem is influx of people moving from Swaziland to KZN.

- The Ithala Game Reserve is expanding, hence more revenue for uPhongolo and eDumbe since this runs across both borders.
- There's a good working relationship between uPhongolo and eDumbe; during droughts and cyclone Dimoina they aided each other.

## CHAPTER 10: IMPLEMENTATION PLANNING

The SDF, in effect is the spatial representation of the municipality's Integrated Development Plan (IDP). The SDF and its implementation is crucial to the development of the municipal area and its communities. Through the IDP, the SDF will influence budgeting and resource allocation and specific interventions will be measured through the performance management system. Practical implementation of the SDF will be achieved through the further detailed planning of special development areas and the uPhongolo Land Use Management System, currently being formulated.

The Spatial Development Framework needs to contribute in a meaningful manner towards the spatial restructuring and development within the municipality, and it is therefore vital to address key implementation aspects related to the SDF and spatial planning in general.

The SDF needs to reflect the IDP strategies and projects in a spatial framework. The assessment of current capital investment target areas to assess the level of compliance to the findings and intentions of the SDF as well as to identify any gaps or needs for additional expenditure in order to achieve the desired spatial structure.

The SDF also needs to address further planning highlight issues where more details are required. The strategic nature of the SDF always identifies key intervention areas which might require more detailed investigation and/ or planning and this should be addressed as a vital part of direct implementation of the SDF. This will also include some guidelines for the municipality's land use management system.

## 10.1. RESOURCE TARGETING

Determining the capital investment framework for a municipality is primarily the function of the IDP and /or associated Financial Plan to be illustrated spatially within the SDF of the municipality. èDumbe Municipality does not currently has a Capital Investment Framework and in order to determine the spatial distribution of public investment and its alignment to the intentions of the SDF. In order to include the relevant information in this document the following steps were taken: A base list of capital and economic investment projects was compiled by extracting key capital projects from the municipal IDP, provincial Departmental MTEFs as well as projects identified within the various sector plans of the èDumbe Local Municipality and ZDM respectively. Please refer Table 46: Project List for a depiction of the projects that could be spatially identified. Some of the projects on the plan are only in the vicinity as exact localities could not be determined and as it is not the intention of the SDF to provide projects cadastral correct on a micro level.

In an effort to record these projects, existing GIS data and topographical maps were used to locate projects with place reference as accurately as possible per type of project. The result is a map of planned capital projects illustrated overleaf. Although it is evident that the planned projects are clustered within the most densely populated and needed areas generally in line with the proposed SDF, it is currently not possible to determine the amount of capital required to implement these projects which would ideally assist in determining planned investment per area and/or availability of capital required over specific financial years.

However the map does provide an indication of the spatial concentration of the planned capital projects within the various wards and interventions areas. This furthermore allows for the identification of potential additional planning and capital projects to be identified towards the implementation of future spatial structure of the municipality as listed on the overleaf:

**Table 47: Project List**

MIG PROJECTS 2017/18					
ID	PROJECT NAME	PROJECT NUMBER	PROJECT BUDGET	WARD	PROJECT MANAGER
1	Izingudeni Pedestrian Bridge	EDUMIG/01/17/18	R 3 500 000.00	1	VUMESA
2	Mangosuthu Combi Court	EDUMIG/02/17/18	R 2 000 000.00	2	BI INFRASTRUCTURE
3	Upgrading of eDumbe Hall		R 3 000 000.00	3	SIBGEM ENGINEERS
4	Fencing of eDumbe Cemetery	EDUMIG/03/17/18	R 2 000 000.00	3	BI INFRASTRUCTURE
5	Kanyekanye Hall	EDUMIG/04/17/18	R 3 000 000.00	4	BI INFRASTRUCTURE
6	Rehabilitation of Kanyekanye Road	EDUMIG/09/17/18	R 1 000 000.00	4	VUMESA ENGINEERS
7	Impucuko Sportsfied		R 2 964 800.00	6	VUMESA ENGINEERS
TOTAL			R 17 464 800.00		
INEP PROJECTS 2017/18					
ID	PROJECT NAME	PROJECT NUMBER	PROJECT BUDGET	WARD	IMPLIMENTING AGENTS
1	Nkonkotho/Obivane Electrification	EDINEP/01/17/18	R 7 500 000.00	1	SIBGEM ENGINEERS
2	Enkembeni Phase 4	EDINEP/02/17/18	R 7 000 000.00	6 & 5	BTMN ENGINEERS
3	Refurbishment of Electrical Infrastructure (Sub-	EDINEP/03/17/18	R 6 000 000.00	3	BOSTON INK PROJECT ENG

	station)				
4	Ward 1 Electrification	EDINEP/04/17/18	R 4 390 000.00	1	SIYETHEMBA CONSULT ENG
TOTAL			R 24 890 000.00		
MIG PROJECTS 2018/19					
ID	PROJECT NAME	PROJECT NUMBER	PROJECT BUDGET	WARD	PROJECT MANAGER
1	Paulpietersburg Civic Centre		R 7 000 000.00	3	SIBGEM ENGINEERS
2	Rehabilitation of KwaHaya and Kwasa Roads		R 1 252 350.00	4	BI INFRASTRUCTURE
3	Tholakele Access Roads		R 2 000 000.00	5	VUMESA ENGINEERS
4	Abaqulusi Sportfield		R 4 000 000.00	7	VUMESA ENGINEERS
5	Ophuzane Combi Court		R 2 000 000.00	8	BI INFRASTRUCTURE
6	Bilanyoni traffic circle		R 2 000 000.00	4	BI INFRASTRUCTURE
TOTAL			R 18 252 350.00		
INEP PROJECTS 2018/19					
ID	PROJECT NAME	PROJECT NUMBER	PROJECT BUDGET	WARD	IMPLIMENTING AGENTS
1	Ward 1 Electrification	EDINEP/01/18/19	R 8 000 000.00	1	TBC
2	Ward 7 Electrification	EDINEP/02/18/19	R 7 000 000.00	7	TBC
3	Upgrading of Ward 3 Network	EDINEP/03/18/19	R 6 000 000.00	3	BOSTON INK PROJECT ENG
4	eDumbe infills	EDINEP/04/18/19	R 5 400 000.00	3	TBC
TOTAL			R 26 400 000.00		



## 10. The way forward

This document aims to provide a framework for the future spatial development of èDumbe Local municipality within the context of the various elements which are influencing development i.e. from National Policy to the local state of affairs. It is strongly advised that the Municipality embarks on a programme of further investigation and planning to give effect to certain of the recommendations highlighted in this document. Certain key areas are vital economic generators and /or social development areas. It is therefore proposed that more detailed planning is undertaken for the following areas illustrated below:

1. Paulpietersburg – Bilanyoni corridor strategy: It is recommended that this corridor be thoroughly analysed and that a development strategy be developed to ensure the future structured development and strengthening of the corridor.
2. Paulpietersburg CBD regeneration Strategy: The regeneration strategy of the CBD need to take cognisance of the Urban Edge and the development of the Paulpietersburg/Dumbe node as a single integrated urban entity.
3. Strategic Environmental Assessment and Environmental Management Plan: Including State of the Environment Reporting at a municipal level in order to determine the current state of rivers, soil conditions, biodiversity areas under development threat within the entire municipality. Ensure that the environment is protected and the linkages of wilderness corridors are ensured.
4. Nodal Development/Precinct Plans: Nodal Development Plan Study with more detailed spatial structure and implementation planning for each of the identified nodes and addressing the land requirements for proposed facilities and services.
5. Strategic Agricultural Assessment: Detailed study into the potential expansion agricultural development areas which will include an agricultural potential assessment, market analysis, land ownership audit, extensive consultation, management plan and infrastructure requirements towards a comprehensive agricultural business plan. This should be done in line with the National Vision 2030 policy.
6. Bivane Dam Tourism Potential: The Corporation of Impala Irrigation Board and relevant role-players should be found to open the potential offered by the dam.
7. Facilities Standards Determination: The state and compliance of all Public and Social facilities within the municipality should be determined in order to define upgrading and non-capital interventions required.

8. River Flood line Areas: The Department of Human Settlements is currently engaged in a project to determine broad river flood lines for all rivers within KwaZulu-Natal based on GIS methodology being piloted. These flood lines will identify all households within the floodplains and engage in projects to educate and relocate such households where needed. It will be important to incorporate this information into the next SDF review as it might impact on the planned future land uses envisaged within the SDF.

## 11 Conclusion

This report contains the draft consolidated Spatial Development Framework for èDumbe Municipality and is the result of a series of spatial analysis and technical interactions with the Project Steering Committee. It is intended to serve as discussion document for public comment and role-player input towards the finalisation of the SDF as vital input the èDumbe IDP Review for 2013/2014. Please refer to Map 57: Spatial Development Framework, for the resulting Plan created via this process.

Following public comments and role-player inputs, the document will be submitted to the èDumbe Council for final adoption and inclusion in the said IDP. Once adopted this SDF will serve as base SDF to inform planning and public investment within the municipality for the period 2013 to 2017 with annual reviews during that period.

Map 57: Proposed eDumbe SDF

