ILUNGELO LAMI
CONSULTING PROFESSIONALS

AMAJUA DISTRICT MUNCIPALITY

SPATIAL DEVELOPMENT FRAMEWORK 2019/2020

AMAJUBA
DISTRICT MUNICIPALITY

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1.EXECUTIVE SUMMARY

Every five years, the Municipality prepares and adopts its Municipal Spatial Development Framework (MSDF) in line with the requirements of the Municipal Systems Act (MSA), No. 32 of 2000, the Spatial Planning and Land Use Management Act (SPLUMA, Act No.16 of 2013)

The SDF is reviewed annually and this report represents the DRAFT SDF 2019/2020 which is the second SDF of the five-year SDF cycle (2017/2018 – 2021/2022). This aligns with the Integrated Development Plan (IDP) process and five-year IDP plan. Once approved by Council, the Final IDP and SDF will be submitted to the Department of Co-operative Governance and Traditional Affairs (DCOGTA) for assessment.

This SDF is an integral component of the Integrated Development Plan (IDP) and a key spatial transformation tool which guides how the implementation of the IDP should occur in space. The SDF therefore guides the desirable spatial distribution of land uses within a Municipality in order to give effect not only to the spatial vision, goals and objectives of the Municipality but by directing where the city should intervene in space to achieve its transformational objective. This is achieved through the identification of district-wide spatial priorities and spatially targeting interventions in these key areas. The SDF is also aligned with provincial and municipal sector plans and strategies as a way of ensuring that the desired spatial form and outcomes of the municipality are achieved both horizontally and vertically.

2. THE 2019/2020 MSDF PREPARATION PROCESS

The Municipality continues to work towards full compliance with the Spatial Planning and Land Use Management Act (SPLUMA) No. 16 of 2013 and Municipal Planning and Land Use By-laws, 2016 as well as adherence to the Guidelines for the Development of Spatial Development Frameworks, introduced by the Department of Rural Development and Land Reform.

This Draft MSDF 2019/2020 has focused on the following:

- Addressing the MEC for COGTA's comments on the SDF
- Actively pursuing a response to the request for an Agricultural Sector Plan and Disaster Management Plan as part of the IDP/SDF
- Achieving SPLUMA compliance in terms of the required content of a Municipal SDF;
- On-going Sector and Cross Border engagements and information updates
- Ongoing Mapping Improvements;
- Alignment with Sector plans, IDP/ SDF and Council Budget processes.
- Mainstreaming Climate Protection in the SDF

Section A of the document defines the vision, the long-term spatial vision and the short term spatial vision of the Amajuba District Municipality as recommended by the MEC in order to ensure that the provisions of Spatial Planning Land Use Management Act Number 16 of 2013 (SPLUMA) is adhered to. The MEC has also recommended that funding be set aside in order for the Amajuba District Municipality to deal with conformance and implementation of the principles and stipulations of SPLUMA, the Amajuba District Municipality should ensure in the prospective financial years that a reasonable budget allocation is made in order to ensure that the Amajuba District Municipality can be fully compliant with SPLUMA provisions that are applicable for District Municipalities.

Section B focuses on spatial alignment, in keeping with the recommendations of the MEC an extensive and thorough alignment process has been undertaken. Spatial alignment with the National Development Plan, Provincial Growth and Development Plan, District Growth and Development Plan, internal alignment with the LMs within Amajuba District Municipality, neighbouring KZN DMs, LMs and with the neighbouring Provincial DMs and LMs to KZN that are direct neighbours to the Amajuba District Municipality.

Section C focuses on demographics and population projections, this is an area that the MEC highlights that attention should be paid to as this is also a SPLUMA requirement that population projections be developed for a period of twenty years per five-year intervals. The MEC further states that a spatial depiction of population projections must be illustrated however after analysis of the source data required to undertake such, it was deduced that it will be misleading and inaccurate as the base dataset been census 2011 conforms to the 2011 ward boundaries, the ward boundaries have since been amended in 2016 thus whereby two wards have either been incorporated into one or one ward split into two or the boundary of a ward now incorporates a portion that was previously under the jurisdiction of another municipality. The Community Survey 2016 is not conducted at a ward level; hence there are no individual population figures per a ward as compare to the Census 2011. The Amajuba DM has however utilizing a universal formula to calculate growth rates and population projections utilizing the Census 2001, 2011 results, furthermore the Amajuba DM has also utilized the Community Survey 2016, in tandem with the Census 2011 to determine growth rate and population projections purely for comparative purposes. An in-depth analysis of the LMs within the ADM regarding population projections and demographics has been conducted by the LMs which have been incorporated into this section.

Section D focuses on the Capital Invest Framework for the Amajuba DM. The MEC recommends that a twenty year Capital Investment Framework be developed however after consultation with the relevant business directorate within the ADM, the LMs within the ADM and Provincial Sector Departments there exists no twenty year plan but rather five year plans, it must be noted that in regard to the Sector Departments only two of the Sector Departments have supplied the Amajuba DM with information regarding capital investment that been the

Department of Education, Department of Public Works and the Department of Transport. In regard to the SOEs, Eskom has provided a list of Capital Investment projects.

The ADM has taken cognizance of the Cross Cutting issues that require attention in production of this document in responding to the issues emanating from SPLUMA and conformance thereof, in order to ensure that the SDF is compliant in this regard and that a platform is now in place to further develop the SDF as an instrument that contributes towards effective and efficient planning consistent with the relevant legislative prescripts.

3. DISTRICT VISION

The Following vision and spatial vision has been developed by the Municipality.

Amajuba District Municipality Vision is as follows:

"*By 2035 the Amajuba district will be a leading and pioneering District characterized by sustainable development and quality services*".

Amajuba District Municipality Spatial Vision is as follows:

"Amajuba will be a prosperous district with a preserved environment, sustainable economy, enhanced social life and healthy population by 2035".

The Short-Term Vision is as follows:

Attainment of the Municipal Development Vision and Long-term Spatial Vision by:

- Promoting development within the urban edges and in defined areas near services and infrastructure.
- Creating an effective and efficient planning system with improved decision making aimed at the eradication of basic services backlogs.
- Rebalancing growth between the Urban and the Rural regions within the ADM with emphasis on bridging the void caused by apartheid.
- Protecting the Environment, Agriculturally Irreplaceable Areas and ensuring that a healthy environment is maintained hence at the same time ensuring that inhabitants within the ADM are not exposed to pollution that could be detrimental to them now and in the future.
- Effective strategic intervention within all pertinent sectors within the ADM facilitating the development of a platform for increased local economic development.

4. INTRODUCTION

4.1. BACKGROUND

Amajuba District Municipality Spatial Development Framework (SDF) is intended, in part, to comply with Section 26(e) of the Municipal Systems Act, Act No. 32 of 2000), which requires a municipality to prepare and adopt an SDF as a component of its Integrated Development Plan (IDP). Most importantly, the SDF is intended to facilitate development of a spatial structure that promotes integrated development and enables an efficient delivery of services. It will give direction to future planning and development within the District and provide a framework for the local municipalities SDFs.

The Constitution of the Republic of South Africa, (Act No. 108 of 1996) confers to municipalities major developmental responsibilities intended to improve quality of life people residing and/or working within a municipality's area of jurisdiction. An SDF therefore, forms part of the systems and procedures at the disposal of the municipality to perform on its developmental mandate and facilitate removal of spatial remnants of the apartheid past. The main purpose of the SDF is to guide the form and location of future spatial development within Amajuba. It is a legislative requirement and has a legal status. In summary, the SDF has the following benefits:

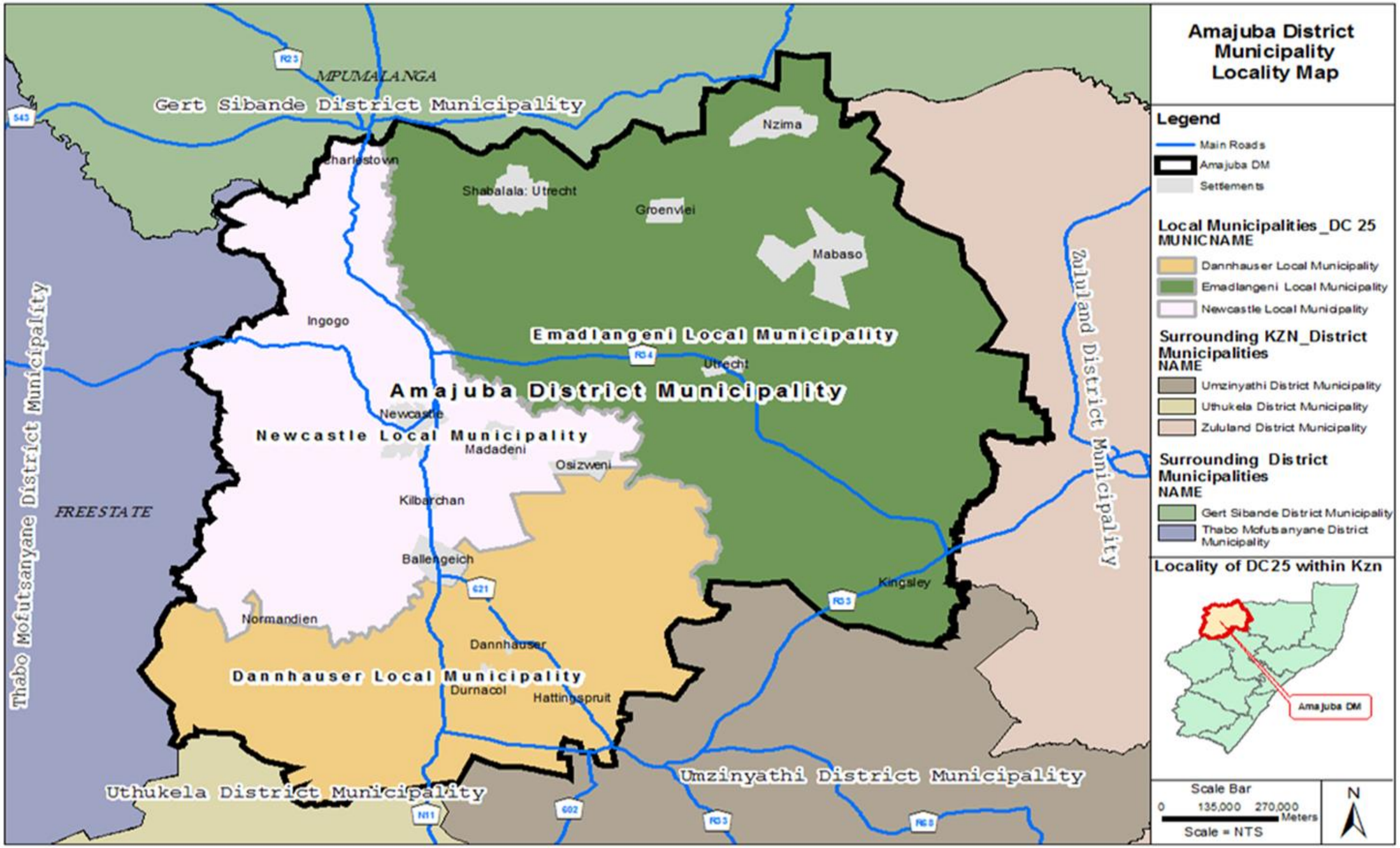
- facilitates decision making with regard to the location of service delivery projects and guides public and private sector investment;
- it strengthens democracy and spatial transformation and facilitates effective use of scarce land resources;
- it promotes intergovernmental coordination on spatial issues and serves as a framework for the development of detailed Land Use Management Scheme (LUMS).

Amajuba is positioned within a region that is rich in terms of natural resources which includes Ncandu and Chelmsford Reserves at the foothills of the Drakensberg. It also comprises of a commercial and industrial centre (Newcastle) which has its main markets within the northern of KZN as well as parts of Free-State and Mpumalanga. The agricultural sector fairly exists mainly in the form of livestock (cattle) farming. None of these have been fully exploited for the material well-being and development of the local communities in an equitable manner. The area is also characterised by massive poverty, service backlogs and areas with marginal production potential. The latter coincides with areas occupied by the majority and previously disadvantaged rural communities or villages. Some of the villages has benefitted from formal spatial planning processes while others have not, and this has a potential to compromise uniformity.

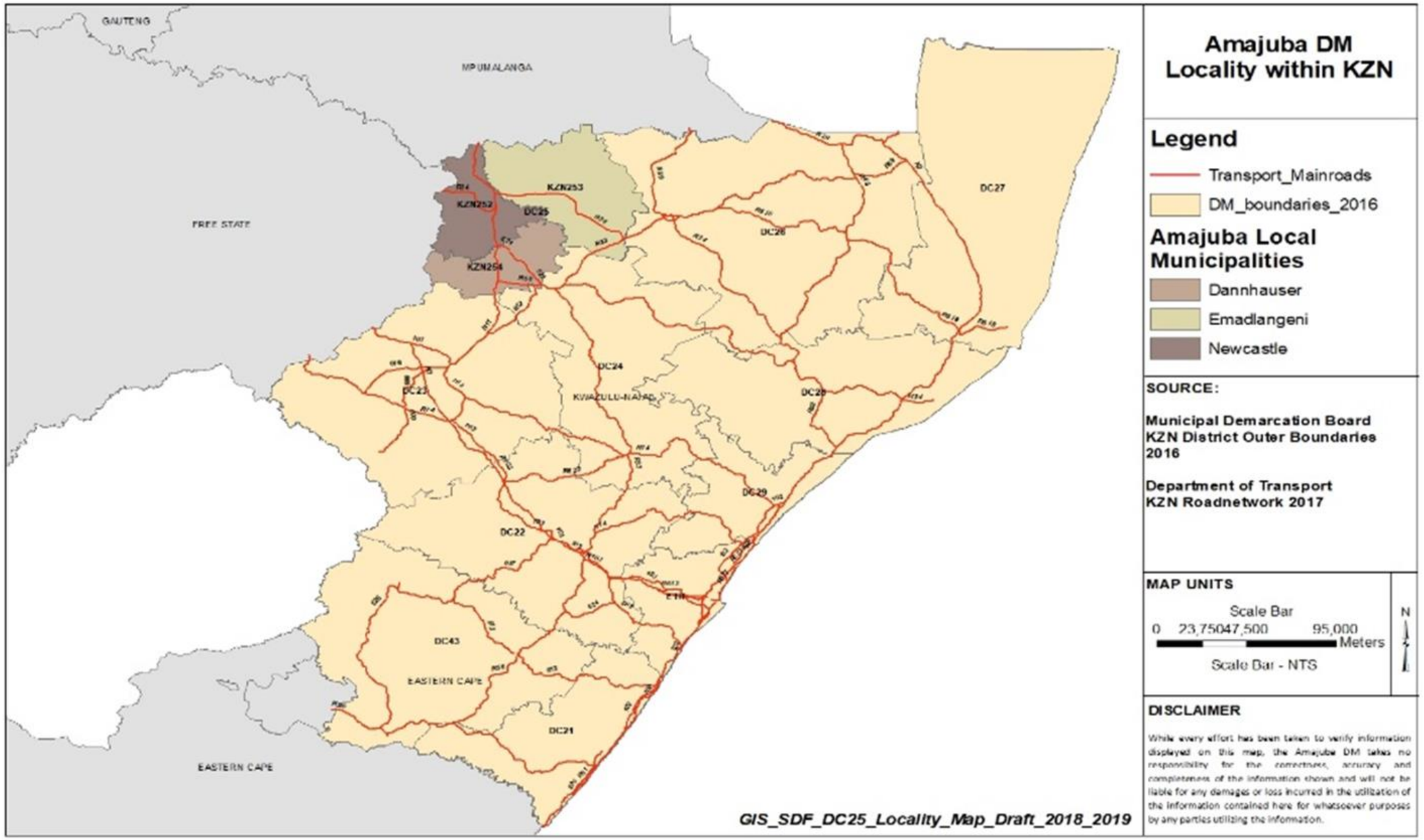
4.2. AMAJUBA DISTRICT MUNCIPALITY OVERVIEW

Amajuba District Municipality (ADM) is located to the north-western corner of the KwaZulu-Natal Province. It comprises of Newcastle, Emadlangeni and Dannhauser local municipalities. The main transportation routes linking the district to its surroundings, is the N11. This is also an alternative route to Johannesburg from Durban. The R34 bisects the district in an east-west direction and provides a linkage from the port city of Richards Bay to the interior. The district has a total surface area of 7 101 km^2, it is divided into Newcastle Municipality which occupies 1 855 km^2, Emadlangeni Municipality which has a surface area of 3539 km^2 and Dannhauser Municipality which occupies 1707 km^2.

It comprises of a total population which is estimated at 531 327 people who are accommodated on 110 963 households. Newcastle has the highest population which is estimated at 389 117 people (84 272 households) followed by Dannhauser 105 341 people (20 439 households) and Emadlangeni with 36 869 people (6 252 households).



MAP 1: AMAJUBA DM LOCALITY MAP



MAP2: AMAJUBA DM LOCALITY WITHIN KZN

5. POLICY CONTEXT

5.1. BACKGROUND ON SPATIAL PALICY AND LEGISALTIVE CONTEXT

Development within South Africa is guided by a multitude of legislation. Since the introduction of the democratic dispensation in South Africa, the notion of spatial planning, given effect in the form of spatial development plans and spatial targeting, has gained momentum. This is the case in all spheres of government. This followed the realization by national government that the rural areas need attention in terms of development and proper management. Due to a failure by apartheid government to provide a relatively habitable environment in rural areas. In fact, much attention was paid on insensitive controls that were blended with the promotion of racial discriminatory laws that oppressed the majority of the rural population through Betterment Planning and Group Areas Act No 41 of 1950.

At a national level, this focus first emerged within the context of the Reconstruction and Development Programme (RDP) and was given statutory emphasis through the Development Facilitation Act (DFA). Spatial targeting was first built into the Integrated Sustainable Development Strategy (ISRDP) which identified 13 nodal areas. The National Spatial Development Plan (NSDP) was introduced in the early 2000s and has had a profound impact in terms of spatial planning at a national level. It has since been replaced by the National Development Plan 'Vision 2035' (NDP).

The NDP is now widely acclaimed as a blueprint of the country in terms of development. On 6 May 2011, the Department of Rural Development and Land Reform published the Draft Spatial Planning and Land Use Management Bill for public comment. This was passed into law and ascended as legislation in August 2013 (SPLUMA). It replaced the Development Facilitation Act No 67 of 1995, Removal of Restrictions Act No 84 of 1967, the Physical Planning Act No 88 of 1967 and other laws. SPLUMA provides, inter alia, for a uniform, effective, efficient and integrated regulatory framework for spatial planning, land use and land use management in a manner that promotes the principles of co-operative government and public interest.

It provides for and determines development principles, compulsory norms and standards for land use management, promotes sustainable and efficient use of land. SPLUMA's overarching goal is to fulfil the constitutional mandate by spatially addressing the inequalities manifested in unsustainable settlement pattern which was inherited by the democratic government. SPLUMA also recommends the preparation of norms and standards which provide in-depth knowledge of land use, allocation and practices within the country. This will promote consistency and uniformity in processes and decision making within rural areas. The rest of the policy and legislative framework in KwaZulu-Natal is mentioned below. The local

government strategies such as the Spatial Development Framework are developed within the broader framework of these policy intents.

5.2. INTERNATIONAL DEVELOPMENT FRAMEWORK

In addition to the need to be SPLUMA compliant, the SDF must inform the strategic spatial response of the IDP and is itself informed by key international, national, provincial and local influences. The following diagram provides an overarching view of the combined influences on the municipal IDP and SDF. Each of the strategies listed below should not be seen in isolation but as integrated components of an overall framework for sustainable development of the city.

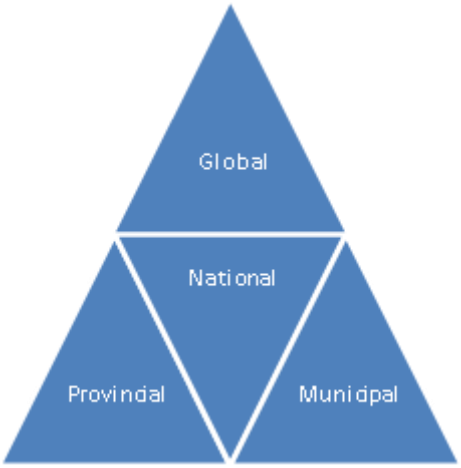


Figure 1: Diagram depicting overarching view & combined influences on the IDP and SDF

The strategic and spatial approach to the development of the Municipality and its built environment is underpinned by strategic global, national and regional policy. The objectives of these policies have influenced the development of the strategic and spatial direction of the Municipality. The most recent and relevant developmental policies (as depicted in the diagram below) - Sustainable Development Goals National Development Plan, Service Delivery Agreement Outcome 9, Medium Term Strategic Framework 2015 – 2019, Provincial Growth and Development Strategy and the Provincial Government Priorities - are expanded on overleaf.

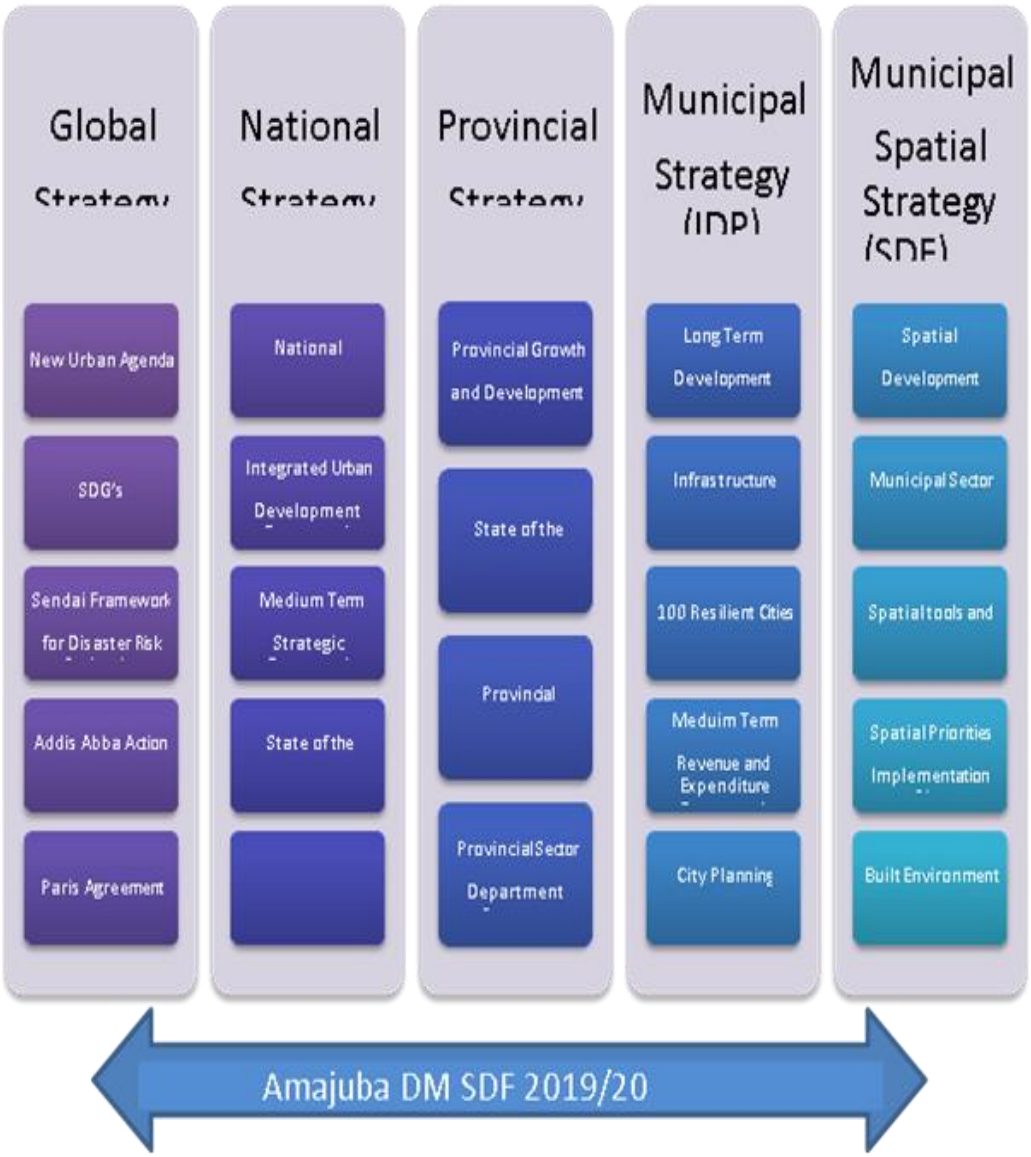


Figure 2: Diagram depicting Developmental Policies

The legislative framework states the legal obligations of the spheres of government and outlines the processes to be followed. The development framework however presents the main focus areas of the development agenda. South Africa's national development framework does not however stand in isolation but is grounded with international development frameworks such as the United Nations led Millennium Declaration. The concept of a developmental state which applies to both the country and the province is rooted and set to align with global goals.

These include; first (1) sustainable Development Goals (SDGs), otherwise known as the Global Goals, are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. They include 17 goals and 169 targets that capture the

global aspirations for sustainable development, which is simply aiming to meet the needs of the present generation without compromising the ability of the future generation meet their own needs. These 17 Goals build on the successes of the Millennium Development Goals, while including new areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice, among other priorities.

The goals are interconnected, often the key to success on one will involve tackling issues more commonly associated with another. The SDGs work in the spirit of partnership and pragmatism to make the right choices now, to improve life, in a sustainable way, for future generations. They provide clear guidelines and targets for all countries to adopt in accordance with their own priorities and the environmental challenges of the world at large. The SDGs are an inclusive agenda. They tackle the root causes of poverty and unite us together to make a positive change for both people and planet.

Secondly (2), is the Millennium Development Goals (MDGs) adopted by United Nations. South Africa is committed to fulfilling its constitutional obligations to deliver socio-economic rights within the context of its national plan of action and the MDGs. The eight MDGs goals (as shown on the image) include; eradicating extreme hunger and poverty, achieving universal primary education, promotion of gender equality and empowering women, reduce child mortality, improve maternal health, combat HIV/AIDS, malaria and other diseases, ensure environmental sustainability and develop a global partnership of development. In South Africa, one of the indicators of progress towards the achievement of the MDGs is the effective and equitable delivery of public services. Since 1994 South Africa has set out to rigorously dismantle the apartheid system and to create a democratic society based on the principles of equity, non-racialism and non-sexism. To achieve these objectives the Government of South Africa has pledged to promote equality and eradicate poverty (MDGs 1 and 3). This is an approach to how the country should pave development and strategically exploit all opportunities in the short, medium and long term to ensure positive socio-economic transformation.

African Union Agenda 2063 was adopted by the African Union in 2013 with a vision “An integrated, prosperous and peaceful Africa driven by its own citizens and representing a dynamic force in the global arena.” It is an approach to how the continent should learn from the lesson of the past, build on progress and strategically exploit all opportunities in the short, medium and long term to ensure positive socio-economic transformation. These are built on the following 10 priority actions:

- Eradicate poverty in a generation by 2025;
- Skills Revolution and in science, technology and innovation;
- Economic Transformation and industrialisation through beneficiation of natural resources;
- Connectivity through World Class Infrastructure;

- Free Trade Area;
- Young people as drivers of the African Renaissance;
- Silence the guns;
- Gender Parity;
- African Passport; and
- Strengthen Africa's voice in global negotiations.

The intention of the SDG's is to be a universally shared common, globally accepted vision to progress to a just, safe and sustainable space for all inhabitants. It is based on the moral principle of the Millennium Development Goals that no one or one country should be left behind, and that each country has a common responsibility in delivering on the global vision. It is further noted that each of the SDG targets and goals are applicable to both developed and developing countries alike. One of the departure points in developing the SDG's was that countries would need to ensure that there is a balance between the economic, political, social and environmental effort required to ensure that these goals are achieved. The SDG's allow for holistic development of cities with a wider range of development programs. The municipality would continue to address these issues in a holistic and integrated manner. The 17 SDG's are listed below.

Figure 3: Illustration depicting the 17 SDG's

The SDF strives to respond to all the goals and targets within its mandate but is largely influenced by SDG 11: 'Making cities and human settlements inclusive, safe, resilient and sustainable' as its primary goal. Of particular importance to cities are the targets that are defined for this goal. These targets are listed below.

- By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.
- By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.
- By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.
- Strengthen efforts to protect and safeguard the world's cultural and natural heritage
- By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.
- By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.
- By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, for women and children, older persons and persons with disabilities.
- Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning.
- By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels.
- Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials.

This Municipal SDF needs to respond to all the SDG's but in particular, the SDG 11 targets through various spatial tools and interventions, spatial priorities and catalytic projects

Figure 4: Illustration depicting the Hierarchy of Plans

5.3. NATIONAL AND PROVINCIAL CONTEXT

5.3.1. THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA, 1996

The Constitution of the Republic of South Africa (Act 108 of 1996) in its desire for local government was conceived as "the local sphere of government with the constitutional mandate to carry out a number of developmental duties". Chapter 7 of the Constitution states that it is the object of local government to "encourage the involvement of communities and community organizations in the matter of local government". Local government must also promote the Bill of Rights, which reflects the nation's values about human dignity, equality and freedom, and uphold the principles enshrined in the Constitution.

5.3.2. THE MUNICPAL SYSTEMS ACT (ACT NO.32) OF 2000

The Municipal Systems Act (No. 32 of 2000) and associated regulations provide the impetus for integrated development planning in South Africa. In the reviewal of the Dannhauser SDF, this process will be guided by this legislation which specifies the following requirements for SDF's:

- **Set out objectives that reflect desired- spatial form of the municipality;**
- **Contain strategies, policies and plans which must-**
- **Indicate desired patterns of land use within the municipality;**
- **Address the spatial reconstruction of the location and nature of development within the municipality; and**
- **Provide strategic guidance in respect of the location and nature of development within the municipality;**
- **Set out basic guidelines for land use management system in the municipality;**
- **Contain a strategic assessment of the environmental impact of the SDF;**
- **Identify programs and projects for the development of land within the municipality;**
- **Be aligned with the SDFs reflected in the integrated development plans of neighbouring municipalities; and**

- **Provide a visual representation of the desired spatial form of the municipality, which representation;**
- **Must indicate where public and private land development and infrastructure investment should take place;**
- **Must indicate desired or undesired utilisation of space in a particular area;**
- **Delineate the urban edge;**
- **Must identify areas where strategic intervention is required; and**
- **Must indicate areas where priority spending is required.**

5.3.3. NATIONAL DEVELOPMENT PLAN, VISION 2035

The National Development Plan introduces the long-term vision for the future development of South Africa. It is a country wide strategy intended to eliminate poverty and reduce inequality by 2035 through uniting South Africans, unleashing the energies of its citizens, growing an inclusive economy, building capabilities, enhancing the capability of the state and leaders working together to solve complex problems. It also acknowledges the spatial inefficiencies that characterizes existing settlements and commits the national government to developing national policy framework to address these abnormalities. The objectives of the NDP includes improving education; training and innovation; economy and employment; environmental sustainability and resilience; inclusive rural economy; transforming human settlements; provision of health care for all; social protection; building safer communities; fighting corruption; and economic infrastructure. The NDP requires the plans of the municipality to respond directly to the area specific issues.

5.3.4. THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT NO.107 OF 1998)

The National Environmental Management Act (Act No 107 of 1998) establishes a framework for Environmental Management in South Africa. It provides for Environment Impact Assessment Regulation (and other tools for Integrated Environmental Management) and directives to remedy the effects of environmental damage and control of emergency incidents. The objective of the statute is to provide co-operative, environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of state, and to provide for matters connected therewith. The preamble of the act specifies that “sustainable development requires the integration of social, economic and environmental factors in the planning, implementation

and evaluation of decisions to ensure that development serves present and future generations".

5.3.5. THE SPATIAL PLANNING AND LAND USE MANAGEMENT ACT 2013 (ACT NO.16OF 2013)

This statute is a framework for spatial planning and land use management in the Republic of South Africa with intents to specify the relationship between the spatial planning and the land use management system and other kinds of planning; to provide for the inclusive, developmental, equitable and efficient spatial planning at the different spheres of government; to provide a framework for the monitoring, coordination and review of the spatial planning and land use management system; to provide a framework for policies, principles, norms and standards for spatial development planning and land use management; to address past spatial and regulatory imbalances; to promote greater consistency and uniformity in the application procedures and decision-making by authorities responsible for land use decisions and development applications; to provide for the establishment, functions and operations of Municipal Planning Tribunals; to provide for the facilitation and enforcement of land use and development measures; and to provide for matters connected therewith.

The role of local government in spatial planning has been re-energized through the introduction of the Spatial Planning and Land Use Management Act No. 16 of 2013 (commonly known as SPLUMA). The intention of this national legislation is to introduce the norms and standards for spatial planning and to specify the relationship between spatial planning and land use management. This is intended to create uniformity and consistency on the manner in which both spatial planning and land use management is practiced within the whole country. Chapter 4 of SPLUMA stipulate the need to prepare Spatial Development Frameworks (SDFs) by all municipalities including the Districts. Part E stipulates that the Municipal Spatial Development Framework must cover the following issues, which are and will be addressed per phase in accordance with the methodology.

According to SPLUMA a Municipal SDF must:

- Give effect to the development principles and applicable norms and standards set out in Chapter 2;
- Include a written and spatial representation of a five-year spatial development plan for the spatial form of the municipality;
- Include a longer term spatial development vision statement for the municipal area which indicates a desired spatial growth and development pattern for the next 10 to 20 years;
- Identify current and future significant structuring and restructuring elements of the spatial form of the municipality, including development corridors, activity spines and economic nodes where public and private investment will be prioritised and facilitated;
- Include population growth estimates for the next five years;
- Include estimates of the demand for housing units across different socio-economic categories and the planned location and density of future housing developments;
- Include estimates of economic activity and employment trends and locations in the municipal area for the next five years;
- Identify, quantify and provide location requirements of engineering infrastructure and services provision for existing and future development needs for the next five years;
- Identify the designated areas where a national or provincial inclusionary housing policy may be applicable;
- include a strategic assessment of the environmental pressures and opportunities within the municipal area, including the spatial location of environmental sensitivities, high potential agricultural land and coastal access strips, where applicable;
- Identify the designation of areas in the municipality where incremental upgrading approaches to development and regulation will be applicable;
- Identify the designation of areas in which—
    - more detailed local plans must be developed; and
    - shortened land use development procedures may be applicable and land use schemes may be so amended;
- Provide the spatial expression of the coordination, alignment and integration of sectoral policies of all municipal departments;
- Determine a capital expenditure framework for the municipality's development programmes, depicted spatially;
- Determine the purpose, desired impact and structure of the land use management scheme to apply in that municipal area; and
- Include an implementation plan comprising of—
    - sectoral requirements, including budgets and resources for implementation;
    - necessary amendments to a land use scheme;
    - specification of institutional arrangements necessary for implementation;
    - specification of implementation targets, including dates and monitoring indicators; and
    - specification, where necessary, of any arrangements for partnerships in the implementation process.

Figure 5: Box Illustration explanation of SPLUMA SDF Requirements

5.3.6. STATE OF THE NATION ADDRESS (SONA) FEBRUARY 2019

Figure 6: Image of the State of the Nation Address Advertisement

The recent State of the Nation Address (SONA), 07 February 2019 delivered by President Cyril Ramaphosa focused on building a better South Africa, where he eluded that over the past year efforts have focused on accelerating inclusive growth, significantly increasing levels of investment and putting in place measures to create more jobs. Given the key role that small businesses play in stimulating economic activity and employment, government will use this year to expand the small business incubation programme.
The president highlighted these key points as being what will underpin everything that will be done this year:

- To accelerate inclusive economic growth and create jobs
- Our History demands that we should improve the education system and develop the skills that we need now and into the future.
- We are Duty bound to improve the conditions of life for all South Africans, especially the poor
- Stepping up the fight against corruption and state capture
- Strengthening the capacity of the state to address the needs of the people.

5.3.7. NATIONAL SPATIAL DEVELOPMENT PERSPECTIVE

The National spatial development vision is articulated in the National Spatial Development Perspective (NSDP), and various supportive policies. It seeks to:

- Promote economic development in strategic areas where government should direct its investment initiatives so as to achieve maximum and sustainable impact;

- Create forms of spatial arrangements that are conducive to the achievement of the national objectives of democratic nation building and socio-economic inclusion; and
- Taking government beyond the rhetoric of integration and coordination and start putting into place clear procedures and systems for achieving these ideals.

5.3.8. STATE OF THE PROVINCE ADDRESS (SOPA) 2019

The State of the Province delivered by Premier of the Province of Kwa-Zulu Natal Honourable Mr TW Mchunu 27 February 2019 indicated the need to ensure that the economy of the Province grows to create decent jobs. He states that the sectors of our economy that have potential to grow and create jobs are namely, agriculture, manufacturing, tourism, freight and logistics, as well as development of strategic infrastructure.

The Small-Town Rehabilitation Programme, the Community Services Centre Programme and the Formalisation of Rural Service Nodes Programme are programmes aimed at ensuring that we create sustainable service nodes in rural areas in order to improve accessibility, reliability and quality of both government and private sector services to our rural communities.

5.3.9. INTEGRATED URBAN DEVELOPMENT FRAMEWORK

The Integrated Urban Development Framework (IUDF) is a policy initiative of the Government of South Africa, coordinated by the Department Of Cooperative Governance and Traditional Affairs (COGTA).

The IUDF marks a New Deal for South African cities and towns. It sets a policy framework to guide the development of inclusive, resilient and livable urban settlements, while addressing the unique conditions and challenges facing South Africa's cities and towns. It advocates the effective management of urbanization so that the increasing concentration of an economically active population translates into higher levels of economic activity, greater productivity and higher rates of growth, thereby transforming our South African cities into engines of growth.

The key outcome of the IUDF is spatial transformation. The identified policy levers and priorities are crucial for maximizing the potential of urban areas, by integrating and aligning investments in a way that improves the urban form. The intention is to retrofit existing city footprints to produce compact, coordinated and connected cities, using transit-oriented and other urban planning strategies to yield desirable social, economic and environmental outcomes, as envisioned in the National Development Plan. This should be done in a way that strengthens rural-urban linkages and promotes urban resilience and urban safety. It is intended that the IUDF be used as a guide to achieve a unified and innovative response to the building of inclusive, resilient, safe and livable urban settlements.

The IUDF responds to the post-2015 Sustainable Development Goals (SDGs), in particular to Goal 11: Making cities and human settlements inclusive, safe, resilient and sustainable. It also

builds on various chapters of the National Development Plan (NDP) and extends Chapter 8 'Transforming human settlements and the national space economy' and its vision for urban South Africa:
By 2030 South Africa should observe meaningful and measurable progress in reviving rural areas and in creating more functionally integrated, balanced and vibrant urban settlements. For this to happen the country must:

- Clarify and relentlessly pursue a national vision for spatial development;
- Sharpen the instruments for achieving this vision; and
- Build the required capabilities in the state and among citizens.
-

The IUDF consists of 5 strategic goals with 8 levers for change (as depicted below).

Inclusion and Access: To ensure people have access to social and economic services, opportunities and choices
Growth: To harness urban dynamism for inclusive, sustainable economic growth and development

Governance: To enhance the capacity of the state and its citizens to work together to achieve social integration.
Spatial Integration & Transformation: To forge new spatial forms in settlement, transport, social and economic areas.
These goals inform the eight priority levers of the strategy.

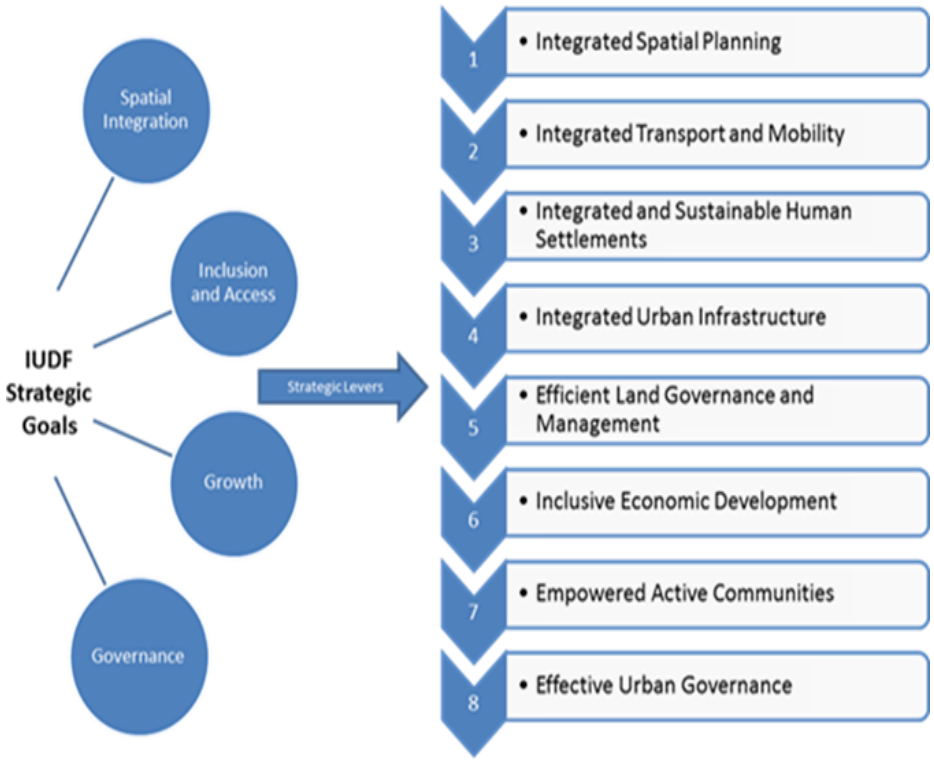


Figure 7: Diagram depicting the IUDF 5 Strategic Goals and 8 Levers for change

The eight levers are premised on the understanding that:

1. Spatial planning forms the basis for achieving integrated urban development, which follows a specific sequence of urban policy actions
2. Integrated transport that informs targeted investment into integrated human settlements, underpinned by integrated infrastructure network system
3. Efficient land governance which all together trigger economic diversification inclusion and empowered communities
4. Deep governance reform to enable and sustain all the above.

The ADM embraces the principles outlined in the IUDF and now that it has been gazetted will be taking steps to collaborate with National and Provincial COGTA to facilitate its implementation.

5.3.10. PROVINCIAL GROWTH AND DEVELOPMENT PLAN (PGDP)

The Provincial Growth and Development Plan (PGDP) is the implementation framework for the PDGS and therefore has the same strategic goals. The plan develops a theory of change for the implementation of the PGDS outlining broad actions to be undertaken and performance indicators. The PGDP framework has Action Working groups (AWGs) which are platforms for stakeholders to participate in the ongoing refinement and implementation of the PGDP. The first generation of the PGDP was first adopted in August 2012, later updated in 2015 and recently been revised 2018.

This encompasses the monitoring, evaluation, reporting and review of components and brings together all the relevant key indicators, targets and interventions required to achieve the strategic objectives. The PGDP is a strategic management tool for the Province to ensure that it is a concerted and measured effort to achieve the 2035 Vision, which the province of KwaZulu-Natal is planned to maximize its position as a gateway to South and Southern Africa, as well as its human and natural resources so creating a safe, healthy and sustainable living environment. The main purpose of this PGDP is to translate the PGDS into an implementation plan which will provide a sound platform for departmental, sectoral and stakeholder annual performance planning and therefore to guide resource allocation.

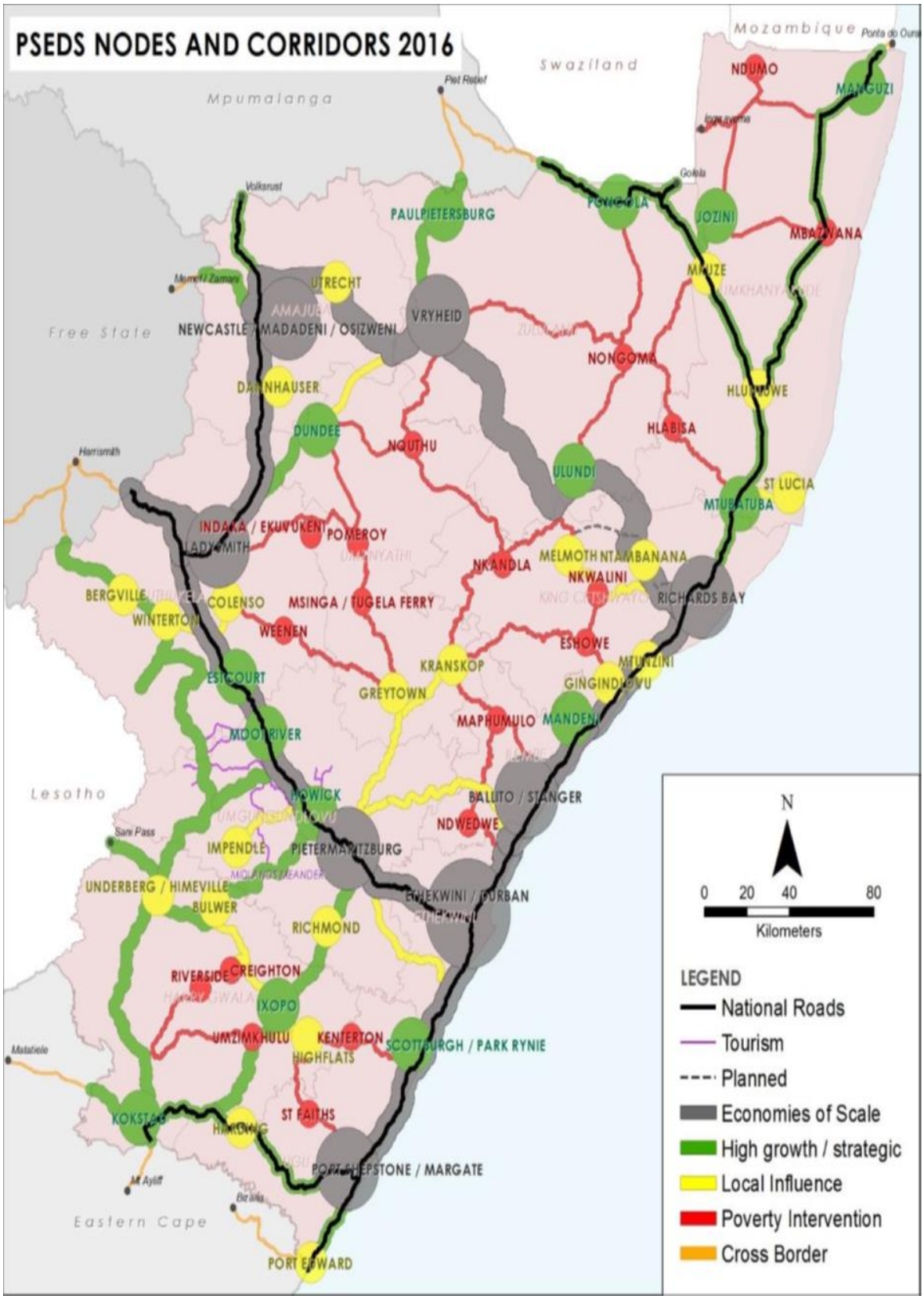
In this transition from strategy to plan, the focus is on driving implementation in a coordinated and integrated manner, where progress can be measured against predetermined targets and where roles and responsibilities have been confirmed within established lines of accountability. The PGDP clearly indicates:

- **The desired 2035 outcomes in the 7 goals and 31 objectives, with a focus on 2020;**

- **A set of indicators that will be applied to measure the progress being made to achieve the desired outcomes;**
- **The targets and the KZN growth path for 2020, 2025, 2035 and 2035 in respect of each of the indicators;**
- **The strategic interventions required to achieve the set targets;**
- **The catalytic projects in support of the PGDP Goals;**
- **The institutional framework for the implementation of the PGDP;**
- **The monitoring, evaluation, reporting and review framework of the plan; and**
- **Technical indicator descriptors.**

5.3.11. PROVINCIAL SPATIAL ECONOMIC DEVELOPMENT STARETGY (PSEDS) 2019

PSEDS sets where government directs its investment and development initiatives, capitalise on complementarities, facilitate consistent, focused decision making, bring about strategic co-ordination, interaction and alignment. The strategy recognizes the agriculture, tourism, manufacturing and service sectors as the four key drivers of the KZN economy. The focus areas of the strategy are then mapped out showing the areas of highest existing and future development potential for each of the four-key economic drivers of the economy.


PSEDS NODES AND CORRIDORS 2016
Mozambique
Swaziland
Mpumalanga
Free State
Lesotho
Eastern Cape
NDUMO
MANGUZI
PAULPIETERSBURG
JOZINI
MBAZWANA
UTRECHT
VRYHEID
NEWCASTLE / MADADENI / OSIZWENI
NONGOMA
DANNHAUSER
DUNDEE
NQUTHU
HLABISA
ULUNDI
ST LUCIA
MTUBATUBA
INDAKA / EKUVUKENI
LADYSMITH
POMEROY
NKANDLA
MELMOTH NTAMBANANA
NKWALINI
RICHARDS BAY
BERGVILLE
WINTERTON
COLENSO
MSINGA / TUGELA FERRY
WEENEN
ESHOWE
MTUNZINI
KRANSKOP
ESTCOURT
GREYTOWN
GINGINDLOVU
MAPHUMULO
MANDENI
MOOI RIVER
MOWBRAY
BALLITO / STANGER
NDWEDWE
Sani Pass
IMPENDLE
PIETERMARITZBURG
UNDERBERG / HIMEVILLE
BULWER
RICHMOND
RIVERSIDE
CREIGHTON
IXOPO
UMZIMKHULU
KENTERTON
SCOTTBURGH / PARK RYNIE
HIGHFLATS
Matatiele
KOKSTAD
ST FAITHS
PORT SHEPSTONE / MARGATE
PORT EDWARD
N
0 20 40 80
Kilometers
LEGEND
National Roads
Tourism
Planned
Economies of Scale
High growth / strategic
Local Influence
Poverty Intervention
Cross Border

MAP 3: PSEDS NODES AND CORRIDORS

5.3.12. PROVINCIAL GROWTH AND DEVELOPMENT STRATEGY PGDS 2035

During the 2016 calendar year the Premiers Office in KwaZulu-Natal initiated the review of the Provincial Growth and Development Strategy (KZN PGDS). The PDGS review bolsters the Province's commitment to achieving the vision of KwaZulu-Natal (KZN) as a "Prosperous Province with a healthy, secure and skilled population, acting as a gateway to Africa and the world". The PGDS aims are as follows:

- to build this gateway by growing the economy for the continued development,
- the continued improvement of the quality of life of all people living in the Province,
- ensuring that those currently marginalized have broader socio-economic opportunities.

The reviewed PGDS provides a strategic framework for accelerating and sharing the benefits of an inclusive growth through deepened, meaningful, effective and sustainable catalytic and developmental interventions.
The Revised 2016 KZN PGDS continues to:

- Be the primary growth and development strategy for KwaZulu-Natal to 2035;
- Mobilise and synchronise strategic plans and investment priorities in all spheres of government, and development partners in order to achieve the desired growth and development goals,
- Spatially contextualise and prioritise interventions so as to achieve greater spatial equity;
- Guide clearly defined institutional arrangements that ensure decisive and effective leadership, robust management, thorough implementation and ongoing inclusive reviews of the growth and development plan.

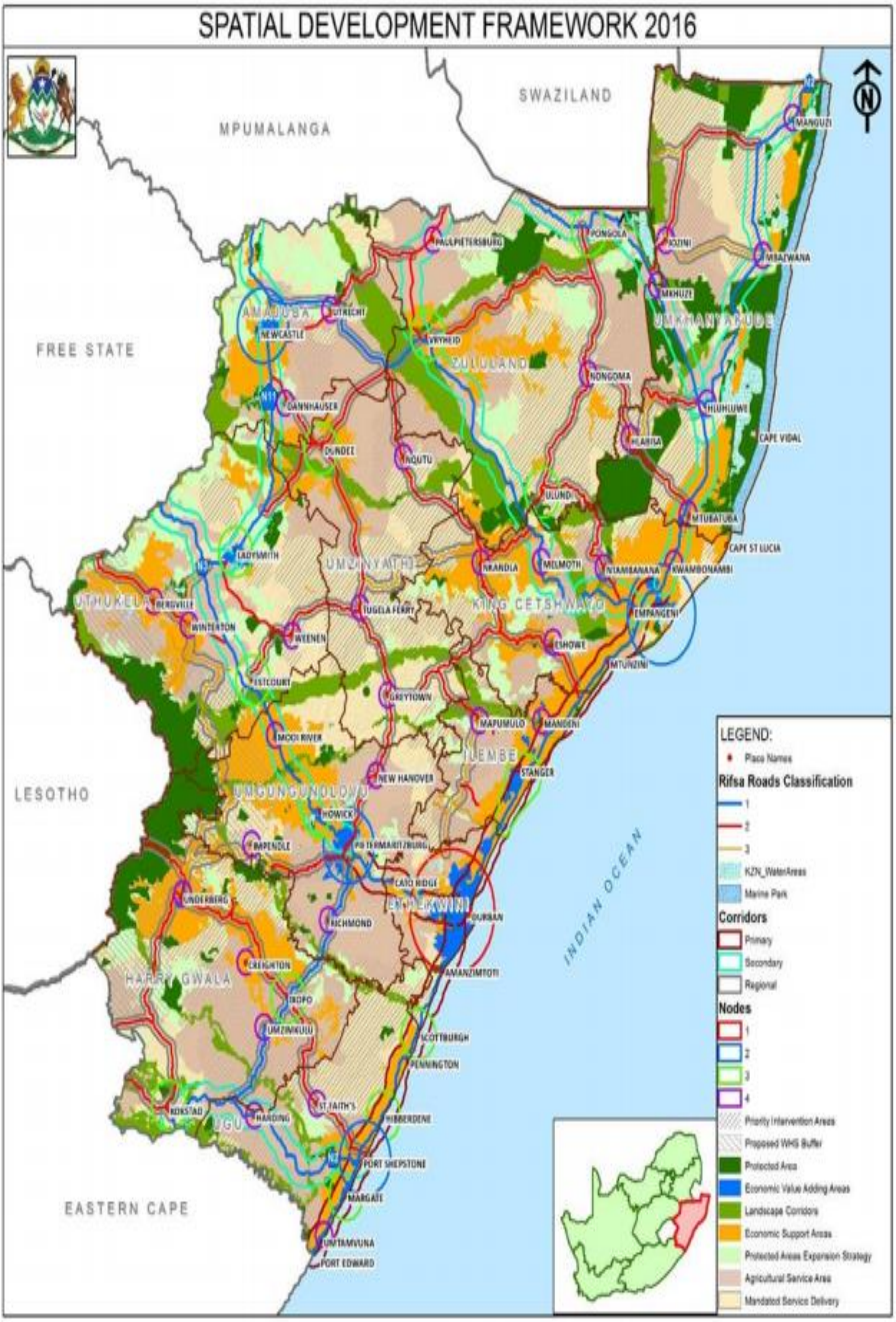
Figure 8: KZN PGDS Strategic Framework

The plan recognises that environmental vulnerability, social need and economic development are not evenly distributed, and spatial disparities will always exist due to the spatial distribution of natural resources, historical imperatives and cultural factors. The PGDS provides a long-term vision for KZN, presenting the situational overview along with the strategic analysis of the province. This strategy focuses on sustainable growth and development through addressing social, economic, environmental, infrastructural, governance and spatial issues.

The strategy is built on seven strategic goals (inclusive economic growth, human resource development, human and community development, environmental sustainability, infrastructure development, governance and policy and spatial equity) along with thirty-one objectives, of which new amendments of strategies have occurred such as to enhance spatial economic development, waste management capacity and expand the application of green technologies to achieving this. The vision is aimed to be achieved by the year 2035. PGDS also underscores the general spatial intentions of the strategy 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.

5.3.13. KZN SPATIAL DEVELOPMENT FRAMEWORK (SDF)

To achieve the goals and objectives of the PGDS, the provincial SDF has been developed to spatially express the PGDS and provide spatial context to the proposed strategic interventions. It further provides principles to guide the province in dealing with socio-economic issues manifested spatially; provide mapping guidance for future spatial development and prioritizes investment and development initiative. Overall this strategy guides municipal IDP's, SDF's and other municipal framework plans. The envisaged spatial vision for KwaZulu-Natal is summarized as follows, “Optimal and responsible utilisation of human and environmental resources, building on addressing need and maximising opportunities toward greater spatial equity and sustainability in development.”



MAP 4: KZN SPATIAL DEVELOPMENT FRAMEWORK

5.3.14. COMPREHENSIVE RURAL DEVELOPMENT PROGRAMME, 2019

This is a national strategy focusing on dealing effectively with rural poverty through the optimal use and management of natural resources. The programme focuses on a three-pronged strategy covering the following:

- Agrarian transformation.
- Rural development emphasising:
- Improved economic infrastructure
- Improved social infrastructure.
- Land reform:
- Increase the pace of land redistribution
- Increase the pace of land tenure reform
- Resolving outstanding land restitution claims.

5.3.15. HUMAN SETTLEMENT MASTER PLAN, 2019

South Africa's Human Settlements Master Spatial Plan is a plan for coordinating tangible public and private investment that are sustained over time, and carefully adapted to the needs and opportunities of specific places. The purpose of the plan is to identify areas for investments for human settlements development by multiple public and non-public role players. The NHSMSP aims to achieve two specific and interrelated goals:

- To identify areas for human settlements investments for multiple public and non-public role-players;
- To direct the necessary and available State resources to existing human settlements and to plan for the provision of new human settlements.

The objectives to realize these goals are to:

- Align mandates of all spheres and sectors which have a strong spatial dimension for human settlements development;
- Promote maximum intergovernmental and multi-sectoral collaboration; and
- Assemble the capacity and development arrangements to ensure planning, project, preparation and project management.

The intended outcomes therefore are:

- Harmonisation of government mandates and roles to improve coordination;
- Integration of plans and adjustments to priorities;
- Alignment of resources and opportunities along the delivery value chain
- Accountability, mechanisms, and good governance; and a driven government workforce.

Ultimately the impact must be transformation of undesirable settlement patterns emanating from past practices and creation of new human settlements (spatial transformation). The interventions outlined on the MSP are focused around the role of the State but accommodates and reflects other key role players. This plan is underpinned by twin levers of spatial targeting and intergovernmental coordination and contracting. The MSP further identified that Newcastle/ Dannhauser would need a total of 289,4 ha of land to accommodate future housing inclusive of Gap Housing and Infill-Low Income Housing.

5.3.16. MEDIUM TERM STRATEGIC FRAMEWORK: OUTCOMES 9,13 & 16

The Medium-Term Strategic Framework (MTSF) is Government's strategic plan for the 2014-2019 electoral term. It reflects the commitments made in the election manifesto of the governing party, including the commitment to implement the National Development Plan (NDP). The MTSF sets out the actions Government will take and targets to be achieved. It also provides a framework for the other plans of national, provincial and local government. The aim of the MTSF is to ensure policy coherence, alignment and coordination across government plans as well as alignment with budgeting processes. Performance agreements between the President and each Minister will reflect the relevant actions, indicators and targets set out in this MTSF. The 2019-2021 electoral mandate focuses on the following priorities:

- Radical economic transformation, rapid economic growth and job creation;
- Rural development, land and agrarian reform and food security;
- Ensuring access to adequate human settlements and quality basic services;
- Improving the quality of and expanding access to education and training;
- Ensuring quality health care and social security for all citizens;
- Fighting corruption and crime; and
- Contributing to a better Africa and a better world Social cohesion and nation building.

In addressing the 2019/2020 Amajuba District SDF assessment and responding to the previous MEC Comments in regard to outcomes 9, 13 and 16 need to be reflected. The outcome 9 also referred to as to a responsive, accountable, effective and efficient Local Government System. It purpose includes to increase in the percentage of households with access to a functional water service from 85% in 2013 to 90% by 2019; increase in the percentage of households with access to a functional sanitation service from 84% in 2013 to 90% by 2019, including elimination of bucket sanitation in the formal areas; 1.4 million additional households to be connected to the grid between 2014 and 2019, and 105 000 additional non-grid connections.; Income support to the unemployed through expansion of the Community Work Programme to reach 1 million participants in 2019; an increase in the level of public trust and confidence in local government from 51% in 2012 to 65% in 2019, as measured by the IPSOS survey; and an improvement in overall municipal audit outcomes, with at least 75% of municipalities receiving unqualified audits by 2019. The national outcome 13 is also a comprehensive, responsive and sustainable social protection system. It purpose includes improving efficiency in the delivery of services; addressing exclusions by identifying and reaching all those who are entitled to the existing benefits of social protection; and reducing the administrative bottlenecks that prevent people from accessing benefits.

The outcome 9 further aims to ensure a responsive, accountable, effective and efficient local government system so as to restore the confidence of citizens in the local government sphere. As such municipalities need to ensure that the basic needs of communities are met; build clean, effective, efficient, responsive and accountable local government; improve performance and professionalism and strengthen partnerships between local government, communities and civil society. The Outcome consists of 7 critical issues in order to achieve the overarching goal or vision of a responsive, accountable, effective and efficient local government system:

- Develop a more rigorous, data driven and detailed segmentation of municipalities that better reflect the varied and capacities and contexts within municipalities and lays the basis for a differentiated approach to municipal financing, planning and support
- Ensure improved access to essential services
- Initiate ward-based programmes to sustain livelihoods
- Contribute to the achievement of sustainable human settlements and quality neighbourhoods
- Strengthen participatory governance
- Strengthen the administrative and financial capability of municipalities
- Address coordination problems and strengthen cross-departmental initiatives

5.4. DISTRICT POLICY CONTEXT

5.4.1. AMAJUBA DISTRICT GROWTH AND DEVELOPMENT PLAN "VISION 2035'

The District Growth and Development Plan is a relatively new approach to address economic development at a local level. The plan takes its lead from the Provincial Planning Commission in stating that employment equity and other measures of redress should continue and be made more effective by focusing on the environments in which capabilities are developed. The objectives of the Amajuba DGDP are:
To establish and outline long term vision and direction for development in the district (vision 2035);

- **To provide an overarching and coordinating framework for planning and development initiatives within each of the local municipalities and across municipal boundaries;**
- **To provide a spatial context and justification for priority interventions;**
- **To guide resource allocation of various spheres of government, service delivery agencies and private sector working within the district;**
- **To develop institutional arrangement for an effective implementation of the Amajuba DGDP and the PGDS;**
- **To align and integrate departmental strategic plans at a district level;**
- **To facilitate commitment of resources (human, financial, etc) towards the implementation of strategic objectives, catalytic initiatives and other district priorities.**

The Amajuba DGDP is not intended to be 'inventory' development plan for the district, but will rather focus on a limited but strategic, high impact, fast-track interventions that can act as catalysts for accelerated and shared growth. Therefore, the 5-Year Strategic Programme as outlined in the Integrated Development Plan and the associated sector plans, and the other district or local municipal planning and service delivery instruments will continue along-side and align with the Amajuba DGDP. The Amajuba DGDP will therefore serve as a district translation and an implementation framework for the PDGS. One of the economic targets from DGDP is for employment within the district economy of Amajuba to increase from 2010 baseline of 159 258 people employed to 180 000 in 2020; and 220 000 people employed in 2035. This target goes hand in hand with increasing the GDP per Capita within the district economy of Amajuba from 2010 baseline of R 27,347 per capita to R 35, 690 in 2020; and

R48,000 in 2035. This is doubling of GDP Per Capita as per the National Development Plan. The district must focus on the creation of employment through unleashing agricultural potential, tourism,
enhancing industrial development through investment into the key productive sectors of manufacturing, tourism, transport and logistics, the green economy and service sectors, expansion of government-led job creation programmes, promoting SMME and entrepreneurial development and developing the knowledge base to enhance the knowledge economy.

5.4.2. AMAJUBA INTEGRATED DEVELOPMENT PLAN (IDP) 2019/2020

Integrated Development Planning is a process through which a Municipality, its constituencies, various service providers, interested and affected parties come together to identify development needs, outline clear objectives and strategies which serve to guide the allocation and management of resources within the Municipal's jurisdictional area. The vision of Amajuba District Municipality is "By 2035 Amajuba District Municipality will be a leading and pioneering District characterized by sustainable development and quality services". The plan is prepared in fulfilment of the Municipality's legal obligation in terms of Section 34 of the Local Government: Municipal Systems Act, 2000 (MSA Act 32 of 2000). From this planning process emanates the Municipal Integrated Development Plan (IDP), with the main objective being improved coordination and integration of planning, budgeting and development within a Municipal area. As a five (5) Year budgeting, decision-making, strategic planning and development tool, the IDP is used by the Municipality to fulfil its role of 'developmental local governance.' Central to this are the overarching objectives and strategies encapsulated in the plan, which guides the Municipality in the realm of the following:

- **Municipal Budgeting;**
- **Institutional restricting in order to realize the strategic intent of the plan;**
- **Integrating various development sectors such as Infrastructure, Land Use, Agriculture with Socio-economic and Ecological dimensions; and**
- **Performance Management System.**

5.4.3. AMAJUBA SPATIAL DEVELOPMENT FRAMEWORK

Amajuba District municipality has recently reviewed their Spatial Development Framework (SDF) for the year 2019/2020. This is conceptualized as a core sector plan of the Integrated Development Plan. The Spatial Development Framework is a process through which a municipality prepares a strategic spatial development plan for a medium to long term period to facilitate effective implementation of the IDP. The district's SDF purposes is to spatially guide the form and location of future developments within the district to help manage and efficiently use the districts scarce land resources, speed up service delivery and attract funding amongst other things. The district SDF thus provides a tool to guide spatial planning and development that promotes coordination and alignment amongst the local municipalities of the district.

5.4.4 AMAJUBA ENVIRONMENTAL MANAGEMENT FRAMEWORK

EMF is a tool to guide development initiatives from an environmental perspective, thus providing an environmental support to decision makers of the municipality. It was developed prior to the District Biodiversity Sector Plan and does not incorporate the CBA information. The district is in the process of developing an EMF with the purpose of protecting the environmentally sensitive or critical areas of the district. Furthermore, the framework will act as a guide to assist planners, developers and other relevant decision-makers in terms of environmental management and sustainable use of the district's natural resources. The purpose of the plan or framework is to provide the district with a comprehensive picture of the status of the environment, and give strategic direction and structure for addressing problems, identify priority environmental opportunities concerning environmental matters especially related to resource management and provide strategic guidance on environmental, economic and social issues in the district.

5.4.5. AMAJUBA BIODIVESITY SECTOR PLAN

The Biodiversity Sector Plan (BSP) for the Amajuba District Municipality was developed as a precursor to a bioregional plan. The reason behind this was the identified need for KZN to clearly set out the baseline for the conservation priorities in each of the Districts, before interacting

with the various other sector plans, IDPs and SDFs as required by S48 of National Environmental Management Biodiversity Act, 2004 and the Bioregional Guidelines (DEAT, 2009). As such, the BSP for the Amajuba District Municipality complies with SANBI's Bioregional Planning terminology and requirements as well as the guidelines for the

development of Bioregional Plans (DEAT, 2009). The purpose of a bioregional plan is to provide a map of biodiversity priorities (identified as Critical Biodiversity Areas 1 and Ecological Support Areas 2) with accompanying land use planning and decision-making guidelines, to inform land use planning, environmental assessment and authorizations as well as natural resource management by a range of sectors whose policies and decision impact on biodiversity.

The Amajuba BSP is used by all sectors that are involved in land use planning and decision making and multi sectoral spatial planning. Users should include reactive decision-making such as Environmental Impact Assessment and land Use applications; Proactive users such as spatial planners, IDPs, SDFs and zoning schemes; and Proactive conservation such as stewardship and protected area expansion, as well as alien clearing, monitoring and research programmes.

5.4.6. AMAJUBA LOCAL ECONOMIC DEVELOPMENT (LED) STRATEGY

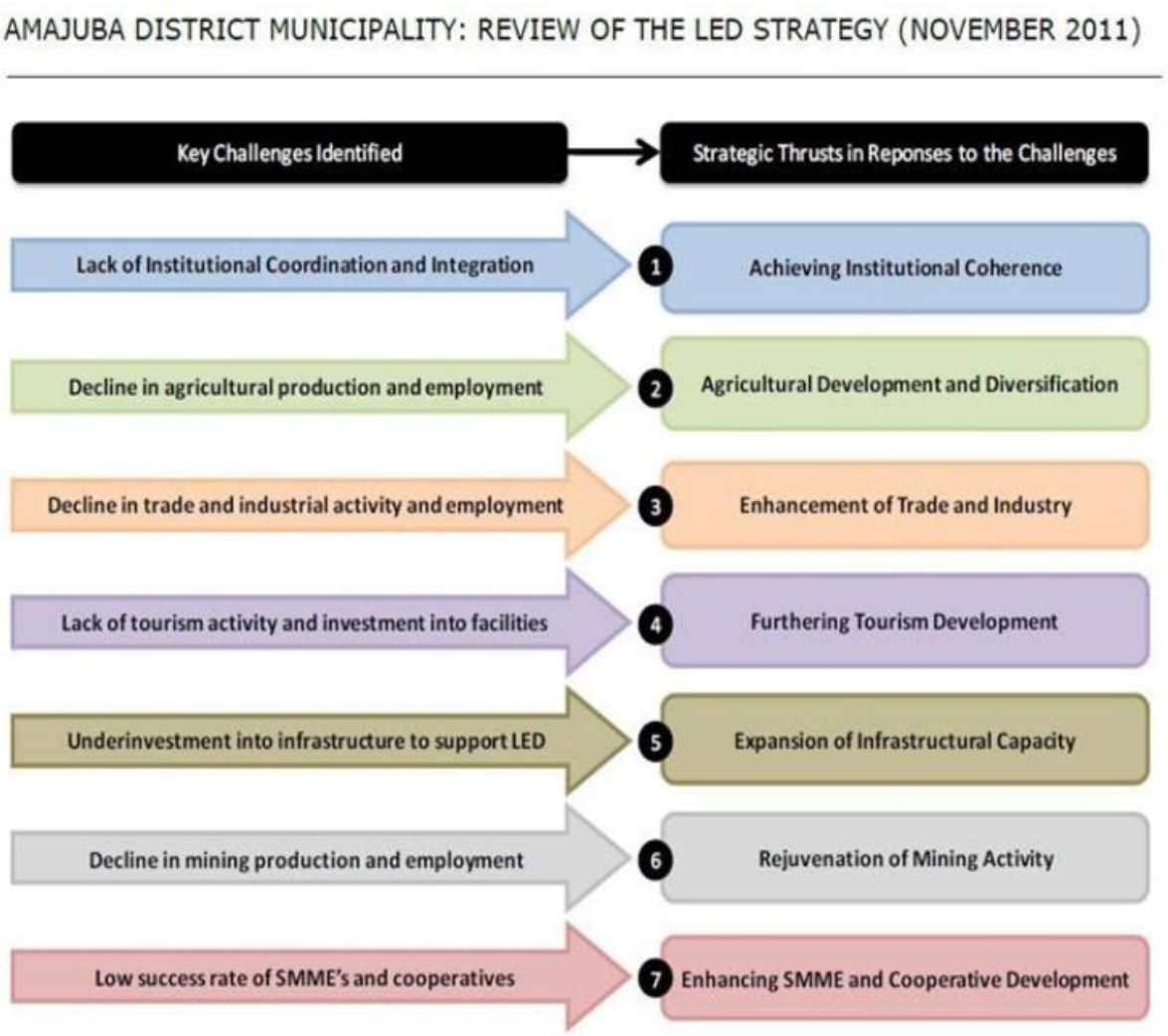


Figure 9: Amajuba LED Issues

Local Economic Development (LED) is an approach towards economic development which allows and encourages local people to work together to achieve sustainable economic growth and development thereby bringing economic benefits and improved quality of life for all residents in a local municipal area. Amajuba District municipality undertook the development of an LED strategy in 2004, which formed part of the IDP process, and latter reviewed it on 2011.

The drive of the existing LED strategy was therefore to provide an up-to-date economic plan for the district which will assist in identifying opportunities and guiding the district in achieving its economic development objectives, goals and provide a framework which would assist by integrating and coordinating the activities and decisions made by development agencies in the district.

The vision of ADM stands to be a fully developed district, with a vibrant, inclusive and sustainable economy, a better quality of life, preserved within its own cultural and traditional values.

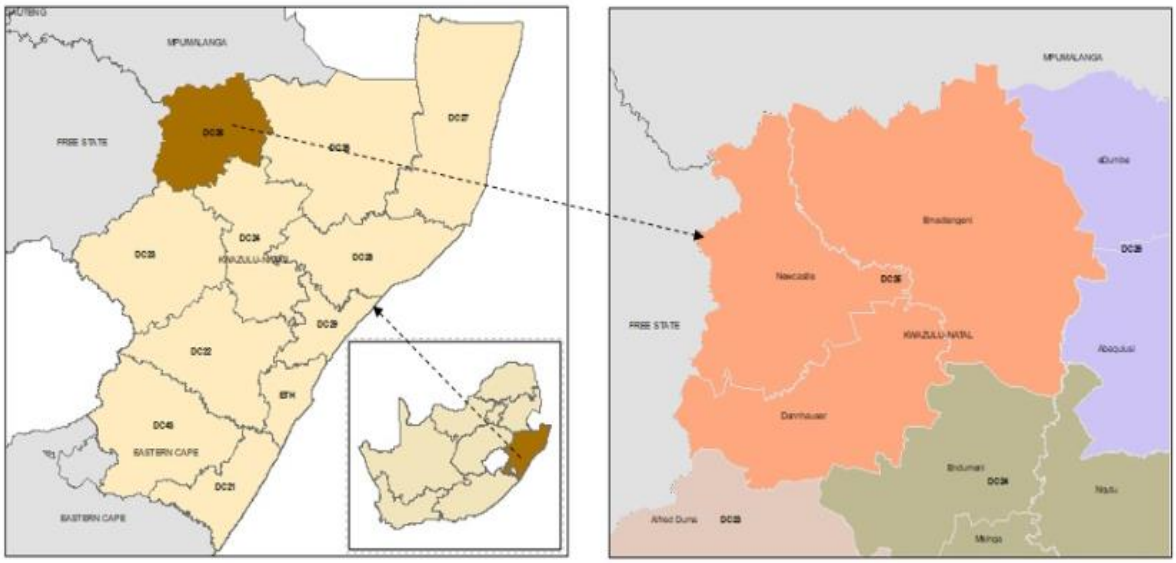
6. PROVINCIAL CONTEXT

6.1. LOCALITY

Amajuba is one of the ten (10) district municipalities that make up KwaZulu-Natal. It is located in the north-western corner of KwaZulu-Natal and comprises the three local municipalities of Newcastle (KZ252), Utrecht (KZ253) and Dannhauser (KZ254). The total geographical size of Amajuba is 6910 km^2. Emadlangeni occupying the largest area of 3 539 km^2, Newcastle some 1855 km^2 and Dannhauser some 1 516 km^2. The main transportation routes linking the District to its surrounds includes the N11, which is the alternative route to Johannesburg from Durban, and the rail line which is the main line from the Durban harbour to Gauteng. The R34 also bisects the district in an east-west direction and provides a linkage from the port city of Richards Bay to the interior.

6.2. REGIONAL ACCESS

The geographic location of Amajuba District Municipality along the border of KwaZulu-Natal, Free-State and Mpumalanga Provinces establishes the area as gateway (entry and exit) point to these provinces. The main transportation routes linking the District to its surroundings includes the N11 which is the alternative route to Johannesburg from Durban, and the rail line which is the main line from the Durban harbour to Gauteng. The R34 also bisects the District in an east-west direction and provides a linkage from the port city of Richard Bay to the interior. The P483 provincial road forms the major access road from Newcastle to Madadeni, Osizweni and Utrecht all located to the east of Newcastle.



MAP 5: AMAJUBA DM LOCALITY WITHIN KZN & THE LMS WITHIN THE AMAJUBA DM

7. DEVELOPMENT CONTEXT

7.1. DEMOGRAPHIC ANALYSIS

The Community Survey 2016 and the Census 2011 results published and disseminated by Statistics South Africa have been utilised by all three LMs within the DM for demographic analysis, however in determining population growth rates and calculating population projects it must be noted that , engaging the statistics derived from the Community Survey 2016 the LMs and the ADM discovered that the data is unrefined and not conclusive for projecting current status and future projections. The stats that does not correspond to each other includes the following:

- Type of main dwelling
- Sources of water
- Piped water
- Refuse removal
- energy for heating / cooking / lighting
- etc

It would therefore be incorrect to update the contents of the of any sector plans with inconclusive data to inform the document thus the Census 2011 the last reliable data provided by Statistics SA has been utilised to determine growth rates and population projections It is very important that in the compilation/review of such a strategic document that reliable and conclusive data is used as it informs the direction and focus areas that the municipality must consider, and more importantly such statistics inform the priorities of the municipality and subsequently the municipal capital budget.

7.1.1. AMAJUBA DM DEMOGRAPHICS AND POPULATION GROWTH

Amajuba DM comprises of a total population which is estimated at 531 327 people. Newcastle has the highest population which is estimated at 389 117 within 34 wards followed by Dannhauser 105 341 within 13 wards and Emadlangeni with 36 869 people within 6 wards. *(These figures are derived from the Community Survey 2016,Statistics SA*).

The population increased from 468 036 in 2001 to 499 839 in 2011 at an annual growth rate of 0.67%. The population increased from 499 839 in 2011 to 531 327 in 2016 at an annual growth rate of 1.25%. *(These figures are derived from the Community Survey 2016, Census 2011 and Census 2001, Statistics SA*).

Municipality	Census 2001 Total Population	Census 2011 Total Population	Growth Rate/10 Years (2001 - 2011)	Community Survey 2016 Total Population	Growth Rate/5 Years (2011 - 2016)
Newcastle	332 981	363 236	0.90%	389 117	1.42%
Dannhauser	102 779	102 161	-0.06%	105 341	0.62%
Emalangeni	32 277	34 442	0.67%	36 869	1.40%
Amajuba	468 036	499 839	0.67%	531 327	1.25%

Table 1: Total Population for Amajuba DM and LMs including Population Growth Rates per LM as per Census 2001, 2011 and Community Survey 2016, Statistics SA. (Source, Statistics SA).

NB: The growth rates have been calculated utilising the Population figures supplied by Statistics SA.

Utilising the growth rates derived from the three sources of data available from Statistics SA, the Amajuba DM has produced population projections per a 5 year interval for the 20 years, for the period starting in the year 2016 and ending in the year 2041. The table below indicates the results derived:

Year	Population Projection Figure For 20 Years Using Growth Rate:10 Years (2001 - 2011) 0.67%	Population Projection Figure 20 Years Using Growth Rate:5 Years (2011 - 2016) 1.25%
2016	516 809	531 327
2021	534 355	565 375
2026	552 497	601 605
2031	571 255	640 157
2036	590 650	681 179
2041	610 703	724 830

Table 2: Amajuba DM Population Projection for 20 years per 5-year interval.

In respect to Tables 1 & 2 preference will be given to the Census figures and calculations executed utilising the Census 2001 and 2001 results, since the Community Survey 2016 is exactly what it name states it is that just been a survey thus for the Tables produced the, Community Survey 2016 has been added purely just for purposes of comparison however

any future strategic planning the point of departure will be based on the 10 year growth rate inclusive of the population projections determined.

7.1.2. NEWCASTLE LM DEMOGRAPHICS AND POPULATION GROWTH

The tables below depict the only stats of the Community Survey 2016 that the SDF has looked into for the purposes of depicting latest stats. These stats show that the population of Newcastle has grown from 363 236 in 2011 to 389 117 in 2016. Section 3.2.2 Population Growth has done a future projection from this. And the household count has grown from 84 272 in 2011 to 90347 in 2016 with an average size of 4.3 people per household that has not changed in 2016 at 4.3.

	CENSUS 2011			COMMUNITY SURVEY 2016		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
KZN	4 878 676	5 388 625	10 267 300	5 306 295	5 758 945	11 065 240
Amajuba	238 712	261 127	499 839	253 700	277 407	531 107
Newcastle	**172 846**	**190 390**	**363 236**	**186 246**	**202 871**	**389 117**
Emadlangeni	17 486	16 956	34 442	17 724	19 145	36 869
Dannhauser	48 380	53 781	102 161	49 731	55 390	105 121

Table 2: Person Indicator per Municipality, Newcastle LM

Source: Newcastle SDF 2017/2018 – 2021/2022, Page 43

	CENSUS 2011		COMMUNITY SURVEY 2016	
	Total households	**Household size**	**Total households**	**Household size**
KZN	2 539 429	4,0	2 875 843	3,8
Amajuba DM	110 963	4,5	117 181	4,5
Newcastle LM	**84 272**	**4,3**	**90 347**	**4,3**
Emadlangeni LM	6 252	5,5	6 667	5,5
Dannhauser LM	20 439	5,0	20 167	5,2

Table 3: Household Indicator per Municipality, Newcastle LM

Source: Newcastle SDF 2017/2018 – 2021/2022, Page 43

According to the Stats SA, 2011 census data Newcastle has a population of 363 236 people. This amount has increased compared to the 2001 census data with 0.87%. The 2011 stats of 363 236 has increased to 389 117 according to the Community Survey of 2016. Future growth thereafter has been calculated at 1.3% which is less than the 3% increase per annum previously assumed from 2011 growth as shown overleaf in a table.

YEAR	POPULATION	YEAR	POPULATION
2011	363 236	2020	410 026
2016	389 117	2021	415 427
2017	394 242	2022	420 898
2018	399 435	2023	426 441
2019	404 696	2024	463 631

Table 5: Population Growth, Newcastle LM

Source: Newcastle SDF 2017/2018 – 2021/2022, Page 44

7.1.2.1 NEWCASTLE LM POPULATION DISTRUBUTION BY WARD

The population is spread unevenly amongst thirty-four (34) municipal wards, with ward 6 being the most populated ward followed by ward 7 and ward 1. The main settlement areas that are found in ward 6 include Jobstown, the New Dicks Halt area, and the Massondale area. Ward 7 comprises of the Manzana area, Inverness and parts of the Madadeni Township. Ward 1 is rural in nature with settlements such as Kilbarchan, Ingagane, Clavis and farmlands with different rural settlements.

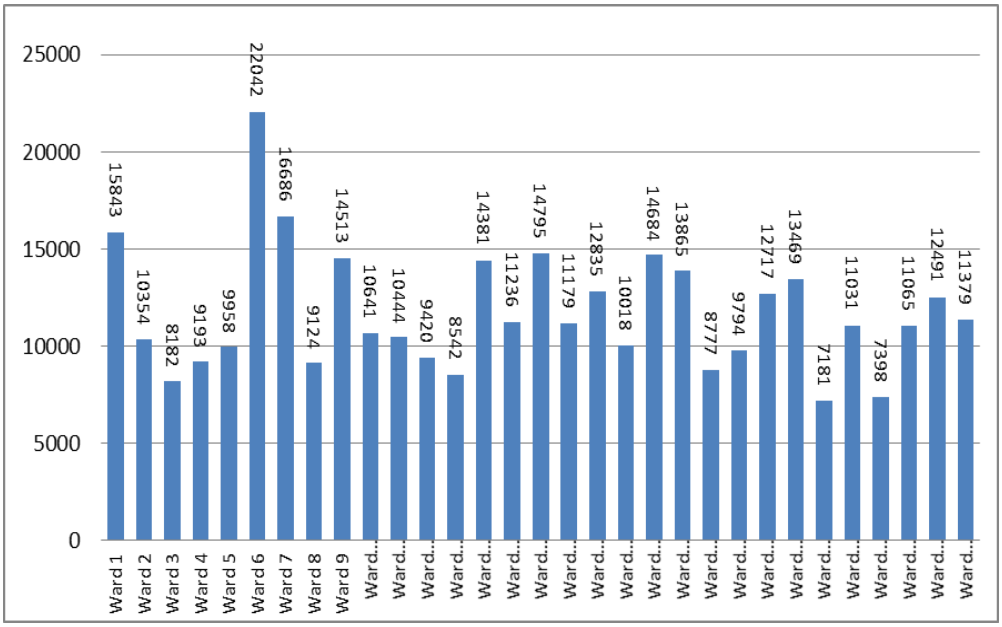


Figure 10: Population Distribution by Ward, Newcastle LM

Source: Newcastle SDF 2017/2018 – 2021/2022, Page 45

The recent ward delimitation process which was conducted by the Municipal Demarcation Board in line with the requirements of the Local Government: Municipal Structures Act (Act No. 117 of 1998), saw an increase in the number of wards within Newcastle with an additional 3 wards, namely ward 32, ward 33, and ward 34. The location of the new wards is within the

following areas, however not covering the whole, rather only parts of the area, in spatial terms: -

A. Ward 32: Osizweni A, Osizweni E, Osizweni F;
B. Ward 33: Manzana.
C. Ward 34: Newcastle Central, Newcastle CBD, Arbor Park, Riverside Industrial, Newcastle Industrial, KwaMathukuza.

The increase in the number of wards necessitates an increase in the number of Councillors to a number which is to be determined by the MEC. The increase also necessitates an increase in the number of the members of the Ward Committees from the current 310 to 340. An increase in the number of Councillors and Ward Committees necessitates an increase in the allocation of funds towards remuneration. Ward delimitation does not affect the population of Newcastle; however, it will affect the population within the affected wards in that it has either increased, or decreased head counts within certain wards. Furthermore, the ward delimitation process has also affected the size of the wards in spatial terms, either expansion or contraction.

The increase in the number of wards within Newcastle Municipality is a sign of positive growth towards a city status. The challenges encountered during the process are merely issues around the projected power struggles for political administration from a public perspective, from a municipal perspective, the ward delimitation process will not affect the delivery of municipal services within the different wards (business as usual). However, the process will play a significant role in terms of deepening local democracy and also improve local governance.

7.1.2.2. NEWCASTLE LM AGE AND GENDER DISTRUBUTION

The total population for Newcastle in 2011 is estimated at 363 236 as indicated by Statistics South Africa from the census that was conducted in 2011. The diagram below indicate the population structure by race for Newcastle Local Municipality.

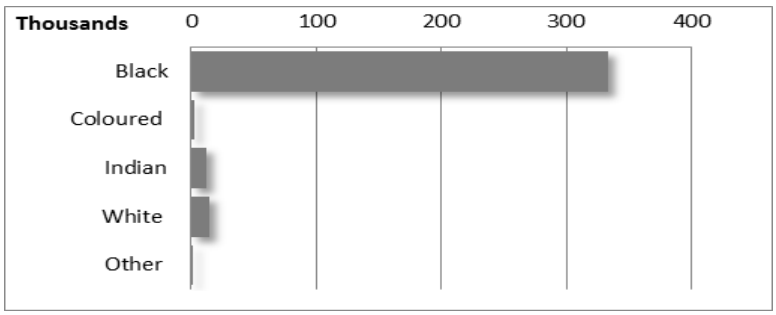


Figure 11: Population Structure by Race, Newcastle LM
Source: Newcastle SDF 2017/2018 – 2021/2022, Page 46

The demographic profile and five-year population estimates for Newcastle with an annual growth rate of 3% can be summarized as follows:

	2001		2007		2011
Population	**332 981**	**-1.6%**	**327 637**	**+10.9%**	**363 236**
Gender (M)	**157 171**	**-0.6%**	**156 282**	**+10.6%**	**172 846**
Gender (F)	**175 810**	**-2.5%**	**171 354**	**+11.1%**	**190 390**
Employed	**57 207**	**+2.2%**	**58 482**	**+7.6%**	**62 968**
Unemployed	**67 465**	**-18.5%**	**54 948**	**-31.4%**	**37 686**
Not Economically Active	**82 473**	**-6.0%**	**77 488**	**+44.8**	**112 225**
Dependency Ratio **(Age 15 – 46)**	**202 119**	**-2.2%**	**197 565**	**+6.6%**	**210 676**
Households	**71 164**	**+9.3%**	**77 786**	**+8.3%**	**84 272**
Housing owned/being paid off	**37 716**	**+3.7%**	**39 126**	**+12.6%**	**44 058**

Table 6: Demographic Profile & Population Estimates with an Annual Growth Rate of 3%.

Source: Newcastle SDF 2017/2018 – 2021/2022, Page 46

In total, 95% % of the Municipal Area population is urbanized, either in urban or mining settlements. Only 5% of the population lives on farms. A low rural population is indicative of a tertiary sector economic structure. In the case of Charlestown and Ingogo it is not to be entirely true, with large sections of the population employed by the primary mining sector. But this percentage does show that the Municipal Area population does not 'live off the land'.

According to Statistic South Africa the Census conducted in 2011 the majority of the population within the Newcastle Municipality are between the ages of 0-4 and 15 -34 years in age

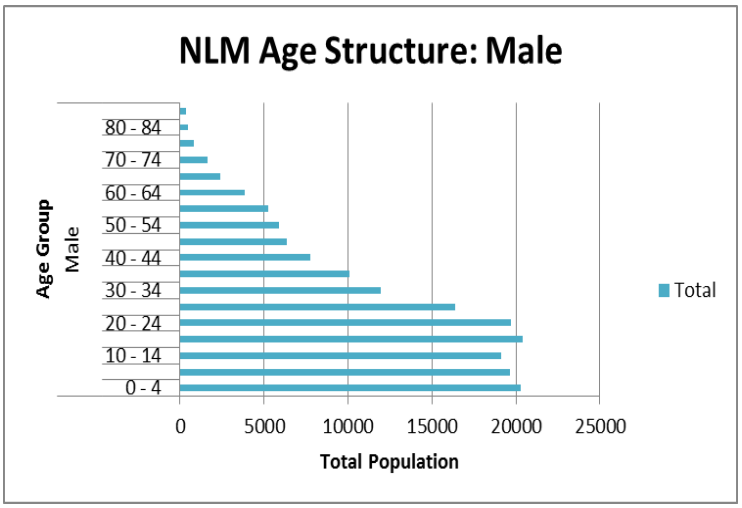


Figure 12: Age Structure Male, Newcastle LM

Source: Newcastle SDF 2017/2018 – 2021/2022, Page 47

7.1.3. DANNHAUSER LOCAL MUNICIPALITY URBANISATION AND POPULATION OUT-MIGRATION

The urbanization process and the rural population out-migration do not seem to be taking place within Dannhauser. Urbanization is the increasing number of people that migrate from rural to urban areas and mainly results in the physical growth of the urban areas. The urban population is sharply decreasing while the rural population has increased. Comprehensive analyses of population statistics at ward level by place from 2001 – 2011 suggest the following:

- The urban population decreased by an overall -35%; and
- The rural population increased by an overall 6,7%.

This suggests that there may be an external movement of people who relocate away from Dannhauser Municipal area. Population movement trends and patterns have implications for human settlement planning and development. The following is noted with regards to migration pattern in Dannhauser Municipality;

- 99.9% (105236 of 105341) of citizens in the Dannhauser Municipality enjoy South African citizenship status. 55 (0.05%) of the citizens were born in the Southern African Development Community (SADC) region while 25 (0.02%) were born in the rest of Africa. The rest were born in South Africa.
- Only 0.17% of the households have previously had any family member leave the country to reside abroad.
- 99.4% regard Dannhauser Municipality as their place of usual residence.
- 83.2% have been residents of Dannhauser Municipality since or before October 2011. Only 3.6% relocated to the municipality after October 2011. The rest (13.2%) were born after October 2011.

Figure 13: Population Outmigration and Urbanisation , Dannhauser LM

Source: Dannhauser LM SDF 2017-2040, Page 114

RURAL POPULATION						PERCENTAGE CHANGE
SETTLEMENT NAMES	Census 2001	Wards	SETTLEMENT NAMES	Census 2011	Wards	
Geduld	4359	3	Geduld	9101	3	208,8
Nyanyadu, Milford	9133	4	Milford, Nyanyadu	9213	4	0,9
Kilegethe, Cloneen and KwaMdakane	5865	5	Doornskop and KwaMdakane	17656	5 & 11	301,0
Milford, Nyanyadu	8696	6	Flint, Rudland	9538	6	8,8
Nellieville	16574	7	Nellieville	8094	7	-104,8
Springbok Laagte, Greenock	12127	8	Springbok Laagte, Greenock	9446	8	-28,4
Klipbank, Inverness, Groot geluk	12354	9	Klipbank, Inverness, Groot geluk	9787	9	-26,2
Annandale, Mtendeka	9570	10	Annandale & Mtendeka	11484	10	16,7
TOTAL	**78678**			**84319**		**6,7**

URBAN POPULATION						PERCENTAGE CHANGE
SETTLEMENT NAMES	Census 2001	Wards	SETTLEMENT NAMES	Census 2011	Wards	
Normandien and Hattingspruit	14268	1	Normandien and Durnacol	9749	1	-46,4
Durnacol, Dannhauser	9815	2	Hattingspruit, Dannhauser	8095	2	-21,2
TOTAL	**24 083**			**17 844**		**-35,0**

Table 7: Population Growth and Decline, Dannhauser LM

Source: Dannahuser LM SDF 2017-2040, Page 115

- Majority of those that moved to the municipality came from the Gauteng province, while others came from Free State and Mpumalanga to a lesser extent.
- The main reasons for moving to the current place are to live with or closer to spouse, new dwelling for household, education, and for job opportunities, in that order.
- The municipality's population experienced a positive growth rate between 2011 and 2016.
- The wards with KwaMdakane and Geduld experienced the highest population growth rates (509,8% combined).
- It can be deduced that in and out migration as well as emigration is very much limited within Dannhauser Municipality.

7.1.3.1 DANNHAUSER LOCAL MUNICIPALITY POPULATION GROWTH TRENDS

The Census conducted in 2011 by Stats SA indicates that Dannhauser experienced a negative growth between the 2001 and 2011 period, with the population decreasing from 102 776 in 2001 to 102 161 in 2011, at a rate of -0.6%. This decrease in population could be due to a myriad of factors such as outward migration of people moving to other neighbouring municipalities in search of better living standards and greener pastures. However, the municipality's population experienced a positive growth rate between 2011 and 2016, with the population growing from 102 161 to 105 341.

This however can be attributed to the fact that the municipality inherited some portions of land from the Alfred Duma Municipality, on the southern parts of Ward, as part of the ward delimitation and municipal boundary redetermination processes.

When analysing population age clusters, both in 2011 and 2016, it is clearly evident from the following tables, that children have increased by a general number of 42, youth by 51, adults by 92 and the elderly by 30, but the 70+ age population is decreasing sharply as observed on above table. The trend for the population of children cluster increasing has been consistence in increasing, similar for the elderly with decreasing over the past 15 years. It should also be noted with evidence of the following graphs that the youth and the adult's population groups have also been cumulative.

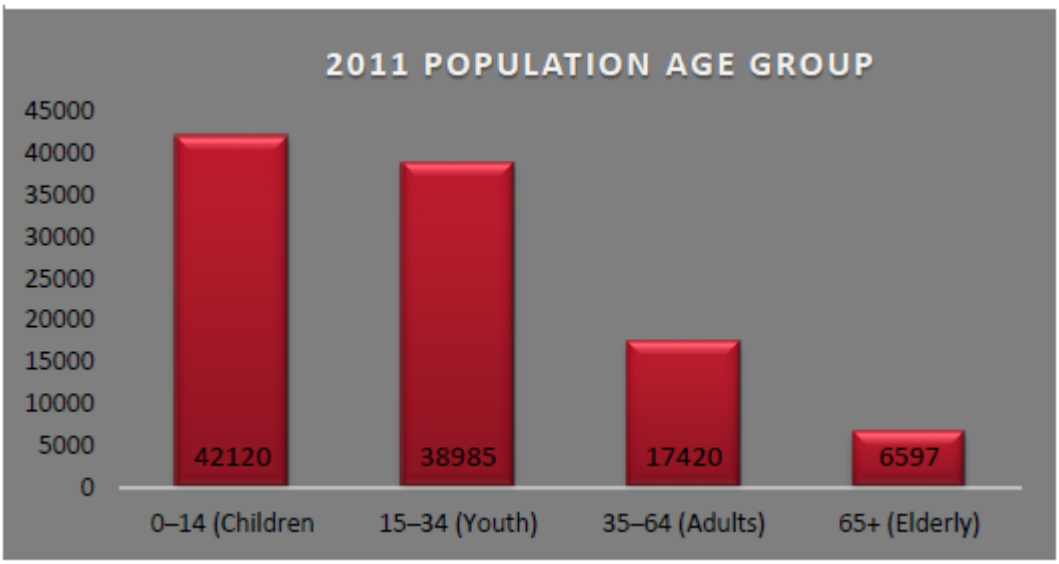


Figure 14: Age Per Population Group , Year 2011, Dannhauser LM
Source: Dannhauser LM SDF 2017-2040, Page 117

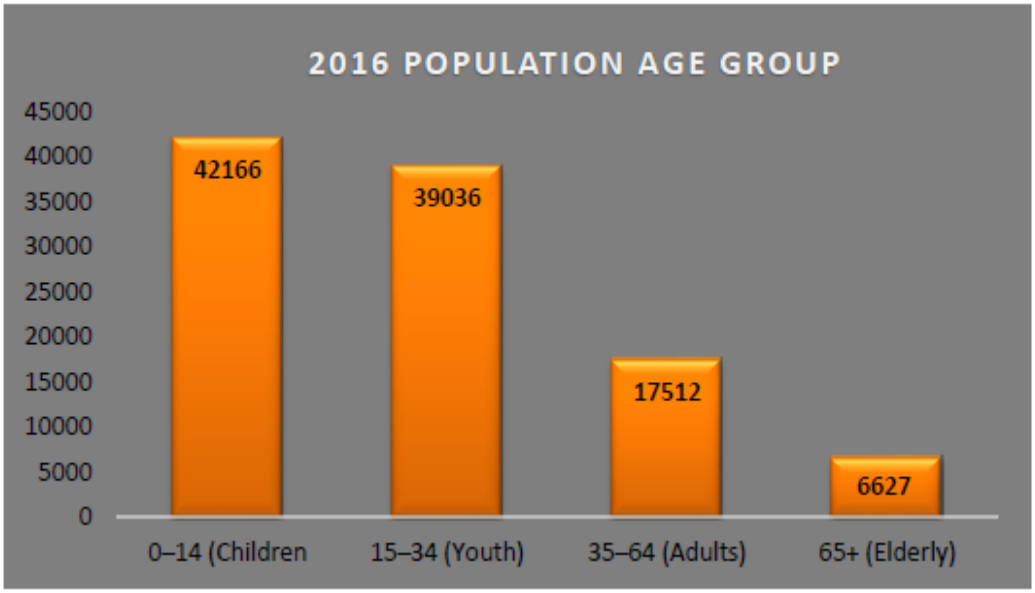


Figure 15: Age Per Population Group, Year 2016, Dannhauser LM
Source: Dannahuser LM SDF 2017-2040, Page 117

7.1.3.2. DANNHAUSER LOCAL MUNICIPALITY GROWTH PROJECTIONS

After engagements with the Department of Statistics South Africa with regards to an appropriate methodology to estimate the population projection for the next 20 years as per spatial strategic vision, it was indicated that StatsSA doesn't prepare projections at a sub-provincial level. However, the approach that is normally used when computing the Mid-Year estimates is based on the cohort analysis (i.e. five-year age groups) taking into consideration the fertility, mortality growth and migration for the region at hand. This very same approach was then used to project population growth for Dannhauser up to the year 2041. An analysis of the migration pattern, based upon above sub-section, indicated that rural immigration seems to be occurring and new settlements are emerging especially within the areas such of KwaMdakane, Ubuhlebomzinyathi and Milford, concurring the increase of rural population by an overall 6,7% from the year 2001 to 2011. The fertility rate, which is the average number of children that would be born to a woman over her lifetime, for Dannhauser were as follows;

	2011	2016
Fertility Rate	2.18	2.50

Table 8: Rate of Babies born to Women (15-49) in Dannhauser
Source: Dannahuser LM SDF 2017-2040, Page 118

The whole notion behind fertility is based on the quality of being productive, with regards to Dannhauser as the rate has increase between 2001 and 2016, this means that likelihood of population to increase has elevated.

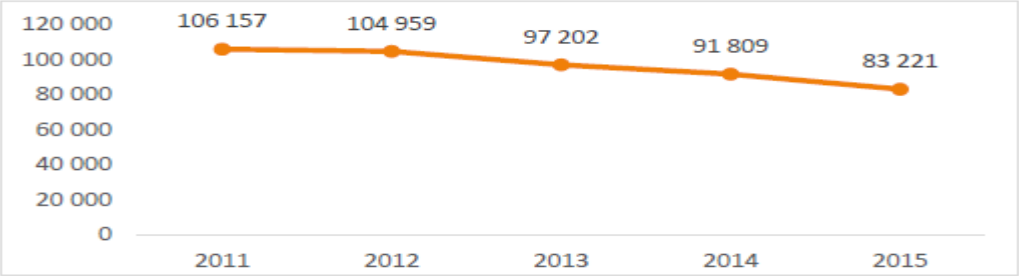


Figure 15: Trend Analysis of Mortality for Kwazulu-Natal

Source: Dannahuser LM SDF 2017-2040, Page 118

Mortality in KwaZulu – Natal as a whole indicates a decreasing trend annually. The trends between 2011 and 2016 were as follows:

KwaZulu-Natal		
	2011	2016
Deaths	387 702	91 596
population	10 365 005	10 940 668
% of deaths	3.7	0.8
% Growth/Decline in percentage of deaths		-0.78
Change in number of deaths		-0.76

Table 9: KZN Population Mortality Trends

Source: Dannahuser LM SDF 2017-2040, Page 118

The mortality trend for Dannhauser is as follows, and it indicates that it has decreased. Such also has influenced on the population growth. From the year 2011 to 2016, the total population was estimated at an increase of 0.311%. The figure below presents the population projection based on the percentage change with reference to the population growth trend over the past enumerations, including the fertility and mortality trend within the municipality. It is assumed that by 2041 the population in the municipality would have increased to 131 606 people. This implies that the population would have increased by approximately 26 264 people within 25 years.

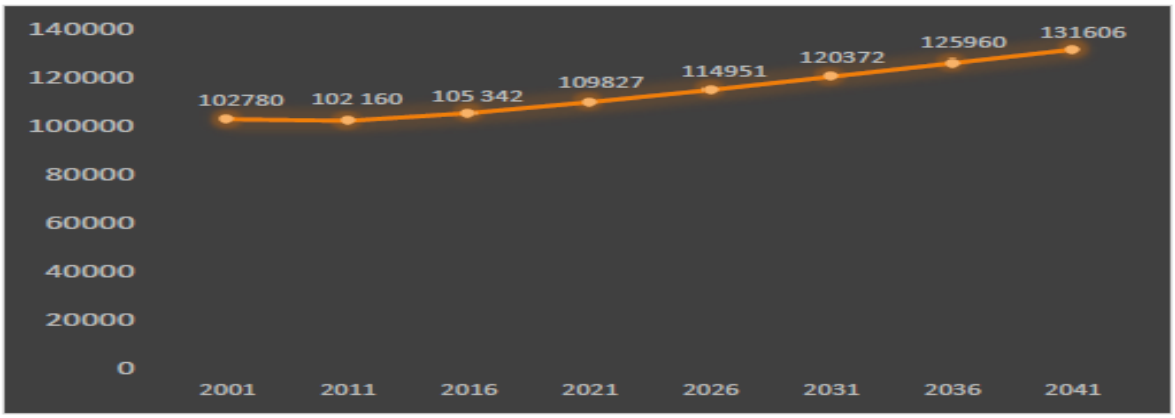


Figure 16: Population Projections 2001-2041, Dannhauser LM

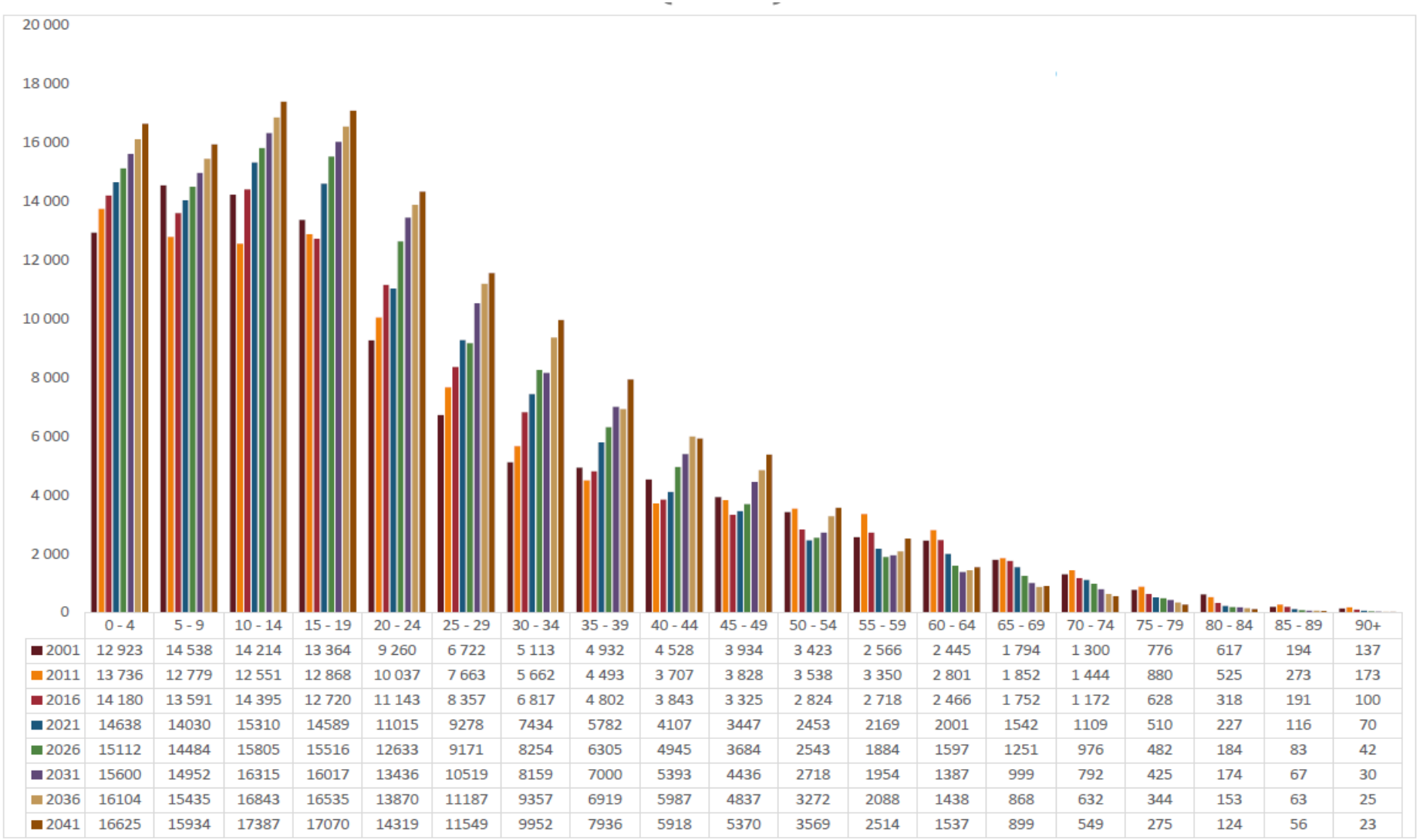
Source: Dannhauser LM SDF 2017-2040, Page 119

The graph of projection by age group overly represents that the elderly populace is sharply decreasing and younger age groups such as the children, youth as distinctively increasing. This simply explains that by 2041 Dannhauser will have excessive additional children and youth population, meanwhile the quantity of the aging will be insignificant.

Dannhauser Municipality		
	2011	2016
Deaths	6 569	1 447
population	102 161	105 341
% deaths	6.4	1.4
% Growth/decline in percentage of deaths		-0.79
Change in number of deaths		-0.78

Table 10: Dannhauser Mortality Rates

Source: Dannhauser LM SDF 2017-2040, Page 119



	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80 - 84	85 - 89	90+
2001	12 923	14 538	14 214	13 364	9 260	6 722	5 113	4 932	4 528	3 934	3 423	2 566	2 445	1 794	1 300	776	617	194	137
2011	13 736	12 779	12 551	12 868	10 037	7 663	5 662	4 493	3 707	3 828	3 538	3 350	2 801	1 852	1 444	880	525	273	173
2016	14 180	13 591	14 395	12 720	11 143	8 357	6 817	4 802	3 843	3 325	2 824	2 718	2 466	1 752	1 172	628	318	191	100
2021	14638	14030	15310	14589	11015	9278	7434	5782	4107	3447	2453	2169	2001	1542	1109	510	227	116	70
2026	15112	14484	15805	15516	12633	9171	8254	6305	4945	3684	2543	1884	1597	1251	976	482	184	83	42
2031	15600	14952	16315	16017	13436	10519	8159	7000	5393	4436	2718	1954	1387	999	792	425	174	67	30
2036	16104	15435	16843	16535	13870	11187	9357	6919	5987	4837	3272	2088	1438	868	632	344	153	63	25
2041	16625	15934	17387	17070	14319	11549	9952	7936	5918	5370	3569	2514	1537	899	549	275	124	56	23

Figure 17: 2001 – 2041 Population Projection by Age Group Dannhauser LM

Source: Source: Dannhauser LM SDF 2017-2040, Page 120

7.1.4. EMADLANDENI LOCAL MUNICIPALITY POPULATION DISTRUBUTION

Emadlangeni previously had 4 wards, however, in August 2016 the Municipal Demarcation Board delimited Emadlangeni municipality into 6 wards. The municipality recorded a total population of 34 442 people in the 2011 Census. According to the 2016 Community Survey, the total population in the municipality was recorded at 36 869 people.

7.1.4.1. EMADLANGENI LOCAL MUNICIPALITY POPULATION GROWTH

	2001	2011	2016
Emadlangeni	32277	34442	36869
Growth Rate	(2001-2011)= 0.65%		(2011-2016)= 1.37%

Table 11: Population Growth Rates Emadlangeni LM

Source: Emadlangeni LM SDF/ 2017/2018, Page 24

The population increased from 32 277 in 2001 to 34 442 in 2011 at an annual growth rate of 0.65%. In 2016, the population of Emadlangeni LM increased from 34 442 in 2011 to 36 869. This indicates a positive annual growth rate of 1.37% and a total addition of 2427 people in the municipality.

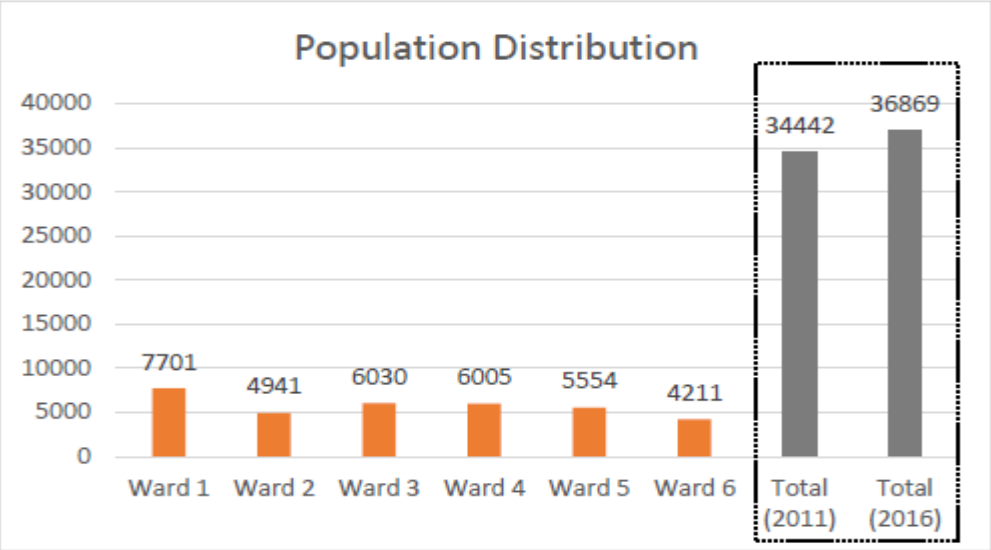


Figure 18: Population Growth Emadlangeni LM

Source: Emadlangeni LM SDF/ 2017/2018, Page 24

The municipality has been experiencing a trend of steady increase in population between 2001 and 2016. An increasing population can be attributed to migration patterns, increased fertility rate, declining mortality rate etc.

7.1.4.2. EMADLANGENI LM AGE DISTRUBUTION

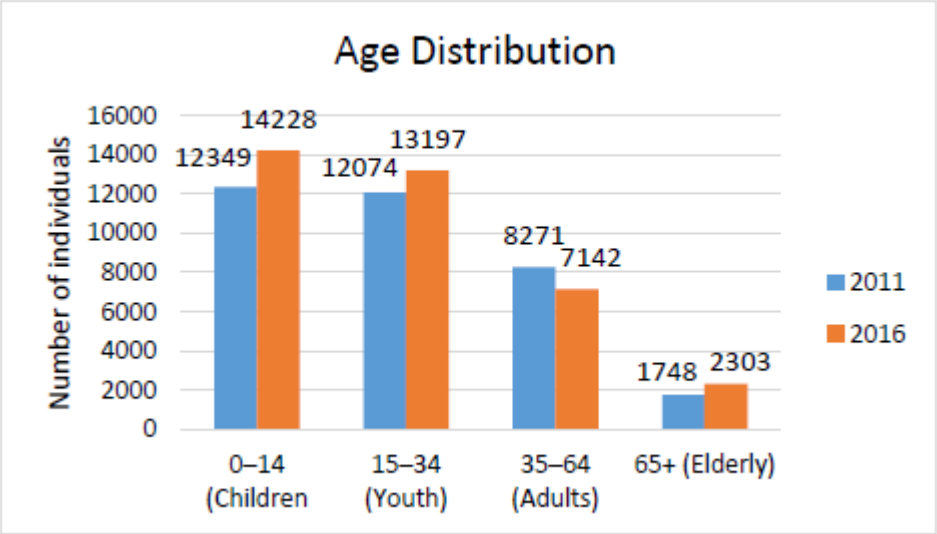


Figure 19: Age Distribution Emadlangeni LM

Source: Emadlangeni LM SDF/ 2017/2018, Page 25

The data from the 2016 Community Survey data reveals a generally young population within the municipality. A large portion falls below the age of 35, accounting for 74.38% of the population. The needs of this generally young population thus become important and it has implications on the provision of educational facilities, social welfare and the stimulation of the economy to provide job opportunities and economic development for the economically active portion of the population.

7.1.4.3. EMADLANGENI POPULATION PROJECTION

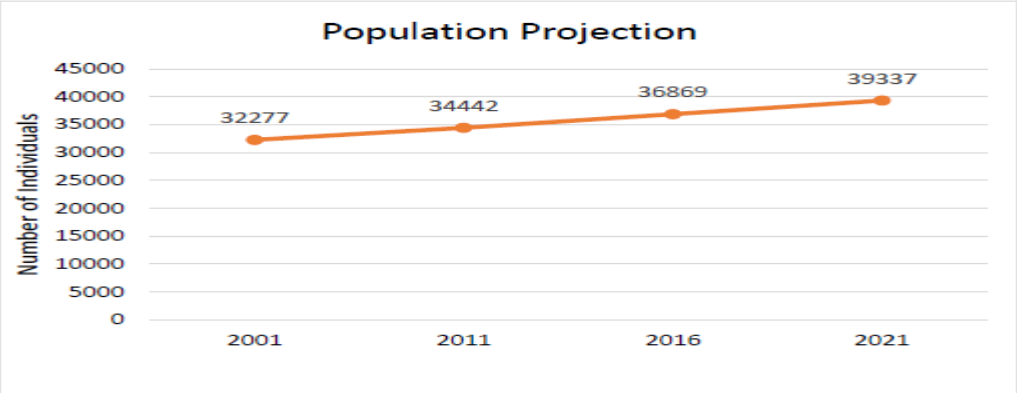


Figure 20: Population Projection 2001-2021, Emadlangeni LM

Source: Emadlangeni LM SDF/ 2017/2018, Page 25

Using the growth rate of 0.65% the population projection for 2021 is estimated at 39 337 people. This means that the population would grow by an additional 2468 people. A growing population allows for an intensity of development and further implies that the municipality must develop strategies to create employment opportunities as well as improve access to social facilities that can support a growing population.

7.1.4.4. EMADLANGENI LM POPULATION MIGRATION

Internal movement patterns include children going to school and people visiting clinics and other public facilities and services, as well as people visiting areas of economic activity (shopping trips). These internal movements closely correspond to the spread and location of public facilities in relation to each other. In the traditional rural areas, the location of public facilities is interlinked to traditional land allocation processes. As a result, the distances that people have to walk to these facilities vary and proper planning of these facilities can improve their accessibility.

Another important population movement trend in the rural settlements located on communal (traditional) land is that people and households tend to move closer to transportation routes and areas that have benefitted from service delivery. This trend provides people easier access to services and facilities and is also one of the factors that is contributing to the change in settlement patterns in these areas.

In Emadlangeni, there is also movement of students to areas outside the municipal area, due to a lack of tertiary facilities. Consequently, the municipality is exploring the development of a satellite branch of the Amajuba FET College.

7.2. ECONOMIC PRODUCTIVITY

Amajuba District Municipality (ADM) is the fourth District Municipality with highest Gross Domestic Product (GDP) in the province. According Global Insight Database, ANDM had a GDP of approximately R12.33 billion in 2011. The dominant economic activities are agglomerated within Newcastle Municipal Area of jurisdiction. Newcastle accounts for more than 88% of the total Gross Value Added (GVA) which amounts to R10.4 billion. Although ADM is well performing within the province of KwaZulu-Natal, a comparative assessment of Amajuba in relation to the districts economies that surrounds it demonstrates that it is significantly small.

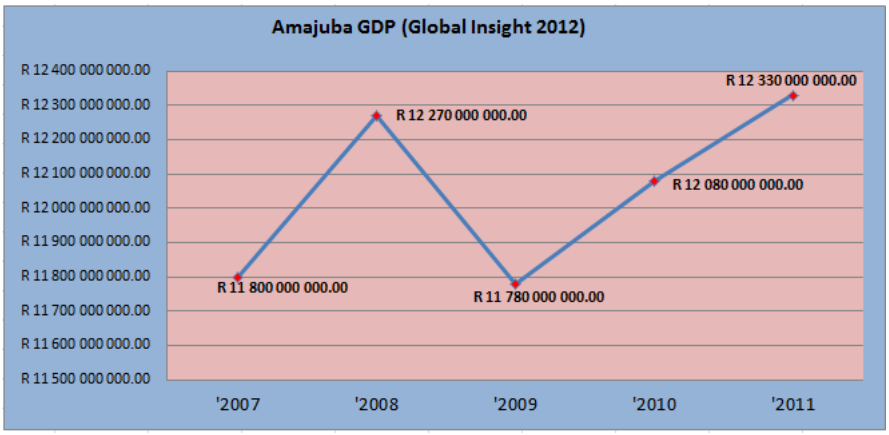


Figure 21: Amajuba DM GDP

Sedibeng District Municipality (Free-State) has GVA of R28.8 billion in 2011, Gert Sibande District Municipality (Mpumalanga) had a recorded GVA of R46.8 billion in 2009 and Nkangala District Municipality (Mpumalanga) has a GVA of R53.9 billion in 2009. The annual growth of GVA in Amajuba District Municipality is also significantly lower compared to other districts. The economy of the Amajuba is largely dominated by the manufacturing sector which accounts for 35% of total Gross Value Added. Other sectors of importance at a district level include the community service sector (22.2% of total Gross Value Added), financial and business services (15.2%) as well as the trade sector (8.6%). The size of the Amajuba District is relatively small in the provincial context and only contributes 3.5% of the province's GVA. This is due to its relatively small population. The district has the fourth highest Gross Value Added (GVA) capital in the province. The Gross Value Added has been compared to that of the provincial economy, in order to identify the sectoral advantages of a given district:

Manufacturing and Mining have a greater level of importance for the district than they do for the province Agriculture; Finance, Construction and Transport are relatively less important as compared to the province. The other key sectors in terms of GVA contribution are the general government sector, wholesale and retail, finance and business services sector. GVA generated through general government services is approximately R1,8 billion, which contributes 17.6% to total GVA. This sector has experienced average annual real growth of 2.6% per annum. Just over 17% of GVA can be attributed to finance (6.9%) and business services (10.2%), which collectively generate R1.8 billion worth of GVA to the Newcastle economy. These have also been the fastest growing subsectors, with finance and insurance services growing at an average rate of almost 9% per annum since 2000, and business services growing at 6.2% over the same period. Wholesale and retail trade contributes R1.4 billion to the local economy, which accounts for almost 14% of total GVA. Wholesale and retail trade have been growing at a modest rate of 2.63% per annum from 2000 – 2010.

7.3. POVERTY ASSESSMENT

Poverty is a complex concept to define and measure. Initial measures of poverty are usually based on financial indicators such as the World Bank measure of income less than $1/day. The World Bank recommends that when monitoring country poverty trends, indicators based on national poverty lines should be used in place of the WB measure. In view of this, the "Minimum Household Living Level (MHLL)" created by the South African Bureau for Market Research can be used as an indication of the prevalence of poverty in the study area. The MHLL states that in March 2004 an average household with 3.7 members living on less than R22,728/year (or R1,894/month) or less will be unable to meet its financial requirements.

In South African context, the National government currently considers the households with a monthly household income of less than R1600 as indigents. The percentage of people living in poverty in the Amajuba is estimated to be around 52.2% (260 915 people). A total of 56% households in Newcastle earn less than R800 per month. This clearly shows that Newcastle annual individual income is very low, a clear indication that individual households cannot afford basic necessities such as housing and health services. A total of 18 550 households were registered for indigent support due to high unemployment rate of 54%. Most of the poverty-stricken households of Newcastle are located in the East as well as the Traditional Authority areas. Low household income has led to illegal mining within the local municipality to supplement income for the poor especially in the rural areas thereby putting the environment at risk.

The income levels are very low in Dannhauser. Census 2011 reported that 76,3% of the population in Dannhauser have no monthly income, with a further 15% having monthly income of less than R1, 600 per month. The large proportion of the population (51,4%) within Emadlangeni receives no income and the income level of households in Emadlangeni is exceptionally low with just about 87% of households earning less R1, 500, which are classified as poor. The municipality has developed an indigent register, although not all people have been captured, efforts are being made to ensure that people do register on the database. This puts a strain on the municipality resources because almost the entire population falls within the indigent bracket. Although people have jobs, the lack of skills prevents them from getting better wages or salaries.

8. SPATIAL ANALYSIS

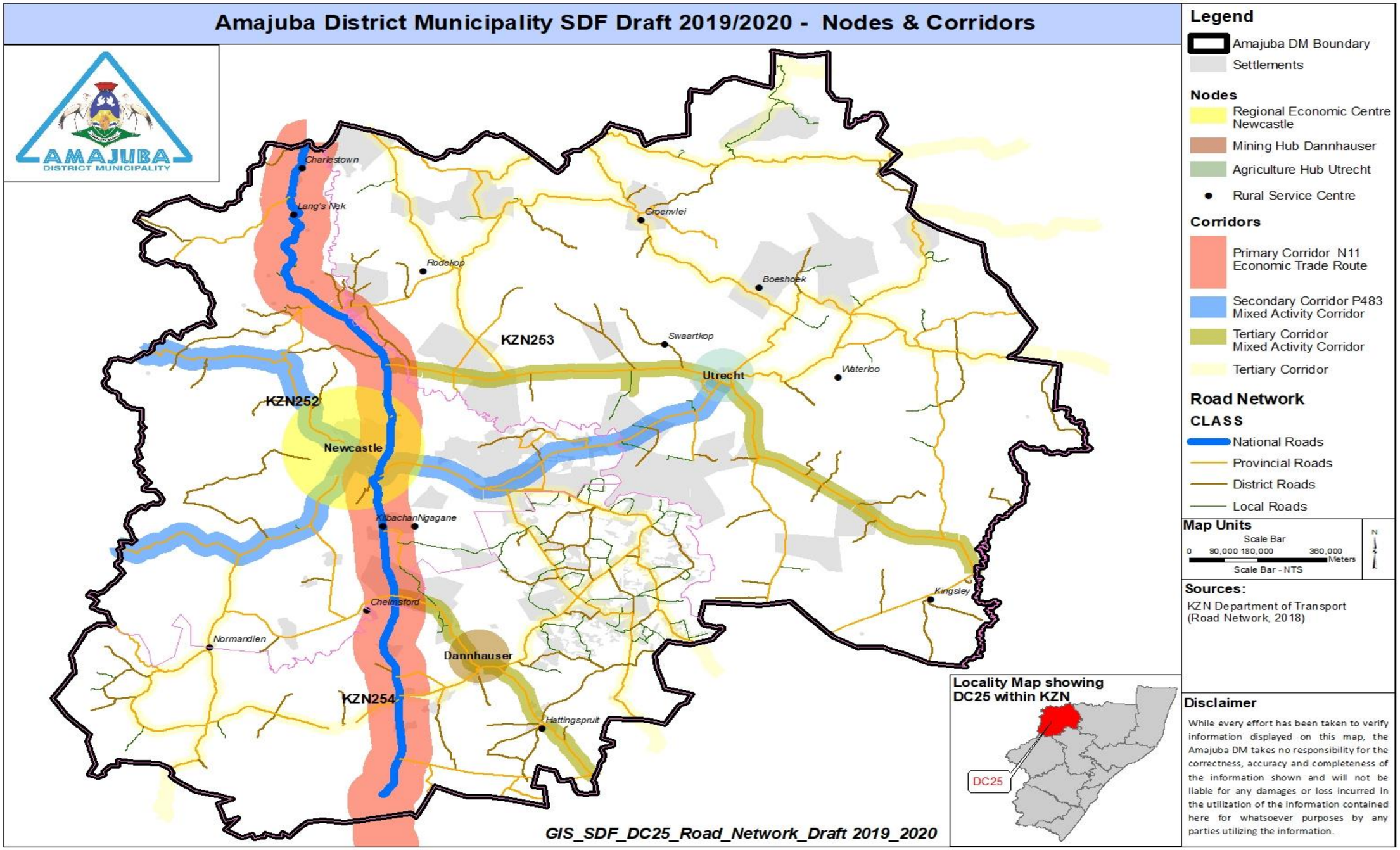
8.1. REGIONAL CONTEXT

Amajuba is administratively located within KwaZulu-Natal; however it is geographically positioned within space economy of four provinces which are Free-State, Mpumalanga, KwaZulu-Natal and Gauteng. This is due to its proximity in relation to the economic trading hubs of these provinces. The distance from the Amajuba to the major economic hubs within these provinces indicates that it is 144km away from Harrismith (Free-State), 152km from Ermelo (Mpumalanga), 259km from Pietermaritzburg (KwaZulu-Natal), 291km from Johannesburg (Gauteng) and 339km from Durban (KwaZulu-Natal). The position and role of the Amajuba in the regional space economy is tightly interlinked with these four provinces since the area have strong functional linkages. The challenge is to ensure that the area benefit from trading and undertaking commerce activities with these economic hubs as opposed to the role of a peri-pheral to the economy of these regions.

8.2. STRUCTURING ELEMENTS

8.2.1. THE ROLE OF THE N11

The N11 runs north to south through the central part of the municipal area. It is the busiest corridor in the province and a major link between the national industrial hubs of Johannesburg and Durban. It can be considered as the primary route within the area. This route is however, largely a movement corridor between the different areas of Amajuba. Due to the high volumes of traffic along this road, and the fact that it is largely being utilised as a main route by trucks and other freight vehicles, many opportunities exist for development that can capitalize on the existence of this route. Due to the limited access nature of this road, opportunity points exist at key intersections or off-ramps along its route.

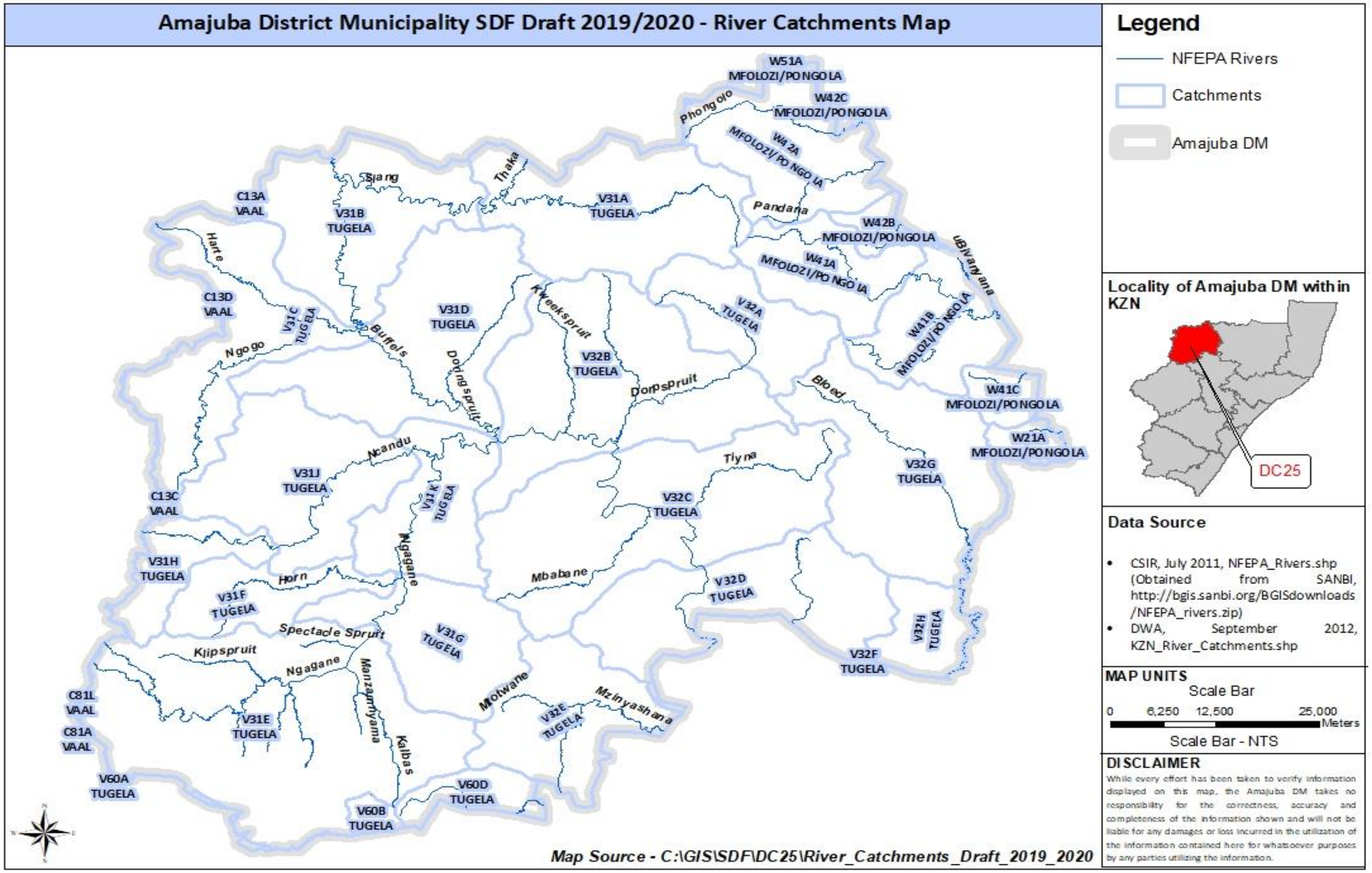


MAP 6: AMAJUBA DM NODES, SERVICE CENTRES AND CORRIDORS

8.2.2. INFLUENCE OF MAJOR RIVERS AND BOUNDARY DEMARCATION

The biggest rivers that are found within the within Amajuba are Pongola River, Blood River and Buffalo River. These rivers are the most visible natural structuring elements of the municipal area such that the Municipal Demarcation Board actually used these to demarcate the boundaries between and within Amajuba as follows:

- Pongola River – informed boundary demarcation on a small north portion to Emadlangeni Municipality.
- Blood River – informed boundary demarcation on the eastern portion of Emadlangeni Municipality.
- Buffalo River – informed boundary demarcation between Newcastle and Emadlangeni Municipalities. This river stretches all the way down to become a boundary between Dannhauser and Emadlangeni Municipalities.



MAP 7: AMAJUBA DM RIVER CATCHMENTS MAP

8.2.3. INFLUENCE OF STEEP TERRAIN AND MOUNTAINS

Slope and terrain are also very strong structuring elements in terms of Amajuba spatial configuration. The eastern part of Dannhauser Municipal Area, northern parts of Emadlangeni and western parts of Newcastle have higher slope inclines, indicating mountainous areas. This steep terrain within the traditional council areas promotes the dispersed settlements structure and creates difficulties in terms of bulk infrastructure provision. In fact most of the settlements within the rural parts of Amajuba have followed this terrain such that the homesteads have tended to locate within the flatter terrain while the steep spaces within and between settlements have remained vacant.

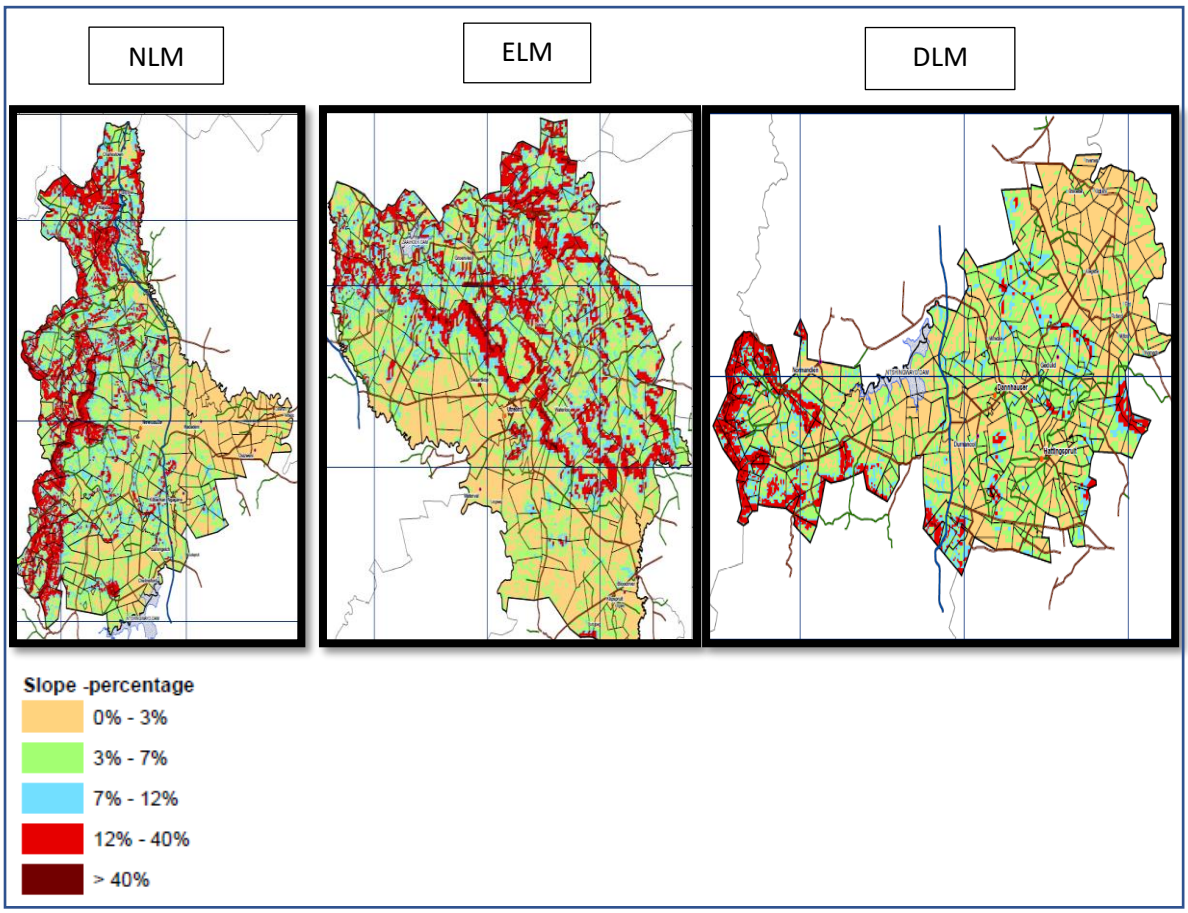


Figure 22: Steep Terrain & Mountainous Areas

8.2.4. IMPACT OF POST APARTHEID SPATIAL PLANNING LEGACY

The spatial policies of the past had a very strong impact on the structure and functionality of different areas within Amajuba Municipality. The most visible impact is fragmentation of communities as well as marginalisation of economic activities in an effort to undermine their participation in the economy. These policies enforced a system of physically locating people in areas with poor access to urban services and facilities, and effectively entrenched the

philosophy of unequal development. In the context of Newcastle urban complex, spatial fragmentation was implemented to effectively separate Newcastle west and the former dormitory suburbs of Madadeni and Osizweni. These two areas are situated at least between 15km and 35km from Newcastle central business district (CBD) in line with apartheid spatial engineering. Dannhauser and Emadlangeni Municipalities are predominantly rural in character with urban areas limited to the towns (Dannhauser and Utrecht) and surrounding areas that formed part of the coal mining activities.

Given the historical development of Dannhauser, the area does not have an easily discernible structure and settlement pattern. The development in most of the area is scattered with an absence of a strong nodal hierarchy. Uneven topography, membership of the community and traditional land allocation practices are the major factors that shape this settlement pattern. This spatial fragmentation, referring to separate blobs of development with no linkages, has the potential to undermine the role of Amajuba in its regional context and impact negatively on its ability to perform its functions effectively and efficiently.

8.4. SETTLEMENT PATTERN

8.4.1. NEWCASTLE CENTRAL BUSINESS DISTRICT

Amajuba District Municipality is a mixed of rural and urban in its character. This is particularly due to the existence of Newcastle as an urban complex while Dannhauser and Emadlangeni are predominantly rural. The key features of the settlement pattern can be broken down as follows:

- Urban settlements;
- Peri-urban settlements; and Rural villages

The development in most of the area is scattered with an absence of a strong nodal hierarchy. Uneven topography, membership of the community and traditional land allocation practices are the major factors that shape this settlement pattern.

The CBD is located in Newcastle West on the southern side of the confluence of the Ncandu and Jordan Rivers. Newcastle West is predominantly residential with the northern section being the most affluent. Ribbon development runs south-eastwards from the CBD along the R34 and includes a new shopping centre, restaurants, garage and car showroom, hotels and lodges. The northern portion of Newcastle West also accommodates the showgrounds, Monte Vista Casino and Conference Centre, a golf course and technical college. Immediately south of the CBD are the original residential areas of the town also laid out in the same gridiron pattern and home to the Newcastle Private Hospital and Newcastle Provincial Hospital, the police station and several home offices which have spread outwards from the CBD. South-west of the CBD are further residential suburbs. Newcastle CBD is currently going through a process of spatial transformation. This involves three main processes, namely:

Decentralisation of commercial and office space; Redevelopment; and Expansion of town area.

Decentralisation of commercial and office space occurs in the form of nodular development at both eastern and western entrances/gateways into Newcastle CBD. Newcastle west development includes several service industries, a community commercial centre, hotels and several associated developments. The area is earmarked for further commercial development.

A new office complex has also been developed in the area while infrastructure has been laid for mixed land use development. Other developments expected in this node in future include motor-showrooms, restaurants, etc. Redevelopment on the other hand, involves refurbishment of buildings vacant or under-utilised, because of economic downturn and relocation of offices to the new office node. This process also includes intrusion of office use, particularly professional offices, into residential areas that abut into the CBD. Several dwelling units have been granted office use rights or are being used as offices.

Newcastle Municipality has accordingly developed strategic responses to these trends. These include Newcastle West Precinct Plan, CBD Development Plan and Newcastle South Spatial Development Plan (SDP). The latter provides for a range of residential products, mixed land use and commercial nodes. The net effect of these plans is the extension of the town built - up area, shifting of the urban edge and opening of new interface zones. In view of its strategic location in northern KwaZulu-Natal, Newcastle is likely to remain a regional service centre unchallenged by other nearby town in the foreseeable future. Its market threshold is relatively secure but its economic and social vitality remains dependent on the state of its regional hinterland. The CBD itself has remained relatively stable.

8.4.2. NEWCASTLE CENTRAL INDUSTRIAL AREA

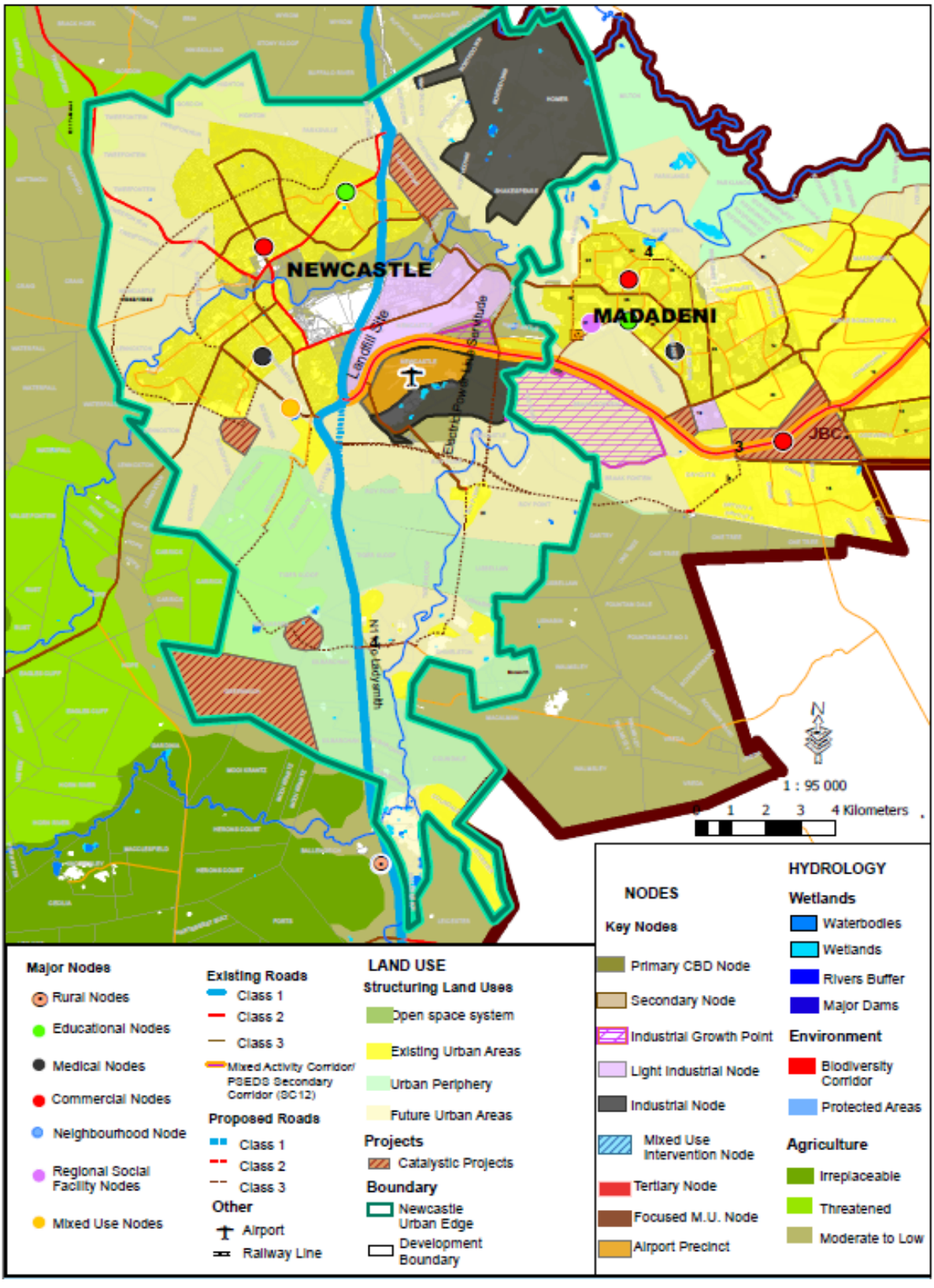
East of the CBD lies large industrial areas, the N11 and Arcelor Mittal facility as well as an airfield and landfill site. The Amcor Dam and Recreation Area are also located in this area. The area occupies approximately 516ha of land zoned for industrial use, of which only a small portion is developed. While the area accounts for a significant amount of employment opportunities in the NLM, it historically developed as a buffer between the former white only areas in the Newcastle West and the former black only townships of Madadeni and Osizweni.

8.4.3. MBO COMPLEX

MBO is located along P483 and comprises of the Townships of Madadeni and Osizweni, and the JBC area. Madadeni and Osizweni were laid out in the 1970s on the basis of a Master Plan developed in 1975 and reviewed in June 1985. The plan was based on the dominant planning doctrine and highly influenced by the political regime. It gave rise to a compact linear urban form with rectilinear road network based on 3 to 4 km grid spacing of major arterials.

The JBC area, which joins the Madadeni and Osizweni areas, has a more peri-urban character, consisting mainly of informal settlements. This area developed as a result of “shack farming” thus transforming the area from agriculture into an urban slum, with no formal planning. This has given rise to a complex set of land legal issues including title adjustment, beneficial occupation rights, tenancy and freehold ownership rights. The MBO complex is characterised by poor condition of services and general lack of amenity and pleasant appearance.

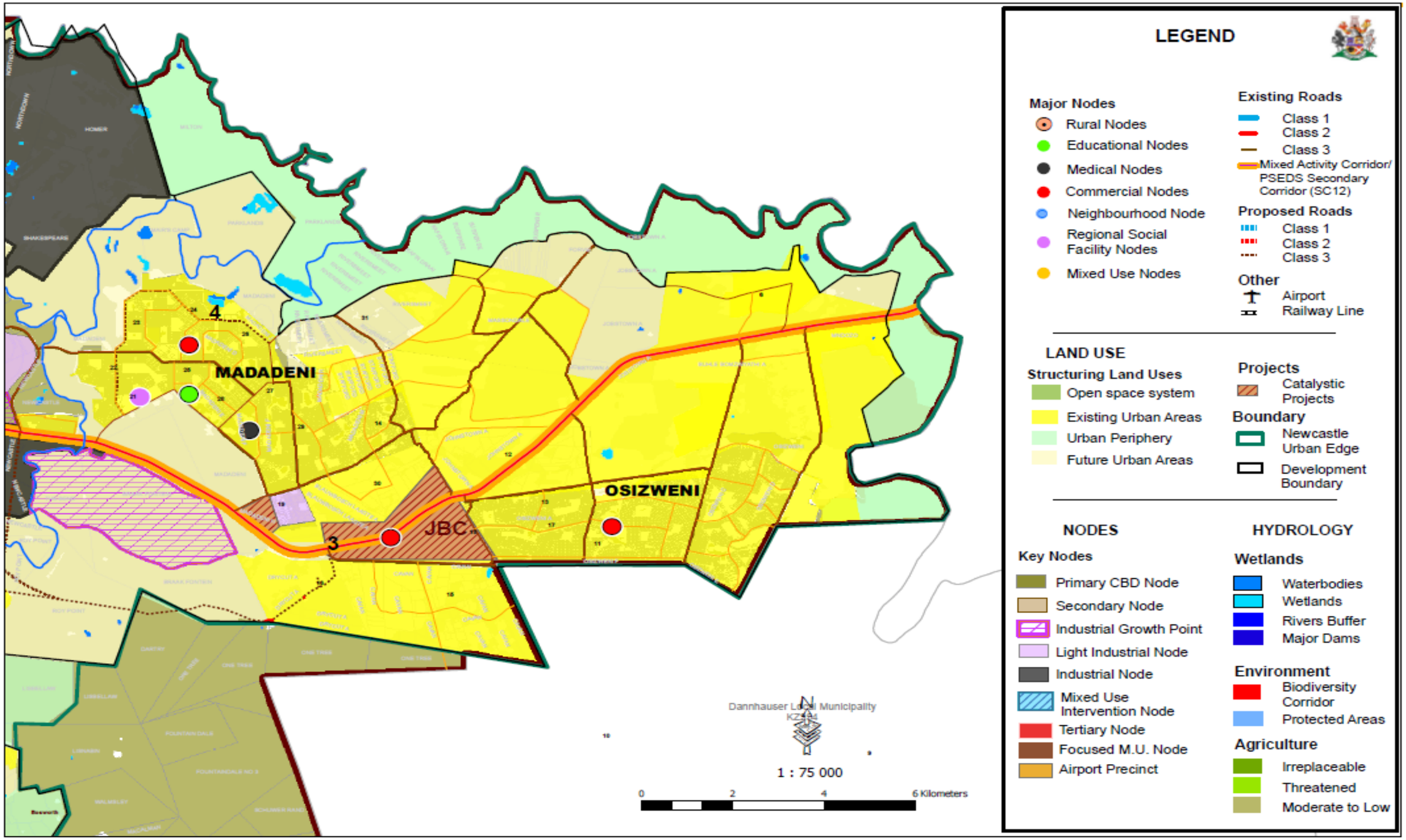
This robs the area of private sector investment and perpetuates dependency on Newcastle town. Urban renewal programmes being initiated in the MBO complex will address the upgrade of the public realm and improve the quality of life of the previously disadvantaged. It will also promote both public and private sector investment in the area. Access to public facilities and a safe environment are the other important aspects of quality of life that should be addressed in these areas.



AMAJUBA DM SDF 2019/2020 - NEWCASTLE WEST SERVICE DELIVERY REGION

MAP 8: NEWCASTLE WEST SERVICE DELIVERY REGION

Source Newcastle SDF 2018/2019



AMAJUBA DM SDF 2019/2020-NEWCASTLE LM EASTERN SERVICE DELIVERY REGION

MAP 9: NEWCASTLE EASTERN SERVICE DELIVERY REGION

Source Newcastle SDF 2018/2019

8.5. DANNHAUSER TOWN

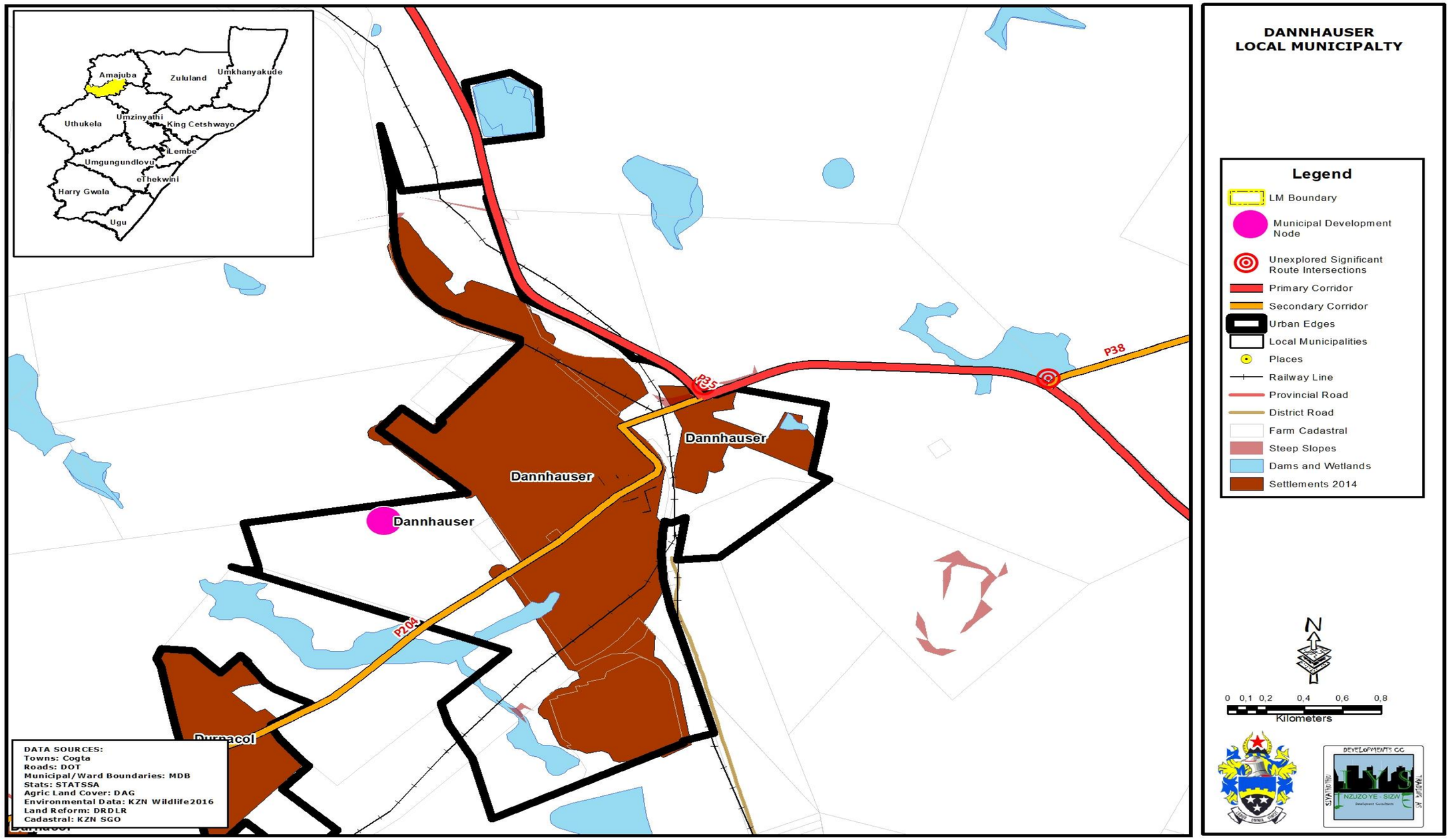
Dannhauser town, encompassing the Emafusisini and Durnacol areas is the seat of Dannhauser Local municipality. It is classified as a town in the SDF and has since become a somewhat dilapidated rural town with aging infrastructure, poorly maintained roads, and lack of aesthetic appeal. The town consists of one main street, and the main shops are the post office, bank, chemist and some grocery and hardware stores. The residential component of the town has also been subjected to urban decay and the former glory of its beautiful vintage architectural buildings has since been lost.

8.6. UTRECHT TOWN

Utrecht town is the main administrative centre for Emadlangeni Municipality. It is located at the foothills of Balele Mountains and into was incorporated in the former Colony of Natal. The layout of the town is a simple grid-iron with a commercial centre (CBD) at the centre of it and residential/ dwelling uses around it. Similar to Dannhauser, the town is dilapidated with aging infrastructure and lack of aesthetic appeal.

8.7. HATTINGSPRUIT AND DURNACOL

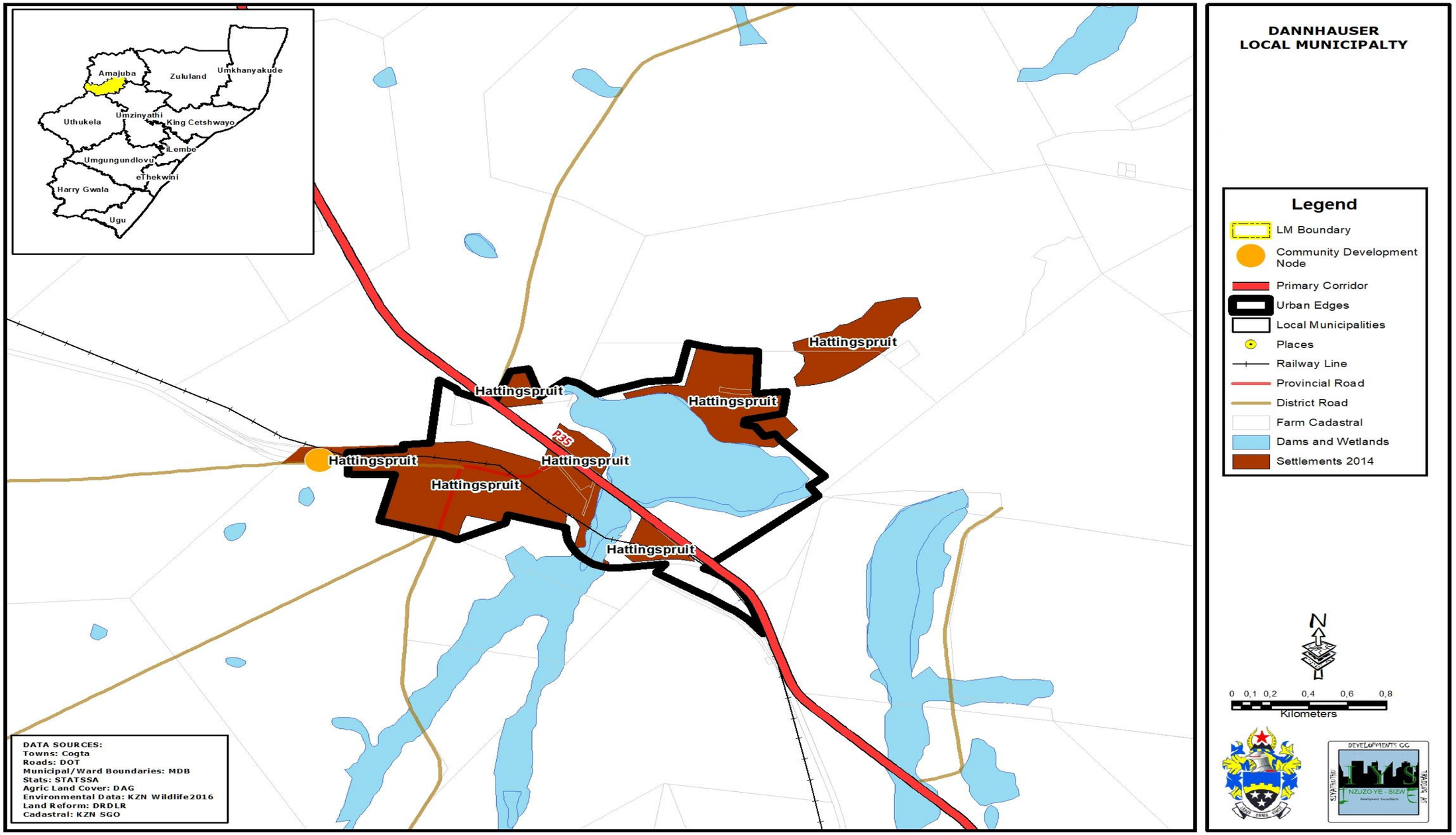
The settlements of Hattingspruit & Durnacol have also been identified as towns and have been subjected to urban decay town with poorly maintained infrastructure, bad roads and no aesthetic appeal.



AMAJUBA DM SDF 2019/2020 – DANNAHUSER TOWN MAP

MAP 10: DANNHAUSER TOWN MAP

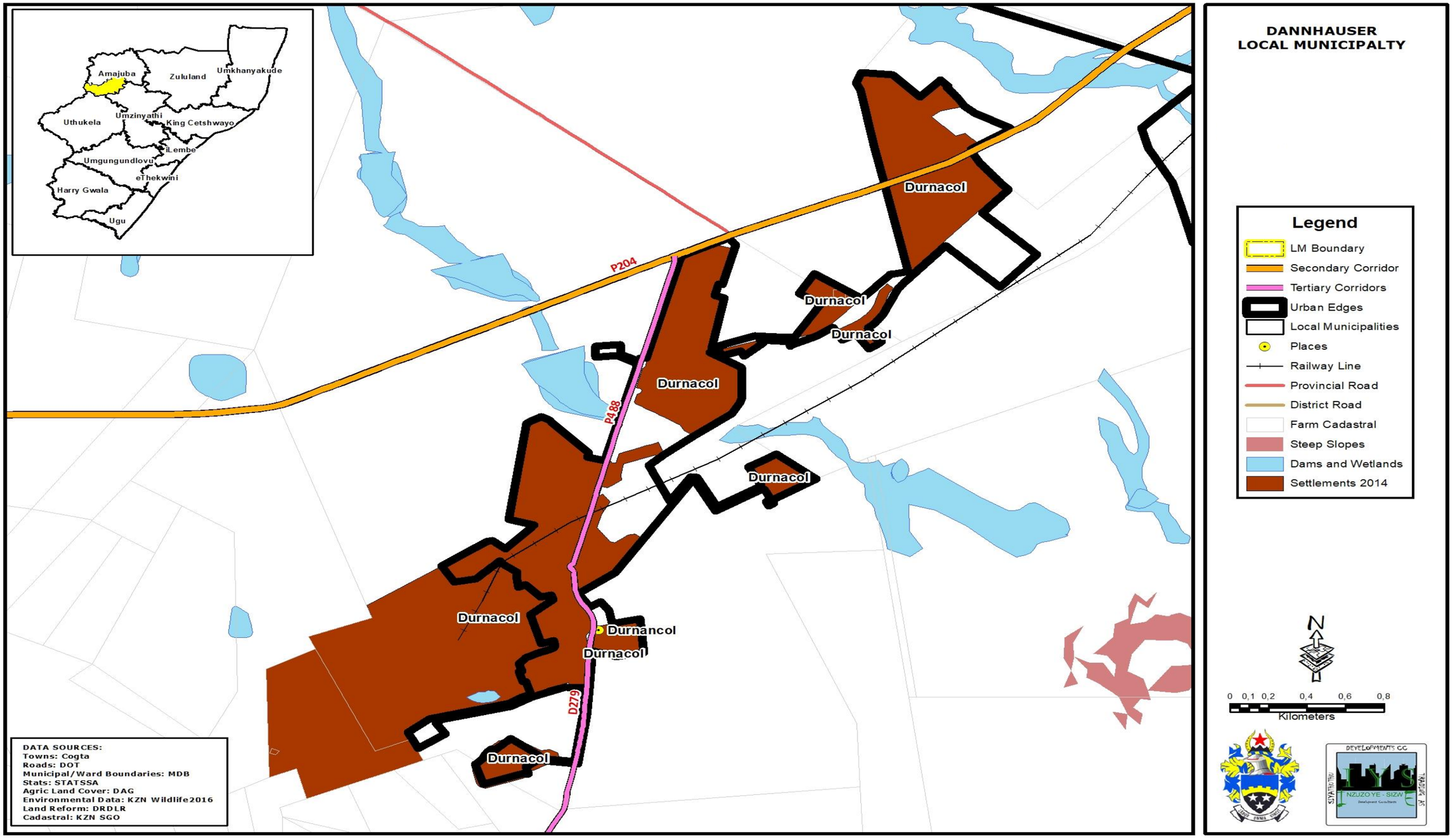
Source: Dannhauser SDF 2018/2019



AMAJUBA DM SDF 2019/2020 – HATTINGSPRUIT TOWN MAP

MAP 12: HATTINGSPRUIT TOWN MAP

Source: Dannhauser SDF 2018/2019



AMAJUBA DM SDF 2019/2020 – HATTINGSPRUIT TOWN MAP

MAP 13: DURNACOL TOWN MAP

Source: Dannhauser SDF 2018/2019

AMAJUBA DM SDF 2019/2020 – UTRECHT TOWN MAP

MAP 14: UTRECHT TOWN MAP

Source: Utrecht LUMS 2007

8.8. PERI URBAN SETTLEMENTS

8.8.1. KINGSLEY

Kingsley is situated on the R33 road between Bloedrivier and Dundee. It emanated from a land reform project and it is served with social facilities such as the police station, schools, taxi rank, shops and petrol filling station.

8.8.2. GROENVLEI

Groenvlei is situated halfway between Utrecht and Wakkerstroom. There is a land reform settlement (Nkosi Shabalala) which has strengthened the aspirations of the municipality to develop this area as a node. The area is linked to Paulpietersburg via a gravel road and exists with a variety of facilities have been developed.

8.8.3. AMANTUNGWA

Amantungwa is located along the P243 between Utrecht and Madadeni/Osizweni. It is a land reform settlement. The Amantungwa Trust area is strategically located between the Utrecht Municipality and the Dicks Cluster in the Newcastle Municipality which is ensuring integration and densification.

8.8.4. NZIMA

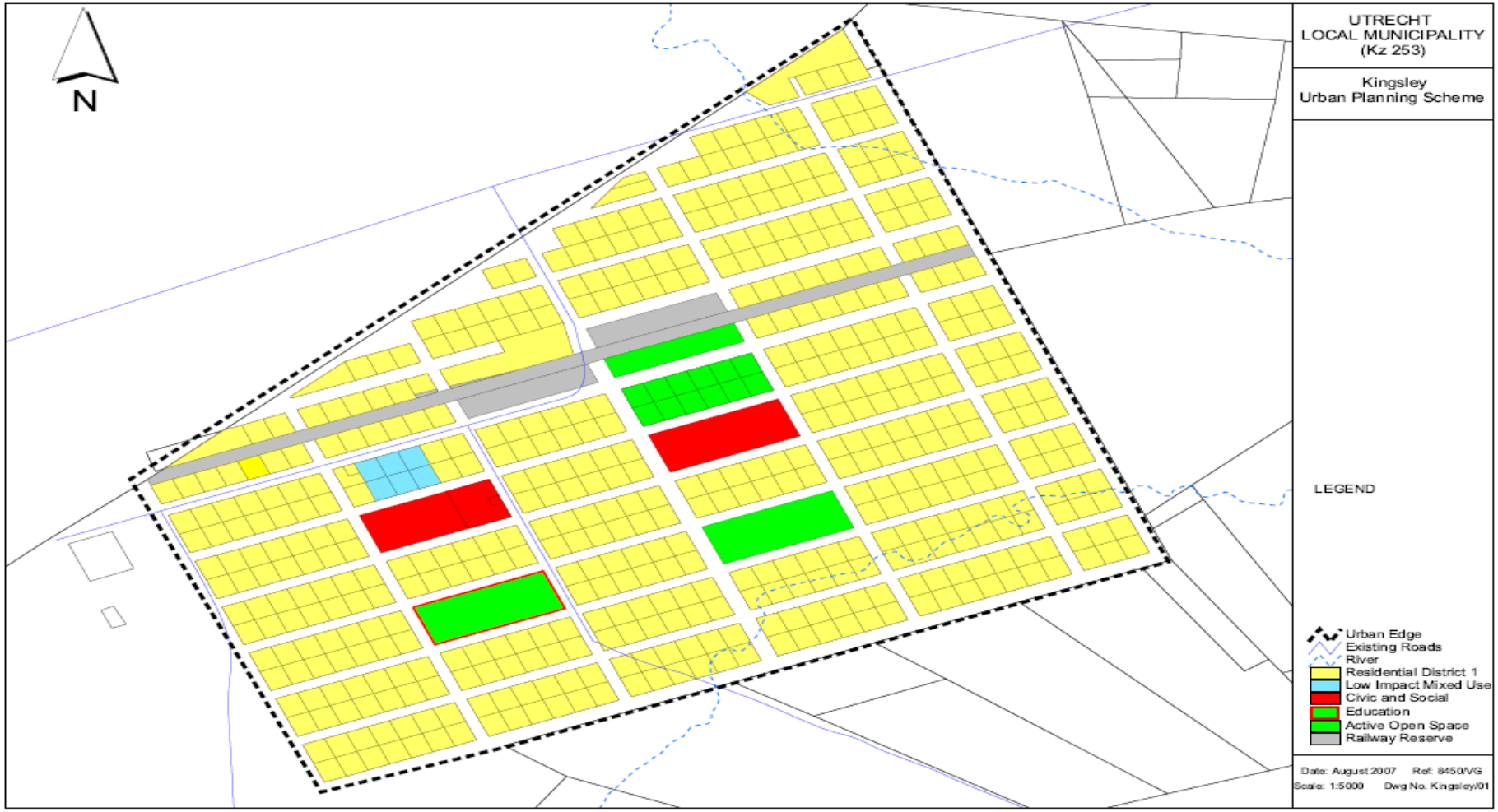
The Nzima satellite is situated to the far north of the district. Access to the node is via the Wakkerstroom/ Piet Retief road. A total of 300 families are settled here. Due to poor direct access to Utrecht district, people experience problems regarding the use of social infrastructure. The facilities in this area are limited but will be upgraded with the development of the land reform project.

8.8.5. MABASO

The Mabaso satellite occurs around the Pivaanspoort area. Adjacent to this development is the Kempslust mine area and SAPPI Forest development. Both these areas also house large numbers of people.

8.8.6. BLUE MOUNTAIN

This satellite is situated at the fork of the district road which connects the R34 with the D543 road which go to Wakkerstroom and Ingogo respectively.



AMAJUBA DM SDF 2019/2020 – KINGSLEY MAP

MAP 15: KINGLSLEY MAP

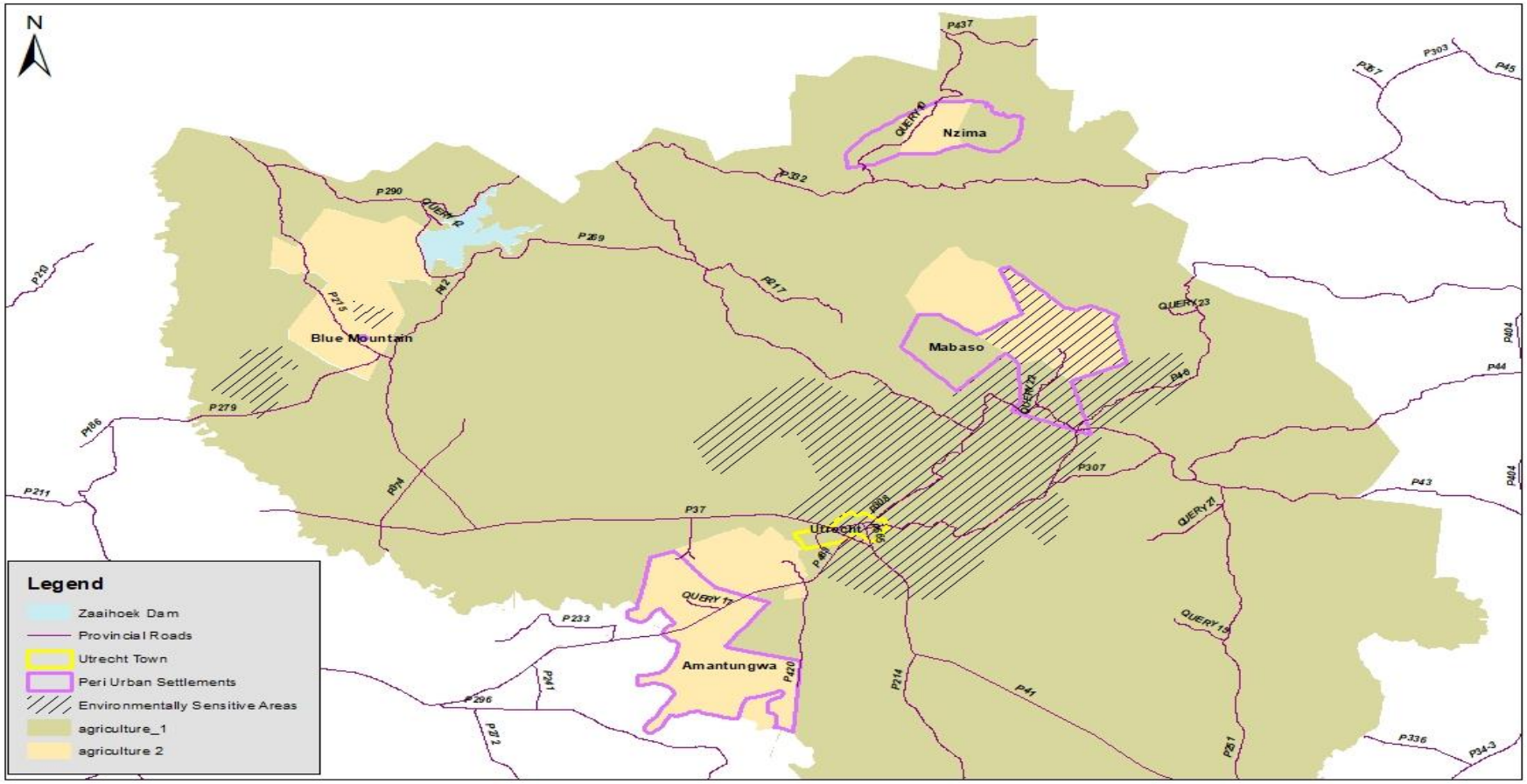
Source: Utrecht LUMS 2007

AMAJUBA DM SDF 2019/2020 – GROENVLEI MAP

MAP 16: GROENVLEI MAP

Source: Utrecht LUMS 2007

AMAJUBA DM SDF 2019/2020 – PERI URBAN AREAS MAP (EMADLANGENI)



MAP 17: PERI URBAN AREAS MAP (EMADLANGENI)

Source: Utrecht LUMS 2007

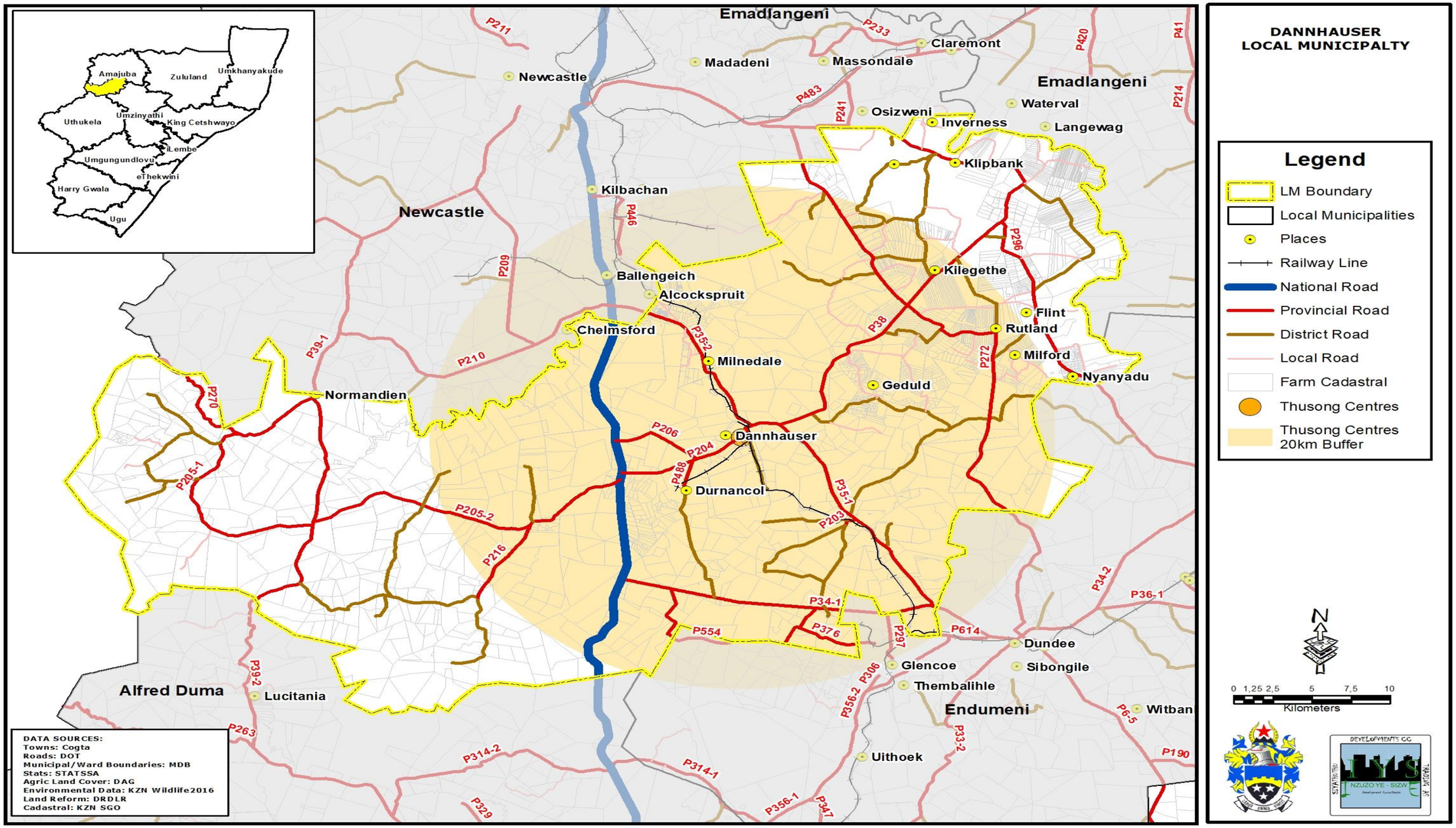
8.7. RURAL VILLAGES

8.7.1. KWAMADKANE

Nellie (KwaMdakane) has been identified as a service hub as it provides a higher order and more permanent range of services. It is a highly populated rural settlement that is dynamic and vibrant. The main attraction in KwaMdakane is the MPCC, which provides a number of government and non-government services, including and not limited to, pension pay points, health care, sporting facilities and social welfare services. KwaMdakane is a typical rural settlement characterised by subsistence farming, an array of livestock farming and economic activity in the form of small- medium scale businesses e.g. tuck shops, brickyards, etc. KwaMdakane is identified as a service hub in the SDF because of the MPCC.

8.7.2. NYANYADU & UBUHLEBOMYINYATHI

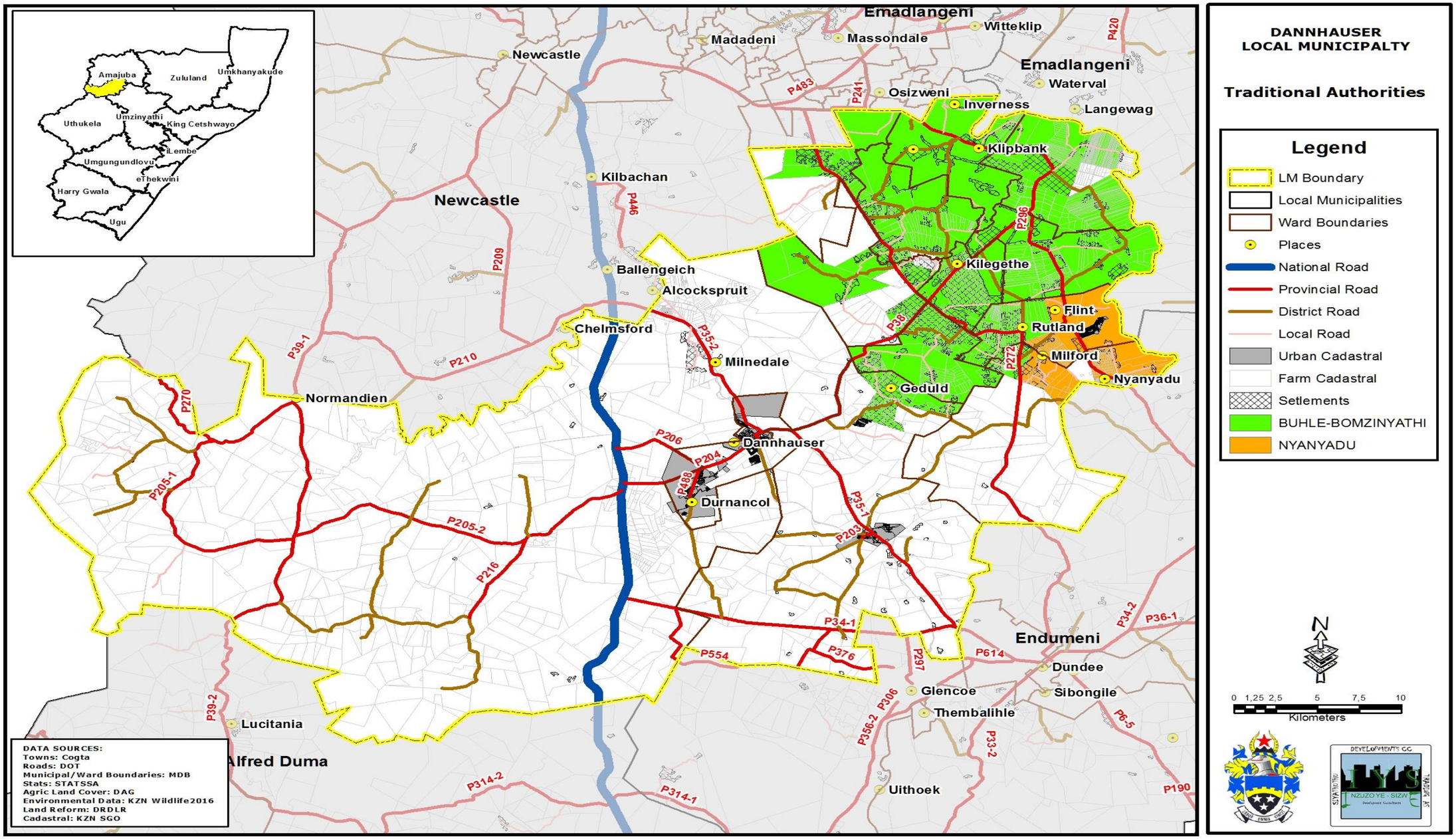
The north-eastern portion of the Dannhauser municipal area is largely land under traditional authorities and includes a portion of Ubuhlebomzinyathi Community Authority (that falls within Dannhauser Municipality) covering an area of about 13, 395 km2 in extent and Nyanyadu Traditional Council area which accounts for about 1, 1190 km2 of the total municipal area. The status of Ubuhlebomzinyathi as a land administration structure, and its responsibility in the allocation of land for different land uses is unclear following the recent transformation of the institution of traditional leadership in the province and the establishment of traditional councils. Due to the increasing settlement pressures, traditional councils are forced to reduce standards, which negatively affect the settlement pattern, as there is an immediate rapid expansion of settlements, which are highly saturated with limited resources. This creates a problem, as the systems in place are not capable of managing urbanising settlements. Land administration and land-use management by traditional authorities in rural areas, needs to be made more transparent and be guided by administrative principles that are consistently applied. This will ensure that it does not become a constraint on economic, spatial and communal development in peri-urban and rural areas (Mathe K: 2010).



AMAJUBA DM SDF 2019/2020 – MPCC THUSONG SERVICE CENTRE 20KM BUFFER

MAP 18: MPCC THUSONG SERVICE CENTRE 20KM BUFFER MAP

Source: Dannhauser SDF 2018/2019



AMAJUBA DM SDF 2019/2020 – TRADITIONAL AUTHORITIES MAP DANNAHUSER LM

MAP 19: TRADITIONAL AUTHORITIES MAP DANNAHUSER LM

Source: Dannhauser SDF 2018/2019

8.7.3. CHARLESTOWN AND INGOGO

Charlestown and Ingogo are small rural settlements that are established on commercial farmlands. Charlestown provides basic services and functions to the surrounding agricultural areas and is identified as a tertiary node in Newcastle SDF, together with Lennoxtown. Ingogo, on the other hand, is a purely rural settlement based on its low population numbers, and is classified as a rural node, as is Leokop. Other rural settlements are located within Ubuhlebonzinyathi Community Authority area and include settlements that generally fall within the traditional leadership of AmaHlubi in the Drycut area and Khathide along the northern boundary of the Newcastle Municipality.

8.7.4. FORMER MINING SETTLEMENTS: KILBARCHAN, INGAGANE & BALLENGEICH

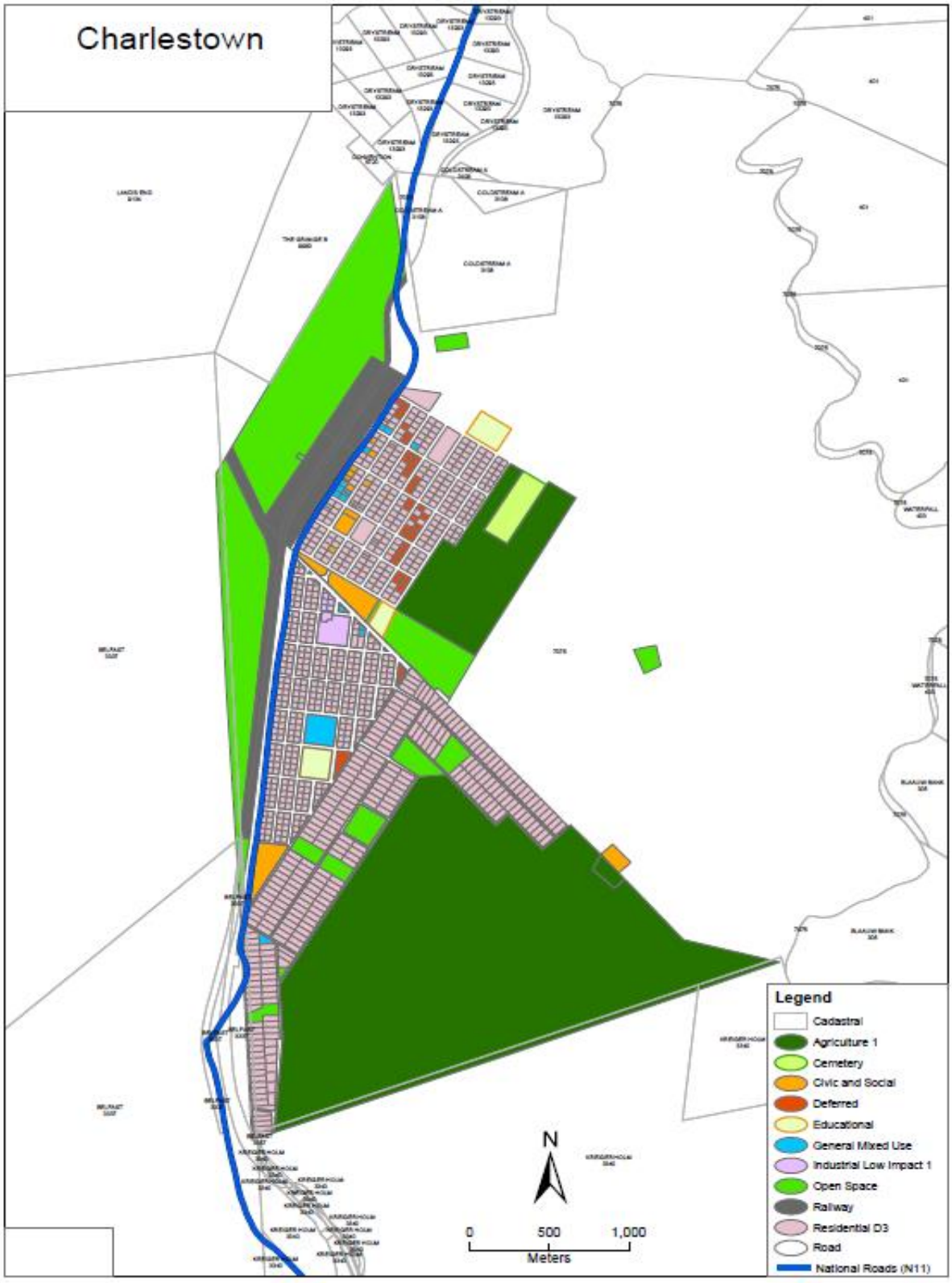
A number of settlements are also located in the south-eastern portion of Newcastle LM. These settlements are scattered throughout the area and are mainly as a result of mining activity, which is concentrated along a mining belt that runs from the centre of the municipal area towards the south east. The mines have stimulated the development of numerous smaller settlements, such as Kilbarchan, Ingagane and Ballengeich. It has however impacted negatively on the spatial structure of the Municipal area by preventing development of an integrated urban structure. Higher standards of housing and access to infrastructure are found in these formal settlements. The settlement pattern can mainly be ascribed to the mining activities and the Ingagane power station in the area, which caused the discrete pockets of settlements. These are mostly around or close to mining activities. Some of the mining activities have however been downscaled or closed down.

8.7.5. NORMANDIEN

The Nomandien Pass is a cross-border settlement that situated within Newcastle and some parts of it overlaps to Dannhauser Local Municipality. According to the Newcastle SDF (2010), Nomandien Pass is relatively isolated from the main arterial routes such as N11. It is accessible by the dirt district road to Free-State. The area is located within the farmlands. It is identified as a Rural Service Centre by Newcastle SDF. It is positioned at the plateau and it overlooks the beautiful valleys of that act as the physical borders of these provinces. There are currently no major activities that have not taken place to impact nor disturb the environment within the node. The vegetation is mostly in pristine condition. There are few facilities which includes a Police Station and a small settlement that mainly accommodates the farming community.

The beautiful country side, imagery and feel of Nomandien Pass is most likely to attract physical development of a tourism nature including holiday homes as well as Hiking & Trails, Bed and Breakfast establishments. The unique location of Nomandien Pass on top of a Plateau plus the secluded and remote bushveld-covered valleys of the escarpment lend themselves

to all manner of development, but specifically the hiking experience. Its remoteness has contributed to a lack of major physical development however it retains its charming quality which gives the countryside its wonderful character.



AMAJUBA DM SDF 2019/2020 – CHARLESTOWN LAND USE MAP

MAP 20: CHARLESTOWN LAND USE MAP

Source: Newcastle SDF 2018/2019

8.8. URBANISTAION AND POPULATION OUT-MIGRATION

A comparative analysis of urbanisation within the district demonstrate that Newcastle Urban Complex with its associated complex of townships known as MBO (i.e. Madadeni, Blaauwbosch and Osizweni Urban Complexes) have experienced a substantial amount of urbanisation. This is evidenced from population growth that the area has experienced. Urbanization can be described as the rapid and massive growth of, and migration to large cities.

Urban Settlements	Wards	2001	2011	% of Growth (+) or Decline (-)
Newcastle Urban Complex	2,3,4,5 and 20	49094	52371	6
Madadeni Urban Complex	14,19,22,23,24, 26,27,28 and 29	83590	92362	9
Osizweni Urban Complex	7,8,9,10,11,12, 13,15,16,17,18 and 30	133536	141906	6
Dannhauser Town	2	9816	8095	-21
Utrecht Town	2	5488	5290	-4
TOTAL		**281524**	**300024**	**6**

Table 12: Comparative Growth Rates 2001-2011

Source: Census 2011

With reference to table above the population that resides within the urban areas (within all towns of the district) have increased by 6%. These urban areas accommodate 60% of the total district population. Madadeni complex had the highest level of urbanisation which caused its population to increase by 9% between 2001 and 2011. This is followed by Newcastle and Osizweni Complexes which had a population growth of 6% each. Both Dannhauser and Utrecht Towns experienced population decline which implies that these areas are experiencing population out-migration. Dannhauser is experiencing a great level of out-migration such that its population declined by 21% while Utrecht's population declined by 4%.

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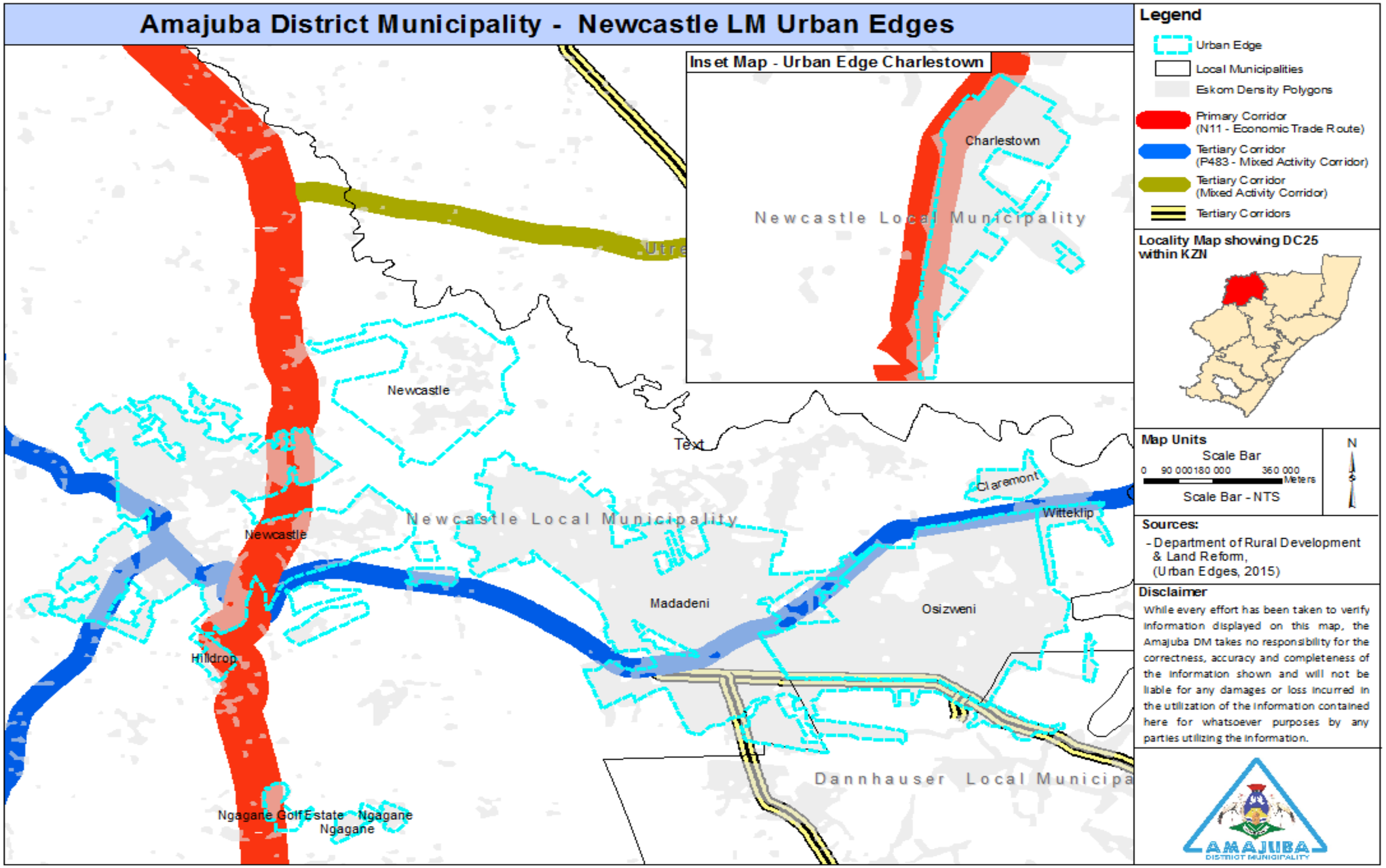
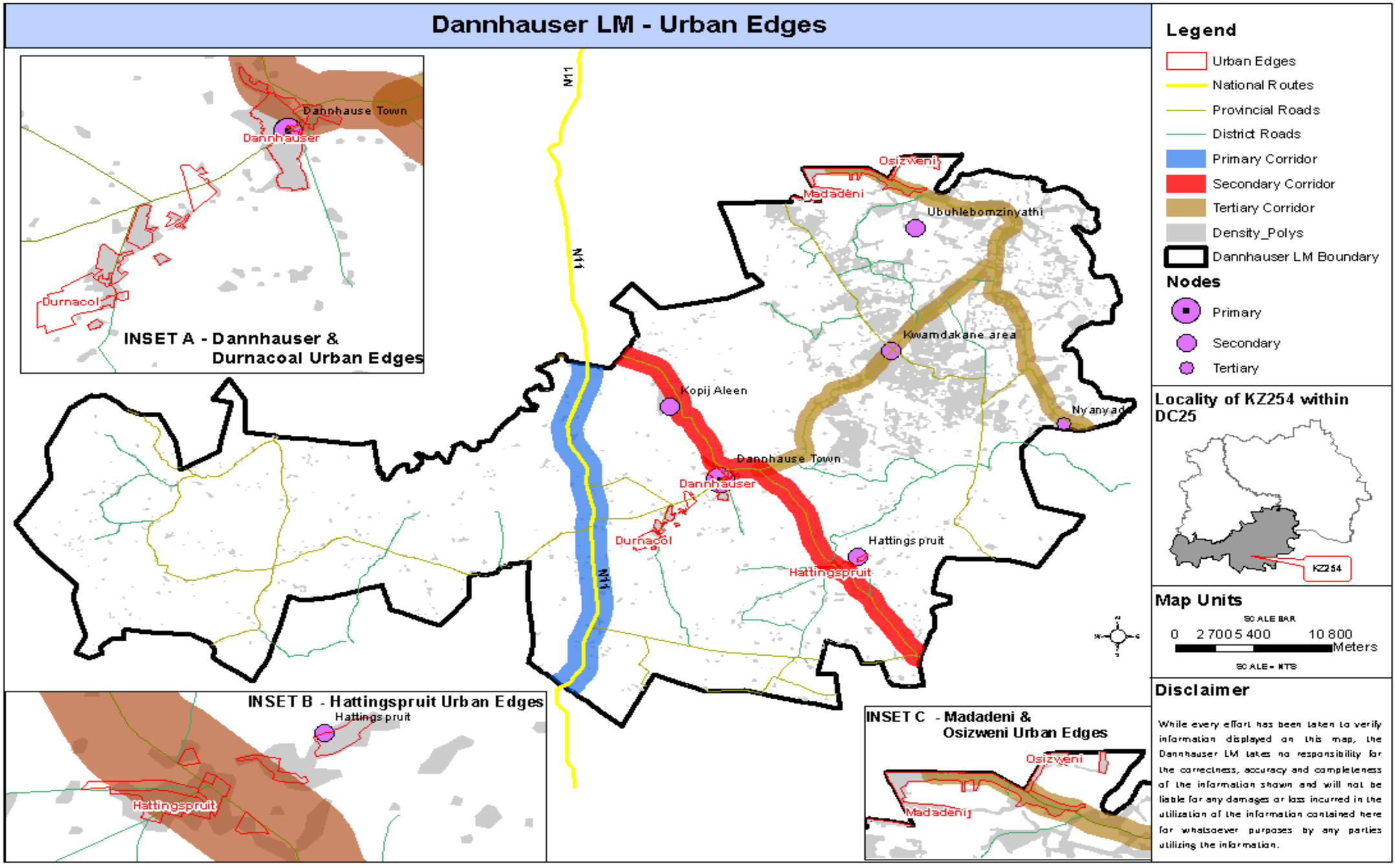
According to Census 2011, the type of housing within the district is mainly dominated by Brick Houses (80%), Traditional Houses (9%) and Flats (3%). Based on the Municipality's housing waiting list the total demand for housing is currently estimated at 10 700 units. This is divided into demand in Urban Areas (8 200) and demand in Rural Areas (2 500).

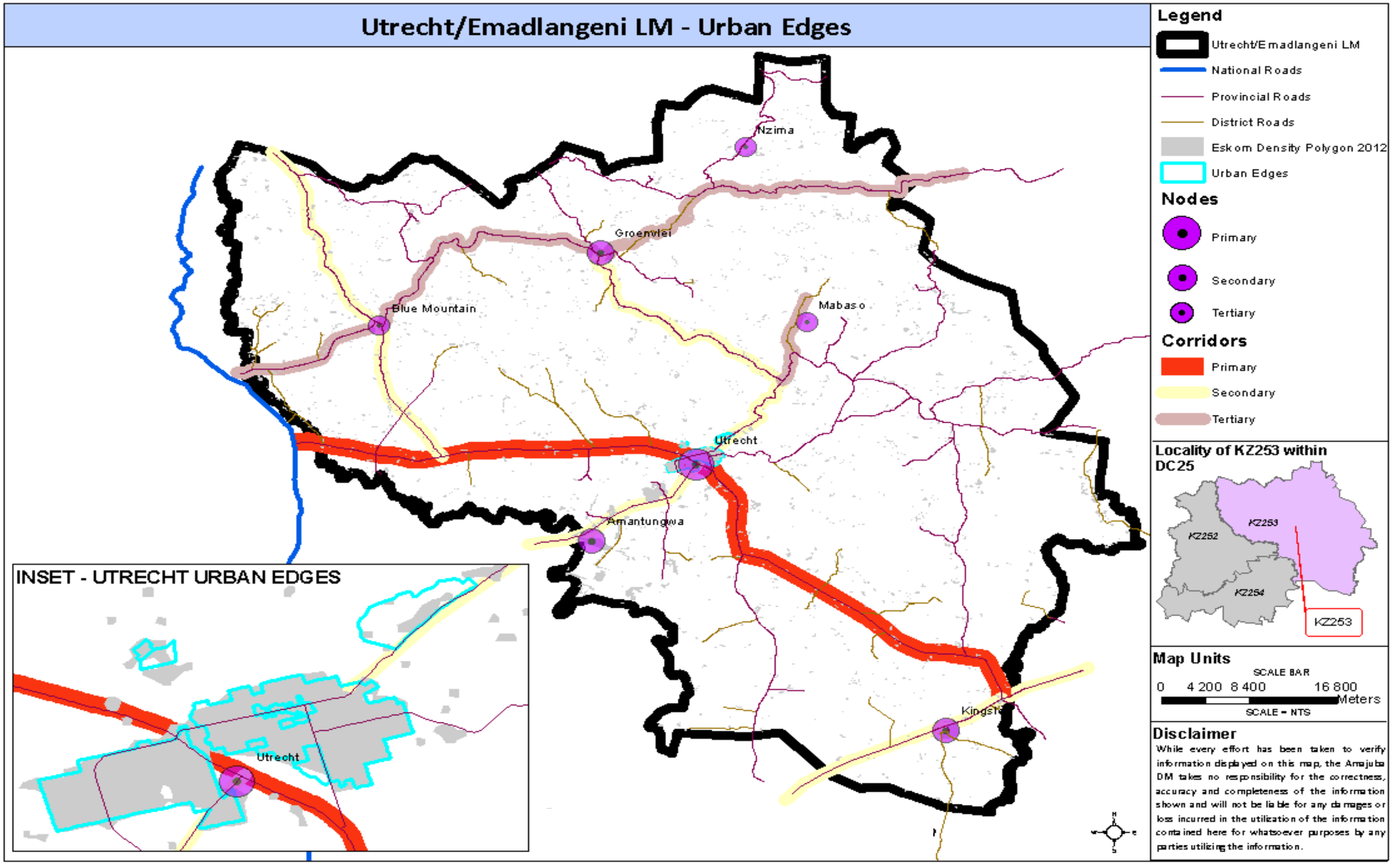
There has been an influx of people from the rural to the urban and the population surroundings Dannhauser (e.g. S'khobharreni) has increased. Reasons for the influx could be attributed to improved work opportunities, saving on transport costs and improved schooling. Unfortunately with the population growth there have been social problems such as increase in crime levels and health problems. Previous planning of the existing towns did not take this urbanization into consideration resulting in bulk services being inadequate.



MAP 21: URBAN EDGES MAP FOR NEWCASTLE LM



MAP 22: URBAN EDGES MAP FOR DANNHAUSER LM



MAP 23: URBAN EDGES MAP FOR EMADLANGENI LM

8.9. HOUSING DELIVERY

Achieving sustainable human settlements is one of the main spatial goals within an area such as Amajuba District which is characterised by settlement pattern that has encounter a high level of disintegration and fragmentation. An opportunity still exists to turn the situation around through facilitating and promoting the evolution of these discrete pockets of settlements into sustainable, integrated human settlements clusters. This is bearing in mind the fact that settlements are not static, they respond to change and are continuously in the process of transformation. The key challenge is to turn them from being creations and remnants of the apartheid regime into sustainable human settlements.

A sustainable settlement improves the level of choice, encourages creativity and investment while a less sustainable settlement imposes a lifestyle on people and results in unnecessary expenses. It is neither possible nor desirable for settlements to be homogenous hence an emphasis on choice.

8.9.1. HOUSEHOLDS AND SERVICES

The number of households over the years has increased; looking at the table below it is evident that the numbers of households in the ADM have almost doubled between 1996 and 2011. Contrary to the doubling of the number of households and the increase in the population the house hold size have decreased which is an indication that families are breaking away from each other which is also an indication more people are sustaining themselves.

Emadlangeni LM has the least households by the highest household average for 2011 which is typical for a rural area with little services available.

Number of households and household size			
Local Municipality	**Year**	**Number of households**	**Average Household Size**
Newcastle LM	2001	55217	5,1
	2011	71164	4,6
	2016	84272	4,2
Emadlangeni LM	2001	3378	6,2
	2011	6187	4,7
	2016	6252	5,2
Dannhauser LM	2001	15555	6,2
	2011	19320	5,3
	2016	20439	4,9
Amajuba DM	2001	74150	5,4
	2011	96671	4,7
	2016	110963	4,4

Table 13: Number of households and household service

8.9.2. DWELLING TYPOLOGIES

When Census was first conducted there was a larger number of informal dwellings which did not adhere to the objectives of the South African Constitution mainly to provide safe environments and quality housing. The Department of Human Settlements together with the local municipalities have continuously worked in ensuring that all communities have access decent housing. A significant amount of work has been done to do away with informal settlements and unsafe structures with the achievements to date there is still more that needs to be done. Table 14 below highlight the number of households as per the dwelling typology.

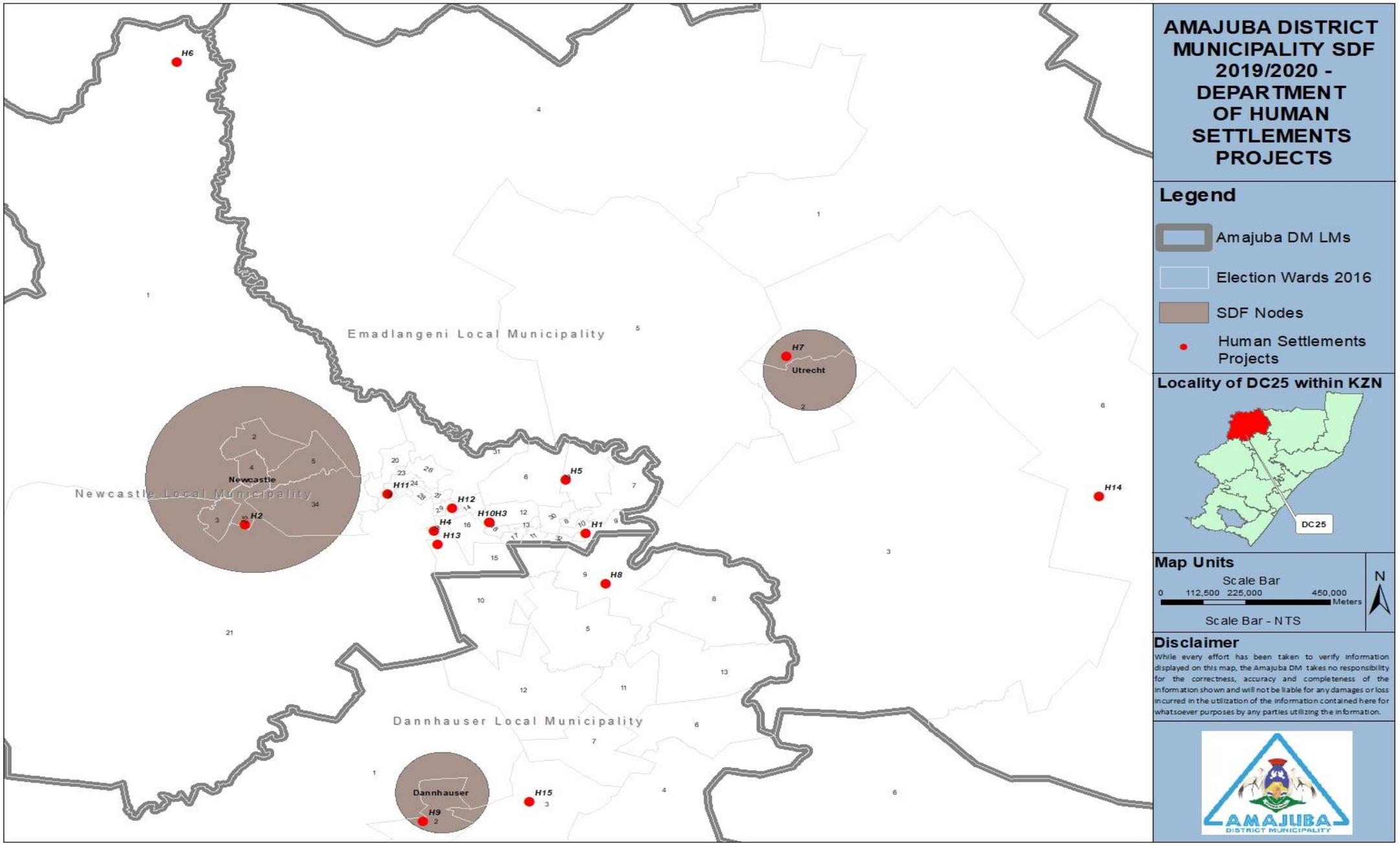
Dwelling Typologies				
Municipality	**Year**	**Formal Dwelling**	**Informal dwelling**	**Traditional Dwelling**
Amajuba DM	2001	75154	7633	13429
	2011	97341	5100	7949
	2016	98958	4494	80473
Newcastle LM	2001	59423	6851	4649
	2011	76792	4459	2642
	2016	10781	2077	2816
Emadlangeni LM	2001	2836	184	2981
	2011	3644	148	2409
	2016	6153	89	5803
Dannhauser LM	2001	12895	598	5799
	2011	16905	493	2898
	2016	1288	8	1255

Table 14: Dwelling Typologies

The Department of Human Settlements has provided the Amajuba DM with a list of funded projects for 2019/2020 which is reflected in the table below:

AMAJUBA 2019-20 BUISNESS PLAN -FUNDED PROJECTS				
HSS Project Number	**HSS Project Desc**	**Total Annual No of Sites**	**Total Annual No of Units**	**Total Annual Budget**
K13030003/8	K13030003 Municipality Accredtation Funding	0	0	R 7 620 000,00
K14030026/1	K14030026 Dannhauser Housing Project(New annexure D)	150	0	R 7 650 000,00
K17090005/1	K17090005 Khayalethu Housing Project(18/19)	0	0	R 205 000,00
K02110004/1	02110004 Osizweni Section 'e" Slum Clearance	0	151	R 13 042 248,00
K11090004/1	K11090004 Johnstown, Blaauuboschslaagte and Cavan (JBC) PH,1	130	0	R 6 630 000,00
K11090011/2	K11090011 Madadeni H39	0	125	R 15 675 000,00
K11090012/2	K11090012 Fairleigh /siyahlala-la Housing Project	0	140	R 16 820 000,00
K12020009/2	K12020009 Charlestown Housing Project	0	130	R 16 290 000,00
K13050009/1	K13050009 N11 Community Residential Units	0	50	R 20 000 000,00
K14040032/1	K14040032 UbuhleboMzinyathi Rural (New Annexure D)	0	140	R 17 780 000,00
K14120001/1	K14120001 Madadeni Storm Damaged 650 Newcastle Municipality and Mageba Project cc	0	0	R 11 881 529,00
K15090008/1	K15090008 Johnstown, Blaauuboschslaagte and Cavan Phase 2 & 3 Housing Project(New Annexure D)	0	0	R 850 000,00
K16050004/1	K16050004 Kwamathukuza Housing Project Phase 2	0	0	R 500 000,00
K17090003/1	Drycut Farm Housing Project	0	0	R 963 000,00
K17090007/1	Soulcity/stafford Hill (18/19)	0	0	R 400 000,00
K17090009/1	Vezokuhle 18/19	0	0	R 608 000,00
K20000069/1	20000069 RuralStriijbank	0	57	R 7 239 000,00
K11120006/1	K11120006 Goedehoop Housing Project	127	0	R 6 477 000,00
		407	**793**	**R 150 630 777,00**

Table 15: List of funded projects from the Department of Human Settlements for 2019/2020



Please refer to Table 16 the Map Label Guide overleaf

MAP 25: DEPARTMENT OF HUMAN SETTLEMENTS FUNDED PROJECTS FOR 2019/2020

LABEL NO	HSS Project Number	HSS Project Desc	Total Annual No of Sites	Total Annual No of Units	Total Annual Budget
NOT MAPPED	K13030003/8	K13030003 Municipality Accredtation Funding	0	0	R 7 620 000,00
H9	K14030026/1	K14030026 Dannhauser Housing Project(New annexure D)	150	0	R 7 650 000,00
H7	K17090005/1	K17090005 Khayalethu Housing Project(18/19)	0	0	R 205 000,00
H1	K02110004/1	02110004 Osizweni Section 'e" Slum Clearance	0	151	R 13 042 248,00
H3	K11090004/1	K11090004 Johnstown, Blaauuboschslaagte and Cavan (JBC) PH,1	130	0	R 6 630 000,00
H4	K11090011/2	K11090011 Madadeni H39	0	125	R 15 675 000,00
H2	K11090012/2	K11090012 Fairleigh /siyahlala-la Housing Project	0	140	R 16 820 000,00
H6	K12020009/2	K12020009 Charlestown Housing Project	0	130	R 16 290 000,00
NOT MAPPED	K13050009/1	K13050009 N11 Community Residential Units	0	50	R 20 000 000,00
H8	K14040032/1	K14040032 UbuhleboMzinyathi Rural (New Annexure D)	0	140	R 17 780 000,00
H11	K14120001/1	K14120001 Madadeni Storm Damaged 650 Newcastle Municipality and Mageba Project cc	0	0	R 11 881 529,00
H10	K15090008/1	K15090008 Johnstown, Blaauuboschslaagte and Cavan Phase 2 & 3	0	0	R 850 000,00
H5	K16050004/1	K16050004 Kwamathukuza Housing Project Phase 2	0	0	R 500 000,00
H13	K17090003/1	Drycut Farm Housing Project	0	0	R 963 000,00
H12	K17090007/1	Soulcity/stafford Hill (18/19)	0	0	R 400 000,00
NOT MAPPED	K17090009/1	Vezokuhle 18/19	0	0	R 608 000,00
H15	K20000069/1	20000069 RuralStriijbank	0	57	R 7 239 000,00
H14	K11120006/1	K11120006 Goedehoop Housing Project	127	0	R 6 477 000,00

Table 16: Map 25 Label Guide.

8.10. ADMINISTRATIVE STRUCTURE IN RELATION TO BROAD LAND USE ANALYSIS

Most parts of Amajuba District Municipality are farmlands which are managed in terms of the Agricultural Act 70 of 1970. The Spatial Planning and Land Use Management Act, Act No 16 of 2013 (SPLUMA), requires all municipalities in the province to develop and introduce wall-to-wall Land Use Schemes throughout their area of jurisdiction. There are a number of reasons for the preparation of Schemes. Firstly, a municipality must satisfy the legal requirements emanating from both the Municipal Systems Act and the SPLUMA, which require a municipality to prepare a Scheme as part of an Integrated Development Plan (IDP). Secondly, the municipality has a responsibility to encourage harmonious development within its area of jurisdiction. This includes the protection of property rights and ensuring that development occurs in a compatible manner. In addition, scheme will promote sustainable land use and assist the municipality and other role-players to address environmental management issues.

In the case of land that is under Ingonyama Trust there are additional local structures that have the influence in terms of land allocation. These include tribal chief, their headman and sub-headmen. The local municipalities have expressed challenges in terms of managing land allocation within the tribal council areas. There are instances whereby the municipality communicates with the tribal chiefs during the IDP processes with regards to land allocations. This affords the municipality a platform to advice the traditional council if their land allocation issues are not ideal. This may soon be resolved if all the municipality manage to ensure that the recommendation of the PDA (to have wall-to-wall Land Use Management Scheme) is indeed implemented.

8.10.1. LAND USE PATTERN

Current land use pattern has evolved in response to the economic trends, settlement pattern, rural character of the district, applicable planning policies and land use management practices i.e. formal and customary. The broad categories of land uses that exist within Amajuba are:

- Urban Settlement – these are the Newcastle urban complex, small towns (within Emadlangeni and Dannhauser) with an agglomeration and variety of social and economic uses;
- Rural Settlements – which primarily includes rural villages with social facilities, subsistence agriculture but limited economic uses;
- Commercial agriculture – these are mainly the privately-owned farms within around the district; and
- Conservation areas – which includes the protected nature reserves, wetlands and mountains.

8.10.2. LAND OWNERSHIP PATTERN

Amajuba is characterised with a very diverse land ownership composition. Most of the land is however privately owned. The broad pattern of this can be divided as follows a shown in the table 17 below:

Ownership Classification	Area (Ha)
Agricultural	1785.7349
Communal	48017.1984
Ecclesiastical	563.5944
Mining	17129.5202
Municipal	15709.5403
Private	543716.5314
Provincial	390.0877
State Land - Unalienated	1779.0321
State Land National	31784.7508
State owned enterprise	1198.7181
Traditional	19725.6324
Unspecified - assumed to be unregistered	14025.0133
Total	695825.354

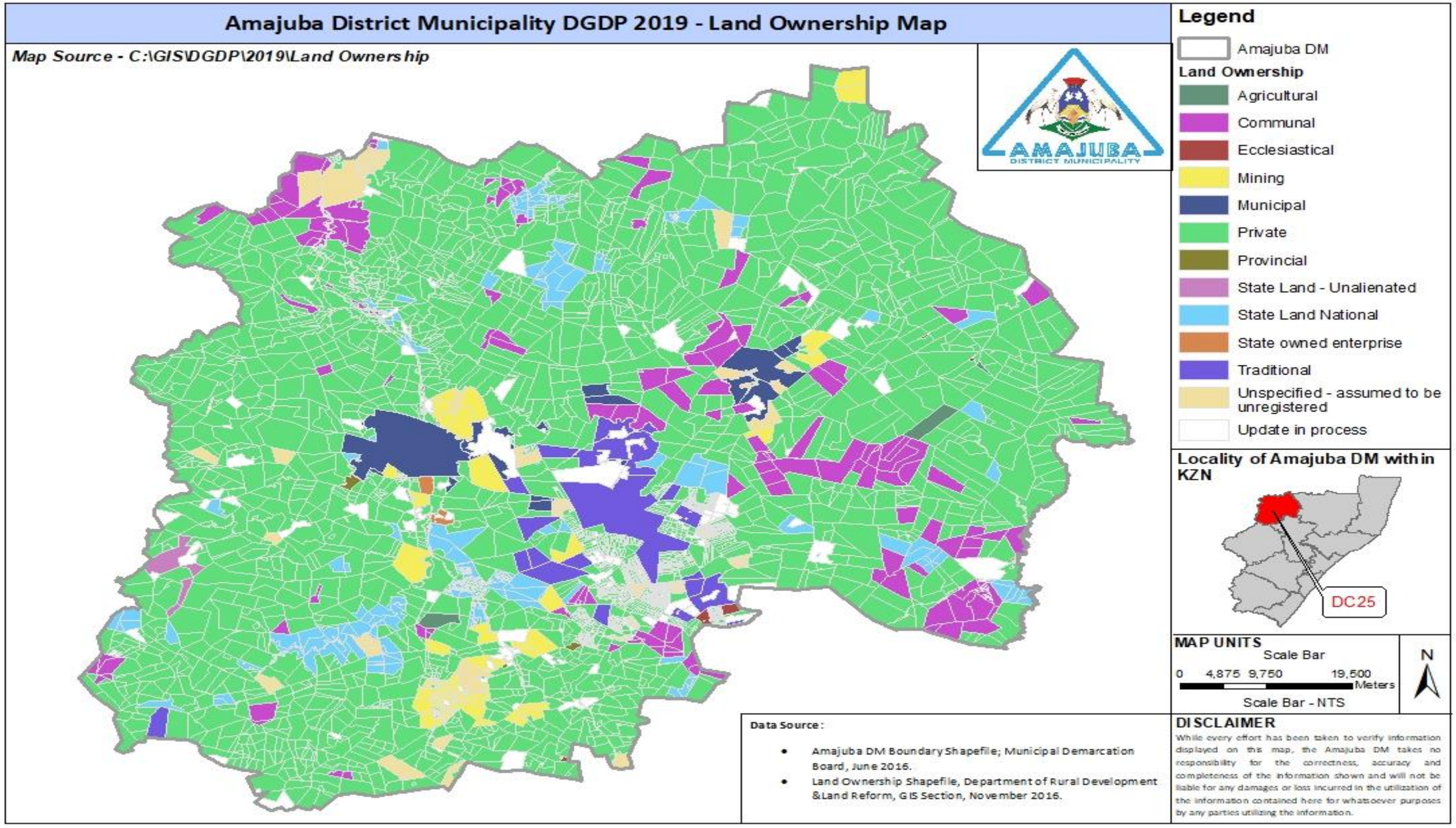
Table 17: Land Ownership Classification

10.2.3. INGONYAMA TRUST LAND

There are two tribal councils within Amajuba which are Ubuhle-Bomzinyathi and Nyanyadu Tribal Council Areas. The day to day management of this land is the responsibility of the traditional council under the leadership of the tribal chiefs concerned, but the administration and long-term leasing of these land parcels is the responsibility of the Ingonyama Trust Board.

10.2.4. STATELAND

There are numerous parcels of state land located throughout the district. These include land that is under the ownership of the department of Regional and Land Affairs. This state land includes parcels of land upon which various facilities have been constructed, for example, government and municipal offices, police stations, schools and utilities such as the sewerage works plant.



MAP 26: LAND OWNERSHIP MAP

10.2.5. LAND ADMINISTRATION – FORMAL LAND USE MANAGEMENT

Both Newcastle and Dannhauser Municipalities have developed wall-to-wall schemes. Newcastle undertook this as part of a comprehensive review of the existing Newcastle Town Planning Scheme, and a process towards the introduction of land use controls in areas hitherto not covered by the scheme.

The Newcastle municipality has taken an incremental approach toward the implementation of the town-planning scheme in all areas, except the agricultural land. At present, Newcastle town is the only area that is covered by a Town Planning Scheme within the municipality. Dannhauser Municipality has encountered delays in the implementation of this policy document due to the introduction of the Planning and Development Act (PDA).

LUMS will be implemented in an incremental manner with the first phase focusing mainly on a comprehensive review of the Dannhauser Town Planning Scheme to bring it in line with the PDA. Subsequent phases will entail the extension of the scheme to other urban nodes such as Durnacol, Emafusini and Hattingspruit towns. Introduction of land use controls in the rural settlements and commercial farmlands will constitute the last phase of this process. Dannhauser Town is the only area within the municipality that is subject to a town-planning scheme. The scheme was developed in terms of the erstwhile Natal Ordinance and is based a restrictive zoning system. As such, the area is characterised by a clear separation of generally compatible land uses.

The CBD is the only area where there is limited mixed use. The Dannhauser Urban scheme is being reviewed. The new scheme will cover the Dannhauser, Hattingspruit and Durnacol. This represents the first phase of a process towards the introduction of a wall-to-wall scheme. Emadlangeni Municipality has an old town planning scheme focussing on the town of Utrecht. The municipality has not initiated a process towards a wall-to-wall scheme; however the district is assisting the municipality to review this old scheme as part of the Nodal Development Study as well as per requirements of the KwaZulu-Natal Planning and Development Act.

10.2.6. CUSTOMARY LAND USE PRACTICES AND ALLOCATION

Land use management within Ingonyama Trust land is embedded within the land administration and land tenure systems through which a buddle of rights is allocated to each household. The two main tenure instruments that the Ingonyama Trust Board makes use of

are leases and PTOs. Accessing Ingonyama Trust Land is guided by two important policies. The first relates to the distinction between PTOs and leases.

The Board has a rental policy that is market based for commercial land uses. Leases are therefore determined at a market level, while PTOs are fixed at a more nominal amount. The second is that the Ingonyama Trust Board, in general, does not sell land or dispose of it where this is not deemed to be necessary. In the case of a commercial development, the Ingonyama Trust Board would prefer to enter into a lease at commercial rates than dispose of the land or issue a PTO.

Also important are the 'informal land rights' held by members of the community residing within the Ingonyama Trust, these rights and interests in land are protected in terms of the Interim Protection of Informal Land Rights Act of 1996 (Act 31) (IPILRA). The Act provides for the recognition of a beneficial occupier; which is a person in occupation of land as if she or he is the owner, without force, openly and without the permission of the registered owner. The informal land right includes the use of, occupation of or access to land in terms of any tribal, customary or administrative practice and the right or interest in land of a beneficiary under a trust arrangement. The Act does not create any real rights, but merely recognizes existing interests in land. The Act protects existing interests by preventing unlawful deprivation of land rights and by giving the beneficial occupier the right to be compensated in the event of being deprived of his land rights in the property

10.2.7. LAND TENURE UPGRADING

The need for land tenure upgrading has been identified within Newcastle Municipality. This is said to affect four types of communities such as people who hold Deeds of Grant to land, people who require their title deeds to be adjusted, tenants in the JBC area and Farm dwellers. This affects the following areas:

- Madadeni and Osizweni Townships – The title upgrading process undertaken as part of the Extended Discount Benefit Scheme and involving areas where people held their properties through Deeds of Grants (e.g. Madadeni and Osizweni Townships) has virtually been completed.
- JBC and Charlestown – Similarly, substantial progress has been made with the title adjustment process involving land owners in the JBC and Charlestown areas. The completion of this exercise is critical to unlocking privately owned land in these areas for the development of sustainable human settlements. In fact, a comprehensive scheme which involved the provincial Department of Human Settlements and the national Department of Rural Development and Land Reform should be initiated as part of the urban Renewal Programme to deal with the land issues in the JBC and

Charlestown areas. This includes people who occupy the area as tenants whose land tenure remains insecure.

- Ubuhlebomzinyathi – Communities occupying the area that falls under the jurisdiction of Ubuhlebomzinyathi Community Authority should also be considered for land tenure upgrading. These include Khathide, Dicks, Mndozi, etc. At present, these communities enjoy beneficial occupation rights protected in terms of the Interim protection of Informal Land Rights (IPILRA). These areas require careful management as they are fast deteriorating into urban slums. Densities are increasing and accounts for some of the huge urban service backlogs in the NLM.
- AmaHlubi Settlement – The land occupied by AmaHlubi Community in the vicinity of Drycut Cemetery should be investigated as it may fall outside the proclaimed area of Ubuhlebomzinyathi Community Authority. The land has been subject of a court case between Ingonyama Trust and AmaHlubi Traditional Council. Other areas that require attention in terms of tenure security are the settlements located to the north of Osizweni Township and JBC area.

10.2.8. LAND REFORM

Despite years of relatively good Integrated Development Planning processes in Amajuba District Municipality, issues of land tenure reform have in the final analysis remained marginal and isolated due to a lack of high-level integration and alignment between land tenure reform and spatial planning within the municipality. Lack of sustained co-ordination between the Department Land Affairs, Commission for Restitution of Lands Rights and municipalities in the District has manifested itself in delays in the delivery of basic services to communities that were assisted to reclaim their land and to gain access to land such as Ndlamlenze, Amantungwa and Thekwane etc.

10.2.9. LAND RESTITUTION

A total of 210 756ha of land was subjected to the land restitution claims. Only 40 141ha has been settled while 170 615 has been gazetted. The gazetted restitution claims amounts to 832.

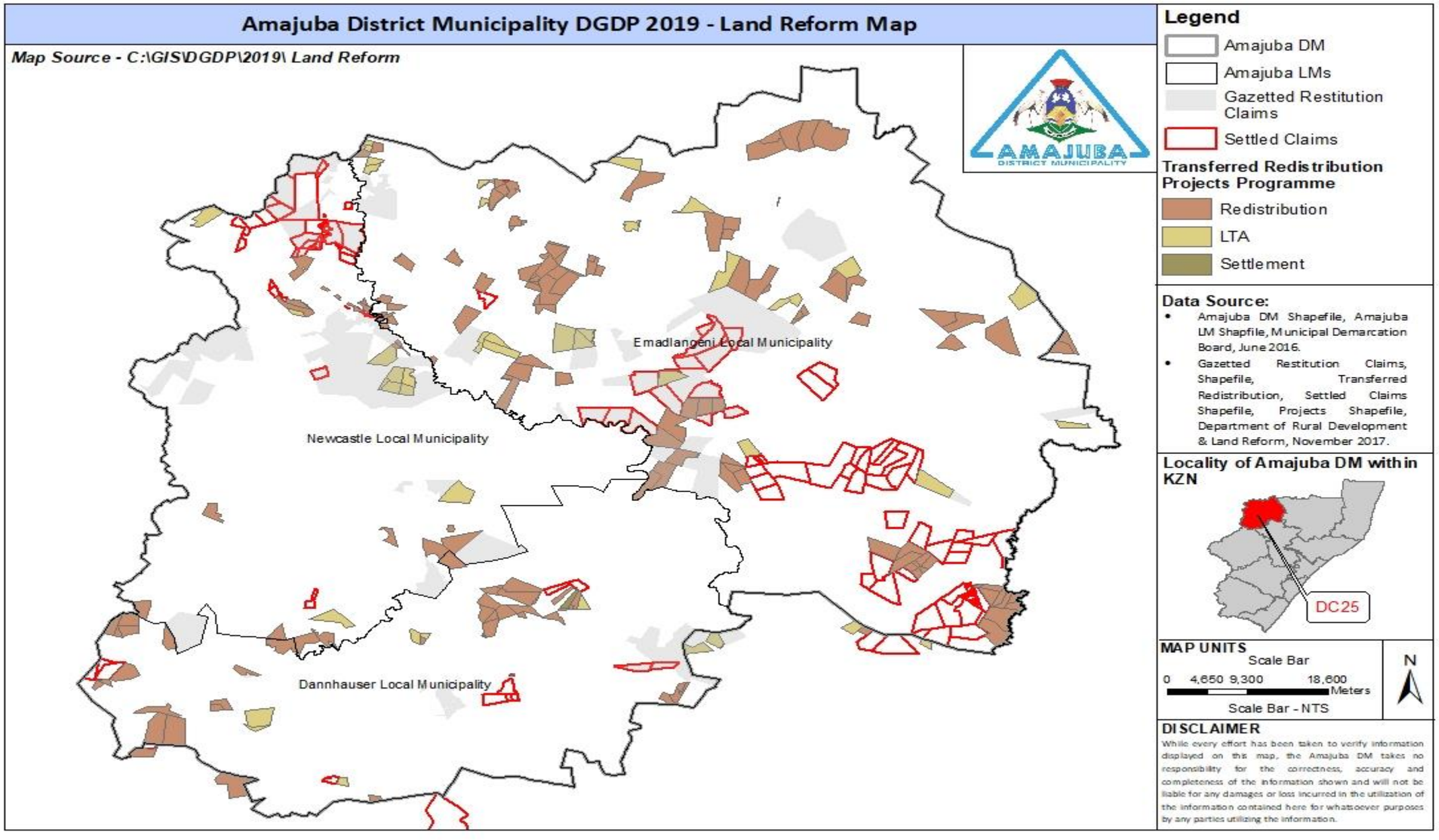
10.2.10. LAND REDISTRIBUTION

A total of 45960ha of land was subjected to land redistribution. Only 14 320ha has been settled while 31 640ha is still subject to investigations. The settled redistribution amounts to 131 claims.

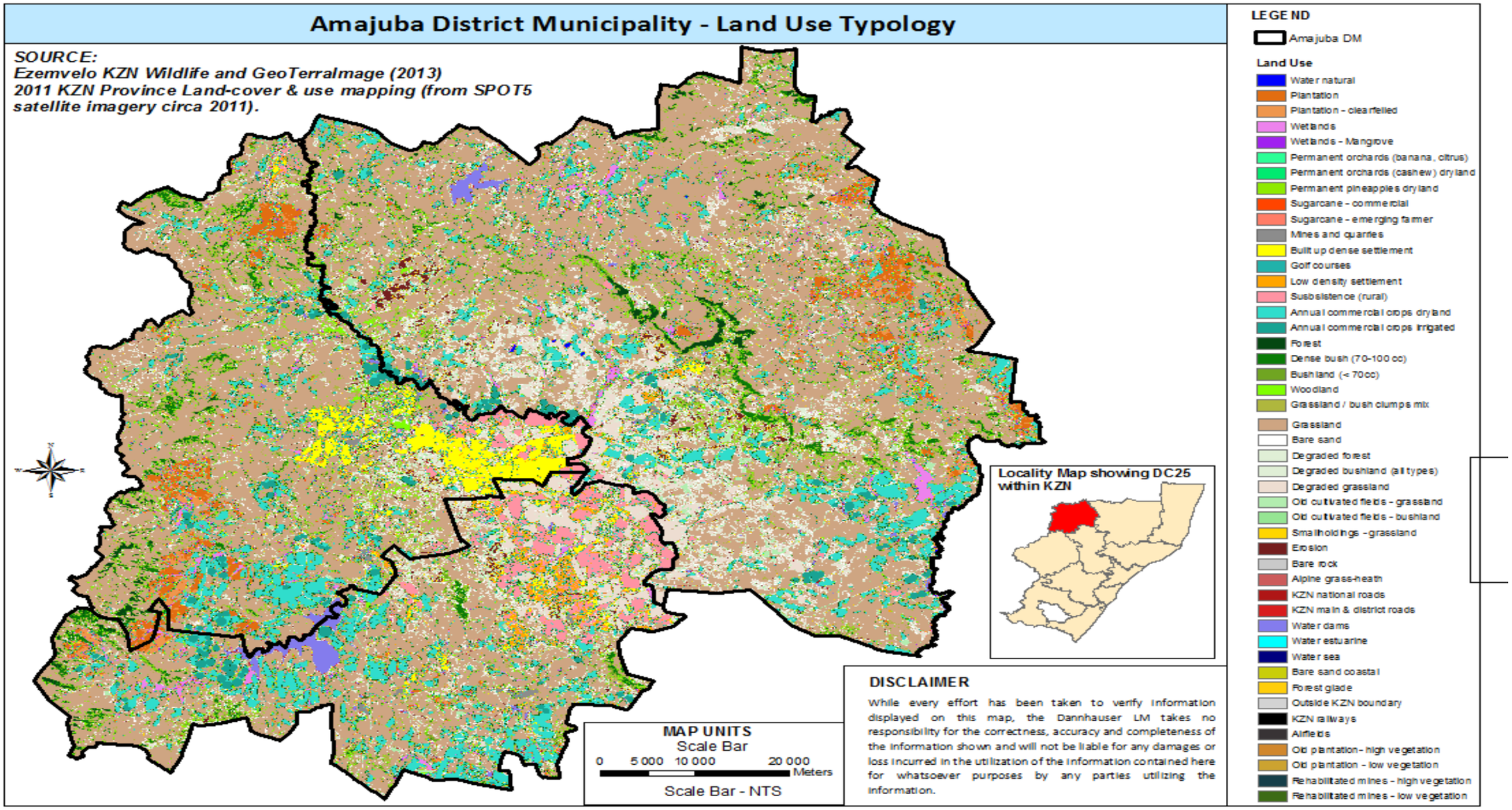
10.2.11 LAND TENURE REFORM

Amajuba is characterised by complex and intricate land tenure reform challenges. These include farm dwellers whose land rights are protected in terms of the Extension of Security of tenure Act. These are households that are established within commercial farms but their

members are no longer providing labour to the farm. Although these households may not be evicted unless an ESTA process has been followed, their land tenure remains insecure. 116 907ha of land has been identified for land tenure reform and only 8 628 was prioritized through the Area Based Plan (ABP).



MAP 27: LAND REFORM MAP



MAP 28: LAND USE TYPOLOGY FOR THE AMAJUBA DISTRICT MUNCIPALITY

10.3. DISASTER MANAGEMENT AREAS

The management of disasters in Amajuba is a mainly the responsible for the district. As such the district has prepared a Disaster Management Plan in order to minimize, reduce and eradicate any risk that the area may face due to disasters. This plan indicates that a disaster can be caused by humans or nature since these are events that are sometimes unpredictable. It also states that disasters and development have both a negative and positive relationship, this relationship needs to be recognised and managed to achieve sustainable development. In a negative sense, disasters can destroy development or uncontrolled, improper development can cause disasters.

In a positive sense, disaster can create an opportunity for more resilient development and proper development can reduce the risk of disasters occurring. The Disaster Management Plan further points out that badly planned development in a floodplain increases disaster risk by making the new community vulnerable to flooding, which would constitute a disaster. The development of well-planned and effective flood defence measures can decrease the vulnerability of the community and thus contribute to disaster risk reduction. Disasters are inevitable although we do not always know when and where they will happen. But their worst effects can be partially or completely prevented by preparation, early warning, and swift and decisive responses.

10.3.1. LIST OF PRIORITY RISKS

According to the Amajuba Disaster Management, Fire and Rescue Sector Plan, the Amajuba District Municipality is mostly threatened by the following hazards:

- Veld fires;
- Structural fires;
- Drought;
- Lightning;
- Strong winds;
- Heavy rain and Hail;
- Floods.

HAZARD	*Veld Fires*	*Structural Fires*	*Drought*	*Lightning*	*Strong Winds*	Heavy Rains & Hail	Floods
WARD 1							
WARD 2							
WARD 3							
WARD 4							
WARD 5							
WARD 6							
WARD 7							
WARD 8							
WARD 9							
WARD 10							
WARD 11							
WARD 12							
WARD 13							
WARD 14							
WARD 15							
WARD 16							
WARD 17							
WARD 18							
WARD 19							
WARD 20							
WARD 21							
WARD 22							
WARD 23							
WARD 24							
WARD 25							
WARD 26							
WARD 27							
WARD 28							
WARD 29							
WARD 30							
WARD 31							
WARD 32							
WARD 33							
WARD 34							

Risk Colour Coding Key

- Very High
- High
- Medium
- Low
- Very Low

Figure 23: Risks per a ward within the Newcastle LM

HAZARD	Veld Fires	Structural Fires	Drought	Lightning	Strong Winds	Floods	Heavy Rains & Hail
WARD 1							
WARD 2							
WARD 3							
WARD 4							
WARD 5							
WARD 6							
WARD 7							
WARD 8							
WARD 9							
WARD 10							
WARD 11							
WARD 12							
WARD 13							

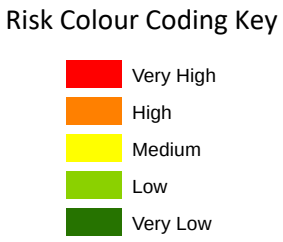


Figure 24: Risks per a ward within the Dannhauser LM

HAZARD	Veld Fires	Structural Fires	Drought	Lightning	Strong Winds	Heavy Rains & Hail	Floods
WARD 1							
WARD 2							
WARD 3							
WARD 4							
WARD 5							
WARD 6							

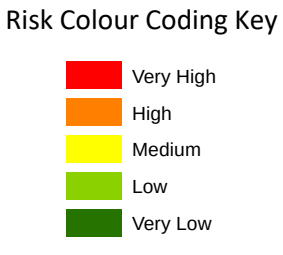
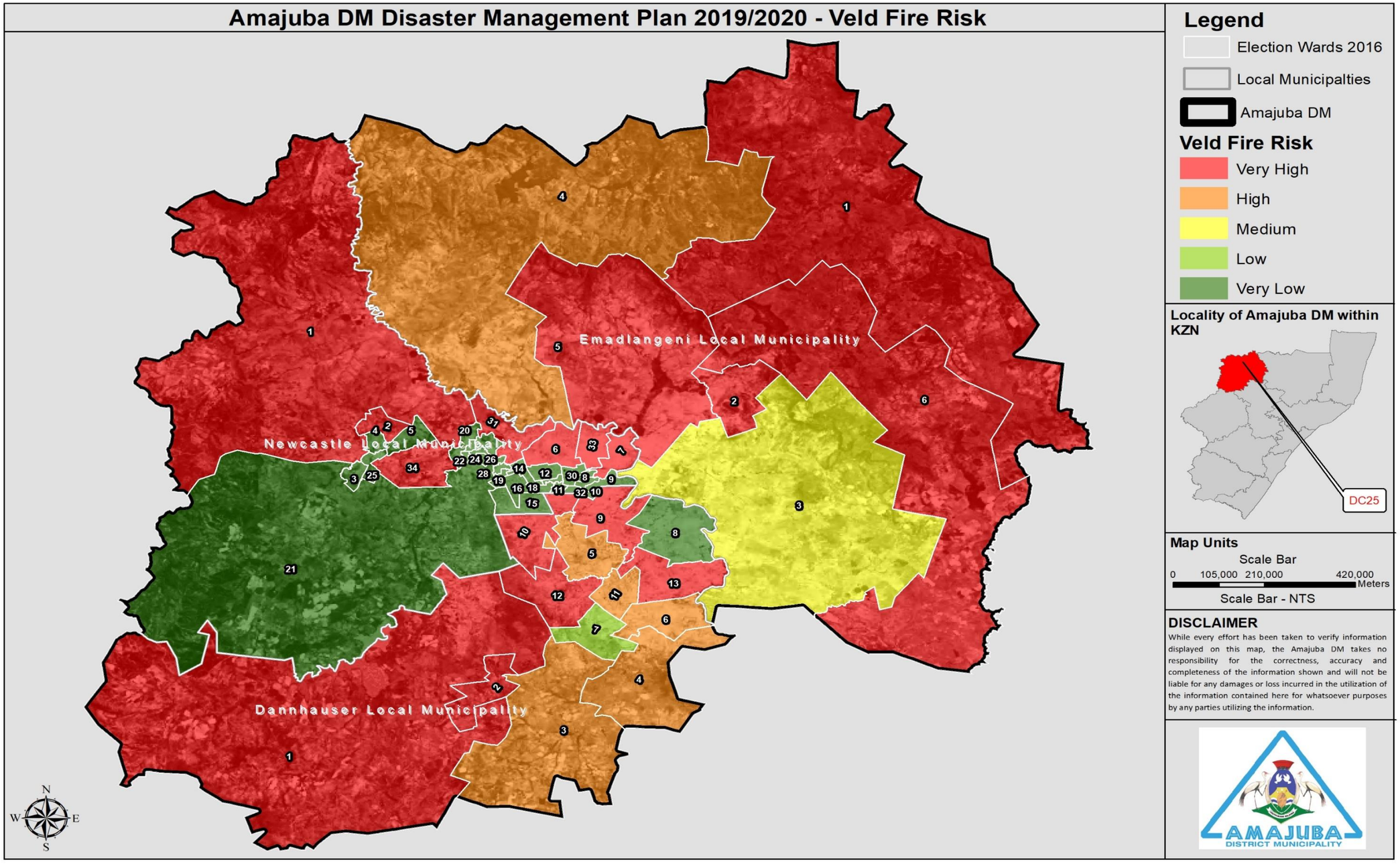
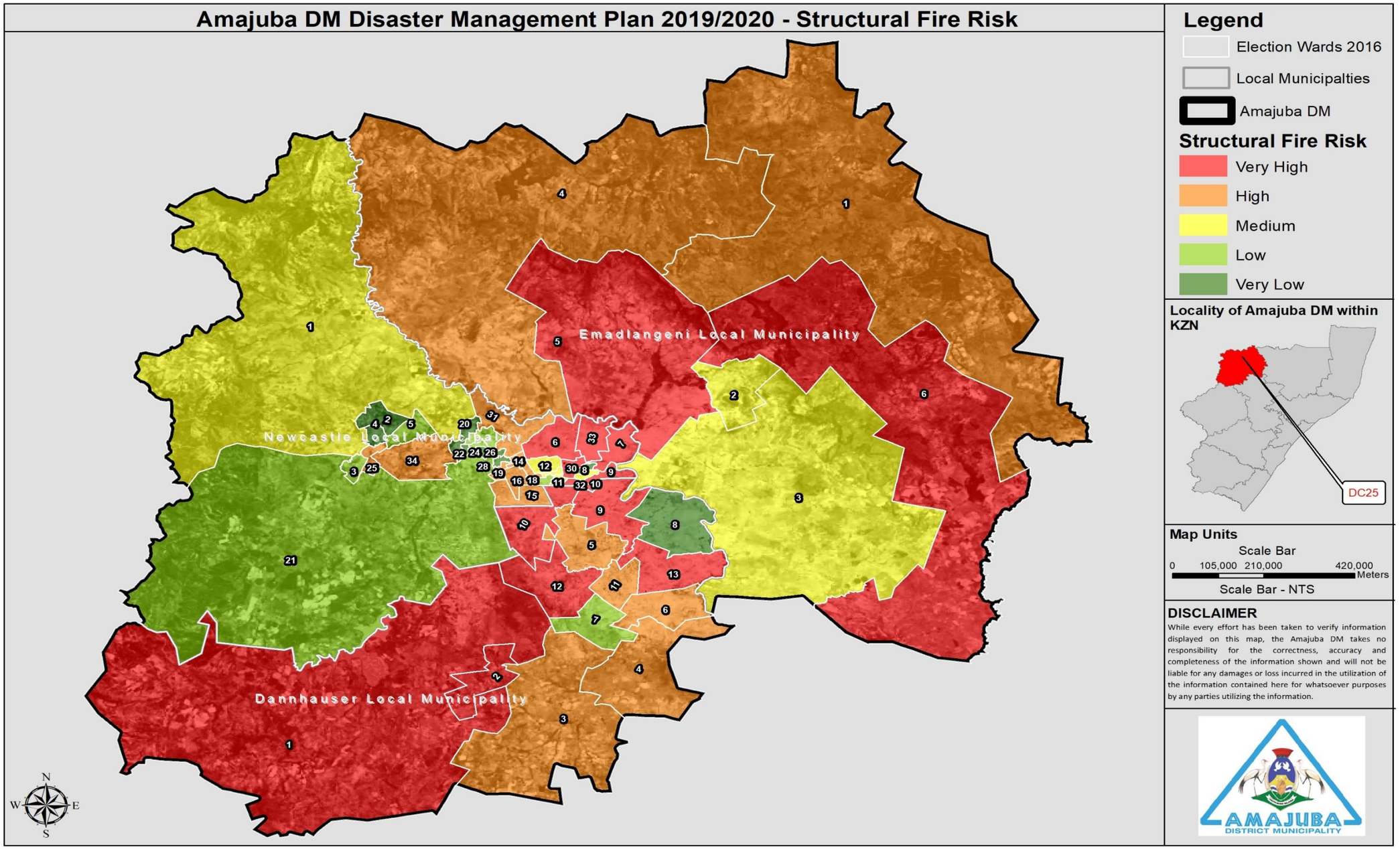


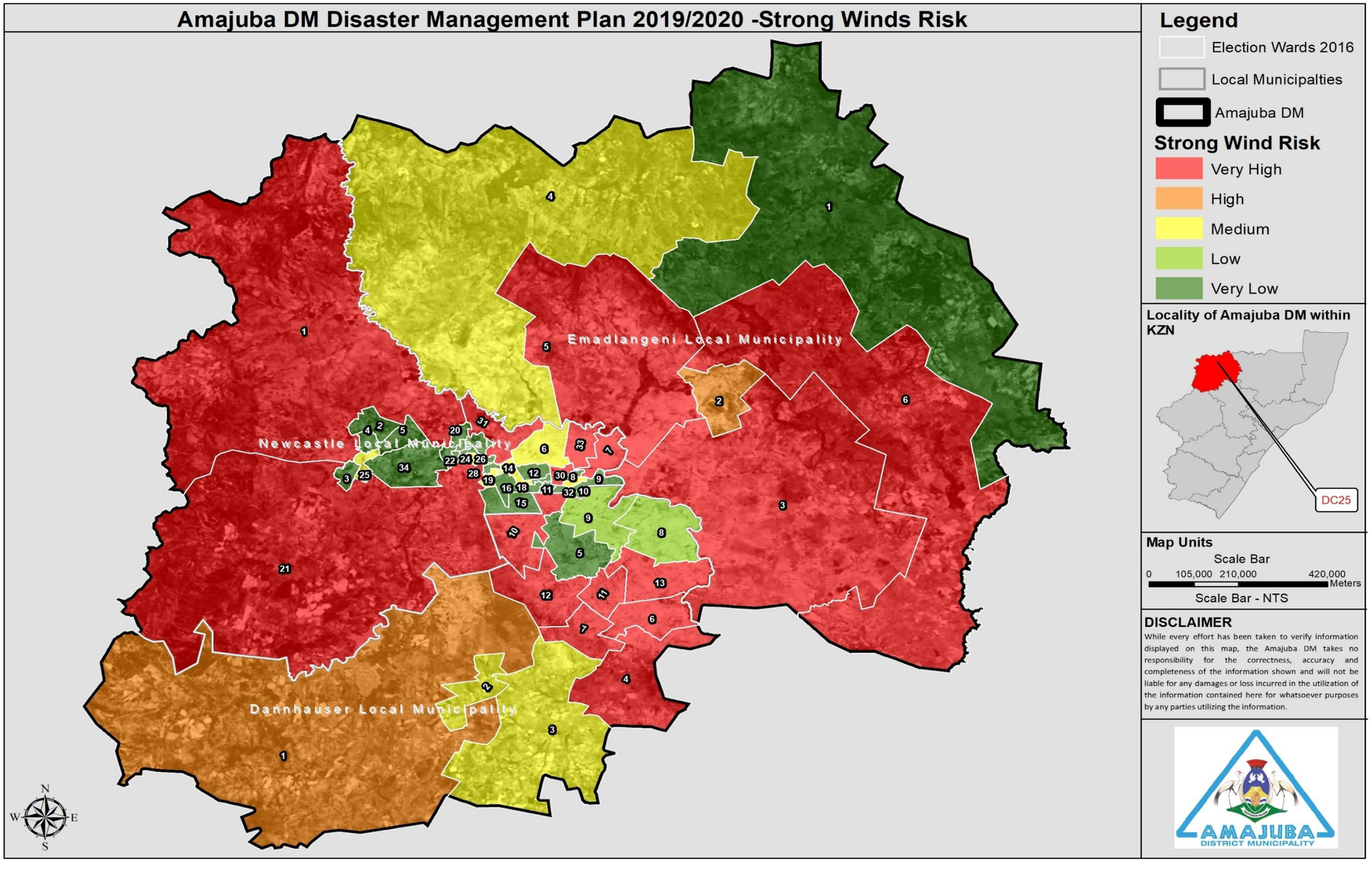
Figure 25: Risk per a ward within the Emadlangeni LM



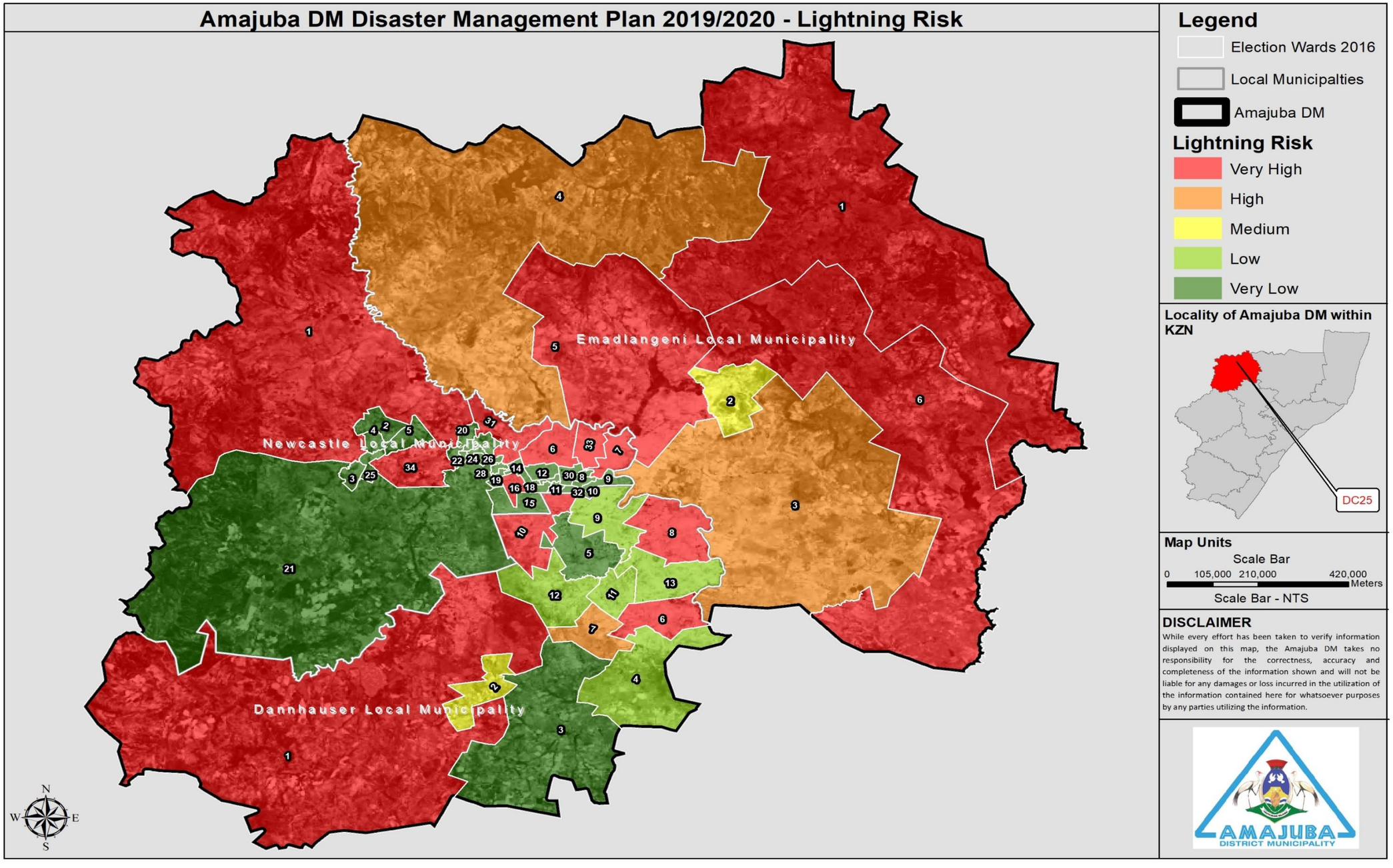
Map 29: VELD FIRE RISK WITHIN THE AMAJUBA DM



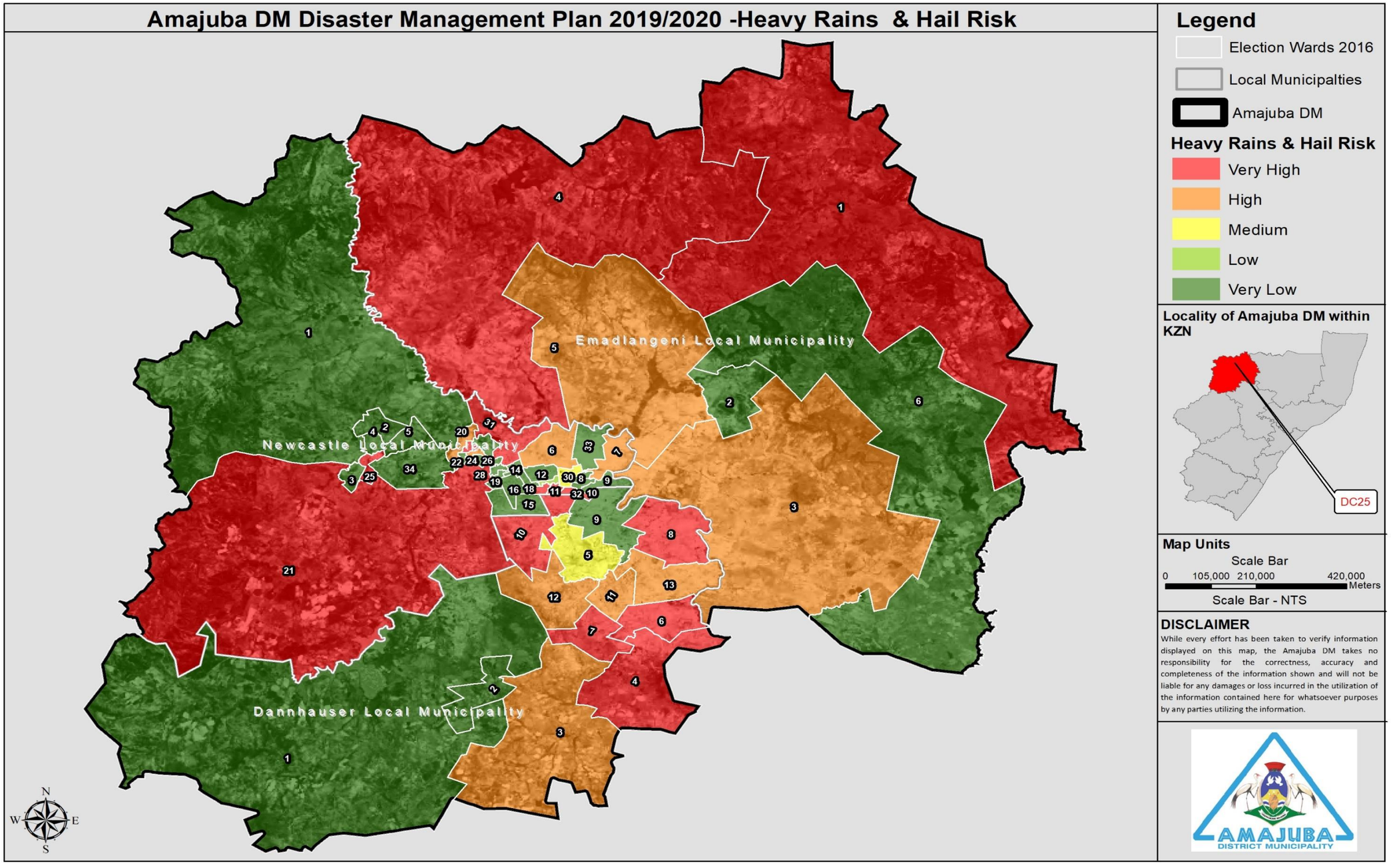
MAP 30: STRICTURAL FIRE RISK WITHIN THE AMAJUBA DM



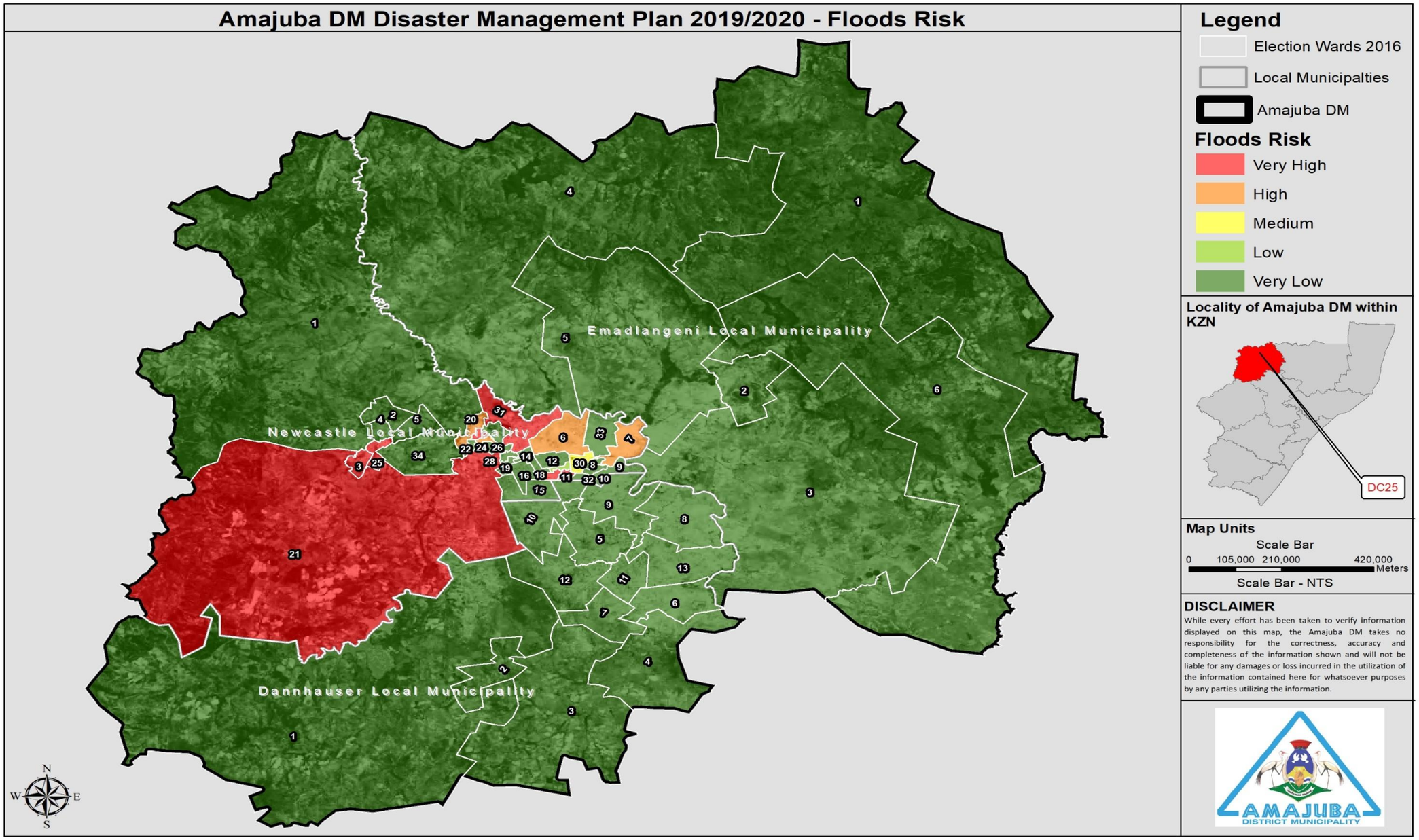
MAP 31: STRONG WINDS RISK WITHIN THE AMAJUBA DM



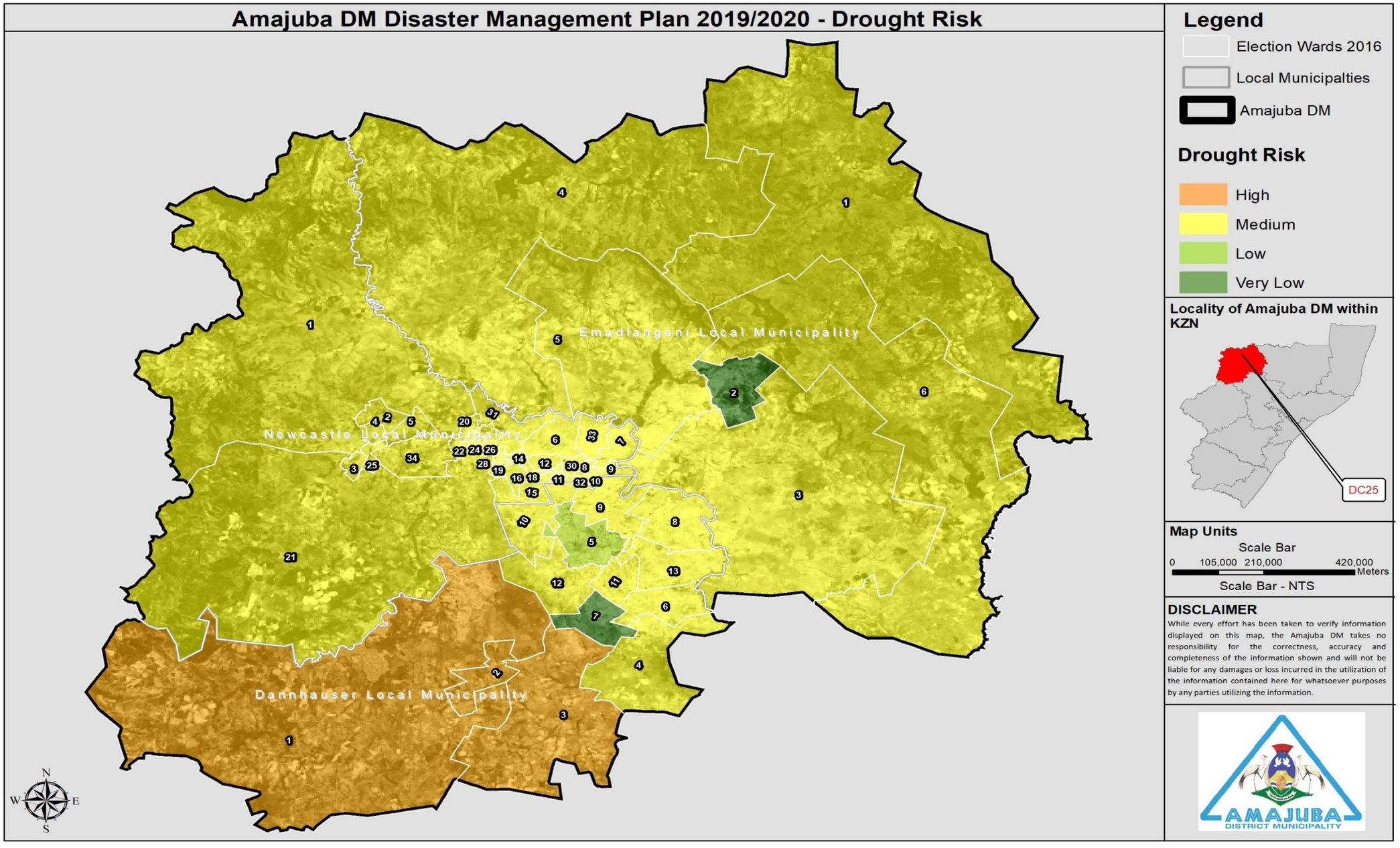
MAP 32: LIGHTNING RISK WITHIN THE AMAJUBA DM



MAP 33: HEAVY RAINS AND HAIL RISK WITHIN THE AMAJUBA DM



MAP 34: FLOODS RISK WITHIN THE AMAJUBA DM



MAP 35: DROUGHT RISK WITHIN THE AMAJUBA DM

10.3.2. DISASTER MANAGEMENT VULNERABILITY ASSESSMENT

The Amajuba District Municipality Disaster Management Unit in undertaking the preparation of the Disaster Management Sector Plan conducted a disaster vulnerability assessment which forms part of the plan. The vulnerability assessment identifies vulnerabilities or weaknesses that contribute towards the prospective occurrences of risks.

Ward_No	Ward_Code	Political	Social	Economic	Technological	Environmental
1	KZN254_1	Very High	Low	Medium	Very Low	Very Low
2	KZN254_2	Very High	High	Medium	Medium	Low
3	KZN254_3	Very High	Low	Medium	Low	Low
4	KZN254_4	Very High	Low	Medium	Low	Low
5	KZN254_5	Very High	Low	Low	Very Low	Very Low
6	KZN254_6	Very High	Very Low	Very Low	Very Low	Very Low
7	KZN254_7	Very High	Low	Very Low	Very Low	Very Low
8	KZN254_8	Very High	Medium	Medium	Low	Very Low
9	KZN254_9	Very High	Medium	Medium	Medium	Low
10	KZN254_10	Very High	Low	Low	Low	Very Low
11	KZN254_11	Very High	Medium	Low	Very Low	Very Low
12	KZN254_12	Very High	Very Low	Very Low	Very Low	Very Low
13	KZN254_13	Very High	Very Low	Very Low	Very Low	Very Low
1	KZN253_1	Very High	Very High	High	Very High	Very High
2	KZN253_2	Very Low	Very Low	Very Low	Very Low	Very Low
3	KZN253_3	Very Low	Low	Low	Low	High
4	KZN253_4	Medium	High	High	High	Very High
5	KZN253_5	High	Low	Low	Medium	High
6	KZN253_6	Medium	Very Low	Very Low	Very Low	Very Low

KZ254 = Dannhauser LM

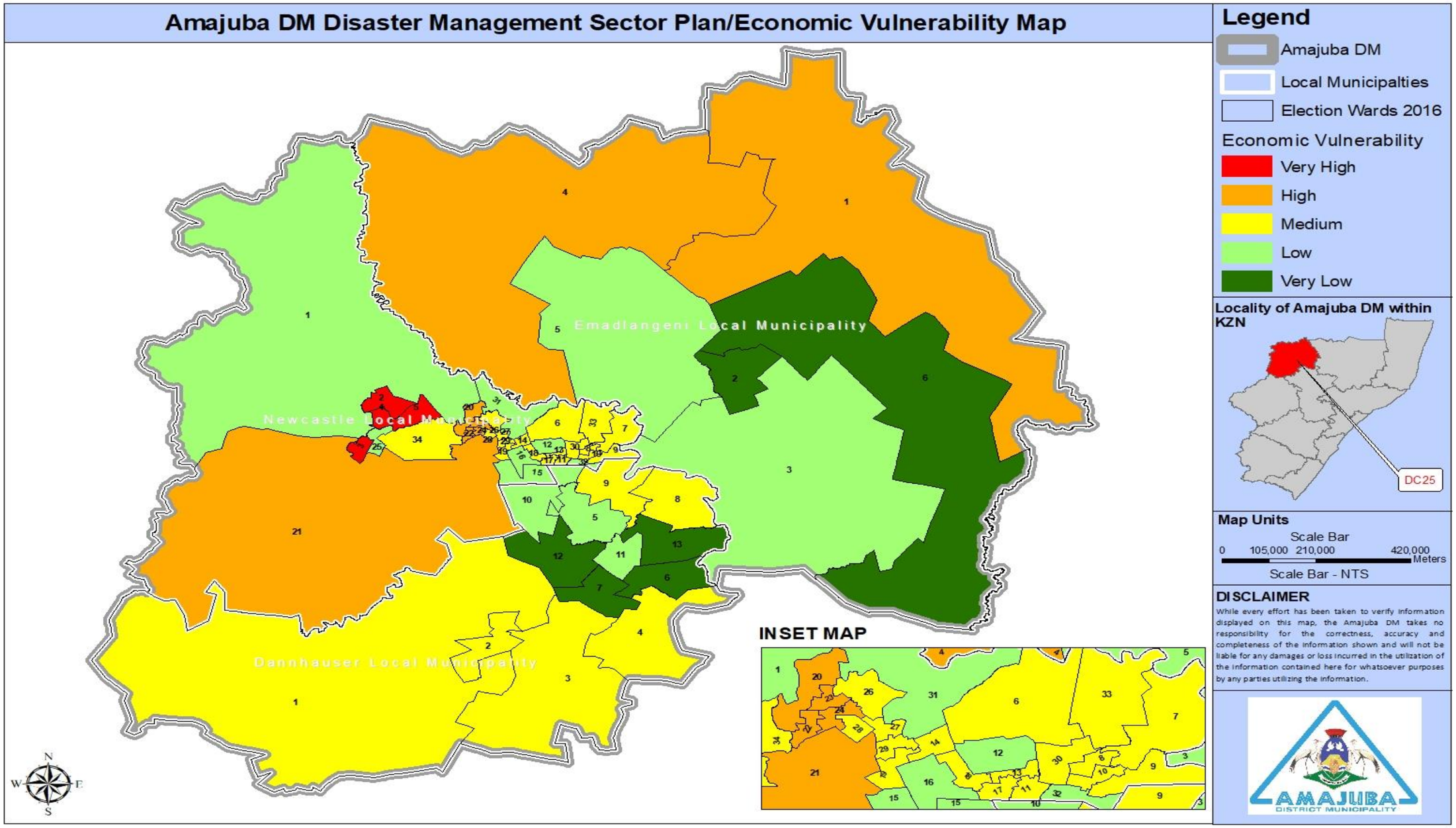
KZ253 = Emadlangeni LM

Table 18: Disaster Vulnerability Risk Assessment for Dannhauser LM and Emadlangeni LM

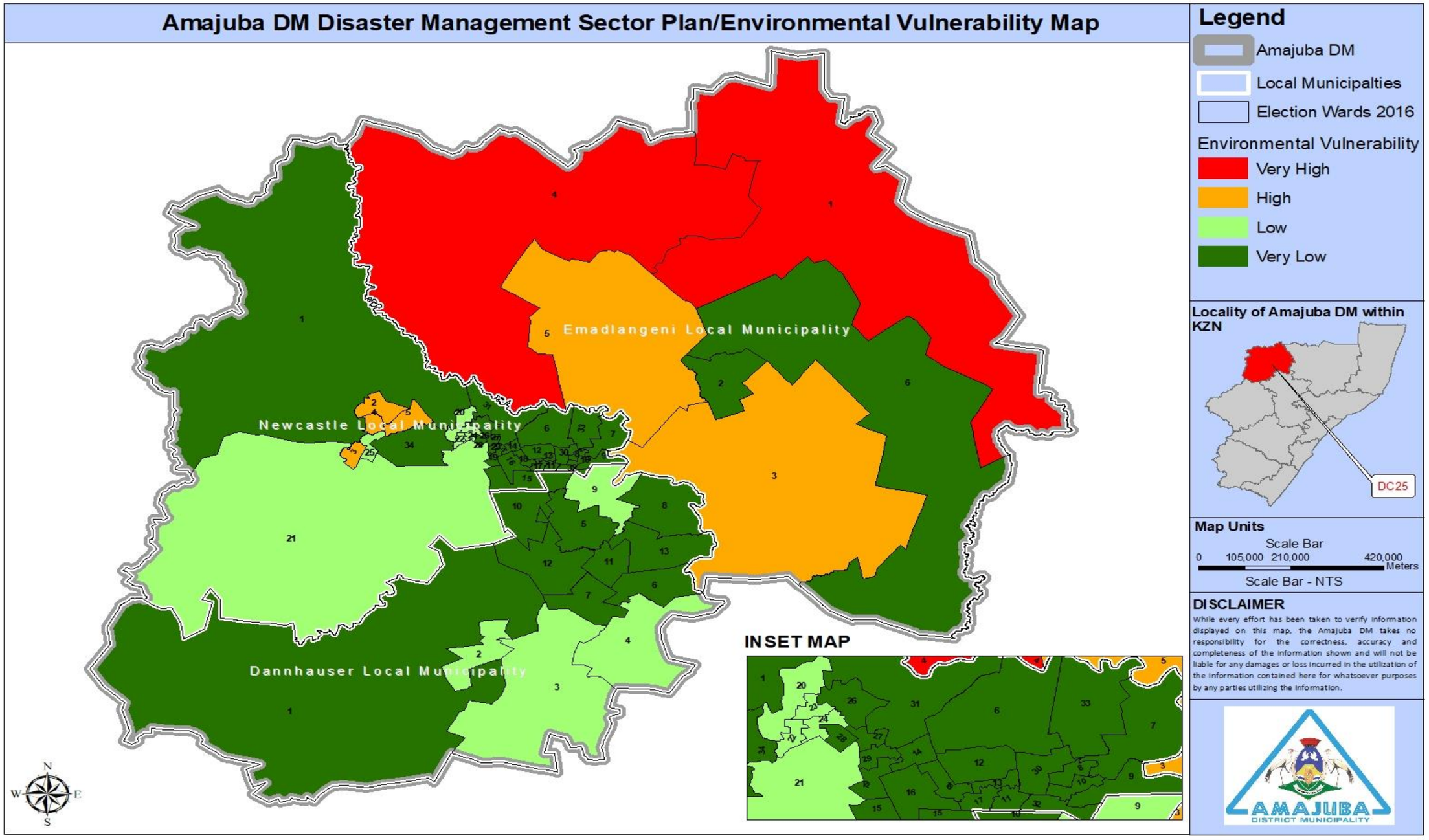
Ward_No	Ward_Code	Political	Social	Economic	Technological	Environmental
1	KZN252_1	Very High	Medium	Low	Very Low	Very Low
2	KZN252_2	Very High	Very High	Very High	Very High	High
3	KZN252_3	Very High	Very High	Very High	Very High	High
4	KZN252_4	Very High	Very High	Very High	Very High	High
5	KZN252_5	Very High	Very High	Very High	Very High	High
6	KZN252_6	Very High	High	Medium	Medium	Very Low
7	KZN252_7	Very High	High	Medium	Medium	Very Low
8	KZN252_8	Very High	High	Medium	Medium	Very Low
9	KZN252_9	Very High	High	Medium	Medium	Very Low
10	KZN252_10	Very High	Medium	Medium	Low	Very Low
11	KZN252_11	Very High	Medium	Medium	Low	Very Low
12	KZN252_12	Very High	Low	Low	Low	Very Low
13	KZN252_13	Very High	High	Medium	Medium	Very Low
14	KZN252_14	Very High	High	Medium	Medium	Very Low
15	KZN252_15	Very High	Medium	Low	Medium	Very Low
16	KZN252_16	Very High	Medium	Low	Medium	Very Low
17	KZN252_17	Very High	High	Medium	Medium	Very Low
18	KZN252_18	Very High	High	Medium	Medium	Very Low
19	KZN252_19	Very High	High	Medium	Low	Very Low
20	KZN252_20	Very High	High	High	Low	Low
21	KZN252_21	Very High	High	High	Low	Low
22	KZN252_22	Very High	High	High	Medium	Low
23	KZN252_23	Very High	High	High	Medium	Low
24	KZN252_24	Very High	High	High	Medium	Low
25	KZN252_25	Very High	Low	Low	Medium	Low
26	KZN252_26	Very High	Medium	Medium	Low	Very Low
27	KZN252_27	Very High	Medium	Medium	Very Low	Very Low
28	KZN252_28	Very High	High	Medium	Low	Very Low
29	KZN252_29	Very High	High	Medium	Low	Very Low
30	KZN252_30	Very High	Medium	Medium	Low	Very Low
31	KZN252_31	Very High	Low	Low	Very Low	Very Low
32	KZN252_32	Very High	Low	Low	Very Low	Very Low
33	KZN252_33	Very High	Low	Medium	Very Low	Very Low
34	KZN252_34	Very High	Low	Medium	Very Low	Very Low

KZ252 = NEWCASTLE LM

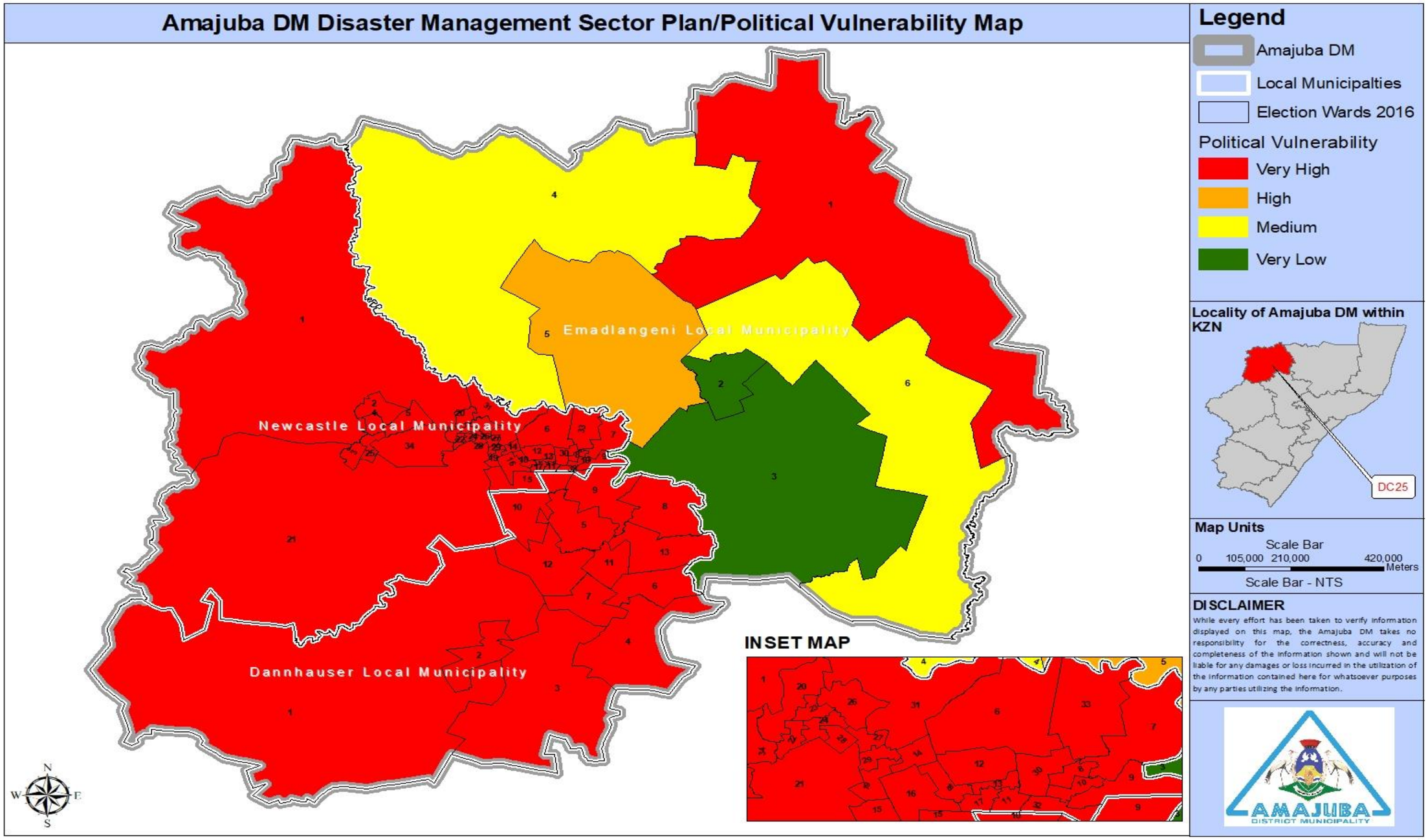
Table 19: Disaster Vulnerability Risk Assessment for Newcastle LM



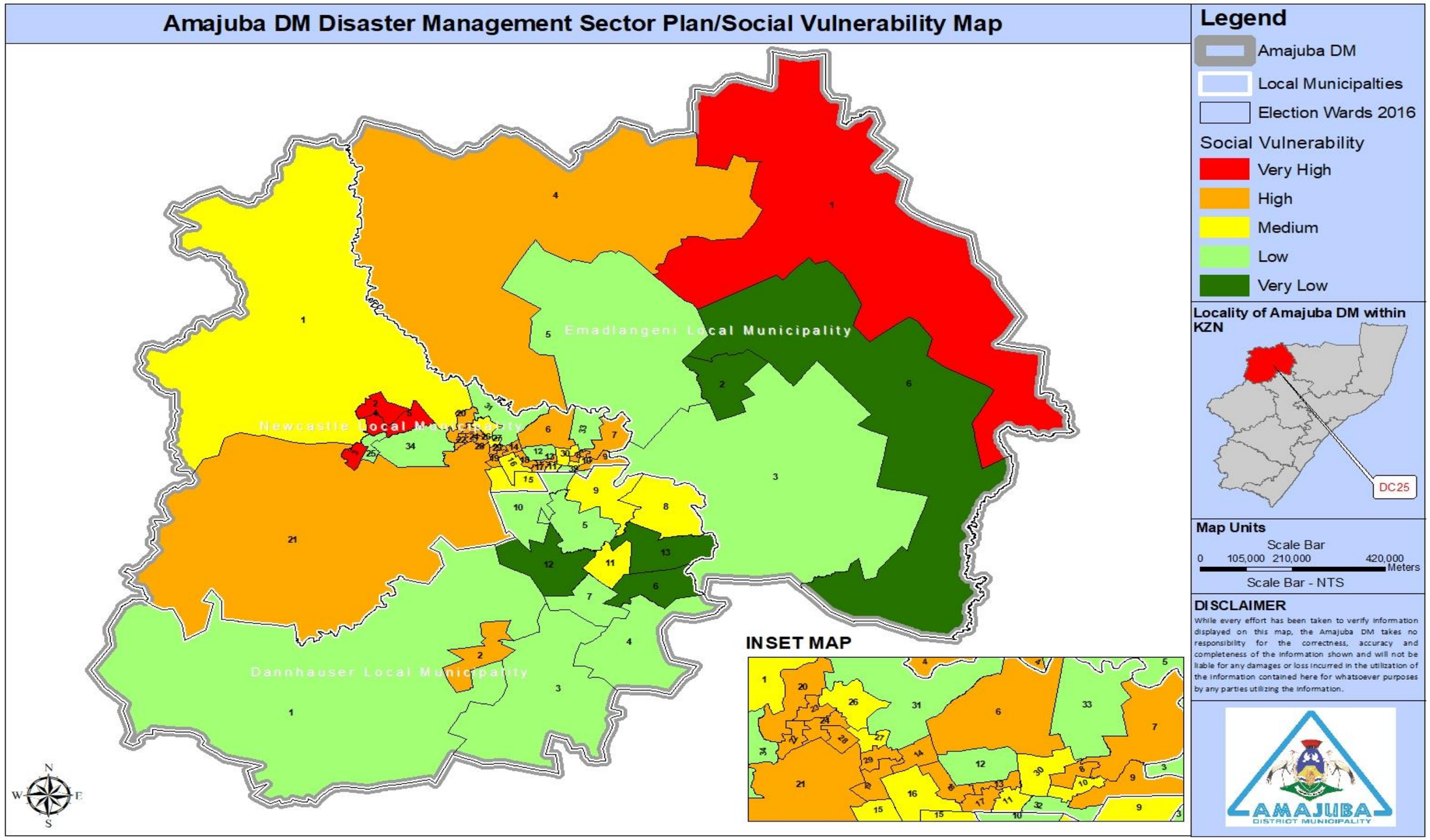
MAP 36: ECONOMIC VULNERABILTY WITHIN THE AMAJUBA DM



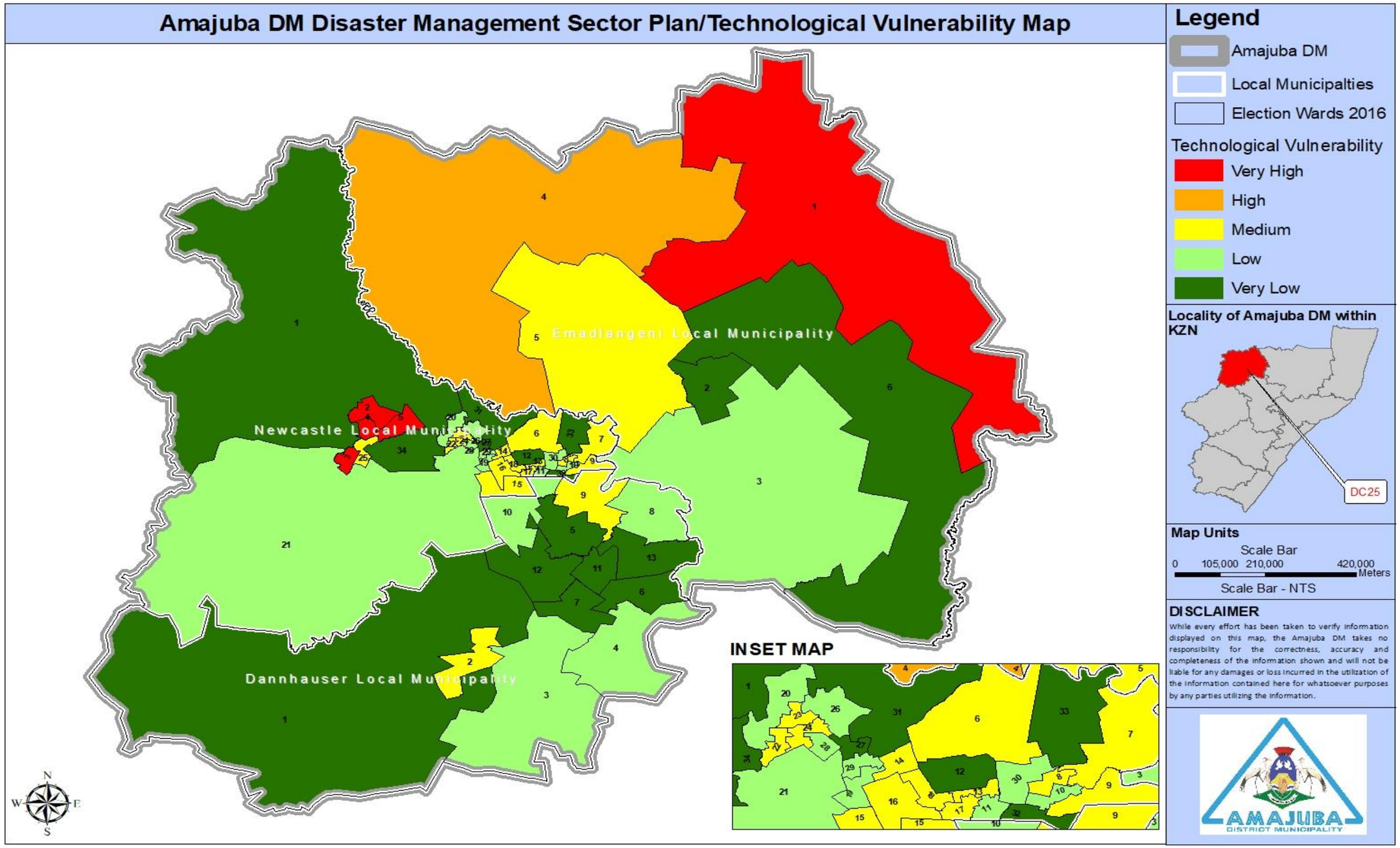
MAP 37: ENVIRONMENTAL VULNERABILITY WITHIN THE AMAJUBA DM



MAP 38: POLITICAL VULNERABILTY WITHIN THE AMAJUBA DM



MAP 39: SOCIAL VULNERABILITY WITHIN THE AMAJUBA DM



MAP 40: TECHNOLOGICAL VULNERABILITY WITHIN THE AMAJUBA DM

10.3.3. DISASTER MANAGEMENT CAPACITY ASSESSMENT

The Amajuba District Municipality Disaster Management Unit in undertaking the preparation of the Disaster Management Sector Plan conducted a disaster capacity assessment which forms part of the plan. The capacity assessment identifies areas whereby strengthening disaster preparedness for effective response at all levels requires equipping institutions, individuals and communities in disaster-prone areas with the necessary knowledge, skills and capacities to manage and reduce disaster risk.

Ward_Code	Institutional Capacity	Physical Resources	Support Network	Peoples Capacity
KZN254_1	Low	Low	Low	Very Low
KZN254_2	Medium	Medium	Medium	Medium
KZN254_3	Low	Low	Low	Very Low
KZN254_4	Low	Very Low	Very Low	Very Low
KZN254_5	Low	Very Low	Very Low	Very Low
KZN254_6	Very Low	Very Low	Very Low	Very Low
KZN254_7	Low	Low	Low	Very Low
KZN254_8	Low	Low	Low	Very Low
KZN254_9	Medium	Low	Low	Very Low
KZN254_10	Low	Low	Very Low	Very Low
KZN254_11	Low	Low	Low	Low
KZN254_12	Medium	Medium	Medium	Low
KZN254_13	Low	Low	Very Low	Very Low
KZN253_1	Low	Medium	Medium	High
KZN253_2	Medium	Medium	Medium	Medium
KZN253_3	Medium	Very Low	Low	Medium
KZN253_4	Medium	Very Low	Very Low	Very Low
KZN253_5	Low	Very Low	Low	High
KZN253_6	Low	Very Low	Very Low	Very Low

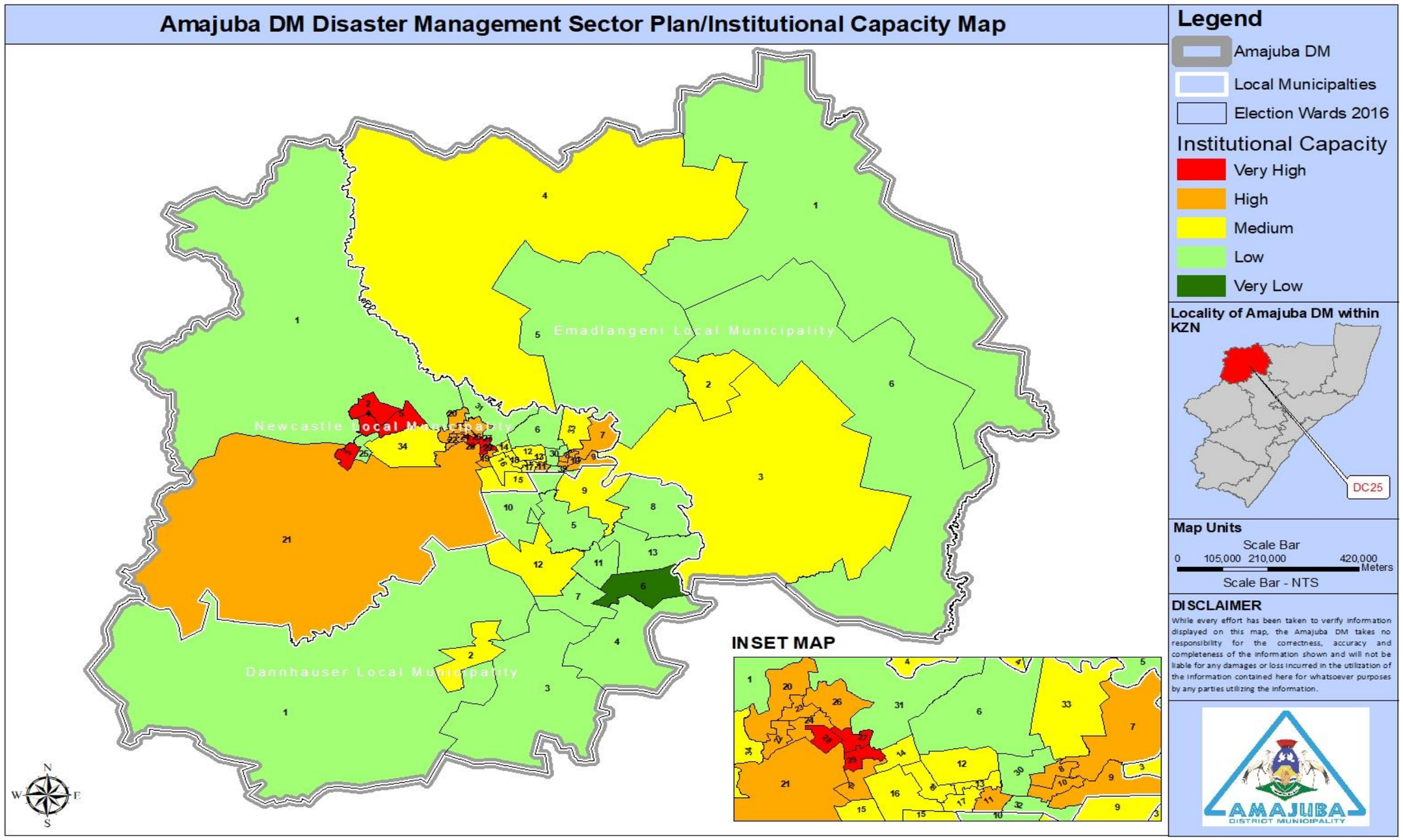
KZ254 = Dannhauser LM
KZ253 = Emadlangeni LM

Table 20: Disaster Capacity Assessment for Dannhauser LM and Emadlangeni LM

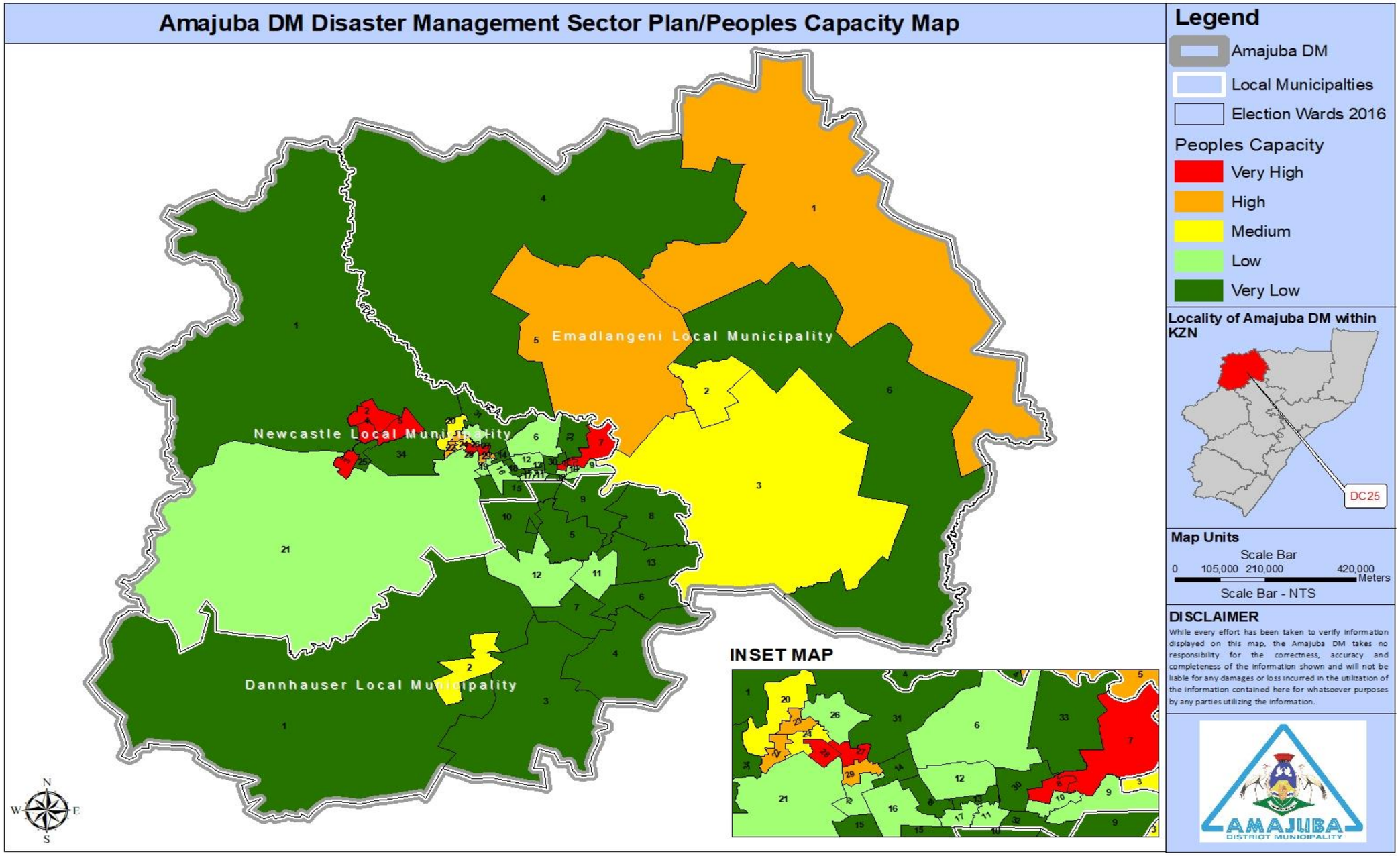
Ward_Code	Institutional Capacity	Physical Resources	Support Network	Peoples Capacity
KZN252_1	Low	Low	Medium	Very Low
KZN252_2	Very High	High	High	Very High
KZN252_3	Very High	High	High	Very High
KZN252_4	Very High	High	High	Very High
KZN252_5	Very High	High	High	Very High
KZN252_6	Low	High	Medium	Low
KZN252_7	High	High	Medium	Very High
KZN252_8	High	High	Medium	Very High
KZN252_9	High	Medium	Medium	Low
KZN252_10	High	Medium	Medium	Low
KZN252_11	High	Medium	Low	Low
KZN252_12	Medium	Medium	Low	Low
KZN252_13	Medium	Medium	Low	Very Low
KZN252_14	Medium	Medium	Low	Very Low
KZN252_15	Medium	Medium	Low	Very Low
KZN252_16	Medium	Medium	Low	Low
KZN252_17	Medium	Medium	Low	Low
KZN252_18	Medium	Medium	Medium	Very Low
KZN252_19	High	Medium	Medium	Low
KZN252_20	High	High	Low	Medium
KZN252_21	High	Low	Low	Low
KZN252_22	High	High	Medium	High
KZN252_23	High	High	Medium	High
KZN252_24	High	High	Medium	Medium
KZN252_25	Low	Medium	Very Low	Very Low
KZN252_26	High	High	Medium	Low
KZN252_27	Very High	Very High	High	Very High
KZN252_28	Very High	Very High	High	Very High
KZN252_29	Very High	High	Medium	High
KZN252_30	Low	High	Medium	Very Low
KZN252_31	Low	Very Low	Medium	Very Low
KZN252_32	Low		Low	Very Low
KZN252_33	Medium	Low	Low	Very Low
KZN252_34	Medium	Low	Low	Very Low

KZN252 = Newcastle LM

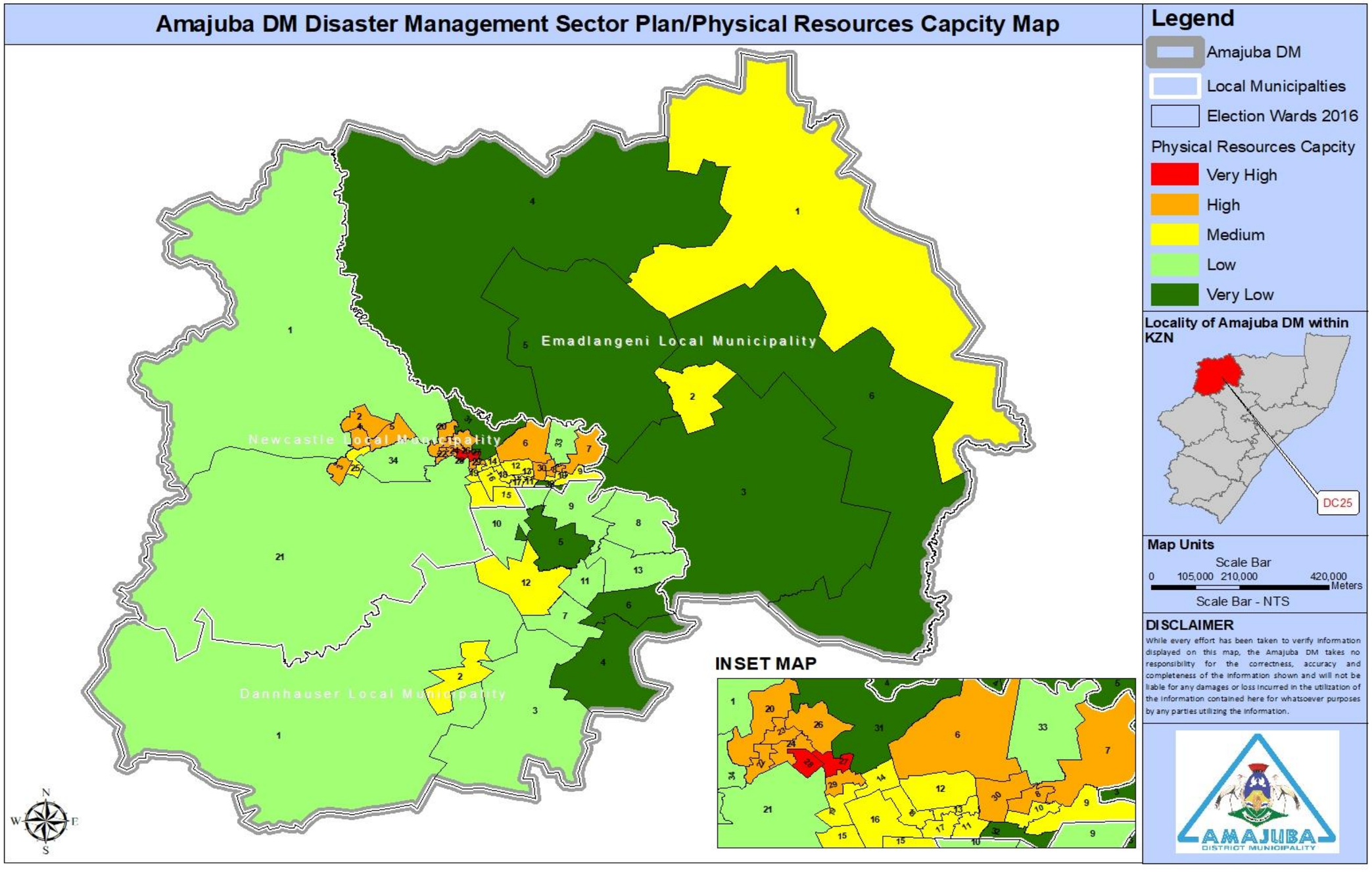
Table 21: Disaster Capacity Assessment for Newcastle LM



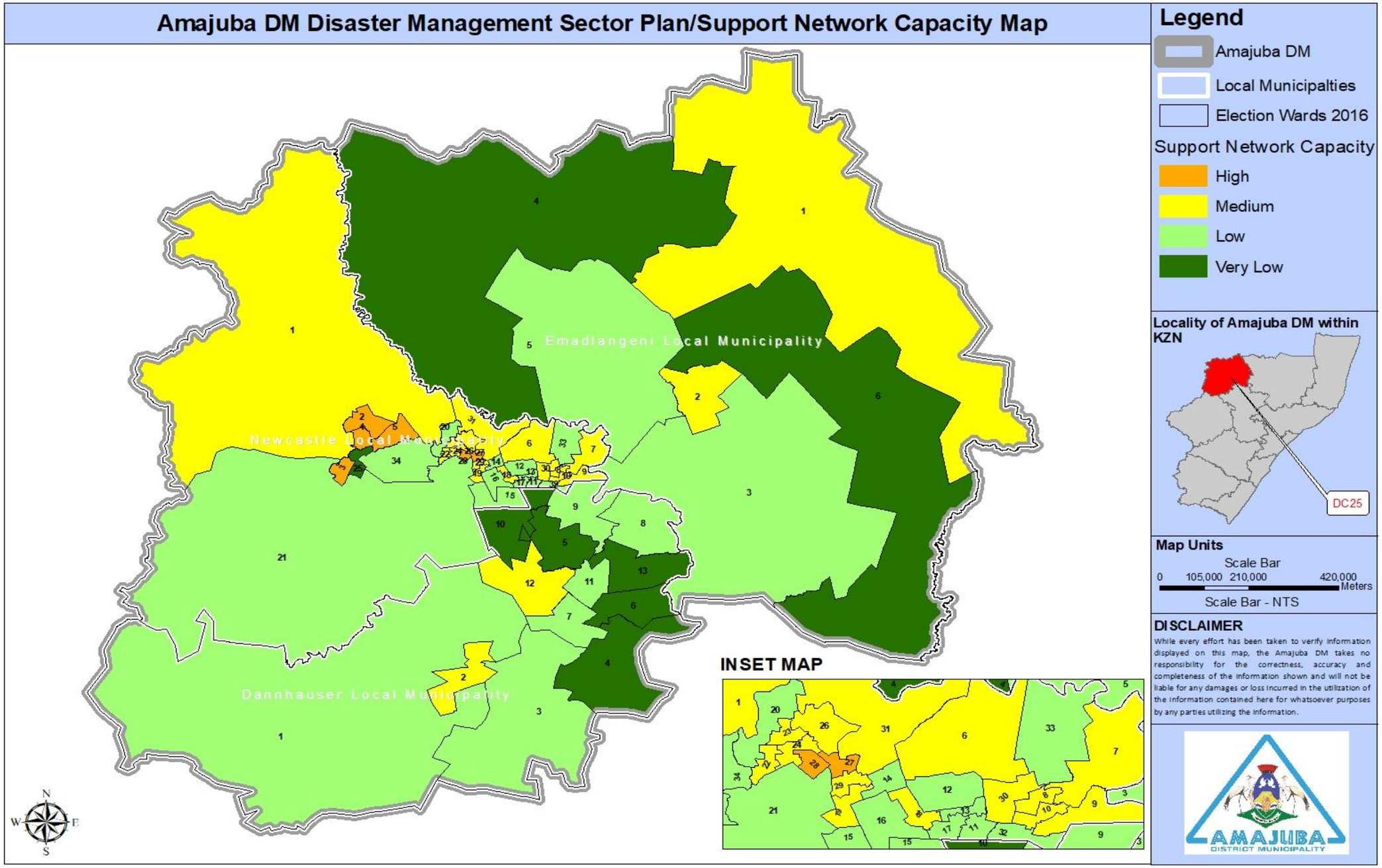
MAP 41: INSTITUIONAL CAPACITY WITHIIN THE AMAJUBA DM



MAP 42: PEOPLES CAPCITY WITHIN THE AMAJUBA DM



MAP 43: PHYSICAL RESOCURCES CAPACITY WITHIN THE AMAJUBA DM



MAP 44: SUPPORT NETWORK CAPACITY WITHIN THE AMAJUBA DM

11. INFRASTRUCTURE

South Africa needs to maintain and expand its electricity, water, transport and telecommunications infrastructure in order to support economic growth and social development goals. (National Development Plan 2035)

The above-mentioned statement encapsulates the desired outcomes in the South African context relating to development of infrastructure that will yield positive outcomes for the economy. It is therefore imperative that the Amajuba DM infrastructure is assessed in context thereof achieving the 2035 National Development Plan objectives. For purposes of this report solid waste management and sanitation infrastructure have also been assessed because with the exception of the Newcastle LM, the Amajuba DM is the WSA within the study area.

The infrastructure assessment has utilized different sources of information provided for by the municipality albeit some of it outdated so the review of the sector plans is considered critical. The assessment intends to unpack the spatial distribution of the different economic infrastructure within Amajuba DM as this will be critical in ensuring a commendable Spatial Development Framework.

11.1. ELECTRICITY

Apart from its social benefits, electricity is also a driving factor in the economy. Schedule 4B of the Constitution lists electricity and gas reticulation as a local government responsibility and as a consequence also plays an important revenue source for local government. For this exercise the spatial location and supply thereof the bulk electricity infrastructure has been assessed.

Eskom is the bulk supplier of electricity to Amajuba DM. Newcastle and Emadlangeni LMs possess licenses to supply electricity in certain areas within their LM boundaries. Typically, the CBD and suburbs are supplied by the LM, while outlying townships and rural areas are supplied directly by Eskom.

11.1.2. BULK ELECTRICITY INFRASTRUCTURE

The current reticulation network in Amajuba District Municipality area as indicated in the Map 55 shows areas already electrified and the location within the district of the bulk electricity infrastructure. It is no surprise that the bulk electricity infrastructure is concentrated in areas that have the highest population densities in areas such as Newcastle, Dannhauser, Utrecht, Madadeni etc. Newcastle Municipality has a superior population size and economy in the

Amajuba district and as such has more areas that would require bulk electricity infrastructure. There are 8 sub-stations in the Newcastle Municipality that supply electricity to the areas of Newcastle, Madadeni and Osizweni. The spatial distribution of most sub-stations within Newcastle

Municipality is predominantly situated along the N11 primary corridor. Newcastle is a growing economy within the District, and it will be essential to demonstrate that the current supply is sufficient to meet current and future demands.

Emadlangeni Municipality has 6 sub-stations that service the settlements within the municipality for residential purposes whilst Utrecht would most like be for economic factors albeit a declining economy. Dannhauser Municipality has 3 sub-stations situated within its jurisdiction servicing the settlements of Mdakane and Osizweni. The supply capabilities of the substations and reticulation networks including the projects related to maintaining and upgrading these substations and reticulation networks are contained in Network Development Plans (NDPs) compiled by the Eskom Area Network Planning Division.

11.1.2.1. EXTENT OF ELECTRICITY SUPPLY

The spatial extent of supply and location of electricity within ADM can be used to determine areas that are well serviced, hence conducive to development, as well as areas that require further attention in order to encourage development. The spatial extent of electrification within small areas of ADM was mapped by integrating readily available spatial datasets. The relationship between the spatial distribution of Eskom transmission powerlines and the level of electrification is evident as illustrated in Map 56.

Eskom transmission networks within Amajuba DM have coverage across all three LMs. Specific regions that have no coverage in terms of transmission lines include the north eastern areas of Emadlangeni LM and the extreme western regions of Newcastle LM.

11.1.2.2. STATE OF ELCTRICITY INFRASTRUCTURE AND SUPPLY

The capacity of Eskom electrification networks within Amajuba DM is considered the key state indicator with respect to the provision of electricity to the municipality. The capacity of Eskom transmission and distribution lines were spatially represented into three categories as reflected in Map 57, those being: (1) – Constrained; (2) Not constrained and (3) Slightly constrained. These were subsequently used to form linkages between poorly serviced areas within Amajuba DM and current Eskom capacity.

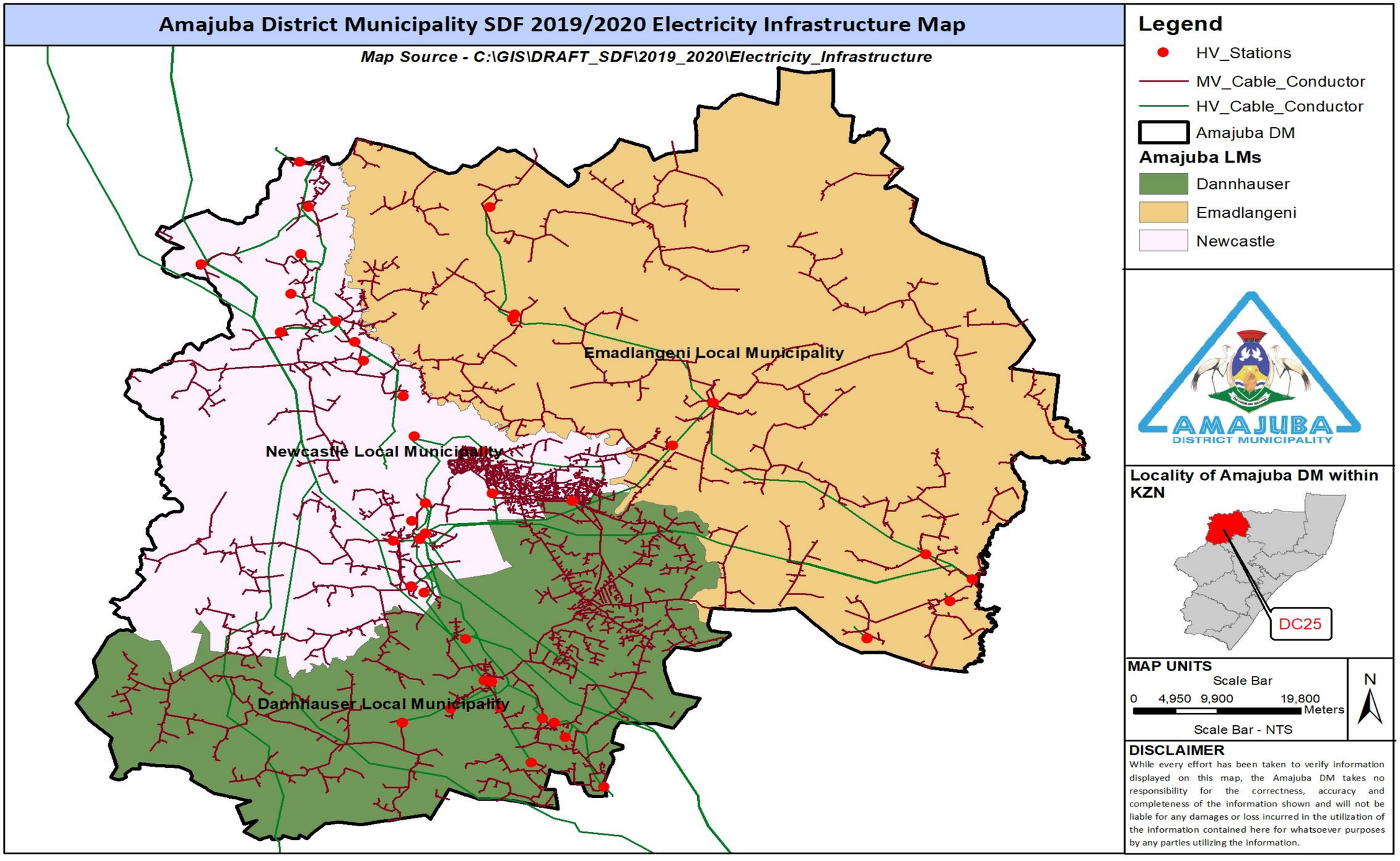
The majority of networks within the district municipality are not constrained, with certain areas being exceptions. Urbanised areas in Madadeni, Dannhauser and Emadlangeni LMs show some constrained networks, with areas on the outskirts of urban regions indicating

slightly constrained networks. The only concern is situated in the northern regions of Emadlangeni and the south-western regions of Dannhauser LMs, as electricity networks in these areas are constrained. The abovementioned regions are situated within rural and agricultural communities, who rely on electricity for daily household and farming activities.

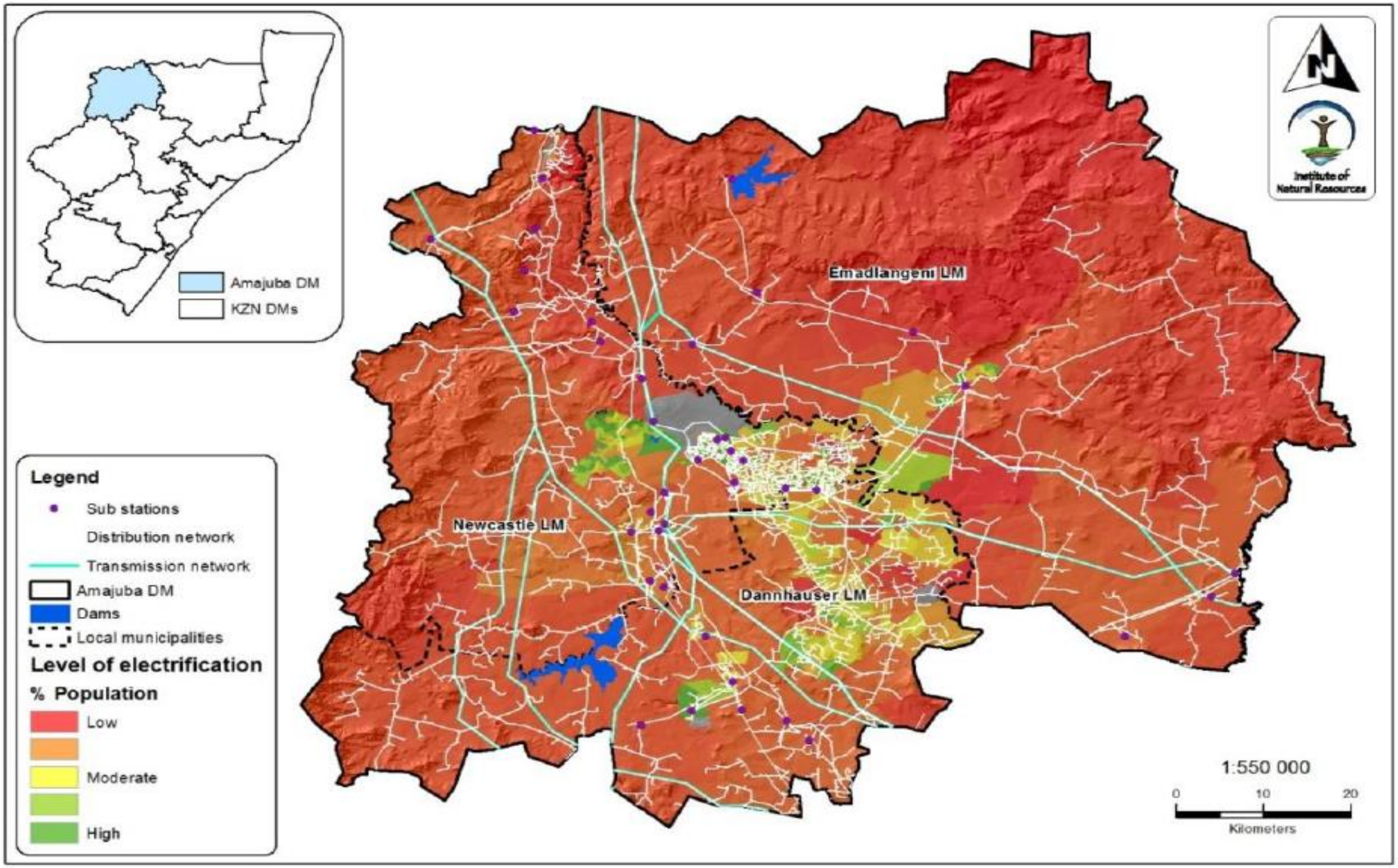
11.1.2.3. LICENSED DISTRUBUTORS

Eskom generates approximately 95% of the electricity used in South Africa and this association extends to generating, transmitting and distributing electricity to industrial, mining, commercial, agricultural and residential customers and redistributors. In the context of the Amajuba DM the above-mentioned fact is no different as Eskom is still the main supply of electricity within the district whilst the Newcastle and Emadlangeni Municipalities have the license to supply electricity in certain areas within their jurisdiction.

The provision of electricity in Newcastle is demand driven. The demand triggers the need to plan for additional capacity of the electricity network distribution. Eskom supplies in the order of 125,000KVA per month with an additional supply of 800 KVA being supplied by IPSA from gas turbines. The electricity networks for the Newcastle West area being the CBD and surrounding suburbs are managed by the municipality whereas the outlying townships and rural areas are supplied by Eskom. The Newcastle Municipality further gives support to Eskom for the surrounding townships and rural areas by implementing capital projects funded by the Department of Energy which upon completion is handed over to Eskom.

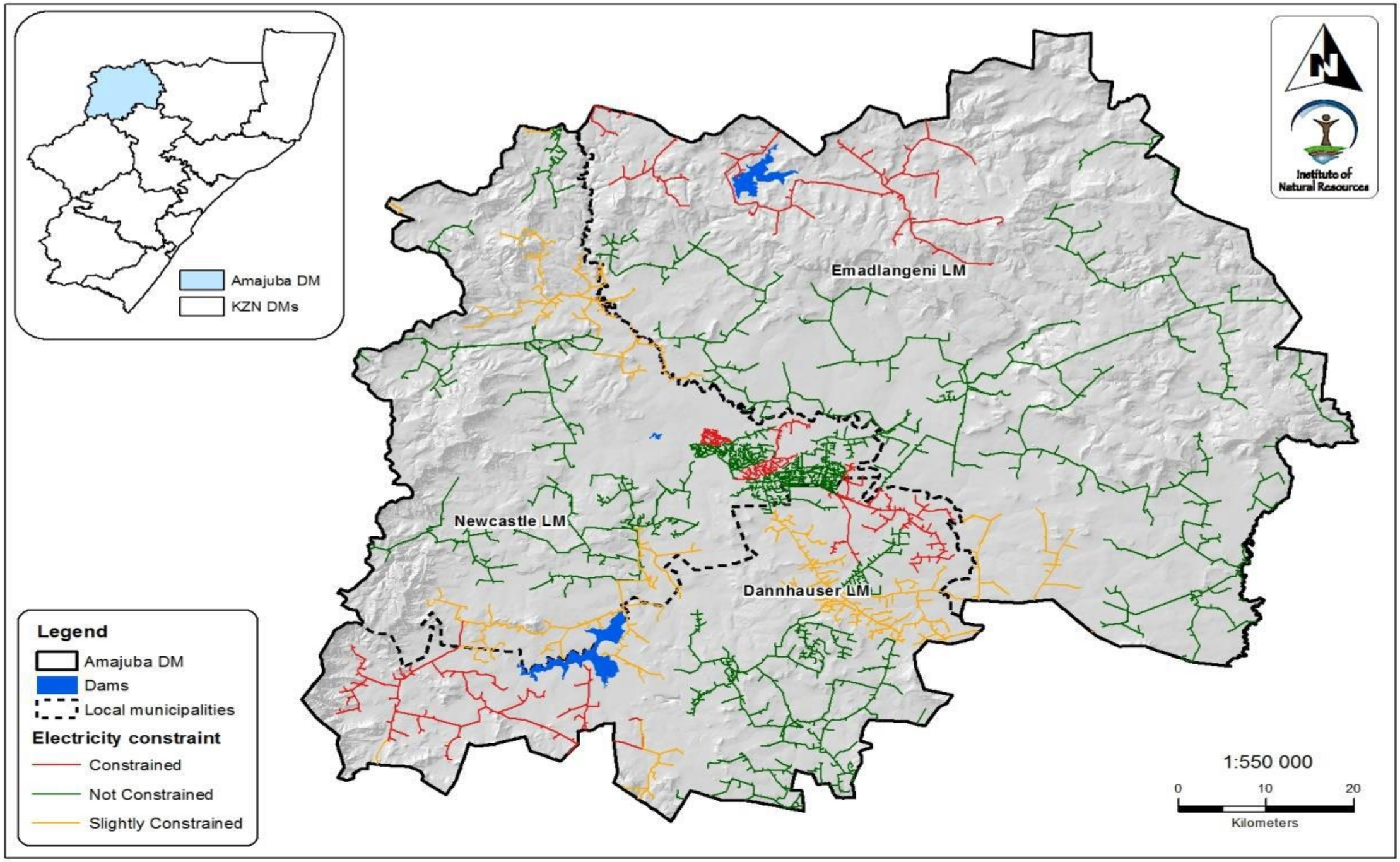


MAP 55: ELECTRICITY INFRASTRUCTURE SUPPLY MAP FIR THE AMAJUBA DM



MAP 56: LOCATION & EXTENT OF ESKOM DISTRUBUTION & TRANSMISSION POWERLINES (EXCLUDES LM OPERATED DISTRUBUTION LINES)

Source: Amajuba District Municipality Environmental Management Framework - Draft Status Quo Report January 2019



MAP 57: CAPACITY OF ESKOM DISTRUBUTION AND TRANSMISSION POWERLINES

Source: Amajuba District Municipality Environmental Management Framework - Draft Status Quo Report January 2019

11.2. BULK WATER & SANITATION INFRASTRUCTURE

uThukela water is the primary bulk water service provider to Amajuba District. Responsibility for distribution then rests with the two water services authorities in the District – The Amajuba District Municipality WSA services Emadlangeni and Dannhauser LMs and Newcastle LM WSA is responsible for servicing its own municipal area.

11.2.1. EXTENT OF WATER SUPPLY

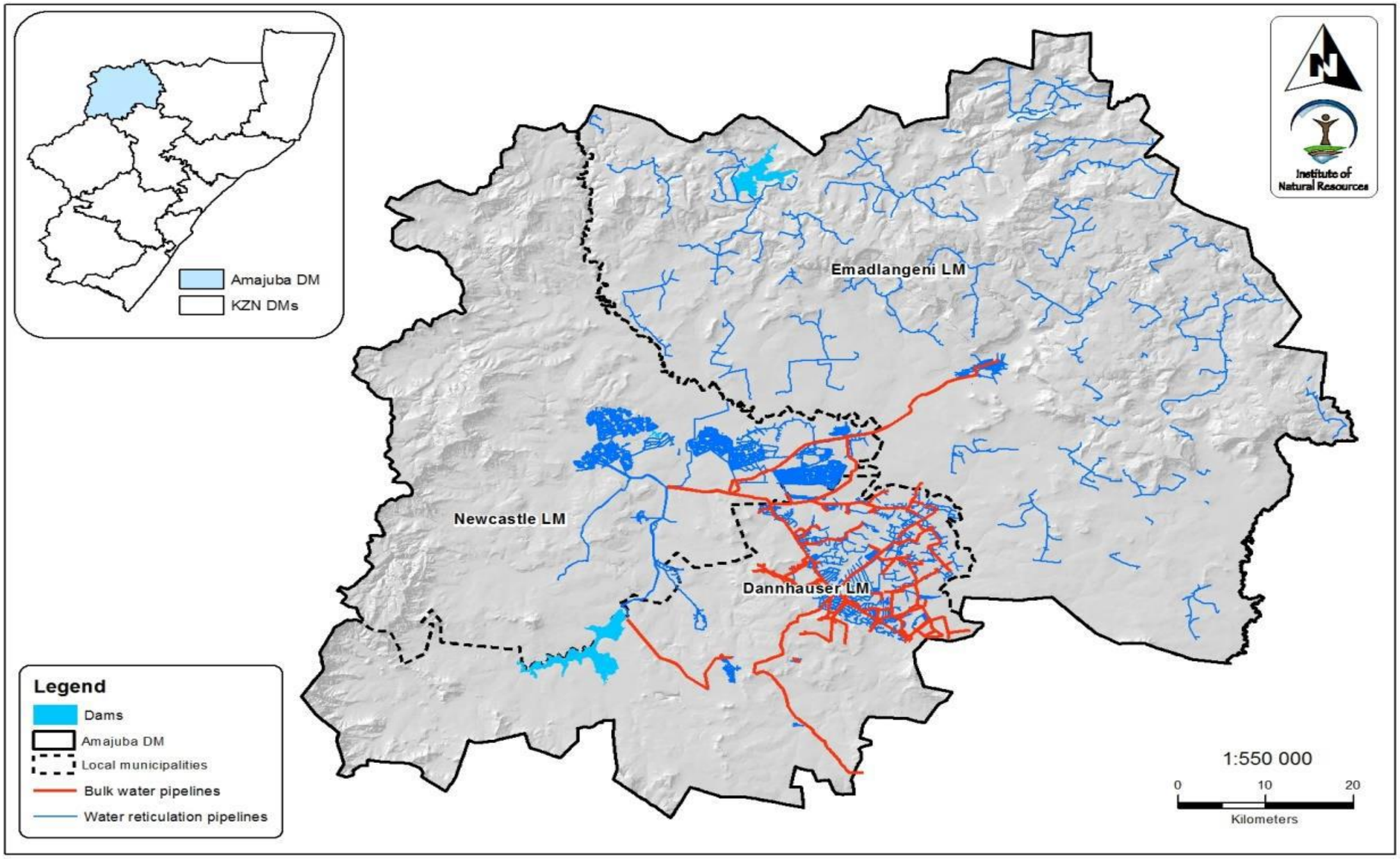
Water and sanitation supply are essential services to ensure and facilitate social and economic development, business security and environmental health. Lack thereof has serious social, economic, environmental, health and security risks. There are two water service authorities (WSA) in ADM area. Those are the Amajuba District Municipality WSA, which services Dannhauser and Emadlangeni Local Municipalities and the Newcastle LM WSA which services the Newcastle LM area. uThukela Water is a registered Water Services Provider and services both WSAs.

The backlog with respect to supply of water services is described in terms of the 2011 Stats SA Census data. This is reported here in Table 22. Water reticulation pipelines within Amajuba DM are concentrated around urbanised areas as per Map 58, with bulk water pipelines showing supply of bulk water services to all local municipalities. The Emadlangeni LM displays sparse water reticulation pipeline distribution, as large areas within this municipality are agricultural communities serviced by via boreholes and other water sources. Many of the areas within Emadlangeni LM receive tanked, rudimentary, traditional and yard tap water supply.

Type of access	Year	Newcastle	Emadlangeni	Dannhauser	Amajuba
Yard Connections	1996	37 765	1 257	2 578	41 600
	2001	43 886	1 947	2 798	48 631
	2011	71 635	2 410	10 175	84 220
Communal Connection	1996	9 835	117	4 781	14 733
	2001	18 175	1 154	7 693	27 022
	2011	9 347	1 260	7 595	18 202
No access to piped water	1996	6 346	1 935	7 821	16 102
	2001	9 103	3 086	8 829	21 018
	2011	3 290	2 581	2 669	8 540

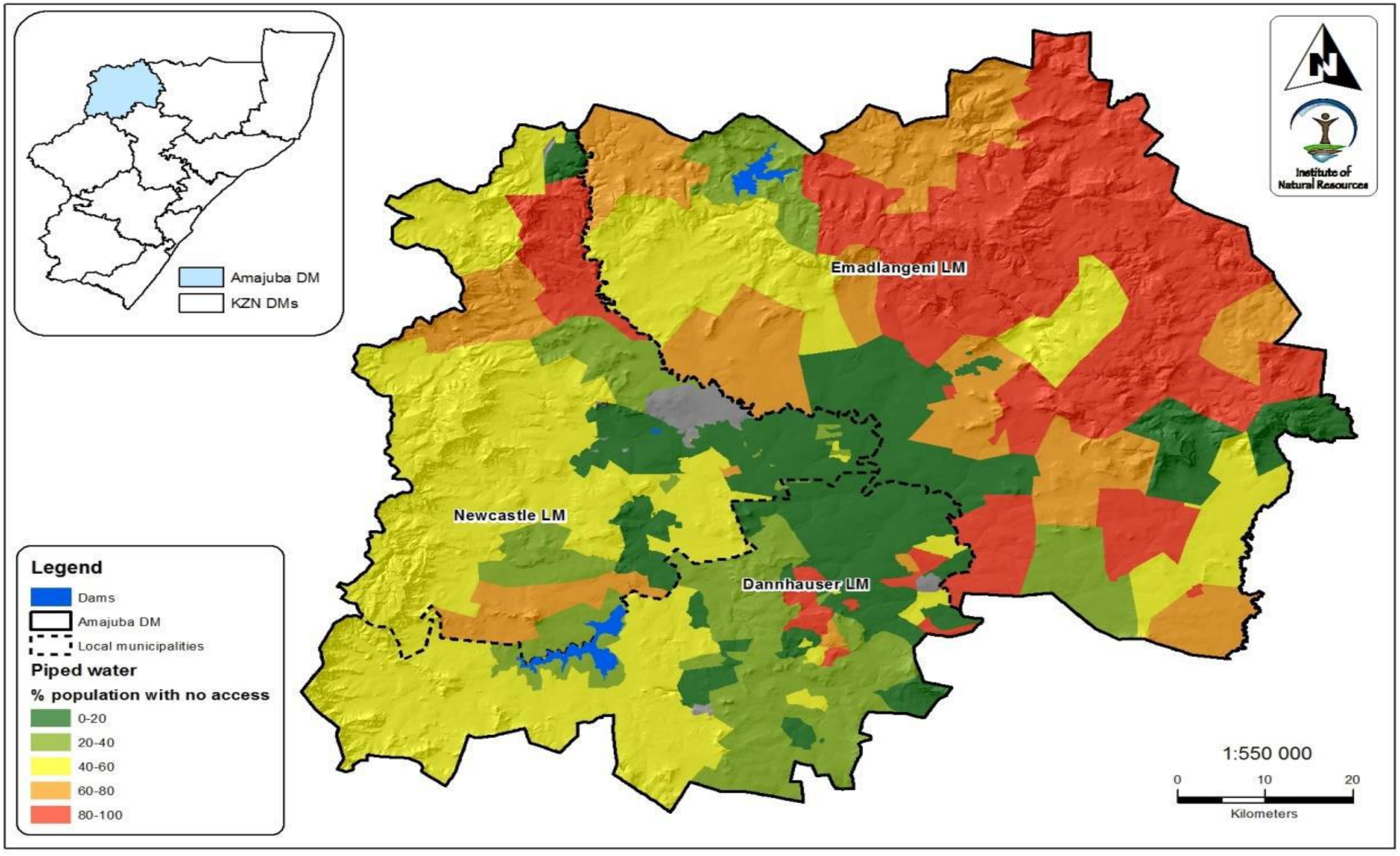
Table 22: Backlogs for Water Services

The provision of water by municipal schemes within Amajuba DM shown in Map 59 closely aligns to the distribution of water reticulation networks illustrated in Map 58. Areas that have high levels of municipal water provision coincide with areas highly concentrated with water reticulation pipelines.



MAP 58: WATER RETICULATION PIPELINES WITHIN THE AMAJUBA DM

Source: Amajuba District Municipality Environmental Management Framework - Draft Status Quo Report January 2019



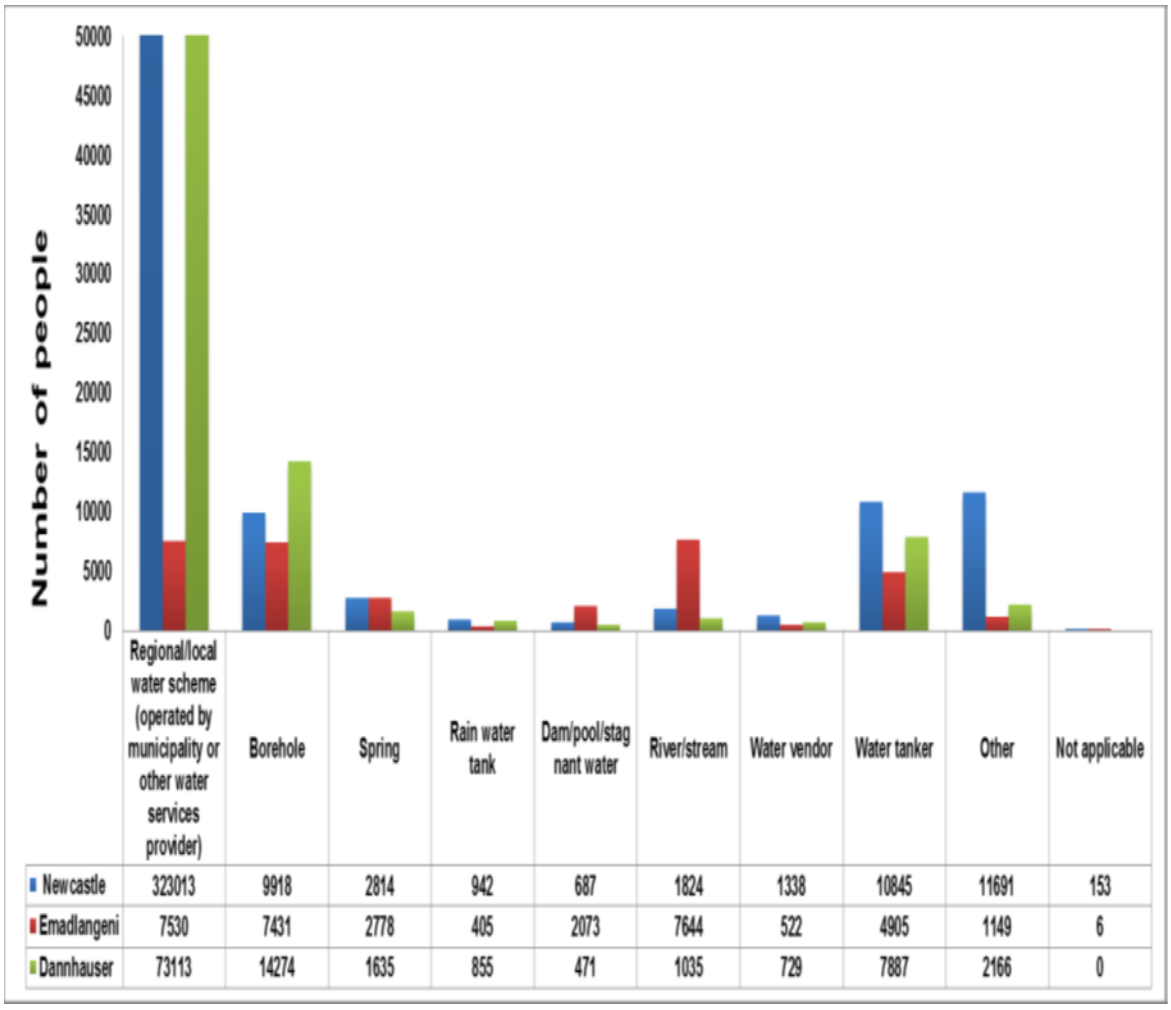
MAP 59: PERCENTAGE OF PEOPLE PER SMALL AREA WHO DO NOT HAVE ACCESS TO PIPED WATER WITHIN 1 KM DWELLING/RESIDENCE

Source: Amajuba District Municipality Environmental Management Framework - Draft Status Quo Report January 2019

11.2.2. STATE OF WATER SUPPLY

Newcastle and Amajuba municipalities are both Water Services Authorities (WSA). Amajuba services both Emadlangeni and Dannhauser municipal areas, while Newcastle is responsible for its own municipal area. Based on the 2016 Stats SA Community Survey illustrated in Figure 26:

- 11,1632 households have piped water supply either to inside the home or on site,
- 17% of households rely on communal standpipes,
- 7.9% of households are reliant on boreholes or springs as opposed to the previous and are reliant on other sources of water. The quality of the water obtained from these sources is unknown and cannot be guaranteed, thus possibly leading to health problems.



	Regional/local water scheme (operated by municipality or other water services provider)	Borehole	Spring	Rain water tank	Dam/pool/stagnant water	River/stream	Water vendor	Water tanker	Other	Not applicable
Newcastle	323013	9918	2814	942	687	1824	1338	10845	11691	153
Emadlangeni	7530	7431	2778	405	2073	7644	522	4905	1149	6
Dannhauser	73113	14274	1635	855	471	1035	729	7887	2166	0

Figure 26: Number of Households with access to different water sources

Census 2011 data shows that there are still significant portions of the population who do not have access to safe drinking water (as defined by the Department of Water and Sanitation – 25l/p/day within 200m of your home) illustrated in Figure 27.

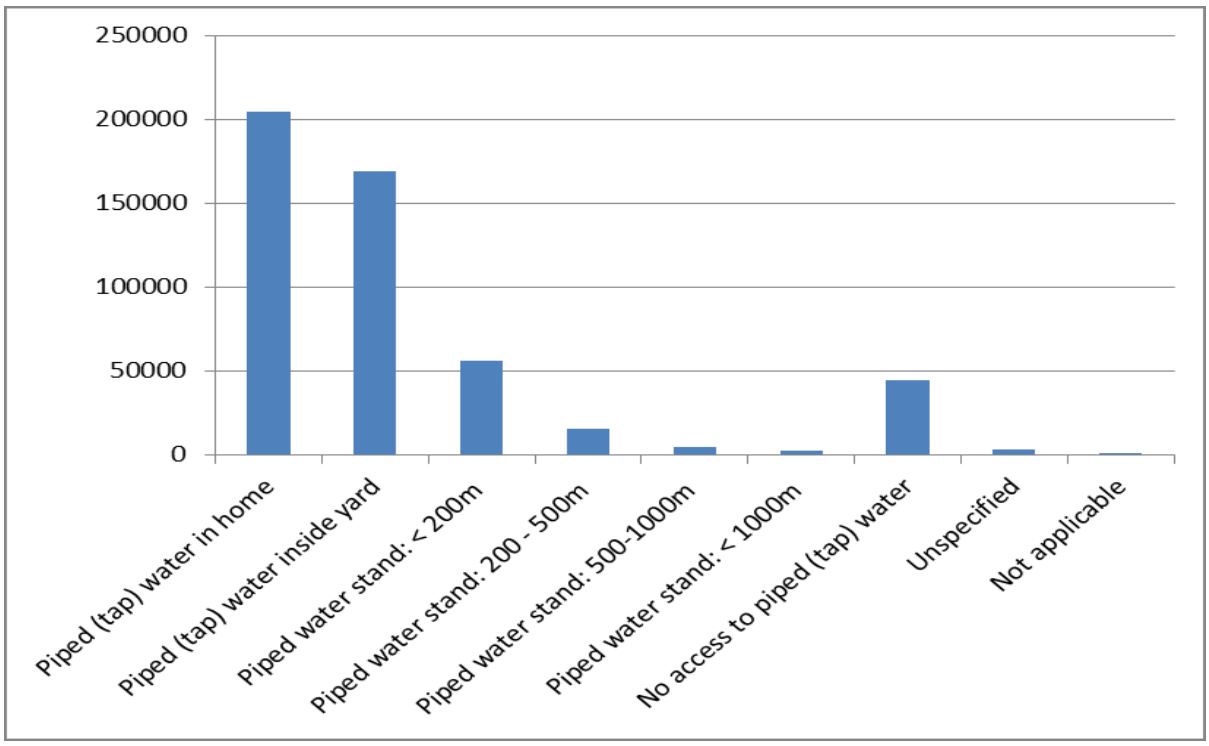


Figure 27: Peoples Accessibility to Piped Water

11.2.3. SURFACE WATER RESOURCES

The Amajuba District Municipality (ADM) falls entirely into two primary catchments namely the Thukela and Pongola catchments. The Ngogo, Ncandu, Horn and Ngagane Rivers are important tributaries of the Buffalo River draining from the western highlands while the Slangspruit, Doringspruit and Dorpspruit form the main tributaries in the north. The headwaters of the Pongola River (including the Bivane River) are found in the high lying north eastern areas of the ADM and drain eastwards out of the District.

The Ntshingwayo Dam is fed by the Ngagane River and is situated at the boarder of the Newcastle and Dannhauser Municipalities. This dam is the most important water supply point for Newcastle – the most densely populated area and economic hub of the District. The Zaaihoek Dam is situated in the Emadlangeni Municipality and is used to primarily supply water to Majuba Power Station, but also Volksrust town and to supplement the Vaal catchment.

11.2.4. WATER YIELD

The Amajuba District Municipality (ADM) falls entirely into two primary catchments namely the Thukela and Pongola catchments. The Ngogo, Ncandu, Horn and Ngagane Rivers are important tributaries of the Buffalo River draining from the western highlands while the Slangspruit, Doringspruit and Dorpspruit form the main tributaries in the north. The headwaters of the Pongola River (including the Bivane River) are found in the high lying north eastern areas of the ADM and drain eastwards out of the District.

The Ntshingwayo Dam is fed by the Ngagane River and is situated at the boarder of the Newcastle and Dannhauser Municipalities. This dam is the most important water supply point

for Newcastle – the most densely populated area and economic hub of the District. The Zaaihoek Dam is situated in the Emadlangeni Municipality and is used to primarily supply water to Majuba Power Station, but also Volksrust town and to supplement the Vaal catchment.

Water yield from these catchments is directly affected by vegetation types and cover and invasive alien woody species are increasingly present in these catchment areas. This represents a significant threat to water security in the District.

Water yield is also affected by land use changes. The conversion of natural veld to cultivated agriculture, industry, mining and urbanisation affects runoff and infiltration which in turn affects the quantity, quality and the timing of flows in rivers. Vegetation changes resulting from grazing also decrease the surface vegetative cover which affects water yield. These have all been identified as impacts affecting the ADM strategic water source areas.

11.2.5. EXTENT OF SANITATION INFRASTRUCTURE SERVICES

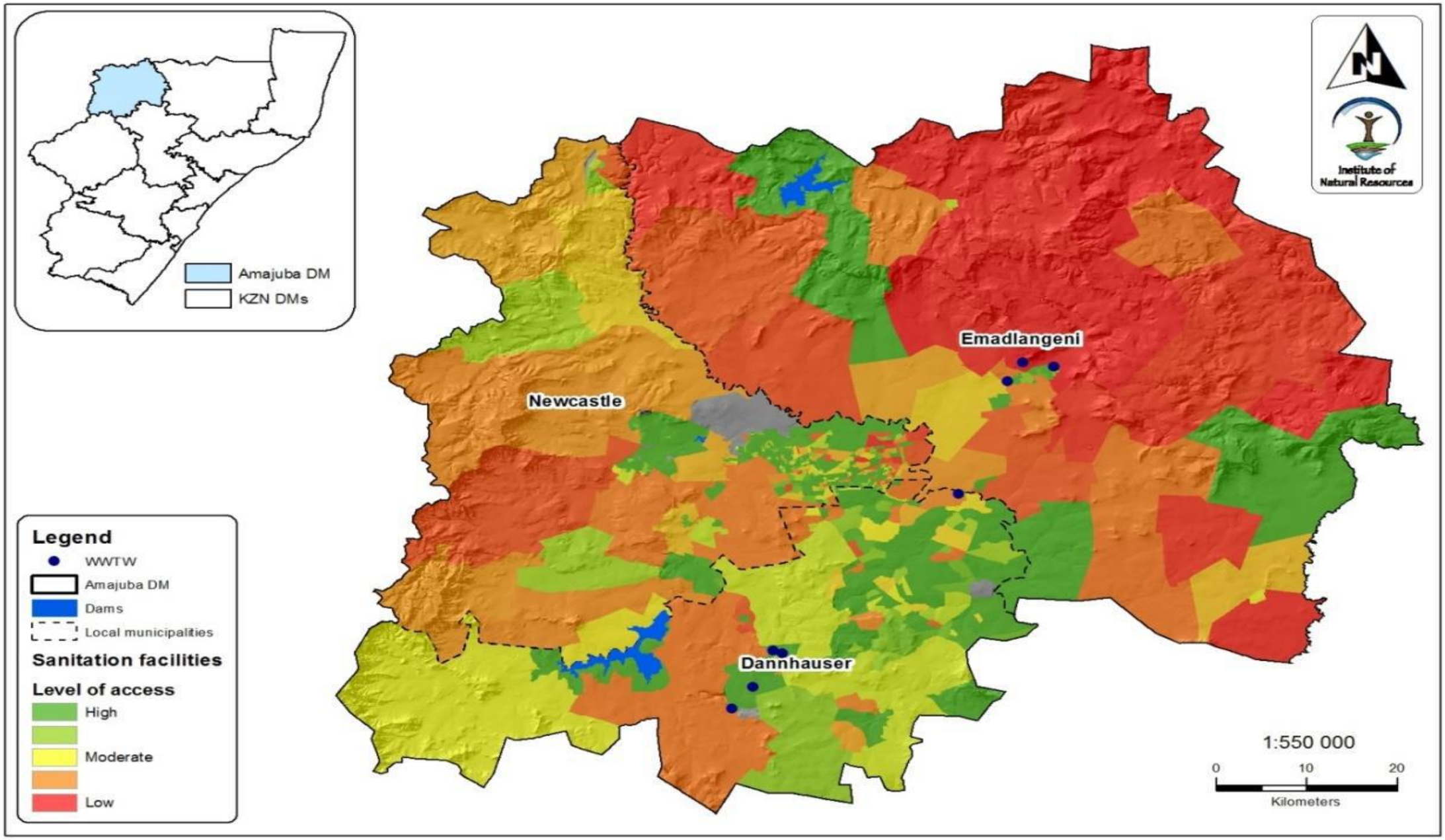
There are currently twelve waste-water treatment facilities registered on the DWS Integrated Regulatory Information System (IRIS). These are split equally between the two water service authorities in the study area – Amajuba District WSA and Newcastle LM WSA. These are listed in Table 23. According to the Newcastle LM EMF Status Quo report, there are only five facilities in the Newcastle LM. This suggests that the IRIS list contains a duplicate record, presumably the Madadeni STP is a duplicate of the Madadeni WWTW.

Amajuba District WSP	Newcastle LM WSP
Durnacol WWTP	Charlestown Ponds
Gulela STW	Kilbarchan WWTP
Tweediedale Ponds	Madadeni STP*
Utrecht Ponds	Madadeni WWTP
Utrecht Welgedaght WWTP	Newcastle WWTP
Welgedagt	Osizweni WWTP

- Likely a duplicate record

Table 23: Waste- water treatment facilities listed on the IRIS located within the Amajuba DM

These facilities service the urbanised areas in the District. This is evident in the 2011 census data showing the distribution of people with access to improved sanitation services illustrated in Map 60.



MAP 60: PERCENTAGE OF PEOPLE PER SMALL AREA WITHOUT ACCESS TO IMPROVED SANITATION FACILITIES

Source: Amajuba District Municipality Environmental Management Framework - Draft Status Quo Report January 2019

About 46% of the households in the Amajuba DM have flushed toilets that are connected to a sewerage system, 30% of households utilise unventilated pit latrines and 4% of the households in the Amajuba DM do not have any form of sanitation (Census, 2011) as per (Figure 28).

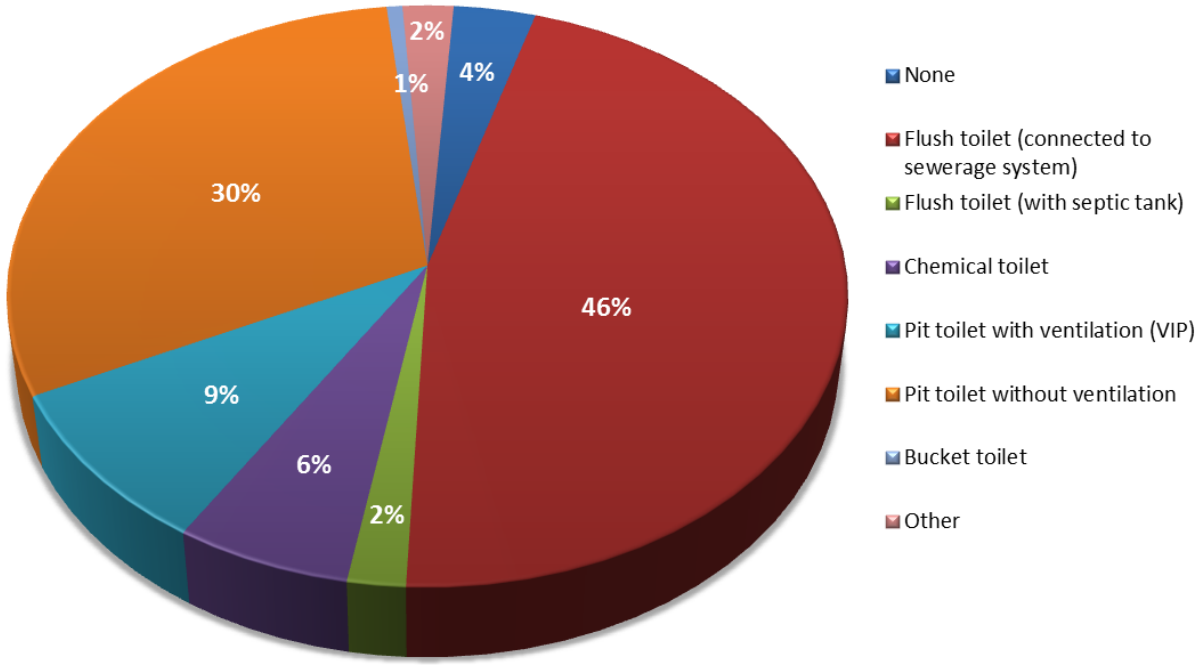


Figure 28: Households access to different forms of sanitation

While the statistics reflect that a substantial proportion of the households in the ADM have adequate sanitation, it has however been noted that many homes are still faced with unhygienic conditions due to pit latrines and that many of these are full, thereby exacerbating the problems associated with such low tech sanitation systems.

11.2.6. STATE OF SANITATION SERVICES

According to the 2014 Newcastle LM EMF Status Quo report, Madadeni WWTW was at that stage overloaded while Osizweni WWTW was running at full capacity. This suggests that these facilities are stretched and potentially unable to meet standards for the discharge of effluent. This is consistent with the latest green drop results reported on the IRIS website for the Newcastle LM WSP which reports that the Madadeni WWTP is only 50% compliant with Microbiological category risk metrics and 75% compliant with chemical category metrics. Newcastle WWTP is greater than 99.9% compliant with Microbiological and Physical category metrics, but is only 87.5% compliant with chemical category metrics.

Newcastle Local Municipality								
	Microbiological		Chemical		Physical		Operational	
	Comply	Monitoring	Comply	Monitoring	Comply	Monitoring	Comply	Monitoring
Charlestown Ponds	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Kilbarchan WWTP	>99.9%	8.0%	>99.9%	8.0%	>99.9%	8.0%	0.0%	0.0%
MADADENI STP	0.0%	>99.9%	0.0%	>99.9%	0.0%	0.0%	0.0%	0.0%
Madadeni WWTP	50.0%	16.0%	75.0%	16.0%	>99.9%	12.0%	0.0%	0.0%
Newcastle WWTP	>99.9%	16.0%	87.5%	16.0%	>99.9%	12.0%	0.0%	0.0%
Osizweni WWTP	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Newcastle Local Municipality	83.3%	7.0%	85.0%	8.0%	>99.9%	5.0%	0.0%	0.0%

Figure 29: December 2017 Extract from IRIS for the Newcastle LM managed WWTPs.

Zero compliance of operational category metrics is reported by all facilities and zero compliance results for all of the four categories of metrics are reported for Osizweni WWTP and Charlestown Ponds. This may simply reflect non-reporting as opposed to complete failure of the treatment works, but this is still of concern given the importance of monitoring and reporting in ensuring sustainability.

Zero compliance with all metrics is reported by all of the ADM WSP facilities. Although this may also only reflect non-reporting (only the Welgedagt facility indicates monitoring is occurring), laboratory results from these facilities show that in virtually all results reviewed, Soluble Reactive Phosphate (SRP) results are non-compliant with national standards and that microbiological results were often poor.

According to uThukela Water (2012), all of the facilities in the Newcastle LM fleet struggle with aging sewer infrastructure, storm water ingress and resultant hydraulic overloading during summer storm events. This results in the discharge of large volumes of partially treated or untreated effluent.

11.3. SOLID WASTE MANAGEMENT

Individual LMs are responsible for waste management in their municipal areas and are solely responsible for the collection and disposal of waste and the management of their waste disposal sites.

11.3.1. SPATIAL EXTENT OF WASTE COLLECTION AND MANAGEMENT SERVICES

An increase in population leads to an increased rate of waste generation, which ultimately requires effective waste management strategies and policies. Ten registered landfill sites are located within the NLM of which nine are classified as H:H – that is hazardous facilities. These H:H sites are managed by private sector entities. A registered general waste disposal site is located in Newcastle adjacent to the Newcastle airport (Figure 30). This facility is the largest in the District and is managed by Newcastle LM. Unregistered waste disposal sites are located in Charlestown, Dannhauser and Waterval Prison whilst a general waste landfill site is located in Utrecht.

Figure 30: General waste landfill site located adjacent to Newcastle Airport

There are also existing buyback centre facilities in Newcastle LM and Madadeni, these facilities play a role in economic development and additionally contribute to the longevity of landfill sites through diversion of waste.

11.3.2. STATE OF SOLID WASTE SERVICES

Solid waste management is of critical importance to achieving sustainable development and social well-being. Solid waste can not only impact on human and ecological health but also on infrastructural integrity as storm water drains are often blocked by solid waste resulting in flooding and damage to infrastructure.

Land fill sites are predominantly used in the ADM to dispose of solid waste. The largest facility is the registered general waste landfill site in Newcastle LM. In 2004, this site was reported as

having sufficient airspace for another two years of operation (Sivest 2004). This site is still being used today, although a new site has been identified and the Newcastle LM is in the process of seeking environmental authorisation for this facility. The site is understood to be operating relatively well, despite the limited capacity.

The conditions of the other sites listed in the Amajuba DM SDF are as follows:

- The Newcastle East and Rural landfill is understood to be adequate with regards to collection and disposal equipment.
- Utretch landfill site requires further attention and upgrades in order to improve overall operation and disposal capacity.
- Waterval Prison landfill site is still undergoing the process of acquiring a permit, this process is guided by the relevant legislation, which will dictate whether the permit received is for closure or to continue operating.
- The Dannhauser site is in a similar situation to Waterval Prison, as the permit process is still ongoing, be for closure or continued operation.

At present a major challenge to waste management is the limited disposal sites within urban centres. It is therefore critical that new sites be located and identified in order for future development. A key environmental concern with the siting of a landfill site is the potential for such a facility to contaminate groundwater, particularly given the shallow groundwater table across much of the Buffalo River basin.

11.4. ROAD NETWORK

Road hierarchy is a significant determinant in road infrastructure governance as national roads are the sole responsibility of National Department of Transport (DOT) and are maintained through the South African Roads Agency Ltd (SANRAL). Provincial roads (both Provincial main roads and Provincial district roads) are the responsibility of the KwaZulu-Natal Provincial DOT.

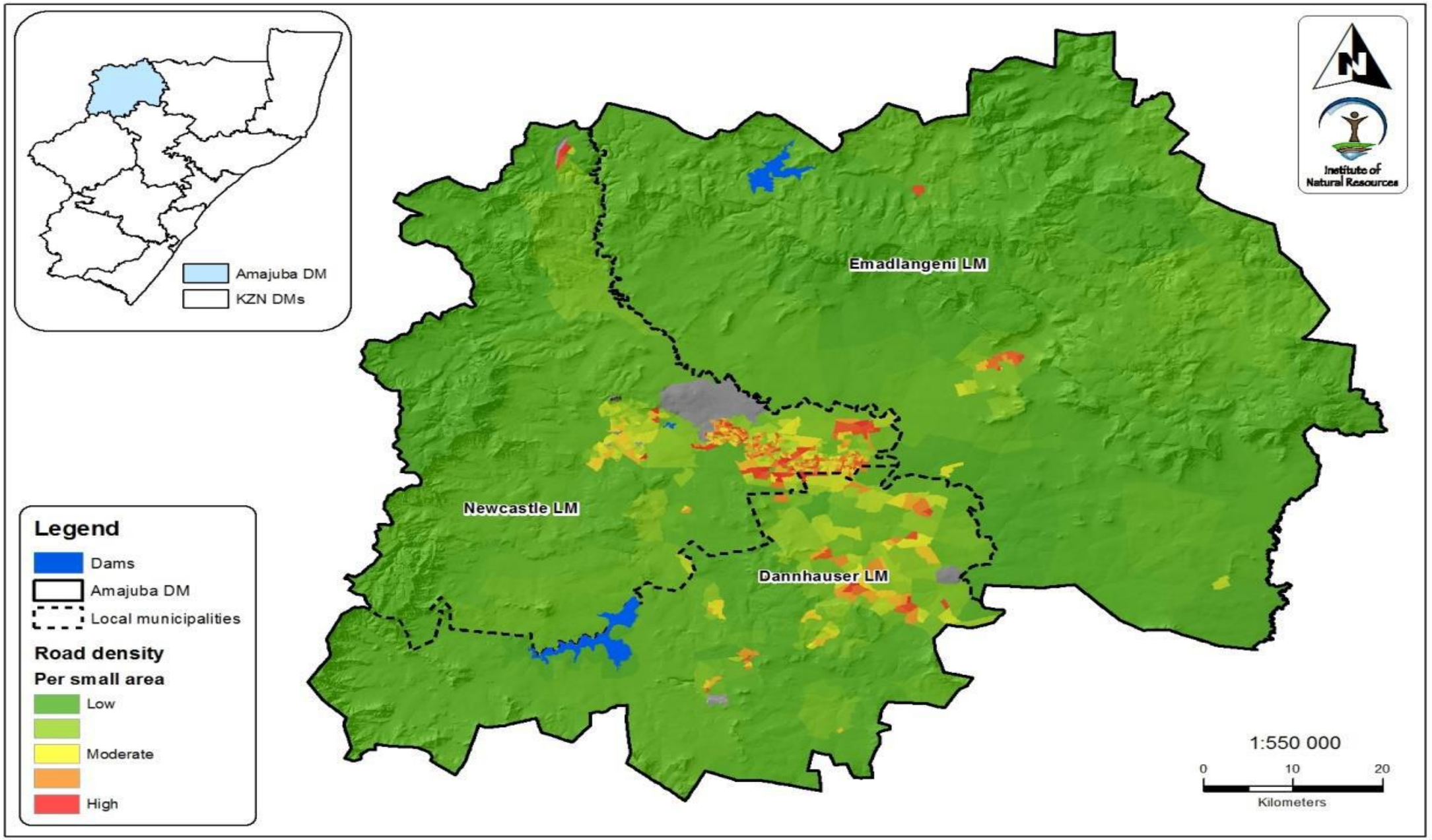
11.4.1. EXTENT OF ROAD NETWORK

The relevant road authorities in South Africa at different government levels are obligated to provide a reliable, effective and efficient integrated transport system. This is to be done with an overarching goal of supporting sustainable economic and social development objectives. Roads play an important role in connectivity and mobility and have the potential to bridge not only geographical divides but also the ability to provide communities with access to improved economic and social opportunities.

The majority of road infrastructure in the ADM is understandably centred around the urbanised centres in the eastern areas of the Newcastle LM as well as the north eastern areas of the Dannhauser LM. These areas are indicated by having high road densities per small area

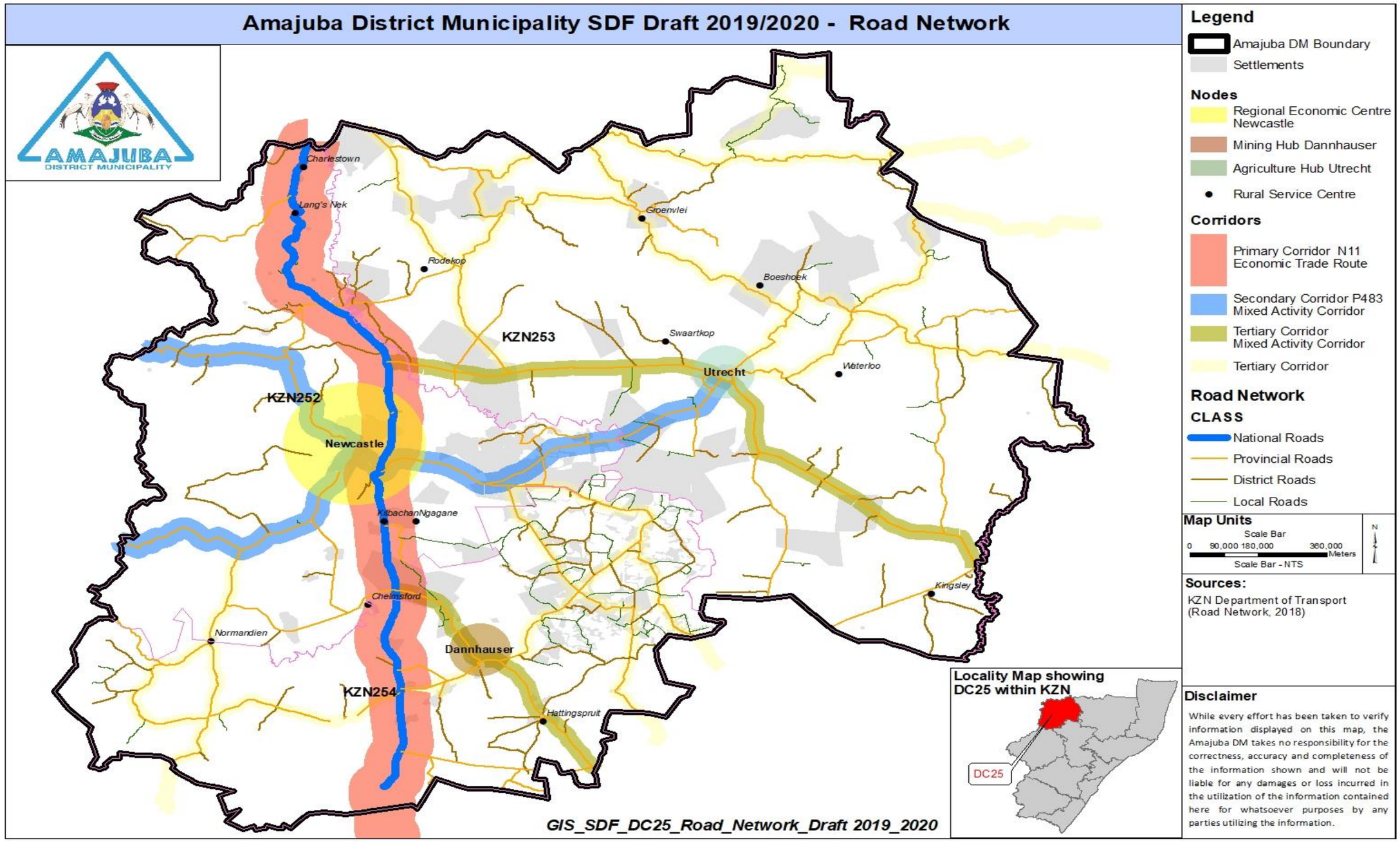
unit (Map 61) though this does not account for road class. Road density decreases as one moves away from these urban centres within the rural regions of Amajuba DM.

From a strategic perspective, the importance of the road network is illustrated in the fact that the Strategic Development Framework is effectively built around key road infrastructure (Map 62). The N11 as a primary development corridor and roads linking Dannhauser and Utrecht to Newcastle as secondary mixed activity corridors.



MAP 61: DENSITY OF ROADS (ALL CLASSES) PER SMALL AREA OF AMAJUBA DM

Source: Amajuba District Municipality Environmental Management Framework - Draft Status Quo Report January 2019

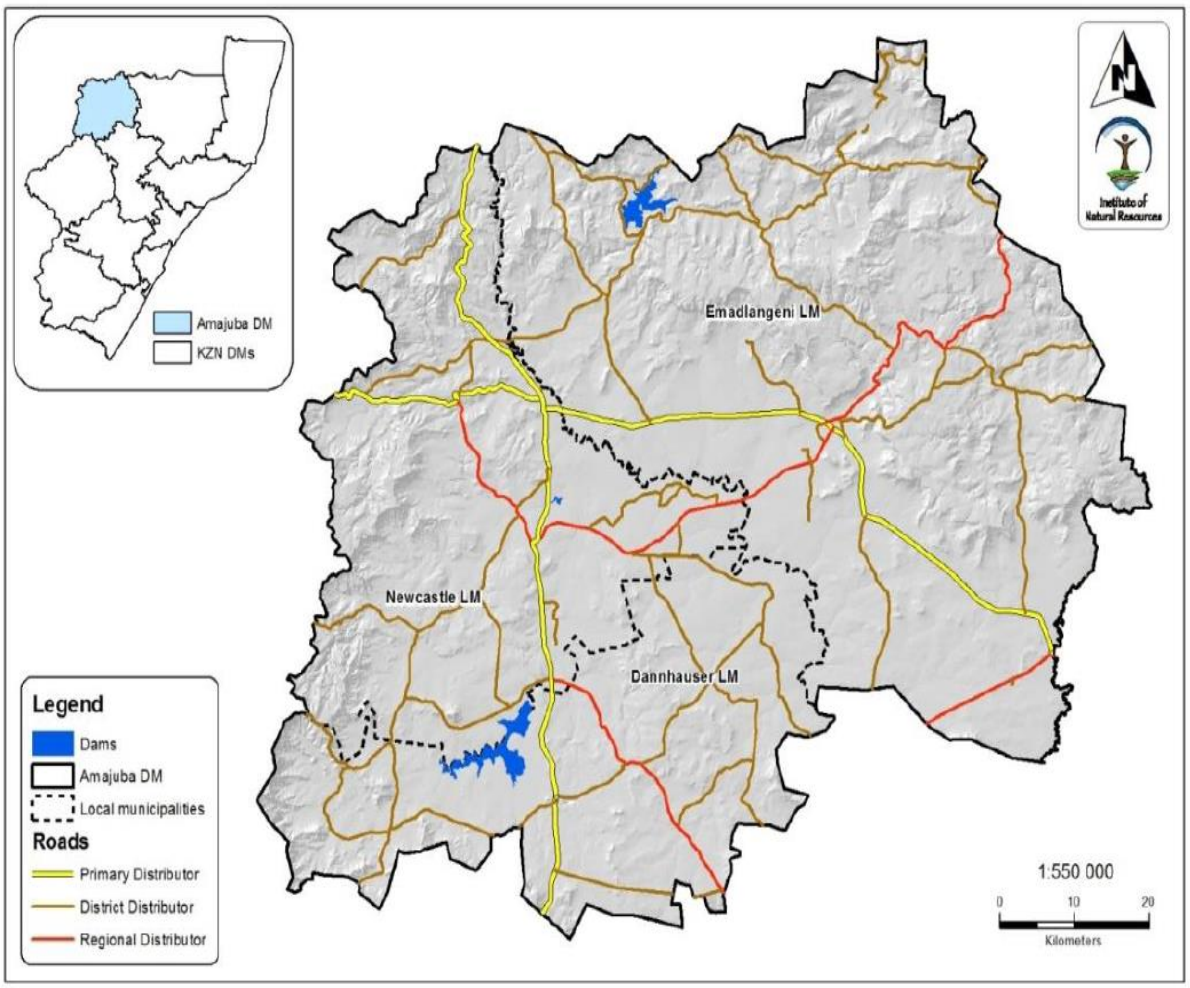


MAP 62: AMAJUBA DM ROAD NETWORK

Road infrastructure is a critical element in the growth and development of regional economies. The Road Infrastructure Strategic Framework for South Africa (RISFSA) embodies the Road Infrastructure Policy and provides a blueprint for roads planning and development. This identifies six classes of road infrastructure (Table 24). The distribution of these classes across the ADM is shown in Map 63.

Class	Name
Class 1	Primary Distributor
Class 2	Regional Distributor
Class 3	District Distributor
Class 4	District Collector
Class 5	Access Roads
Class 6	Non-Motorised Accessways

Table 24: Road Infrastructure Strategic Framework for South Africa Road Classifications



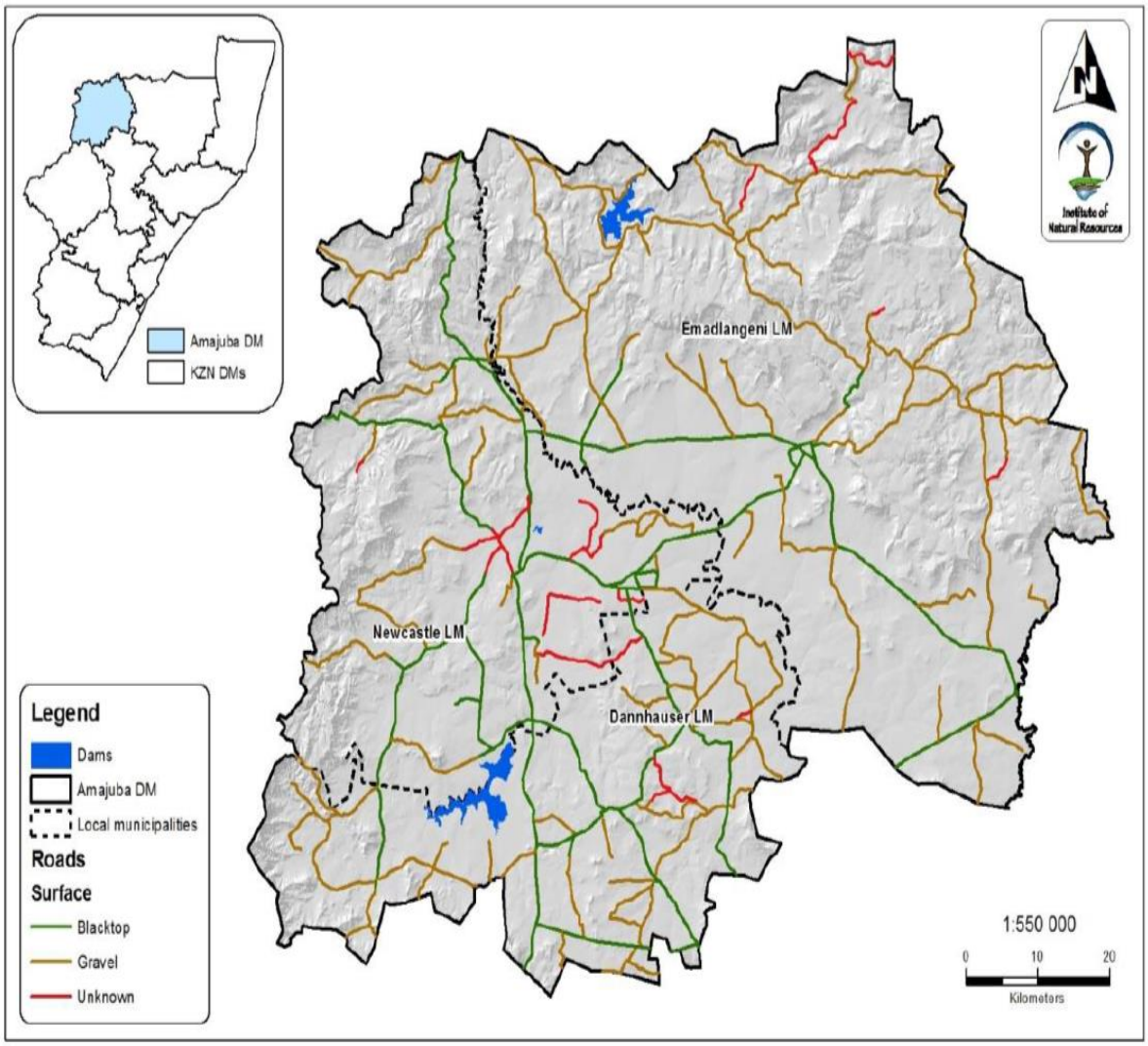
MAP 63: ROAD CLASSES AS OUTLINED BY RIFSA

Source: Amajuba District Municipality Environmental Management Framework - Draft Status Quo Report January 2019

11.4.2. STATE OF ROAD INFRASTRUCTURE

The majority of road surfaces within ADM are gravel (Map 64), with the majority of these gravel roads classed as district distributors (Map 63). Blacktop (tar) roads cover a significant portion of ADM (Map 64) and are classified as primary and regional distributors.

The poor condition of roads is a major challenge in economic development in the region. The majority of community access roads are unsurfaced gravel roads and according to the ADM IDP, they are not constructed according to geometric design standards. The high level of usage by public transport vehicles results in high vehicle maintenance costs and unsafe traveling conditions for passengers. During wet periods, these surfaces become slippery or impassable resulting in unreliable transport options for the communities dependent on these roads.



MAP 65: ROAD SURFACE OF NATIONAL, PROVINCIAL AND DISTRICT ROADS

Source: Amajuba District Municipality Environmental Management Framework - Draft Status Quo Report January 2019

12. SOCIAL FACILITIES

12.1. EDUCATION

There are 267 schools within Amajuba District; these include the primary, secondary, combined schools, special needs and independent schools; which are spread among different settlements within the local municipalities. Of these 267 schools 257 of these schools are run by government (including three schools to be registered and one to be confirmed), varying levels of water and sanitation provision occur at these schools. According to the Baseline (2009) Amajuba DM has a backlog of inadequate sanitation and water supply of approximately 0.75% and 1.89% respectively. Table 25 below summarises the educational facilities in Amajuba DM.

Educational Facility	Newcastle	Dannhauser	Emadlangeni	Amajuba
Pre-school	2	0	0	2
Primary School	94	48	38	180
Secondary School	37	16	4	57
Combined School	4	4	6	14
LSEN (special needs)	5	0	1	6
Independent	8	0	0	8
TOTAL	150	68	49	267

Table 25: Education Facilities at the Amajuba DM

On average in the ADM the number of educators per school is 16 which is the highest figure amongst the different district municipalities in KwaZulu Natal. The number of educators per school in the ADM with other comparative DM's is the same as that of Nkangala DM, somewhat higher than Gert Sibande DM (12) and considerably lower than Sedibeng DM (22).

12.2. HEALTH

There are 3 hospitals and 25 clinics that exist within Amajuba District. The Department of Health has managed to address all of its backlogs for water, sanitation, electricity and telephones for all of its health facilities; however clinics are at times without telephone line because of the theft of Telkom cables and poor Telkom network. There is currently 100% compliance with the provision of sanitation, water, electricity and telephones. There is a need to involve clinic committees and community leaders to address the vandalising of telephone

poles; Telephone systems are not always functional at other provincial clinics such as Greenock, Thembalihle and Lady bank and the district does not have a community health care centre. Table 26 below highlights the basic health care facilities in the district.

MUNICIPALITIES	Facility Type	No. Facilities
Dannhauser	District hospital	0
	Clinics	9
Newcastle	District hospital	2
	Clinics	14
EMadlangeni	District hospital	1
	Clinics	2
Amajuba	District hospital	3
	Clinics	25
TOTAL		56

Table 26: Health Facilities in the Amajuba DM

12.3. POLICE STATIONS

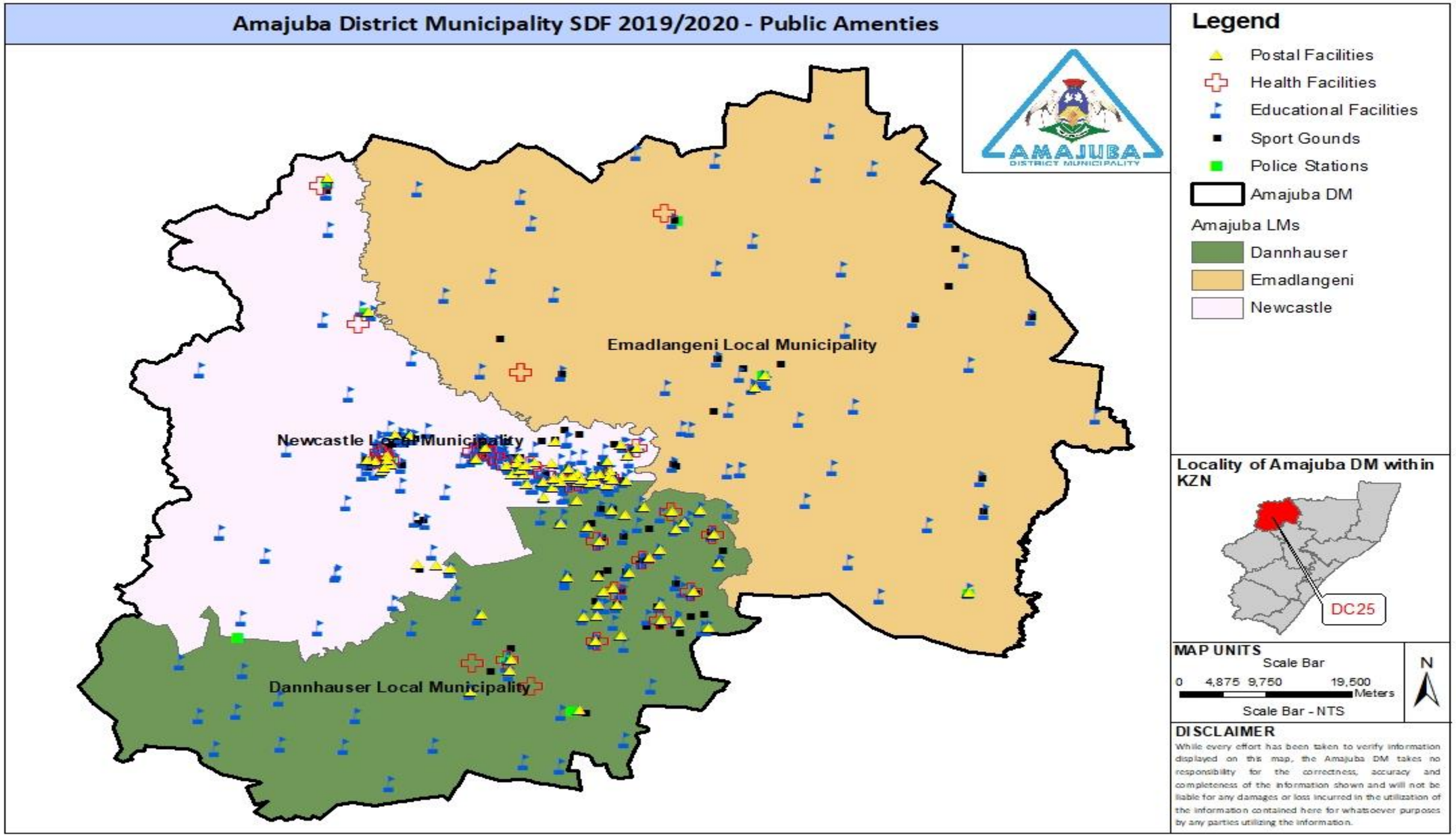
The district municipality has 12 permanent police stations. The most common crimes in the area are stock theft mostly in Emadlangeni and cable theft. The response time by the police tends to take longer due to the poor infrastructure i.e. poor roads and the vast area that needs being covered as there is a shortage of police stations.

MUNICIPALITIES	No. of police stations
Newcastle	7
Emadlangeni	3
Dannhauser	2
Total	12

Table 27: Number of Police Stations per LM.

12.4. SPORTS FACILITIES

Amajuba does not appear to be well provided with sports and recreational facilities. The sport facilities are mainly found within the urban centres i.e. Newcastle, Utrecht and Dannhauser Towns. A need exists to ensure that these facilities are rolled out within the rural areas.



MAP 66: PUBLIC AMENTIES WITHIN THE AMAJUBA DM

13. ECONOMIC ANALYSIS

Local economic development (LED) is an area of importance within the ADM. Some of the challenges experienced around LED within the ADM include: the fact that development potential of the municipality which is rated as an area where resource potential is low, human need is medium-high and economic activity is low. Agriculture is the largest sector within the ADM together with wholesale and retail. There has been a noticeable decline in the agricultural sector within the ADM, this can be attributed to large areas under land claim, difficulty in accessing funding for infrastructure especially as small-scale farmers and a lack of access to markets and support structures. An important step to local economic development is an emphasis on infrastructure development. Although areas such as Newcastle have good infrastructure and development, other areas within the ADM lack both social and economic infrastructure. This lack of infrastructure includes a lack of roads to support agricultural and mining activities, a lack of commercial and industrial spaces and a lack of irrigation for agricultural activities. Unemployment and poverty remain one of the main hindrances to LED and therefore a lot of focus has been put towards increased investment and economic growth.

13.1. DISTRICT ECONOMIC CONTRIBUTION

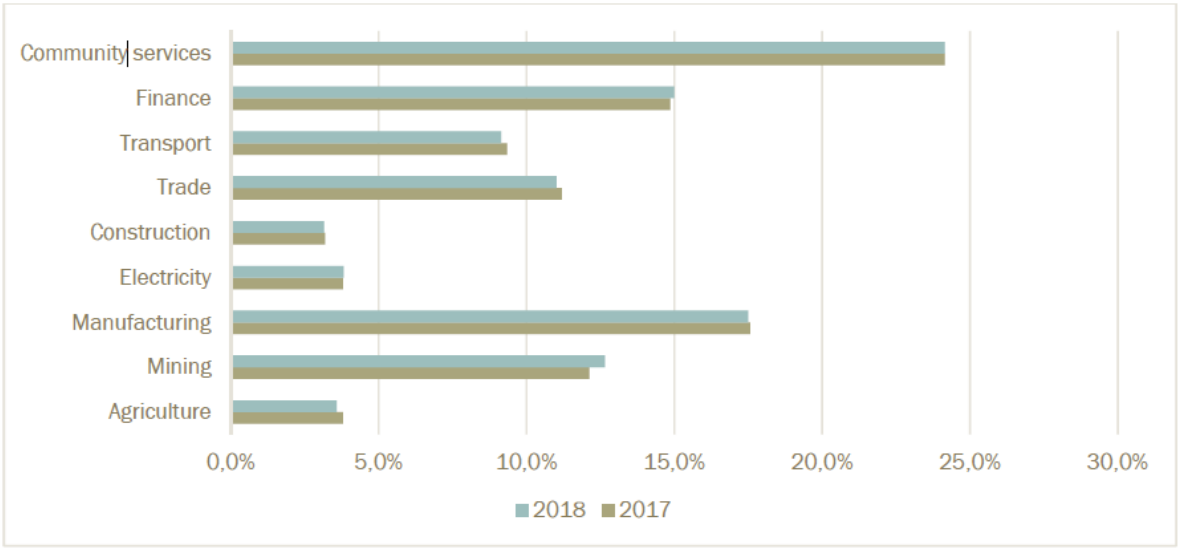


Figure 31: GVA Contribution for Amajuba District Municipality & KZN (2018)
Source : Provincial Treasury 2018 (Global Insight Regional Explorer)

In overall terms, the Amajuba District made a limited contribution to the economy of KwaZulu- Natal in 2017, contributing for about 2.7% of the total provincial GVA, with the structure of the District economy differing from the structure of the provincial economy.

Agriculture accounts for approximately 2.7% of the provincial GVA and has grown in the province on average by approximately 3.2% over the past 5 years. Agriculture contributes 3,8% towards the district economy and has declined by about -0.2% per annum on average.

18% of the province's GVA stems from the manufacturing sector, while Figure 31 reflects 17.6% for the Amajuba district. This indicates the importance of manufacturing in the region and highlights the importance of ensuring sustainable growth in the manufacturing sector in Amajuba. However, the Amajuba District experienced negative growth (-1.6%), compared to an average annual growth in the province of 0.4%.

Mining is growing within the district contributing 12.1% to total district GVA, but this is more than the province's contribution of 1.5%. This is due to the coal deposits found within the north-western areas of the province.

The wholesale and retail trade sector contribute significantly to both the provincial and district economies. The sector accounts for 18% of the provincial GVA, and 17.6% of the district GVA. However, average annual growth in the province was 2.4% and 1.3% in the province and district respectively over the past 5 years. This sector relies on growth in primary and secondary sectors in order to increase production and income. Given that growth has been relatively low in these sectors, this low growth in retail and trade is expected.

The general government sector contributes approximately 23.5% to the provincial GVA, while this figure is 23% for the district, with the province and district experiencing an average annual growth rate of 3.9% and 3.3% respectively.

The Finance sector accounts for almost 16% of total GVA in Amajuba, in comparison with 20% in the province. Average annual growth was about 6.6% for the district, compared to 2.7% for KZN.

13.2. EMPOLYMENT AND UMEMPLOYMENT LEVELS

Figure 32 overleaf illustrates the proportion (in both the formal and informal sectors), unemployed and not economically active populations within the three local municipalities and Amajuba District.

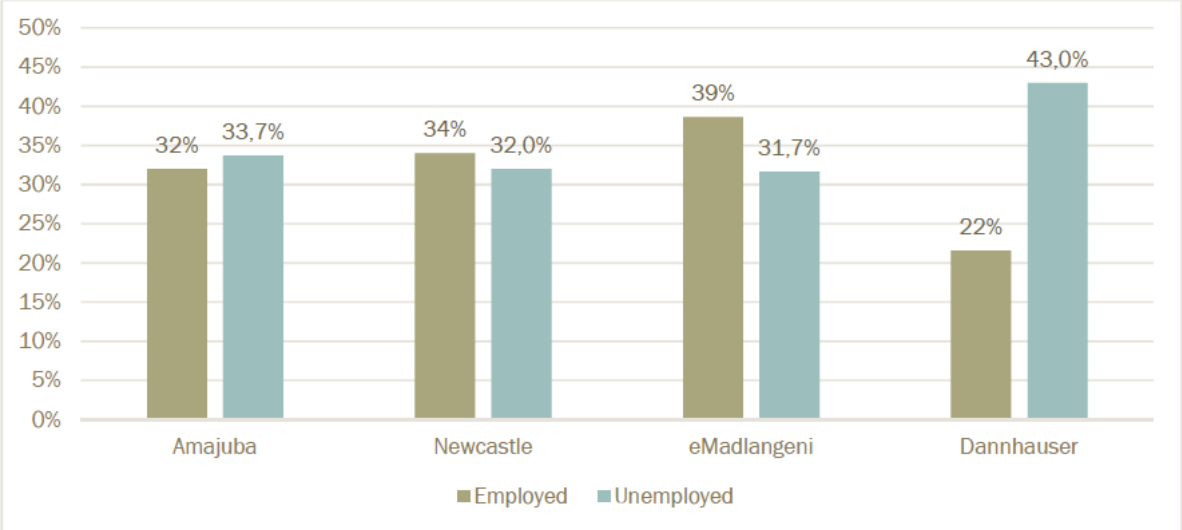


Figure 32: Employment Level by Municipality

Source: Provincial Treasury 2016 (Global Insight Regional Explorer)

It is noted that 33.7% of Amajuba's working age population, are either formally or informally employed, with 34 % for Newcastle, 39% for Emadlangeni, and 22% for Dannhauser. Dannhauser Local Municipality has the highest proportion of its population that are unemployed at 39.6%. Key areas of concern are the significant gaps between the percentage of working age population, employment and the large numbers of not economically active residents, indicating high dependency levels.

Table 28 below reflects the strict expanded definitions of the unemployment rate for Amajuba District Municipality and the three local municipalities.

	Newcastle	Emadlangeni	Dannhauser	Amajuba
Strict definition	30%	22%	36%	30%
Expanded definition	33%	34%	45%	35%

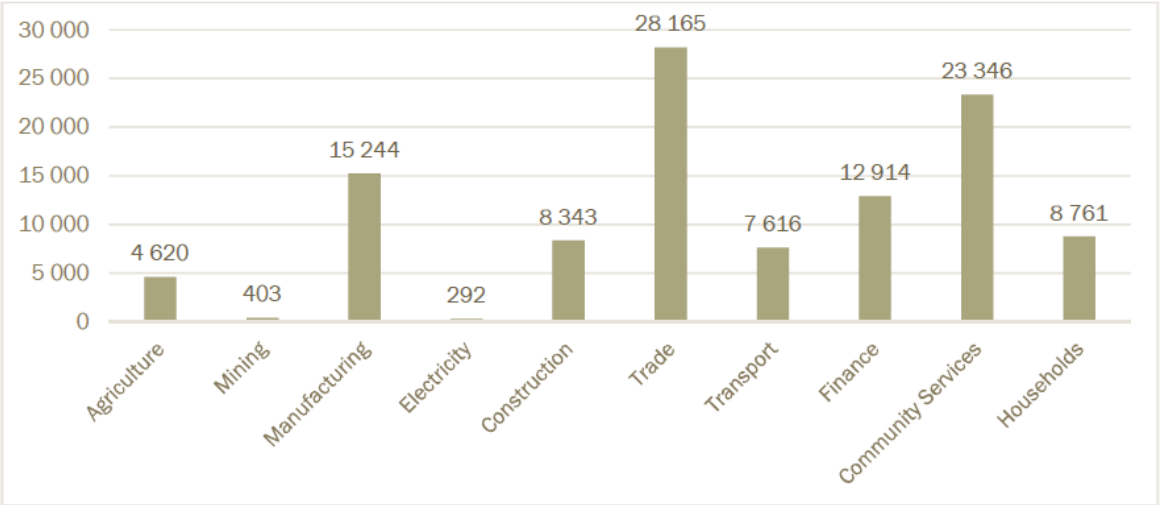
Source: KZN Treasury -Global Insight

Table 28: Strict & Expanded Unemployment Rate – 2017

The strict definition of the unemployment rate excludes those who are not-economically active, i.e. those who have become discouraged from seeking employment. The expanded definition includes all people who are within the working age population. It is noted that up to 35% of those within the working age population in Amajuba are unemployed according to the expanded definition.

In Dannhauser, 45% of all those willing and able to work, are unemployed. Overall however, the high unemployment rates are a reflection of a large portion of the working age population that have either been discouraged from seeking employment due to a lack of opportunities, or who are actively seeking employment but cannot find any opportunities.

Figure 33 below displays the number of people employed per sector in the Amajuba District in 2016.



Source: Provincial Treasury 2016 (Global Insight Regional Explorer)

Figure 33: Number of People Employed by Sector in the Amajuba District Municipality

Agriculture experienced a -8% decline in employment over the past 5 years, while this figure was - 1% for the tourism industry. Both the catering and accommodation, and agricultural sectors only contributed 3.9% each to total employment in Amajuba. It is therefore important that initiatives are taken to ensure sustainable agricultural developing within the region, as well as to enhance employment in tourism related industries.

Although the manufacturing sector is the largest contributor to total district GVA (17.65%), this sector only contributed 13.1% to total employment in 2010, which is an indication of the capital intensiveness of the manufacturing activities within the district, and also highlights the importance of creating further employment opportunities within the manufacturing industry. In addition, the manufacturing sector has experienced a -1.6% decline in average annual growth of employment over the past 5 years (in line with GVA growth), which indicates a gradual decline within the sector, and highlights the need for further interventions in order to retain and expand existing manufacturing businesses.

The wholesale and trade sector make the largest contribution towards district employment levels, accounting for 25% of total employment in the district. The other two largest contributing sectors are community, social and personal services, and general government services, each contributing about 18% to total employment in the district. These sectors only contribute 11.2% and 13.8% respectively to total GVA, indicating that they are labor-intensive industries within the region. Both sectors only experienced between 0.5% - 1.1% growth in employment over the past five years.

Overall, no sectors have experienced sufficient employment growth since 2005, with the greatest growth being Business Services, with 2.7% on average over the past five years.

Both the catering and accommodation, and agriculture sectors only contributed 2% each to total employment. Initiatives need to be developed to ensure sustainable agricultural developing within the region, as well as to enhance employment in tourism related industries.

13.3. ECONOMIC SECTOR ANALYSIS

13.3.1. AGRICULTURE

The Amajuba District Municipality is one of the most fertile regions within KwaZulu-Natal, and therefore has a comparative advantage in terms of agriculture. The agricultural sector accounts for approximately 3% of total GVA in the Amajuba District, while the contribution of this sector to total formal employment is 4%. Although the sector only contributes a small proportion to the total output in the district, the importance of agricultural development and sustainability in the province has been prioritized recently in many of the provincial and national policies and strategies.

The sector has experienced a substantial improvement in GVA growth over the period 2010-2016, with a 0.4% average annual growth rate over this period. In light of the slight improvement, the sector is still declining in the region and this can be attributed to a number of factors including:

- Uncertainty about the large number of pending land claims;
- Lack of support for small-scale and informal farming operations;
- Lack of relevant skills and training programmes;
- Access to markets;
- Access to funding for investment into new machinery and equipment;
- Increasing input costs and competition;
- Poor institutional support and assistance in the region.
-

According to the Amajuba Agricultural Plan (2006) the main commercial crops that are produced in Amajuba are Maize, soybeans, peanuts, wheat, dry beans, potatoes, cabbage and barley. The agricultural activities occurring within the district are crop farming (varied vegetables and seedling production), dairy production, aquaculture, poultry and livestock21.

The Dannhauser Local Municipality contributes almost 40% to total agricultural production in the district and has experienced the smallest decline of -2% between 2005 and 2009. Newcastle and Emadlangeni contribute 33% and 28% respectively to total agricultural output in the district and have both experienced a decline in growth of -6% from 2005 – 2009. However, agricultural activities contributed 10% and 9% to total employment in the Emadlangeni and Dannhauser municipalities in 2009, indicating the importance of ensuring growth and development within this sector.

Large areas of the region have comparatively low agricultural potential, as they are included within the relatively unproductive Bioresource group TUc122. This is evident in terms of the land resource potential of the District, 11.2% (77 514ha) is considered to be high potential,

whilst 4.1% (28 333ha) is categorized as good potential land. The majority of the district (40.6% or 280 490ha) is regarded as moderate potential land23. Therefore, the conclusion is that good potential agricultural land needs to be kept productive and lower potential land will have to be well managed (i.e. not overstocked) to conserve the limited
production potential that does exist.

13.3.2. MINING

Mining and quarrying only contributes a small amount to total GVA in the district (3.4% in 2010). The area has experienced a significant decline in formal commercial mines over the past 5-10 years (largely due to the down-scaling of coal mining in Dannhauser), with small-scale mining accounting for more recent growth. The only substantial product that is still mined within the district is coal.

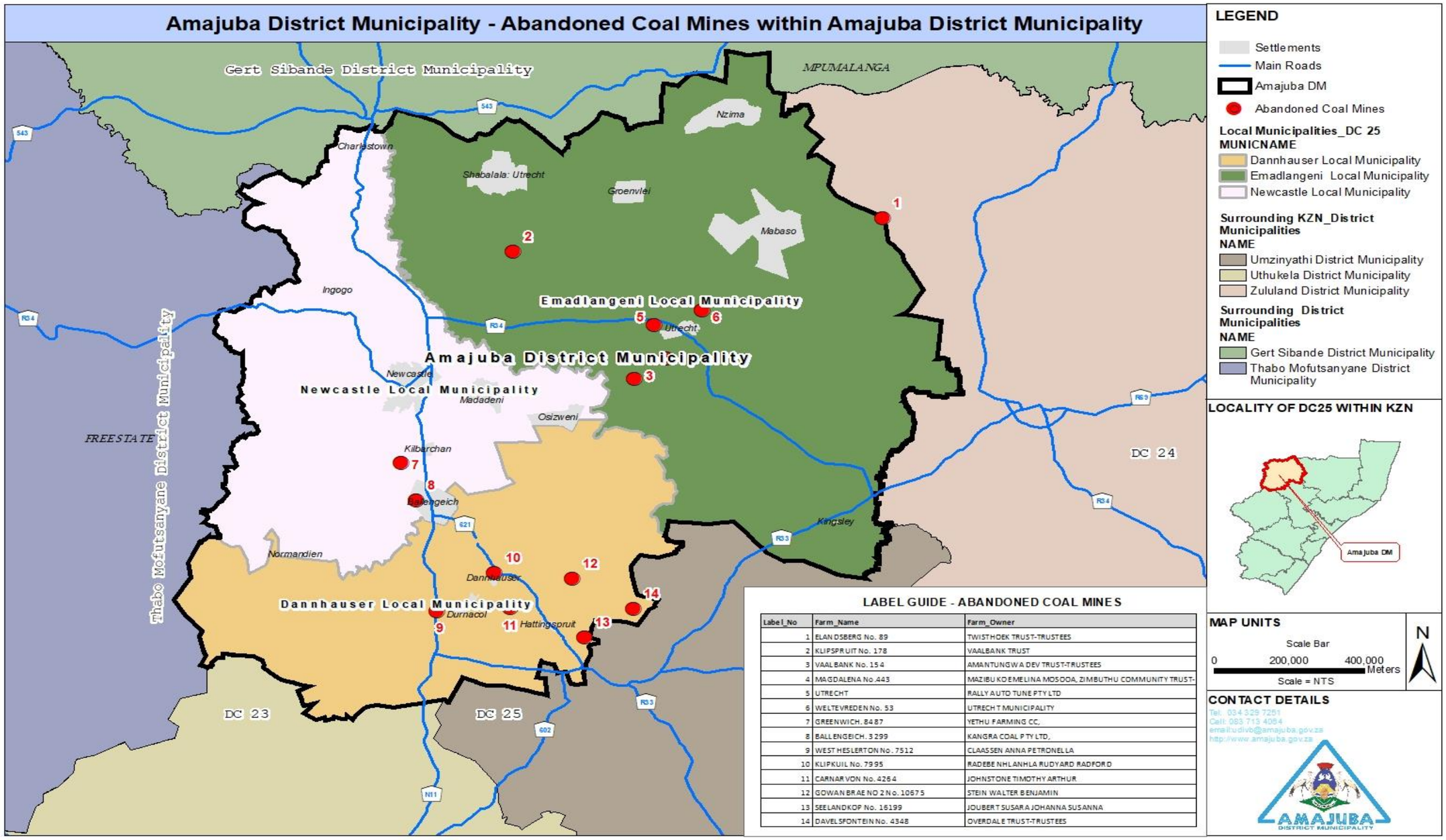
In terms of employment, this sector accounts for approximately 1% of total employment in the district, a substantial long-term decline from 7% contribution in 1996, and a smaller short-term decline from a 2% contribution to employment in 2000.

An important economic activity in the area is undoubtedly coal mining and this also has a significant impact on various environmental and development components in the District. The Amajuba District Municipality falls within the Newcastle – Klip River coal field and primarily the Hattingspruit – Newcastle coal sector with a small portion of the Glencoe-Dundee-Hattingspruit sector spanning the southern boundary of the Umzinyathi District MunicipalityDM and the UThukela District Municipality.

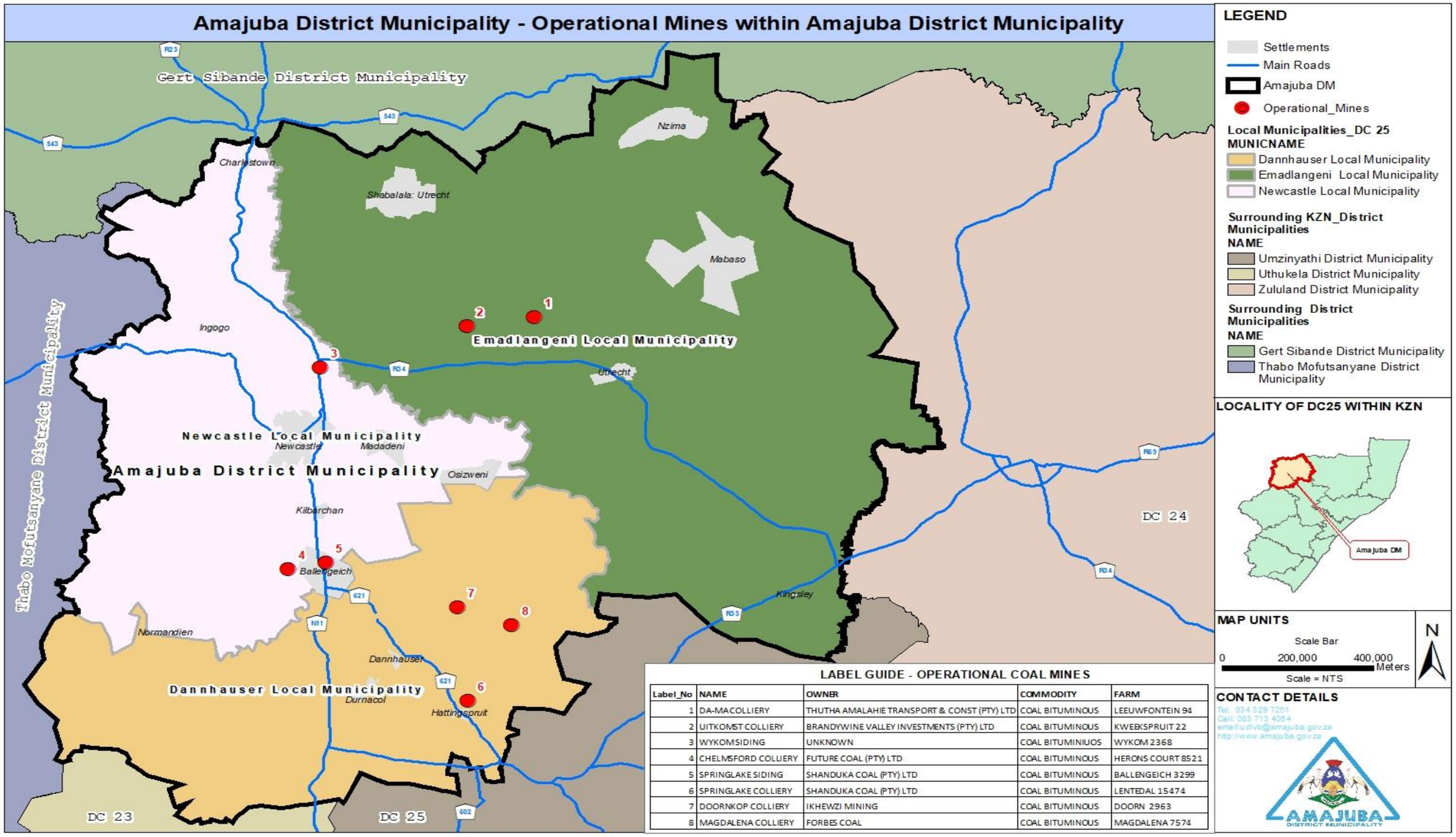
Various ranks of coal are present within the two coal sectors, namely coking coal, anthracite and bituminous coal. In the central section of the Newcastle-Dundee coal sector, the Durban Navigation Colliery (Durnacol) with a production of 68,000 tonnes of coking coal per month used to provide Newcastle, Pretoria and Vanderbijlpark Steel works with coking coal. The mine was closed in 2000. Other underground mines in the Hattingspruit-Newcastle sector include Ballengeich, Kilbarchan and Ingagane which have been closed. Most of the underground mine workings are 100 to 200m deep and the coal seams are frequently overlain by thick dolerite sills.

However, the Natal coal field production has steadily decreased from 20Mt in 1982 to 2.5Mt in 2005. This is primarily due to difficult mining conditions, rising costs, decrease of demand for export of anthracite, gas explosions and competition with low cost mines of Mpumalanga.

Numerous abandoned mines exist in the District and importantly, rehabilitation works have not been carried out or are incomplete at many of these. This has significant implications for environmental management, particularly development, ground stability and water quality in the District.



MAP 67: ABANDONED COAL MINES WITHIN THE AMAJUBA DISTRICT MUNCIPALITY



LABEL GUIDE - OPERATIONAL COAL MINES

Label_No	NAME	OWNER	COMMODITY	FARM
1	DA-MA COLLIERY	THUTHA AMALAHIE TRANSPORT & CONST (PTY) LTD	COAL BITUMINOUS	LEEUWFONTEIN 94
2	UITKOMST COLLIERY	BRANDYWINE VALLEY INVESTMENTS (PTY) LTD	COAL BITUMINOUS	KWEEKSPRUIT 22
3	WYKOM SIDING	UNKNOWN	COAL BITUMINIUOS	WYKOM 2368
4	CHELMSFORD COLLIERY	FUTURE COAL (PTY) LTD	COAL BITUMINOUS	HERONS COURT 8521
5	SPRINGLAKE SIDING	SHANDUKA COAL (PTY) LTD	COAL BITUMINOUS	BALLENGEICH 3299
6	SPRINGLAKE COLLIERY	SHANDUKA COAL (PTY) LTD	COAL BITUMINOUS	LENTEDAL 15474
7	DOORNKOP COLLIERY	IKHEWZI MINING	COAL BITUMINOUS	DOORN 2963
8	MAGDALENA COLLIERY	FORBES COAL	COAL BITUMINOUS	MAGDALENA 7574

MAP 68: OPERATIONAL MINES WITHIN THE AMAJUBA DM

Relatively few mining applications have been confirmed to have been lodged in the ADM in the last few years. There are currently four mining related projects in EIA or startup phase in the Amajuba District. These are listed as follows:

- Ikhwezi Mining- DC25/S24/0001/2013- About to commence mining.
- Keldron Newcastle Colliery-DC25/0013/2012- Status unclear.
- Proposed Alleen 2 open cast extension of the Magdalena Colliery in Dannhauser-DC25/0018/2013 .
- Proposed extension of the Magdalena Colliery Discard Dump in Dannhauser -DC25-0018-2012.

13.3. MANUFACTURING

Manufacturing contributes 25.2% to the total district GVA, making it the largest contributor to the district economy. The sector has undergone changes over the past 30 years. During the apartheid era Newcastle was established as an industrial de-concentration point primarily for the processing of iron and steel products at ISKOR. While government subsidies and policies remained in place, the iron and steel industry continued to operate in this area. During the 1970s and 1980s, the production of textiles and clothing entered into the area as an additional manufacturing sub-sector along with chemicals and associated steel processing plants (e.g. galvanizing, fabrication etc.). Over the last 10-15 years the economy has undergone a further change, with the decline of the textile industry in Newcastle, the decline of the iron and steel industry and the emergence of large-scale retailing.

Over this period there has been a shift from large scale plants to a variety of smaller scale manufacturing and processing units. A large number of the manufacturing companies in the greater Newcastle area produce for national and international markets (mainly Gauteng at national level).

Most large industry is located within Newcastle, which accounts for over 83% of total GVA in the Amajuba manufacturing industry, followed by Dannhauser with 12.7% and Emadlangeni with 3.8% of GVA Newcastle has a strong base of existing infrastructure geared towards manufacturing, and is considered an important node within the wider provincial manufacturing sector. The sector consists of strong clusters of manufacturing industries and has historically attracted a large number of foreign (mainly Chinese and Taiwanese) manufacturers due to incentives offered. The sector is however dominated by a few large firms, which presents the opportunity to diversify the manufacturing base to promote the growth of SMME's within the sector.

The dominant sub-sectors within the district's manufacturing sector include:

- Metals, metal products, machinery and equipment - contributes almost 45% to total GVA, and 30% to total employment within the industry. This is largely due to the presence of two major producers of primary metal within the Amajuba, both located in Newcastle, namely, ArcelorMittal Steel (Newcastle Steel) and Xstrata/Silicon Technologies (Glencore).

- Petroleum products, chemicals, rubber and plastic – this sub-sector contributes about 15.4% to total GVA, but only contributes 6.7% to total employment in the district, indicating the capital-intensiveness of the industry. The industry has experienced a decline since 2005 (- 1.7%).
- Clothing, textiles and leather goods - accounts for approximately 12.5% of GVA and over 36% to total employment in the sector. Newcastle accounts for approximately 86% of all textile and footwear manufacturing operations in the district. However, due to noncompliance with labor regulations, many of the Chinese and Taiwanese manufacturers in the area have been shut down. This has damaged the textile industry substantially, with thousands of jobs being shed in the industry.
- Furniture manufacturing - this industry contributes 8.9% to GVA in the manufacturing sector within Amajuba. The industry has experienced a -3.7% average annual decline between 2005 and 2009. Approximately 1267 people are employed in this industry (8.8% of total manufacturing employment) which is in line with the province (8.2% of employed in manufacturing).
- Food, beverages, tobacco contributes 8.2% to GVA in Amajuba. The industry has experienced growth, with an average annual growth rate of 1.6% in Amajuba. The industry accounts for 6.6% of total employment in manufacturing.

13.4. TOURISM

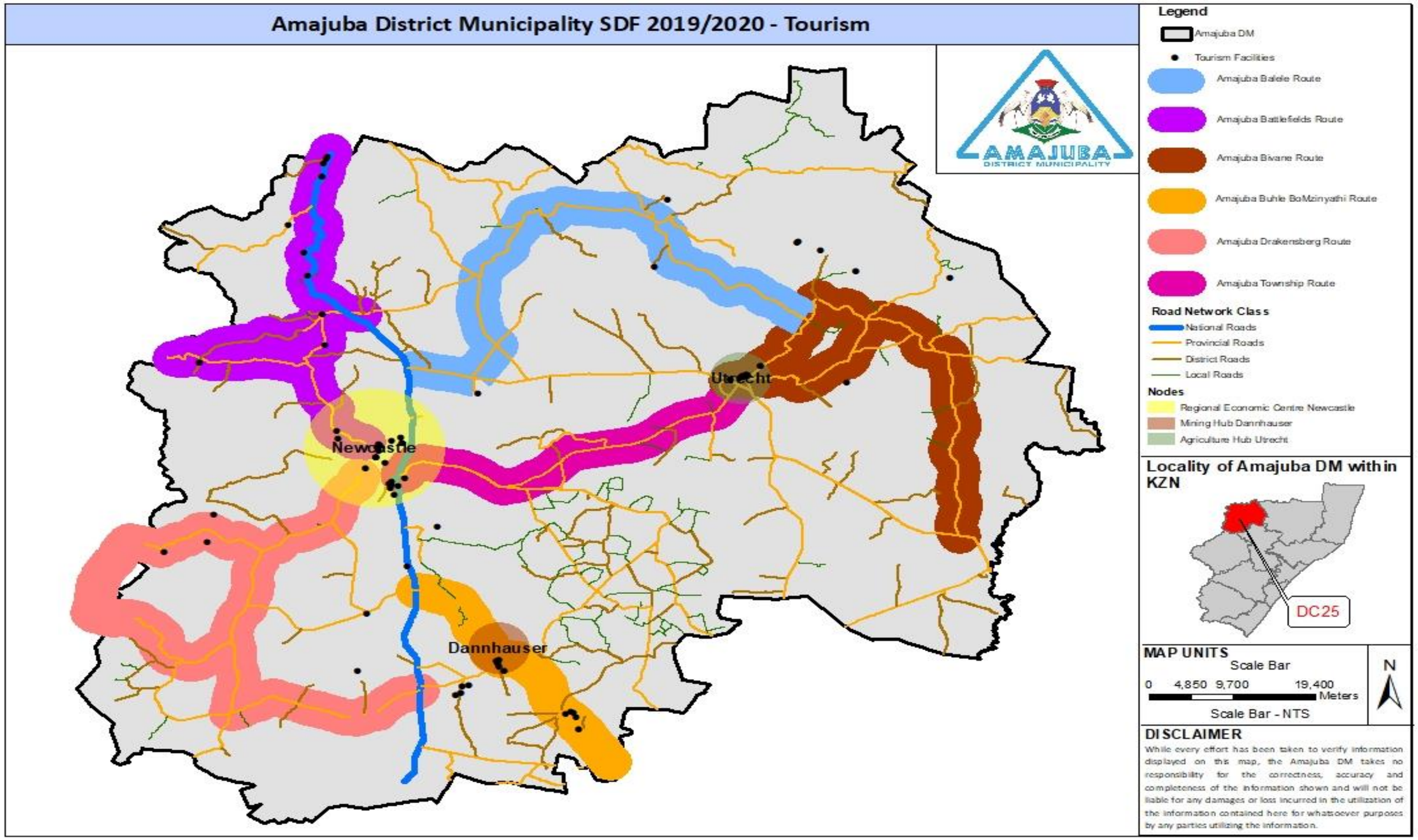
It is difficult to measure the contribution of tourism to the district economy, since GVA from the tourism industry is spread across a number of other sectors. However, catering and accommodation within Amajuba contributed 0.6% to total GVA in 2010. This is expected to be only a portion of the total GVA generated from the industry. The contribution of this sector to total employment is 1.5%.

The Amajuba District is not considered to be a major tourism destination within KZN due to its historical association with industrial and mining activities. However, it is a key sector that presents opportunities for economic development within the region. Tourism within the town has grown over the past years, which is justified by the growing number of accommodation facilities and activities offered within the region.

Major tourist attractions in Amajuba include avi-tourism/birding tourism; nature and game reserves; adventure and sports tourism; and natural, cultural and historical attractions (e.g. Battlefields)28. These attractions present a clear opportunity for the district to position itself to take advantage of this sector.

The district has a large number of accommodation facilities, which range from lodges, to B&B's, to self-catering facilities and hotels. However, most of these facilities are located within Newcastle, with only a limited number of facilities within the Emadlangeni and Dannhauser Municipalities. During the LED Strategy review process in 2012, the following issues were identified as being constraints to the sector:

- Historical association of the district as a mining and industrial centre;
- Lack of coordinated promotion of the region and attractions offered;
- Run-down and lack of tourism facilities;
- No specific draw-card attraction to make the district a priority for tourists;
- Lack of sufficient signage along the N3 and also within the district to promote tourism
- facilities and attractions; and
- Loss of tourists to larger tourist attractions such as the Durban beachfront, DrakensbergMountains, and the north and south coast.



MAP 69: AMAJUBA DM TOURISM ROUTES & ACCOMODATION FACILITIES

13.5. TERTIARY SERVICES (INCL GOVERNMENT SERVICES)

The tertiary services sector includes communications, finance and insurance, business services, community and social services, and general government. Average growth for these sectors has been 8% per annum from 2005 - 2009, far surpassing growth in the primary and secondary sectors of the district. These sectors contribute over 45% to total GVA in Amajuba district. In terms of employment, over 62,000 people are employed within these sectors, which accounts for 74.5% of total employment in the sector. This indicates the significance of this these tertiary sectors within Amajuba.

Wholesale and retail trade are the largest contributing sector to tertiary services, accounting for almost 20% of total GVA within the district. General government spending and community, social and personal services contribute 18.5% and 17.6% respectively. This trend indicates the need to diversify the district economy in order to create a wider economic base in support of long-term sustainable job creation.

13.6. INFORMAL TRADE

Within the Amajuba District Municipality, informal trade accounts for over 20% of total employment within the region. Over 74% of informal trade in the district occurs within the Newcastle Local Municipality, with only 7.5% in Emadlangeni, and 17.6% in Dannhauser. Informal trade is predominately clustered around public transport facilities and along main transport corridors, although there are a number of activities that occur in backyards and on the periphery of each of the towns.

Informal traders face a number of constraints which make it difficult for them to successfully operate, expand their business, or formally register. These are factors are, Lack of financial and business skills, lack of access to funding, lack of access/finance for trading premises, low turnovers & harsh trading conditions and crime. It is important that these issues be addressed in order to create a more conducive environment for small informal business within the district to function, expand and thrive.

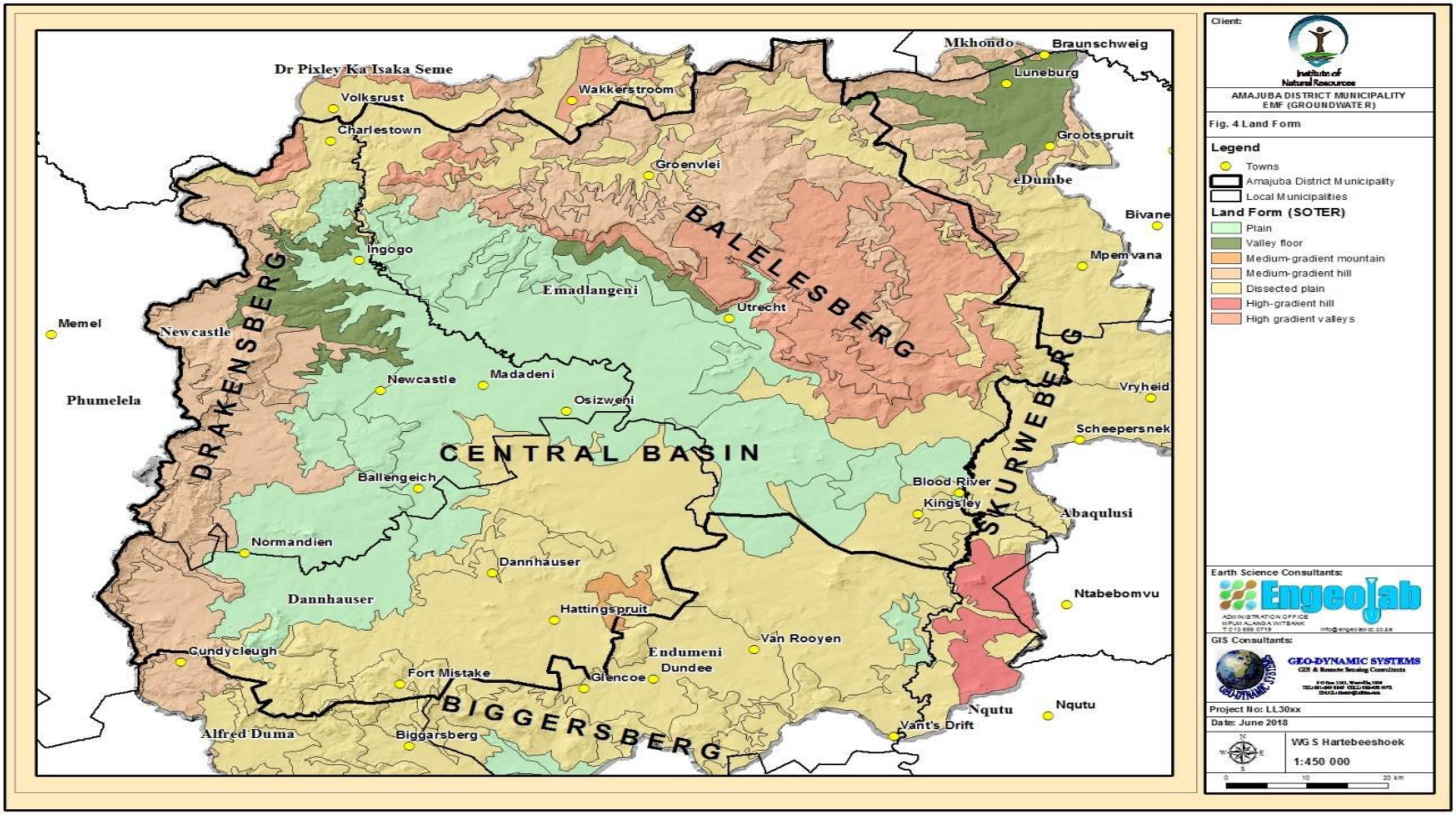
14. ENVIRONMENTAL ANALYSIS

14.1. TOPOGRAPHY & LAND-FORMS

The ADM is characterised by a horseshoe of high lying western, eastern and northern regions. The western areas comprise a section of the Drakensburg escarpment, while the northern and eastern areas comprise the Balelesberg and the Skurweberg mountains. The Biggarsberg Mountains are located to the south of the District with the majority of this landform falling in neighbouring Districts. These higher regions drain into the Buffalo River basin in the middle of the District supplying water to the lower lying, flat central regions of the ADM. The District ranges from 1042m to 2290m above mean sea level, as listed in Table

Local Municipalities			
	Newcastle	**Dannhauser**	**Emadlangeni**
Area (km2)			
Area	1855	1516	3539
Elevation range (meters above mean sea level)			
Min	1140	1143	1149
Max	2247	2104	2276

Table 28: Topographical variables of the Amajuba District per Local Municipality



MAP 70: LAND FORMS IN THE AMAJUBA DISTRICT MUNICIPALITY

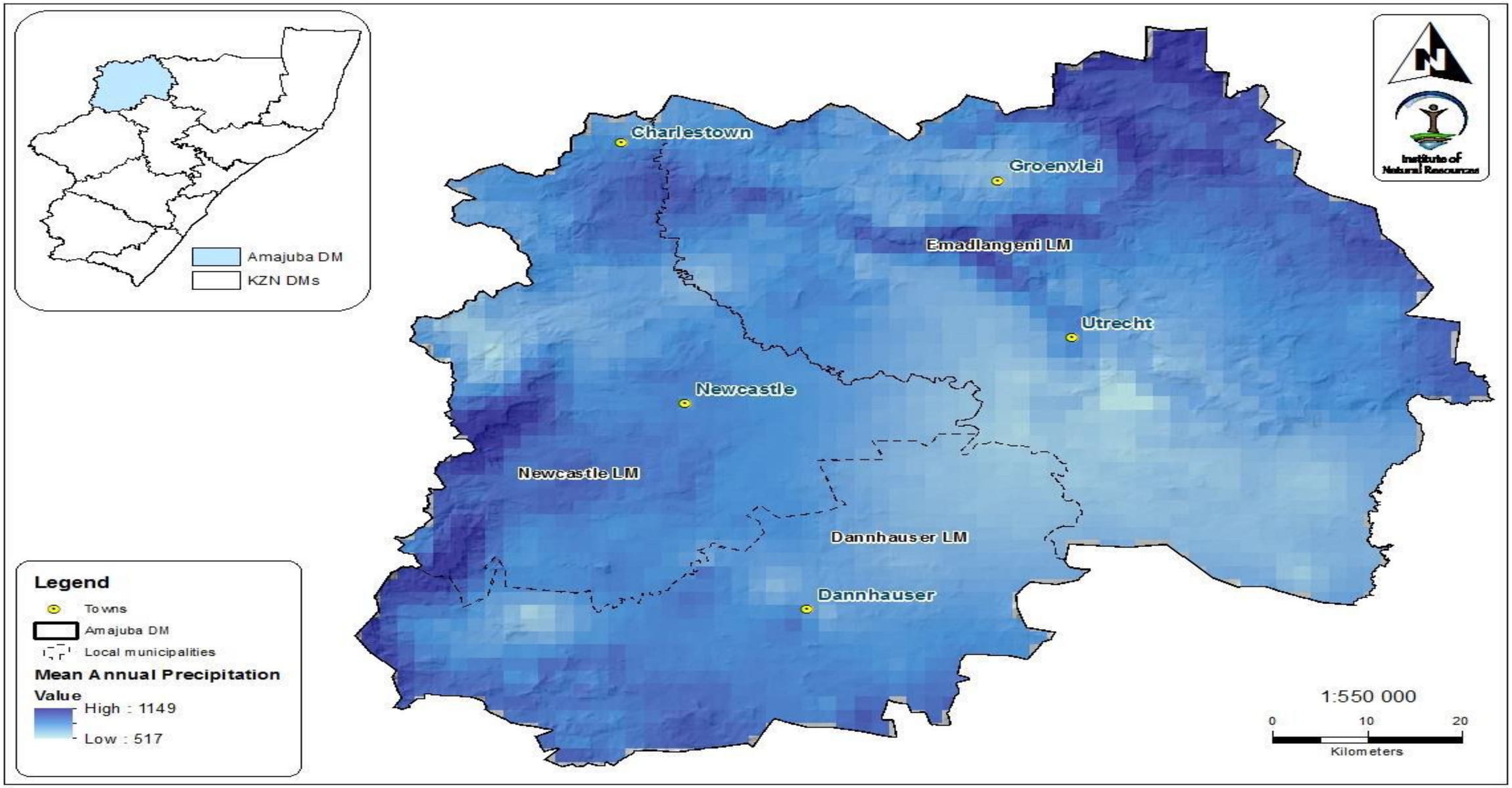
Source: Amajuba District Municipality Environmental Management Framework - Draft Status Quo Report January 2019

14.2. CLIMATIC CHARACTERISTICS

There is a substantial difference in temperature between summer and winter months in the ADM. Winter is noticeably cold with temperatures usually dropping below 0 degrees. Frost in the colder autumn and winter months is a common occurrence. Summer is far warmer with temperatures exceeding 30 degrees. An average annual temperature of 17 degrees has been measured across the district (Map 72).

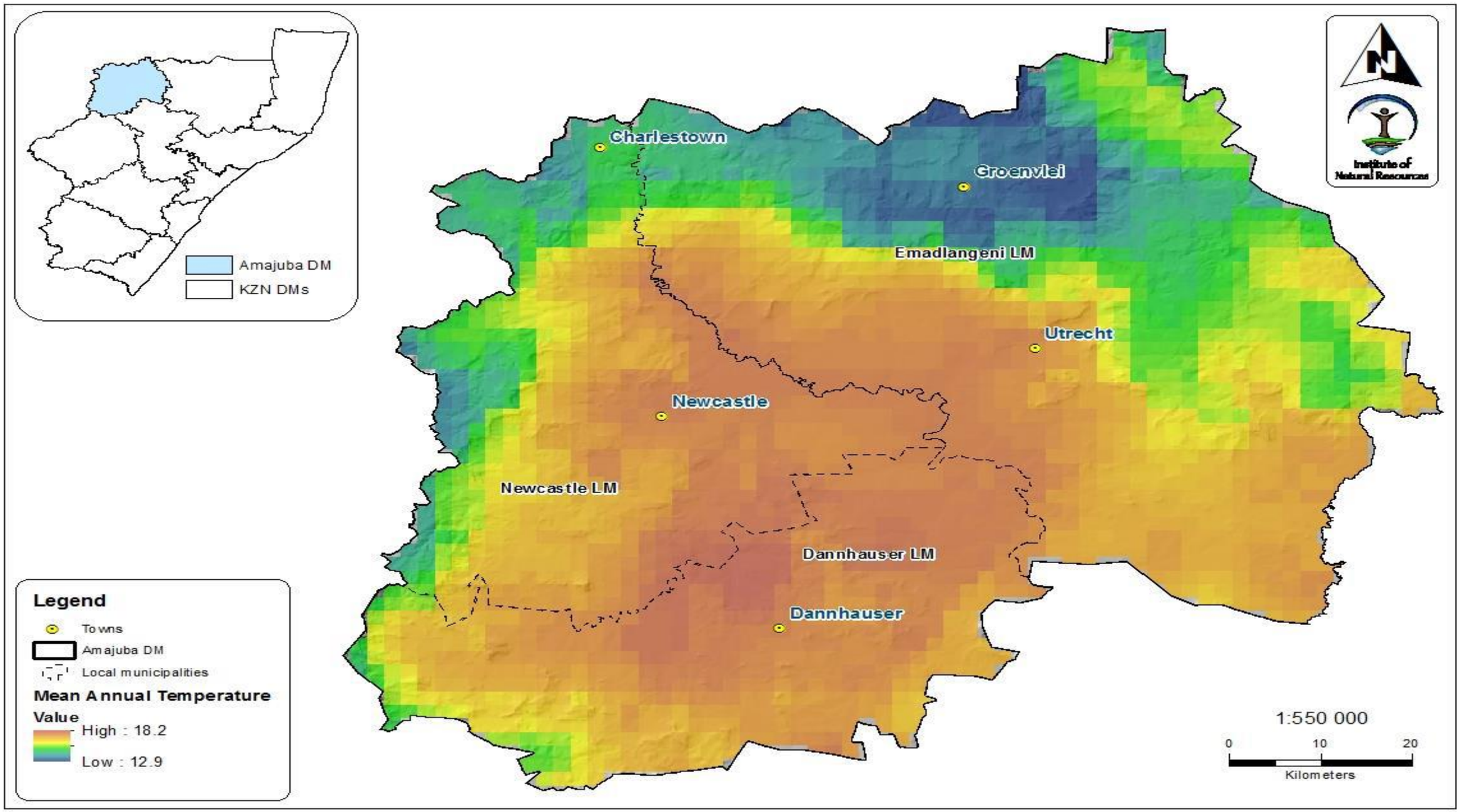
Precipitation (mm)			
	Newcastle	**Dannhauser**	**Emadlangeni**
Annual Min RF	504	587	517
Annual Max RF	1149	1015	1127

Table 29: Mean Annual Rainfall per Local Municipality



MAP 71: MEAN ANNUAL RAINFALL FOR THE AMAJUBA DISTRICT MUNICIPALITY (Schulze et al 2011)

Source: Amajuba District Municipality Environmental Management Framework - Draft Status Quo Report January 2019



MAP 72: MEAN ANNUAL TEMPERATURE FOR THE AMJUBA DISTRICT MUNICIPALITY (Schulze et al 2011)

Source: Amajuba District Municipality Environmental Management Framework - Draft Status Quo Report January 2019

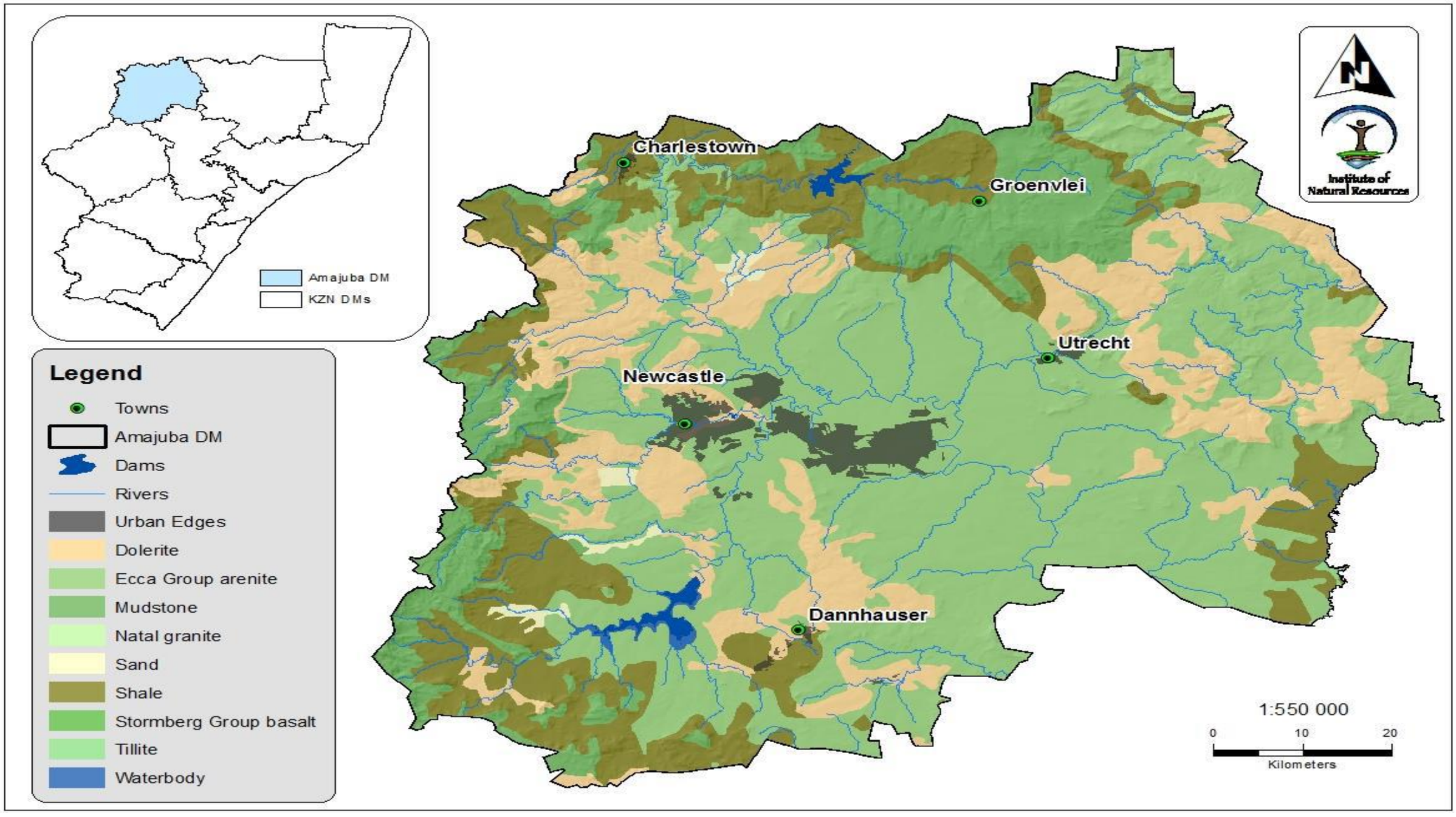
14.3. GEOLOGY & SOILS

The underlying geology of the central portion of the ADM is underlain by Karoo Sequence sediment with higher-lying areas underlain by a combination of geological foundations. Varying soil types occur in the area consisting of Dolerite, Mudstone, Sand and Shale amongst others. The over texture of the soil appears to be predominantly clay. Due to the numerous wetlands in the area, it is usual for the soils to have an expansive property, meaning that they have the ability to shrink and swell based on their water content (typical of wetland type soils).

The geology of the area can be described as consisting mainly of shales (with coal in certain instances), mudstones, sandstone and siltstones of the Ecca Group, Karroo Sequence, with intrusive dolerite. In essence this geology has given rise to many of the in situ characteristics of soils that are found in the area. Generally speaking soils derived from shale/mudstone are usually high in clay (>25%) while those derived from the sandstone/siltstone geology are low in clay (<15%). The dolerite derived soils are usually red in colour and have a clay percentage of >30%. The soils of Amajuba are very varied and the soil potentials therefore are also varied. The basis on which the analysis for Amajuba has been done has been to use the information from the BRP. The base information around which the soils part of the BRP founded relates to the original work done on the Tugela Basin and the land type maps for the area. In terms of Geology, it is noted that the majority of the Emadlangeni Municipality is characterised by Arenite which has low erosion potential. The northern mountainous portion of the municipality is predominately mudstone surrounded by shale.

There is also large scale pockets of dolerite dispersed throughout the municipality especially in the central and eastern portion of the municipality. The geological nature of an area influences the topography, and alignment of river channels. It also has an influence on the type of soil formation prevalent. Soil potential is determined using several factors including soil form, texture, depth, wetness, slope and soil surface characterised by good soil potential. There is a band extending from north western corner of the municipality to the south eastern portion of the municipality with low soil potential.

The central area of the district is underlain by Karoo Sequence sediment with higher-lying areas underlain by a combination of geological formations (see Figure 2-3, (EKZNW, 2009c)). Solid pans and rocky dolerite outcrops are common and soils within these areas are subjected to wind and soil erosion. Three types of soils have been identified within the District; transported soils, colluvial and residual of Pleistocene and Recent origin. Most soils appear to be very clayey and expansive, that is they have shrink and swell properties according to their water content, with this type of soil often associated with wetlands (Amajuba District Municipality, 2012).



MAP 73: GEOLOGY OF THE AMAJUBA DISTRICT MUNICIPALITY

Source: Amajuba District Municipality Environmental Management Framework - Draft Status Quo Report January 2019

14.4. BIODIVERSITY

14.1. OVERVIEW OF TERRESTRIAL BIODIVERSITY IN THE AMAJUBA DISTRICT MUNICIPALITY

14.1.1. BIOMES AND VEGETATION TYPES

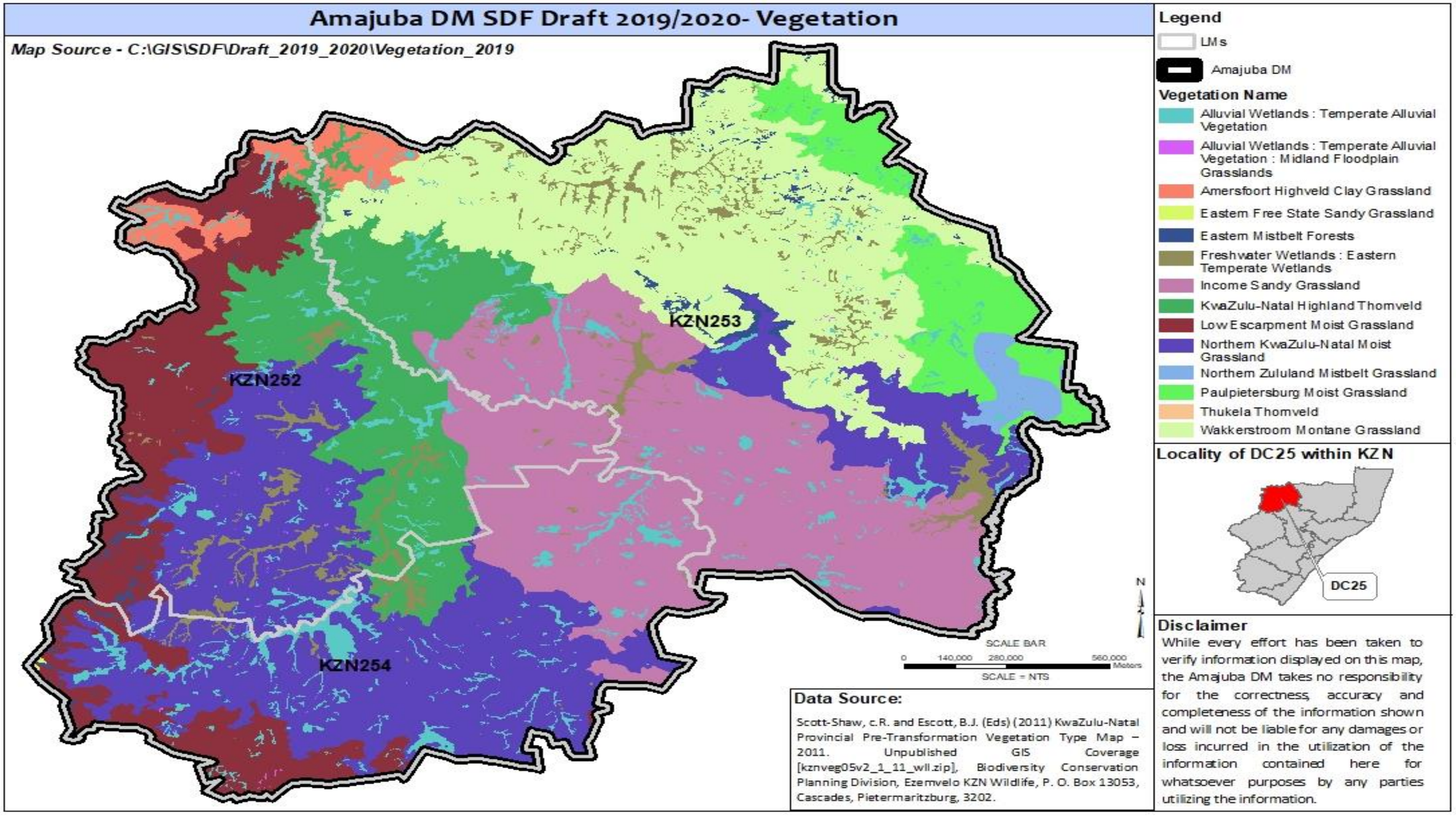
There are 4 biome types within the ADM (Forest, Savanna, Grasslands and wetlands) that contain 14 different vegetation types (Scott-Shaw and Escott 2011). Table 30 and Map 74 list and map these vegetation types and show that the District is dominated by Grasslands and more specifically by Income Sandy Grassland, Wakkerstroom Montane Grassland, Northern KZN Moist Grassland and the KZN Highland Thornveld. Forests form a very small component of the vegetation in the District.

KZN VEG TYPE NAME	Area (Ha)	Provincial Conservation Status
Alluvial Wetlands : Temperate Alluvial Vegetation	33900.7	Vulnerable
Alluvial Wetlands : Temperate Alluvial Vegetation : Midland Floodplain Grasslands	488.9	Least threatened
Amersfoort Highveld Clay Grassland	13078.1	Least threatened
Eastern Free State Sandy Grassland	189.1	Least threatened
Eastern Mistbelt Forests	5477.2	Endangered
Freshwater Wetlands : Eastern Temperate Wetlands	24488.1	Vulnerable
Income Sandy Grassland	149900.4	Vulnerable
KwaZulu-Natal Highland Thornveld	73206.1	Least threatened
Low Escarpment Moist Grassland	75319.5	Least threatened
Northern KwaZulu-Natal Moist Grassland	162370.7	Vulnerable
Northern Zululand Mistbelt Grassland	7007.7	Vulnerable
Paulpietersburg Moist Grassland	35547.9	Vulnerable
Thukela Thornveld	21.4	Least threatened
Wakkerstroom Montane Grassland	128280.7	Least threatened

Table 30: Extent of original vegetation types within the Amajuba District Municipality (Scott -Shaw and Escott 2011)

Of these, Income Sandy Grassland, Northern KZN Moist Grassland, Paulpietersburg Moist Grassland and Northern Zululand Moist Grassland are considered vulnerable grassland vegetation types. Eastern Mistlbelt Forests are considered endangered, whilst Eastern Temperate Wetlands and Temperate Alluvial Vegetation are considered vulnerable wetland types.

Grasslands play an important role in water production and other ecosystem services. Good condition grasslands have the ability to reduce runoff in wet seasons and improve infiltration. This contributes to maintaining dry season baseflow and helps mitigate against the effects of drought. Grasslands can also decrease the destructive force of floods (flood attenuation).



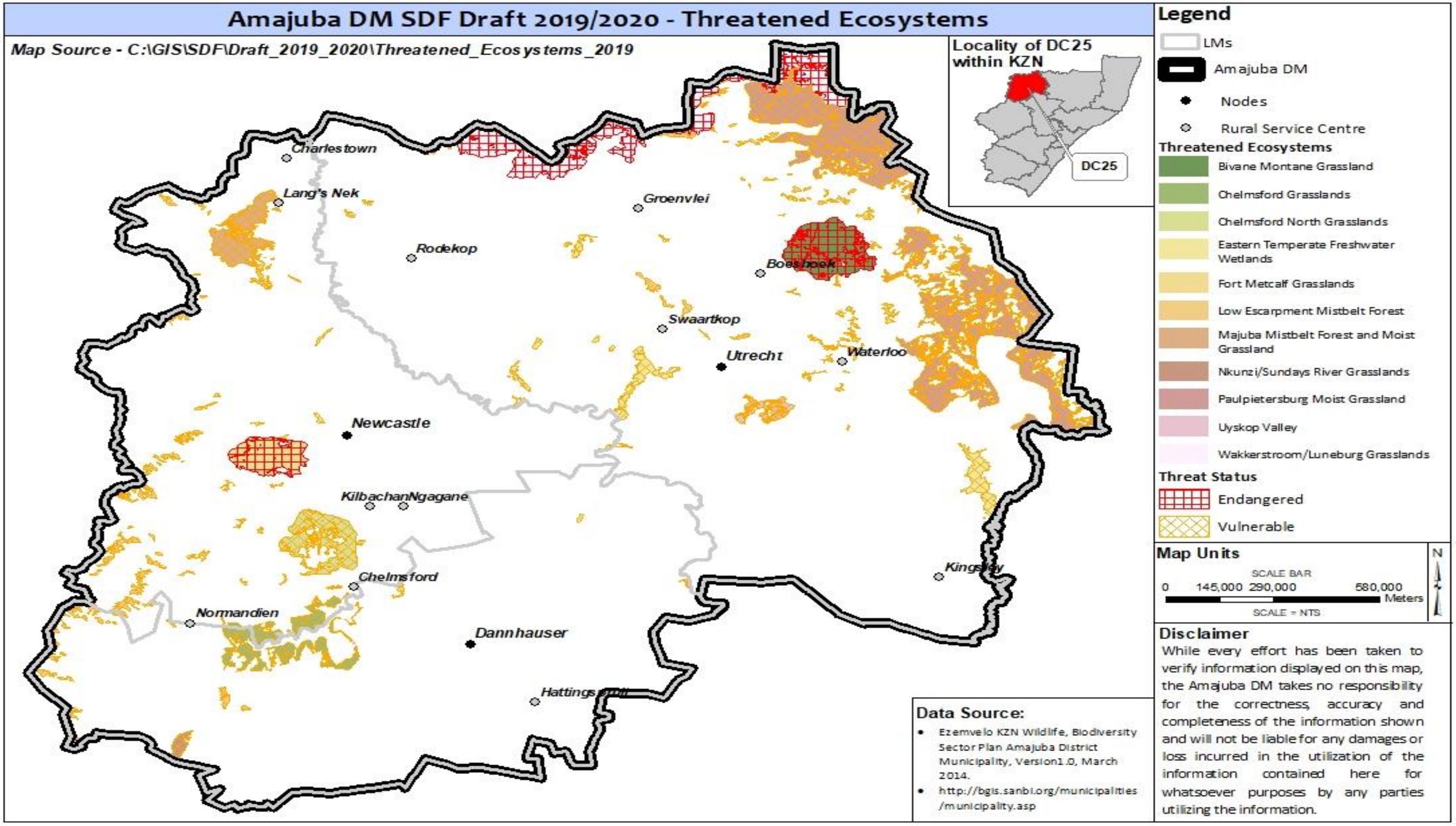
MAP 74: VEGETATION TYPES IN THE AMAJUBA DISTRICT MUNCIPALITY

The high lying grasslands of the ADM are located in a high rainfall/runoff region of the country and have been included as National Strategic Water Source Areas. Some areas have an estimated mean annual rainfall of between 600-1000mm, which is significantly higher in comparison to the regional average of 450mm. Due to the relative inaccessibility of the area along the Drakensberg escarpment, these grasslands provide a reserve of relatively pristine natural resources. Minimal infrastructural development has occurred in the area, which has contributed to the continued supply of relatively good quality water. This is beneficial for users of the ADM from a water quantity and quality perspective (Snyman and Jewitt, 2010).

14.1.2. NEMBA THREATENED ECOSYSTEMS

The National Environmental Management: Biodiversity Act (Act 10 of 2004) allows for the publication of provincial and national lists of ecosystems that are threatened6 and in need of protection. NEMBA listed threatened terrestrial ecosystems that occur within the ADM include:

1. Bivane Montane Grassland (EN),
2. Wakkerstroom Grassland (EN),
3. Fort Metcalf Grassland (EN),
4. Low Escarpment Mistbelt Forest (VU),
5. Paulpietersburg Moist Grassland (VU),
6. Uyskop Valley (VU),
7. Chelmsford Grassland (VU),
8. Chelmsford North Grassland (VU),
9. Majuba Mistbelt Forest and Moist Grassland (VU) and
10. Nkunzi / Sundays River Grassland (VU).



MAP 75: THREATENED ECOSYSTEMS WITHIN AMAJUBA DISTRICT MUNICIPALITY

14.1.3. THREATENED FLORA

Flora data for the ADM shows that the habitat supports 1 near threatened, 1 rare species and 5 vulnerable species e.g. *Nerine Platypetala* (Groenvlei Lily), which as the name suggests is found in the grasslands around the Groenvlei Wetland. The Groenvlei Lily, like other species in its class is threatened by habitat degradation and loss (Scott-Shaw, 2005; SANBI Red List).

14.1.4 THREATENED FAUNA

Faunal data (amphibians, reptiles, birds, mammals, fish and invertebrates) has recorded 3 critically endangered species, 4 endangered and 5 vulnerable species. Of these, 3 critically endangered birds species are known to inhabit the area namely, *Bugeranus carunculatus* (Wattle crane), *Heteromirafra ruddi* (Rudd's Lark) and *Hirundo atrocaerulea* (Blue Swallow). While some species such as the Wattle Crane inhabit regions within the ADM more permanently (i.e. wetlands), some species such as the Rudd's Lark and the Blue Swallow are are infrequently observed in the District. According to the South African Bird Atlas Project (Animal Demography Unit, UCT), a reporting rate of less than 5% has been recorded for Rudd's Lark in the Wakkerstroom / Groenvlei habitat, and 4% for Blue Swallow in the Newcastle area, with none being recorded in 2018 thus far.

The 2 endangered mammalian species found in the ADM are the *Mystromys albicaudatus* commonly known as the White-tailed mouse and the *Ourebia ourebi ourebi*, also known as the Oribi.

Rare invertebrate species include the *Aloeides swanepoeli* (Swanepoel's Copper) and the *Bowkeria Phosphor borealis* (Scarce Scarlet), while the *Doratogonus septentrionalis* (Northern black millipede) and the *Doratogonus minor* (Minor black millipede) are endangered species.

14.2. PROTECTED AREAS AND STEWARDSHIP SITES

Formally protected areas are regions protected by law under the National Environmental Management: Protected Areas Act (Act 57 of 2003) such as nature reserves, national parks, and world heritage sites. Stewardship sites and protected environments also provide protection, however these occur on private land with various levels of stewardship.

The Chelmsford Nature Reserve and the Ncandu Forest Reserve and recently the Pongola Bush Protected Environment are the only 3 provincial nature reserves in the ADM. The Ncandu Forest is situated between KZN and the Free State along the rugged escarpment. The area is known for its birdlife, supporting Wattle Crane, Grey Crowned Crane, Blue Crane and the Denham's Bustard (EKZNW, 2009-2013). The Chelmsford Nature reserve is an important conservation feature for Oribi (EKZNW, 2009-2013). The Pongola Bush Protected Environment site constitutes many pristine forest and grassland species and is a known wattle crane breeding site (Stone *et al.*, 2011).

The BSP also lists the Normandien Farm as a Natural Heritage site, which consists largely of natural forest that boarders the Ncandu Nature Reserve (Thring *et al.,* 1999). Mkhothane is a community conservation area, in Charlestown, which includes pristine grassland and woodland along the Buffalo River.

14.2.1 CRITICAL BIODIVERISTY AREAS AND ECOLOGICAL SUPPORT AREAS

A Critical Biodiversity Area (CBA) is a natural / pristine or semi-natural feature, habitat or landscape that stretches across the terrestrial, aquatic and marine environments that is considered critical for:

- Meeting national and provincial biodiversity targets and thresholds
- Assists in safeguarding certain areas in the landscape that are required to ensure the persistence and functioning of species, ecosystems as well as the delivery of ecosystem goods and services
- Preserving habitats that are important for biodiversity or rare species.

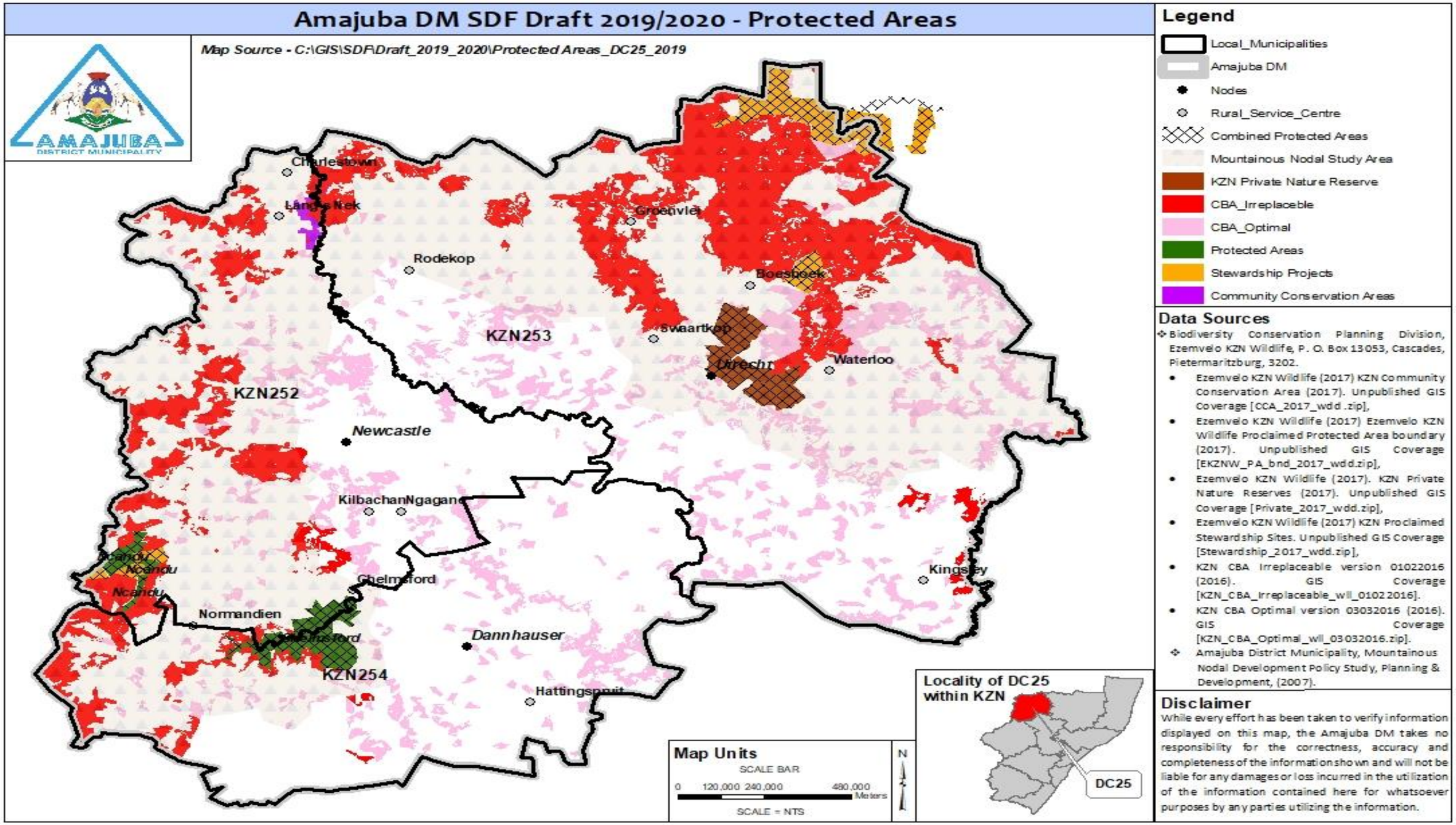
CBAs can be further divided into two categories; CBA Irreplaceable and Optimal.

- **CBA Irreplaceable:** these areas are considered critical for meeting biodiversity conservation targets. Irreplaceable areas are necessary for the persistence of species as well as the overall functionality of the environment.
- **CBA Optimal:** these are areas that are considered an optimal solution for meeting biodiversity conservation targets and aims to avoid areas where the risk of losing biodiversity is high.

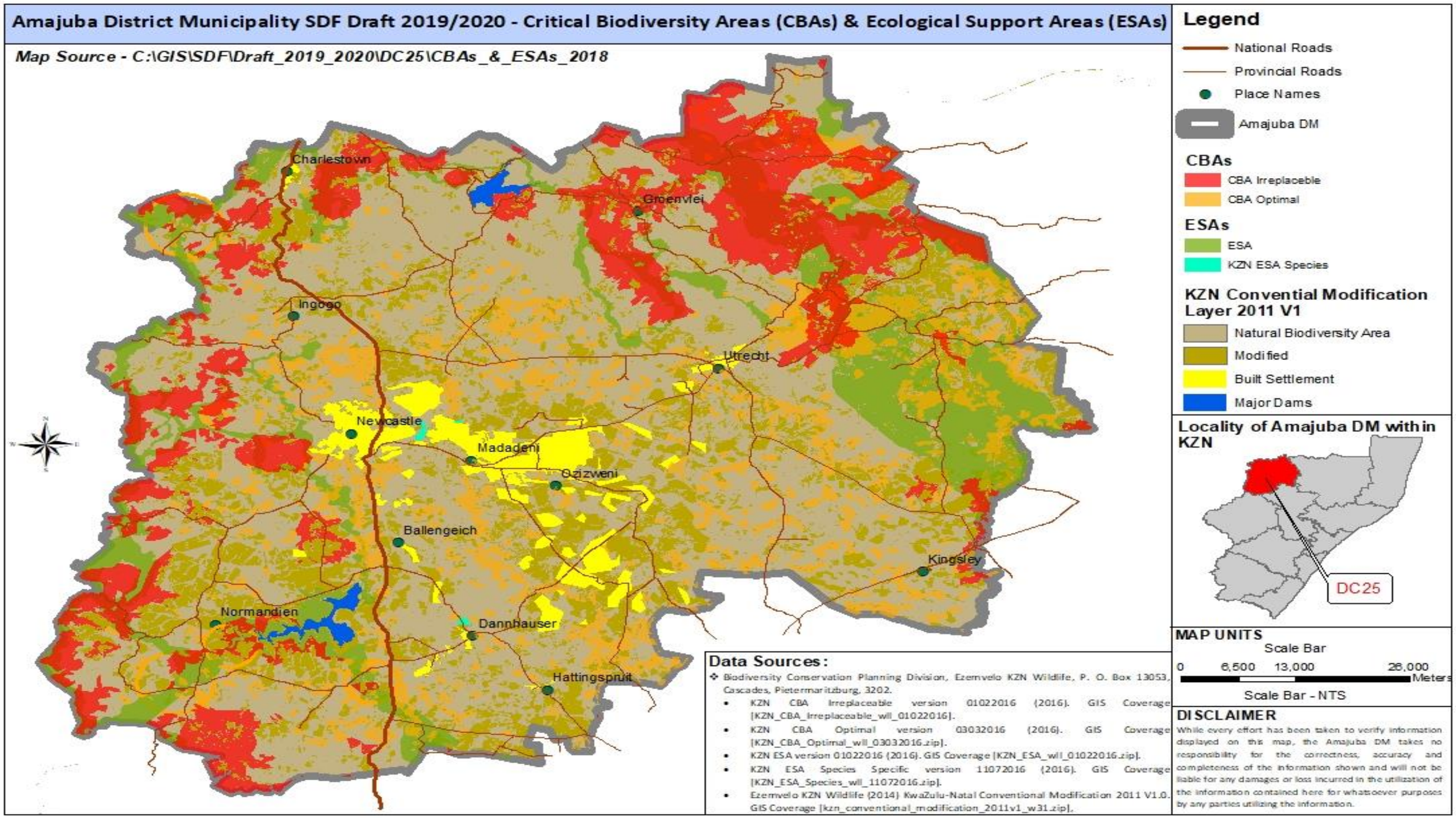
Conservation of CBAs is a priority as areas that are not well maintained in a natural or near natural state have limited carrying capacity for biodiversity and rare species, which in turns reduces the chances of meeting national/ provincial biodiversity conservation targets.

An ESA is a functional area, whilst not necessarily in a natural or in near-natural state, that is used to ensure the persistence and maintenance of biodiversity, species and environmental processes within a CBA. ESAs are made up of four categories, ESA, ESA corridors, ESA Expert Input and ESA Species Specific.

CBAs and ESAs are used in the development of district biodiversity sector plans which makes recommendations regarding appropriate land uses and provides guidelines regarding land management. The distribution of CBAs and ESAs across the ADM are shown in Map 77.



MAP 76: PROTECTED AREAS AND STEWARDSHIP SITES WITHIN THE AMJUBA DISTRICT MUNCIPALITY



MAP 77: DISTRUBUTION OF CBAs & ESAs ACROSS AMAJUBA DISTRICT MUNICIPALITY

14.2.3. AGROBIODIVERSITY ZONES

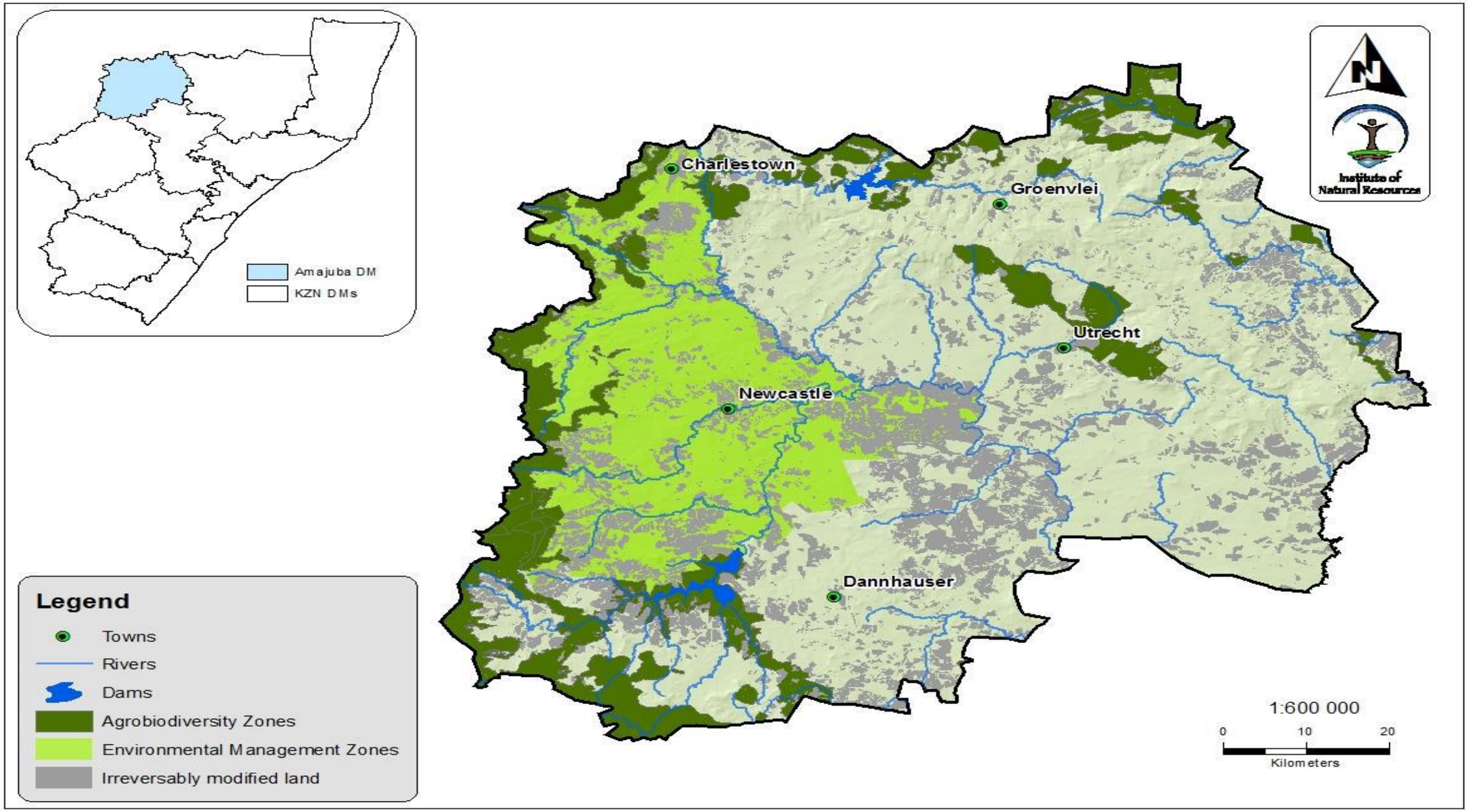
Agrobiodiversity zones are zones that aim to highlight the importance of sustainable agriculture and biodiversity conservation, because they represent areas that are deemed to have both a high to moderate agricultural potential and a high biodiversity value. Importantly, they exclude land which is considered high priority from a crop cultivation perspective as this would place biodiversity conservation objectives at odds with that of agriculture in these areas. An agrobiodiversity zone therefore promotes the co-existence of indigenous biodiversity with agricultural activities.

These zones are also linked through “corridors” with formal protected areas. To enable or maintain species interaction between populations, the use of rangelands can be used to link or provide viable habitats for species that are prone to isolation. This encourages protecting indigenous vegetation and maintaining it in a good state and/or re-establishing natural species, the removal of alien plant species and buffering wetlands and watercourses.

Agrobiodiversity zones promote appropriate management of pesticide, herbicide and fertiliser use. They also aim to control surface runoff and prevention of soil erosion and degradation (in accordance with CARA (Act 43, of 1983)). The cultivation/ ploughing of virgin land are not supported in these areas as they do not contribute towards the above aims. Often, grazing is offered as an alternative. Natural resource harvesting is permitted, at low levels provided it is on a sustainable basis.

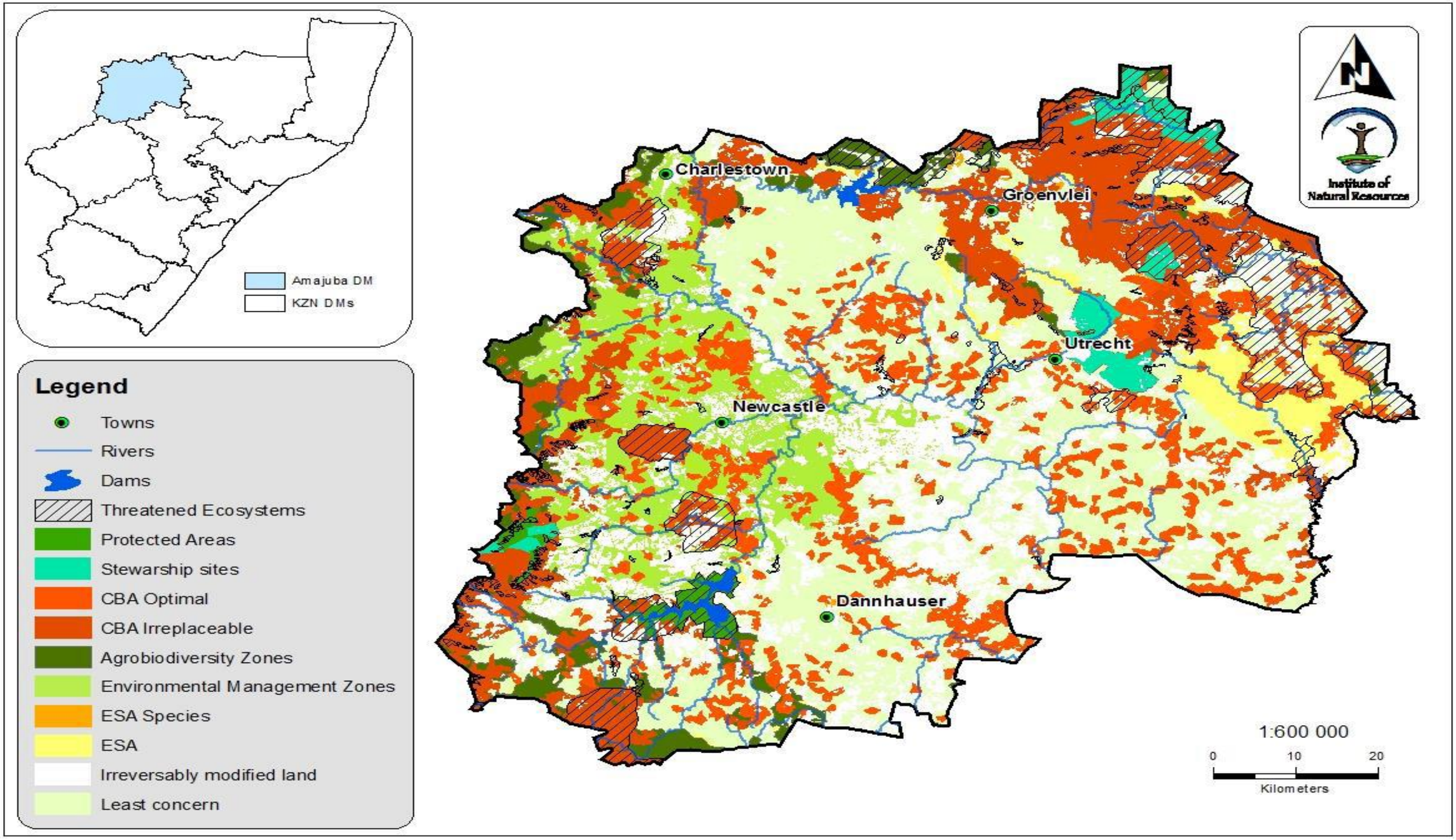
14.2.4. COMPOSITE BIODIVERSITY MAP

By combining all important biodiversity features, a composite map can be compiled reflecting all important biodiversity features of the ADM. This is shown in Map 79.



MAP 78: AGROBIODOVERSITY ZONES WITHIN THE AMAJUBA DISTRICT MUNCIPALITY

Source: Amajuba District Municipality Environmental Management Framework - Draft Status Quo Report January 2019



Map 79: COMPOSITE MAP OF IMPORTANT BIODIVERSITY FEATURES IN THE AMJUBA DISTRICT MUNICPALITY

Source: Amajuba District Municipality Environmental Management Framework - Draft Status Quo Report January 2019

14.3. CONSERVATION AND SOCIAL USE VALUE OF TERRESTRIAL ECO SYSTEMS

Biodiversity and the ecosystem services provided by the terrestrial environment underpin social and economic activities that form a central feature of socio-economic development in Amajuba District. Agriculture, tourism, livestock grazing and numerous environmental processes (nutrient cycling, soil stabilization, water purification etc.) are vital for the proper functioning of human life and economic growth in this region. Conservation and proper management of these biodiversity features is therefore essential.

The different grasslands of the ADM are perhaps the most important ecosystems in the District. They play a critical role in providing habitat for a range of biodiversity and perhaps more importantly they provide a range of services that are crucial for the persistence and growth of the local economy. Extensive animal production is directly reliant on grasslands for grazing, while industry, mining and any form of settlement is dependent on the water produced by grassland dominated catchments. The grasslands of the ADM are also key habitats for medicinal plants that are important from a socio-cultural perspective for many, especially for rural communities with limited access to healthcare facilities.

The District has identified intensive irrigation farming as an important mechanism to develop the regional economy (SDF, 2017). This however is dependent on the availability and supply of good quality water to areas with sufficiently arable land. The grassland ecosystems of the District are critical components of the hydrological cycle which results in the supply of water to the District. This demonstrates a critical link between development objectives in the District and the management of the terrestrial ecosystems providing water related services. Without well managed catchments, water stress (quality and/or quantity) will likely curtail any irrigation related development initiatives. Importantly, **all** the water used in the District is generated by catchments located entirely within the District. The District is therefore effectively soley responsible for the management of its water resources.

In most cases, these areas provide multiple benefits. Not only do they support economic growth through provision of water related services, but they additionally fulfil a critical role in supporting tourism. The ADM has identified tourism and its associated environmental resources as key areas in which to implement development initiatives (IDP, 2017). The Drakensberg escarpment offers tourism opportunities through hiking trials in the natural forests, scenic walks alongside waterfalls, trout fishing in clear mountain streams and bird watching in the numerous reserves, grasslands and wetlands. The large dams of the ADM and their surrounds are used as recreational areas for relaxation, fishing and sports such as the annual Chelmsford Challenge. These areas have been identified as important opportunities for tourism development (IDP, 2017).

The area surrounding Ntshingwayo dam i.e. Chelmsford Nature Reserve as well as other important catchment areas such as the Ncandu Nature Reserve and the Pongola Bush Protected Environment are also formally protected, which allows them to serve as sanctuaries for biodiversity. Close to 400 faunal and floral species associated with grasslands, bushveld, wetlands and mountainous habitats have been recorded in the ADM, some of which have already been noted in this report. Bird life in the ADM is also a key drawcard for tourism and therefore must be regarded as a valuable resource. As with agriculture, the development of such

tourism initiatives links heavily to water (fishing, wetlands, dams etc.) and will therefore largely depend on well managed terrestrial ecosystems, particularly in the higher lying catchment areas.

Blue crane	Bush Blackcap	Amur falcon
Rudd's Lark	Bald Ibis	Wattle cranes
Buffstreaked Chat	Blacknecked Grebe	Blue Korhaan
Palecrowned Cisticola	Grass Owl	Ground Woodpekcer
Yellowbreasted Pipit	Greywinged Francolin	Blue Swallow

Table 31: Bird species of tourism interest found in the ADM
Source (Amajuba Routes)

Sensitive wetlands in the area assist in regulating and filtering water that moves through the landscape. Taking into consideration the number of industrial and mining operations in the area which contribute to an array of water and air quality impacts, and considering the complete reliance of the District on its own catchments, it is essential to highlight the role wetlands play in the local economy through the sequestration of contaminants and the regulation of base flow during dry periods. Sound management of the terrestrial ecosystems in these key catchment areas is thus critical for the sustainable development of the District.

14.4. THREATS TO TERRESTRIAL BIODIVERSITY AND DRIVERS OF CHANGE

14.4.1. HABITAT LOSS

It is widely accepted that globally, habitat loss is the single greatest threat to biodiversity. In the Amajuba District, grasslands such as Income sandy grassland, Paulpietersburg moist grassland, Northern KZN moist grassland and Amersfoort Highveld Clay grassland have been negatively impacted by land use change showing a decline in spatial coverage of between 20-35% from their original extent, giving these vegetation types a conservation status of 'vulnerable'. Grasslands are not the only vegetation type that has been adversely affected, alluvial wetland vegetation has also been readily converted. These losses and various others can be attributed to a number of anthropogenic activities or processes.

Table 19 gives an indication of the level (in percent) of modification that natural vegetation has undergone in the ADM. According to this summary, the Income Sandy Grassland, Northern KZN Moist Grassland and the Paulpietersburg Moist Grassland have been the most threatened vegetation types in the ADM, aligning well with their KZN vulnerable status. The conversion of natural grasslands to commercial agriculture and plantations are the leading cause of their vulnerability. Sparse rural settlements and associated subsistence agriculture have also lead to the degradation of natural ecosystems, particularly the Income Sandy Grassland. Irreversible modification of grasslands limits the ecosystem services that these ecosystems supply such as floodattenuation, sediment control, groundwater recharge and filtration, thus increasing the vulnerabilityof downstream users both within and outside of the District.

	Natural Unimpacted	Wetlands	Unimpacted habitat sum	Natural Degraded	Dams and Rivers	Plantations	Dryland Commercial Agriculture	Irrigated Commercial Agriculture	Subsistence Agriculture	Sparse Settlement	Urban Open Space	Urban Residential	Urban commercial	Urban industrial	Mines and Quarries
Amersfoort Highveld Clay Grassland	74.5	3.3	77.8	0.2	0.1	1.6	14.9	0.8	1.8	2.8	0.0	0.0	-	-	0.1
Eastern Free State Sandy Grassland	100.0	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-
Eastern Temperate Freshwater Wetlands	70.4	21.9	92.3	1.0	2.2	0.2	3.0	1.0	0.3	0.0	-	-	-	-	-
Income Sandy Grassland	63.1	1.9	65.0	2.6	0.3	0.3	11.1	1.6	8.5	7.5	0.1	2.6	0.1	0.0	0.3
KwaZulu-Natal Highland Thornveld	80.3	3.4	83.7	1.5	0.2	0.5	6.3	1.9	1.1	1.4	0.2	1.5	0.4	0.5	0.9
Low Escarpment Moist Grassland	89.5	1.7	91.2	0.3	0.1	5.4	2.4	0.3	0.1	0.3	-	-	-	-	0.0
Northern Afrotemperate Forest	93.1	0.7	93.7	1.5	0.0	4.4	0.1	-	-	0.3	-	-	-	-	-
Northern KwaZulu-Natal Moist Grassland	64.7	5.5	70.2	0.3	2.4	5.2	16.8	2.3	0.6	0.8	0.0	0.8	0.1	0.0	0.4
Northern KwaZulu-Natal Shrubland	93.2	2.1	95.3	0.1	0.0	0.8	1.7	-	-	0.1	0.3	1.4	0.0	0.1	0.1
Paulpietersburg Moist Grassland	63.3	7.1	70.4	0.2	0.1	15.9	8.7	0.2	3.0	1.5	-	-	-	-	0.0
Thukela Thornveld	100.0	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-
Wakkerstroom Montane Grassland	88.7	2.8	91.5	0.6	0.9	2.4	3.5	0.1	0.9	0.2	-	-	-	-	0.0

Table 32: Land cover classes associated with vegetation type distrubutions

Importantly Table 32 does not indicate the extent to which grasslands have been altered to other 'Unimpacted' land cover classes. An analysis has been undertaken of land cover change over the period of 1990 to 2014 using the national land cover data sets from these two points in time. The results of this analysis clearly indicate the extent to which grasslands are under threat. Over this time period, roughly 94 000 Ha of grassland has been altered to another land cover type (Table 23). This represents 18 percent of the grassland that was present in 1990.

Habitat	Area change (Ha)	Total area (1990)	Percent of total habitat
Grassland	93696.1	500912.3	18.7
Thicket / Dense bush	8180.4	17405.9	47.0
Woodland / Open bush	6122.9	7115.5	86.1
Low shrubland	4307.0	4630.9	93.0
Ind. Forest	480.6	3502.0	13.7

Table 33: Area of ecosystem change in ADM 1990 – 2014

14.4.2. INVASIVE ALIEN PLANT SPECIES

Further analysis of land cover change data (1994 – 2014) indicates that over the last 20 years, the primary driver of the conversion of grassland is the change from grassland to woody vegetation. Interrogation of this change shows clearly that the primary factor driving this change is the spread of alien Acacia dealbata and A. mearnsii. It is a significant concern from a biodiversity as well as agricultural and water resource management perspective that 40 000 Ha of valuable grassland has been lost to this process in the space of 20 years.

Grassland chages to:	Area (Ha)
Thicket / Dense bush	26506.04
Woodland / Open bush	12450.94
Cultivated comm fields (med)	9675.31
Plantations / Woodlots mature	8480.71
Cultivated comm fields (low)	5430.58
Cultivated subsistence (med)	4066.24
Urban village (low veg / grass)	3707.77
Erosion (donga)	3644.13
Wetlands	3618.63
Plantation / Woodlots clearfelle	2926.51
Low shrubland	2359.80
Indigenous Forest	2011.47
Cultivated subsistence (low)	1155.21
Cultivated comm pivots (low)	781.98
Plantation / Woodlots young	765.31
Bare none vegetated	764.90
Urban township (low veg / grass)	649.01
Urban informal (low veg / grass)	606.88
Water permanent	570.05
Cultivated subsistence (high)	521.16

Driver group	Area
Woody vegetation	41316.78
Comm Cultivation	15887.86
Forestry	12172.53
Subs Cultivation	5742.61
Human settlements	4963.65
Other	13612.65
Total	**93696.08**

Table 34: Area of Grassland lost to different land cover categories 1990-2014 (and summary table)

Invasive alien plant species pose a major threat to the integrity of terrestrial ecosystems. In the ADM, this is particularly true of grasslands. Alien plants and wattle species in particular can establish themselves in areas where grasslands are heavily utilized / poorly managed and in poor condition. Once established, they are able to expand into more pristine areas using rivers as seed dispersal agents along riparian corridors and through a 'mushrooming' process whereby localized seed dispersal results in a progressive enlargement of an existing stand in a circular pattern . In this way they slowly erode the area of natural and productive grassland, limiting ecosystem service provision such as grazing and water and biodiversity related services.

Exotic species utilize more water than indigenous species, meaning they release more water into the atmosphere through transpiration as a result of them accessing ground water (Calder and Dye, 2012). A decrease in both ground water and overland flow limits the amount of water available for humans and their associated daily activities.

Large portions of grasslands in the upper reaches of the ADM and the riparian areas of important water courses have been invaded by alien invasive species i.e. silver wattle (Acacia Dealbata), black wattle (Acacia Mearnsii), gum (Eucalyptus sps.) and white poplars (Populas Alba)(Angus Burns pers. comm.). The impacts of this alter the water production potential of these areas as indigenous species are outcompeted and the water source is over utilized. This is particularly important where major supply dams / abstraction points occur downstream.

The loss of grassland regions to alien species also results in bare ground exposure (lack of cover under the canopies and undergrowth) which is a leading cause of soil erosion (though wind and water). This results in a loss of fertile topsoil which limits nutrient cycling and decreases the chances of supporting biodiversity. This impact is felt further in terms of reduced livestock grazing areas for farmers, impacting livelihoods. This process additionally threatens water resources through enhancing sedimentation of water courses and impoundments.

The Enkangala grassland project encouraged farmers to clear alien species by providing them with an incentive in the form of herbicide. This resulted in a 95% success rate in terms of removal, which highlights the effectiveness of stewardship programmes, and similar initiatives which involve the land owners in alien clearing activities.

The large areas invaded by wattle interestingly also present an economic opportunity. A positive social outcome of the Enkangala grassland alien clearing work was job creation. There additionally exist opportunities for the utilisation of the biomass in power generation, charcoaling, wood sales etc…

14.4.3. AGRICULTURAL IMPACTS

Agriculture can pose a significant threat to terrestrial biodiversity, particularly the cultivation of virgin land, which transforms large areas of natural vegetation and habitat. Intensive farming practices, over utilization of harmful chemical such as pesticides, fertilizers, herbicides etc. can also however have a detrimental impact on biodiversity. In Amajuba District, heavy grazing is a major concern and one of the biggest pressures (Angus Burns WWF. Pers. comm). Intense over-grazing and frequent burning of the grassland decreases biodiversity, allows alien invasive infestation and decreases grassland vigour/health. Grasslands are put at risk by poor burning management, where grasslands are burnt too frequently, in-frequently or burnt in the wrong season (C. Botha – KZN DARD Pers. comm).

Poor land management practices also leads to loss of vegetation cover and soil loss. There has been an observed decline in overall grassland health due to intense grazing pressure and frequent burning, including in grasslands within protected areas (Angus Burns pers. comm).

Biodiversity on private farm land is also affected by illegal hunting and poaching. Hunting with dogs has become more popular, which affects antelope utilizing the grassland such as Southern Reedbuck and flagship species such as Oribi (Angus Burns pers. comm).

Agriculture can however co-exist with biodiversity, particularly where grazing areas are well managed and where intensive farming is responsibly practiced, leaving appropriate corridors and buffers for habitats to persist. This is the foundational principle behind Agrobiodiversity Zones. As an example of this, the WWF has implemented stewardship programmes which promote land reform and food security. The Mndeni community were the beneficiaries of a successful land claim. Working with WWF, they took on the responsibility of improving land management and biodiversity and successfully declared their land as a protected environment. Furthermore, through funding provided by the UNDP, the community was provided with mentorship and training on management of their grasslands, and effective farming practices. The Mndeni community have successfully lowered the mortality rates and raised the overall condition of their herd, whilst simultaneously conserving biodiversity. They recently entered the commercial livestock market, sending their first 70 oxen to market (WWF).

14.4.4. EXPANSION OF SETTLEMENT AND INFRASTRUCTURAL DEVELOPMENT

Unplanned, inappropriate and ill managed development i.e. for tourism, formal and informal, urban and rural developments are extremely destructive to biodiversity. Built-up towns and settlements generally represent irreversible modification / loss of habitat – leaving little to no ability to support biodiversity, as opposed to agricultural land uses which often still have the ability to provide a degree of biodiversity value.

Clearing natural landscapes for informal settlements and / or subsistence agriculture is less destructive than hardened urban environments, but none-the-less eliminates or degrades large areas of habitat and this type of activity is very often unregulated and difficult to control. It is evident from aerial photographs that large portions of grassland in the ADM have been converted to small scale or subsistence agriculture , particularly in the southern low lying areas of the Buffalo River basin. This can have further implications than the loss of natural landscapes e.g. increased destructive power of floods (more compact, bare surface which reduces infiltration) and ultimately loss of life and livelihoods.

14.4.5. MINING

Mining is in most cases incompatible with biodiversity conservation priorities and open cast mining in particular is land hungry and destructive and poses a major threat to terrestrial (and aquatic for that matter) biodiversity. Underground mining is less 'land hungry', but is none-the-less considered a threat through secondary impacts such as the construction of required infrastructure, the large volumes of waste that are generated (and often poorly managed, particularly after mine closure) and water quality degradation.

The areas of Newcastle, Durnacol, Dundee and Glencoe have a long history of coal and metal ore mining, which played a big role in the development of the local economy. Over recent decades

however, the weakening of this sector is noticeable in the decline in the surrounding towns' populations and in the closure and abandonment of mines. A large number of coal mines have been abandoned within the Newcastle and Emadlangeni municipalities. From a biodiversity perspective, several old mine sites require rehabilitation and despite their closure, still pose a threat to the environment through water and air pollution. The most active mining town remains Dannhauser (with the main mining outputs being coal and clay. Only 1 significant commercial coal mine remains in Newcastle.

According to WWF, mining activities continue to pose a major threat to grasslands in Amajuba (Angus Burns, pers comm). Mining not only threatens grasslands in the form of direct disturbance related habitat loss, but it also can result in groundwater contamination which can ultimately result in damage to terrestrial ecosystems and crops. Acid mine drainage from defunct mines has reportedly degraded farmers water resources in the area and is known to have detrimentally impacted the water quality of important water resources. Very little information is however available regarding acid mine drainage as monitoring data is limited. Furthermore, effluent dams built within close proximity to water courses results in effluent leaching into the ground and surface water, decreasing water quality and biodiversity in aquatic ecosystems (Amajuba Park).

Fracking applications by applicants Rhino and Sungusungu have been received in the Amajuba district, and one exploration license has been granted. It is widely believed that fracking will lead to ground water contamination and surface water quality decline, while grassland habitat will undoubtedly be destroyed by fracking infrastructure.

14.5.6. CLIMATE CHANGE

Climate change impacts from a terrestrial biodiversity perspective are likely to be considerable, with the loss of ecosystem goods and services. The change in rainfall patterns and temperature will have an effect on the geographical ranges of sensitive species, which ultimately affects ecosystem species composition, populations and communities. Over time, species and even biomes may shift towards more desirable conditions in efforts to persist. The future existence and distribution of sensitive species will depend on the ability of species to migrate. Altitudinal corridors and ESAs therefore play an important role in facilitating the migration of species. Fragmented habitats hinder plant migration as they do not offer suitable areas for successful colonization.

The loss of grasslands through land conversion and alien invasion in the District can also exacerbate the effects of climate change. Grasslands and vegetation cover are known to act as carbon sinks, removing large amounts of carbon dioxide from the atmosphere and storing it in the soil. Grassland degradation and modification elevates the carbon levels in the atmosphere increasing the effects of climate change (increased temperatures / seasonal changes / elevated annual rainfall).

15. SURFACE HYDROLOGY & CATCHMENTS

The Amajuba District Municipality (ADM) falls entirely into two primary catchments namely the Thukela and Pongola catchments. Within these catchments there is an extensive network of rivers and tributaries. The District is characterised by a horseshoe shaped area of high lying land in the western and northern regions of the District which forms part of the Drakensburg escarpment. These regions drain into a central lower lying basin which hosts the Buffalo River which is the largest river system in the ADM and which is a key tributary of the Thukela River.

The Ngogo, Ncandu, Horn and Ngagane Rivers are important tributaries of the Buffalo River draining from the western highlands while the Slangspruit, Doringspruit and Dorpspruit form the main tributaries in the north. The headwaters of the Pongola River (including the Bivane River) are found in the high lying north eastern areas of the ADM and drain eastwards out of the District.

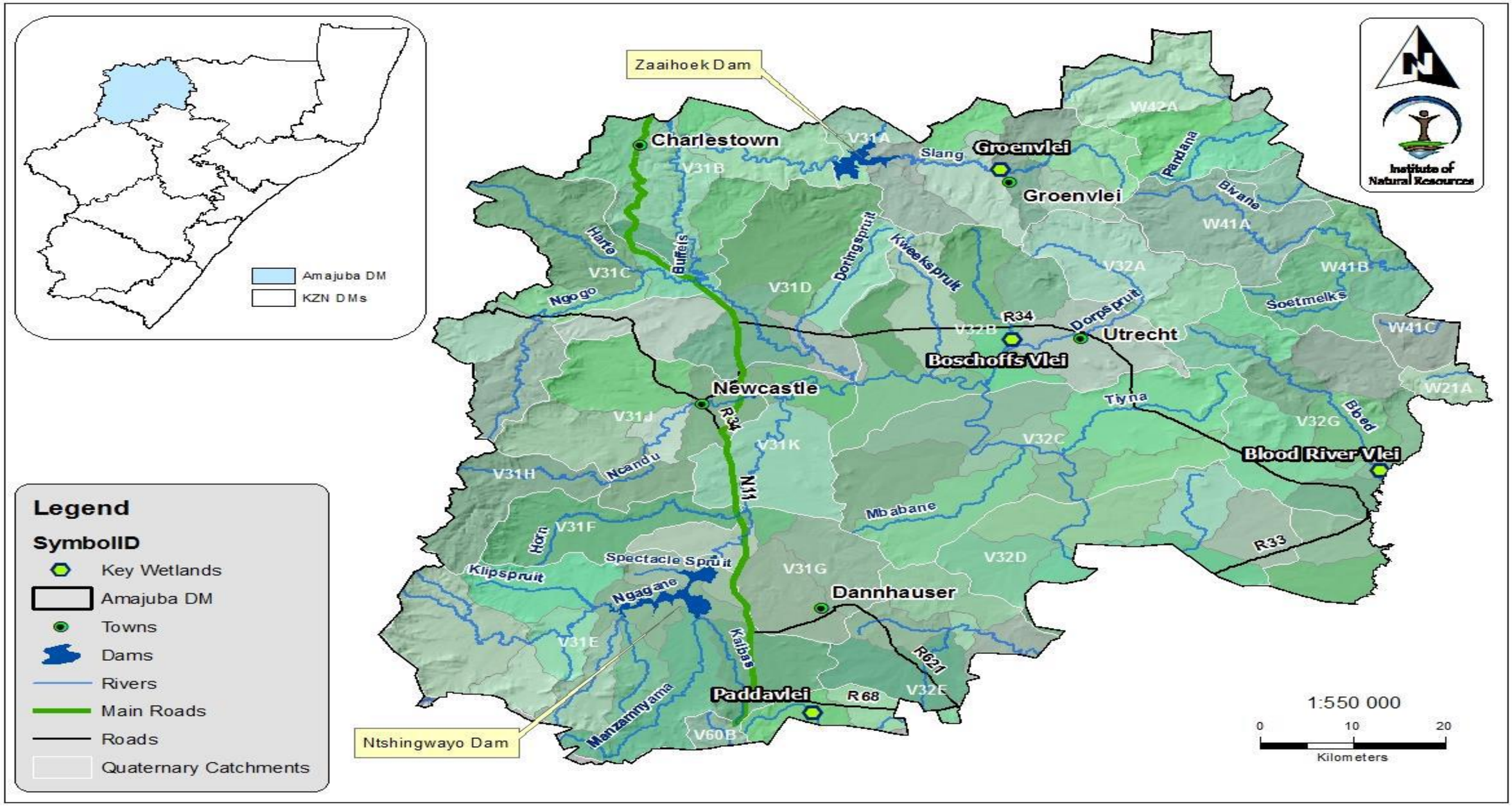
The high lying areas of the ADM are important water source areas. The northern areas form part of the Enkangala Drakensberg Strategic Water Source Area and the south western highlands form part of the Northern Drakensberg Strategic Water Source Area (Le Maitre et al 2018). Importantly from a District perspective, all of the water used within the District is sourced from catchments entirely located within it (barring very small areas at the top of the Ngagane and in the Buffalo River headwaters). This highlights the importance of the catchment areas for socio-economic wellbeing in the District.

These catchments however also supply surrounding areas, including the Vaal River catchment through the Zaaihoek transfer scheme, the Bivane and Pongolapoort Dams which support large scale irrigation farming and the Richards Bay economic hub through a transfer from the Thukela River into Goedetrouw Dam.

The Ntshingwayo Dam (formally known as Chelmsford Dam) and Zaaihoek Dam are the largest impoundments in the ADM. The much smaller Tom Worthington Dam is located near Hattingspruit. The Ntshingwayo Dam is fed by the Ngagane River and is situated at the boarder of the Newcastle and Dannhauser Municipalities. This dam is the most important water supply point for Newcastle – the most densely populated area and economic hub of the District. Water is pumped from the dam to the Ngagane water purification plant from where it is supplied to users in Newcastle, Osizweni, Madadeni, Braakfontein, Kilbarchan, the Eskom village, Ballengeich and the Amajuba District areas of Emadlangeni, Buffalo flats Alcockspruit and Steildrift.

The Zaaihoek Dam is situated in the Emadlangeni Municipality and is used to primarily supply water to Majuba Power Station, but also Volksrust town and to supplement the Vaal catchment. Water is pumped to Uitkyk reservoir from where the water can flow via a gravity main to Majuba Power Station. There is however a diversion at Uitkyk to Mahawane Dam to supply Volksrust. The water for the Vaal catchment is released into the Perderwaterspruit, upstream of Amersfoort Dam.

The Buffalo River is a key water supply feature for users located downstream of the ADM, and in particular, the Biggarsberg Water Treatment Plant which supplies the towns of Dundee, Glencoe and Sibongile with potable water. This water is abstracted at the Tayside Weir (outside ADM) and is supplemented from smaller dams such as the Tom Worthington Dam (inside ADM) and other small dams located outside the District when these have sufficient water (uThukela).



MAP 80: RIVER QUATERNARY CATCHMENTS IN THE AMAJUBA DISTRICT MUNCIPALITY

Source: Amajuba District Municipality Environmental Management Framework - Draft Status Quo Report January 2019

16. WETLANDS

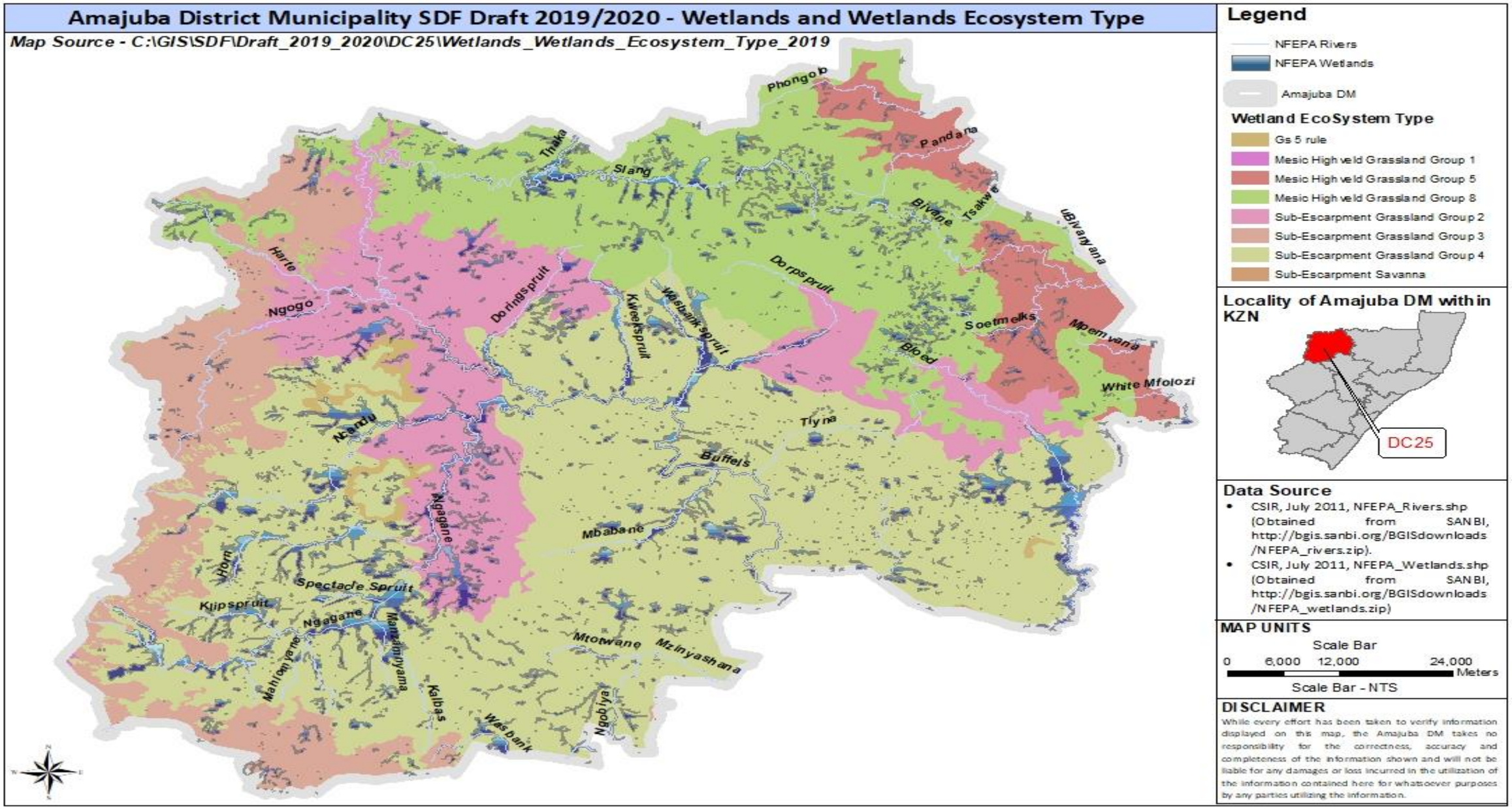
The Blood River Vlei, Boschoffsvlei, Groenvlei and the Padavlei are four of the most sensitive and important wetlands in the ADM (among approximately 9200 smaller wetland features).

The District has a high density band of wetlands in the higher lying areas in the north west stretching from the important Blood River Vlei and its upper catchment, through the upper Bivane and Pongola River catchments up to the upper catchment of the Slang River which hosts Zaaihoek dam and Groenvlei wetland. The upper catchments of the Ncandu, Horn and Ngagane Rivers are similarly densely populated with wetlands. The low lying Buffalo River flood plain also hosts a number of wetlands, but the density here is lower. The important Boschoffs Vlei is located in this area.

According to the ADM EMP (2003) the Boschoffsvlei is in a fair condition and the Groenvlei is in a good condition. There is however no record of wetland condition for the thousands of smaller wetland systems in the ADM. There are however many factors which impact on their condition. One of the main drivers of change in wetland extent and condition is the drainingwetland areas for agriculture. Developments such as dams and industrial and domestic housing complexes also drive change within wetland ecosystems. In particular, the flat Buffalo River flood plain has been heavily utilised for the development of housing, both formal and informal and other infrastructure.

Wetlands provide many ecosystem services such as water purification, flood control, groundwater replenishment, sediment control and are areas of high biodiversity. In particular, the ADM is geographically located in an important water supply area, and water generated in the catchments of this District is not only critical to the continued economic growth of the District, but it is also vital to users downstream of the District and in other catchments.

Wetlands are also important features in the ADM tourism plan of placing a strong emphasis on birding and avi-tourism. This niche market has potential to improve the district economically as it is known to be a birding region and there are over 400 bird species identified in the region.



MAP 81: WETLANDS AND WETLANDS ECOYSTEM TYPES FOR AMAJUBA DSISTRICT MUNCIPALITY

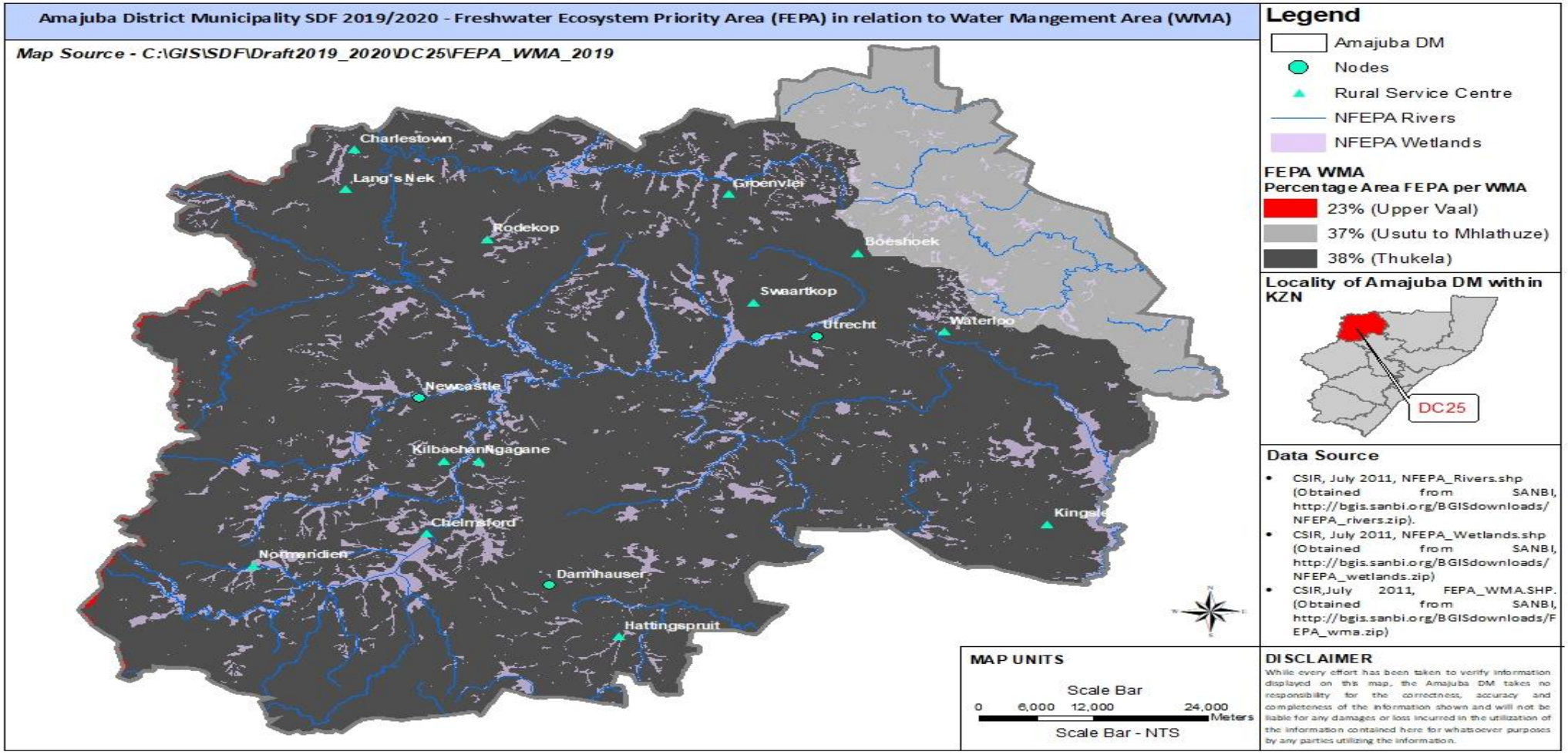
17. RIVER HEALTH AND BIODIVERSITY

River ecosystems provide essential goods and services for human and environmental well-being. In order to effectively manage the environment to ensure the achievement of a balance between use and protection of river ecosystems it is necessary to characterize each system in terms of its present ecological state (PES) and its ecological value.

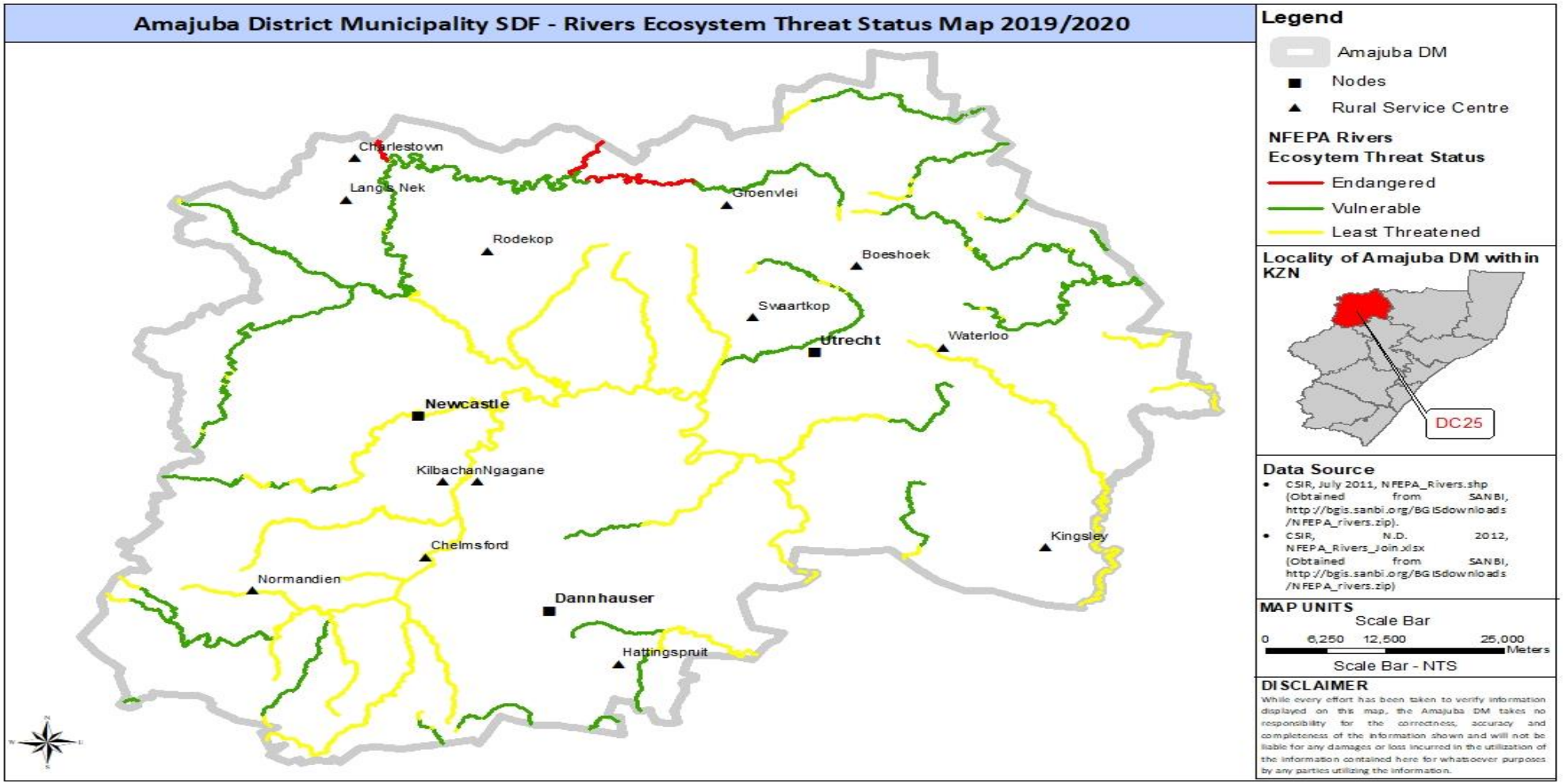
The National Freshwater Ecosystem Priority Areas (NFEPA) data set identifies areas that are important for meeting biodiversity conservation goals for freshwater ecosystems. Many of the upper river reaches within the ADM are characterised as river FEPAs. The lower lying areas of the catchment have been characterised as fish support areas. These areas are fish sanctuary areas and are important in the migratory routes of fish species.

DWS's Present Ecological State (PES) information indicates that the Buffalo River is a category B. The Ncandu River is a category D and the Ngagane River is a category C. The results indicate that even though the tributaries are in a poor to fair condition, the main Buffalo River within the ADM is in a good condition which is largely natural with a few modifications.

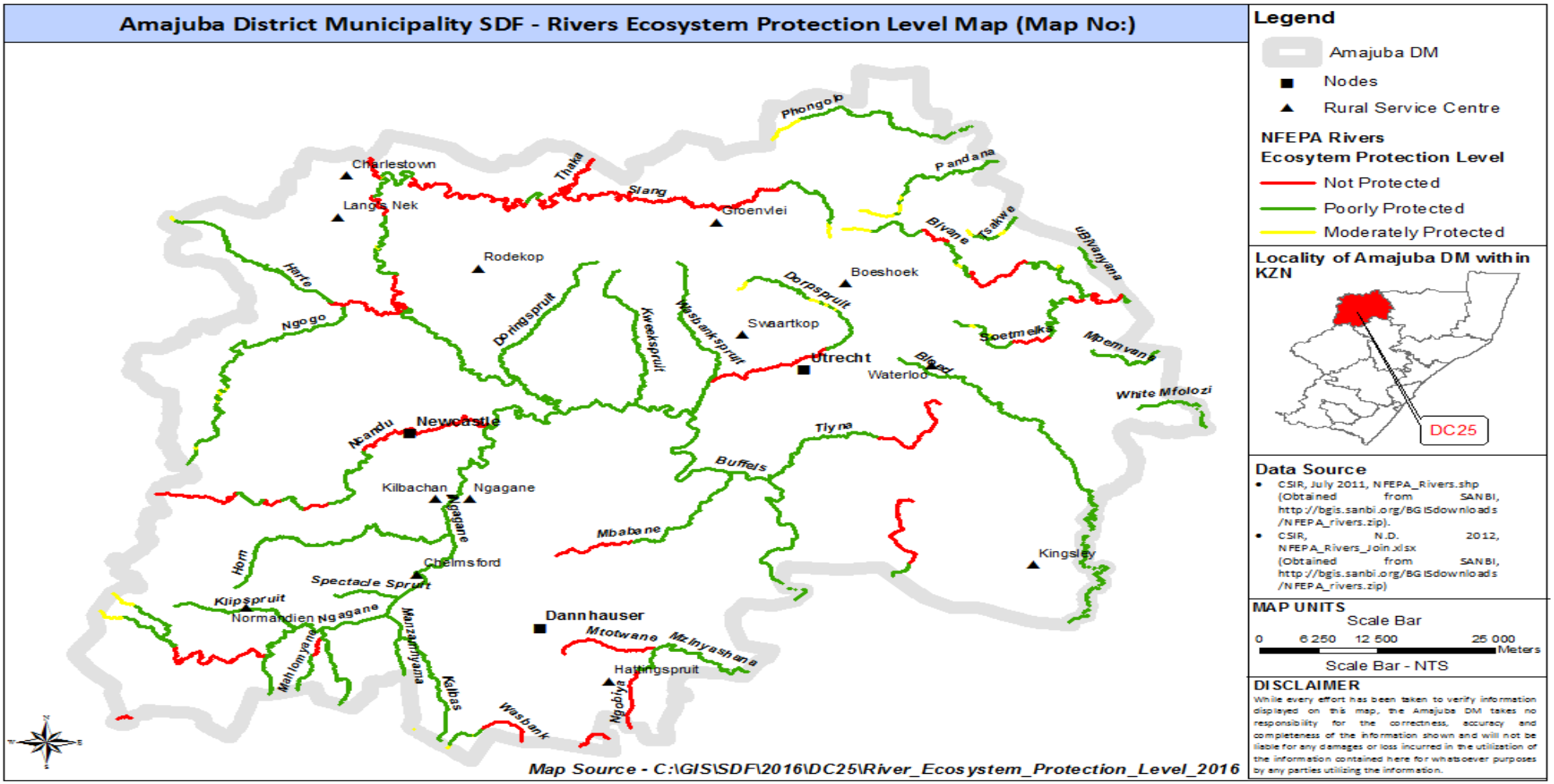
One of the biggest drivers of change in river health is pollution from activities within the domestic, industrial, mining and agriculture sectors. Another key driver of changes in aquatic ecosystems is invasive alien species. The infestation of riparian areas by alien vegetation can cause significant change in the health of river ecosystems. Alien fish species also have a significant impact on the aquatic ecosystem. Largemouth bass (Micropterus salmoides) and Common carp (Cyprinus carpio) are both common in the rivers of the District.



MAP 82: FRESHWATER ECOSYSTEM PRIORITY AREA (FEPA) IN RELATION TO WATER MANAGEMENT AREAS (WMA)



MAP 83: RIVERS ECOSYSTEM THREAT STATUS WITHIN THE AMAJUBA DISTRICT MUNCIPALITY



MAP 85: RIVERS ECOSYSTEM PROTECTION LEVEL WITHIN THE AMAJUBA DISTRICT MUNCIPALITY

18. AIR QUALITY

The Provincial Department of Economic Development, Tourism and Environmental Affairs (EDTEA) sampled and reported monthly dust fallout rates between February 2017 and January 2018 at twelve (12) sites across the Amajuba District Municipality. Overall, the finding of comfortable compliance (on average) with the Residential guideline throughout all sites and all months, with the exception of three sites during October 2017 only, suggests that dust nuisance is not a major issue across the Amajuba District Municipality.

Passive samplers were also deployed at selected sites by EDTEA from February 2017 to January 2018 to measure sulphur dioxide (SO2), nitrogen dioxide (NO2), and the BTEX parameters (benzene, toluene, ethylbenzene and xylene). In addition, some measurements were conducted for hydrogen sulphide (H2S) concentrations. NO2 and SO2 results are shown in the table below.

Site name	SO_2	NO_2
Site 3: Amadada High School	0,8	9,5
Site 6: Madadeni Police Station	3,9	8,8
Site 8: Utrecht Prison	0,3	8,4
Site 9: Emalahleni Secondary School	1,3	4,2
Site 11: Church St and Link St	5,3	11,0
Site 12: Shri Avenue	1,0	12,7

Table 35: List of sites where passive sampler have been deployed

All SO2 and NO2 concentrations are well below the National Ambient Air Quality Standards (NAAQS) of 50 µg/m3 and 40 µg/m3 for SO2 and NO2 respectively and are thus comfortably compliant. The ratio of SO2 to NO2 is typically a good indicator of industrial versus vehicular pollution, since industries produce both SO2 and NO2, whilst road traffic produces much more NO2 than SO2. Since the SO2 ambient measurements are low whilst NO2 concentrations are relatively high compared with SO2 and when expressed as a percentage of the NAAQS for NO2, these results suggest that road traffic rather than industry is the main contributor of gaseous air pollution of the Amajuba District Municipality.

Hydrogen sulphide concentrations were measured at four (4) sites. When compared with the WHO standard of 5 ppb over a 30-minute period, there were no apparent exceedances although it is observed that concentrations of this malodorous gas peak in late winter and early spring, and were highest in the Newcastle area.

The BTEX suite of hydrocarbons was also measured at four (4) sites. The NAAQS for annual concentrations of benzene (5 µg/m3) was not exceeded during the duration of this study.

The maximum benzene concentration measured was 2.5 µg/m3. The highest overall BTEX concentrations were measured in Blaauwbosch. VOCs quickly react in the presence of sunlight and moisture, so highest levels are typically measured where samplers are in close proximity to a source.

Since neither Amajuba Park nor Blaauwbosch are close to refineries or tank farms, road traffic emissions are again suspected as the major source of volatiles.

Whilst there is a clear perception from stakeholders that air quality in ADM is under pressure and that residents feel that air quality has been severely compromised, particularly in the Newcastle area, insufficient monitoring data is available to adequately quantify this (available monitoring data is only over a short term period, for passive samplers only and at limited sites). A full dispersion model which accounts for topographic influences has also not yet been developed for this area.

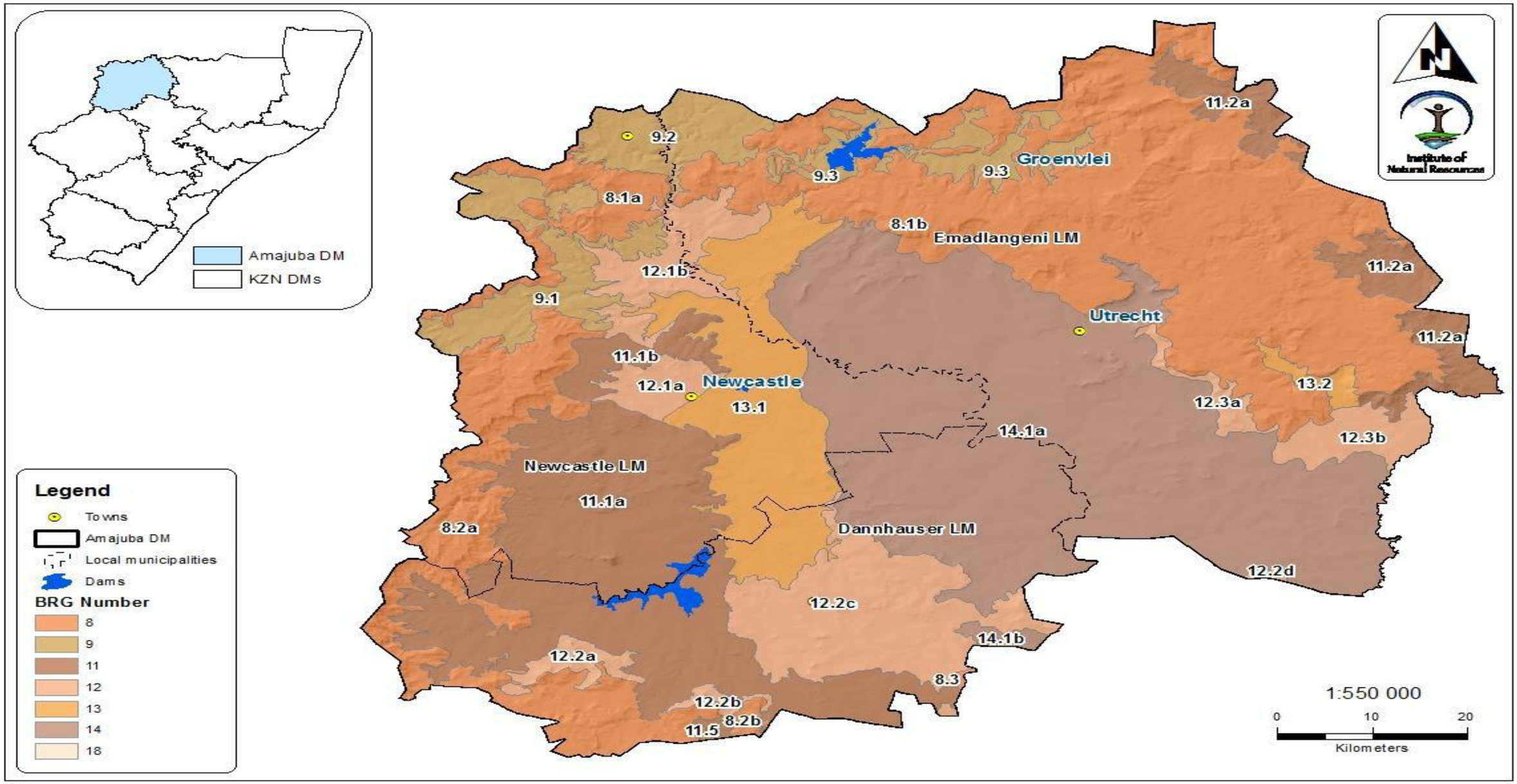
Two key overarching drivers of change in air quality in general are the demand for economic growth which results in the growth of industry, mining and other activities which impact air quality and the growth in urban population which brings an increase in the volume of road traffic and associated air quality impacts. Whilst the highly visible industrial emitters are foremost in the minds of ADM stakeholders, growth in this sector over the last decade has been limited. Road traffic volumes have however increased as the urban population has increased and available monitoring data for the District show that traffic related emissions are a significant contribution to overall air quality impacts.

19. LAND POTENTIAL

Identification of high potential agricultural land in KwaZulu Natal has evolved over the last two decades. Various physiographic factors were combined to establish Bioresource Groups (Camp 1999). Amajuba is divided into six Bioresource Groups (BRG's) namely 8, 9, 11, 12, 13 and 14 (Map 86). Table 36 shows the areas of the various BRG's in Amajuba.

BRG No	Amajuba (Ha's)	Total (Ha's)	Percentage of total BRU in ADM
8	40430.2	879379.9	4.6
9	27422.1	375311.6	7.3
11	54314.5	772487.9	7
12	16023.6	416295	3.8
13	30751.6	478034	6.4
14	15820.1	519301.7	3

Table 36: Bioresource group areas for the Amajuba District Municipality



MAP 86: BIO RESOURCE GROUPS WITHIN THE AMAJUBA DISTRICT MUNCIPALITY

Source: Amajuba District Municipality Environmental Management Framework - Draft Status Quo Report January 2019

BRG 8 Moist Highland Sourveld : The mean annual rainfall varies from 800 mm to 1 265 mm and the temperature is between 11.5oC and 16.6oC. The rainfall is reasonably reliable. Summers are cool and winters cold, with severe to very severe frost. Snow is experienced occasionally, more frequently on the high-lying areas. The growing season is short, hail is a hazard and hot "Berg" winds increase the risk of serious fires.

BRG 9 Dry Highland Sourveld: Droughts are quite frequent occurrences and the mean annual rainfall varies from 620 mm to 816 mm, with the lower extremes in the Newcastle area. Snow is infrequent. The mean annual temperature varies from 12.9oC to 15.6oC.

BRG 11 Moist Transitional Tall Grassveld (Transitional Tall Grassveld): The mean annual rainfall is from 800 mm to 1 116 mm. Mists are a frequent occurrence. The mean annual temperature varies from 15.0oC to 18.7oC. Frosts are generally moderate, but occasional severe frosts do occur.

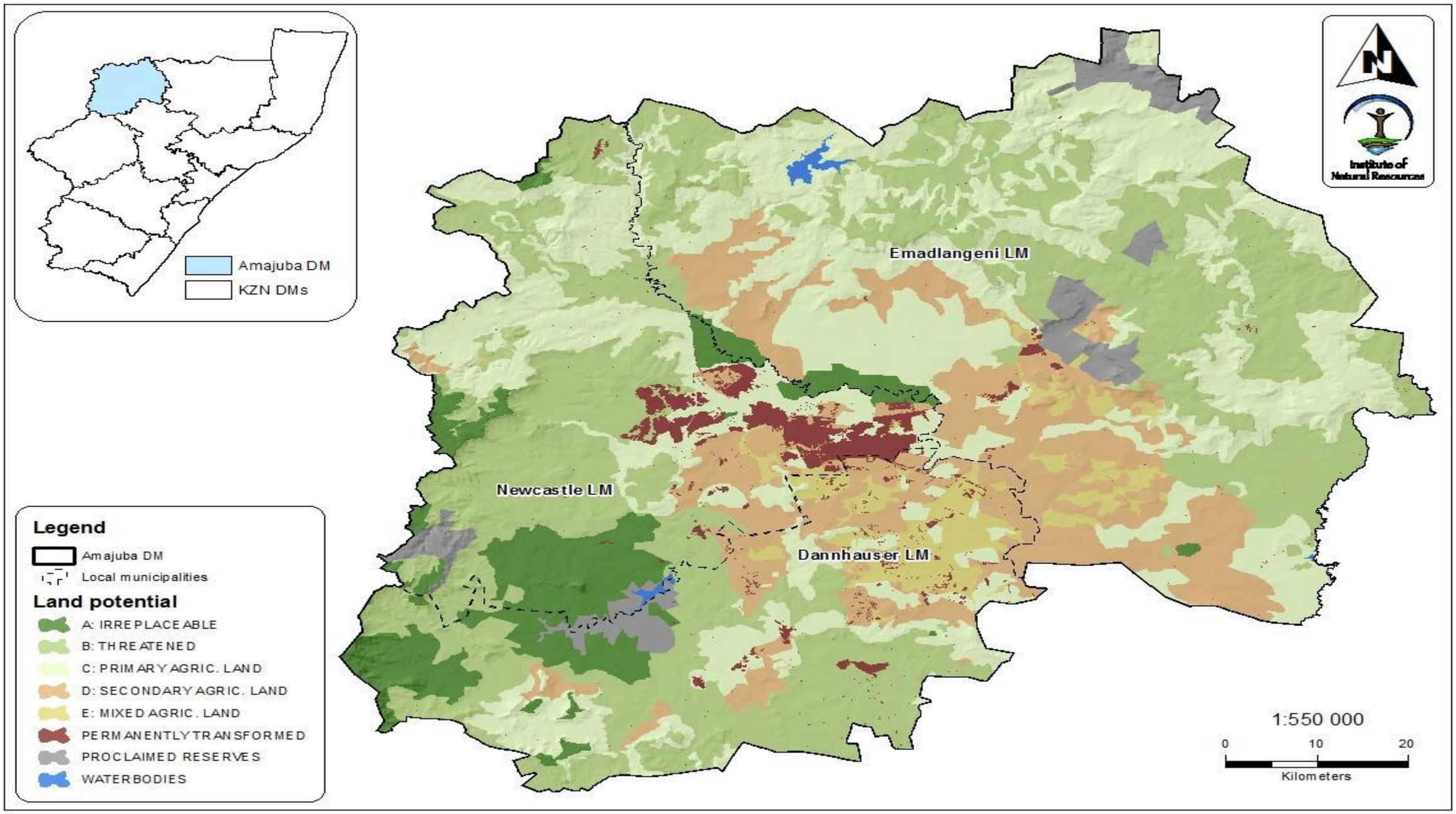
BRG 12 Moist Tall Grassveld: The mean annual rainfall varies from 712 mm to 805 mm. There are 3 to 4 ecologically dry months. The mean annual temperature varies from 15.3oC to 18.9oC. Occasional drought periods occur during the summer, frosts are moderate to severe, and hailstorms are experienced.

BRG 13 Dry Tall Grassveld: The mean annual rainfall varies from 666 mm to 745 mm and there are 4 to 5 ecologically dry months. The rainfall is not reliable and is poorly distributed. The mean annual temperature varies from 15.6oC to 19.0oC and frost is moderate to severe.

BRG 14 Sour Sandveld: The Sour Sandveld has sandier soils than the Dry Tall Grassveld but the climate can be regarded as being similar to the climate of that BRG. The mean annual rainfall varies from 645 mm to 737 mm, and the mean annual temperature is between 14.7oC and 17.3oC.

KZN DARD has more recently undertaken a mapping exercise incorporating a range of spatially referenced agricultural data (including the BRU data) aimed at categorising and mapping land potential for the province.

The distribution of these five categories across the ADM is shown in map 87. The categories themselves are described in Table 37.



Map 87: DISTRIBUTION OF LAND POTENTIAL CATEGORIES ACROSS THE ADM

Source: Amajuba District Municipality Environmental Management Framework - Draft Status Quo Report January 2019

Category	Description	Allowed land uses	Requirements for subdivision / rezoning
Category A: Irreplaceable (Includes 'unique agricultural land').	Regarded as very high potential agricultural land that should be retained exclusively for agricultural use	Land use restricted to those that support primary agricultural production only (e.g. silos, sheds, reservoirs), which should all be preferably located on the lowest potential areas within the category.	Detailed agricultural impact assessment by SACNASP registered scientist that has sufficient motivation for a change of land use (e.g. where available zoning data is
Category B: Threatened	Regarded as high potential land and efforts should be focussed on retaining this land for predominantly agricultural use.	No major change of land use within this category. Limited changes of land use will be supported only if in direct support of primary agricultural production.	
Category C: Primary agricultural land use	Regarded as land with moderate agricultural potential. Arable areas may be restricted and scattered through the landscape – may be more suited to fodder crops and extensive grazing in support of livestock production. Category C areas may also be retained as a buffer to protect Category A & B areas.	Land use within this category may include those mentioned in A&B but could also include: • Storage and processing facilities for farm products • Limited footprint agri-tourism, small education and research structures supporting scientific awareness (preferably in lower potential areas)	broad, and a down grading of the category is justified where site-specific studies show that land potential should be downgraded)
Category D: Secondary agricultural land use	Regarded as land with restricted to low agricultural potential. Change of land use may be supported as long as it does not conflict with the surrounding agricultural activity. Change should also not interfere with existing agricultural activities.	Land use within this category may include those mentioned in A,B&C but could also include: • Intensive farming (e.g. poultry, piggeries) • Packhouses and processing plants • Recreation facilities • Small wedding / conference venues and renewable energy farms	
Category E: Mixed land use	Regarded as land with very restricted to very low potential for agricultural production in terms of both arability and grazing.	Should there be a reason to retain a land parcel within this Category for agricultural purposes, DAFF and KZN DARD must offer supporting documentation as to why the application should be denied. A proposed change of land use within this category will therefore most likely be supported.	Basic / semi-detailed natural resources survey could be requested should there be a reason to retain this land for agricultural use.

Table 37: KZN DARD Land Categories

20. CROSSBORDER ALIGNMENT

Amajuba District is one of the cross-border municipalities within the province. It shares its boundaries with two provinces and three district municipalities within KwaZulu-Natal. This chapter is intended to establish the spheres of influence (socio-economic and spatial) that impact on Amajuba District given its strategic position around this cross-provincial spatial economy. It is also intended to ensure that there is no disharmony between proposals that are suggested by Amajuba SDF and its neighbouring areas. It is presented in the form of an analysis of alignment issues between Amajuba and the neighbouring districts and local municipalities within different provinces.

20.1. INTERNAL AMAJUBA DM ALIGNMENT WITH LOCAL MUNCIPALITIES WITHIN AMAJUBA DISTRCT MUCNIPALITY

The ADM SDF affects the LMs. The detailed SDF being compiled will guide the LMs SDF as far as locally relevant and physically possible however, as the actual implementing agent of spatial restructuring, the LMs SDFs will again inform the district SDF in the case of any differences.

20.1.1. NEWCASTLE LOCAL MUNCIPALITY

Newcastle Local Municipality is located to the north of Dannhauser Municipality and both these municipalities generally have good linkage and are within Amajuba District. They are linked through the provincial route R621 (P35-2) from Hattingspruit to Dannhauser and then unto N11 (to Newcastle). The Newcastle SDF has indicated N11 as the primary mobility route. The northern part of the Dannahuser Local Municipality comprises of a number of rural settlements which includes KwaMdakane and Ubuhlebomzinyathi. These settlements are within the close administrative boundaries of Newcastle and are surrounded by the settlements such as Osizweni. Households located at north of the municipality enjoys that advantage of utilizing facilities provided within Osizweni. There are parts of the northern area which are considered as prime agricultural and conservation areas.

THEME	
SETTLEMENT / NODES	• Statistics of population and number of households for the Dicks/Emantungweni settlements • Sharing of Public Facilities
TRANSPORTATION	• Alignment of plans (P483 Development Corridor) • Improve / upgrade roads linking to P483 • Shared use of P483 and R34 • Sharing of public transportation • Reduce travel time • Spin-off in terms of private investment • Improving linkage between Newcastle and Emadlangeni • Sustainable public transport system
ENVIRONMENT	• Air Quality Study and EMF • Limit/ Control human activities along water bodies • Protect Agricultural land to avoid land degradation • Human interaction with water courses that cut across both municipalities • Industrial activities that affect air quality
ECONOMY	• Employment (a portion of Emadlangeni's population works within Newcastle) • Employment opportunities • Public facilities (health, financial institutions, government institutions)
LAND USE	• Lack of development control

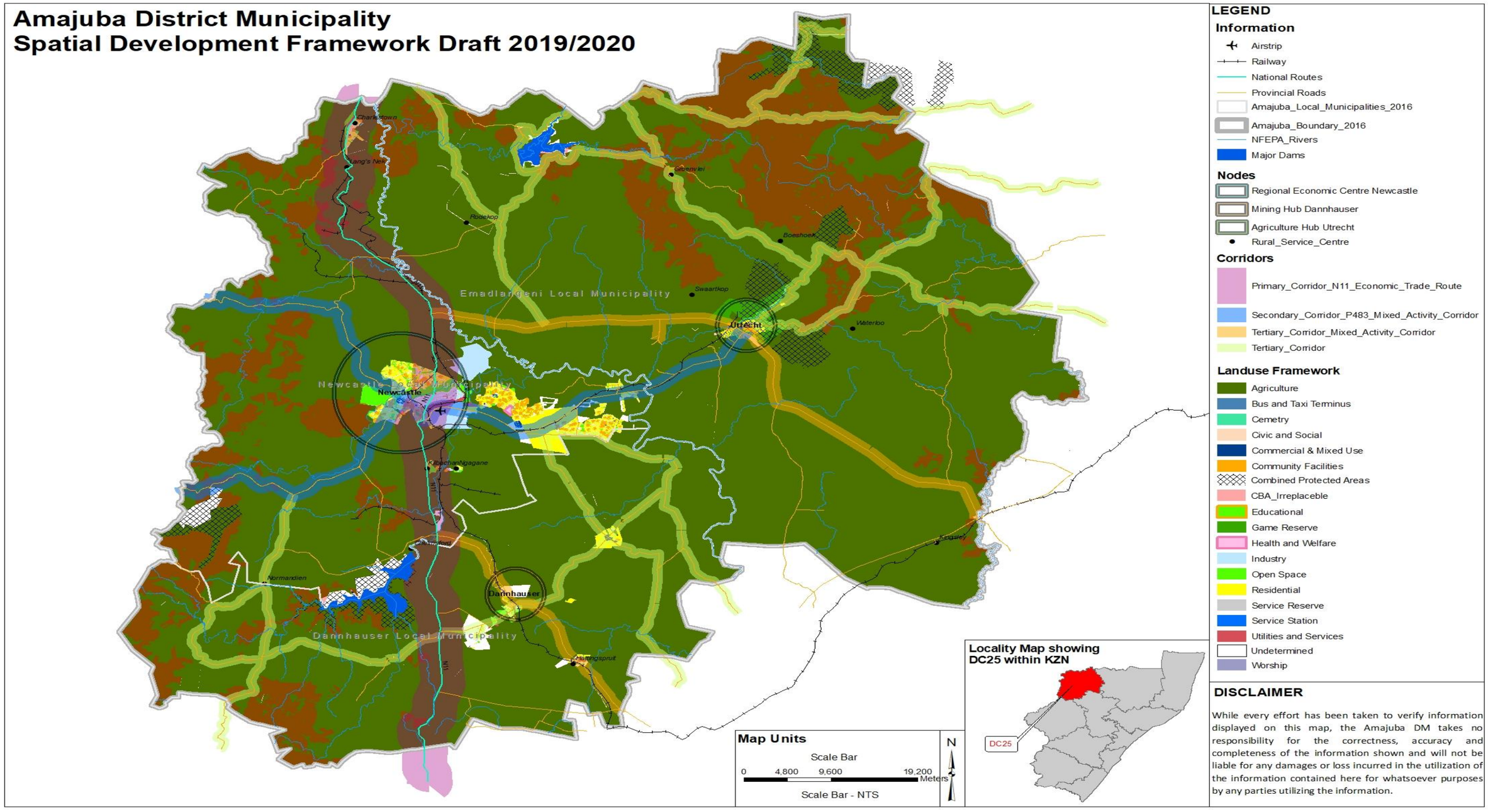
Table 38: Spatial Alignment themes between Newcastle LM and Dannhauser LM

Source: Newcastle LM SDF 2017/2018 – 2021/2022, Page 205

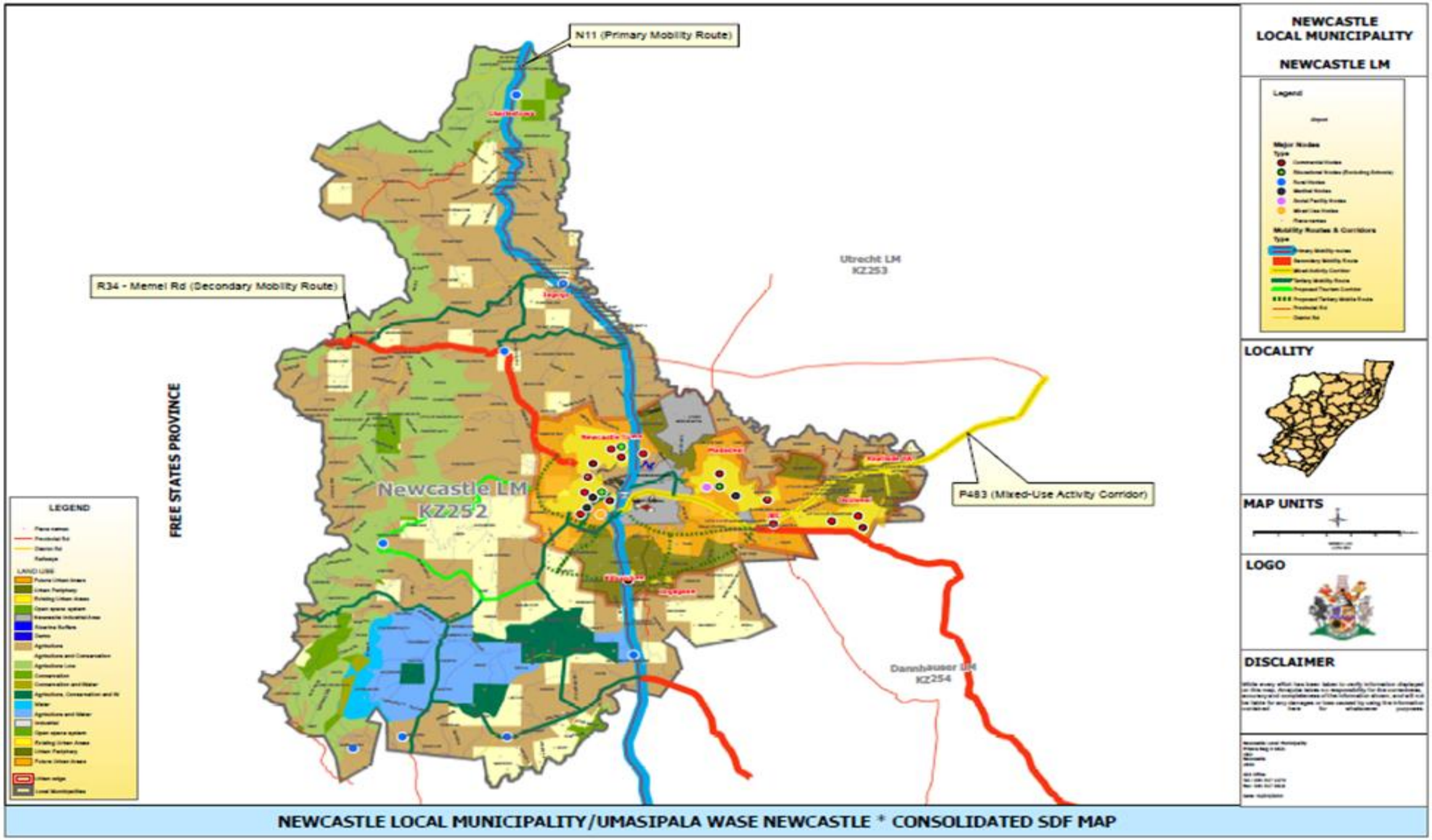
Emadlangeni municipality generally has good linkages with Newcastle. The N11 links the two regions via the R34. The strongest linkage however is via the P483 secondary and mixed activity corridor. It facilitates linkages in an east-west direction between Utrecht and Newcastle east. Nodal points of activity along this corridor provides opportunities for the provision of services as well.

THEME	
SETTLEMENT / NODES	• Statistics of population and number of households for the Dicks/Emantungweni settlements • Sharing of Public Facilities
TRANSPORTATION	• Alignment of plans (P483 Development Corridor) • Improve / upgrade roads linking to P483 • Shared use of P483 and R34 • Sharing of public transportation • Reduce travel time • Spin-off in terms of private investment • Improving linkage between Newcastle and Emadlangeni • Sustainable public transport system
ENVIRONMENT	• Air Quality Study and EMF • Limit/ Control human activities along water bodies • Protect Agricultural land to avoid land degradation • Human interaction with water courses that cut across both municipalities • Industrial activities that affect air quality
ECONOMY	• Employment (a portion of Emadlangeni's population works within Newcastle) • Employment opportunities • Public facilities (health, financial institutions, government institutions)

Table 39: Spatial Alignment themes between Newcastle LM and Emadlangeni LM
Source: Newcastle LM SDF 2017/2018 – 2021/2022, Page 204



MAP 88: AMAJUBA DISTRICTIC MUNCIPALITY SPATIAL DEVELOPMENT FRAMEWORK COMPOSITE MAP



MAP 89: NEWCASTLE LM SDF MAP

Source: Newcastle LM SDF 2017/2018 – 2021/2022

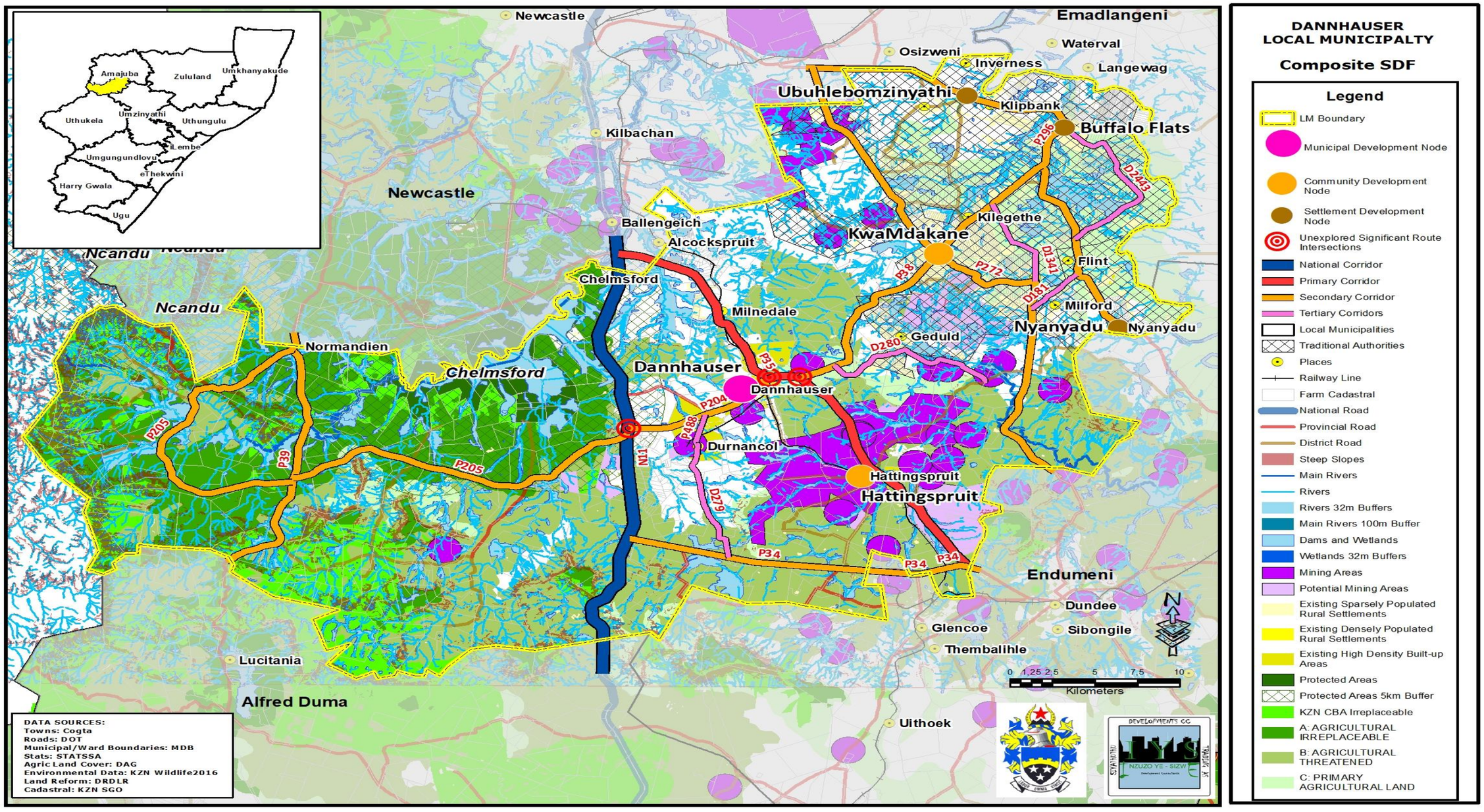
20.1.2. DANNHAUSER LOCAL MUNICIPALITY

ADM SDF recognizes Dannhauser mining hub and a district secondary node, which is defined as to provide essential day to day commercial and social needs, and commercial services to immediate adjacent communities. Dannhauser functions as a small rural service centre providing commercial and service facilities. It is an appealing town that serves the mining economy of Amajuba. It has a good potential as a secondary node for investment promotion and centre of supply of services in the district. It forms part of the provincial spatial systems and is identified in the SDF as the mining hub. However, the mining sector is undergoing the movement from large scale operation to smaller operation.

The town has since become a somewhat ramshackle rural town with aging infrastructure, poorly maintained roads, and lack of aesthetic appeal. It consists of one main street, and the main shops are the post office, bank, chemist and some grocery and hardware stores. The residential component of the town has also been subjected to urban decay and the former glory of its beautiful vintage architectural buildings has since been lost dilapidated. This node is currently functions as the rural centre to the community it serves. As a secondary node, the following development activities should be strengthened in Dannhauser;

- Upgrading of the town infrastructure;
- Urban renewal and regeneration plan;
- Establishment of small-scale mining of coal, clays or reworking coal dumps, prospecting for other minerals; and
- Maximising the infrastructure left by vacating mines would be of value.

The N11 is identified as a primary corridor and it is noticeably detouring through the study area along the areas of Durnancol and Chelmsford, also where there's a Nature Reserve. The secondary corridor is the R621 main road, which is the primary corridor of Dannhauser. It links the town of Dannhauser and the Hattingspruit satellite to the N11 (and onto Newcastle) to the north and to Dundee and Glencoe (and on to the R33 main road) to the south. Road 272, which runs south from Main Road 483 (which links Madadeni and Osizweni in the adjacent Newcastle municipal area, down to Road 38 and on to Dannhauser to the south west or alternatively on to Dundee (in the adjacent Endumeni Municipality) to the southeast is identified as tertiary corridor. Similar identification is posed to Road 296, which runs south-east from Osizweni and on to road 38 to Dannhauser (linking the satellites of Naasfarm, Thirst and Kilkeel to Dannhauser) or alternatively on to Flint, Road 240 and then Road 272 to Dundee to the south. Tertiary corridors link service satellites in the sub-district and provide access to public and commercial facilities at a community level.



MAP 90: DANNHAUSER LM SDF

Source: Dannhauser SDF 2017/2040

20.1.3. EMADLANGENI LM

Cross-boundary issues between the Amajuba District Municipality and Emadlangeni are as follows:

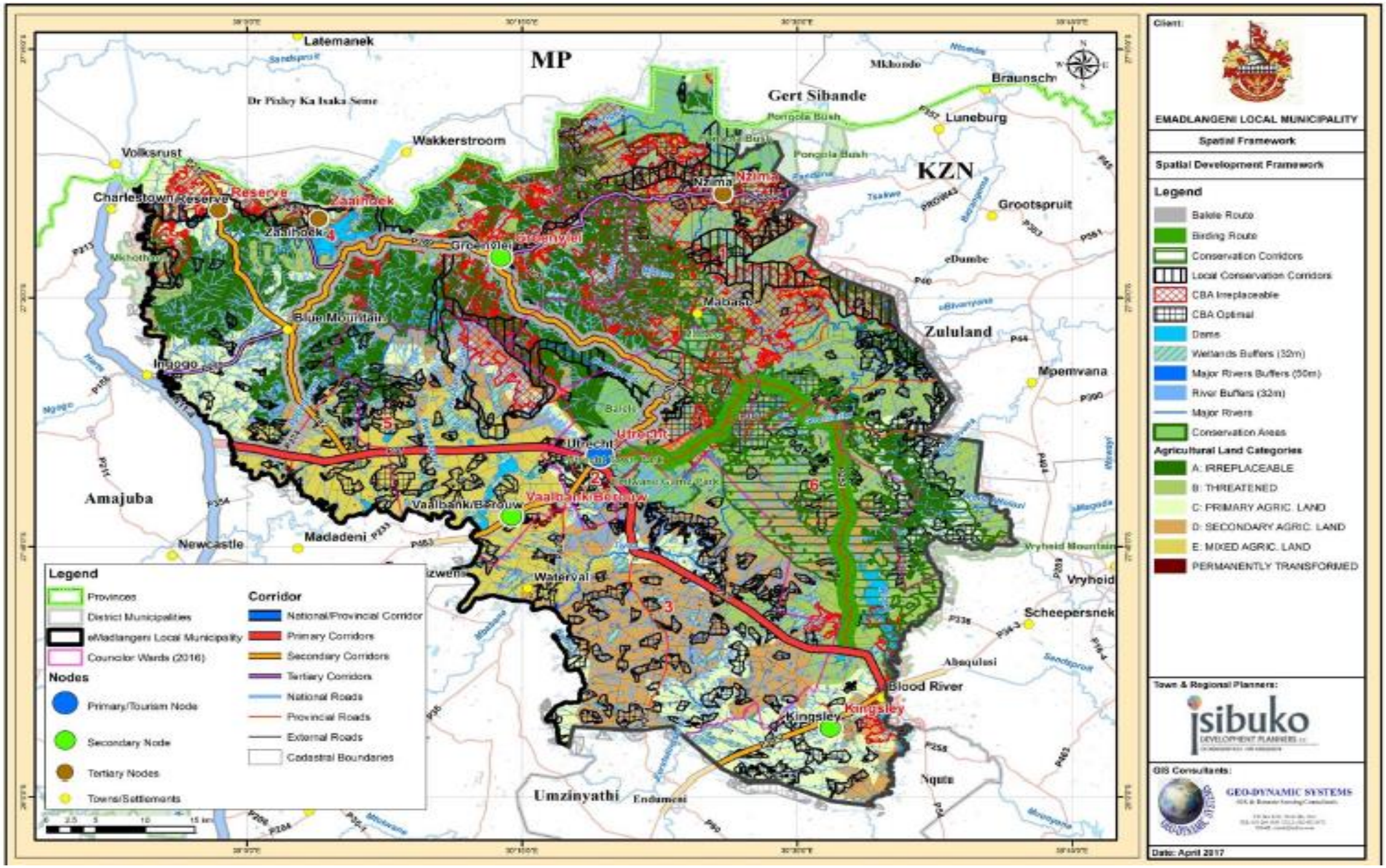
The R34 is identified as a secondary economic corridor in the Amajuba SDF due its linkages to the Richards Bay Port.

Utrecht is identified as a secondary node within the district with the potential to support surrounding towns. It is also identified for agricultural development within the District due to the area's agricultural potential.

The N11 national/provincial corridor is particular importance within the district. It provides linkages to the economic hubs of Johannesburg in the north and Durban in the south. Both the Amajuba and Emadlangeni municipality SDFs note the importance of this route and the opportunities it presents for the district. They posit that development along key intersections of the N11 must be investigated.

The P43 is identified as a tertiary corridor in the District SDF.

Vaalbank/Berouw (Amantungwa) has been identified as a tertiary node within eMadlangeni. The area's potential for growth as a result of its location is also noted in the District SDF.



MAP 91: EMADLANGENI LM SDF

Source Emadlangeni SDF 2017/2018

20.2. ALIGNMENT WITH NEIGBOURING DMs and LMs

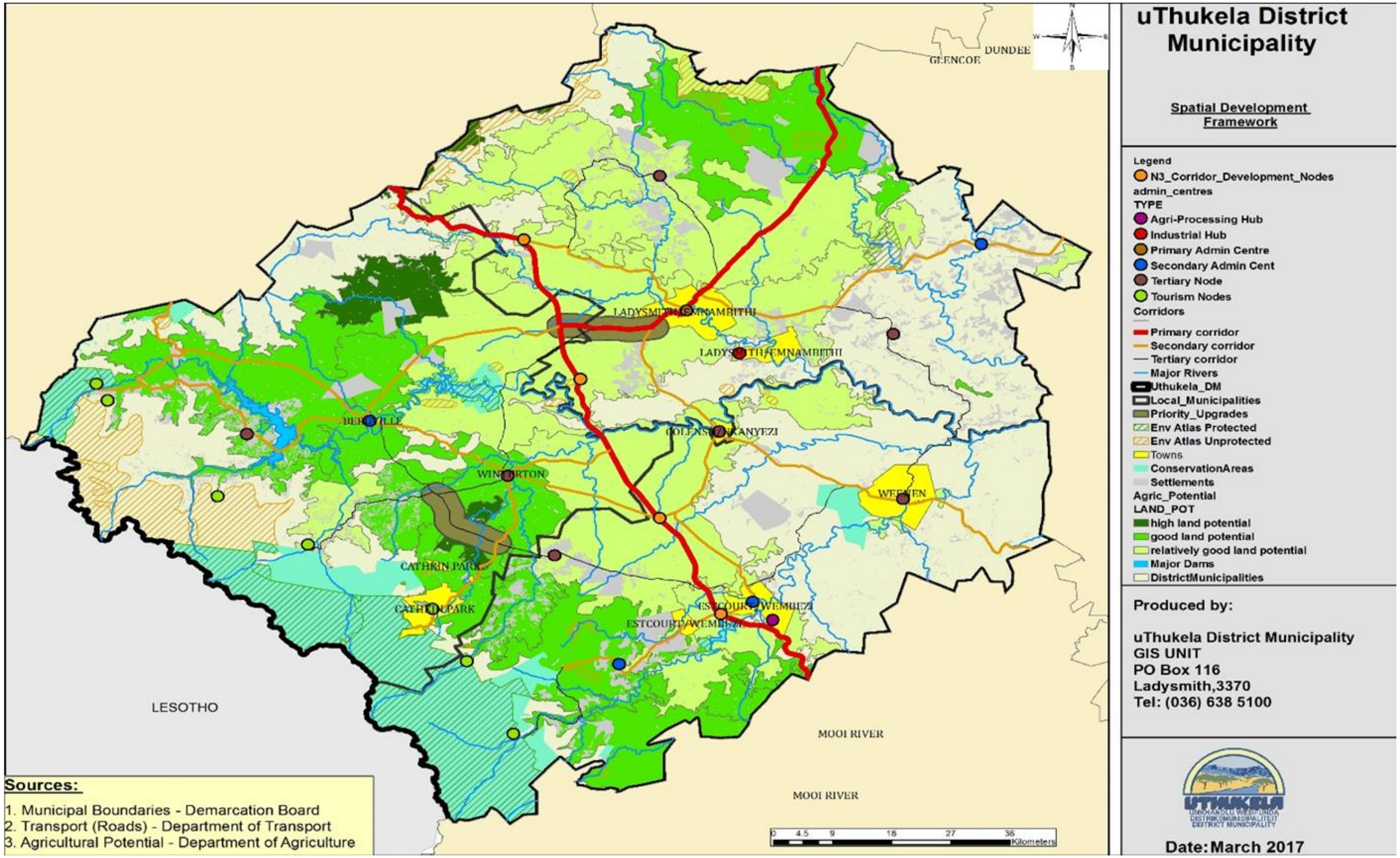
20.2.1. UTHUKELA DISTRICT MUNCIPALITY

The Uthukela District comprises of five local municipalities which are Inkosi Langalibalele LM, Okhahlamba & Alfred Duma LM. The size of the Municipality is approximately 11,500km² and is located along the western boundary of KwaZulu-Natal. It is predominately rural, with three of the five Local Municipalities, being rural in nature.

The Municipality is characterised by socio-economic challenges such as a low revenue base, poorly maintained infrastructure and limited access to social and other services. High levels of poverty, unemployment, skills shortage, a lack of resources and low levels of education is also prevalent. The settlement patterns are disbursed, which resulted in underdeveloped land and settlement patterns that make it challenging and expensive to deliver effective services.

The District is well endowed with water, pockets of good soils and the natural beauty of the Drakensberg. Two national roads, the N3 and N11 transcend the District, which has a potential for economic development. Ladysmith and Estcourt are the two major towns and economic hubs within the uThukela District Municipality. Both Ladysmith and Estcourt are commercial centres for surrounding farming areas and serves as shopping centres for towns such as Bergville and Ekuvukeni, which lacks a strong commercial presence. Large areas of traditional land are located within uThukela, with about 35% of land classified as either “tribal” or peri-urban.

A spatial analysis revealed that a large portion of degraded land is located in traditional areas. The key economic activities that are found within Uthukela are similar to those found in Amajuba. However Uthukela enjoys much stronger competitive advantages in terms of regional economy with the N3 and N11 traversing within it as well as a larger part of the Drakensberg Heritage Site. Alfred Duma LM is the only municipality within Uthukela that shares the boundaries with ADM.



MAP 92: UTHUKELA DM SDF

Source: Uthukela DM SDF 2017/2018

20.2.2. ALFRED DUMA LM

Alfred Duma LM is located to the south of Dannhauser. It is within uThukela DM. Strategic spatial planning cross-boundary issues between the two municipalities include the following:

- Development along the N11 corridor which runs through both municipalities in north-south direction;
- A relatively large block of land with good agricultural potential occurs just north of Driefontein Complex towards the border with Dannhauser. Most of this area is developed as grazing land and accounts for the good performance of the region in livestock farming. This area receives relatively good rainfall throughout the year.
- Management of high potential agricultural; and
- Management of the escarpment as bio-diversity corridor and a source of a number of major provincial rivers.
- The linkage at the western segment of Dannhauser together with north of ADLM has potential for sustainable agricultural practises because this area has numerous wetlands, receives relatively good climate and since the land use at Lutitania and Sundays within Alfred Duma municipality expresses prevalently good potential land.
-

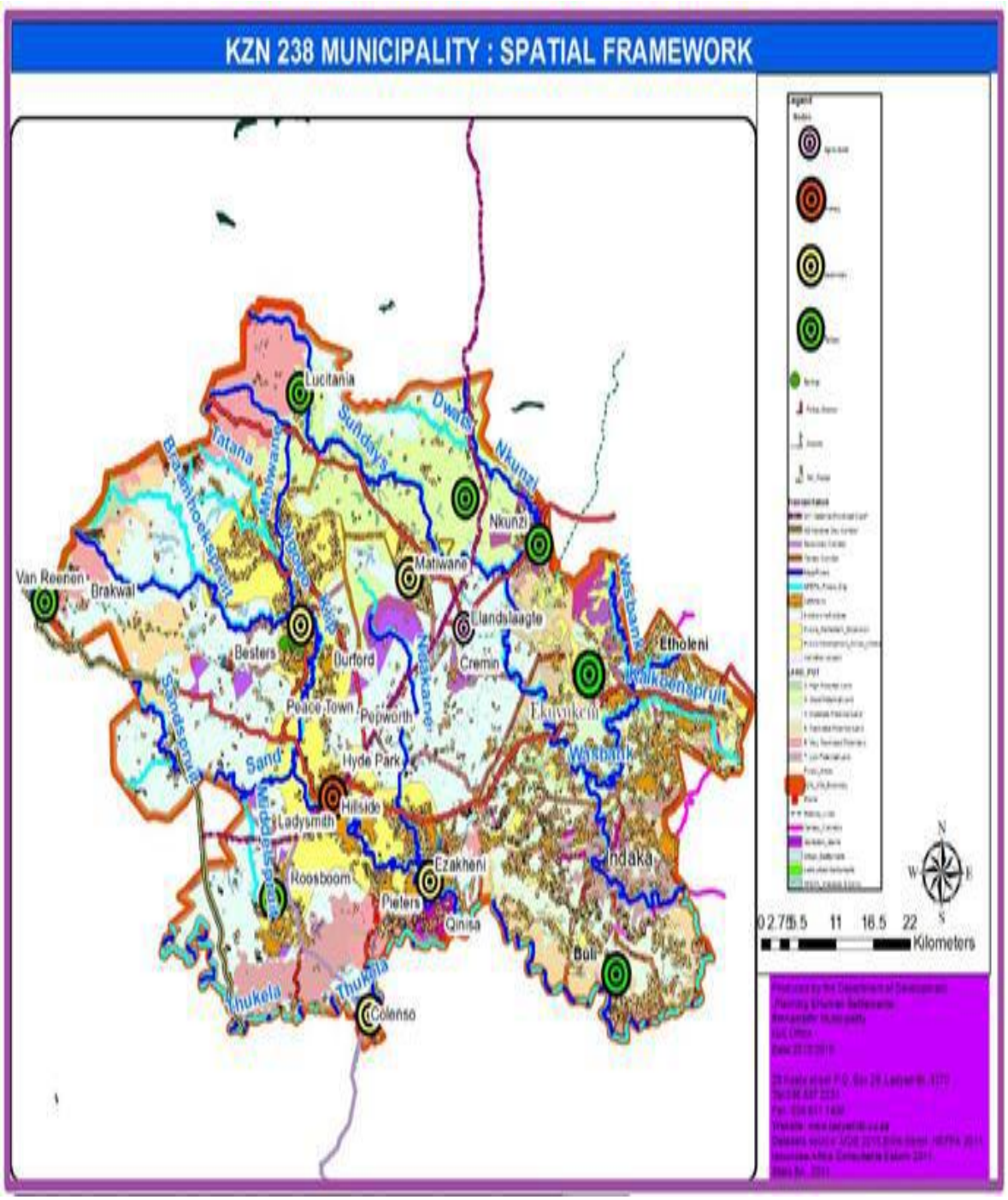
The Alfred Duma Local Municipality is also well located in relation to at least two of the major tourism destinations in KwaZulu-Natal. In fact, it serves as a base for the exploration of the Battlefields to the north and Ukhahlamba-Drakensburg Park to the south. The latter is a World

Heritage Site and a world acclaimed tourist destination. This park is 243 000ha in extent and it is located along uThukela District administrative boundary.

There are a number of natural and cultural attractions that exists within UKhahlamba-Drakensberg destination. The natural attractions include the Drakensberg Mountain, Archaeological sites, nature reserves (game viewing and bird watching), UThukela Biosphere Reserve, Tugela Catchments and Tugela River, Natural Bush, Forests and the climate is mostly comfortable. The cultural attractions include the certain parts of the Battlefields and Memorial, Museums, Monuments, Rock Art, Crafts, Recreation (Horse Riding) and tourism routes.

The Battlefields Route provides a structured journey around the sites of various battles, skirmishes and sieges which are situated in a broad belt running through the central core of the region, from Esctourt in the south, through Ladysmith, Dundee and Newcastle, to Charlestown in the north.This presents the area with a unique ‘tourism triangle’ character, consisting of three of the five B’s branding of provincial tourism – Berg, Bush and Battlefields. In addition to its three main destinations, there is a diversity of related attractions and accommodation facilities. This rich diversity allows tourists to experience a wide range of activities and scenes within a

relatively small area, and is used as an important marketing element in the regional tourism industry. The municipality is located in an region with a rich heritage and military history ranging from the Mfecane period (early 1800s) to the turn of the century when the Boers tried to stem the tide of British imperialism. It includes Shaka's predatory campaigns, the arrival of the Voortrekkers, the Anglo- Zulu War and the Anglo-Boer Wars.

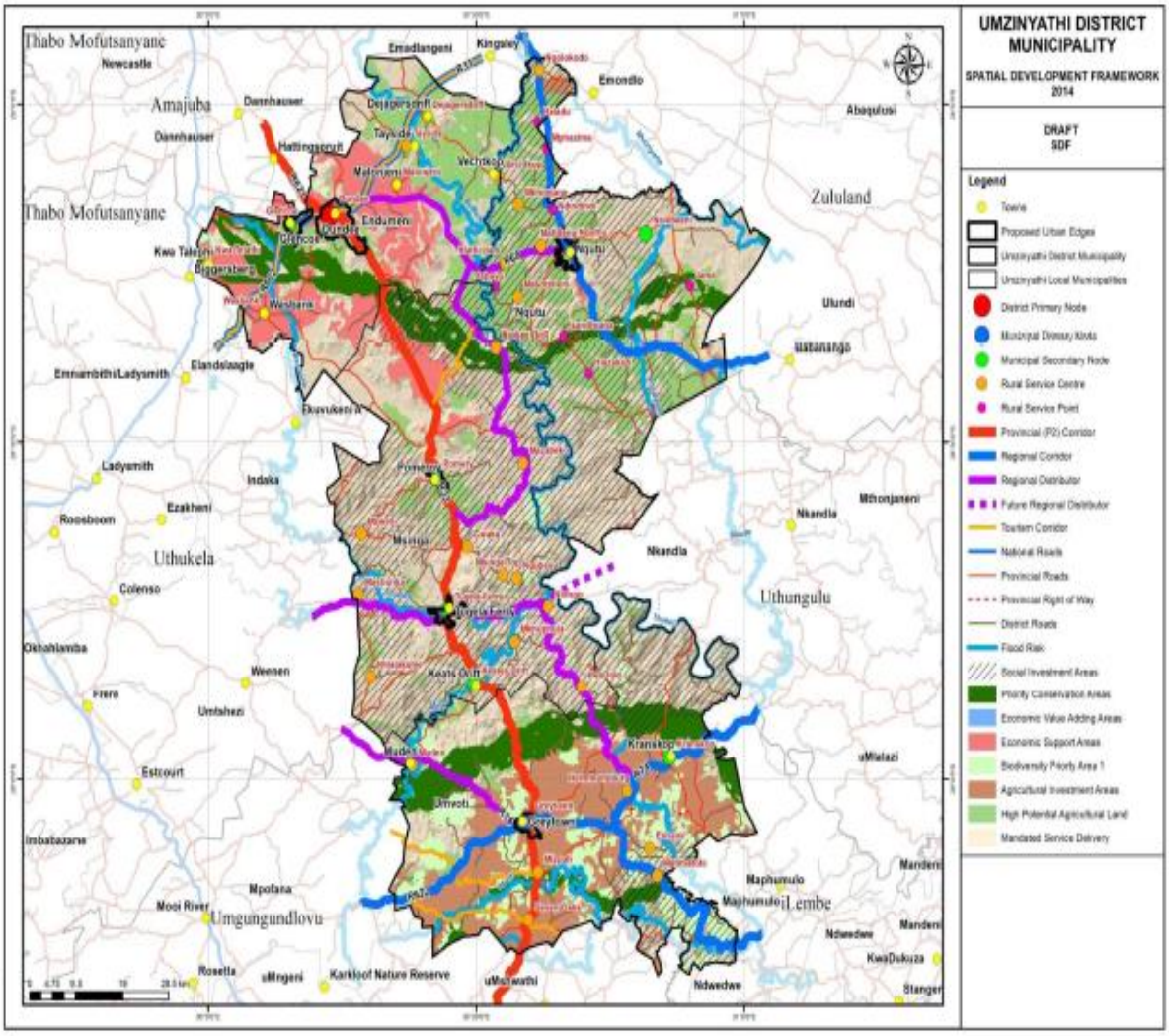


MAP 93: ALFRED DUMA LM SDF

Source: Alfred Duma SDF 2017/2018

20.2.3. UMZINYATHI DISTRICT MUNCIPALITY

The UMzinyathi District covers an area of approximately 8 079.68 km². Msinga Municipality is the largest municipality and Ndumeni Municipality the smallest. The highest concentration of people lives in Msinga who reside within traditional council areas. The Umzinyathi District Municipality economy is the third smallest district economy in the province of KwaZulu-Natal. The district is characterized by large infrastructure backlogs, particularly in respect of water and sanitation and mainly in the rural areas. Dundee is the tertiary node in the district with Greytown, Nquthu and Tugela Ferry serving as quaternary nodes. Even though Pietermaritzburg, Newcastle and Vryheid are centres that fall outside the district they are considered as important as they serve a large portion of the district. The key routes that link Amajuba and Umzinyathi are R33 that is considered as a secondary corridor by Umzinyathi SDF and a Tertiary Corridor linking with Flint.



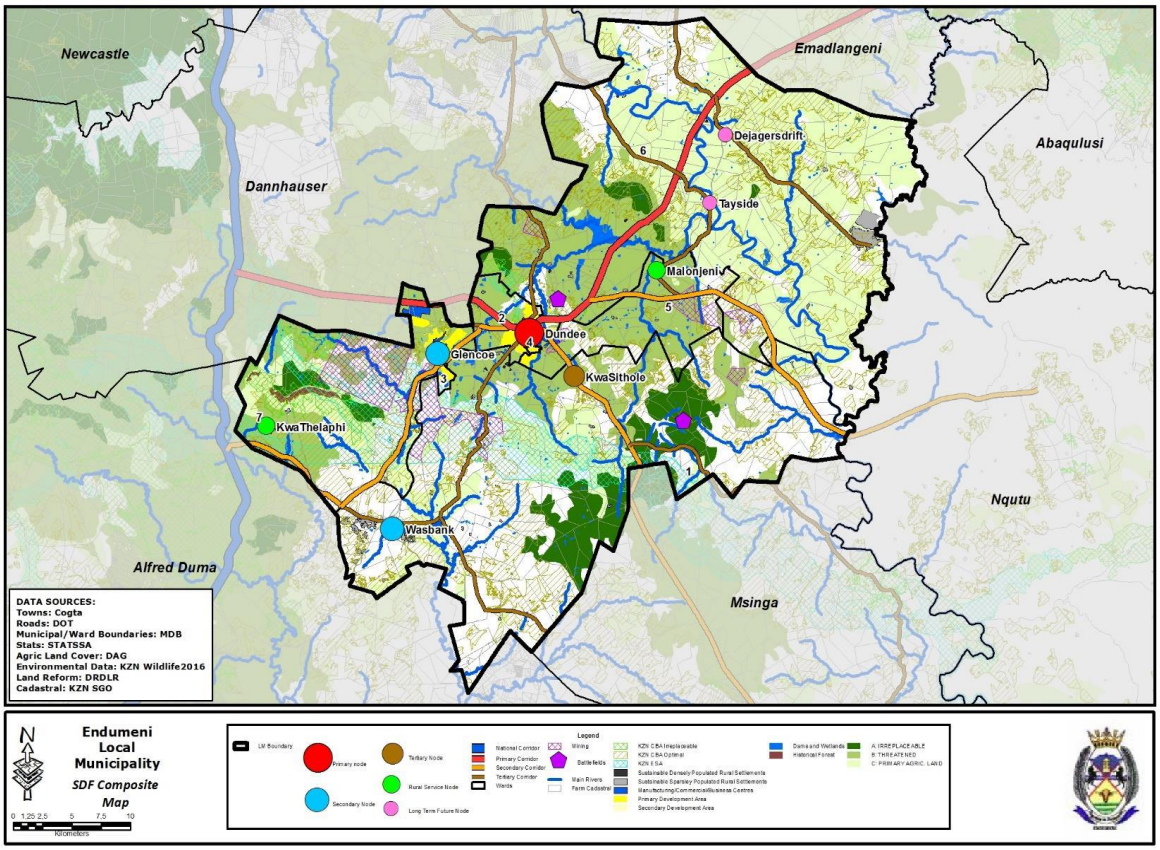
MAP 94: UMZINYATHI DM SDF

Source: Umzinyathi DM SDF 2017/2018

20.2.4. ENDUMENI LOCAL MUNICIPALITY

The R33 links Emadlangeni to Endumeni municipality on the southeast. The R33 is identified as a secondary corridor in Emandlangeni while it is identified as a corridor of local influence in the PSEDS (2016). Overall, the municipalities do not have strong linkages other than those provided by the R33. They both utilise the services of the regional centre of Newcastle which offer a greater variety of services.

Endumeni LM is located to the south east of Dannhauser. It is within UMzinyathi DM. Both these local municipalities are adjoined from R621 (primary corridor of the study area) to R68 (primary corridor of Endumeni LM). This corridor provides vital linkages to services satellites and it ensures connectivity within service delivery in communities. Another feature which seems to be noticeable between both these municipalities, is the open space of grassland. As much as Dannhauser has access to Newcastle town through the municipal primary corridor then unto N11, the community from Hattingspruit and others situated southerly along R621 will be more dependent unto Dundee on health facilities and commercial businesses to name a few, as opposed to the district primary node due to the fair proximity with Endumeni LM.



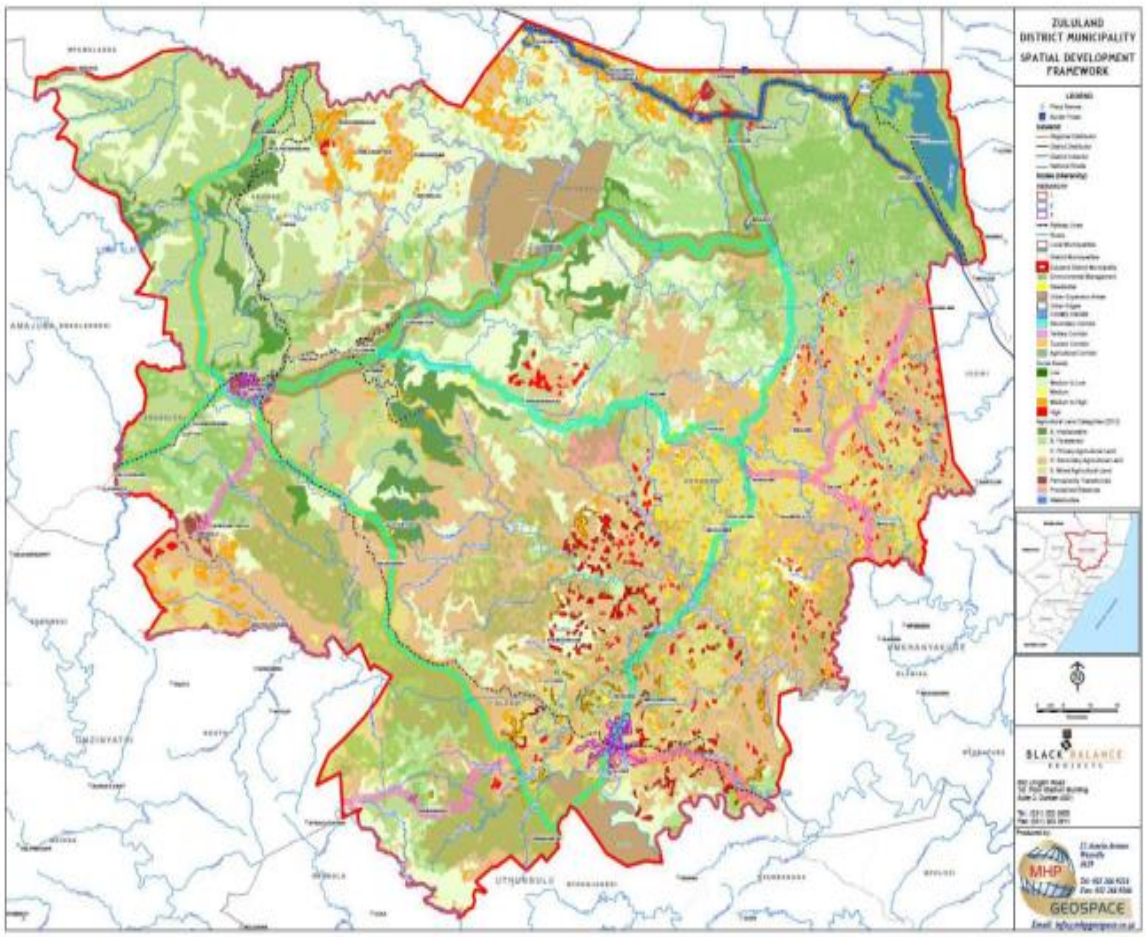
MAP 95: ENDUMENI LM SDF

Source: Endumeni SDF 2017/2018

20.2.5. ZULULAND DISTRICT MUNICIPALITY

The Zululand District is located on the northern regions of the KwaZulu-Natal Province and it covers an area of approximately 14 810 km². Approximately half of the area is under the jurisdiction of traditional authorities while the remainder is divided between commercially owned farms and conservation areas. The District comprises the following five local municipalities eDumbe, uPhongolo, Abaqulusi, Nongoma and Ulundi. The two main towns in the Zululand District are Vryheid and Ulundi. EMondlo is another significant urban area. It is primarily a residential area with limited services and facilities and few employment opportunities. Pongola and Paulpietersburg are small towns, which act as service centres,

while Nongoma fulfils the same role, but with far fewer and lower order services. There are two municipalities that shares boundaries with Amajuba and these are Abaqulusi and Edumbe. Zululand SDF identifies Vryheid as a major town and acknowledges the regional significance of Abaqulusi as the economic powerhouse of the district. It also acknowledges that the influence of the town goes beyond the district boundaries to include portions of Amajuba and Umzinyathi Districts.

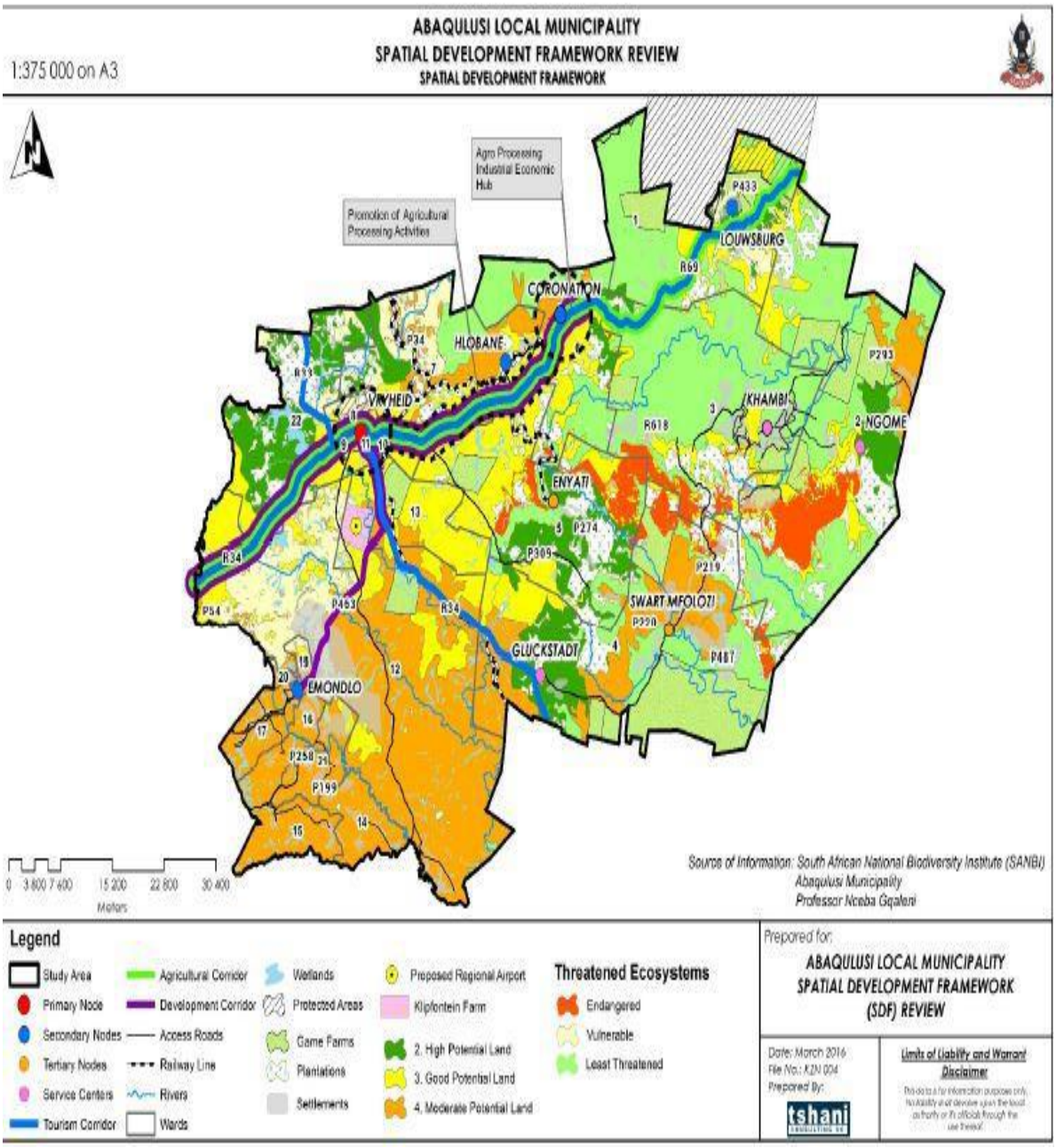


MAP 96: ZULULAND DM SDF

Source Zululand SDF 2017/2018

20.2.6. ABAQULUSI LOCAL MUNICIPALITY

According to the Emadlangeni and Abaqulusi municipality SDFs, the commercial farming enterprises in the eastern municipality. The R33 corridor links the two municipal areas. According the Emadlangeni SDF, the municipality has strong linkages to the urban core of Vryheid. Additionally, the Abaqulusi Municipality offers higher order services than those offered in the Emadlangeni urban area. portions of Emadlangeni generally have good linkages with Abaqulusi.

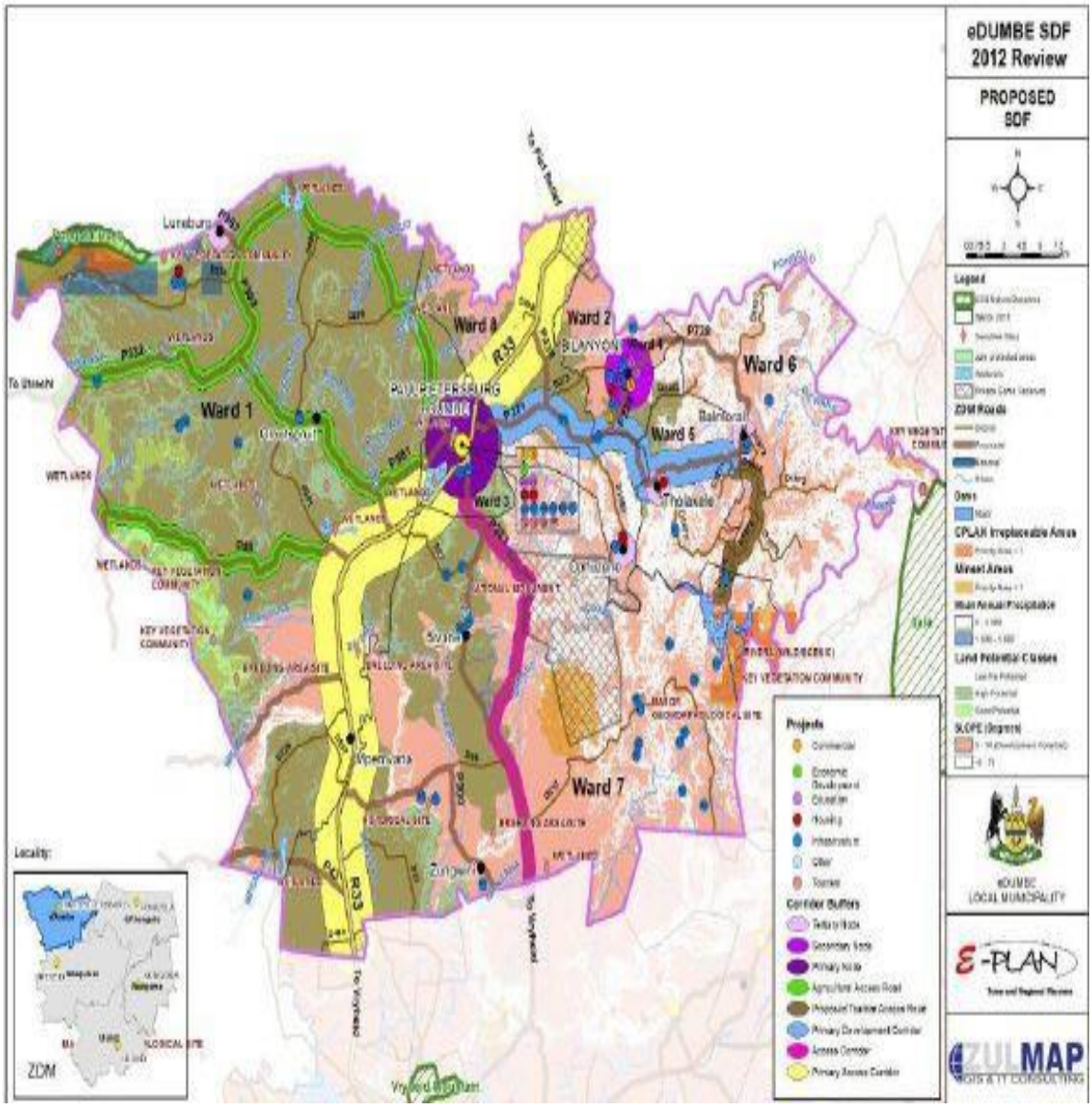


MAP 97: ABAQULUSI LM SDF

Source: Abaqulusi LM SDF 2017/2018

20.2.7. EDUMBE LOCAL MUNICIPALITY

The P332 provides the strongest linkages between Edumbe municipality and Emadlangeni. This is due to the farming in the northeast linking these two regions. The P332 is identified as a tertiary corridor in Emadlangeni SDF while it is identified as an agricultural corridor in the eDumbe SDF. Further, many residents in the north-eastern portion of Emadlangeni use the shopping centres in Paulpietersburg within eDumbe municipality. The potential tarring of the road from Utrecht to Groenvlei and northwards, will have economic spin-offs for Emadlangeni.



MAP 98: EDUMBE LM SDF

Source: Edumbe LM SDF 2017/2018

20.3. CROSSBORDER ALIGNMENT

20.3.1. MPUMALANGA/GERT SIBANDE DISTRICT MUNICIPALITY

Gert Sibande is one of the three districts located within Mpumalanga province. It has a population catchment of 1 043 194 people which accounts for 25% of the district population. Gert Sibande is regarded as an economic hub for mining, agriculture and tourism which is similar to the economic features of Amajuba. It is also a home for major

industrial complexes associated with the petro-chemical industries such as Sasol, Eskom, Mondi, gold and coal mines.The town of Secunda is the dominant urban centre, followed by Ermelo and Piet Retief. These centres are important at a district level due to the fact that these features high levels of economic diversification and value-adding activities. Outside of the main urban centres, the district is predominantly rural in nature, comprising extensive farming, forestry, nature reserves and mining areas. The most important roads that this district shares with Amajuba include:

- The R23 Corridor represents the old route between the Gauteng Province and Durban/eThekwini in KwaZulu-Natal, linking prominent towns and settlements such as Balfour, Standerton and Volksrust to one another. This route virtually runs parallel and to the north of the N3 freeway, which is the main link between Gauteng and KwaZulu-Natal.
- The N11 National Corridor extends from the Limpopo Province in the vicinity of Mookgophong, southwards past Middelburg/Steve Tshwete, and through the Gert Sibande District where it links Ermelo to Volksrust before extending further southwards into KwaZulu-Natal. This is the main road link between the Limpopo Province through Mpumalanga and into KwaZulu-Natal.

MAP 99: GERT SIBANDE DM SDF

Source: Gert Sibande SDF 2018/2018

20.3.2. MPUMALANGA/PIXELY KASEME LOCAL MUNICIPALITY

Pixley Ka Seme Local Municipality is situated on the southern point of Mpumalanga Province. On the whole it is a rural area with only one major urban centre namely Volksrust, which is located on the provincial boundary of KwaZulu Natal. For the rest, there are a few minor settlements, which include Wakkerstroom, Amersfoort, Siyazenzela, Perdekop and Daggakraal. In total the municipality covers an area of approximately 5 227km² in which ±86 000 people live.

The P43 links Emadlangeni to Wakkerstroom within Pixely KaSeme municipality in the Mpumalanga province. The linkages between Pixley Ka Seme and Emadlangeni also include the birding linkages between Wakkerstroom and the northern portions of the Utrecht Municipality, particularly around Groenvlei and the Zaaihoek Dam and the trout fishing linkages between Wakkerstroom.
The Emadlangeni SDF indicates that the settlements around Groenvlei and the Nzima settlement make use of the services in Wakkerstroom due to restrictive road access to Utrecht. This has also resulted in these settlements having stronger linkages with Wakkerstrom compared to Utrecht. The settlement of Esizameleni in Pixely KaSeme municipality face limited expansion opportunities into the municipal area as a result of wetlands and tributaries. The only opportunity for expansion for the town exists in a southeast direction towards Groenvlei. These linkages thus have implications for service delivery for these communities and collaboration between the two municipal areas to curb potential conflict.

The development of the Charlestown Local Area Development Plan by Newcastle LM represented a seamless and detailed planning framework for the northern fringe of the Newcastle municipal area and the interface between Newcastle and Pixley Ka Seme. The Local Area Development Plan is to cover a 5 -10 year period spanning between 2010 and 2020. It will provide policy and spatial development guidance for this settlement for the present and the future. This development plan is expected to provide a framework for renewal initiatives in the area. The plan considered future land uses, nodal, residential and transportation aspects and will definitely have an impact on the Pixley Ka Seme Municipal area. Issues emanating from the plan include:

- Infrastructure (Water supply) and Housing Backlogs especially in Charlestown which is located in KZN.
- Settlements locating near or across provincial boundary (KZN). Urban edge not effective enough and impacting on Newcastle Municipality as settlements encroach across municipal and provincial border.
- N11 utilised as a activity spine from Mpumalanga to KZN and Gauteng.
- Number of smaller settlements located across municipal area.

20.3.3. FREE-STATE PROVINCE: THABO MOFUTSANYANA DISTRICT SDF

Thabo Mofutsanyana is one of the five (5) districts that exist within the administrative boundaries of Free State province. It has a total population of 736 238 people and a land surface area of 33 269 km2. The municipality is primarily agricultural in nature and most households are found in the rural areas.

The mountainous Eastern Free State with the Drakensberg and Maluti Mountains bordering Lesotho, KwaZulu-Natal and the Eastern Cape, also offer some of the most scenic and attractive tourism attractions in the region. The district is the second smallest contributor

to the Free State's GDP with Community Services, financial services and wholesale, retail and trade being the main contributing sectors. The district furthermore, has the second smallest annual importing and exporting value for the five districts. The export trend of the district has however been increasing gradually since 2004/05.

The dominant exporting sector is the manufacturing sector followed by the agricultural sector. The main commodities are 'other chemicals', and man-made fibres, followed by basic chemicals. Due to its regional characteristics, the approach to the Eastern Free State is two-pronged: on the one hand agri-beneficiation and, on the other hand, tourism development. As a result of its strong contribution to the country's total field crop harvest, the Free State is often labelled as the bread basket of SA. The production of wheat and grain sorghum, sunflower seeds, maize, wool, mohair, milk, cream and vegetables, is complimented by major investments in livestock production. Free State farmers also account for large percentages of beef and mutton production. The main centres in

the district are Harrismith, Puthaditjhaba, Bethlehem, Ficksburg, Senekal, Reitz and Warden. The most densely populated local municipality is Maluti-a-Phofung which contains 55, 5% of the district's total population. The Municipality is located within a rural area in the eastern Free State and also includes the former homeland of Qwa-Qwa. It was also declared a Presidential Node in the early 2000s. Thabo Mofutsanyane has the

third largest population of all District Municipalities in the Free State, contributing 26.45% to the total population of Free-State Province.

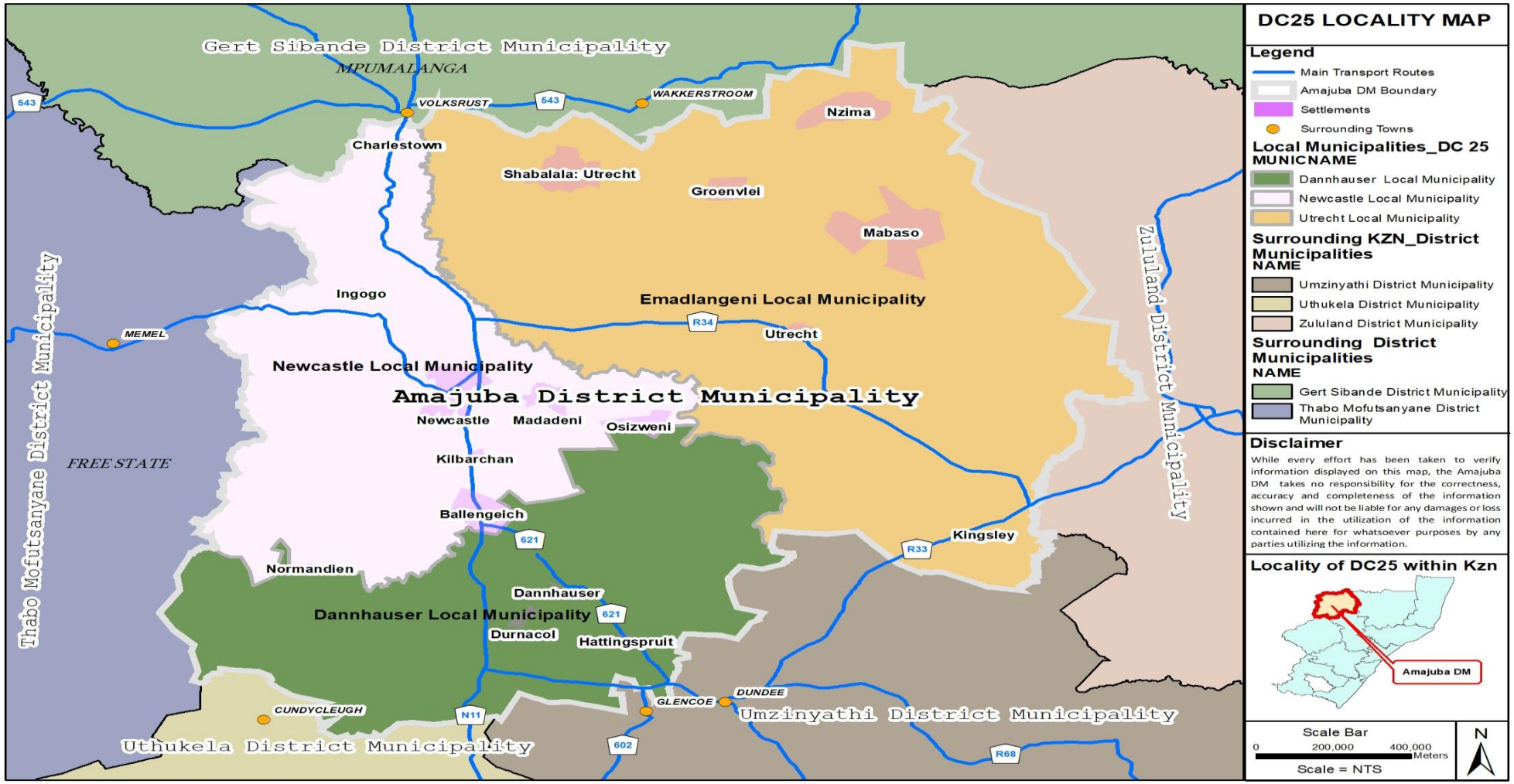
20.3.4. FREE STATE/ PHUMELELA LM

Phumelela LM is situated to the west of Dannhauser. It is one of the five local municipalities within Thabo Mofutsanyana District Municipality. It is within the north-eastern corner of the Free State Province. This municipality is 7531 km2 in extent and has a population catchment of 50 054 people, in accordance with CS 2016, who are unevenly distributed amongst eight (8) wards.

According to the Spatial Development Framework (SDF) of the municipality, the main urban centres include Vrede, Warden and Memel. Agriculture is the main economic activity in the town. Other important dominating sectors of the economy are private households, wholesale, retail and community and social services. There are parts of this municipality which are heavily dependent on Newcastle for commercial and social services.

These mainly include the people that reside within Memel town and adjacent Zamani Township. Memel is 50km away from Newcastle while Vrede is 56km way from Memel, so it is more convenient for the population to travel to Newcastle for some of the services that cannot be found within Memel. The municipality is accessible from three different routes from case study area, however in regards with Dannhauser, the quickest route is from R261 heading north via N11 and detouring to R34 to FS province. Other linkage routes include; (1) via Church street to R34 and head to FS, and the second route is (2) via N11 unto R34 and then to FS. Between where both these municipalities exist, there are nature reserves; Chelmford Nature Reserve and Ncandu Nature Reserve. The topography is very steep especially at the border of demarcation from KZN and FS, given that topography is mountainous. Broad land use represented is grassland with prevalent wetlands.

The other cross-border issues include veld fires during the winter months. Farmers in Free State do not maintain their fire breaks and these also affect the farms in KZN. The district of Amajuba and Dannhauser are being hit hard by fires during the winter months and these fires come from the side of the Free State. Chemsford Dam need to consider water management as an issue which includes river anti-pollution mechanisms. The road (R261) from KZN is also sharply deteriorate when you get to Free State Province.



MAP 100: LOCALITY MAP OF AMAJUBA DM SHOWING NEIGHBOURING PROVINCES INCLUSIVE OF THE DMS

21. MUNICIPAL CAPITAL INVESTMENT FRAMEWORK

To ensure the practical application and success of the spatial principles, concepts, strategies and policies of the SDF, a multifaceted implementation plan is required. The implementation of the SDF also requires the alignment of spatial strategies and infrastructure planning and budgeting. This will be done through the IDP.

The Amajuba District Municipality developed a capital investment framework as part of this SDF, which identify where funds will be allocated through the spatial priorities and corresponding implementation strategies linked to sector plans. This Capital investment framework guides the Amajuba District Municipality's capital expenditure in order to achieve citizen centered public service and to shape the desired form of the municipality. It intends to bridge the gap between the spatial priorities, strategies and the implementation plan and sets the background and basis on which other sector plans should focus with their priorities.

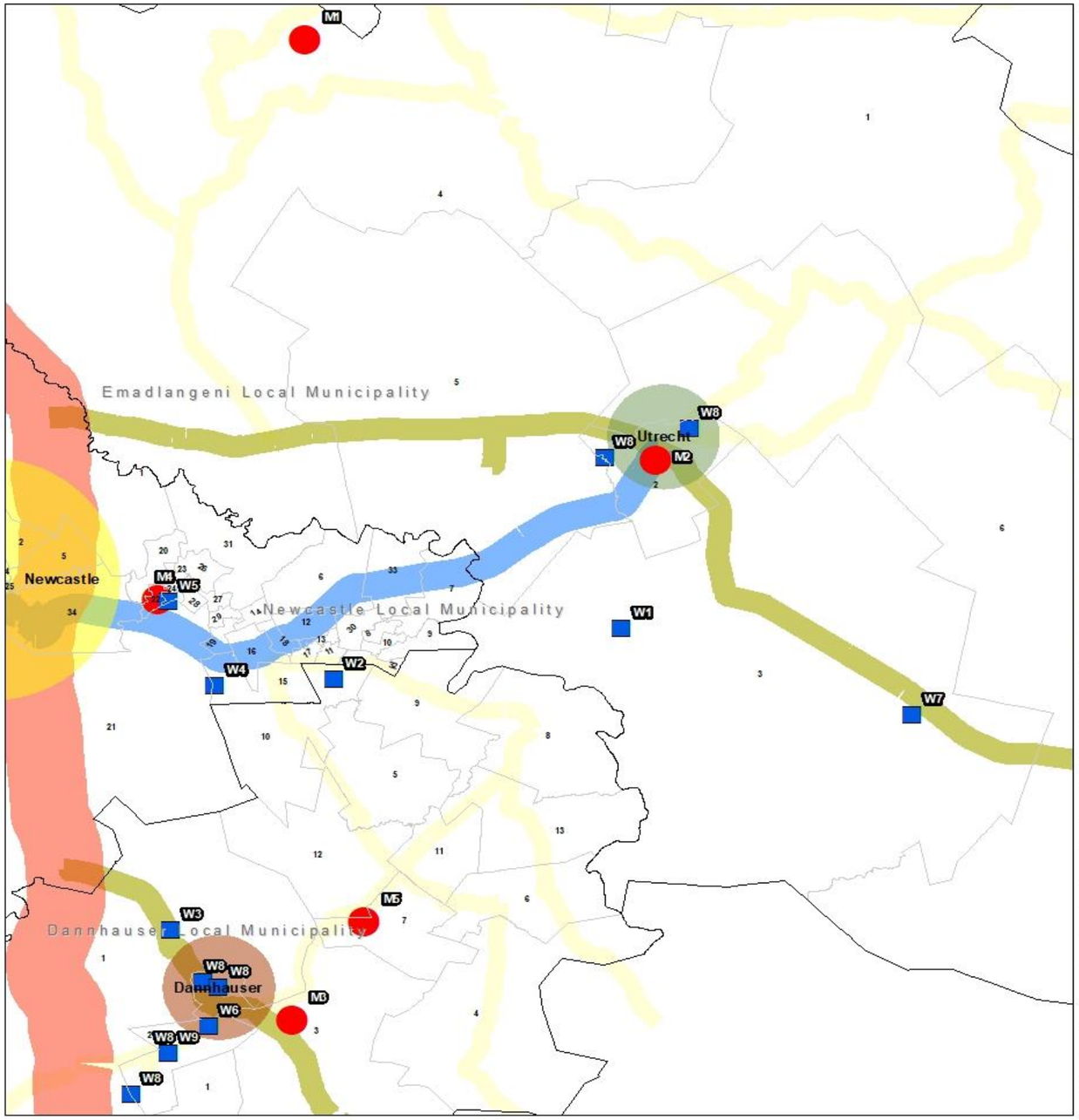
The process of developing a Capital Investment Framework includes the collection of information from other municipal departments and verifying it where necessary. Collected information from other departments will give an indication of the current development profile of the different departments through the Service Delivery and Budget Implementation Plan (SDBIP). This is followed by a spatial illustration to also inform spatial interventions and investments for example bulk infrastructure and corridor development.

Capital Investment Frameworks are also obliged to look into areas that present potential for sustainable economic and corridor development, therefor attracting private sector investment and creating long term employment for the public. In conclusion the Capital Investment Framework for this SDF could assist the Amajuba District Municipality to address spatial distortions and inequalities of past policies in the form of densification, compaction and nodal development.

The major key capital projects with a spatial dimension / implication, which are currently planned or underway as part of the IDP process and have a spatial impact or significance are listed in Table 40 below illustrated on Maps 101 overleaf.

LABEL	PROJECT NAME	TYPE	BUDGET_2019/2020	BUDGET_2020/2021	BUDGET_2021/2022
M1	Emadlangeni Sanitation	MIG	2,000,000	3,000,000	3,500,000
M2	Goedehoop BulK Water & Sanitation	MIG	15,000,000	15,000,000	15,000,000
M3	Dannhauser Housing Development Bulk Water and Sanitation	MIG	7,000,000	10,000,000	8,843,000
M4	Amajuba Disaster Management Centre Phase 2	MIG	-	-	-
M5	Buffalo Flats Water Supply Scheme Phase 3B	MIG	14,039,000	11,714,000	15,000,000
W1	Emxakheni Water Scheme	WSIG	1,000,000	-	-
W2	Buffalo Flats Water Supply Scheme Phase 4 (infills)	WSIG	4,400,000	3,000,000	3,000,000
W3	Rural Household Project Sanitation Infills	WSIG	-	-	-
W4	Construction of Brakfontein Reservoir	WSIG	12,000,000	8,000,000	2,000,000
W5	Upgrade of Citi Call System	WSIG	-	-	-
W6	Emergency Water Supply to Ramphosa_Hilltop_Skobare	WSIG	15,000,000	28,000,000	35,000,000
W7	Emadlangeni Borehole Programme	WSIG	4,600,000	2,000,000	2,000,000
W8	Refurbishment of water and waste water treatment plants	WSIG	2,000,000	2,000,000	18,000,000
W9	Refurbishment and upgrade of Durnacol Water Treatment Works	WSIG	-	-	-

Table 40: List of Amajuba District Municipality IDP grant funded Projects 2019/2020-2021/2022



AMAJUBA DISTRICT MUNCIPALITY CAPITAL IDP GRANT FUNDED PROJECTS 2019/2020 -2021/2022

Legend

- Amjuba DM LMs
- Electoral Wards 2016

CapitaL IDP Grant Funded Projects TYPE

- MIG
- WSIG

Nodes

Node

- Regional Economic Centre Newcastle
- Mining Hub Dannhauser
- Agriculture Hub Utrecht
- Primary Corridor
- Secondary Corridor
- Tertiary Corridor Mixed Activity Corridor
- Tertiary Corridor

LOCALITY OF DC25 WITHIN KZN

DISCLAIMER

While every effort has been taken to verify information displayed on this map, the Amajuba DM takes no responsibility for the correctness, accuracy and completeness of the information shown and will not be liable for any damages or loss incurred in the utilization of the information contained here for whatsoever purposes by any parties utilizing the information.

LABEL	PROJECT NAME	TYPE
M1	Emadlangeni Sanitation	MIG
M2	Goedehoop BulK Water & Sanitation	MIG
M3	Dannhauser Housing Development Bulk Water and Sanitation	MIG
M4	Amajuba Disaster Management Centre Phase 2	MIG
M5	Buffalo Flats Water Supply Scheme Phase 3B	MIG
W1	Emxakheni Water Scheme	WSIG
W2	Buffalo Flats Water Supply Scheme Phase 4 (infills)	WSIG
W3	Rural Household Project Sanitation Infills	WSIG
W4	Construction of Brakfontein Reservoir	WSIG
W5	Upgrade of Citi Call System	WSIG
W6	Emergency Water Supply to Ramphosa_Hilltop_Skobare	WSIG
W7	Emadlangeni Borehole Programme	WSIG
W8	Refurbishment of water and waste water treatment plants	WSIG
W9	Refurbishment and upgrade of Durnacol Water Treatment Works	WSIG

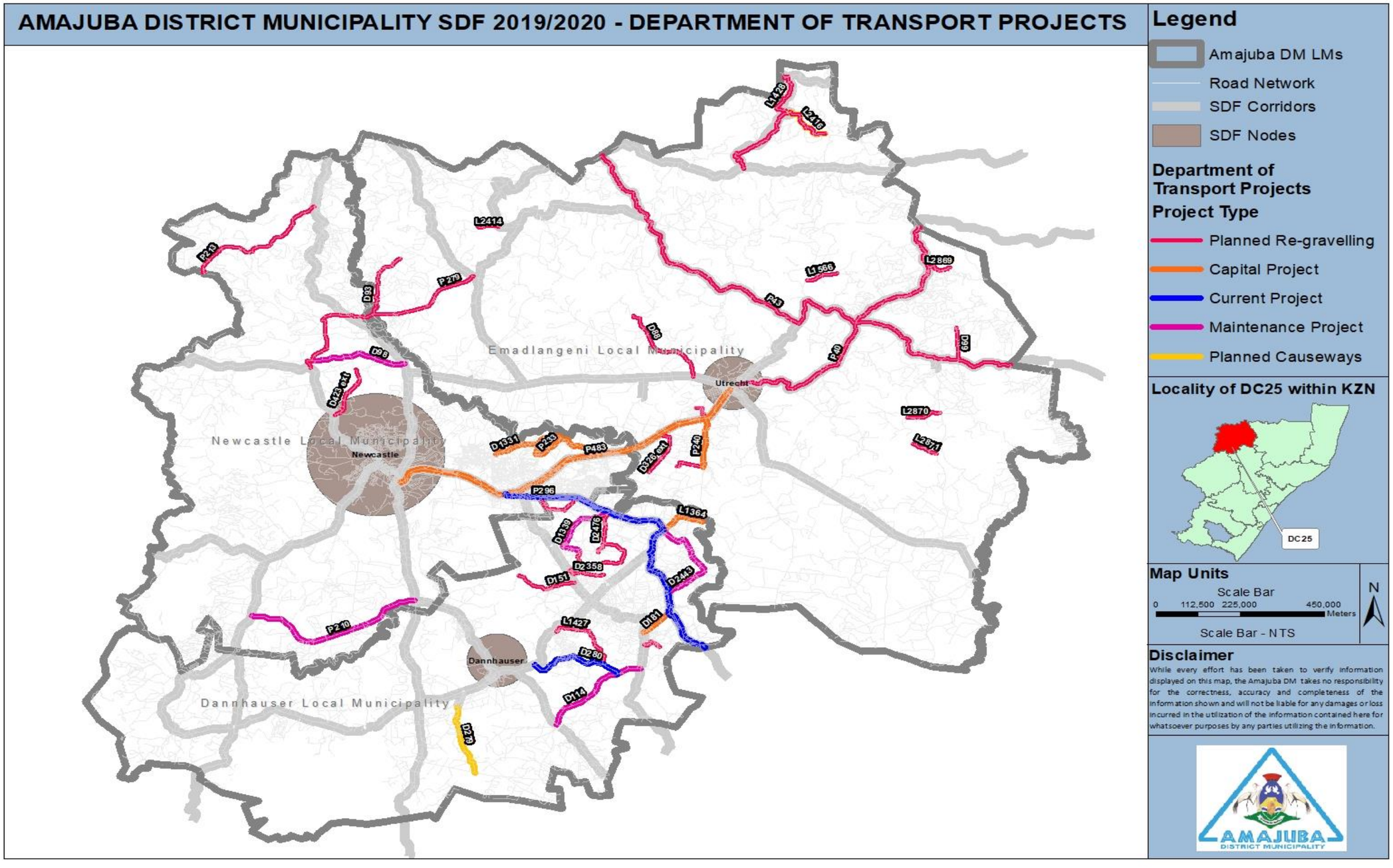
MAP 101: SPATIAL DEPICTION OF AMAJUBA DM CAPITAL IDP GRANT FUNDED PROJECTS for 2019/2020-2021/2022

21.1 SECTOR DEPARTMENT PROJECTS – DEPARTMENT OF TRANSPORT

Roads have the potential to not only bridge the geographical divide but to also provide communities with access to better social and economic opportunities. It is therefore important in this regard that roads are assessed in the context of their spatial network, road classification and road surface condition. The overview below affords an opportunity to the responsible authorities to plan accordingly in response to the desired spatial outcomes of the Amajuba DM. There are three types of road classes that have been focused on for this report as they have implications on the desired spatial outcomes for the Amajuba DM.

- ***National Roads*** **-** These roads denoted with the prefix 'N' e.g. N11 and are primarily the responsibility of DOT and are maintained through the South African Roads Agency.
- ***Provincial Main Roads*** **-** These are higher order provincial roads all with the prefix 'P' e.g. P296. There is a further breakdown of this class into types of main roads, each type meeting certain requirements pertaining to traffic volumes, freight requirements etc and hence not all main roads are surfaced roads.
- ***Provincial District Roads*** **-** All these roads are the responsibility of the KZNDOT and the majority of which are not surfaced. Again, there is a further breakdown into types of district roads, each allocated different design and maintenance specifications. These roads normal have a prefix 'D' e.g. D5241.

Overleaf is a map showing projects mapped from a listing of projects received from the Department of Transport for the 2019/2020-2021/2022.



Map 102: DEPARTMENT OF TRANSPORT PROJECTS FOR THE AMAJUBA DISTRICT MUNCIPALITY 2019/2020-2021/2022

(Please refer to table 41 label Guide)

Label	Project_Type	Expenditure to Date	Duration	Total_Cost	Municipality
P483	Capital Project	N/A	2021-2022	160.5 Million	Newcastle
P483	Capital Project	N/A	2020-2021	78.5 Million	Newcastle
D181	Capital Project	N/A	2018-2019	45 Million	Dannhauser
L1364	Capital Project	N/A	2019-2020	64.9 Million	Dannhauser
D1331	Capital Project	N/A	2019-2020	66 Million	Newcastle
D1335	Capital Project	N/A	2019-2020	43 Million	Newcastle
P233	Capital Project	N/A	2019-2020	104 Million	Newcastle
P240	Capital Project	N/A	2020-2021	68.8 Million	Utrecht
D280	Current Project	45.9 Million	2016-2019	120 Million	Dannhauser
P296	Current Project	103.9 Million	2015-2022	332.9 Million	Dannhauser
D114	Maintenance Project	N/A	2019-2020	2.1 Million	Dannhauser
D1339	Maintenance Project	N/A	2019-2020	1.75 Million	Dannhauser
D2443	Maintenance Project	N/A	2019-2020	1 Million	Dannhauser
D98	Maintenance Project	N/A	2019-2020	1.75 Million	Newcastle
P210	Maintenance Project	N/A	2019-2020	2.2 Million	Newcastle
D279	Planned Causeways	N/A	2019-2020	1.1 Million	Dannhauser
L2416	Planned Causeways	N/A	2019-2020	1.4 Million	Utrecht
D151	Planned Re-gravelling	N/A	2019-2020	1.3 Million	Dannhauser
D2358	Planned Re-gravelling	N/A	2019-2020	1.5 Million	Dannhauser
D2476	Planned Re-gravelling	N/A	2019-2020	2 Million	Dannhauser
D326 ext	Planned Re-gravelling	N/A	2019-2020	0.90 Million	Utrecht
D423 ext	Planned Re-gravelling	N/A	2019-2020	1.1 Million	Newcastle
D88	Planned Re-gravelling	N/A	2019-2020	2.1 Million	Utrecht
D93	Planned Re-gravelling	N/A	2019-2020	2.1 Million	Utrecht
D99	Planned Re-gravelling	N/A	2019-2020	1.32 Million	Utrecht
L1364	Planned Re-gravelling	N/A	2019-2020	0.9 Million	Dannhauser
L1427	Planned Re-gravelling	N/A	2019-2020	2.1 Million	Dannhauser
L1428	Planned Re-gravelling	N/A	2019-2020	1.6 Million	Utrecht
L1430 – L3175 – L3176	Planned Re-gravelling	N/A	2019-2020	1.5 Million	Utrecht
L1558	Planned Re-gravelling	N/A	2019-2020	2 Million	Dannhauser
L1566	Planned Re-gravelling	N/A	2019-2020	1.2 Million	Utrecht
L1570	Planned Re-gravelling	N/A	2019-2020	1 Million	Dannhauser
L2139	Planned Re-gravelling	N/A	2019-2020	1.48 Million	Utrecht
L2414	Planned Re-gravelling	N/A	2019-2020	0.85 Million	Utrecht
L2416	Planned Re-gravelling	N/A	2019-2020	1.6 Million	Utrecht
L2578	Planned Re-gravelling	N/A	2019-2020	1.5 Million	Dannhauser
L2579	Planned Re-gravelling	N/A	2019-2020	2 Million	Dannhauser
L2869	Planned Re-gravelling	N/A	2019-2020	1.17 Million	Utrecht
L2870	Planned Re-gravelling	N/A	2019-2020	1.05 Million	Utrecht
L2871	Planned Re-gravelling	N/A	2019-2020	1.2 Million	Utrecht
P213	Planned Re-gravelling	N/A	2019-2020	1.35 Million	Newcastle
P279	Planned Re-gravelling	N/A	2019-2020	2.1 Million	Utrecht
P40	Planned Re-gravelling	N/A	2019-2020	2.1 Million	Utrecht
P43	Planned Re-gravelling	N/A	2019-2020	1.75 Million	Utrecht

Table 41: Label Guide for Map Projects for the Department of Transport 2019/2020-2021/2022

21.2. SECTOR DEPARTMENT PROJECTS - DEPARTMENT OF HUMAN SETTLEMENTS

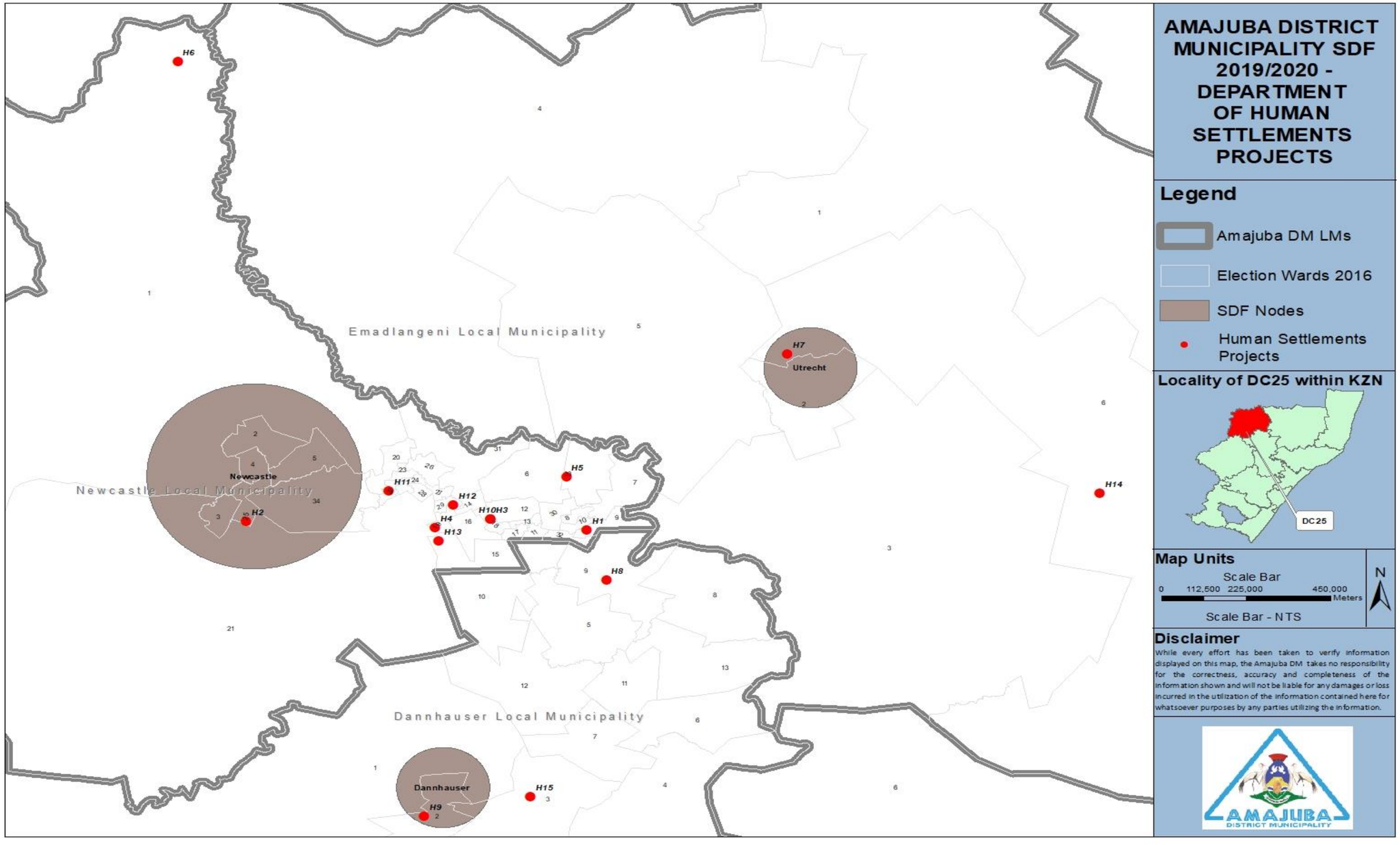
Table 44 below reflects the list of projects received from the Department of Human Settlements.

AMAJUBA 2019-20 BUISNESS PLAN -FUNDED PROJECTS				
HSS Project Number	HSS Project Desc	Total Annual No of Sites	Total Annual No of Units	Total Annual Budget
K13030003/8	K13030003 Municipality Accredtation Funding	0	0	R 7 620 000,00
K14030026/1	K14030026 Dannhauser Housing Project(New annexure D)	150	0	R 7 650 000,00
K17090005/1	K17090005 Khayalethu Housing Project(18/19)	0	0	R 205 000,00
K02110004/1	02110004 Osizweni Section 'e" Slum Clearance	0	151	R 13 042 248,00
K11090004/1	K11090004 Johnstown, Blaauuboschslaagte and Cavan (JBC) PH,1	130	0	R 6 630 000,00
K11090011/2	K11090011 Madadeni H39	0	125	R 15 675 000,00
K11090012/2	K11090012 Fairleigh /siyahlala-la Housing Project	0	140	R 16 820 000,00
K12020009/2	K12020009 Charlestown Housing Project	0	130	R 16 290 000,00
K13050009/1	K13050009 N11 Community Residential Units	0	50	R 20 000 000,00
K14040032/1	K14040032 UbuhleboMzinyathi Rural (New Annexure D)	0	140	R 17 780 000,00
K14120001/1	K14120001 Madadeni Storm Damaged 650 Newcastle Municipality and Mageba Project cc	0	0	R 11 881 529,00
K15090008/1	K15090008 Johnstown, Blaauuboschslaagte and Cavan Phase 2 & 3 Housing Project(New Annexure D)	0	0	R 850 000,00
K16050004/1	K16050004 Kwamathukuza Housing Project Phase 2	0	0	R 500 000,00
K17090003/1	Drycut Farm Housing Project	0	0	R 963 000,00
K17090007/1	Soulcity/stafford Hill (18/19)	0	0	R 400 000,00
K17090009/1	Vezokuhle 18/19	0	0	R 608 000,00
K20000069/1	20000069 RuralStriijbank	0	57	R 7 239 000,00
K11120006/1	K11120006 Goedehoop Housing Project	127	0	R 6 477 000,00
		407	**793**	**R 150 630 777,00**

Table 42: List of Housing Projects received from Department of Human Settlements -2019/2020

21.3. SECTOR DEPARTMENT PROJECTS – DEPARTMENT OF PUBLIC WORKS

Maps 104 and 105 depict the projects mapped as per the listing received from the Department of Public Works for 2019/2020.

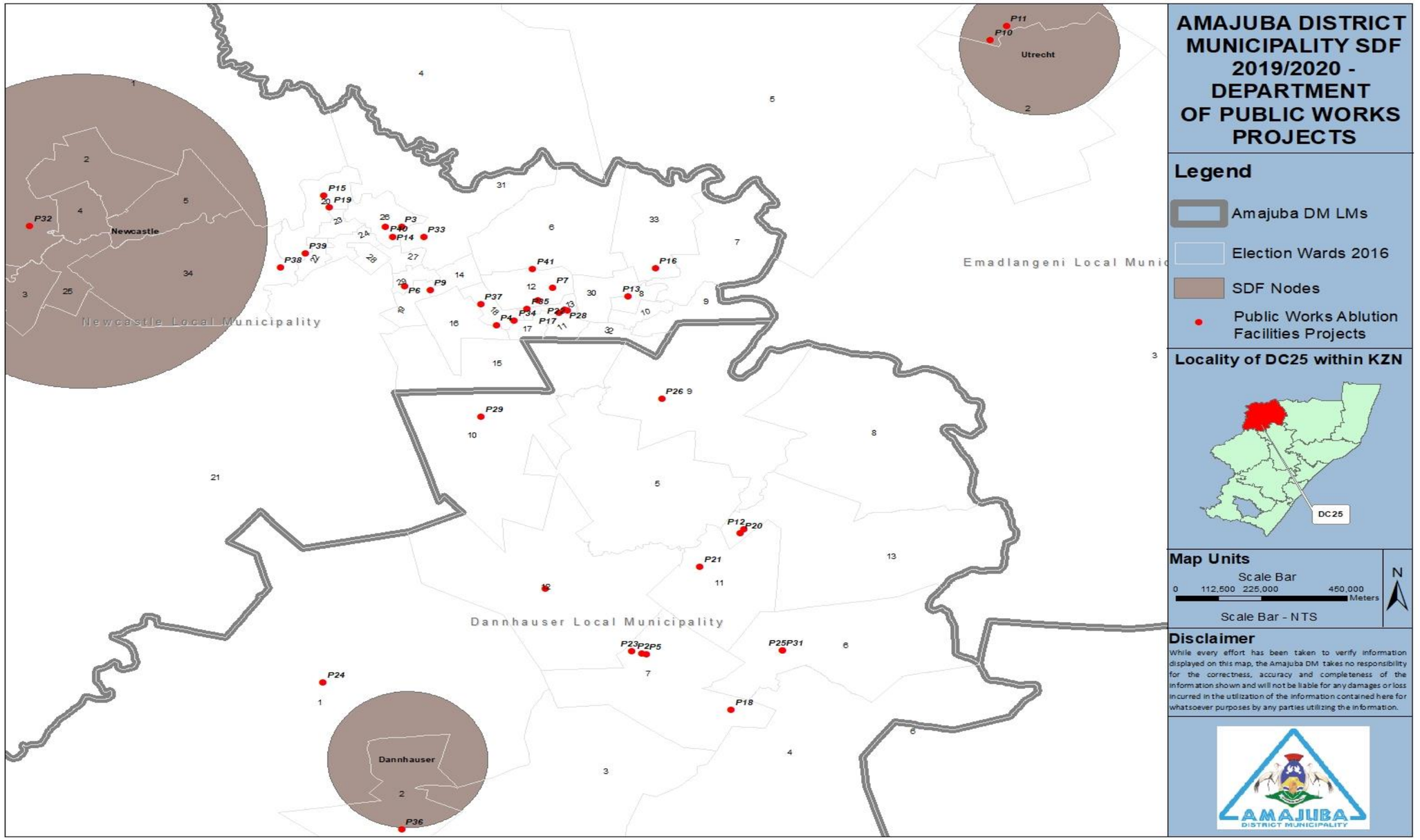


MAP 103: DEPARTMENT OF HUMAN SETTLEMENTS PROJECTS FOR AMAJUBA DISTRICT MUNICPALITY 2019/2020

(Please refer to table 43 label Guide)

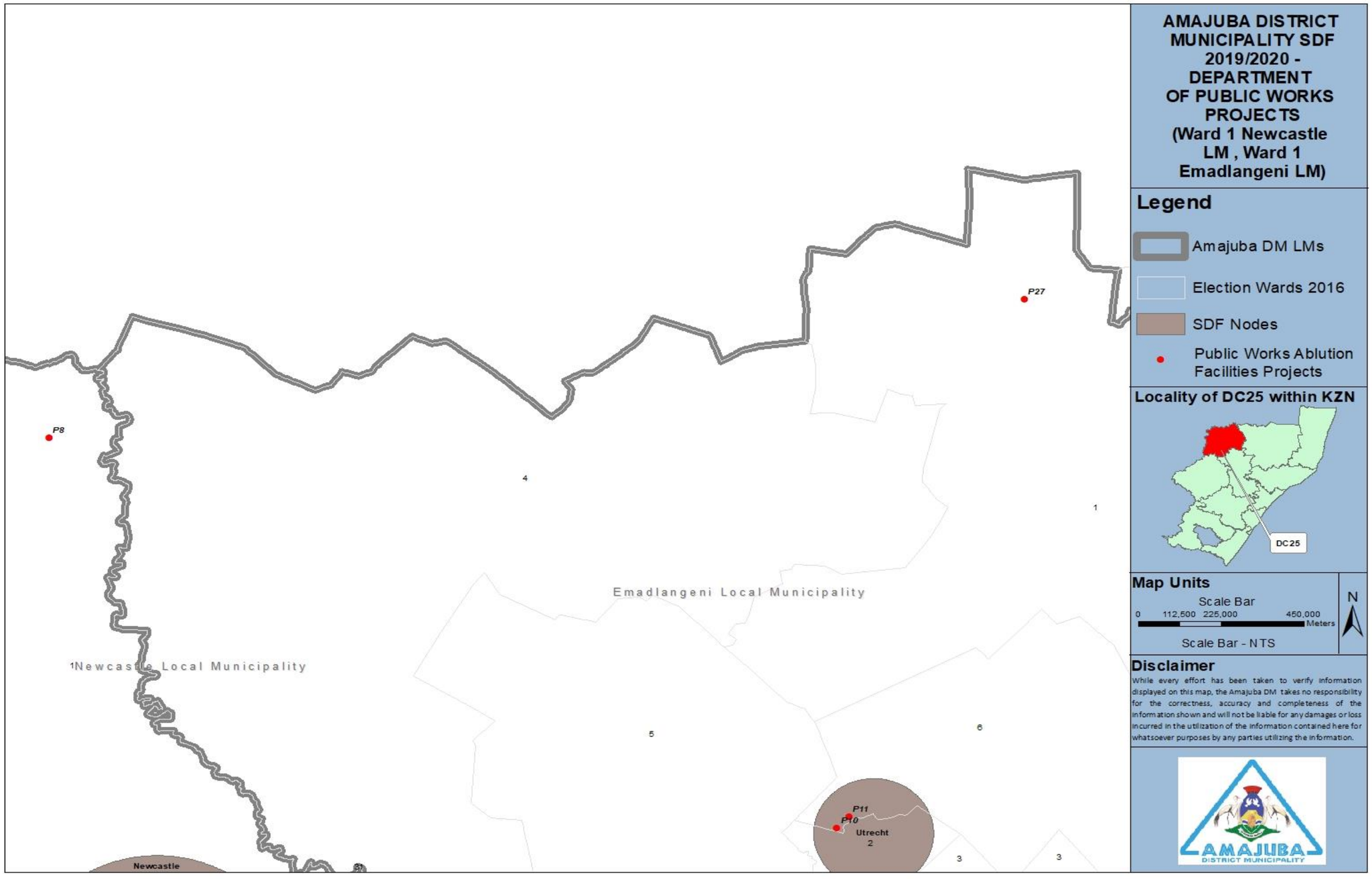
LABEL NO	HSS Project Number	HSS Project Desc	Total Annual No of Sites	Total Annual No of Units	Total Annual Budget
NOT MAPPED	K13030003/8	K13030003 Municipality Accredtation Funding	0	0	R 7 620 000,00
H9	K14030026/1	K14030026 Dannhauser Housing Project(New annexure D)	150	0	R 7 650 000,00
H7	K17090005/1	K17090005 Khayalethu Housing Project(18/19)	0	0	R 205 000,00
H1	K02110004/1	02110004 Osizweni Section 'e" Slum Clearance	0	151	R 13 042 248,00
H3	K11090004/1	K11090004 Johnstown, Blaauuboschslaagte and Cavan (JBC) PH,1	130	0	R 6 630 000,00
H4	K11090011/2	K11090011 Madadeni H39	0	125	R 15 675 000,00
H2	K11090012/2	K11090012 Fairleigh /siyahlala-la Housing Project	0	140	R 16 820 000,00
H6	K12020009/2	K12020009 Charlestown Housing Project	0	130	R 16 290 000,00
NOT MAPPED	K13050009/1	K13050009 N11 Community Residential Units	0	50	R 20 000 000,00
H8	K14040032/1	K14040032 UbuhleboMzinyathi Rural (New Annexure D)	0	140	R 17 780 000,00
H11	K14120001/1	K14120001 Madadeni Storm Damaged 650 Newcastle Municipality and Mageba Project cc	0	0	R 11 881 529,00
H10	K15090008/1	K15090008 Johnstown, Blaauuboschslaagte and Cavan Phase 2 & 3	0	0	R 850 000,00
H5	K16050004/1	K16050004 Kwamathukuza Housing Project Phase 2	0	0	R 500 000,00
H13	K17090003/1	Drycut Farm Housing Project	0	0	R 963 000,00
H12	K17090007/1	Soulcity/stafford Hill (18/19)	0	0	R 400 000,00
NOT MAPPED	K17090009/1	Vezokuhle 18/19	0	0	R 608 000,00
H15	K20000069/1	20000069 RuralStriijbank	0	57	R 7 239 000,00
H14	K11120006/1	K11120006 Goedehoop Housing Project	127	0	R 6 477 000,00

Table 43: Label Guide for Map Department of Human Settlements Projects



MAP 104: DEPARTMENT OF PUBLIC WORKS PROJECTS FOR THE AMAJUBA DISTRICT MUNICIPALITY 2019/2020

(Please refer to table 44 label Guide)



MAP 105: DEPARTMENT OF PUBLIC WORKS PROJECTS FOR THE AMAJUBA DISTRICT MUNICIPALITY 2019/2020 – (ZOOMED IN ON WARD 1 NEWCASTLE LM &WARD 1 EMADLANGENI LM)

(Please refer to table 44 label Guide)

LABEL	SCHOOLNAME	LM	PROJECT	START_DATE	END_DATE	PROJECT VALUE
P1	Annandale Primary School	KZ254	WATER AND SANITATION ABLUTION FACILITIES	8/16/2019	5/13/2019	R4 251 715
P2	Annieville S. Primary School	KZ254	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	12/1/2019	R5 940 866
P3	Bethamoya High School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	9/30/2019	R5 155 439
P4	Blaauwboch Primary School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	11/1/2018	11/30/2019	R10 788 080
P5	Caca Primary School	KZ254	WATER AND SANITATION ABLUTION FACILITIES	11/1/2018	11/30/2019	R8 425 061
P6	Cathulani J.P. School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	8/16/2019	5/13/2019	R5 425 365
P7	Cebelihle Primary School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	1/31/2020	R11 213 243
P8	Clavis Primary School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	7/31/2019	R6 123 965
P9	Dedangifunde High School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	11/30/2019	R11 867 809
P10	Emalahleni Primary School	KZ253	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	4/30/2019	R10 286 450
P11	Emalahleni Secondary School	KZ253	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	4/30/2019	R10 286 450
P12	Emfundweni High School	KZ254	WATER AND SANITATION ABLUTION FACILITIES	2/1/2019	9/1/2020	R7 496 977
P13	Enhlokweni Primary School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	2/1/2019	9/1/2020	R7 496 977
P14	Ezincwadini Senior Primary School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	9/30/2020	R7 495 497
P15	Hlabana Junior Primary School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	4/30/2020	R3 673 060
P16	Indoni Primary School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	8/1/2020	R3 820 021
P17	Indonsa High School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	11/30/2020	R9 539 910
P18	Inzululwazi Secondary School	KZ254	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	8/1/2020	R4 046 949
P19	Khaselihle Primary School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	8/1/2020	R3 472 169
P20	Khiphokuhle High School	KZ254	WATER AND SANITATION ABLUTION FACILITIES	2/1/2019	9/1/2019	R6 068 512
P21	Kilkeel Primary School	KZ254	WATER AND SANITATION ABLUTION FACILITIES	11/1/2018	8/1/2019	R2 474 878
P22	Lingani Primary School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	9/30/2020	R5 230 592
P23	Mana High School	KZ254	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	12/1/2020	R11 542 161
P24	Mandlamasha Combined School	KZ254	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	11/30/2020	R13 902 637
P25	Mdutshulwa Junior Primary school	KZ254	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	11/1/2020	R6 412 937
P26	Muzokhanyayo High School	KZ254	WATER AND SANITATION ABLUTION FACILITIES	8/16/2020	7/15/2020	R7 760 933
P27	Ngcaka Primary School	KZ253	WATER AND SANITATION ABLUTION FACILITIES	8/16/2019	5/15/2020	R4 077 414
P28	Nokukhanya Primary School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	8/31/2020	R6 550 852
P29	Ntendeka Combined School	KZ254	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	6/1/2020	R4 190 283
P30	Qhubimfundo Primary School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	11/1/2018	9/30/2020	R6 392 281
P31	Rutland Primary School	KZ254	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	11/1/2020	R3 177 266
P32	S. E. Vawda Primary School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	7/1/2019	3/30/2020	R12 379 687
P33	Sabela Senior Primary School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	7/1/2019	3/30/2020	R10 530 432
P34	Sebenzani Junior Primary School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	3/30/2020	R8 425 667
P35	Siphumelele Junior Primary	KZ252	WATER AND SANITATION ABLUTION FACILITIES	8/16/2018	5/13/2019	R5 605 369
P36	Siphuthando Public Combined	KZ254	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	11/30/2020	R6 831 592
P37	St. Lewis Bertrands High School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	2/1/2020	9/1/2020	R6 082 264
P38	V S Zulu	KZ252	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	8/1/2020	R4 822 762
P39	Vumelani Primary	KZ252	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	6/30/2020	R6 963 701
P40	Zabalaza Combined School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	11/1/2019	9/30/2012	R6 405 920
P41	Sizamokuhle Primary School	KZ252	WATER AND SANITATION ABLUTION FACILITIES	8/16/2019	9/15/2020	R12 902 354

Table 44: Label Guide for Map Department of Public Works