NOVEMBER 2018

REVIEW OF THE SPATIAL DEVELOPMENT FRAMEWORK FOR MKHAMBATHINI MUNICIPALITY 2018

SPATIAL DEVELOPMENT FRAMEWORK:

STATUS QUO REPORT

MKHAMBATHINI Municipality
For the community
uMkhandlu Wabantu

uMGUNGUNDLOVU
UMASIPALA WESIFUNDA
DISTRICT MUNICIPALITY
DISTRIK MUNISIPALITEIT

SANBI
Biodiversity for Life
South African National Biodiversity Institute

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1 INTRODUCTION

1.1 BACKGROUND

uMgungundlovu District Municipality (UMDM), in partnership with the South African National Biodiversity Institute (SANBI), have initiated a process towards the review of the Mkhambathini Municipality Spatial Development Framework (SDF). The project will unfold in phases with a report being delivered for each phase.

This document is the first in a series of reports to be produced as part of the process. It presents a Status Quo Assessment and intends to serve as an overview of the municipality as well as the spatial development context against which the remainder of the study would be addressed.

1.2 MKHAMBATHINI MUNICIPALITY

The uMgungundlovu District is one of the ten district municipalities that make up the KwaZulu-Natal Province. The district is located in the midlands part of the province, approximately 85km west of Durban. The N3, which is the busiest national highway in South Africa, passes through the area. This, coupled with the declaration of Pietermaritzburg as a capital of KwaZulu-Natal, makes the district one of the busiest districts in the Province. It covers an area of approximately 9 189.53 km^2 and is divided into seven local municipalities, of which Mkhambathini Municipality is the second smallest, accounting for 917km^2 (refer to map 1 on the overleaf).

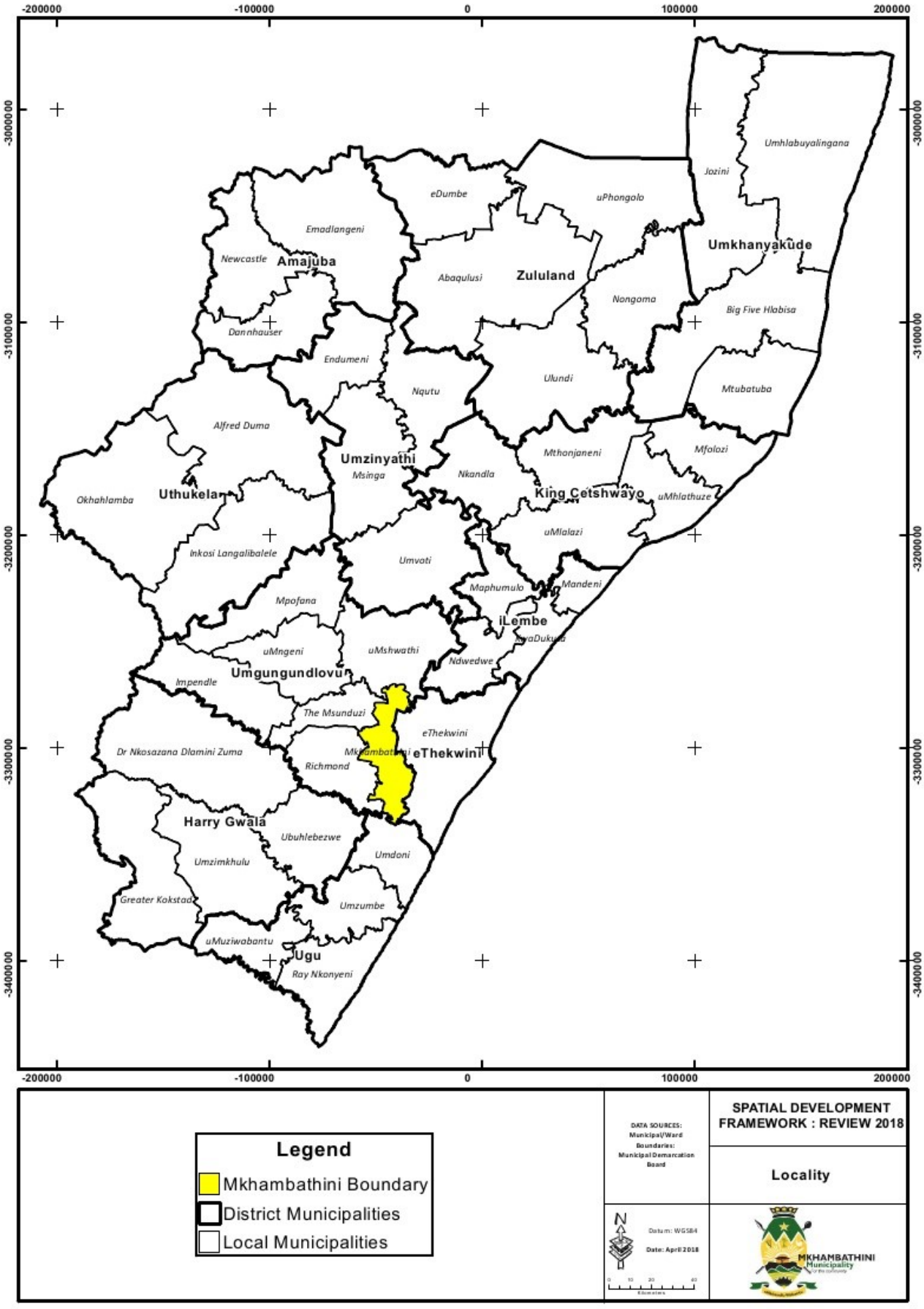
Mkhambathini has a population of approximately 57 075 people (2016) and consists of seven wards, with a large part of the municipality being rural in nature and underdeveloped. The four Traditional Authorities located in the municipality include Mapumulo Traditional Authority, MaNyavu Traditional Authority, Macala-Gwala Traditional Authority and the Embo-Thimuni Traditional Authority (refer to locality map on the overleaf).

The N3 corridor (identified as a Provincial Corridor in the PGDS) that runs through the municipality provides opportunities linked to the Provincial corridor development. Agricultural production centres on vegetables, nuts and sugar cane, and the area features the second highest concentration of poultry producers in the world, as well as pig and beef farming.

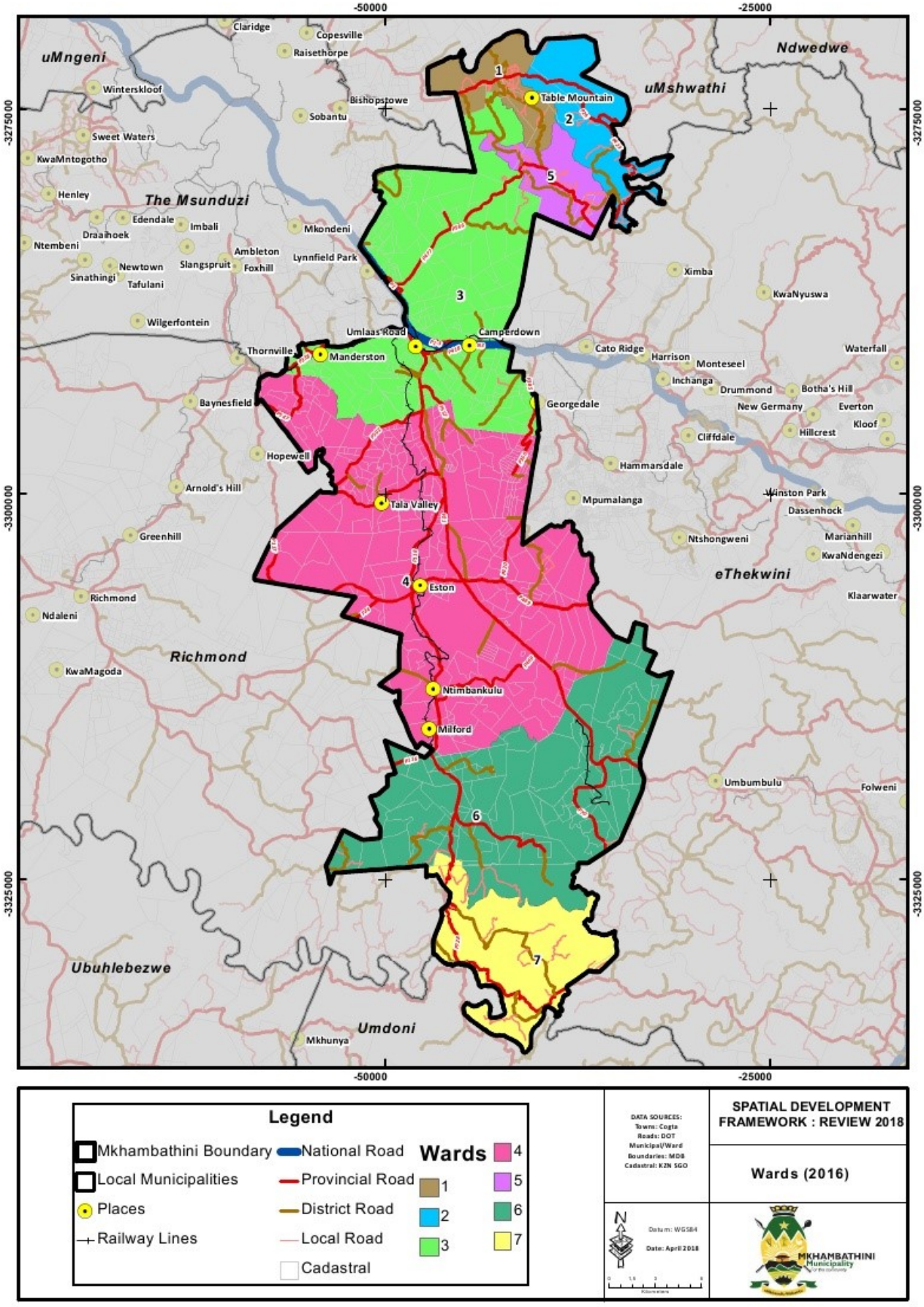
Tourism attractions include the Table Mountain, Tala Game Reserve, Gwahumbe Game Reserve, Lion Park Zoo, Raptor Centre, Nagle Dam and Umgeni Valley, while significant portions of the municipality fall within the Valley of a Thousand Hills.

The proposed SDF should cover the entire municipal area and contribute to the spatial transformation and development of the municipality as a functional, sustainable and generative administrative and economic region.

MAP 1: LOCALITY OF MKHAMBATHINI MUNICIPALITY



MAP 2: MKHAMBATHINI ELECTORAL WARDS 2016



1.3 DEFINING THE SPATIAL DEVELOPMENT FRAMEWORK

The Spatial Development Framework (SDF) is a process through which a municipality prepares a medium to long-term strategic spatial development plan for its area of jurisdiction. The SDF will serve as a principal strategic spatial planning instrument, which guides and informs all planning, land management, development and spatial decision-making in a municipality. It is a component of the Integrated Development Plan (IDP) and aims to create a spatial interpretation of the strategies and projects already contained within the IDP.

The SDF is also a transformation tool. It guides the form and location of future spatial development in a manner that addresses the imbalances of the past. It is a legislative requirement, and this gives it a legal status, but it should resonate with the national and provincial spatial development priorities. It enables the municipality to manage its land resources in a developmental and sustainable manner. It provides an analysis of the spatial problems and provides strategies and programs to address the challenges.

In summary, the SDF has the following benefits:

→ It facilitates effective use of scarce land resources.

→ It facilitates decision making regarding the location of service delivery projects.

→ It guides public and private sector investment.

→ It strengthens democracy and spatial transformation.

→ It promotes intergovernmental coordination on spatial issues.

→ It provides a framework for the preparation of more detailed and area specific spatial plans and a wall-to-wall Land Use Scheme (LUS) as envisaged in the KwaZulu-Natal Planning and Development Act (PDA), Act No. 06 of 2008 and the Spatial Planning and Land Use Management Act (SPLUMA), Act 16 of 2013.

In short, the SDF defines and facilitates a progressive move towards the attainment of an agreed upon desired spatial structure within the municipality's area of jurisdiction.

1.4 AIMS AND OBJECTIVES

The primary aim of this project is to review the Spatial Development Framework for Mkhambathini Municipality, which will address spatial, environmental and economic issues confronting a municipality.

Its objectives are as follows:

→ To give effect to the vision, goals and objectives of the municipal IDP, Spatial Planning and Land Use Management Act and the National Development Plan.

→ To engage the interested and affected parties in a strategic planning process considering their views, concerns and interests.

→ To promote inter-governmental relations by ensuring that all relevant stakeholders are consulted and participate actively in the planning process.

→ To provide for the spatial transformation of the municipal area.

→ To provide for sustainable development in line with the norms and standards for environmental management.

→ To facilitate the development of an efficient and effective spatial structure.

→ To develop a framework for public and private sector investment – capital investment programme.

In addition, the SDF is required:

→ To comply with the Mkhambathini Municipality Spatial Planning and Land Use Management Bylaws.

→ To complete the toolbox for effective spatial planning and land use management. This includes the generation of GIS data that would enable the municipality to promote environmentally sustainable and harmonious development.

→ The SDF will be prepared in accordance with the guidelines as introduced by DRDLR and Chapter 4 of the Spatial Planning and Land Use Management Act (Act 16 of 2013). Box 3 indicates the key components in the preparation of an SDF.

1.5 ALIGNMENT BETWEEN THE SDF AND THE IDP

The review of the Mkhambathini Municipality SDF is intended, in part, to comply with Section 20 of the Spatial Planning and Land Use Management Act, Act 16 of 2013 (SPLUMA). The SPLUMA requires a municipality to prepare and adopt an SDF as a component of its Integrated Development Plan (IDP). Most importantly, the municipality has initiated this process to facilitate development of a spatial structure that promotes integrated development and an efficient delivery of services. The SDF will give direction to future planning and development within the municipality and provide a framework for a site or area specific land use management system.

The Constitution of the Republic of South Africa confers major developmental responsibilities to municipalities to ensure that the quality of life for its citizens is improved. 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 a Municipal area. It is a legislative requirement and has a legal status. It provides an analysis of the spatial problems and provides strategies and programs to address the challenges. In summary, the SDF has the following benefits:

→ As the SDF is a legislative requirement it has legal status and it supersedes all other spatial plans that guide development at local government level.

→ The SDF will enable the municipality to manage its land resources effectively in a sustainable manner.

→ Through the SDF, the municipality can develop and implement appropriate strategies and projects to address spatial problems and to guide private and public-sector investment.

→ The SDF completes the strategic spatial planning toolbox of the municipality.

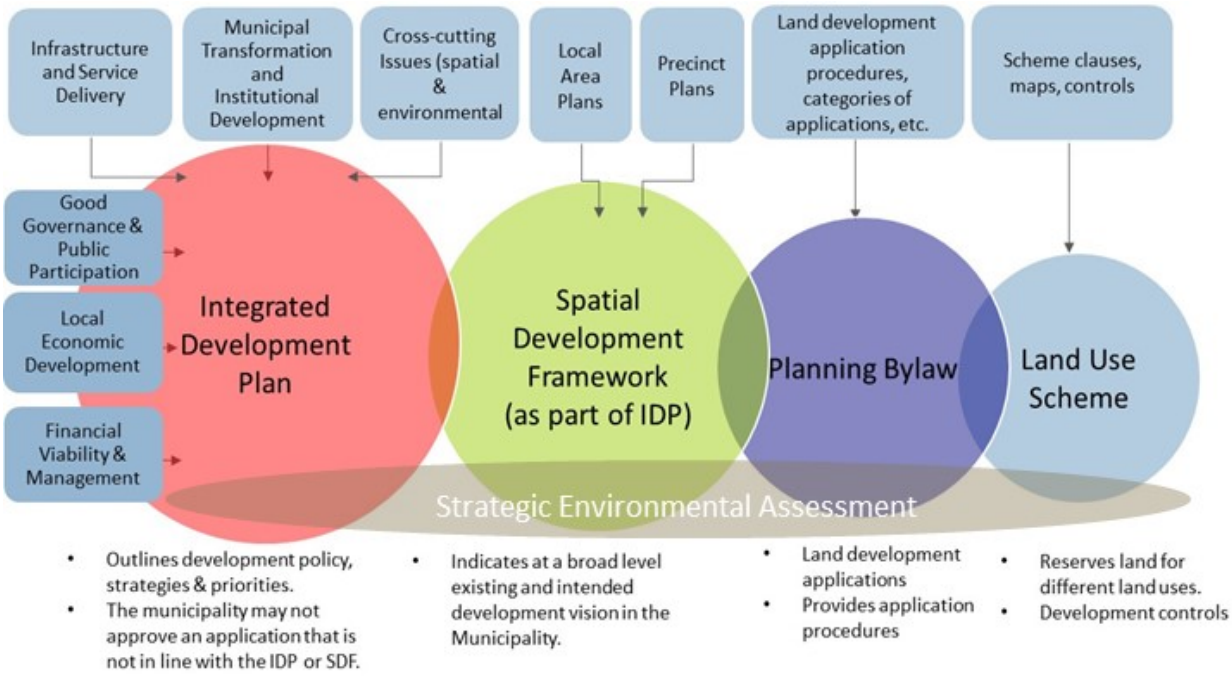
→ In addition to the above, the SPLUMA also requires an SDF to include strategic environmental pressures and opportunities, environmental sensitivities, high potential agricultural land and a capital investment framework for the municipality's development programmes (refer to Box 1).

BOX 1: New Role of Municipal SDFs

- SDF must include both short (5 year development plan) and long-term (up to 20 years) developmental strategy and vision for the municipality linked to an implementation plan.
- IDP becomes a 5 year implementation plan of the SDF mobilising financial and human resources to implement the SDF.
- SDF must identify, quantify and provide location requirements of engineering infrastructure and services provision for existing and future development needs for the next 5 years.
- SDF must determine a Capital Expenditure Framework for the municipality's development programmes, depicted spatially.

Figure 1 indicates the link between the IDP, SDF, SEA and Land Use Scheme. As such, the IDP outlines the development principles and priorities of the municipality, while the SDF provides the spatial representation of the municipal development vision and the Land Use Scheme sets specific development parameters. The Strategic Environmental Assessment (SEA) process forms the link between the IDP, SDF and scheme by providing sustainability and environmental guidelines for spatial development.

FIGURE 1: IDP, SDF, SEA AND LUS PROCESS



In addition, the SDF should align with all sector plans (service delivery, LED, etc.) and be informed by a rigorous assessment of the state of the environment. This should form the basis for the preparation of a Strategic Environmental Assessment (SEA). UMDM has formulated a District Strategic Environmental Assessment and an Environmental Management Framework (EMF), which will inform the review of the SDF. Box 2 outlines environmental criteria that should be included in SDFs.

BOX 2: ENVIRONMENTAL CRITERIA (for inclusion in SDF)

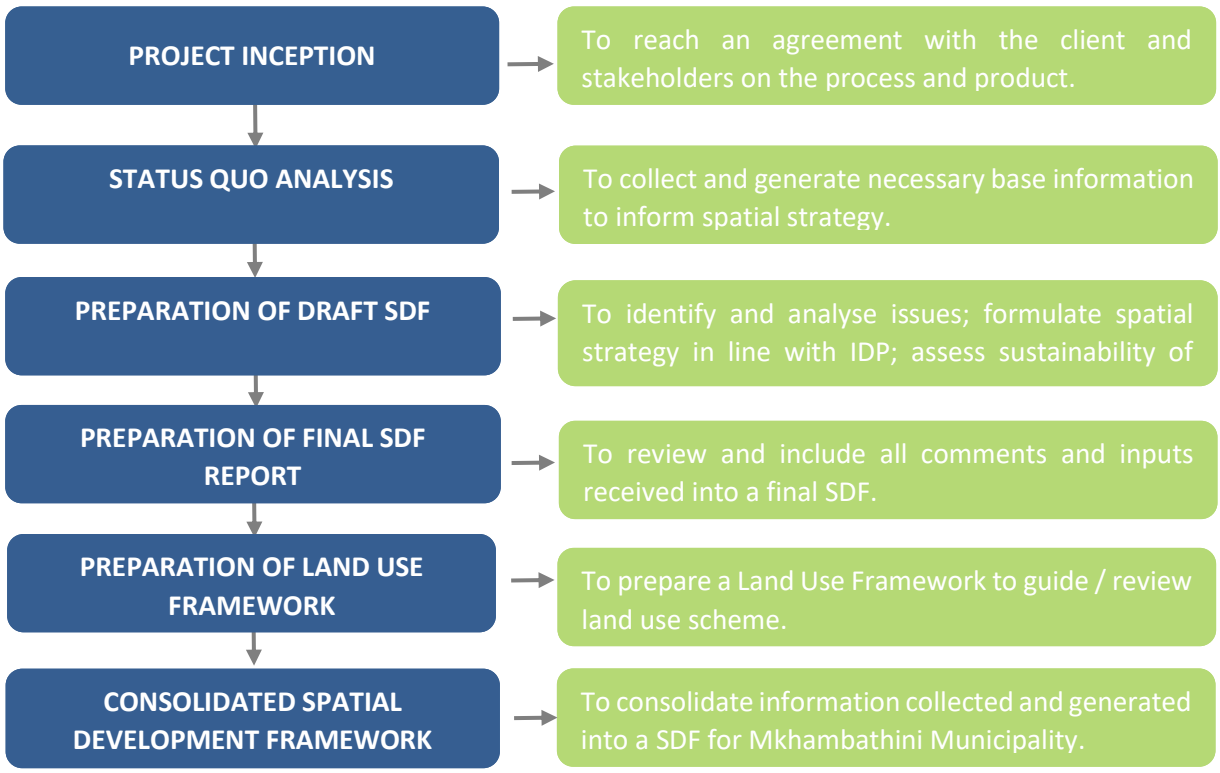
1. Biodiversity
   - Protected Areas (PAs)
   - Critical Biodiversity Areas (CBAs)
   - Ecological Support Areas (ESAs)
2. Water
   - Wetlands
   - River Channels & River Corridors
   - Strategic Water Source Areas
   - Ground Water
   - Dams
   - Waste Water
   - Water Catchments
3. Land
   - Topography & Ridge lines
   - High Potential Agricultural Land
   - Rural/Urban Transect
   - Services (roads, railway etc.)
   - Open space
   - Natural open space
   - Developed (Recreational) open space
   - Absorptive space
4. Forestry
   - Plantations
   - Natural (indigenous) forests
5. Cultural & Heritage Areas
   - Burial sites
   - Cultural WHS sites (UNESCO)
   - National heritage sites
   - Archaeological sites & Paleontological sites
6. Atmosphere
   - Air
7. Energy
   - Renewable Energy
   - Non-renewable Energy
8. Disaster Prone Areas
   - Flooding
   - Dongas & Erosion
   - Sink holes
   - Mining areas
   - Mass movements
   - Extreme weather prone areas
9. Waste
   - Non-hazardous waste
   - Hazardous
10. Invasive Species (SANBI 2017 list)

2 APPROACH AND METHODOLOGY

2.1 APPROACH

The approach adopted in the preparation of the Mkhambathini SDF was a phased approach. The process is divided into seven distinct but interrelated phases with each linked to the attainment of a specific milestone (refer to Figure 2).

FIGURE 2: PHASED APPROACH



2.2 METHODOLOGY

2.2.1 DESK-TOP DATA AND LITERATURE REVIEW

The SDF as a sector plan of the IDP needs to be located firmly within the practice of integrated development planning. This includes ensuring alignment with national, provincial and district strategic plans, and using these to inform approaches to local spatial development challenges. The following is an indication of documents that will be reviewed as part of this process:

→ Key national policies and programmes of relevance, e.g. National Development Plan, Breaking New Ground, Comprehensive Rural Development Programme etc.

→ Relevant legislation such as the Spatial Planning and Land Use Management Act.

→ KZN strategic spatial plans including the Provincial Growth and Development Strategy and Plan.

→ Existing district level long-term strategic plans such as the UMDM Growth and Development Plan.

→ Mkhambathini Municipality IDP and the associated sector Plans. The latter includes LED Plan, Water Services Development Plan, Housing Sector Plan, Integrated Transport Plan etc.

→ Spatial plans and data to be sourced from various sector departments.

→ Spatial data and mapped information to be sourced from various sector departments.

→ Sectoral plans, including the UMDM Biodiversity Sector Plan and the UMDM Environmental Management Framework and UMDM SEA.

→ Environmental information available from SANBI.

→ Planning theories and research reports dealing with a range of strategic projects in the area.

2.2.2 STAKEHOLDER ENGAGEMENT

Stakeholders were identified in terms of potential role and contribution towards the achievement of the objectives of the project. These stakeholders include, but not limited to the following:

→ Mkhambathini Municipality officials responsible for spatial planning.

→ UMDM officials responsible for district spatial planning.

→ SANBI officials.

→ Provincial government officials responsible for spatial planning and environmental management.

→ Traditional councils/authorities.

3 POLICY CONTEXT

The Mkhambathini SDF should be informed by various legislation and spatial planning directives. The internalisation of these directives allows for the translation of the national and provincial spatial development vision to the implementation arena at a local level. It also repositions Mkhambathini to contribute towards the attainment of spatial development targets and objectives outlined in these policy directives. The following is a non-exhaustive list of the critical government policy positions that should inform the Mkhambathini SDF:

→ The National Development Plan (NDP)

→ National Infrastructure Plan (NIP)

→ Spatial Planning and Land Use Management Act (SPLUMA)

→ National Environmental Management Act (NEMA)

→ Comprehensive Rural Development Programme (CRDP)

→ Breaking New Ground (BNG)

→ Provincial Growth and Development Strategy (PGDS)

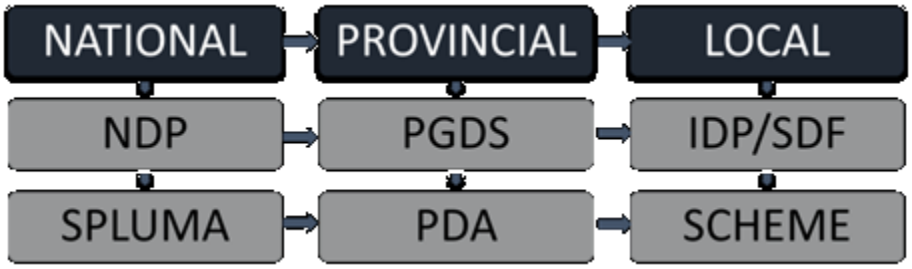
→ uMgungundlovu District Integrated Development Plan

→ uMgungundlovu District Growth and Development Plan

→ Mkhambathini Integrated Development Plan (IDP)

→ Various sector plans and by-laws

FIGURE 3: GENERIC POLICY / LEGISLATIVE RELATIONSHIP



3.1 SPATIAL PLANNING MANDATE

Since the mid-1990s, the notion of spatial planning has become an integral part of the development planning discourse and practice in South Africa. The Constitution (Schedule 4 Part B) bestows this responsibility to local government, particularly local municipalities. Mkhambathini gives effect to this mandate through a range of empowering legislation and policies, including, but not limited to the following:

The **Municipal Systems Act** (MSA), Act No. 32 of 2000 is the principal legislation regulating the content and scope of SDFs and requires that an SDF should be prepared as a component of the IDP.

Spatial Planning and Land Use Management Act (SPLUMA), Act 16 of 2013 that was introduced by National Government to consolidate the spatial planning mandate under a single piece of legislation. SPLUMA is now the overarching spatial planning legislation and introduces a uniform spatial planning approach and agenda throughout the country. One of the key innovations of this legislation is the recognition that spatial planning should not only occur at a local level, but at provincial and national levels as well. This will facilitate vertical and horizontal cross-border alignment and land use integration.

In effect, SPLUMA addresses the following issues:

→ It provides a uniform and coherent framework for spatial planning and land use management;

→ It specifies the relationship between the spatial planning and the land use management system;

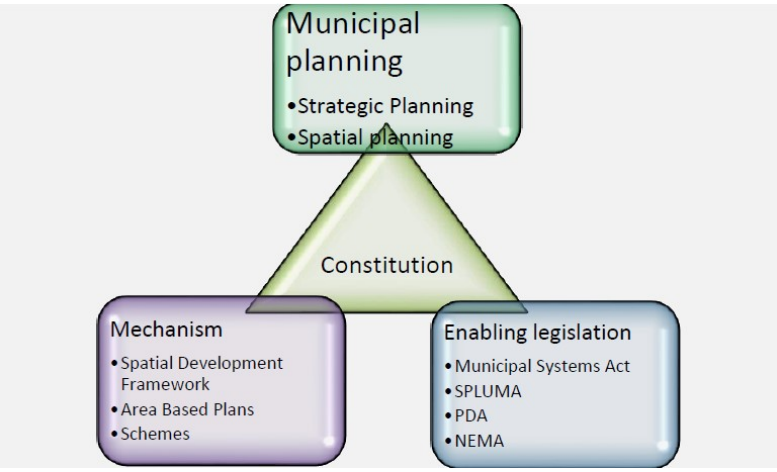
→ It provides for the inclusive, developmental, equitable and efficient spatial planning at different spheres of government;

→ It promotes greater efficiency, consistency and uniformity in the decision-making by authorities responsible for land development decisions;

→ It addresses the legacy of past spatial planning and regulatory imbalances.

The new law supersedes provincially applicable planning laws, such as the Planning and Development Act (PDA). It lays down national policy, norms and standards as well as frameworks on land use, and therefore fall within the ambit of section 146 of the Constitution. At a local level, it provides a framework for the preparation of area specific SDFs and Land Use Schemes.

FIGURE 4: SPATIAL PLANNING MANDATE



The relationship between NEMA and SPLUMA are also of importance, since both are framework laws. SLUMA provides for this alignment by incorporating environmental sustainability planning principles.

3.2 INTERNATIONAL POLICY CONTEXT

3.2.1 SUSTAINABLE DEVELOPMENT GOALS

South Africa is a member of the United Nations, and thus subscribes to the development goals and aspirations of this international organisation. In 2015, member countries adopted a set of 17 goals as part of a new sustainable development agenda. Each goal has specific targets by 2030. The achievement of these goals and associated targets requires everyone, including municipalities, to play their role. A number of goals are of pertinence to spatial planning. These include:

→ **Sustainable cities and communities** - make cities and human settlements inclusive, safe, resilient and sustainable.

→ **Life on land** - protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

→ **Climate action** - take urgent action to combat climate change and its associated impacts / natural catastrophes.

→ **Clean water and sanitation** - ensure availability and sustainable management of water and sanitation for all.

3.2.2 AFRICAN UNION AGENDA 2063

The African Union adopted its 50-year strategic framework for socio- economic transformation within the African continent in 2015, known as the Agenda 2063 (AU63). Agenda 2063 is both a Vision and an Action Plan towards holistic development on the African continent. Furthermore, it builds on past and present growth initiatives and seeks to accelerate the implementation of these. The framework identifies seven aspirations for growth and development within the African continent across all sectors: social, economic, political and environmental. South Africa is also dedicated to the realisation of these aspirations and has aligned these with national priorities. Some of the key priorities of Agenda 2063 are echoed in the Key Performance Areas within the IDP and overall, they are echoed in the strategies and priorities of South Africa's National Development Plan.

3.3 NATIONAL POLICY CONTEXT

3.3.1 NATIONAL DEVELOPMENT PLAN

The National Development Plan (NDP) introduces the long-term vision for the future development of South Africa. It acknowledges the spatial inefficiencies that characterises existing settlements and commits the national government to developing a national Spatial Framework as a policy framework to address these abnormalities.

The NDP requires plans such as the SDF to respond directly to the area specific issues, including the following:

→ Population movement patterns including migratory patterns between rural and urban areas.

→ Impact of external factors such as globalisation and climate change on spatial planning and development within Mkhambathini.

→ Public sector investment in economic infrastructure to create a climate conducive to economic growth and development.

→ Creating opportunities for rural communities to participate actively in the economy. This has serious implications for access to productive assets, particularly high potential agricultural land, skills development, etc.

→ Supporting the development of spatial plans that cross municipal and even provincial boundaries, especially to deal with biodiversity protection, climate-change adaptation, tourism and transportation.

The Mkhambathini Municipality SDF should give effect to the spatial planning principles outlined in the NDP and contribute to an effective implementation of the national spatial development vision. This includes spatial transformation and promoting spatial integration.

3.3.2 NATIONAL INFRASTRUCTURE PLAN

The National Infrastructure Plan (NIP) is the brainchild of the NDP and seeks to use infrastructure development as a vehicle to transform the country's economic landscape, through the maximization of job creation and improved basic service delivery. Essentially, the NIP calls for increased investments in, inter alia: healthcare and education facilities; housing and electrification; sanitation facilities; road and railway infrastructure; construction of dams and ports. Some of the 18 Strategic Integrated Projects (SIPs) identified in the NIP have implications for Mkhambathini Municipality. These include:

→ **SIP 2**: Development Corridor linking the Port of Durban with Gauteng along the N3 route. This is focused on the required infrastructure to promote freight along this corridor as well as associated nodes along the route aimed at product value adding and support services to the freight and transport sectors.

→ **SIP 11** is crucial for predominantly rural municipalities and emphasises investment in agricultural and rural infrastructure. This will allow for growth in production and employment from both small-scale farming and rural development.

→ **SIP 18:** Water and Sanitation Infrastructure. SIP 18 is a ten-year plan that seeks to address backlogs in water supply and basic sanitation to households. This will help serve social needs through efficient basic service delivery.

3.3.3 SPATIAL PLANNING AND LAND USE MANAGEMENT ACT

The Spatial Planning and Land Use Management Act, (Act No, 16 of 2013) (SPLUMA) is a framework legislation for spatial planning and land use management in South Africa. SPLUMA has a primary focus on the rationalization of the fragmented spatial pattern and land use management still evident in South Africa. It aims to redress the underlying historical spatial injustices and imbalances that remain thereof through the following five development principles:

→ **Spatial Justice**: seeks to redress the spatial imbalances of the past through improving access to land and ensuring efficient use of land

→ **Spatial Sustainability:** requires the sustainable use and management of natural resource to ensure the protection of prime land and natural resources.

→ **Spatial resilience**: Advocates for the formulation of spatial plans and land management policies that will ensure the creation of sustainable human settlements that will be resilient against impacts of natural shocks and economic uncertainty.

→ **Spatial Efficiency**: Advocates for the effective use of resources such as land and the optimal use of infrastructure.

→ **Good Governance**: Suggests the adoption of an integrated approach in spatial planning and land development.

SPLUMA provides for inclusive, developmental, equitable and efficient spatial planning in all spheres of government, and a framework for monitoring, co-ordination and evaluation of spatial planning initiatives. It prescribes the minimum content of for SDFs. The Mkhambathini SDF will have to ensure that aspects prescribed by SPLUMA are given adequate attention, so that the final deliverable is SPLUMA compliant.

Further to the above, SPLUMA also prescribes certain environmental sustainability planning requirements. These requirements will contribute to the development of a credible SDF and are summarized in the table below:

TABLE 1: ENVIRONMENTAL SUSTAINABILITY PLANNING REQUIREMENTS OF SPLUMA

IMPLICATIONS OF SPLUMA FOR ENVIRONMENTAL PLANNING	
Aspect	**Key requirement**
Sustainable development	The sustainable development of land requires the integration of social, economic and environmental considerations in both forward planning and ongoing land use management (Preamble).
Principles that guide spatial planning, land development & land use management	Spatial planning, land development and land use management must, amongst others (section 7): • Give special consideration to the protection of prime and unique agricultural land; • Promote land development in locations that are sustainable; • Design decision-making procedures to minimise negative financial, social, economic or environmental impacts; and • Accommodate flexibility to ensure sustainable livelihoods in communities most likely to suffer the impacts of economic and environmental shocks.
Preparation of SDFs	The preparation of spatial development frameworks must, amongst others (Section 12): • Identify the long-term risks of particular spatial patterns of growth and development and the policies and strategies necessary to mitigate those risks; and • Take cognisance of any environmental management instrument adopted by the relevant environmental management authority.
Municipal SDFs	The content of municipal spatial development frameworks must, amongst others (Section 21): • 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.

Strategically there are there (3) aspects that provide focus and which will be included in the final SDF. These are to ensure that:

→ Environmental sensitivities are mapped according to authority requirements;

→ Pressures are spatially analyzed to help identify spatial issues; and

→ The environmental risks associated with the SDF proposals are identified and mitigated through appropriate strategies.

3.3.4 NATIONAL STRATEGY FOR SUSTAINABLE DEVELOPMENT

Government's National Strategy for Sustainable Development and Action Plan (NSSD 1) - which was approved by Cabinet on 23 November 2011 - provides the conceptual framework and the high- level roadmap for strategic sustainable development. Its intention is to provide guidance for long-term planning. It sets out key areas that need attention to ensure that a shift takes place towards a more sustainable development path and identifies the following key elements:

→ Directing the development path towards sustainability;

→ Changing behaviour, values and attitudes; and

→ Restructuring the governance system and building capacity.

→ The outcome of sustainable development is a state in which interdependent social, economic and ecological systems can be sustained indefinitely.

The vision, principles, strategic priorities and strategic goals of NSSD 1 should inform the development of the SDF, and the municipality should agree to contribute to environmental sustainability in its area of jurisdiction. The contribution should include the following:

- Developing a better understanding of the meaning of sustainability within the context of the municipality;
- Promoting environmental accountability in decision-making; and
- Facilitating the identification of development options and alternative proposals, which are more sustainable.

In short, the key implications of the NSSD for the SDF is that it provides focus on what matters strategically, i.e. the priorities are:

- Enhancing systems for integrated planning and implementation.
- Sustaining our ecosystems and using natural resources efficiently.
- Towards a green economy.
- Building sustainable communities.
- Responding effectively to climate change.

Key implications:

- The SDF must provide a framework for promoting the integrated concept of sustainability - this framework must define the spatial relationship between ecological integrity, social justice and economic efficiency;

- The SDF must place sustainable development at the forefront of the development agenda and align spatial planning with the country's strategic sustainability priorities.

3.3.5 NATIONAL ENVIRONMENTAL MANAGEMENT ACT

The National Environmental Management Act, 1998 (Act No.107 of 1998), NEMA, provides for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment. It also provides for certain aspects of administration and environmental management law enforcement undertaken by institutions that can promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of government. The Mkhambathini Municipality SDF embraces the NEMA principles and presents a spatial strategy that is environmentally sustainable and creates a balance between development and protection of the natural resources.

A range of specific environmental management acts were also promulgated under NEMA to deal with specific mediums of the environment. These environmental acts, that help interpret the goal of environmental sustainability, includes:

→ Protected Areas: National Environmental Management: Protected Areas Act 57 of 2003 (NEMPA)

→ Biodiversity: National Environmental Management: Biodiversity Act 10 of 2004 (NEMBA)

→ Air Quality: National Environmental Management: Air Quality Act 39 of 2004 (NEMAQA)

→ Waste: National Environmental Management: Waste Act 59 of 2008 (NEM: WA).

It is important to note that the strategic policy goal of environmental sustainability includes a multitude of environmental objectives, which are defined in a myriad of environmental acts that deal with specific mediums of the environment. These objectives are further translated through local sector plans and or environmental management instruments, which should inform the SDF.

3.3.5.1 NATIONAL ENVIRONMENTAL MANAGEMENT BIODIVERSITY ACT

The National Environmental Management Biodiversity Act (Act No. 10 of 2004) provides for the management and conservation of South Africa's biodiversity; the protection of species and ecosystems that warrant national protection; the sustainable use of indigenous biological resources as well as the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources. As such, the provisions of the act will guide not only a required environmental response within the SDF, but provides for a consideration of sustainable social and economic benefits, which could be derived from the area's biological resources.

3.3.5.2 KZN ENVIRONMENTAL IMPLEMENTATION AND MANAGEMENT PLAN

In terms of Section 16(4)(b) in the National Environmental Management Act (No. 107 of 1998) municipalities must adhere to the KZN Environmental Implementation and Management Plan (EIMP) and the principles contained in section 2 of the NEMA in the preparation of any policy, programme or plan, including the establishment of IDPs and SDFs. The SDF acknowledge the EIMP and cannot be in conflict with this plan.

3.3.6 COMPREHENSIVE PLAN FOR THE DEVELOPMENT OF SUSTAINABLE HUMAN SETTLEMENTS

The Comprehensive Plan for the Development of Sustainable Human Settlements (August 2004) provides detailed information on the programmes identified by the National Department of Human Settlements. The new "Human Settlements Plan" promotes the achievement of a non-racial, integrated society through the development of sustainable human settlements and quality housing. This program seeks to use housing delivery as a means for the development of sustainable human settlements in support of spatial restructuring. It moves beyond the provision of basic shelter towards achieving the broader vision of integrated, sustainable and economically generative human settlement systems at both local and regional scales. The following are fundamental tenets and underlying principles of this new approach:

→ progressive informal settlement eradication;

→ promoting densification and integration in urban centres;

→ enhancing spatial planning in both urban and rural contexts;

→ enhancing the quality and location of new housing projects;

→ supporting urban renewal programmes; and

→ developing social and economic infrastructure.

3.3.7 COMPREHENSIVE RURAL DEVELOPMENT PROGRAMME

The Comprehensive Rural Development Programme (CRDP) seeks to create vibrant, equitable and sustainable rural communities through a three-pronged strategy based on:

→ a coordinated and integrated broad-based agrarian transformation;

→ strategically increasing rural development through social and economic infrastructure; and

→ an improved land reform programme.

Mkhambathini Municipality is very rural in nature. As such, they embrace the principles and seeks to contribute towards the attainment of the CRDP vision as part of their spatial and development planning program. This includes identification of target areas for rural development, agrarian reform and ensuring developmental outcomes of the land reform programme.

The aspects of the CRDP, which are applicable to land use, includes Economic and Social Infrastructure, Public Amenities and the protection of agricultural land and activities. These aspects will form an integral part of all the phases of the Mkhambathini SDF from analysis to project proposals. The Spatial Development Framework will be the tool that ensures the future development of the rural areas by providing direction on the provision of facilities and identifying economic catalytic projects, which will kick-start the development and exponential growth of the rural communities in all areas that is deemed as being part of a vibrant community.

3.4 PROVINCIAL SPATIAL DEVELOPMENT VISION

3.4.1 PROVINCIAL GROWTH AND DEVELOPMENT STRATEGY

The KwaZulu-Natal Province development vision is outlined in the Provincial Growth and Development Strategy (PGDS 2016). The PGDS is a primary strategy for KwaZulu-Natal that drives growth and development in the Province to 2035. It provides the province with a 20-year strategic framework for accelerated and shared economic growth through catalytic and developmental interventions, within a coherent equitable spatial development architecture, putting people first, particularly the poor and vulnerable, and building sustainable communities, livelihoods and living environments (PGDS, 2016).

Concomitant attention is also given to the provision of infrastructure and services, restoring the natural resources, public sector leadership, delivery and accountability, ensuring that these changes are responded to with resilience, innovation and adaptability.

FIGURE 5: PGDS STRATEGIC GOALS

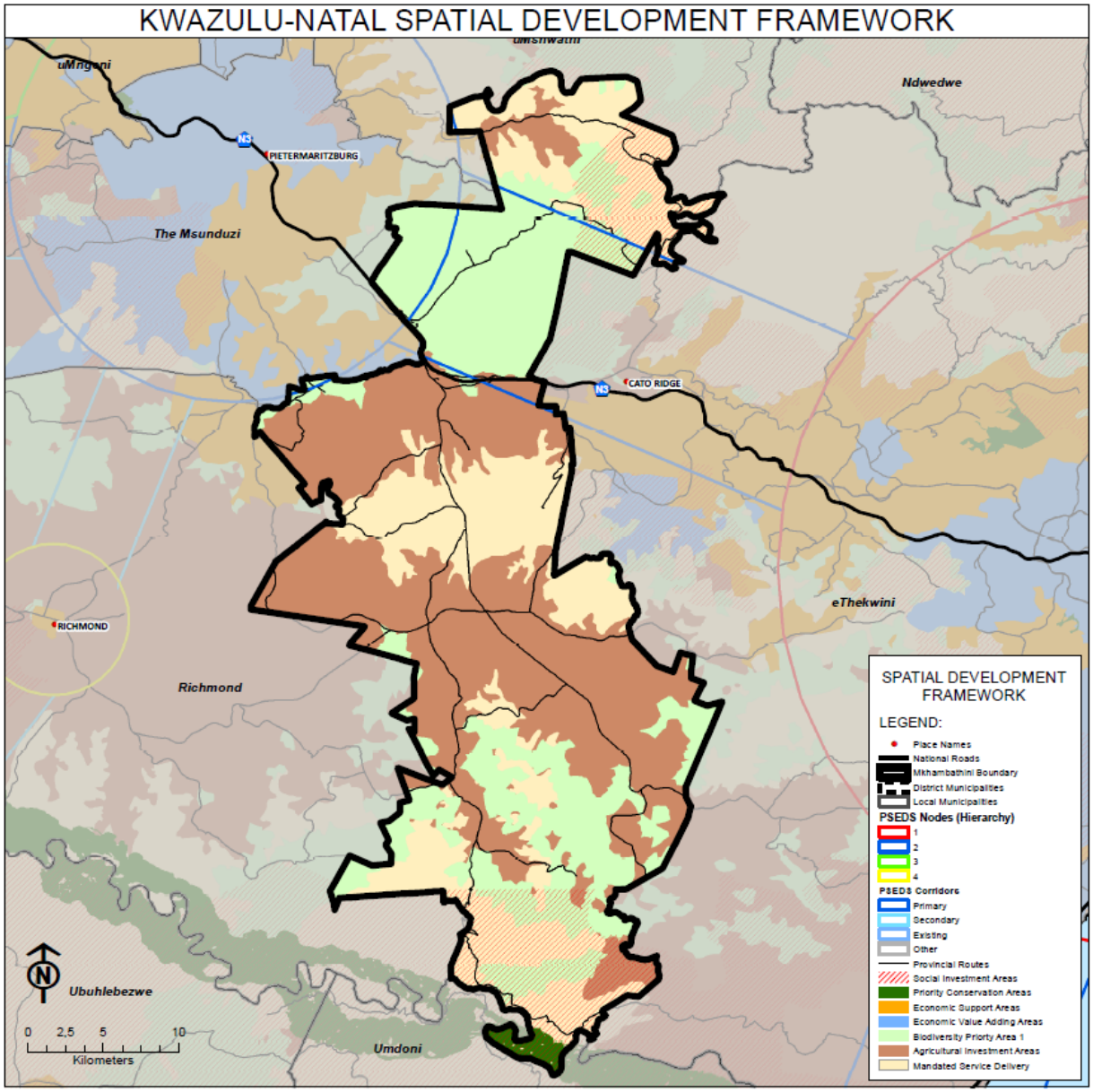
The strategic goals and the associated vision and objectives are reflected In Figure 5. Goal 7 deals specifically with spatial issues. The outcome of this goal is Spatial Equity and Integrated Land Use Management that will guide the allocation and utilization of human and environmental resources towards sustainable growth and development.

In addition, the outcome will focus on the promotion of spatial concentration, the co-ordination of development interventions, the integration of spatial planning initiatives and effective land use management (PGDS 2016: 104).

The PGDS further includes a Provincial Spatial Development Framework, which depicts the main drivers of the economy, and spatially identify areas of focused investment by targeting areas of highest need, and the highest potential for improvement. The Spatial Development Principles illustrated by the adjacent figure will thus inform the intended outcomes of the Mkhambathini SDF as well.

The provincial spatial framework specifically identifies large parts of Mkhambathini as Agricultural Investment Areas as illustrated by the excerpt below.

FIGURE 6: EXCERPT OF THE KZN SPATIAL DEVELOPMENT STRATEGY



The provincial strategy further acknowledges the priority biodiversity areas within the municipality as well as the provincial priority Social Investment Areas within the far northern and southern portions of the municipality, associated with the Traditional Authority areas.

3.4.2 PROVINCIAL SPATIAL ECONOMIC DEVELOPMENT STRATEGY

The KwaZulu-Natal Spatial Economic Development Strategy (PSEDS) was formulated in 2007 (and reviewed in 2017) as a spatial economic assessment of the areas of need and potential within the province. The PSEDS is intended as a guide to service delivery within clusters towards addressing poverty relief and economic growth in the province.

The PSEDS is built on the principles of the National Spatial Development Strategy (NSDP), namely:

Principle 1: Rapid economic growth that is sustained and inclusive is a prerequisite for the achievement of poverty alleviation.

Principle 2: Fixed investment should be focused in localities of economic growth or economic potential.

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

Principle 4: Future settlement and economic development opportunities should be channelled into activity corridors and nodes that are adjacent to or link the main centres.

Four key sectors have been identified as drivers of economic growth in the province, namely:

→ The Agricultural sector (including Agri-processing and land reform)

→ The Industrial sector (Including Manufacturing)

→ The Tourism sectors

→ The Service sector (including government services)

Of importance to Mkhambathini Municipality is the fact that the 2017 review identified the N3 linkage between Durban and Pietermaritzburg as A generator for an 'Economy of Scale'. Thus, although Camperdown itself does not feature within the PSEDS as a node of provincial significance, its response to the N3 route and associated freight could assist in anchoring the town (and the municipality) to the backbone of the provincial economy.

3.4.3 N3 STRATEGIC CORRIDOR DEVELOPMENT PLAN

In response to the National Infrastructure Plan and specifically the SIP 2 initiative, the Department of Co-operative Governance and Traditional Affairs co-ordinated the formulation of a KwaZulu-Natal N3 Strategic Corridor Development Plan (CoGTA, 2016) to identify the potential opportunities to local municipalities along the corridor as well as key infrastructure implications.

Within the KZN N3 Strategic Corridor Development Plan (CoGTA, 2016) the Mkhambathini municipality is identified as part of the so-called provincial corridor Region 1, which is seen as the KZN Industrial & Logistics Hub, together with Msunduzi and portions of eThekwini. The Industrial Activities anticipated within Mkhambathini associated with the corridor is mainly identified around Camperdown and the Umlaas Road area. The dominant manufacturing / processing activities envisaged would be based on *sugar cane* (sugar mills) and *poultry products*. The key manufacturing sub-sectors would include:

→ Food and beverages,

→ Metals, metal products, machinery and equipment,

→ Wood, paper, publishing and printing,

→ Petroleum products, chemicals, rubber and plastic, and

→ Transportation equipment.

3.5 DISTRICT DIRECTIVES

3.5.1 UMGUNGUNDLOVU DISTRICT SPATIAL DEVELOPMENT FRAMEWORK

Spatial Planning is a shared function between Mkhambathini LM and uMgungundlovu District by function of the district Spatial Development Framework (UDM, 2014). Ideally, the district SDF should provide a framework for the formulation of local municipality SDFs, deal with cross-boundary issues and spatial implications of the exclusive powers and functions of the district municipality. As such, any inconsistencies in the spatial planning process between the two entities should be eliminated and a greater coordination should be promoted. The uMgungundlovu SDF details the following with regards to Mkhambathini Municipality:

→ The N3 route identified as a primary corridor in Mkhambathini's SDF is highlighted as a significant economic lifeline within the entire district as part of the National Movement System.

→ The P70 & R603 linking Camperdown to Mid-Illovo and Eston, towards Umbumbulu is identified in the uMgungundlovu SDF as a Regional Movement System.

→ Of the rural Service Centres identified in the uMgungundlovu SDF, two include the secondary nodes of Eston and Opokweni identified in Mkhambathini.

→ The majority of the municipality (south of the N3 route) is identified as an area with high and moderate agricultural potential at a district scale.

→ The entire northern portion of Mkhambathini has been identified as an area where district infrastructure and housing development need to be focussed to address the poverty associated with rural settlements in that area.

3.5.2 UMGUNGUNDLOVU DISTRICT GROWTH AND DEVELOPMENT PLAN

The uMgungundlovu District Growth and Development Plan (UDM, 2015) is intended to translate the Provincial Growth and Development Strategy into a more localised and implementable plan at a district level. It identifies a number of strategic objectives and then details the strategic programmes and key intervention areas required to ensure the realisation of those objectives. Furthermore, it also maps out a spatial vision for the district and details the various key elements forming part of the spatial vision and notes the following strategies within Mkhambathini:

→ diversification of agricultural production and identification of niche markets and Agri-processing opportunities around Eston and associated with poultry production and sugarcane.

→ Opportunities to establish a poultry hub within the Mkhambathini municipality with backward and forward linkages as well as opportunities associated with the N3 corridor.

These spatial development elements identified at a district level will inform the Mkhambathini SDF.

3.5.3 UMGUNGUNDLOVU DISTRICT SECTOR PLANS

uMgungundlovu district Municipality has developed several sector plans to guide the implementation of its development programmes. These include but are not limited to the following:

→ Disaster Management Plan (2017)

→ Environmental Management Framework (2017)

→ District Rural Development Plan (2015)

→ Strategic Environmental Assessment (2013)

→ Strategic Environmental Management Plan (2013)

→ Biodiversity Sector Plan (2014)

Each of these should be considered and integrated into the Mkhambathini SDF.

3.6 LOCAL MUNICIPAL DIRECTIVES

3.6.1 MKHAMBATHINI MUNICIPALITY SECTOR PLANS

The IDP articulates the long-term vision and strategic programmes for the municipality. The latter is elucidated in various sector plans that deal with sector specific issues and identify development opportunity and development need areas. These sector plans include the following:

→ **Local Economic Development Strategy (2016),** which establishes an economic development agenda and identifies economic development opportunity areas.

→ **Housing Sector Plan (Draft 2018),** which outlines a housing delivery agenda and a programme for the transformation of the existing settlements into sustainable human settlements.

→ **Urban Scheme (2014**), highlighting the growth direction of the main nodes.

→ **Rural Land Use Management Policy (2014),** which identifies the various rural / traditional settlements and intended future land use to both grow the settlements as well as to protect the natural and agricultural resources of the municipality.

The SDF gives effect to the intentions of the IDP and provides a framework for the formulation of area and/or site-specific land use controls.

3.7 IMPLICATIONS FOR THE MKHAMBATHINI SDF

National, provincial, district and local spatial planning policies introduce a set of principles that are intended to influence the substantive outcomes of planning decisions. These could relate to spatial development frameworks or decisions on land use change or development applications. The overall aim of these principles is to achieve planning outcomes that:

→ restructure spatially inefficient settlements;

→ promote sustainable development and use of natural resources;

→ channel resources to areas of greatest need and development potential;

→ redress inequitable historical treatment of marginalized areas;

→ stimulate economic development opportunities in rural and urban areas;

→ support an equitable protection of rights to and in land; and

For the desired or ideal spatial and economic system, Mkhambathini Local Municipality needs to work in conjunction with the relevant organs of state and civil society, to achieve efficient spatial planning within its area of jurisdiction. This emphasises the importance of public participation and cooperative governance. To this end, land development should address the local interests. It should generate a wide range of economic development opportunities and provide a choice of living environments. It enables members of the public to conduct their daily activities efficiently, and cost effectively while also promoting equitable access to opportunities.

4 DEMOGRAPHIC CONTEXT

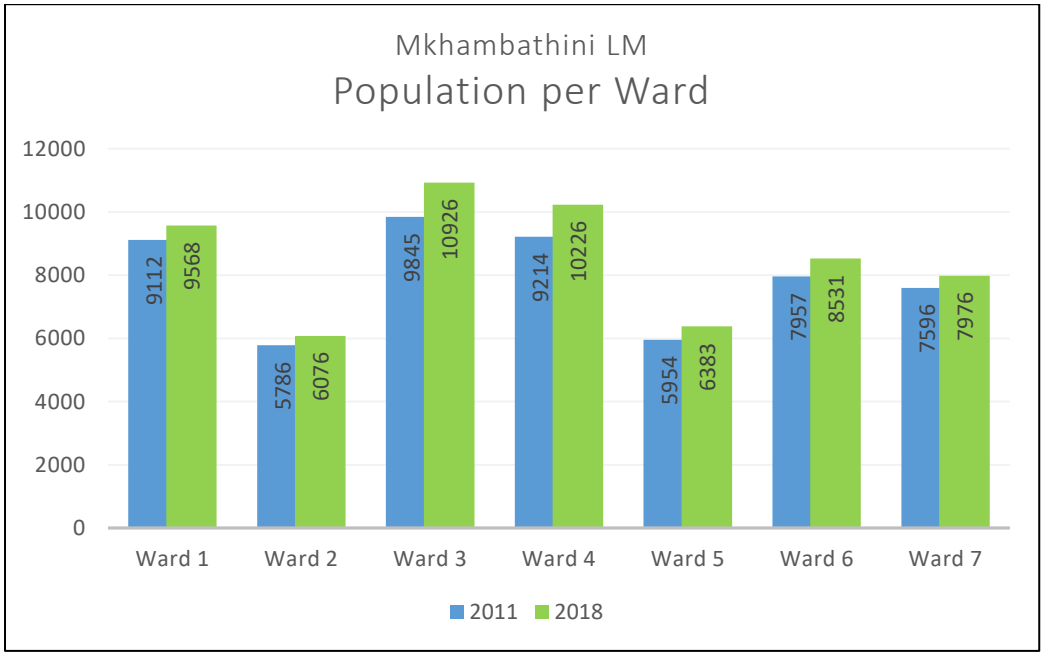
4.1 POPULATION DISTRIBUTION

In 2011 the Mkhambathini Municipality had an estimated population of 63 026 according to the 2011 Census. A review between the number of households (based on the Eskom structures counts of 2009), which were excluded from Mkhambathini to be incorporated into surrounding municipalities (i.e. eThekwini and Richmond) is calculated at approximate 12% of all households and associated population.

Based on that, the estimated population which was included in the current geographical extent of the Mkhambathini Municipality in 2011 was 55 464 people. However, based on the recent Eskom structures counts of 2015 an estimated growth rate of 9.53% was applied to the entire municipality. Although this is an extraordinary high growth rate, it is anticipated that this should be viewed in the context of the relatively low population of the municipality in general, as well as the rapid expansion of rural and peri-urban settlements especially north of Camperdown.

However, it is not anticipated that that extraordinary growth would continue, and the recent municipal LED Strategy suggest that a combination of three growth scenarios could be applied to the municipality. The Low Scenario suggested a 0.7% population growth per annum, a Medium growth scenario of 1.0% per annum and a High growth scenario of 1.5% per annum. Given the nature and historical population trends within the various wards/ areas of the municipality, a medium growth scenario was used to project the population from the last 2011 census values to 2018. The graph below then provides comparative population values for the municipal wards (based on 2016 demarcation) between 2011 and 2018.

FIGURE 7: POPULATION PER WARD



Source: Stats SA Census 2011 (projected to 2018 based on Telkom HH counts)

The highest number of residents are settled in Wards 3 and 4 with the smallest number of people situated within ward 2. Ward 3 includes the dense rural settlements around the Broadview and Nkanyezini areas as well as Camperdown, Umlaas Road and Manderston. It is therefore understandable that it represents both the largest population within the municipality, but also the highest growth in population. Although Ward 4 mainly consists of farmlands, it is by far the largest ward within the municipality and includes Eston and MidIlovo as well as other rural settlements such as Khambutho in the south.

4.2 POPULATION GROWTH

Based on the LED Strategy Scenarios, it is suggested that the various wards would experience different growth scenarios over time between 2018 and 2030 as illustrated by the table below:

TABLE 2: POPULATION GROWTH PROJECTIONS PER WARD

Ward	2011	Rate (%)	2018	Rate (%)	2020	Rate (%)	2025	Rate (%)	2030
Ward 1	9 112	0.7	9 568	0.7	9 702	0.7	10 047	0.7	10 403
Ward 2	5 786	0.7	6 076	0.7	6 161	0.7	6 380	0.7	6 606
Ward 3	9 845	1.5	10 926	1.5	11 257	1.5	12 127	1.5	13 064
Ward 4	9 214	1.5	10 226	1.5	10 535	1.5	11 349	1.5	12 227
Ward 5	5 954	1.0	6 383	1.0	6 512	1.0	6 844	1.0	7 193
Ward 6	7 957	1.0	8 531	1.0	8 702	1.0	9 146	1.0	9 613
Ward 7	7 596	0.7	7 976	0.7	8 088	0.7	8 375	0.7	8 673
Total	55 464	1.05	59 686	1.06	60 957	1.06	64 268	1.07	67 779

It should be evident that Ward 3 and 4 is anticipated to continue a high growth scenario based on their proximity to the N3 Route and Camperdown as well as the existing populations within those wards. Ward 1, 2 and 7 are considered the most rural and remote wards and thus a low growth scenario is applied to those wards. Population growth in those wards are anticipated to be driven mainly by births and almost no migration to those areas.

Overall, the anticipated population growth rate for the entire municipality is just over 1.0% per annum with a slight increase in this rate over time, mainly due to the anticipated migration at a provincial scale, of residents towards the main access routes, such as the N3.

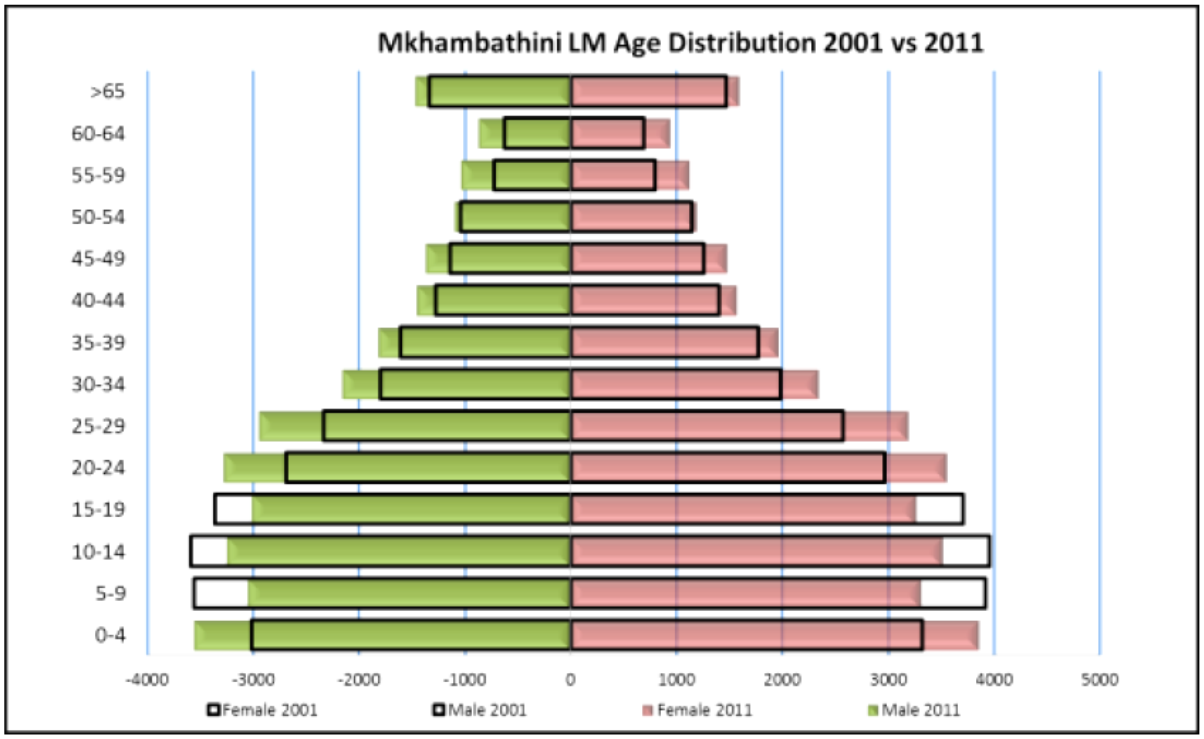
4.3 HOUSEHOLD SIZE

The average household size for Mkhambathini is calculated by subdividing population with the number of households recorded. The average household size for Mkhambathini LM was **4,2 persons per household** in 2011. As this was below the provincial average household size for the same timeframe, it is anticipated that a similar household size still applies in 2018.

4.4 AGE & GENDER DISTRIBUTION

The demographic pyramid is illustrated by the graph below and evidently, the current population of working age is far more than the population going to school and retired age groups. The 2001 stats indicate that a large portion of the population was dependent on a relatively small portion of the population earning an income, but that the tables has turned within the past 10 years. Combined with the high unemployment rate, the situation becomes dire. Depending on the birth rates during the following years, this pattern should stay very similar in the years to come. The number of men in the municipality is slightly lower than that of women, probably indicating the pattern of male migrant workers, seeking work in larger urban areas and women tending to households needs and practicing subsistence farming in the traditional areas of the municipality, especially those areas to the northern and southern parts of the municipality.

GRAPH 1: POPULATION AGE DISTRIBUTION



Source: Stats SA Census 2001 vs 2011

4.5 MIGRATION

Migration patterns has an influence on the population of the municipality. According to the Community Survey 2016, people move to Mkhambathini to look for work or a new dwelling for their household.

TABLE 3: REASON FOR MOVING TO MKHAMBATHINI

Reason for moving to Mkhambathini	KZN226: Mkhambathini
Education(e.g. studying; schooling; training)	87

Reason for moving to Mkhambathini	KZN226: Mkhambathini
Job transfer/take up new job opportunity	57
Look for paid work	143
Moving as a household with a household member (for health	51
Moving to live with or be closer to spouse (marriage)	57
New dwelling for household	80
Other business reasons(e.g. expansion of business)	33
Other	16
Not applicable	56551
Total	**57075**

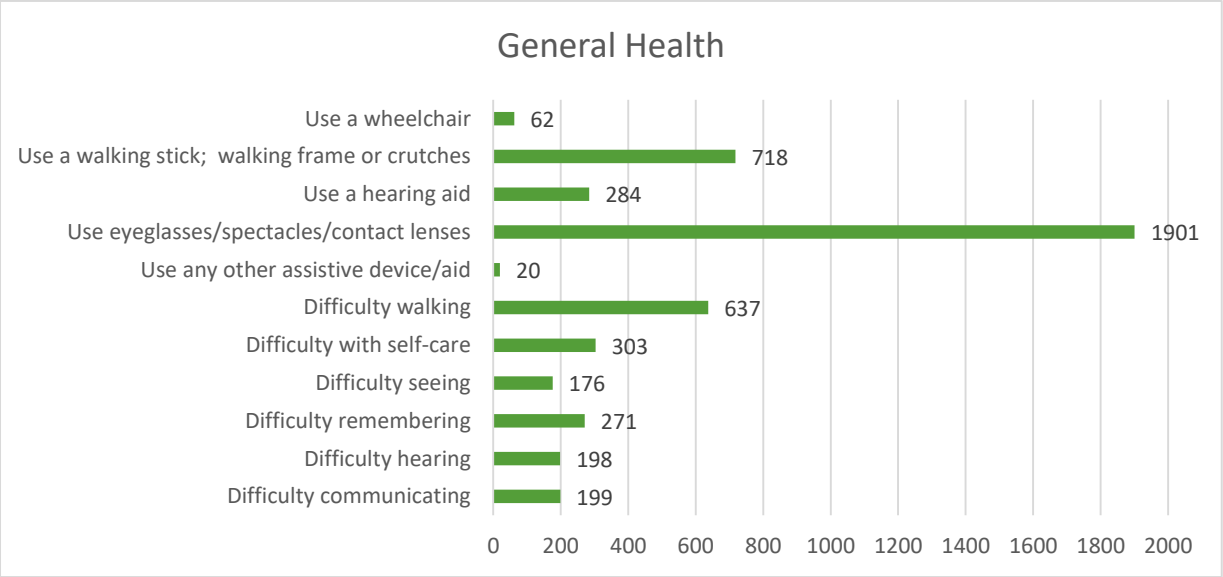
Source: Stats SA, Community Survey 2016

The majority of in-migration comes from neighbouring municipalities, such as eThekwini, Msunduzi, Richmond and the Eastern Cape (Matatiele).

4.6 GENERAL HEALTH

In terms of general health, it would seem that the biggest health issue in the municipality is in respect to poor eyesight and walking disabilities.

FIGURE 8: GENERAL HEALTH



Source: Stats SA, Community Survey 2016

5 LAND AND SPATIAL ANALYSIS

The Land and Spatial analysis includes a review of the current land use pattern, spatial structure and form, settlement pattern, spatial impact of the land reform program and the identification of development nodes and settlements.

5.1 SETTLEMENT PATTERN

5.1.1 NODAL ASSESSMENT

The nodes identified are based on the functions of the centres within the municipality and was classified as such by the Mkhambathini Local Municipality.

The municipality differentiates between Primary, Secondary and Tertiary nodes. The localities for a number of these nodes are unknown.

TABLE 4: IDENTIFIED NODES

Primary Node	Secondary Node	Tertiary Node
Camperdown	Opokweni Eston	Maqongqo Mid-Illovo Tilongo Ngilanyoni

Camperdown is the major residential and commercial centre within the Mkhambathini Municipality. The area has a largely urban setting and incorporates the major economic and administration activities. It accommodates the municipal offices, schools, police station, a hotel, bottle store and a variety of commercial and retail outlets. The "village in the country" atmosphere, which is evident in some portions of the area, is an important attribute, which needs to be conserved and enhanced, particularly as new areas are opened for residential and other development. The node is traversed and separated by the Primary Movement Corridor, which is the National Road Route (N3). To the West it links onto the Primary Corridor connecting the Municipality to the South Coast (R603), providing a high degree of accessibility to the Camperdown area.

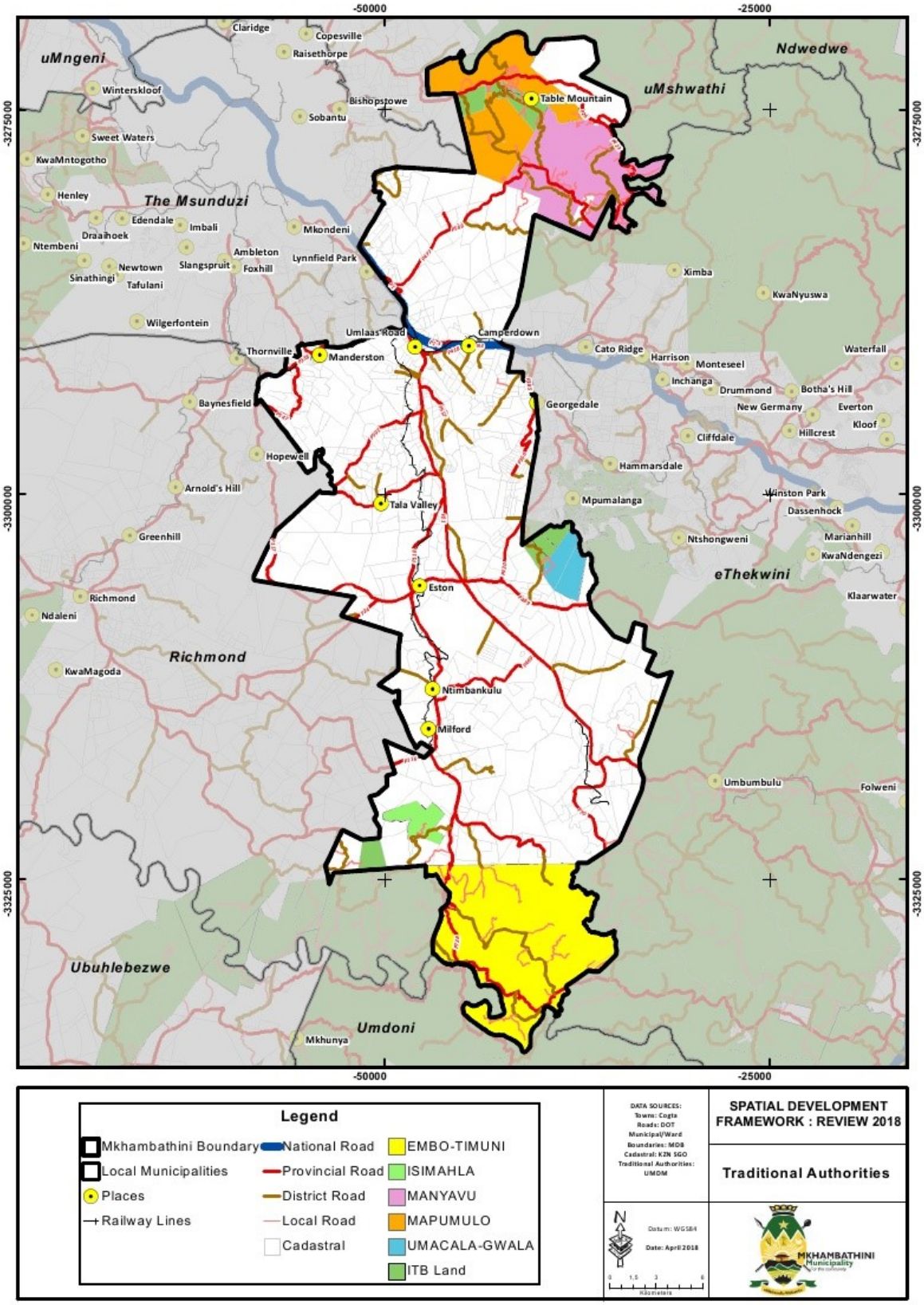
The areas of Opokweni overlapping into the Outer West Municipality and Eston have been identified as Secondary Nodes or Service Centres. These areas play an important role as service centres to communities and farmers in the northern and central portions of the municipality, providing housing and a smaller range of commercial and social services than what is offered in the Primary Node.

Tertiary nodes have been identified at Maqongqo (north) and Mid-Illovo (central, Tilongo, Ngilanyoni).

5.1.2 TRADITIONAL COUNCIL AREAS

The four Traditional Authorities located in the municipality include Mapumulo Traditional Authority, MaNyavu Traditional Authority, Macala-Gwala Traditional Authority and the Embo-Timuni Traditional Authority (refer to the Traditional Authorities map).

MAP 3: TRADITIONAL AUTHORITIES



During the 2016 demarcation process, a large portion of the Embo-Timuni Traditional Authority was included under eThekwini. The Mkhambathini Rural Land Use Management Policy already provides the basis for proper spatial planning and land use within these traditional areas and this will be expanded during the SDF formulation process.

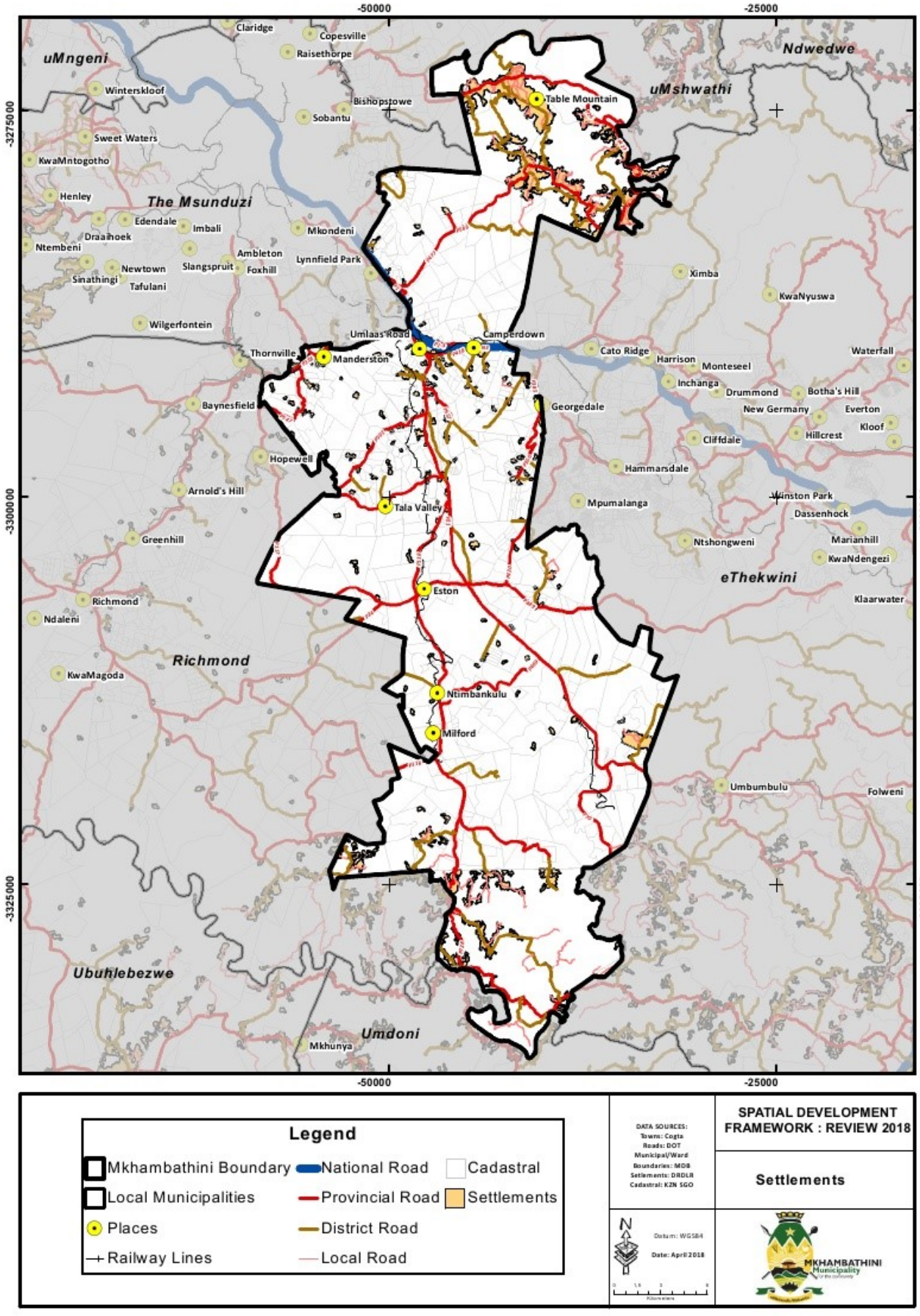
5.1.3 RURAL SETTLEMENTS

From the municipal IDP as well as the Rural Land Use Management Policy, the following rural settlements have been identified and mapped within the various wards:

Ward 1	• Table Mountain • Maqongqo • Villa Maria • Gcina
Ward 2	• Ntweka • Abebhuzi • Manyavu • Ophokweni A • Ophikweni B
Ward 3	• Masangweni • Imboyi Area
Ward 4	• Eston • Manderston • Ntimbankulu • Tala Valley
Ward 5	• KwaNyavu • Ngangezwe • Oqweqweni • KwaChitshane • Eqeleni
Ward 6	• Ismonth • Makholweni - Nungwane • Kwaluzizi • KwaSidingane Area • Esigodini • KwaThomi Senzakahle Road
Ward 7	• Mgwenya • Ngilanyoni • Gulube • Sgondini

As the various rural settlements each represent communities (often the most impoverished within the municipality), it would be important that the SDF provides for access, service and spatial development to various rural settlements. The distribution of the various rural settlements is illustrated by the **Rural Settlements map** overleaf.

MAP 4: RURAL SETTLEMENTS



5.1.4 SETTLEMENT DENSITY

The population density within the municipality is illustrated by **Settlement Density Map** and depicts the number of people per square kilometre within the Mkhambathini LM.

A concentration of population density is found within the central area (around the N3, Camperdown and Umlaas Road), the southern parts and northern portions (around the Table Mountain area) of the municipality. This creates many challenges with regards to provision of services, as well as the identification of a common Economic Development Initiative to impact on the livelihoods of all residents in the municipality.

As it is anticipated that that the provincial trend over the past few years whereby deep rural communities migrate to denser rural communities in closer proximity to the service centres, combined with the land reform project around the Broadview areas has led to the increase in density north of Camperdown. It is however further anticipated that the future migration trends would be for residents from the denser rural areas to move towards Camperdown to access services and employment opportunities. This would thus need to be considered in the future spatial development of the town and its surroundings.

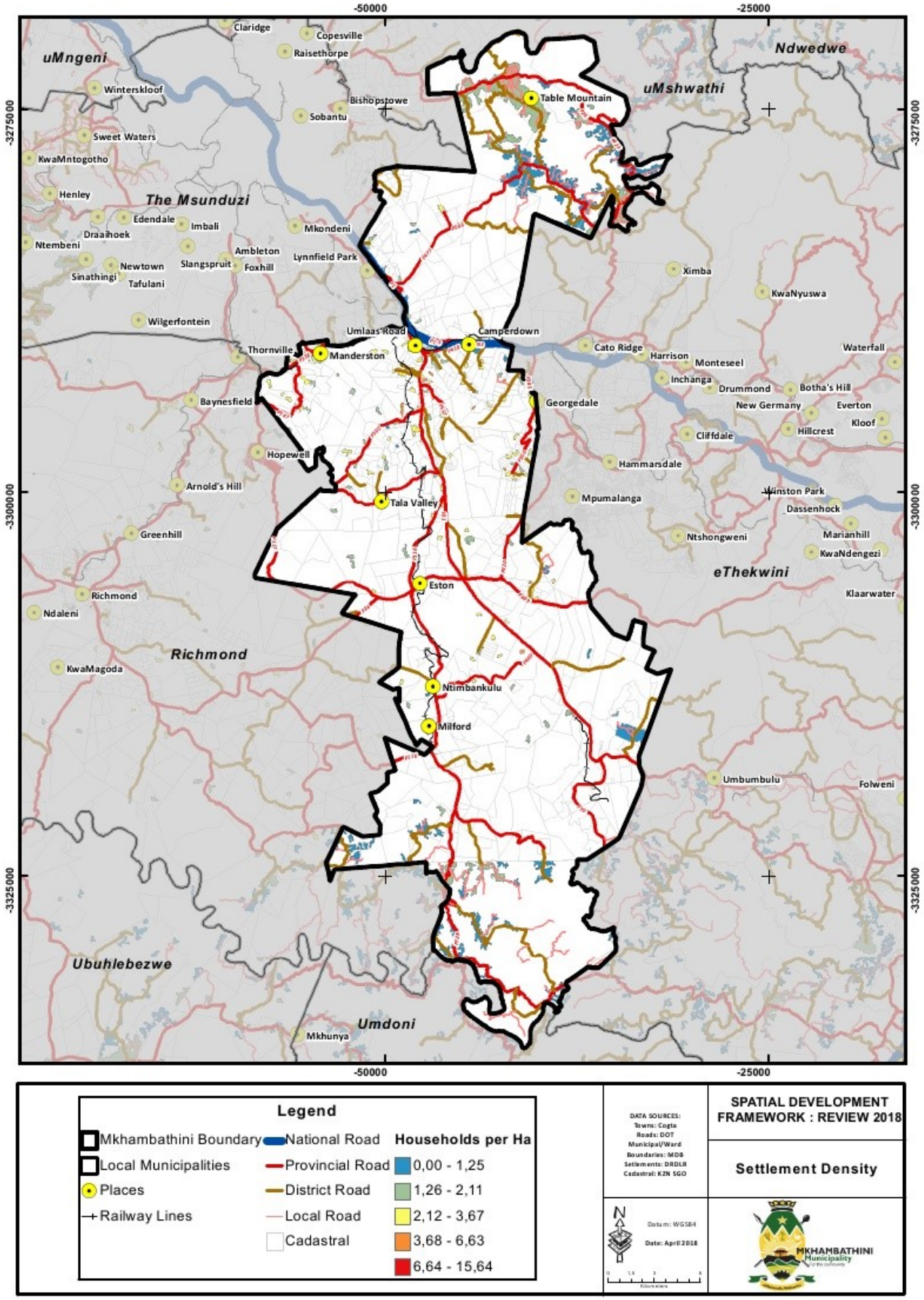
5.2 BROAD LAND USE PATTERN

The broad land cover found in Mkhambathini municipality, as depicted on the **Broad Land Use Pattern** map, attached overleaf.

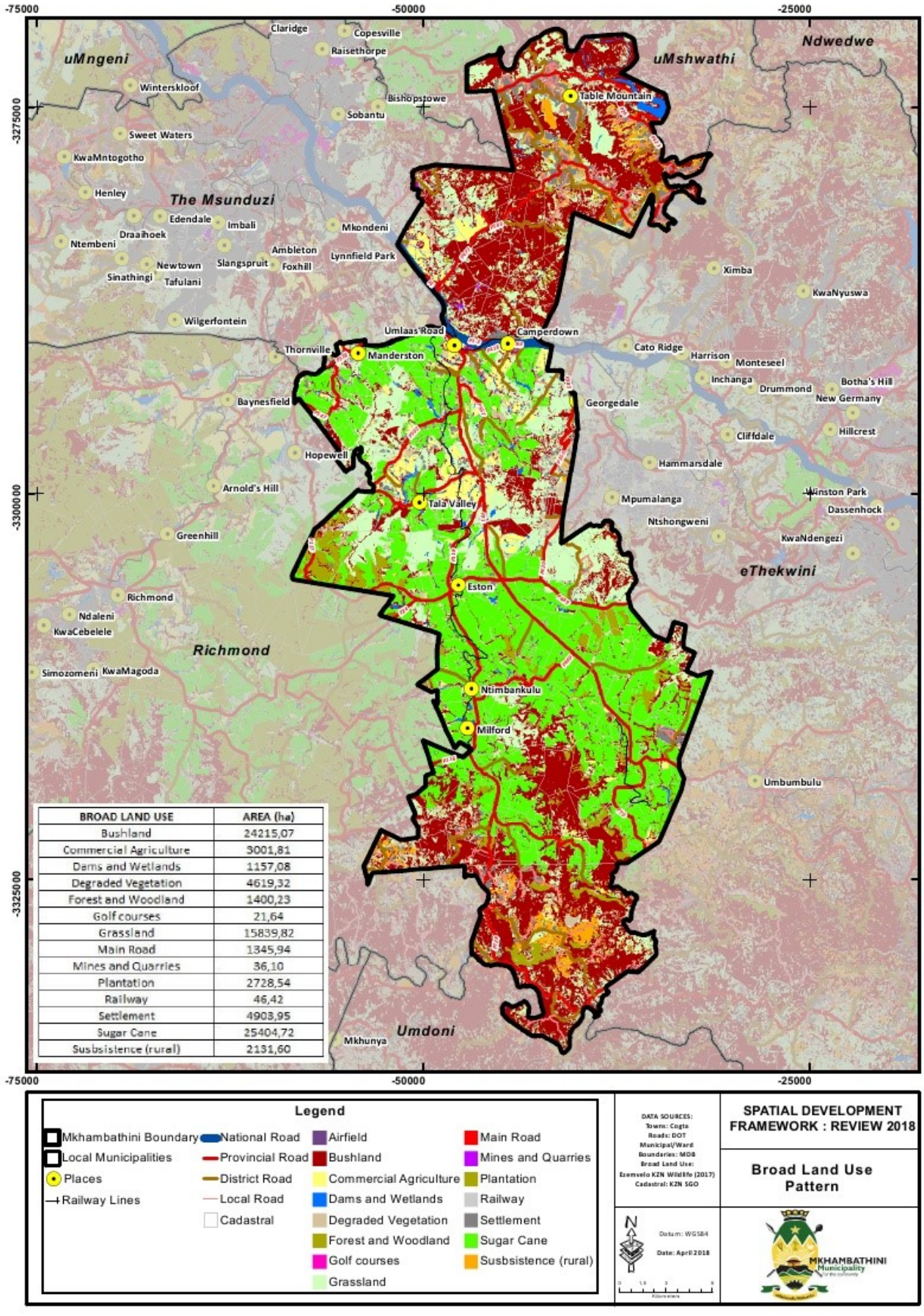
From the land cover data, it is evident that most of the central portions of the municipality is cultivated for commercial sugarcane, with especially high occurrence of this around the Eston settlement area. The southern mountainous steep areas are mainly covered with subsistence cultivation and thicket with some scattered forest areas, whilst the northern-sloped areas are distinctively covered with thicket and natural grassland and some limited forest areas and informal built up areas. Although indicated as “built-up” in terms of the land cover classification, most of settlements are characterised as rural in terms of density and character. These settlements are heavily concentrated within the north central parts of the municipality within the traditional authority areas and occur along national and provincial roads. The main concentration of subsistence farming is found in the south-eastern portions of the municipality. There is a noticeable concentration of commercial built up areas adjacent to the N3. This is expected, as the N3 is a strategic national transport route and the area is located on a stretch between Durban and Pietermaritzburg, with substantial road and rail freight traversing the area.

The existing land uses within the various identified urban nodes are also illustrated by the nodal land use maps. It is evident that the various nodes have different functions and associated land uses within the context of their setting. It is further evident that there are vacant properties available in most of the nodes and suggests a potential rationalisation and densification within these areas.

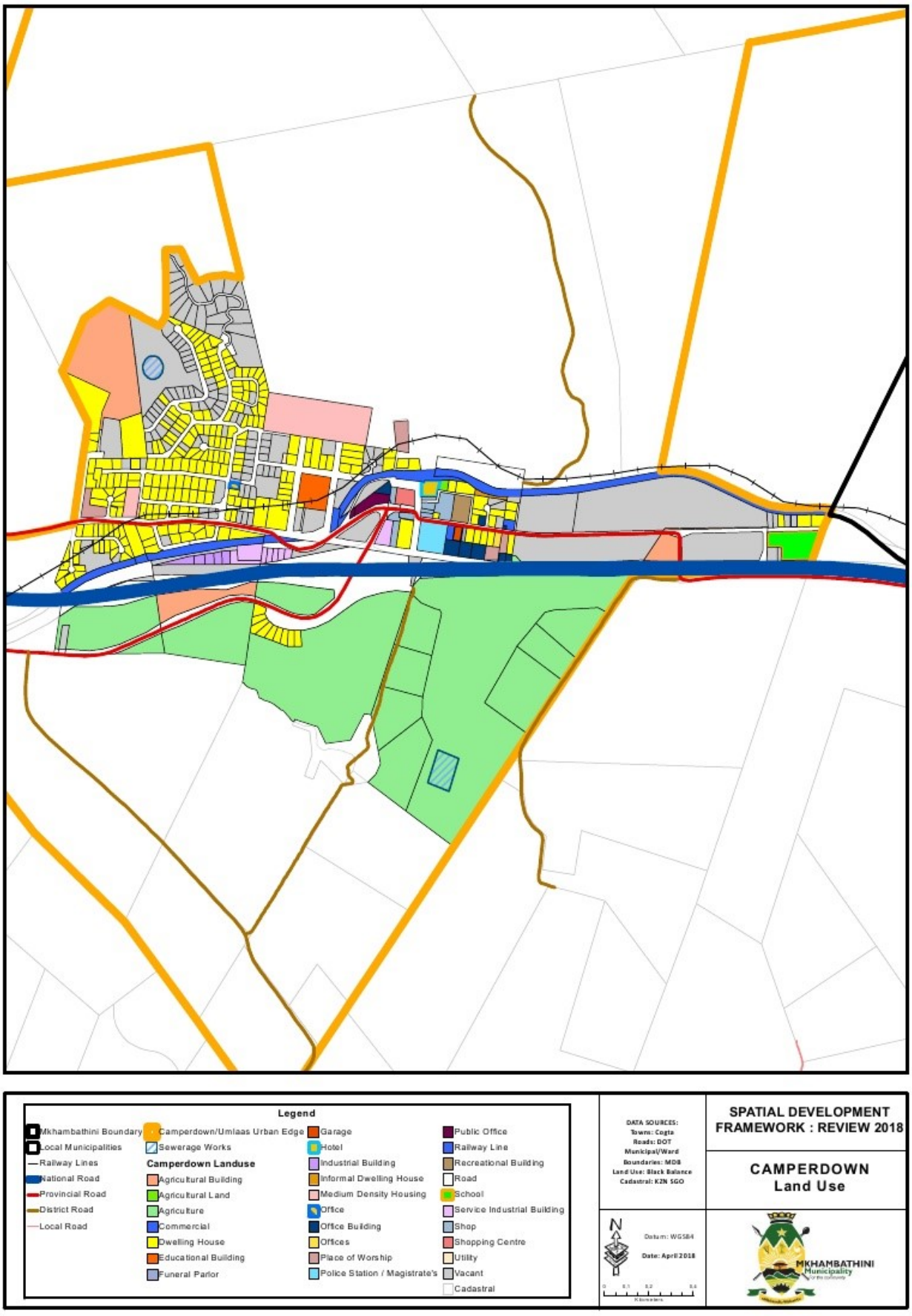
MAP 5: SETTLEMENT DENSITY



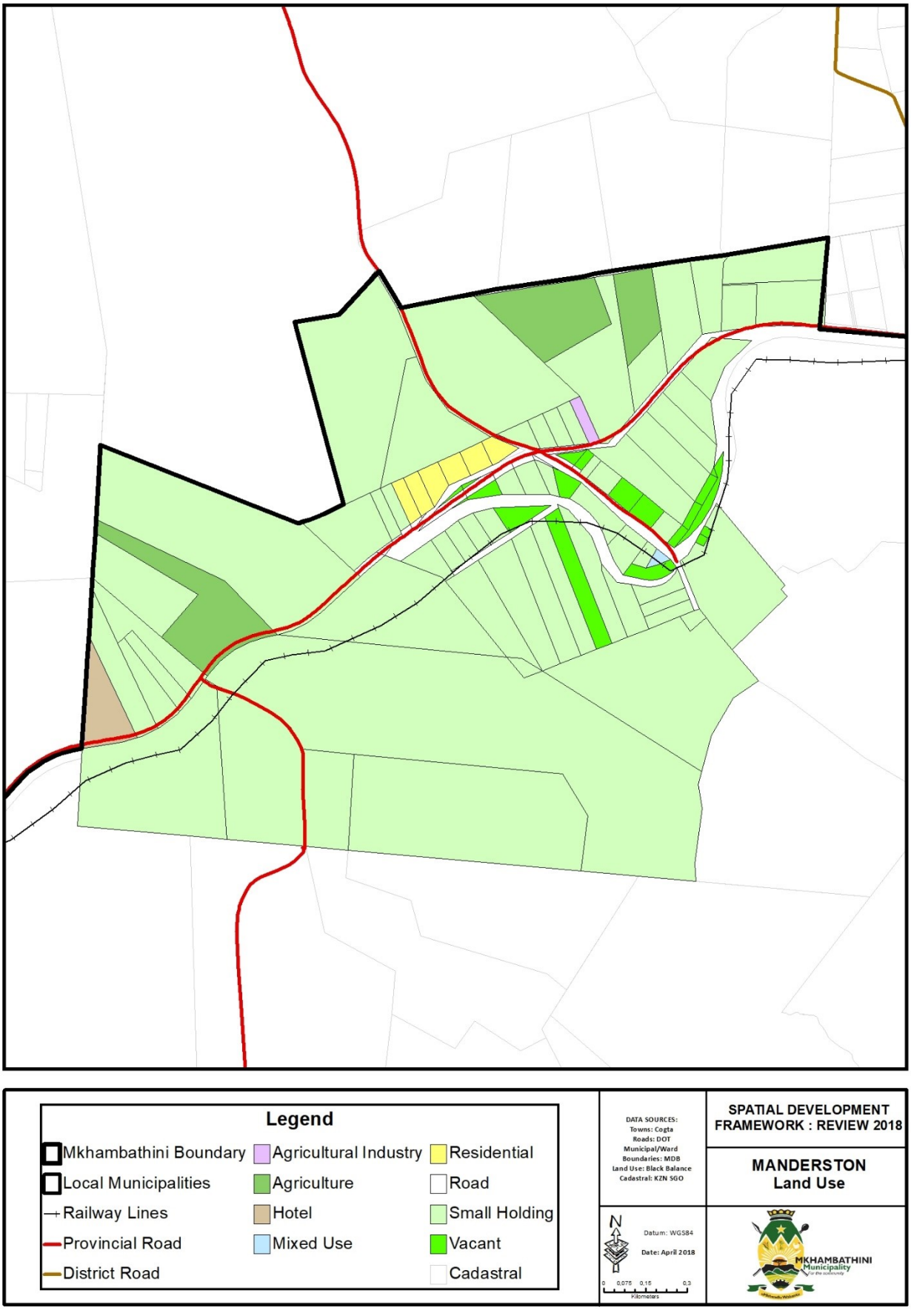
MAP 6: BROAD LAND USE PATTERN



MAP 7: CAMPERDOWN LAND USES

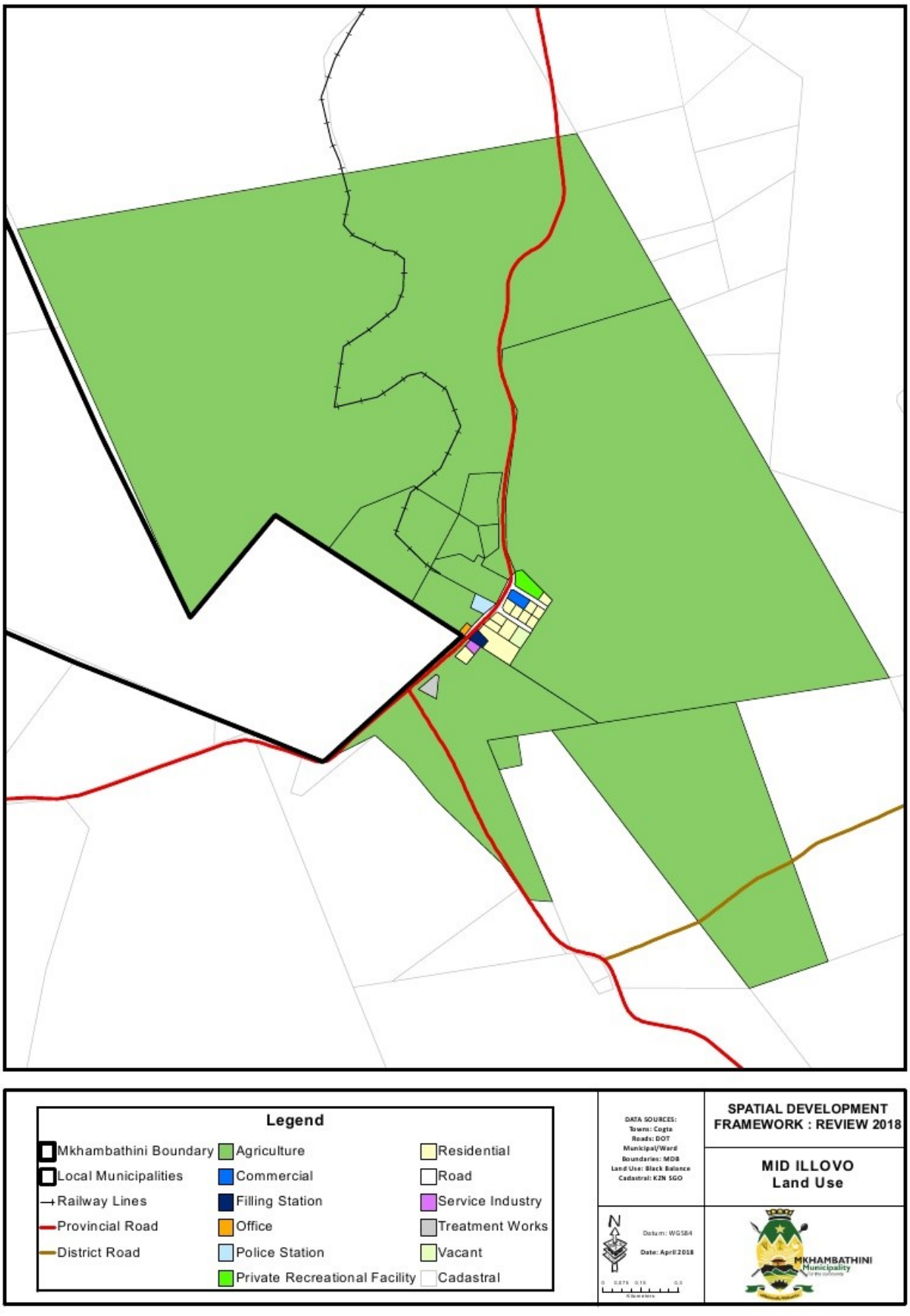


MAP 8: MANDERSTON LAND USES



MAP 9: ESTON LAND USES

MAP 10: MID-ILOVO LAND USES



5.3 LAND LEGAL

5.3.1 BENEFICIAL OCCUPATION RIGHTS

Members of communities that occupy Ingonyama Trust land enjoy beneficial occupation rights protected in terms of the Interim Protection of Informal Land Rights Act, (Act No. 31 of 1996). These include residential, grazing and many other land use rights.

It is probably legally correct to hold that the notion of land ownership was not a rule of the indigenous legal system. Rights to land were never vested in an individual, but rather in a complex web of social groups, such as a family and the residents of an Izigodi, and clear rules existed to regulate the right of all members of a family, clan or tribe to the land occupied by the tribe.

5.3.2 PTOS, LEASE AGREEMENTS AND SERVITUDES

Ingonyama Trust Land is subject to the policies and legislation that governs all land administered by the Ingonyama Trust Board. The trust holds the land on behalf of the members of communities that occupy and use the land. The powers and functions of the ITB are contained in section 2A (2) of the Ingonyama Trust Act, which provides as follows:

The Board shall administer the affairs of the Trust and the trust land and without detracting from the generality of the afore-going the Board may decide on and implement any encumbrance, pledge, lease, alienation or other disposal of any trust land, or of any interest or real right in such land.

Section 2(2) of the Act requires the trust to be administered for the 'benefit, material welfare and social well-being of the members of the tribes and communities' listed in the schedule to the Act – all the tribes and communities residing on Ingonyama Trust land. The trustees are bound to adhere to this provision.

Section 2(5) provides that the trust may not 'encumber, pledge, lease, alienate or otherwise dispose of' any of its land or any real right to such land, without the prior written consent of the traditional or community authority concerned. Thus, the traditional authority (elsewhere called tribal authority) can control the use to which their land is put. The effect of this is that, as custodian of the land, the Trust enters into land use agreements, e.g., leases and the like, but it cannot do so unless and until it has the written consent of the relevant traditional authority. In some cases, the Ingonyama Trust leases the land, or makes it available, under an appropriate agreement to a traditional authority, who, in turn, sub-leases it to a third party (ibid).

The same applies to Permission to Occupy (PTO's). The latter are not surveyed and thus cannot be depicted spatially. It is the intention of Ingonyama Trust to identify all commercial establishments and upgrade them into long-term lease agreements. ITB also intends to survey all state uses and enter into lease agreements with the appropriate government institutions. It is understood that the Ingonyama Trust Board will not sell land outright, unless there are overwhelming and compelling reasons to do so. As a rule, it will either authorize the Minister of Land Affairs, or the KwaZulu-Natal Department of Traditional and Local Government Affairs under delegated authority to issue Permissions to Occupy

under the KwaZulu Land Affairs Act 11 of 1992 or grant a lease for an initial period of 35 years, renewable for a further period of 35 years. Obviously, in special circumstances, the arrangements can be modified. The Trust can also grant servitudes.

5.3.3 LAND OWNERSHIP

The **Land Ownership Map** depicts the ownership of the properties within Mkhambathini. The central portions of the municipality are characterised by privately owned farms that consist of private, trust and private business ownership while the far southern and northern portions are mainly Tribal Authority areas owned by the Ingonyama Trust. These areas are divided into four separate Traditional Authority Areas.

Depending on existing communication structures between the local authority, and the Traditional Authority, careful planning and co-ordination will be required to ensure proper and effective provision of services.

5.4 LAND USE MANAGEMENT

The municipality adopted both an Urban Scheme for Camperdown/Umlaas Road as well as a Rural Land Use Management Policy in 2014. The Rural Land Use Management Policy, on the other hand will cover land held in trust of the Ingonyama Trust Board and land regulated by the Subdivision of Agricultural Land Act (No. 70 of 1970).

The Rural Land Use Management Policy is a policy-based scheme to control and manage land within the appropriate context of traditional processes and the appropriate acknowledgement of the Subdivision of Agricultural Land Act (No. 70 of 1970) on agricultural land without infringing on the mandate of the Department of Agriculture, Forestry and Fisheries.

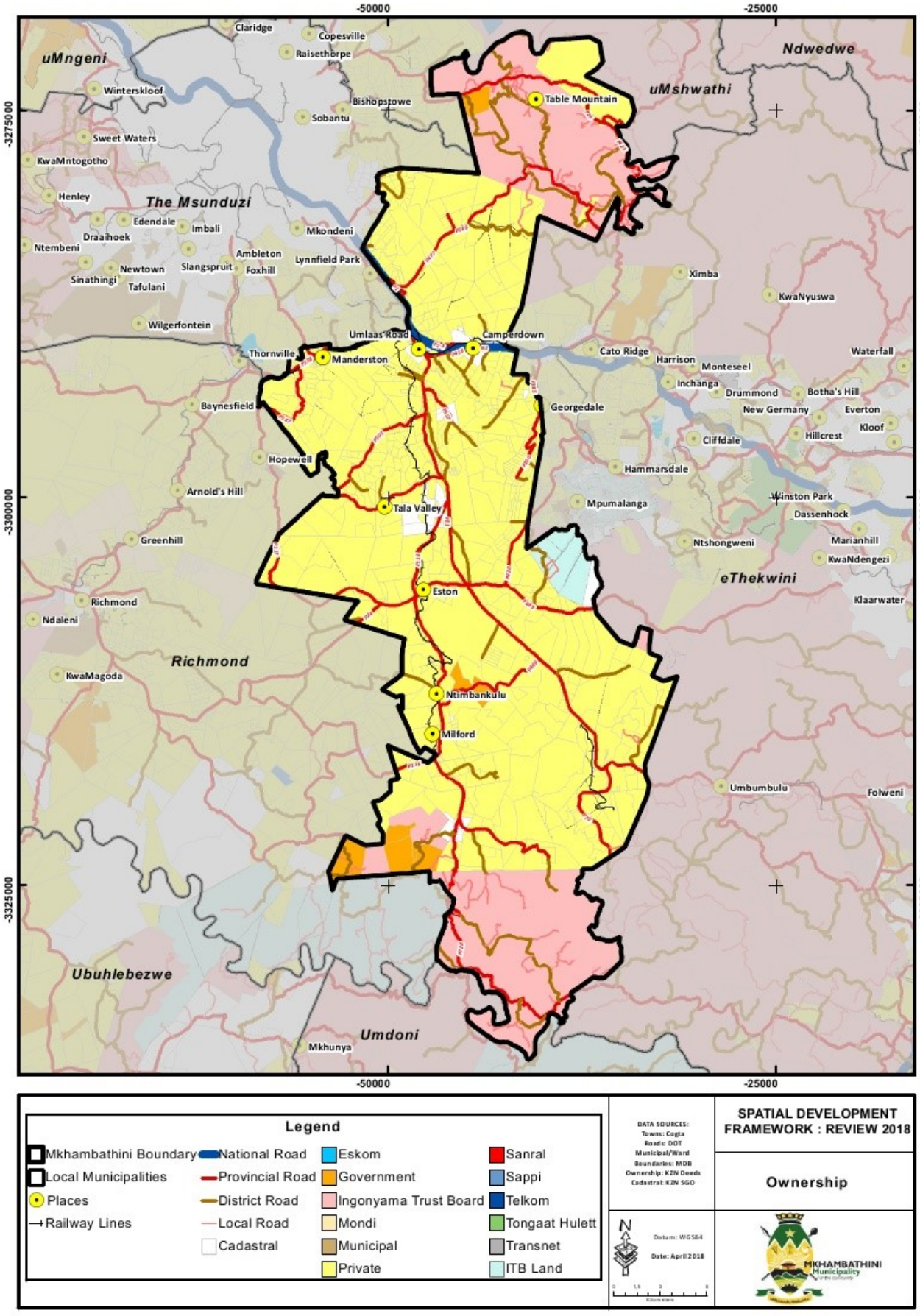
Agricultural Land within South Africa is regulated by the National Department of Agriculture, Forestry and Fisheries (DAFF) as custodians of agricultural land by means of the Subdivision of Agricultural Land Act, 1970 (Act 70 of 1970). Any development or assignment of land use rights on land regulated by this Act requires consent from the DAFF. Most sites in the mid-section of the Mkhambathini Municipality is affected by Act 70 of 1970 as illustrated by the map overleaf.

In preparing a policy-based mechanism over traditionally-owned land, emphasis is placed on preferred and non- preferred land uses and the processes for land development based on applicable legislation and indigenous practices currently applied on traditionally-owned land.

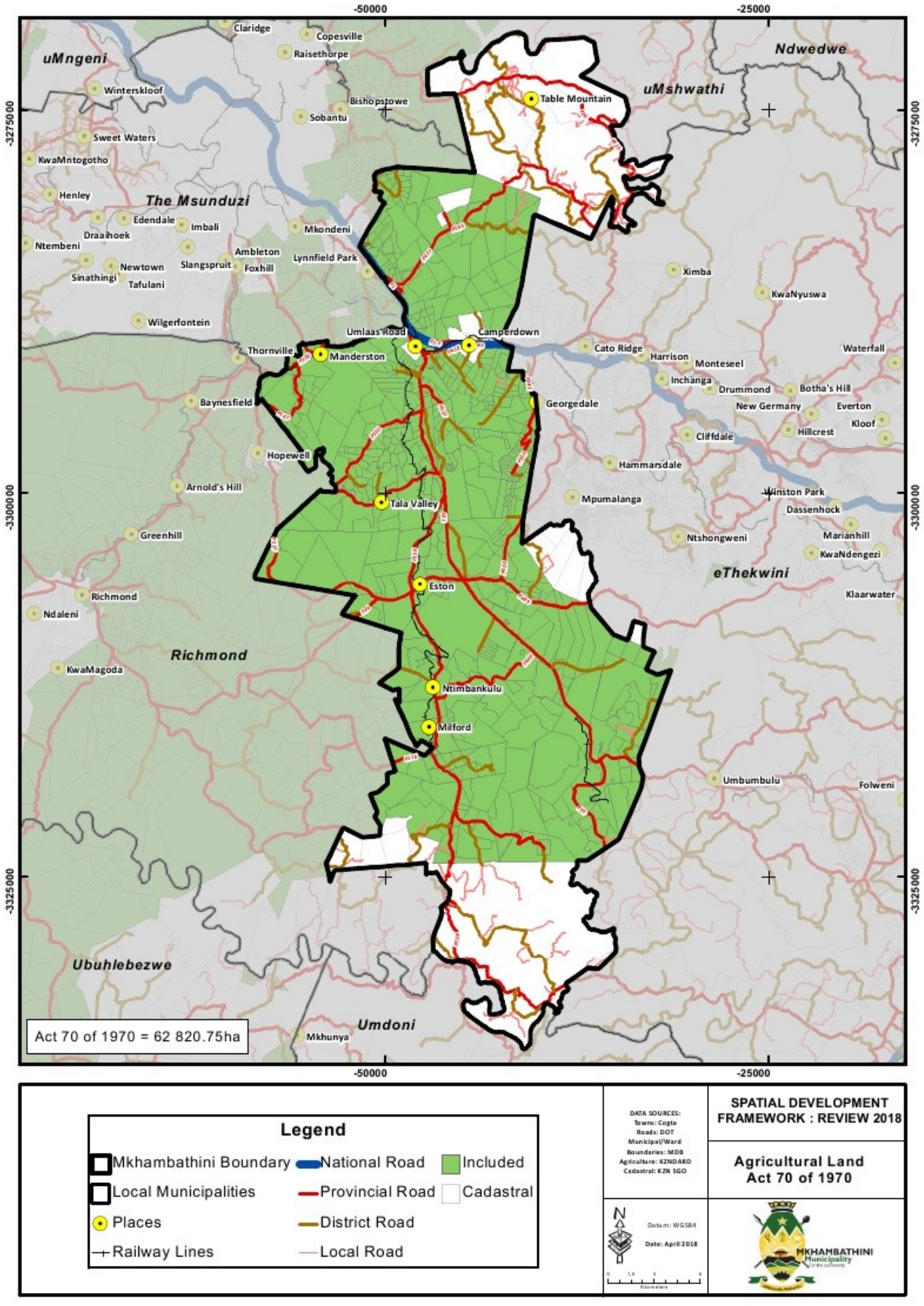
The intent of this policy-based scheme is to assist the municipality in decision-making processes on land development on agricultural land without undermining the provisions of the Subdivision of Agricultural Land Act (No. 70 of 1970) and traditional processes of land allocation. The intention of the scheme is to be flexible yet providing parameters within which land development can occur.

The municipality has furthermore adopted its Spatial Planning and Land Use Management Bylaws, which should be read in conjunction with the urban scheme and rural land use management policy.

MAP 11: LAND OWNERSHIP



MAP 12: LAND SUBJECT TO ACT 70 OF 1970



5.5 LAND REFORM

The **Land Reform Map** indicates land reform claims, which includes Transferred Redistribution, Labour Tenants Applications and Gazetted Restitution. From the map, it is evident that a large section of the municipality shows areas of different land reform projects and phases.

The land reform projects undertaken within Mkhambathini Municipality are indicated in the table below:

TABLE 5: LAND REFORM PROJECTS

LEGAL NAME	NAME OF PROJECT	PROGRAMME USED	PRODUCT TYPE AND NUMBER OF HOUSEHOLDS
Mzomusha CPA	Vaalkop and Dadelfontein	LTA	Settlement (10 HH)
PL & DS Mkhabela	Mr PL Mkhabela	Redistribution	Agri (1 HH)
Alhe Brothers CC	Camperdown Ahle	Redistribution	Commercial Farming (4 HH)
Tomboti Trading	Tomboti Trading Pty Ltd	Redistribution	Agri (4HH)
Zungu Family Trust-	Killarney Labour Tenants	LTA	Stock Farming, Cropping and Settlement (1HH)
Sings and Sings Auctioneers CC	Killarney (Sings and Sings)	Redistribution	Sugarcane Farming (3HH)
ZIbophezele Community Land Trust	INglebrook	Redistribution	Surgacane and Livestock Farming (64 people)
Amadwala Trading	Amadwala Trading 115	Redistribution	Farming, Chicken, Piggery, Cattle and Goats (2HH)
Zuma Family Trust	Sweethome	Labour Tenant	Sugarcane (18 people)
Clear Trade 108 cc	Valsch River Clear Trade	Redistribution	Sugarcane Farming (3HH)
T Bulala	Valsch River TFSL Farming	Redistribution	Sugarcane Farming (3HH)

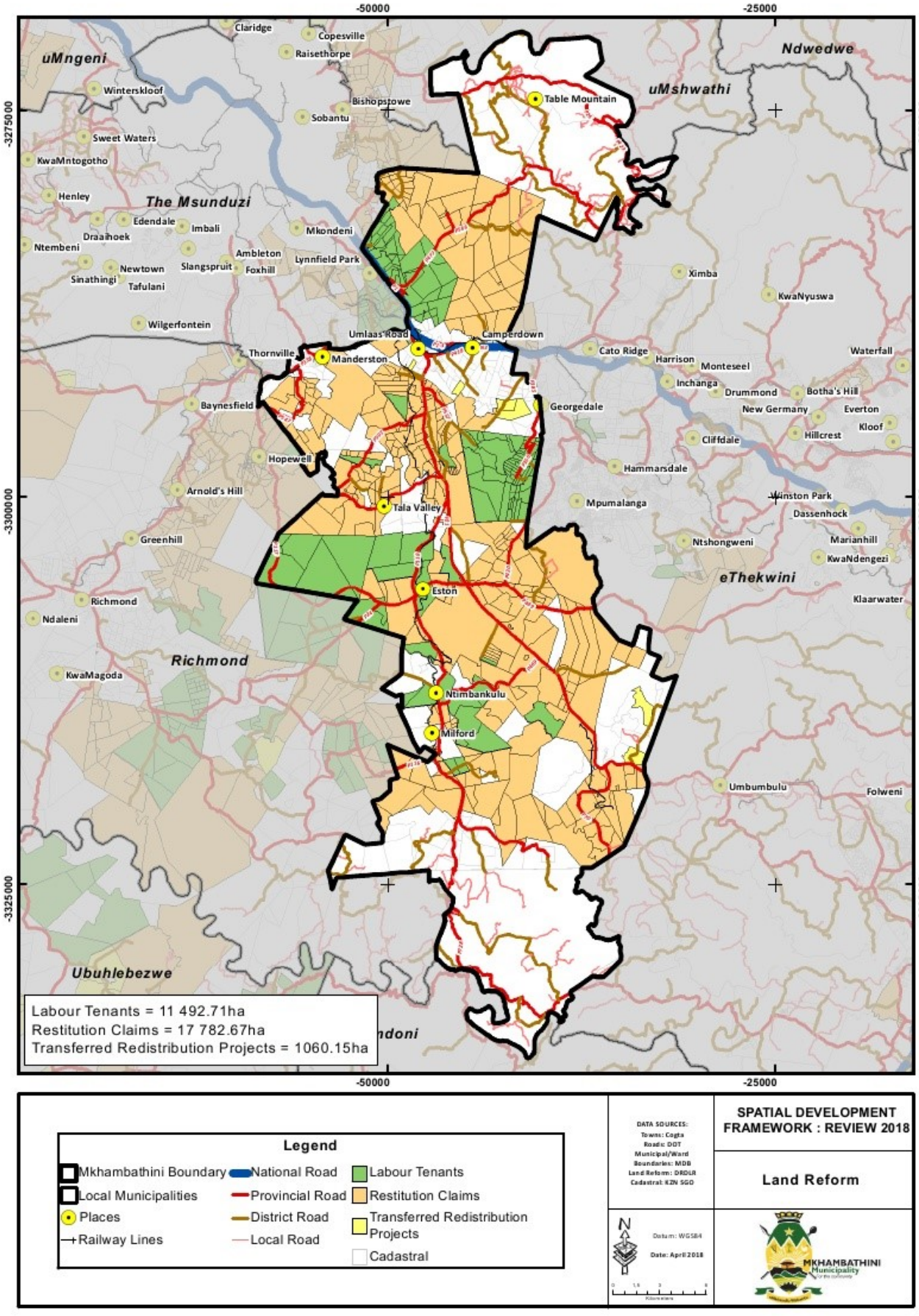
Source: Mkhambathini IDP 2017

5.5.1 LAND RESTITUTION CLAIMS

The 2017 Mkhambathini IDP indicated that 503 claims were lodged within Mkhambathini amounting to 45 964 ha of land. An amount of 498 of these claims have been settled with the land that amounts 44 971 ha.

A number of the identified claims are over the irreplaceable agricultural land towards the east of Mid-Illovo and therefore, the municipality and the associated communities would need to engage in proper management to ensure food security and protection of very good agricultural land.

MAP 13: LAND REFORM



5.5.2 LABOUR TENANT CLAIMS

According the municipal IDP 2017, 263 labour tenant claims have been lodged within Mkhambathini, affecting approximately 9 086 ha of land. The status of these claims would need to be determined.

5.6 HOUSING

The Mkhambathini Housing Sector Plan (Draft 2018) confirms that the focus on the provision of housing should not only be on housing delivery but also on housing development with a greater positive impact for the residents to be able to sustain their livelihood within that locality.

This implies that future housing delivery should be focussed within the vicinity of social facilities and economic opportunities to make it easier for the community to commute, to obtain services and employment opportunities. The provision of housing should therefore be an integrated approach to development, using the delivery of shelter as a primary focus, but including amongst other things basic service delivery (i.e. potable water, appropriate sanitation and access to electricity), obtaining or upgrading of land tenure rights, ease of access to adjacent communities and economic services, job creation plus skills transfer (i.e. during construction stages) and the outcomes should also build self-esteem in the end users.

5.6.1 HOUSING DEMAND

According to the Mkhambathini Housing Sector Plan (Draft 2018), approximately 46% of the households within the municipality consist of traditional dwellings. In the Tribal Areas, traditional households usually include the clustering of a number of thatched roofed huts, which lack basic infrastructure. Formal dwellings are houses with solid, usually concrete, top structure that are served with basic infrastructure. Informal dwellings are made from a variety of materials, are not structurally secure and have no basic infrastructure. Large portions of the people in the municipal area reside in traditional houses with formal houses concentrated mainly in urban areas.

The housing sector plan further estimates that only 4% (464) of urban households reside within informal settlements. This includes 387 (3%) households that reside in informal dwellings, and 77 (1%) of the households that reside in backyards. The total housing backlog is thus estimated at 6701 units within the entire municipality, with the majority of these (6462 dwelling units) within the traditional council areas. The table below provides an estimated distribution of housing typologies based on 2011 Census Data.

TABLE 6: HOUSING TYPOLOGY PER WARD

Total	Formal Housing	Traditional Houses	Backyard Dwellings	Informal Structures	Caravan
Ward 1	704	1458	6	0	2
Ward 2	336	1020	21	1	0

Total	Formal Housing	Traditional Houses	Backyard Dwellings	Informal Structures	Caravan
Ward 3	1708	577	15	29	15
Ward 4	1824	310	22	26	12
Ward 5	561	826	18	7	4
Ward 6	1160	679	52	3	1
Ward 7	211	1593	4	1	0
TOTAL	6504	6462	138	67	34
Share	49,25%	48,94%	1,05%	0,51%	0,26%

Source: Stats SA, 2011 (based on 2016 Wards)

5.6.2 HOUSING PROJECTS

The following housing projects have been identified within the municipal area and would need to be considered during the further SDF planning:

TABLE 7: HOUSING PROJECTS

PROJECT NAME	NUMBER OF SUBSIDIES	STATUS
KwaMahleka Rural Housing	500	Implementing Stage. 220 units constructed. Intended to be completed in Jun 2015.
Mbambangalo (Mapumulo) Rural Housing	1500	Implementing Stage. Completed.
KwaNjobokazi Rural Housing	400	Implementing Stage. 78 units constructed. Intended to be completed in Mar 2015.
Maqongqo Rural Housing	500	Implementing Stage. 405 units constructed. Intended to be completed in Jun 2013.
Stockdale	250	New Project. Recently approved. Require a detailed Environmental Study.
Poortje	481	New Project. Slums Clearance Project. Expropriation is being challenged.
Ward 7	TBC	New Project. GPS Referencing of beneficiaries underway.
Ward 2,3 & 6	TBC	New Project. Planned for 2019.

Source: Mkhambathini Housing Sector Plan, 2018 (Draft)

5.6.3 SUSTAINABLE HUMAN SETTLEMENTS

The notion of Sustainable Human Settlement refers to an integrated approach to housing provision for the residents of Mkhambathini (especially those who are classified within the low-income group). At the concept level, the requirements of sustainable human settlement are precise and unambiguous.

The focus on the provision of housing should not only be on housing delivery but also on housing development with a greater positive impact for the residents to be able to sustain their livelihood within that locality. This implies that future housing delivery and development that takes place within Mkhambathini should be incorporated within the vicinity of social facilities and economic opportunities to make it easier for the community to commute, to obtain services and employment opportunities. This requirement is intended to address the legacies of the past whereby individuals (especially the less privileged) were subjected to poor living conditions with a serious lack of amenities to sustain their livelihood within those settlements. The provision of housing should be an integrated approach to development using the delivery of shelter as a primary focus but including amongst other things basic service delivery (i.e. potable water, appropriate sanitation and access to electricity), obtaining or upgrading of land tenure rights, ease of access to adjacent communities and economic services, job creation plus skills transfer (i.e. during construction stages) and the outcomes should also build self-esteem in the end users.

Housing delivery and development within Mkhambathini occurs in different forms. The first regards the state funded, low-cost housing in which the Department of Human Settlements serves as the developer. The second pertains to private sector developments targeting mainly the upper income groups. The draft Mkhambathini Spatial Development Framework should be a pillar in terms of informing the realization of sustainable human settlements through the implementation of these housing projects.

5.6.4 RURAL HOUSING DEMAND

According to the draft Municipal Housing Plan, approximately 46% (6 269) of the households consist of traditional dwellings. From this, it is evident that the housing backlog is very high in tribal council areas. Housing demand is defined as the number of households requiring formal housing. Traditional housing is perceived as an acceptable form of housing and much of the traditional population lives in this form of housing. In the Tribal Areas traditional households usually include the clustering of a few thatched roofed huts, which lack basic infrastructure. Formal dwellings are houses with solid, usually concrete, top structure that are served with basic infrastructure. Informal dwellings are made from a variety of materials, are not structurally secure and have no basic infrastructure.

5.7 SPATIAL TRENDS AND PATTERNS

5.7.1 RURAL SETTLEMENT DYNAMICS

Rural settlements are not all the same and these settlements are dynamic complex spatial systems. As such, the understanding of the factors that shape these settlements are critical in SDFs and the

implications for spatial planning must be clearly understood. The Mkhambathini SDF thus needs to respond to the rural dynamics of the area, to make the SDF a functional and useful spatial planning tool.

Rural settlements must respond to a range of factors including topographical features, access to natural resources, livelihood strategies, access to basic services and road infrastructure. With the current national government emphasis on rural development and the mandatory introduction of land use schemes in rural areas, it has become imperative to base spatial planning in these areas on informed understanding of spatial dynamics, trends and patterns. Also critical is the relationship between these settlements and other key structuring elements. The rural settlements in Mkhambathini neither followed legal prescripts nor has land use pattern evolved in line with the dictates of systems and procedures such as Town Planning Schemes. Instead, they have emerged in the context of land need, forced removals and livelihood strategies. Today, their growth and spatial development is highly influenced by access to basic services and public facilities.

5.7.2 SETTLEMENT GROWTH AND SPRAWL

Settlements within the municipality have experienced growth despite the low densities in which the settlements exist. Apart from pressures around Camperdown / Umlaas Road, there has been a significant growth in the settlements around Opokweni and Broadview.

Settlement growth has implications for service delivery and the management of conservation areas. The appropriate management of the growth of these settlements become important. Additionally, settlement plans and containing the outward growth of settlements become necessary issues to address.

5.7.3 IMPACTS OF TRADITIONAL LAND ALLOCATION SYSTEM

A large portion of the population in Mkhambathini resides in areas where there is strong influence of traditional leadership and the associated traditional land allocation practices. These systems have been passed on from generation to generation and adapted in response to social changes. In a context of population growth and in- migration, this system has given rise to settlements that are neither integrated nor sustainable. Homesteads are spread unsystematically in space, which renders infrastructure development inefficient from a cost perspective. Some households have located in areas that are poorly accessible, environmentally sensitive and generally not suitable for settlement purposes. It is expected that the implementation of the scheme in these areas will introduce controls, norms and standards, and facilitate the transformation of rural settlements into sustainable human settlements.

5.7.4 OUTMIGRATION OF YOUNG PEOPLE

As mentioned before, the Mkhambathini Municipality has been experiencing growth between 2011 and 2015. Despite this, the municipality has also experienced the phenomenon of outmigration of young people. This could be attributed to young people leaving the municipal area in search for job opportunities in other areas (i.e. Msunduzi & eThekwini) with high economic activity compared the

Mkhambathini area. The lack of secondary and tertiary institutions within the municipality could be the contributing factor in this. The outmigration of young people presents several socio-economic consequences, which include:

→ *Economy of the municipality*: The loss of the economic active portion of the population has certain consequences for the municipality. Economic productivity and the future growth of the area is likely to be affected, since it is unclear if these young people will return to the area, or if they will return to retire on their ancestral land.

→ *Changes in the structure of the population*: Most young people leaving the area are the economic active portion of the population. They leave behind the elderly.

→ *Educational facilities:* The decrease in the young population can be attributed to the lack of tertiary educational facilities in the region.

5.7.5 LANDSCAPE AND SETTLEMENT

Landscapes are composed of different elements, including landforms such as valleys, ridges, mountains, plains, vegetation and land-use or activities such as agriculture or settlement. It includes landforms such as valleys, ridges, mountains or plains and vegetation, as well as land- use or activities such as agriculture or settlement. A landscape can thus be described as what the viewer perceives when standing in a place and is driven by the character of the landscape. However, different landscapes have different capacities to absorb development. For example, steeper areas (which have unspoilt landscapes) are more sensitive to development as opposed to flatter areas. This requires the direction of development into areas where it is most appropriate, through the identification of landscapes that are more sensitive to development. Landscape should spatially guide development and should protect the intrinsic character of sensitive and valuable landscapes.

The **urban landscape** is an identity assigned to a place with concentrations of what are seen to be urban -type characteristics. These include a concentration of people, non-agricultural activities and a much higher density of human structures such as houses, commercial buildings, roads, bridges, and railways than its surrounding areas. These characteristics can currently be seen in Camperdown and Umlaas Road.

Camperdown is the main urban centre in the municipality, providing high order goods and services, residential and commercial accommodation. Camperdown is largely residential in nature with a relatively small business and retail sector. Its immediate surrounding area is dominated by agricultural land uses such as sugarcane farms and poultry farming. Umlaas Road, on the other hand, is a mixture of industrial and commercial activities surrounded by agricultural land. These two areas currently constitute the urban landscapes in Mkhambathini Municipality.

The **rural landscape** refers to areas where the characteristics identified for the urban landscape is partially existent, but with less intensity. This will include settlement areas with both high and low densities, yet without the variety of land uses which are found in the urban area and areas where

primary and secondary agricultural activity is present. These include areas like Eston, Manderston, Mid Illovo, Ophokweni, Maqonqgo and Ngilanyoni.

Within the context of the urban-rural-wilderness continuum, the **wilderness landscape** represents areas that have retained their natural characteristics and have little or no impact from human activities. These are areas which are either formally or informally designated as having biodiversity significance based on the presence of animal and plant species, rivers and their surroundings, mountains and valleys as well as areas which are considered unfit for development (for example, steep slopes, flood plains, etc.). In Mkhambathini Municipality, areas such as these are found in the north like Table Mountain, Nagel Dam and areas north of Camperdown, which have been designated as Critical Biodiversity Areas. Limited development will be permitted in these areas. The SDF will therefore make appropriate proposals to ensure that such areas are conserved and managed accordingly.

5.7.6 IMPACT OF LAND REFORM

The land reform programme is a Constitutional imperative, and forms one of the cornerstones of the rural development programme of national government. Some portions of Mkhambathini municipality are subject to various elements of the land reform programme. While this will transfer productive assets to the rural poor, it may also have an effect of reducing commercial agricultural land and create isolated settlements. Land reform also affects agriculture. Land capability of the Mkhambathini area is of high value and must be secured. Large portions of the municipal area consist of good agricultural potential. It is thus critically important to protect agricultural land and promote its productive use.

6 SOCIAL ANALYSIS

The Social Analysis provides an overview of the demographic reality within the municipality as well as a review of the access to social facilities relating to education facilities, health facilities, community facilities, established cemeteries and crematoria and waste disposal sites.

6.1 HEALTH FACILITIES

Standards for the provision of and access to Health Facilities are the standards prescribed by the CSIR. The KZN Department of Health is in the process of revising its standards, and the KZN Provincial Planning and Development Commission also published a document with a review and lengthy discussions on the standards. All the standards vary, and through discussions with the Local Authorities, a decision must be made with regards to which standards will be implemented. The CSIR Standards table, which was used for analysis of provision of facilities, includes:

TABLE 8: STANDARDS FOR HEALTH FACILITIES

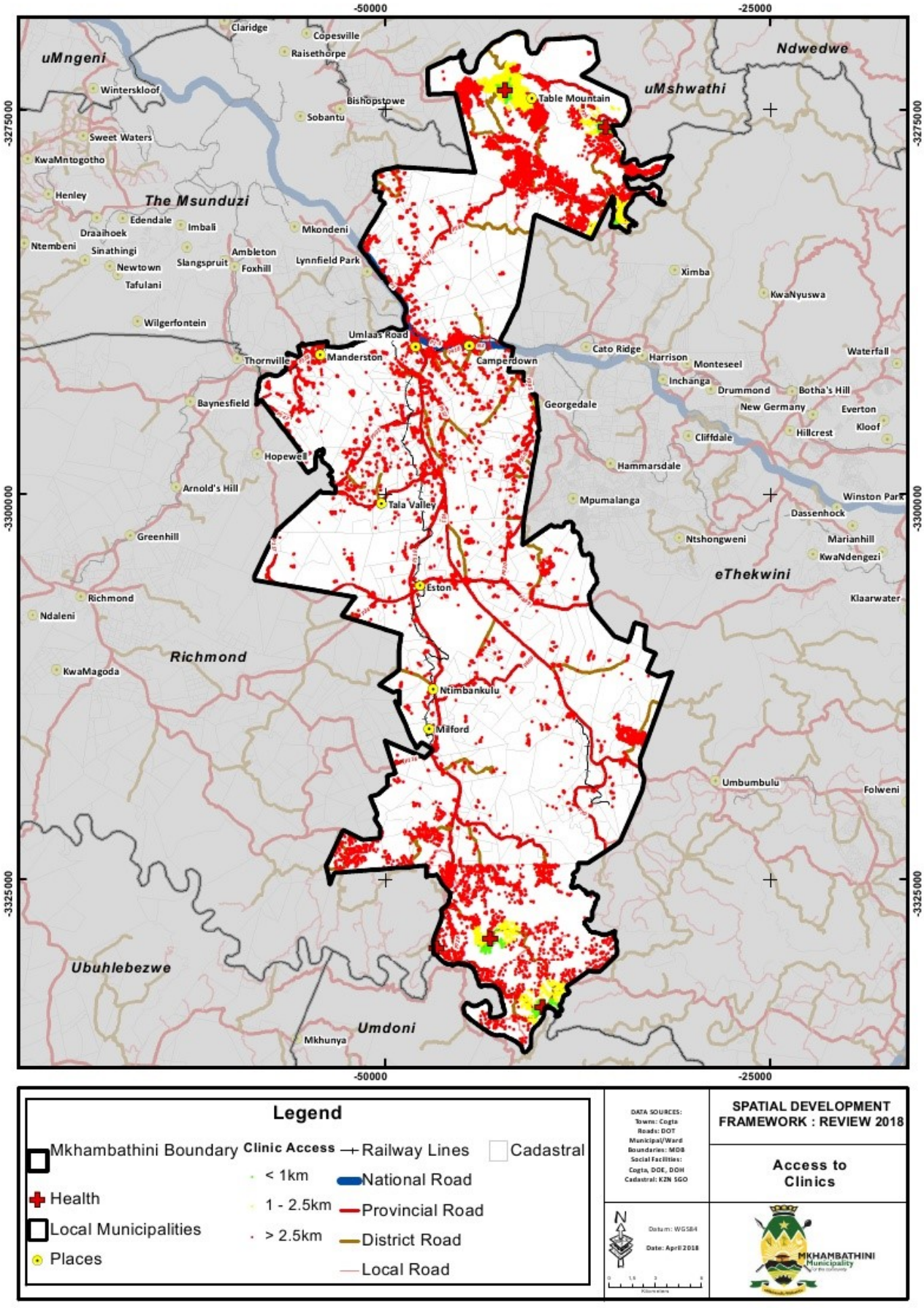
Facility	Provision Standard	Access Standard
Clinic	1 Clinic for every 12 500 persons	None prescribed, thus standard of maximum 5 km access distance used
Hospital	1 Hospital for every 100 000 persons	None prescribed, thus standard of maximum 20 km access distance used

Source: CSIR, 2015

There are no hospitals within the Municipality and the nearest facility to access for its residents is the hospitals located in Pietermaritzburg in the Msunduzi Municipality.

There are however four fixed clinics and mobile clinic visits at once per month. The spatial distribution of health facilities is depicted on the **Access to Clinics** map. The map depicts existing clinics with an optimum walking distance of 1 to 2.5 km and a maximum walking distance of 5km. Access to Clinics in the Mkhambathini municipality indicate that the central portions are predominantly further than 2.5 km from a clinic as opposed to the northern and southern portions, mainly indicating distances of less than 1 km from a clinic. Some of the areas in the municipality is also served by clinics that are in adjacent municipalities. The N3, being a national road, should improve the situation for residents near it as access to clinics can be obtained from the main route. It must however be noted that mobile clinics service most of the Mkhambathini Local Municipality and thus providing a basic service to area indicated as having poor access to the fixed clinics.

MAP 14: ACCESS TO CLINICS



6.2 EDUCATION

6.2.1 EDUCATION FACILITIES

Mkhambathini is served only by primary and secondary education facilities. The **Primary Schools**, and **Secondary Schools** maps, depict the localities of these educational facilities within the Municipality.

TABLE 9: STANDARDS FOR EDUCATION FACILITIES

Facility	Provision Standard	Access Standard
Primary School	1 Primary School for every 750 Households	Maximum walking distance of 5 km
High School	1 High School for every 1000 to 1500 Households	Maximum walking distance of 5 km

Source: Department of Education

Accessibility to education facilities is depicted by means of colour notation depicting distance to the schools. The following colour notations are utilised.

→ Green - Areas serviced within 2.5km by a facility.

→ Yellow - Areas serviced within 2.5km to 5km by a facility.

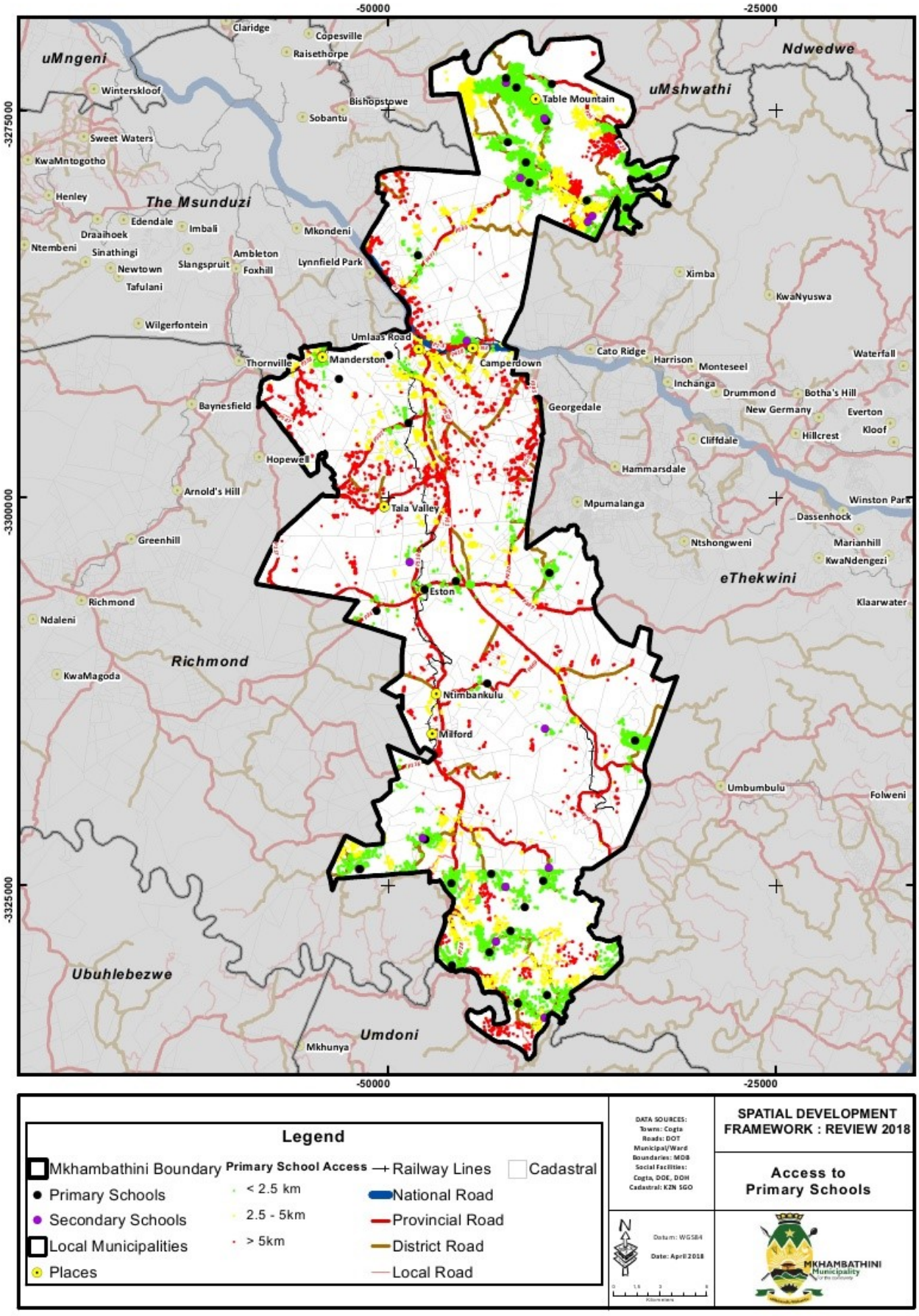
→ Red - Areas not serviced within 5km by a facility.

The municipality is relatively well serviced in terms of primary schools, as is depicted on the **Access to Primary Schools map**. Access to Primary Schools are also expressed in distance from households ranging from closer than 2.5 km to further than 5 km. The northern and southern areas, where the majority of households/settlements are located, show scattered areas further than 5 km with the majority being in a radius smaller than 2.5 km. The central parts of the municipality have scattered settlements that is further than 5 km from a primary school.

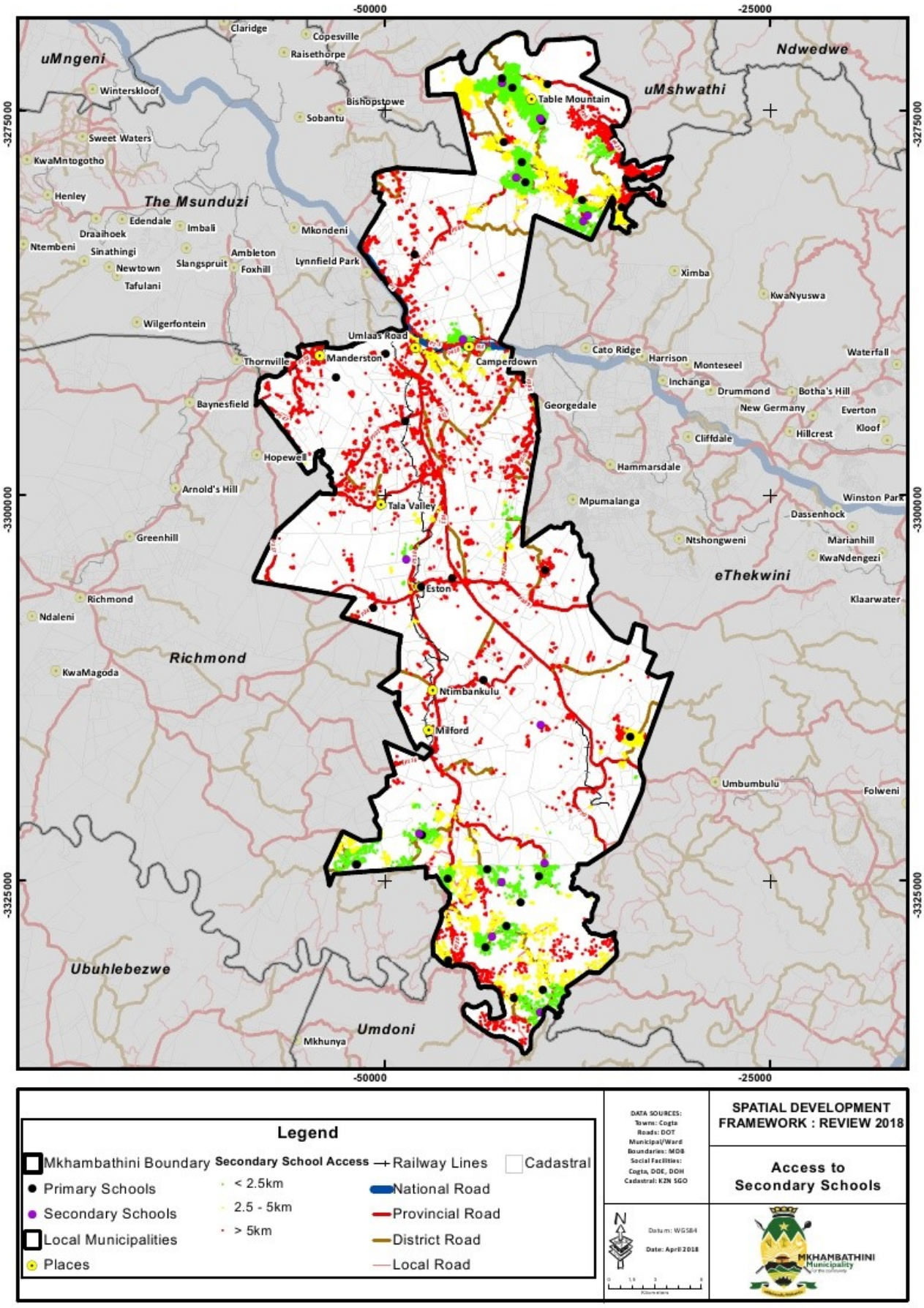
Access to Secondary Schools is expressed in distances with green being less than 2.5km, yellow is between 2.5-5km and red is further than 5 km to a secondary school. Towards the south of the municipal border as depicted on the **Access to Secondary Schools map,** schools are located on roads and therefore settlement serviced by local distributor roads have better access to schools. Secondary schools in the central portions are scattered with the majority of households living further than 5 km from a secondary school. Noted in the northern corner there are areas well located within 2.5 km, but towards the municipal boundary, it is the complete opposite.

The challenge with these facilities are the maintenance, upgrading and quality of the facilities. Depending on the topography, accessibility might also pose challenges to the community. The topography, density of settlements, amongst other factors will influence the ability to service certain areas effectively in the future.

MAP 15: ACCESS TO PRIMARY SCHOOLS



MAP 16: ACCESS TO SECONDARY SCHOOLS

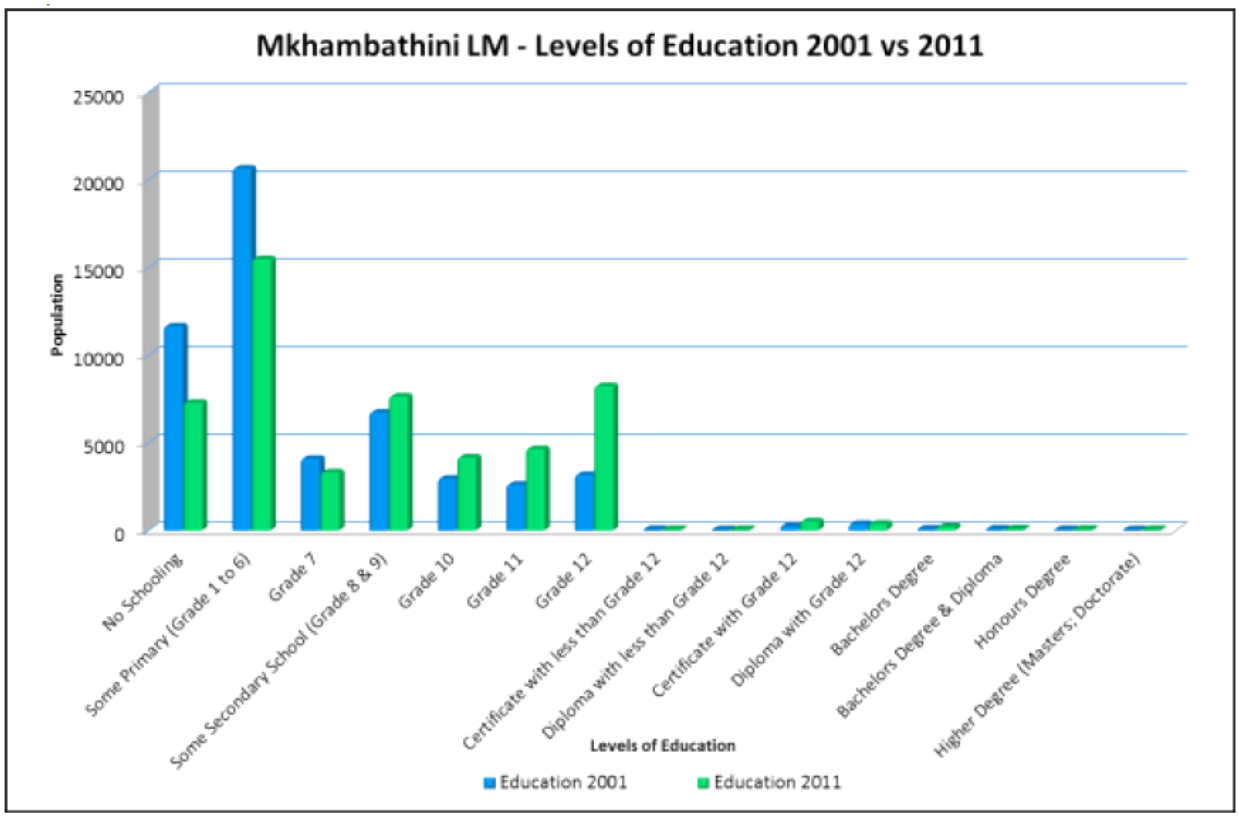


6.2.2 LEVELS OF EDUCATION

The graph below depicts the levels of education for Mkhambathini residents. Almost 11 000 of residents have no formal school education, with approximately 20 000 (30%) residents with some primary level education. This is most likely partially due to the large number of people under the age of 10 years old. Only 847 or 1, 4%, of the population have an education higher that grade 12.

These levels of education impacts drastically on the type of work opportunities one can create for the populace. Unskilled and semi-skilled labour can be used for labour intensive projects such as infrastructure implementation, but for the communities to benefit from opportunities such as tourism, or other opportunities presented by the unique locality of the area, it might be possible or needed that some training be presented to the communities to empower them to utilise these opportunities.

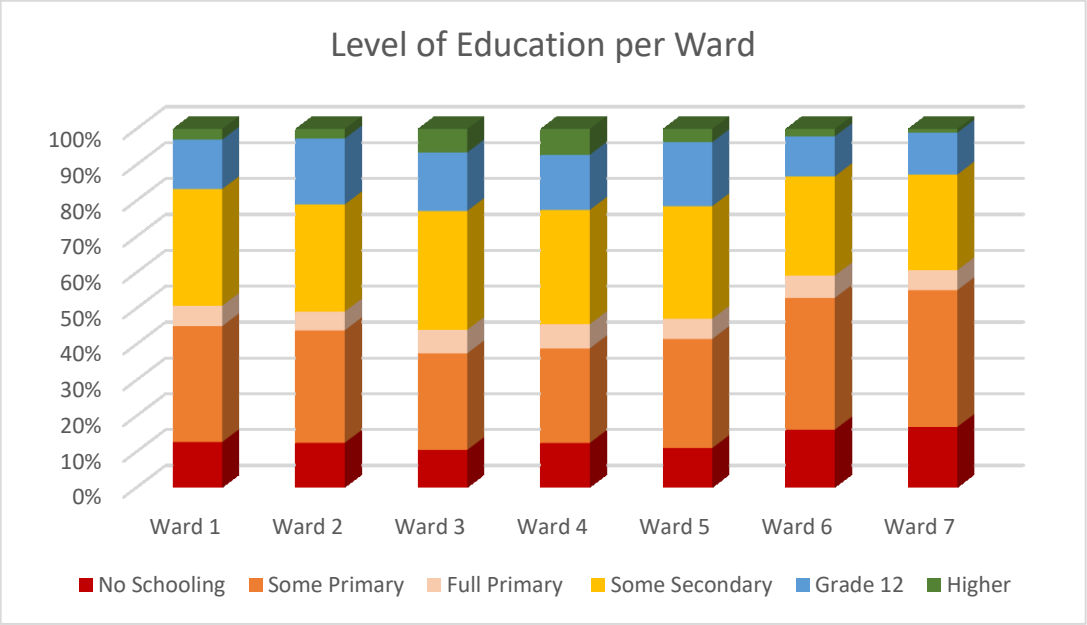
FIGURE 9: LEVELS OF EDUCATION (2001 VS 2011)



Source: Stats SA Census 2001& 2011

When comparing the education levels within the different wards, there is an almost equal distribution of education levels throughout the Municipality, although ward 7 appears to have the lowest general education levels.

FIGURE 10: LEVELS OF EDUCATION PER WARD



Source: Stats SA Census 2011 (Calculated for 2016 Wards)

The KZN Librarian services provided the following standards for provision of Libraries:

TABLE 10: STANDARDS FOR PROVISION OF LIBRARIES

Facility	Provision Standard	Access Standard
Public Library	1 Public Library for every 60 000 Persons.	Maximum walking distance of 3 km

Although this is the official standard, the KZN Librarian Services indicated that these levels of provision are not at all achievable and is not cost effective. In a densely populated city such as Durban, this might be achievable, but in rural KZN, it is difficult to provide a number of cost-effective libraries within the limited budget. The situation is constantly assessed and libraries are then provided near a concentration of schools and urban areas, where the accessibility to the library is the highest and the largest number of people can be reached. The population is also too scattered to provide facilities to service all households within the access standards as prescribed. It needs to be noted that these standards refer to a large fully-fledged municipal library, whilst smaller libraries with specialised learning materials could also be provided at schools and community halls.

Mkhambathini is currently serviced by a single library situated in Library Road, Camperdown.

6.3 POLICE SERVICES

According to **Access to Police Stations** map**,** two police stations currently service Mkhambathini. The standards for provision of Police Stations are as follows:

TABLE 11: STANDARDS FOR PROVISION OF POLICE STATIONS

Facility	Provision Standard	Access Standard
Police Station	1 Police Station for every 25 000 households	Accessible within 20 km radius

The **Access to Police Stations** map (see overleaf) illustrates that the municipality is serviced with police stations at the Camperdown and Mid-Illovo areas respectively. There are at least four police stations near the municipal borders, which can also serve the municipality in terms of the distance factor. Areas around Table Mountain in the north as well as dense areas to the south of the municipality are not served according to these standards. The central areas, which are less densely populated are also not served in terms of the distance factor standards.

6.4 COMMUNITY HALLS

There are currently two official community halls recorded for Mkhambathini in their Dataset. This creates the opportunity to identify additional Community Halls as public facilities, as Mkhambathini is well established. With the amount of schools, a number of multi-purpose facilities must have been constructed to be utilised by the community and the schools.

6.5 CULTURAL HERITAGE

Several national and provincial legislative policies and guidelines that pertain to the management and protection of heritage resources within KwaZulu-Natal, as well as throughout South Africa were given cognisance during this study. These included:

→ The National Heritage Council Act, No. 11 of 1999;

→ The National Heritage Resources Act, No. 25 of 1999;

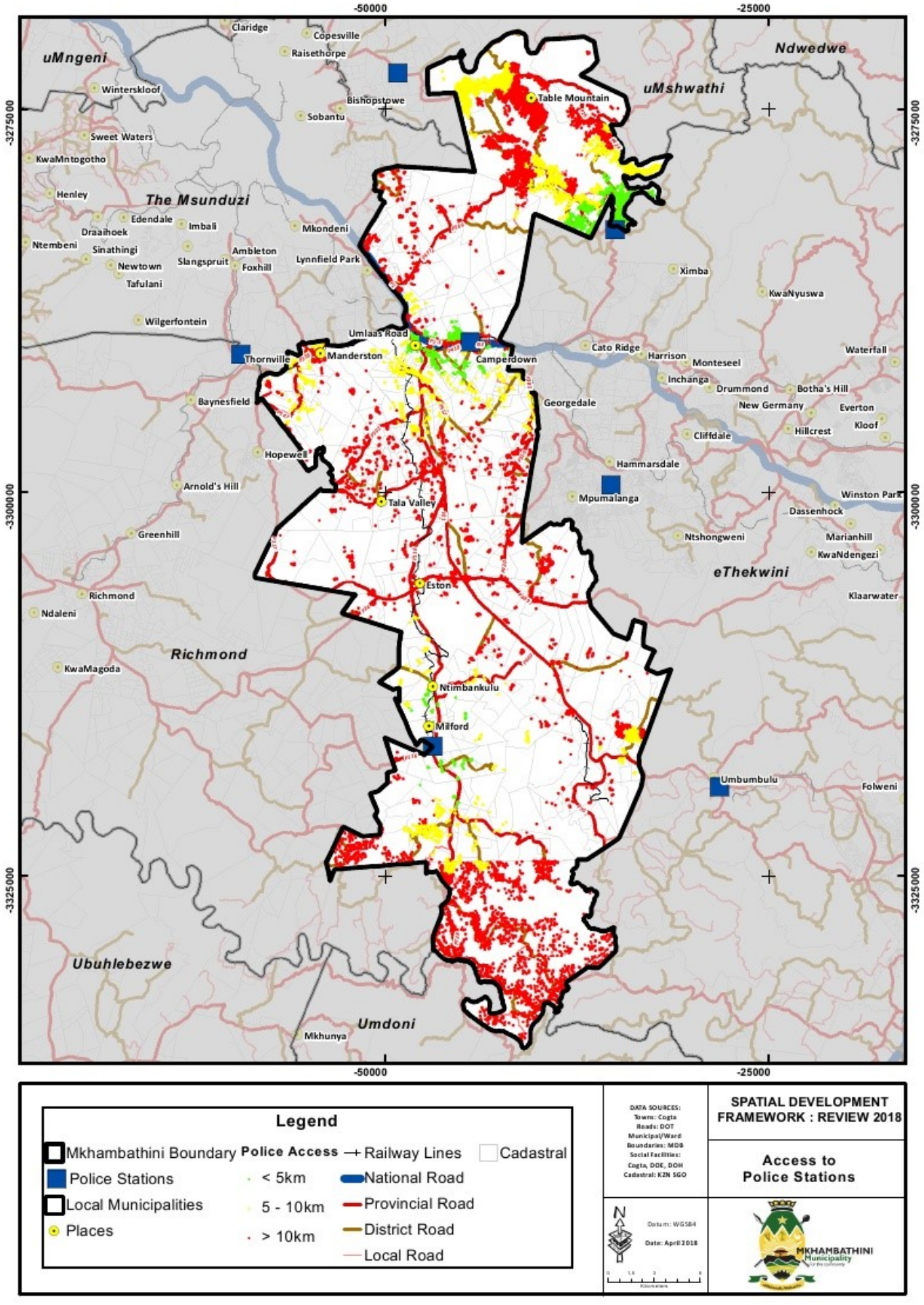
→ The National Monuments Act, No. 28 of 1969;

→ The National Environmental Management Act, No. 107 of 1998; and

→ The KwaZulu-Natal Heritage Act, No. 4 of 2008.

There are currently no municipal bylaws for the study area that pertains specifically to heritage resources. Furthermore, a recent district wide assessment of cultural heritage resources as part of the uMgungundlovu DM Strategic Environmental Management Plan (2012) identified various architectural, archaeological, historical and freedom struggle sites within the district. The two main cultural heritage sites include Mgwahhumbe and the Hope Valley.

MAP 17: ACCESS TO POLICE STATIONS



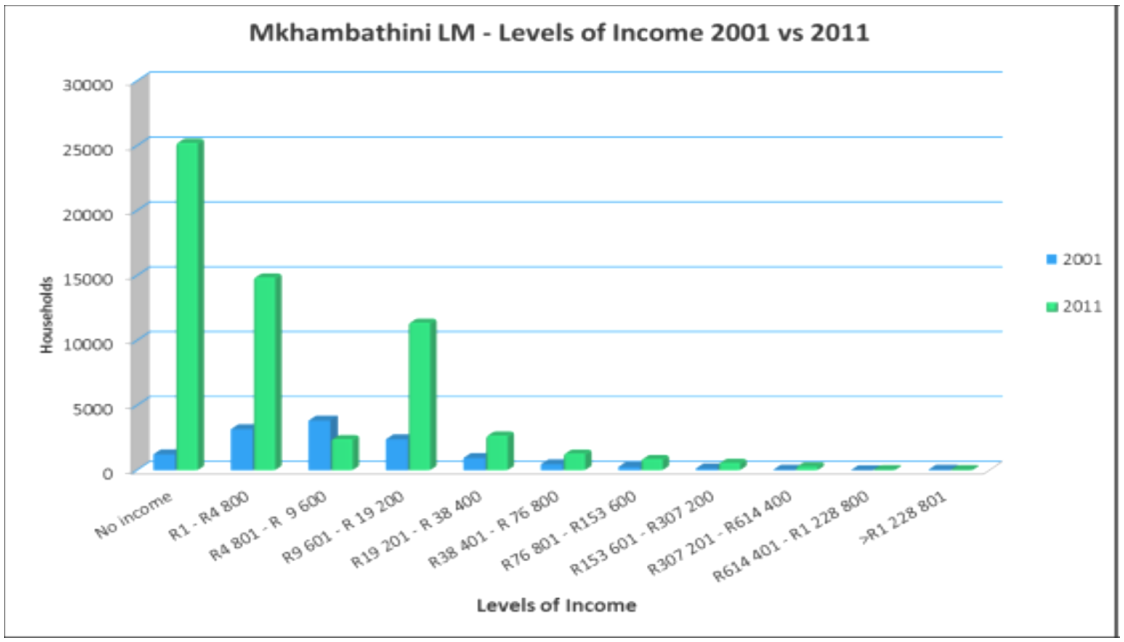
7 ECONOMIC ANALYSIS

The economic analysis includes the analysis of the agricultural development potential of the area, the identification of prime agricultural land, identification of tourism areas, as well as the identification of existing and potential economic development nodes.

7.1 INCOME DISTRIBUTION

The graph below depicts the income distribution throughout Mkhambathini Municipality. With an overall low-income levels as is the case in Mkhambathini, it is very difficult for the municipality to build a proper tax base, which can be utilised for provision and maintenance of services. The graph also shows that the majority of households earns no income. This is typically the income level of a household, which receives social grants from government and indicates a high social grant dependency. Only a small portion of the population qualifies for payment of taxes. This leaves a huge burden on the current taxpayers, who basically carry the municipality financially.

FIGURE 11: LEVELS OF INCOME (PER ANNUM)

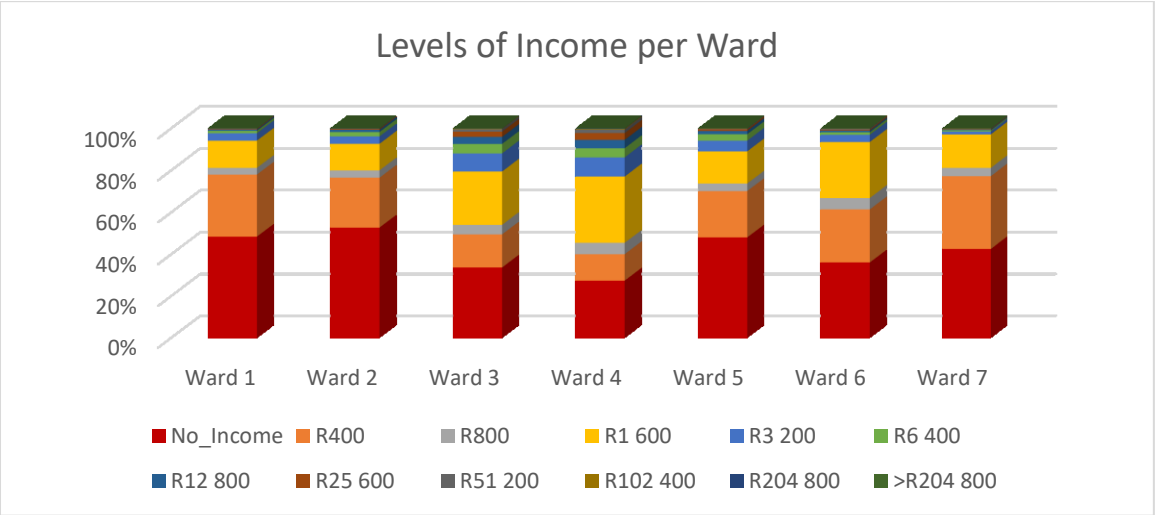


Source: Stats SA Census 2001 & 2011

Without external funding, the municipality will not be able to implement nor maintain any new services. It is therefore essential that the municipality implement initiatives to grow its tax base, by implementing successful economic development initiatives.

The graph below provides a comparison of the income levels between the various wards. The southern and northern portions of the municipality constituted by ward 6 and 7 and wards 1 and 2 appear to be the areas of lowest income. This all points to a lack of economic opportunities within these remote areas, which will have to be addressed. With the concepts of spatial cost and service differentiation in mind, the SDF will to a certain extent aim to direct focussed expenditure programmes to these areas of need.

FIGURE 12: LEVELS OF INCOME PER WARD



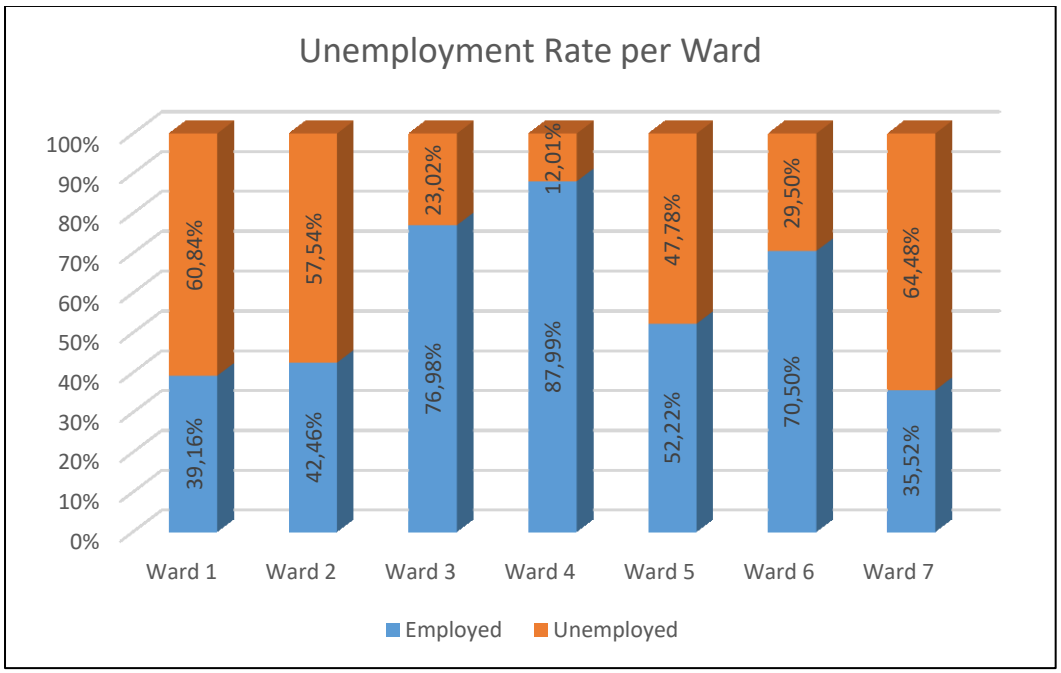
Source: Stats SA Census 2011 (Calculated for 2016 Ward boundaries)

7.2 EMPLOYMENT

7.2.1 UNEMPLOYMENT LEVELS

It is estimated that the municipal wide unemployment rate is 28.42%, although the rate is much higher within certain wards as indicated by the figure below.

FIGURE 13: UNEMPLOYMENT RATE PER WARD



Source: Stats SA Census 2011 (Based on 2016 Ward Boundaries)

The highest levels of unemployment are found in the rural portion of the municipality. In the north, this includes Ward 1 (60.84%), Ward 2 (57.54%), Ward 5 (47.78%) and Ward 7 (64.48%) in the south. This is an indication of a growing economy and higher levels of employment and work opportunities.

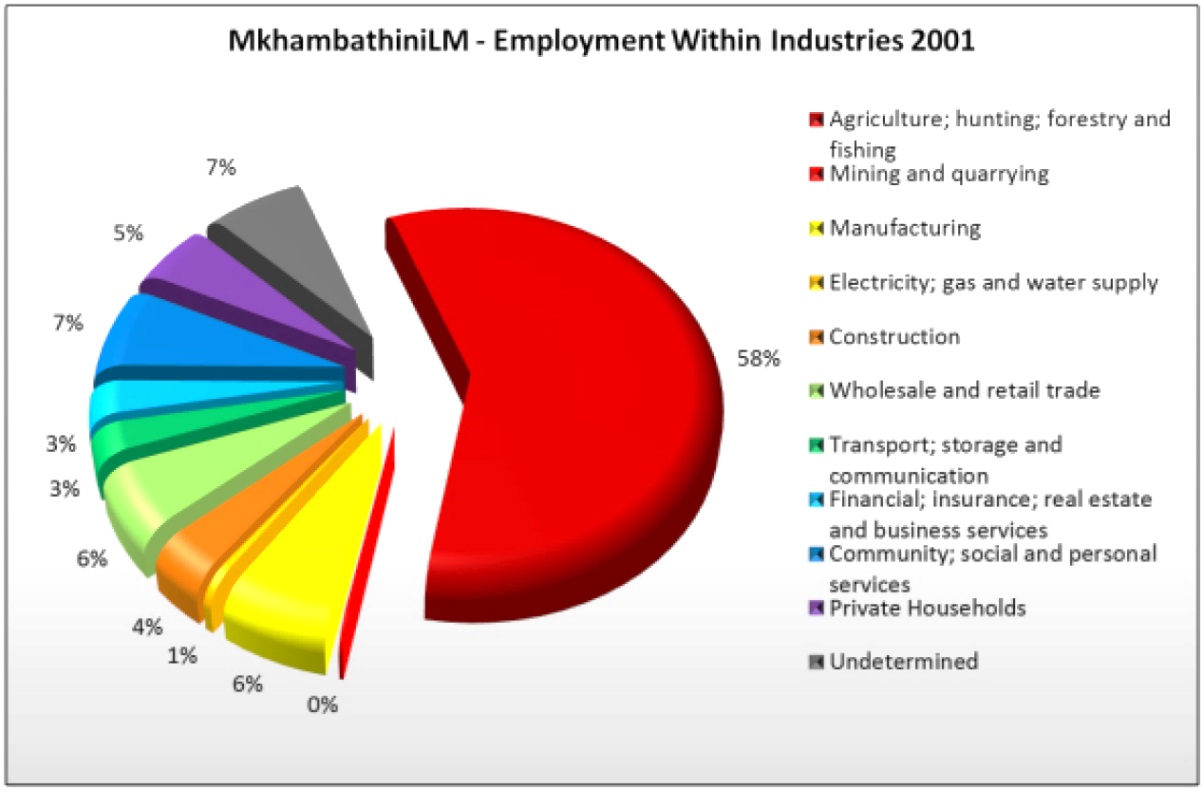
Ward 4 has the lowest level of unemployment, which is likely to be due to the employment created by the agricultural sector.

The implication of this is that there seems to be spatial concentration of employment within the central portions of the municipality, towards the N3 route. The SDF (and other development strategies) would thus need to focus on the stimulation of economic activities within the rural areas as well as promoting access of those communities to the areas and sectors of higher employment.

7.2.2 EMPLOYMENT SECTORS

The biggest employment sector in the municipality is the Agriculture; hunting, forestry and fishing Community; sector (58%), indicating the substantial impact that the commercial sugarcane industry has on the local economy of the municipality. The Community, social and personal services sector (7%) is the second highest employment industry in the municipality, together with undetermined industries. Electricity, gas and water supply and wholesale and retail trade are also noticeable contributors to the employment industries in the municipality.

FIGURE 14: EMPLOYMENT PER INDUSTRY



Source: Stats SA Census 2011

It is evident that the Agriculture and Manufacturing industries account for 64% of employment within the municipality and the SDF strategies would need to be aimed at supporting the growth and development of those sectors.

7.3 ECONOMIC CLIMATE

The Mkhambathini Municipality is based in Camperdown, in the south-eastern periphery of uMgungundlovu District Municipality, only 47 minutes from King Shaka International Airport and 30 minutes from Africa's busiest harbour. Agricultural production centres on vegetables grown for local and hinterland fresh produce markets, nuts and sugar cane (processed through a mill at Eston). The area features the second highest concentration of poultry producers in the world, supported by a network of service suppliers, as well as pig and beef farming. Tourism is centred on African experiences, with attractions such as the Tala Game Reserve, Nagle Dam, Lion Park, Raptor Centre, Umgeni Valley, etc.

The current focus of central Government is to grow the economy and to create an environment conducive for further job creation. It has been agreed by Government that skills development is key to the achievement of these objectives. This is relevant to the Mkhambathini Municipality like in the District since the majority of the population are classified as youth (being younger than 35). There is a need to strengthen and support education and training programmes. Most of these youths are un-franchised and are jobless.

7.4 AGRICULTURE

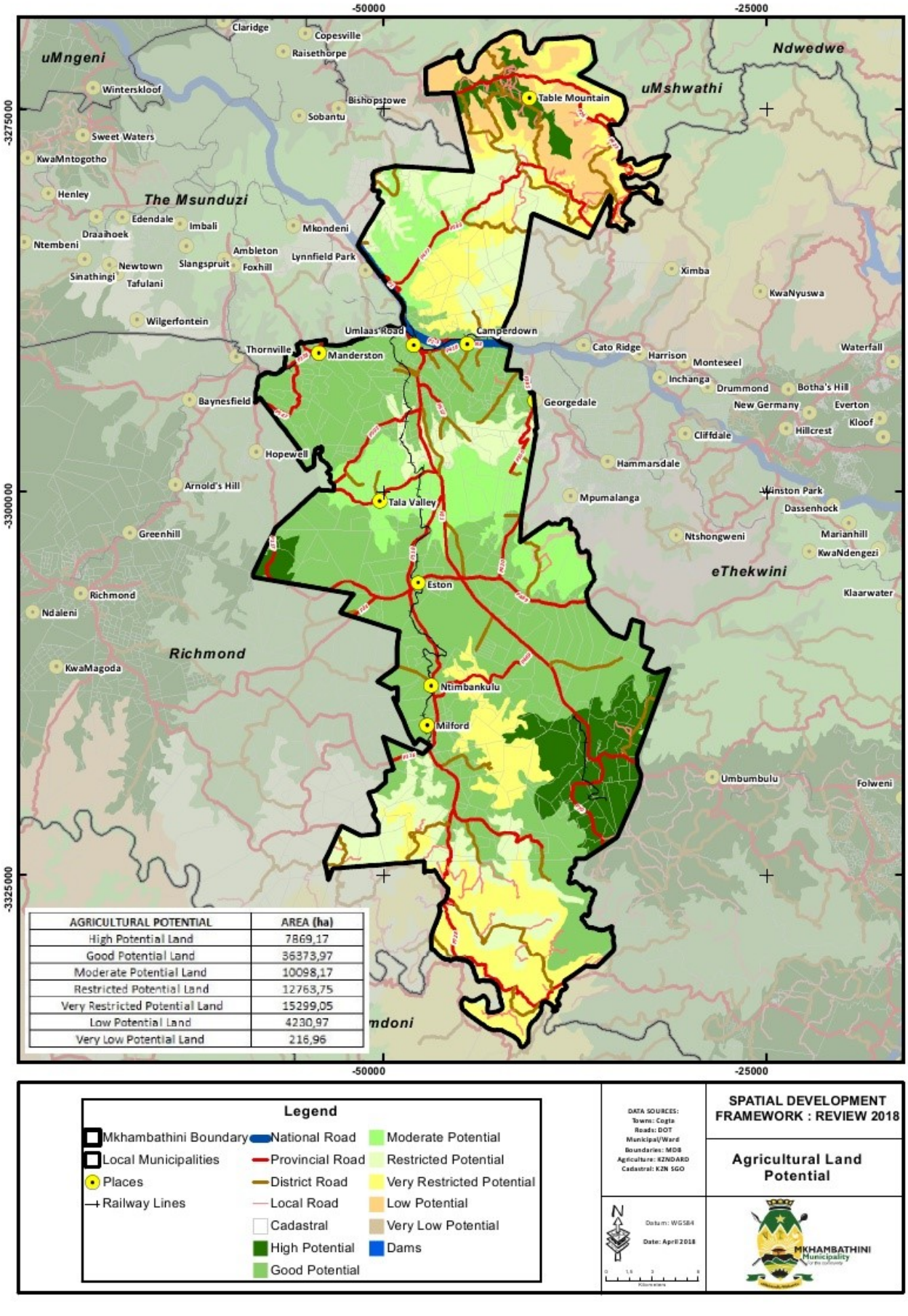
The Agricultural development potential is essentially based on the land capability and existing agricultural production as discussed below. The potential of the land to produce food is largely determined by physical factors such as the terrain, soils and climate. The **Agricultural Land Potential Map** (overleaf) indicates land capability, which can be defined as "*the most intensive long-term use of land for rain-fed agriculture taking into account continuing limitations or hazards*". It indicates that the majority of the high and good agricultural land (as defined by the Department of Agriculture and Rural Development) within the municipality is located south of the N3 route and where the majority of current commercial agricultural production is taking place. These agricultural potential categories also relate to a land capability set of classes as indicate by the table below:

TABLE 12: AGRICULTURAL LAND CAPABILITY CLASSES

LAND CAPABILITY CLASS	LAND USE OPTIONS									LAND CAPABILITY GROUPS
	Wildlife	Forestry	Light Grazing	Moderate Grazing	Intensive Grazing	Poor Cultivation	Moderately Cultivation	Intensive Cultivation	Very Intensive Cultivation	
I										ARABLE LAND
II										
III										
IV										
V										GRAZING
VI										
VII										
VIII										WILDLIFE

Source: Department of Agriculture and Rural Development

MAP 18: AGRICULTURAL LAND POTENTIAL



According to the table above, class VII, which is dominant in the southern parts of the municipality, includes Wildlife, forestry and light grazing as land use options. The central parts of the municipality are dominated by Classes IV and VI. Class VI includes wildlife, forestry and light and moderate grazing as land use options. Class IV, which is dominant in the central areas directly south of the N3 and widely scattered in the southern parts of the municipality, includes wildlife, forestry and light, moderate and intensive grazing as well as poorly adopted cultivation as land use options.

The northern part of the municipality has large areas of class II land, which include arable land for intensive, well-adopted cultivation purposes, moderately well adopted cultivation, light to intensive grazing, wildlife and forestry. These areas are scattered in the lower lying areas of the northern part of the municipality and can generally be regarded as having high agricultural potential. This will need to be factored into the economic development and agrarian reform strategies of the municipality.

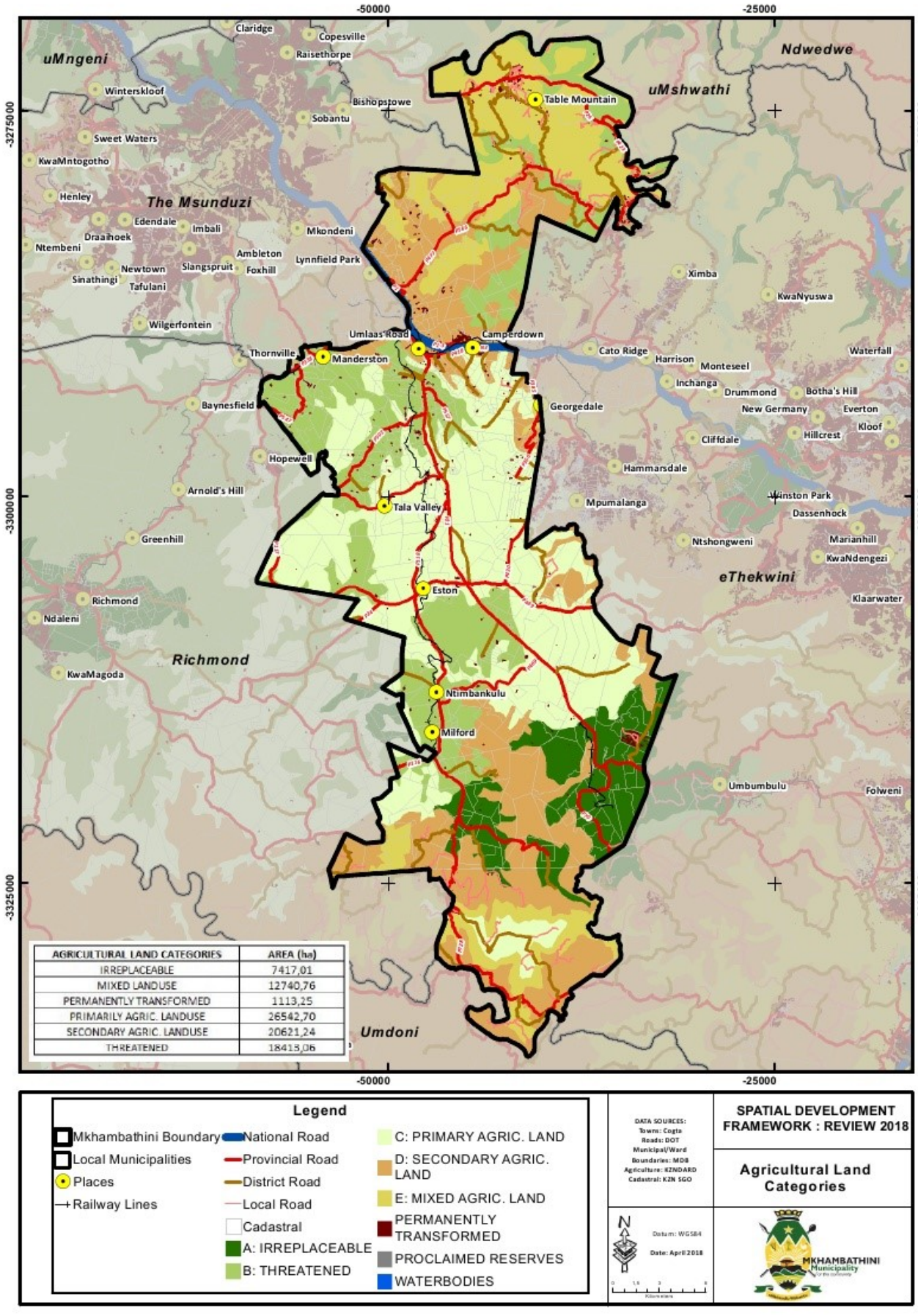
The Soil Depth within the Municipal Area ranges from >750mm to <450mm with relative fields in between. Soil depth, although not exclusively, has an impact on agricultural activities and disaster management. Areas where soil depths are shallower, normally has lower agricultural potential and flood risks could also be higher, due to the shallow soil's inability to capture absorb and maintain moisture.

The KZN Agricultural Land Zoning System (DAFF & DAEA, 2012) is a new initiative by the agricultural authorities that combines available data to classify a region into Agricultural Land Categories (**Agricultural Land Use Categories** map on overleaf), which indicate the ability of an area to produce food under recommended management practices on a sustainable basis. The agricultural authorities regard land with a high agricultural potential as a scarce non-renewable resource and accordingly applies a risk averse and cautious approach when development of such land for purposes other than agricultural production is proposed. In order to support this risk-averse approach as the basis for decision-making, land with high potential for agriculture is deemed irreplaceable and must thus be legally protected (DAFF & DAEA, 2012).

The map further illustrates areas where the agricultural potential could be developed to benefit the rural and traditional communities in the far north and south of the municipality**.** From this map the areas with higher agricultural opportunities (or potential) in the southern parts of the municipality have already been utilised to a great extent for subsistence farming purposes. Many of the areas in the north that are classified as class II are either utilised only as grassland for grazing and the settlements around the Table Mountain area.

The agricultural production in the municipality centres on vegetables grown for local and hinterland fresh produce markets, nuts and sugarcane production. The area features the second highest concentration of poultry producers in the world, supported by a network of service suppliers, as well as pig and beef farming. Although there has recently been a large-scale rationalization of the poultry production in the area by a single producer, there is reportedly an ongoing sector rebound with a number of application by emerging farmers to revitalise some of the local chicken houses as well as proposals for the development of large-scale abattoirs within the same area.

MAP 19: AGRICULTURAL LAND USE CATEGORIES



Lastly, the uMgungundlovu District Rural Development Plan (UDM, 2016) has further identified overgrazing/overstocking within communal grazing areas as a threat to agricultural development within the rural communities. The rural development plan then proposes that overgrazing should be addressed by identifying "*focus areas […] primarily in the communal grazing areas of […] Mkhambathini. The specific focus areas will need to be identified and demarcated by qualified grassland scientists with participation and direct involvement of communities and traditional leaders*."

This is evidently an aspect, which would need to be addressed during the further formulation of the SDF.

7.5 TOURISM

There are a number of tourism attractions found within the municipality and these include resources, which relate to geographic attributes, cultural interests or natural/ecological sites and attractions. Sites with tourism potential are scattered throughout the municipality such as game/ nature reserves as well as heritage/ historical sites. The locality of the municipality as well as the surrounding environment also accommodates a number of events and adventure tourism activities during the year. The various eco-tourism attractions and adventure tourism activities and events are listed in the table below. These are generally found closer proximity to the N3 route as indicated on the **Economic Activities Map** overleaf.

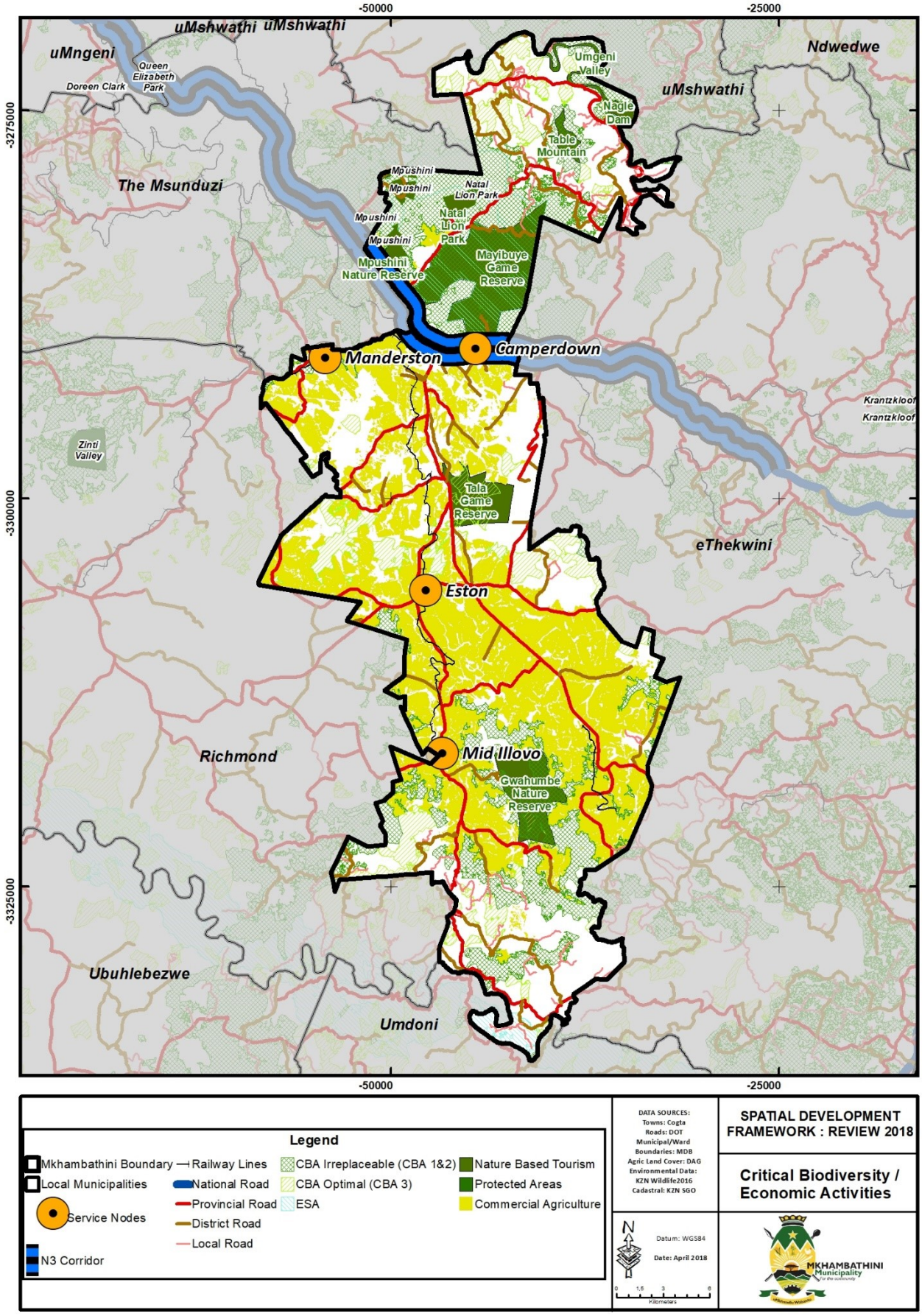
TABLE 13: ECO- AND ADVENTURE TOURISM ATTRACTIONS

Game / Nature Reserves & Wildlife Sanctuaries (Eco Tourism)	Tourism Events/ Activities (Adventure Tourism)
• Nagle Dam (Msinsi Resort) • Tala Game Reserve • Gwahumbe Game Reserve and Spa • Mayibuye Game Reserve • Mpushini Conservancy • Table Mountain • Umgeni Valley • Lion Park & Natal Zoological Gardens • African Bird of Prey Centre	• Hiking Trails • Off-road motorcycle and car races • Comrades Marathon • Duzi Canoe Marathon • Amashova cycling race • Mountain bike races • Micro lighting • Skydiving (Orange Farm- Durban Skydiving Club) • Hot air ballooning (Tala Game Reserve) • Water-skiing • Eston Show (August) • Bundu Mix at POM Place • Horse Run at Nkanyezini

Source: Mkhambathini LED Strategy (MLM, 2016)

The natural landscape in itself also has eco- and adventure tourism potential, like for instance the unique topography of the undulating areas in the north and south of the municipality as well as water bodies like the Nagle Dam. The identified sites and places of tourism interest and possibilities will serve as a good foundation for tourism development in the municipality and need to be explored for further economic benefit to the residents of the municipality.

MAP 20: ECONOMIC ACTIVITIES



Added to this, there is an active agro-tourism sector within the municipal borders, and linking with neighbouring areas, like the Country Capers Tourism Route. The land cover of the municipality, consisting of 60% natural forest, shrub and bush land, also supports adventure tourism activities, and there is also scoping to increase this sector.

The municipality has a number of cultural, historical and natural assets, which have begun to form the basis of and emerging tourism sector. The two main sites include Mgwahhumbe and the Hope Valley. It is envisaged that the Mkhambathini SDF would need to consider the access to and integration of these various tourism attractions in order to stimulate the further development of this sector as well as an increase in potential local benefits form the industry.

7.6 MANUFACTURING

Manufacturing activity occurs primarily at Umlaas Road, as well at Eston Sugar Mill. The sector is dominated by agro-processing relating to sugar cane and poultry as well as logistics (cars). There is potential for upstream and downstream linkages in both industries.

Currently the Camperdown / Umlaas Road area consists of dry industries, due the lack of appropriate sewer infrastructure to accommodate other industries. Again, this appears to be due the strategic nature of the N3 corridor plan and the location of these two areas along the N3 (immediately North and South) as illustrated on the **Economic Activities** Map.

Due to the recent closure of some of the poultry production sites in 2017, there has been a significant impact on the economy of the Municipality with a large number of related workers being retrenched during that process. There is however, a reported resurgence in the poultry industry with a number of emerging farmers interested in local production.

Although the LED Strategy did not provide a proposed recovery strategy to this, it is assumed that existing infrastructure and market demand would suggest that the SDF provide sufficient support in terms of access and infrastructure services to those affected areas in order to contribute to the resilience of those industries to potentially grow again and/or diversify into a related service to utilise existing infrastructure.

8 INFRASTRUCTURE ASSESSMENT

The infrastructure assessment includes the identification and mapping of areas experiencing service backlog, access to basic services such as water, sanitation, electricity, etc., and the identification of areas for bulk infrastructure investment.

8.1 TRANSPORTATION NETWORK

The primary transport route within the municipality is the **N3 Route** that traverses Mkhambathini and links Durban to the east with Pietermaritzburg and ultimately the Gauteng Highveld to the west and north-west. **Road Access and Freight** map shows that the largest majority of households in the Mkhambathini municipality enjoy access to roads at a distance of less than 1km.

There are a number of provincial roads spread relatively evenly throughout the municipal area, improving the accessibility of the majority of settlements and households in the municipality. Many households are also serviced through lower order, district or local, roads. The map does not indicate the condition of the roads in terms of maintenance and quality. The current road lengths are as follows:

TABLE 14: ROAD SURFACES OF MKHAMBATHINI

Gravel	Surfaced	Total
367.23 km	162.24 km	529.47 km

Source: Mkhambathini IDP 2017

The Road Infrastructure Strategic Framework for South Africa (RIFSA) classifications indicates a major dependency on lower order access roads for most of the residents within Mkhambathini. Due to the remoteness of these roads, as well as the limited funding for infrastructure maintenance, maintenance of these roads might pose a problem in future. To ensure correct future analysis of these roads and the dependency of other aspects such as economic opportunities etc. it will be necessary to research the conditions of all these roads, as well as the condition and localities of transport facilities.

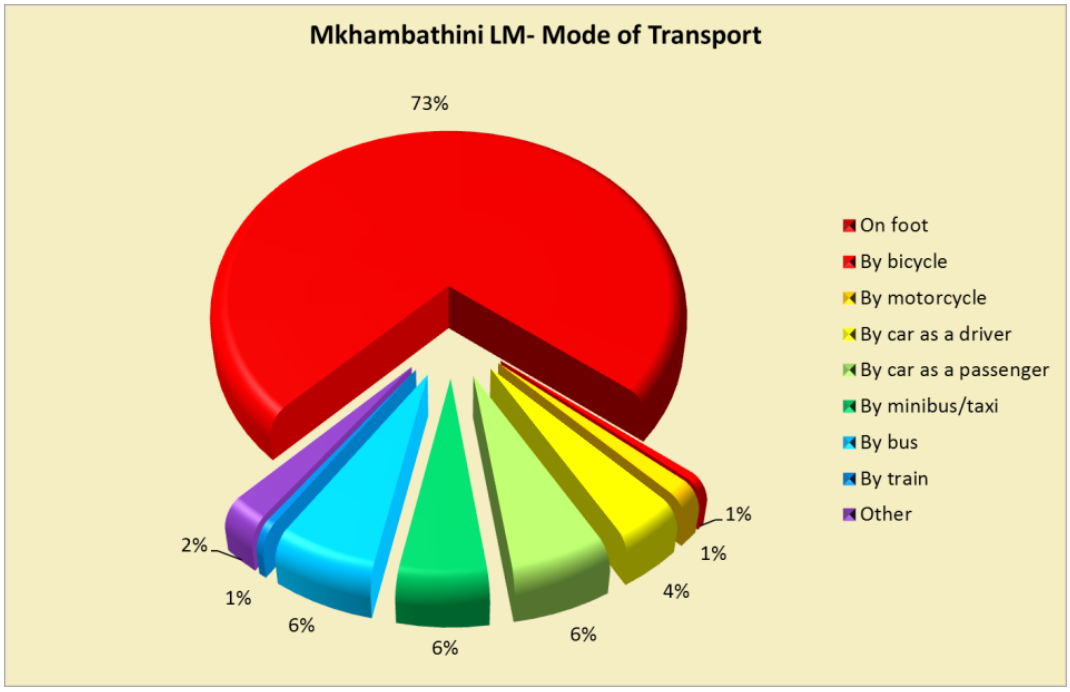
The Road Access and Freight Map indicates Road freight volumes in the municipality**.** As would be expected, the N3 traversing the municipality shows freight volumes of more than 30 mil tons per annum. The N3 serves as a national strategic transport route and its influence on the municipality is limited, as it only serves to channel heavy transport and freight through the municipality to destinations outside of the municipal area. The provincial roads that runs north to south and west of Eston shows slight volumes of road freight (between 100 000 and 1 000 000 per annum). It can be assumed to be because of the road transport activities of the sugarcane farming in the area and the link with the sugar mill at Eston.

High volumes of rail freight are also evident adjacent to the N3, along the railway line linking the Durban Metropolitan area with Pietermaritzburg and the Gauteng Highveld area.

8.2 MODE OF TRANSPORTATION

From the statistical distribution of modes of transports mainly utilised by residents, it is evident that the largest portion of the Mkhambathini population (73%) are dependent on travelling on foot and thus with no or limited access to affordable public transportation. This implies first of all, the lack of funds to utilise public transport, or the lack of an adequate public transport system. Further to this, transport by bus, by minibus taxi and by car as a passenger are the next most popular modes of transport (at 6%). This also relates to the remoteness of some of the areas, as limited road infrastructure exists which allows taxis or buses to reach these remote areas. The last scenario is the most likely of the scenarios, as very few well-maintained lower order roads exist. The three aspects combined, is an indication of the general poverty levels of this area. With the high dependency on the lower order nodes, it is necessary to ensure proper transport infrastructure exist, especially with the view of creating economic growth in the municipality, which positively affects everybody. Should the residents not have proper access to opportunities; the initiatives will not be successful.

FIGURE 15: MODE OF TRANSPORT



Source: Stats SA Census 2011

The SDF in conjunction with the transport planning of the municipality should aim to address these needs of the communities, by identifying possible transportation and connection routes, as well as inter modal transfer facilities.

8.3 WATER SERVICES

8.3.1 ACCESS TO WATER

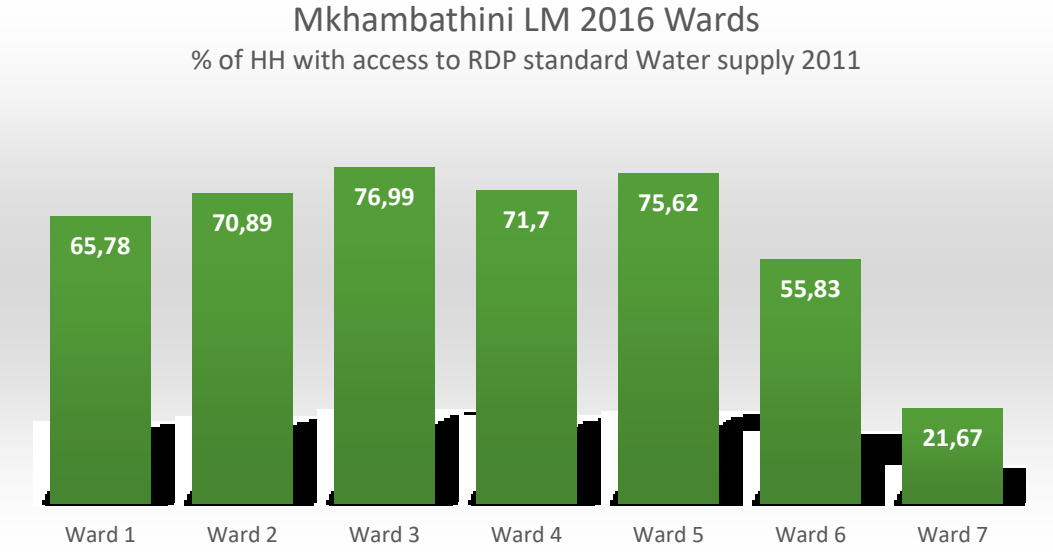
The access to water is illustrated by the **Access to Water map** and from the said map; it is evident that the greater majority of the dense, scattered settlements around the Table Mountain area to the north of the municipality have relatively good water services provision. The areas to the most southern part of the municipality is not well serviced and the majority of households in this area only have access to water at a distance of more than 1000m.

It will be evident that the areas which forms part of the commercial agriculture areas, in the central parts of the municipality and the area directly north of the N3, appears to not have sufficient access to water (at a distance of more than 1000m). This is most likely because these household are mostly self-sufficient through boreholes for single or small concentrations of households. It could be assumed that these areas would not be prioritised by the municipality for water services provision, as the households are widely scattered and are most likely already self-sufficient.

The Access to Water map further maps the existing water infrastructure facilities in the municipal area. There is an obvious correlation between the access to water and the infrastructure, including the availability of reservoirs, boreholes and water pipes. This map will serve to inform the planning for water infrastructure of the municipality, as it already indicates proposed reservoirs. It could be beneficial for the municipality to elaborate on this map by adding all proposed new infrastructure and also attempt to link it in with water services provision needs.

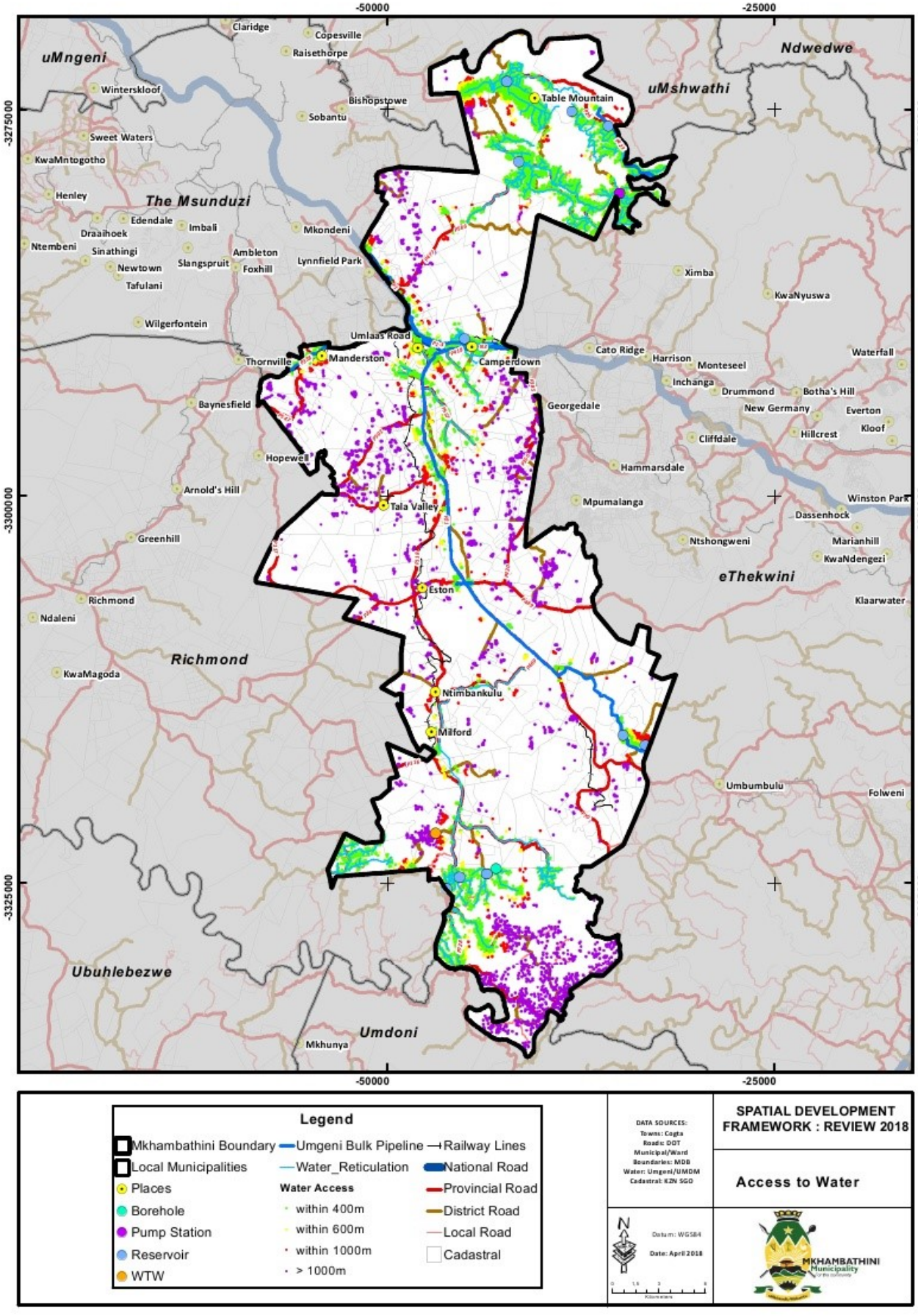
Furthermore, additional information relating to the locality of extraction points, purification works and storage facilities as well as the bulk capacity of these facilities will be essential for the further formulation of the SDF.

FIGURE 16: ACCESS TO POTABLE WATER PER WARD



Source : Stats SA Census 2011

MAP 21: ACCESS TO WATER



The graph depicts the percentages of households per ward, which have access to RDP standard water. The graph shows clear comparisons with Access to Water map, which indicates the very low levels access to water in ward 7 in the south of the municipal area. The access to potable water is relatively low throughout the municipality.

Total backlog for water supply provision across the district is at 13% of the households and is 14% for sanitation supply. This is a marked improvement on the backlog estimated by both Census information and the DWAF NIS system.

TABLE 15: TOTAL BACKLOG FOR WATER SUPPLY PROVISION

LM	No. of households	Houses served with water	Houses served with sanitation	Water Backlog	Sanitation Backlog
uMshwathi (KZN 221)	21,230	12,053	10,131	4,156 (20%)	5,844 (28%)
uMngeni (KZN 222)	24,172	14,921	14,935	2.481 (10%)	2,481 (10%)
Mpofana (KZN 223)	9,373	4,426	4,228	407 (4%)	614 (7%)
Impendle (KZN 224)	6,968	4,366	3,225	1,682 (24%)	2,683 (39%)
Mkhambathini (KZN 226)	14,116	5,941	8,204	2,561 (18%)	234 (2%)
Richmond (KZN 227)	16,445	11,294	10,583	830 (5%)	1,463 (9%)
Totals	92,304	53,002	51,306	12,118 (13%)	13,320 (14%)

Source: UMDM Draft Water Services Development Plan Backlog Study

From the table above, it can be deduced that Mkhambathini water services are in place in most of the areas with Mapumulo and Kwamadleka being the areas where water supply network is being implemented.

Water services infrastructure upgrade and development is regarded as the important tool to attract investors and improve economic development in the municipality.

8.3.2 WATER SERVICES AUTHORITY

The uMgungundlovu District Municipality is the water services authority for the Mkhambathini Municipality which falls within the Umgeni/Mooi Catchment of the Umgeni Operational Region, the Mlazi/Lovu Region which comprise of two tertiary catchments U60 (Mlazi River) and U70 (Lovu River) and the Mkomazi Region. According to the Umgeni Water Infrastructure Master Plan (2017), the demand on the Umgeni catchment currently exceeds the available yield. The risk of water restrictions within the next few years is unacceptably high as a result of the ever-increasing demands in the Umgeni system.

8.3.3 DAMS SERVING MKHAMBATHINI

8.3.3.1 NAGLE DAM

Nagle Dam is one of four major dams on the Mgeni River. The other three are the Midmar, Albert Falls and Inanda dams. These dams are all used as part of the water supply system. Water is released from Albert Falls Dam to Nagle Dam from where it is supplied under gravity to Durban Heights WTP.

The table below contains summary information on the characteristics of Nagle Dam.

TABLE 16: CHARACTERISTICS OF NAGLE DAM

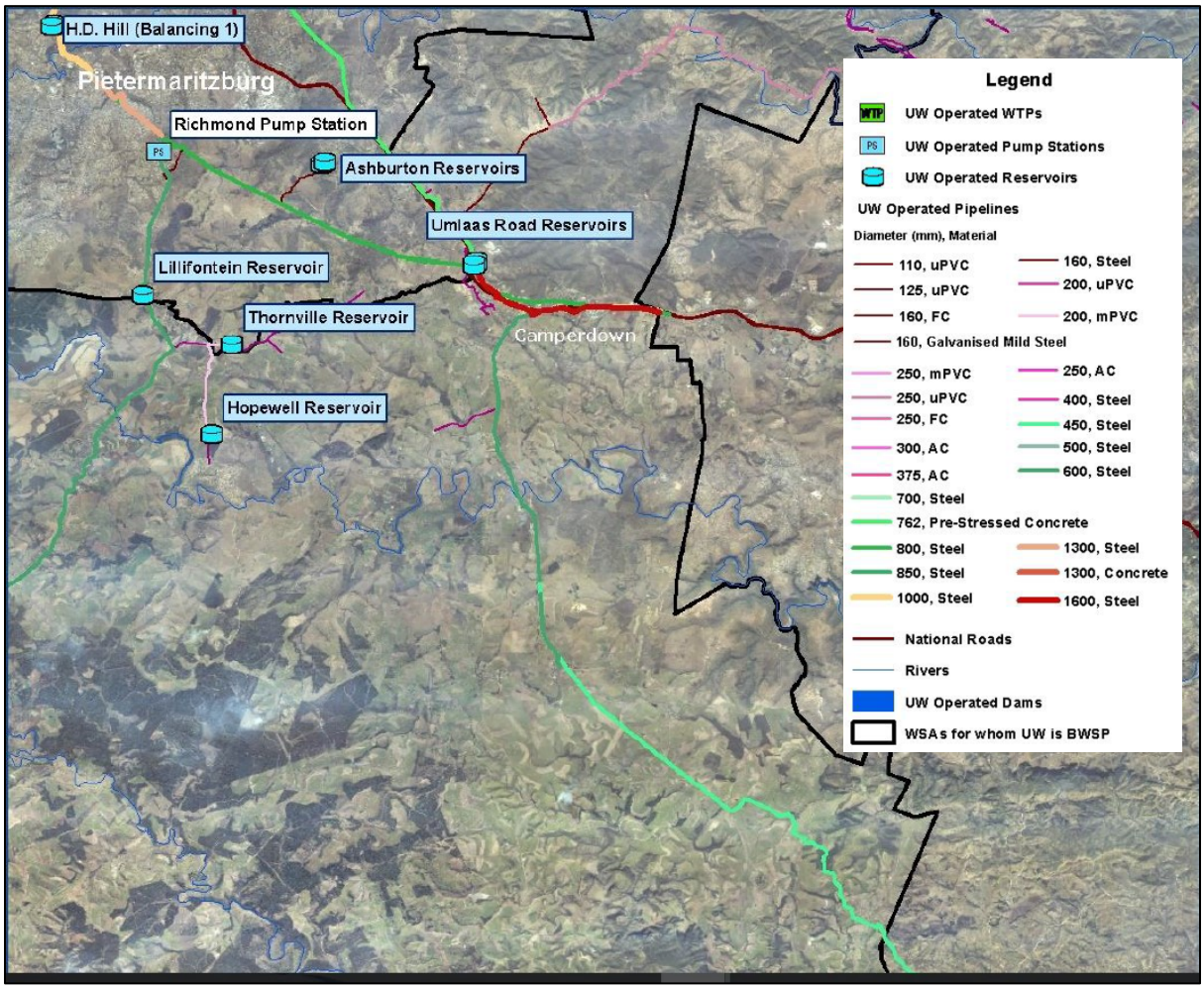
Catchment Details	
Incremental Catchment Area:	885 km^2
Total Catchment Area:	2 539 km^2
Mean Annual Precipitation:	940 mm
Mean Annual Runoff:	139.7 million m^3
Annual Evaporation:	1 200 mm
Dam Characteristics	
Gauge Plate Zero:	379.71 mASL
Full Supply Level:	403.81 mASL
Spillway Height:	24.1 m
Net Full Supply Capacity:	23.237 million m^3 (October 1987)
Dead Storage:	1.366 million m^3
Total Capacity:	24.6 million m^3
Surface Area of Dam at Full Supply Level:	1.56 km^2
Original Measured Dam Capacity	23.237 million m^3 (October 1963)
Dam Type:	Concrete gravity dam
Crest Length:	Spillway Section: 121 m Non-Spillway Section: 272 m
Type of Spillway:	Uncontrolled
Capacity of Spillway:	900 m^3/s
Date of Completion:	1948

Source : Umgeni Water Infrastructure Master Plan 2017

8.3.4 BULK WATER SUPPLY SYSTEM

The bulk water supply from to the majority of Mkhambathini is received via the Midmar Water Treatment Plant (WTP) to the Umlaas Road Reservoir Sub-system as illustrated by the figure below.

FIGURE 17: GENERAL LAYOUT OF THE UMLAAS ROAD RESERVOIR SUB-SYSTEM



Source: Umgeni Water, 2017

The Umlaas Road Reservoir Complex consists of a 9 Mℓ reservoir and a 45 Mℓ reservoir (recently upgraded) which are interlinked. The reservoir complex has two off-takes. One feeds the '57 Pipeline and the other the Lion Park Pipeline.

The '**57 Pipeline** consists of three pipelines (800, 1000 and 1600 mm diameter) that run from Umlaas Road Reservoir to Point M, the sales point to eThekwini Municipality.

Downstream of Umlaas Road Reservoir, the **Eston/Umbumbulu Pipeline** draws water from the 1000 mm diameter '57 Pipeline. It feeds eThekwini Municipality's Umbumbulu Reservoir. En route, there is an off-take to the Eston Reservoir (Table 6.16). Further off-takes from this pipeline feed into the Greater Eston Bulk Water Supply Scheme and the Mid Illovu system.

There are off-takes along the route of the 800 mm diameter '57 Pipeline for Mkhambathini Municipality. The supply to eThekwini Municipality has been decommissioned. A 150 mm diameter AC pipeline and a newly constructed 350 mm diameter steel pipeline, off-take from the '61 Pipeline, supplies individual consumers along the **Lion Park** road. This pipeline was extended in 2011 to feed the rural area of **Manyavu**.

8.3.5 PROPOSED INFRASTRUCTURE UPGRADES

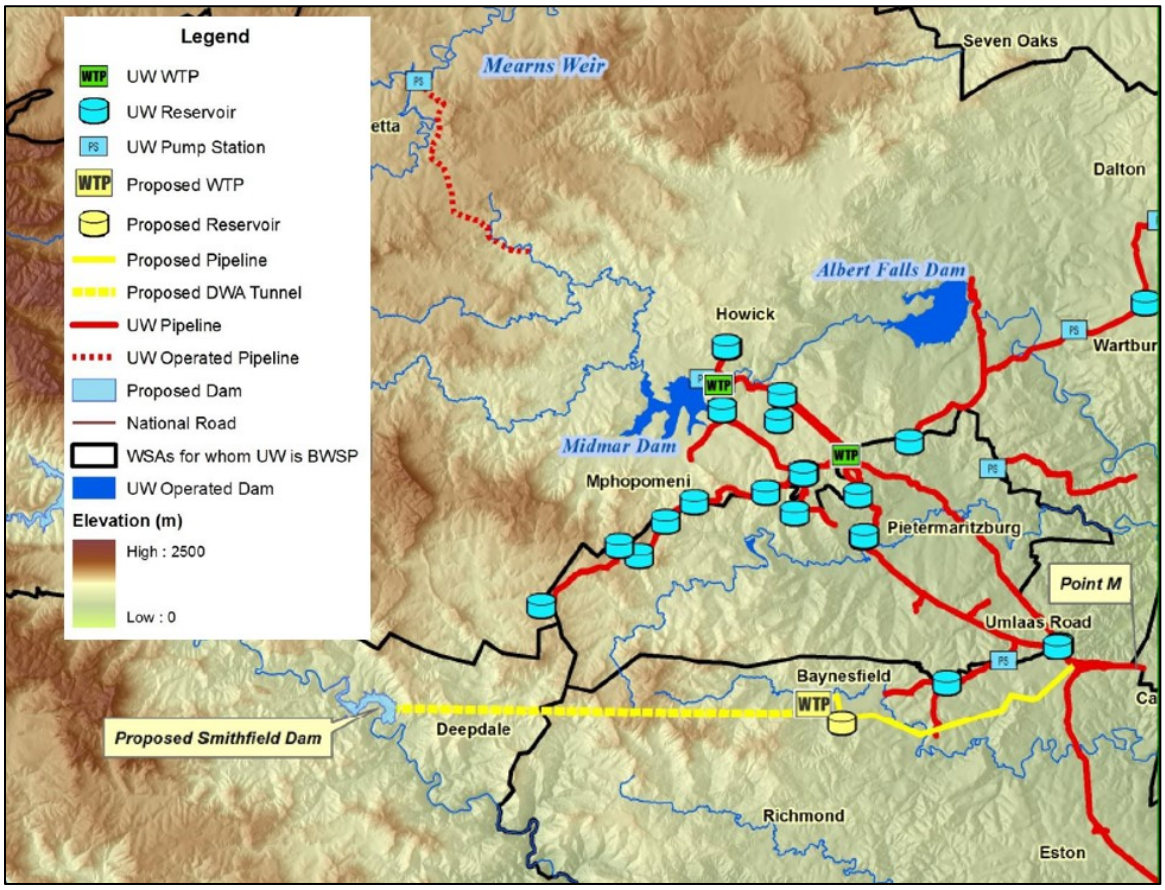
The Umgeni Water Infrastructure Masterplan (2017) indicated that the following recent infrastructure upgrades have been concluded in the past four years and impacts on the Mkhambathini municipality:

→ Addition of an interlinking 45 Mℓ reservoir at Umlaas Road Complex,

→ Greater Eston Bulk Water Supply Scheme Phase 1B Pipeline,

→ Lion Park Pipeline Augmentation.

Towards 2028, the water resource development on the uMkhomazi River has been identified as the next likely major project to secure long-term water resources for the Umgungundlovu District and eThekwini municipal areas. This would be a two-phased scheme as illustrated in the figure below. The first phase will involve the construction of the proposed **Smithfield Dam** with a storage capacity 180 million m3 (25% of MAR). The dam will be located along the central reaches of the uMkhomazi River midway between Lundy's Hill Bridge and Deepdale. Phase 2 (construction of a second dam at Impendle) would only be implemented once the yield of Phase 1 (Smithfield Dam) has been fully utilised.



Source: Umgeni Water, 2017

8.3.6 FUTURE CONSIDERATIONS

8.3.6.1 IMPACTS OF CLIMATE CHANGE ON WATER PROVISION

The Umgeni Water Infrastructure Master Plan refer that that the climate is changing globally and that this will have an amplified impact on water resources and therefore on water security and supply. In South Africa, the Department of Economic Development, Tourism and Environment Affairs (EDTEA) is designated to lead the country's climate change agenda, guided by its recently adopted Long Term Mitigation Strategy on Climate Change. Umgeni Water developed a framework to guide its efforts towards quantifying the possible impacts of a changing climate on its business. At the core of the framework is a hydrological model wherein rainfall and temperature are altered to represent possible scenarios of the impact of future climates on runoff in rivers. The most up-to-date science has been used in this assessment but unfortunately, these results are far from conclusive because performing impact studies, such as water resources based on scenarios of future climates is relatively new and would therefore need data to depict any changes that might occur in the Mkhambathini Municipality.

8.3.6.2 WASTEWATER REUSE

Umgeni Water currently owns an 18% share in the Durban Wastewater Recycling (DWR) Plant. The DWR treats domestic sewage to near potable standards for industrial use. The plant has the capacity to treat approximately 40 Mℓ/day of wastewater. Umgeni Water has previously investigated the option of treating wastewater from the Darvill Wastewater Works (WWW) (Section 7.2) to potable standards. A Feasibility Study to assess the viability of returning reclaimed water back into the distribution system at Umlaas Road was undertaken.

The high capital costs of the project (approximately R 1.6 billion) and the fact that no additional resource is created meant that the project was not economically viable, and a decision has been made not to proceed with the project at this time.

As part of the Darvill WWW upgrade, a new 2 Mℓ/day wash water plant will be constructed. The plant will provide clean water to be used for process purposes. The plant will be designed as a reclamation plant and produce water of a potable standard. Only half of the water produced will be required for wash water. An important function of the reclamation plant will be to use the plant to demonstrate the benefits of water reclamation to the public.

8.4 SANITATION SERVICES

The statistical Data from Stats SA distinguishes between all types of sanitation services provided to the communities.

→ Flush toilet with sewer

→ Flush toilet with sceptic Tank

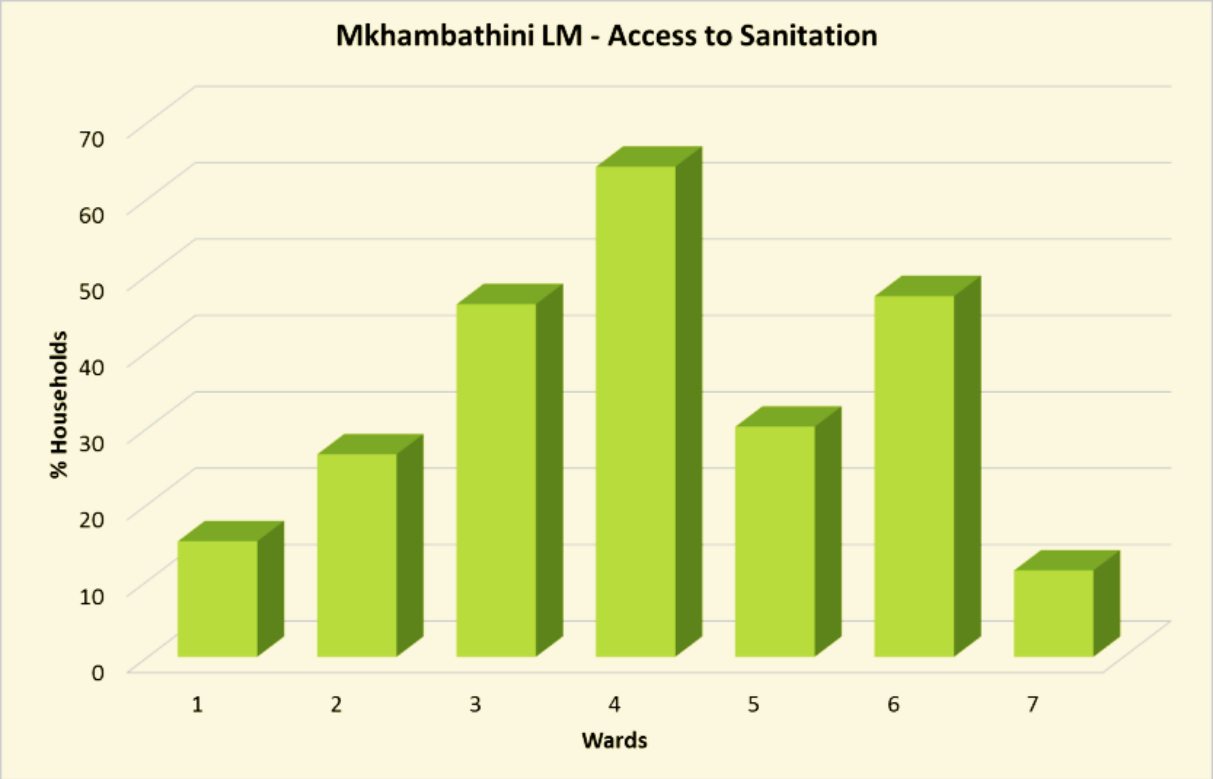
→ Chemical Toilet

→ Pit Latrine with Ventilation

→ Pit Latrine without Ventilation

The obvious long-term target is to provide all residents with waterborne sanitation and sewer but households with one of the above listed forms of sanitation are considered as serviced. The graph below depicts clearly that more than 36% of the residents are serviced below the average service level of the Municipality. Only 66% of the municipality has been serviced with one of the acceptable form of sanitation. Wards 1 and 7 require attention with regards to provision of sanitation services.

FIGURE 18: ACCESS TO SANITATION



Source: Stats SA Census 2011

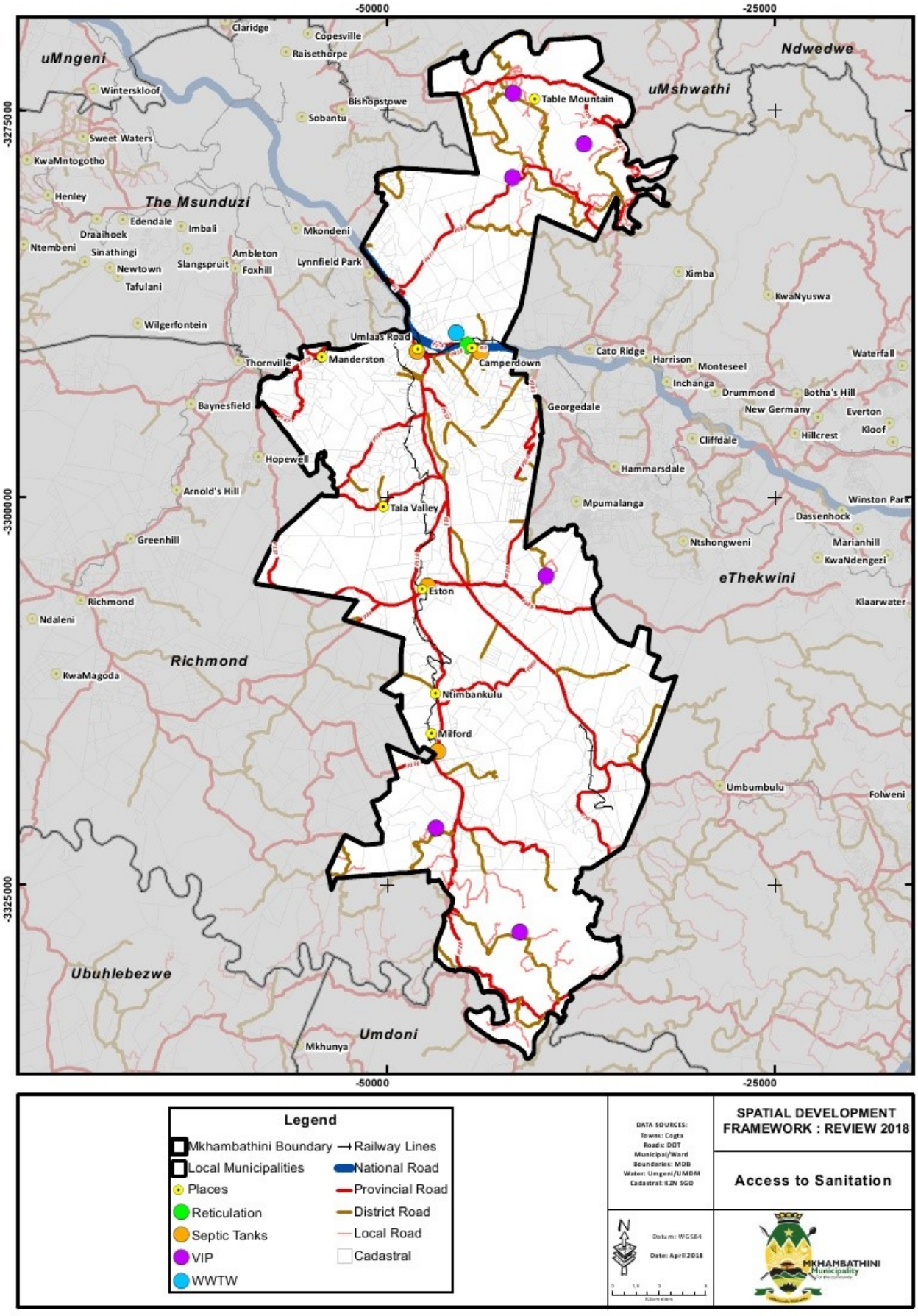
8.5 ELECTRICITY NETWORK

The **Access to Electricity** Map depicts the electrical infrastructure within the Local municipality as per the existing power lines and sub stations.

The infrastructure is widely spread throughout the municipality, but still falls short of providing access to the majority of households in the municipality, as will be clear from said map. According to this map, the greatest majority of households in the south of the municipality are located further than 1000m from electricity infrastructure. This can be assumed to be due to the undulating landscape and scattered and relatively remote nature of households in this area.

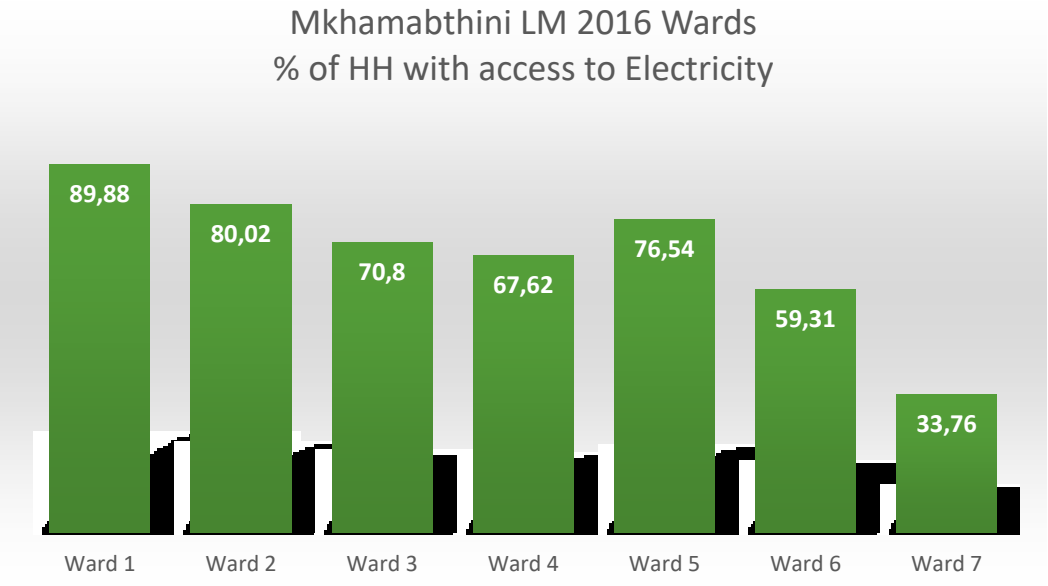
There is a clear concentration of available electricity networks for commercial farming activities in the central parts of the municipality and a general shortage of infrastructure in the south.

MAP 22: ACCESS TO SANITATION



The graph below indicates the access to electricity per ward. It is clear that Ward 7 needs service provision in access to electricity, with Ward 1, 2, 3, 4, 5 and 6 having more than 50% access to electricity.

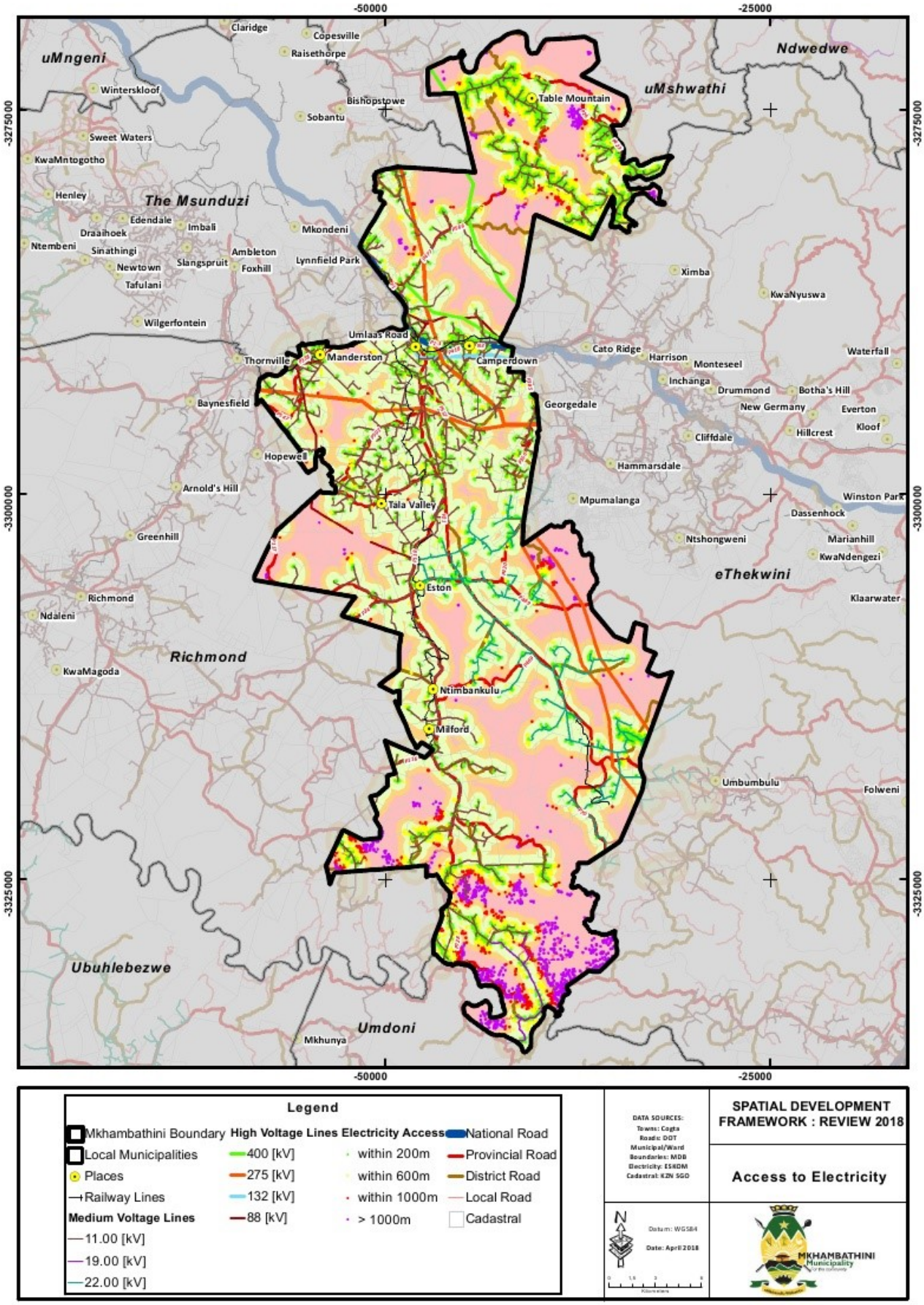
FIGURE 19: ACCESS TO ELECTRICITY



Source: Stats SA Census 2011

Statistical Access to electricity was measured according to the energy used for lighting purposes. The reason for this is that lighting is the cheapest and therefore the first item powered by electricity.

MAP 23: ACCESS TO ELECTRICITY



9 PHYSICAL AND NATURAL ENVIRONMENT ANALYSIS

The physical and natural environment analysis aim to define the spatial environmental sensitivity of the area and environmental opportunities and constraints;

9.1 TOPOGRAPHY AND SLOPE

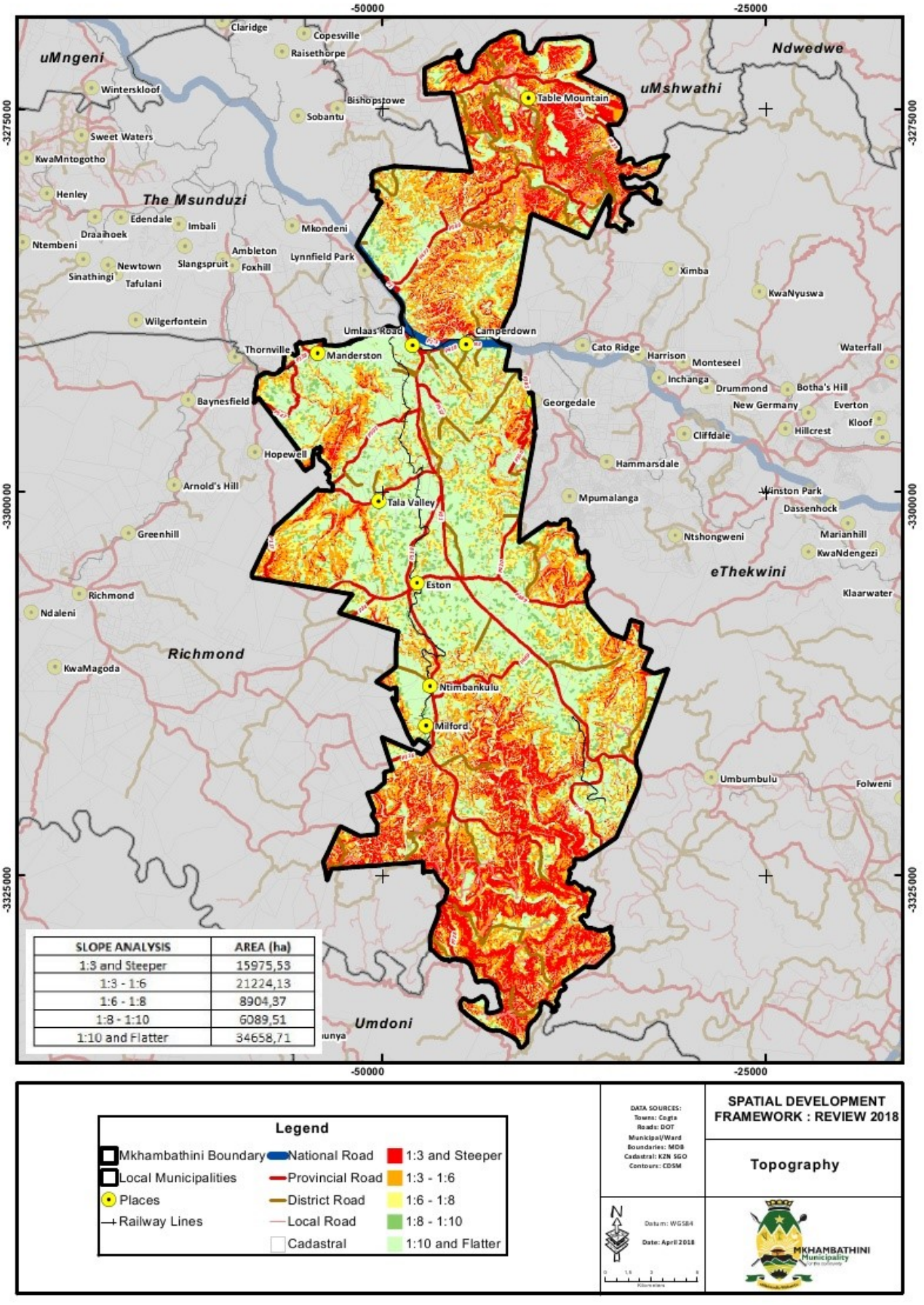
The **Topography map** attached overleaf depicts the slope and general characteristics of the land within Mkhambathini municipality. The mean elevation (meters above sea level) ranges from 0m above sea level, to 953m above sea level. The municipality has a distinct variation in topography landscape with the southern and northern parts being more undulating and a relatively high lying, flat plain area in the central part of the municipality. The southernmost part of the municipality includes relatively low-lying area, with many of the river valley areas between 0 – 203m above sea level. Much the same pattern is observed in the northern part of the municipality. This fluctuating elevation levels of the municipality, impacts on the scattered settlement pattern that can be observed in the northern and southern parts of the municipality.

The Topography map further illustrates the slope variance across the municipality and depicts slope ranges from 0-4% up to 20-58% incline. The northern and southern parts of the municipality have higher slope inclines, indicating mountainous areas. The central part of the municipality is relatively flat, with slope ranges of 0-8%. The greater the gradient (20-58%), the more difficult and more expensive construction becomes, and this should be considered during infrastructure intervention planning. The terrain therefore plays an integral part in determining settlement patterns or the line of roads, which needs to be built cost-effectively.

Slope and terrain are also very strong structuring elements in terms of Mkhambathini spatial configuration. The northern part of Camperdown town has very steep terrain, which limits the expansion of this town towards the north. This implies that the physical expansion of this town will be severely limited. The northern and southern parts of the municipality have high slope inclines, indicating mountainous areas. This steep terrain within the traditional council areas promote the dispersed settlements structure and creates difficulties in terms of bulk infrastructure provision. In fact, most of the settlements within the rural parts of Mkhambathini have followed this terrain such that the homesteads have tended to locate within the flatter terrain while steep spaces within and between settlements have remained vacant.

While the terrain is a very strong structuring element and may present opportunities or constraints to development / the delivery of infrastructure, the character of the natural landscape may also present environmental risks, especially in instances where human activities have degraded land (i.e. loss of vegetation cover) and erosion has started to occur. Aside from the loss of productive soils as a result, the resource most at risk at the face of such land degradation is water resources (i.e. a decline in water quality as a result of sedimentation).

MAP 24: TOPOGRAPHY AND SLOPE



A characteristic of most South African soils is that they are extremely vulnerable to various forms of degradation and have low resilience (recovery potential). The soils in Mkhambathini are no exception. A number of natural factors determine soil erodibility in this area, including slope, soil texture, soil structure, terrain, the presence of organic material in the soil, and vegetation cover. Map 25 provides an indication of land degradation and areas that are susceptible to water erosion. It is based on slope gradient and a soil erodibility index.

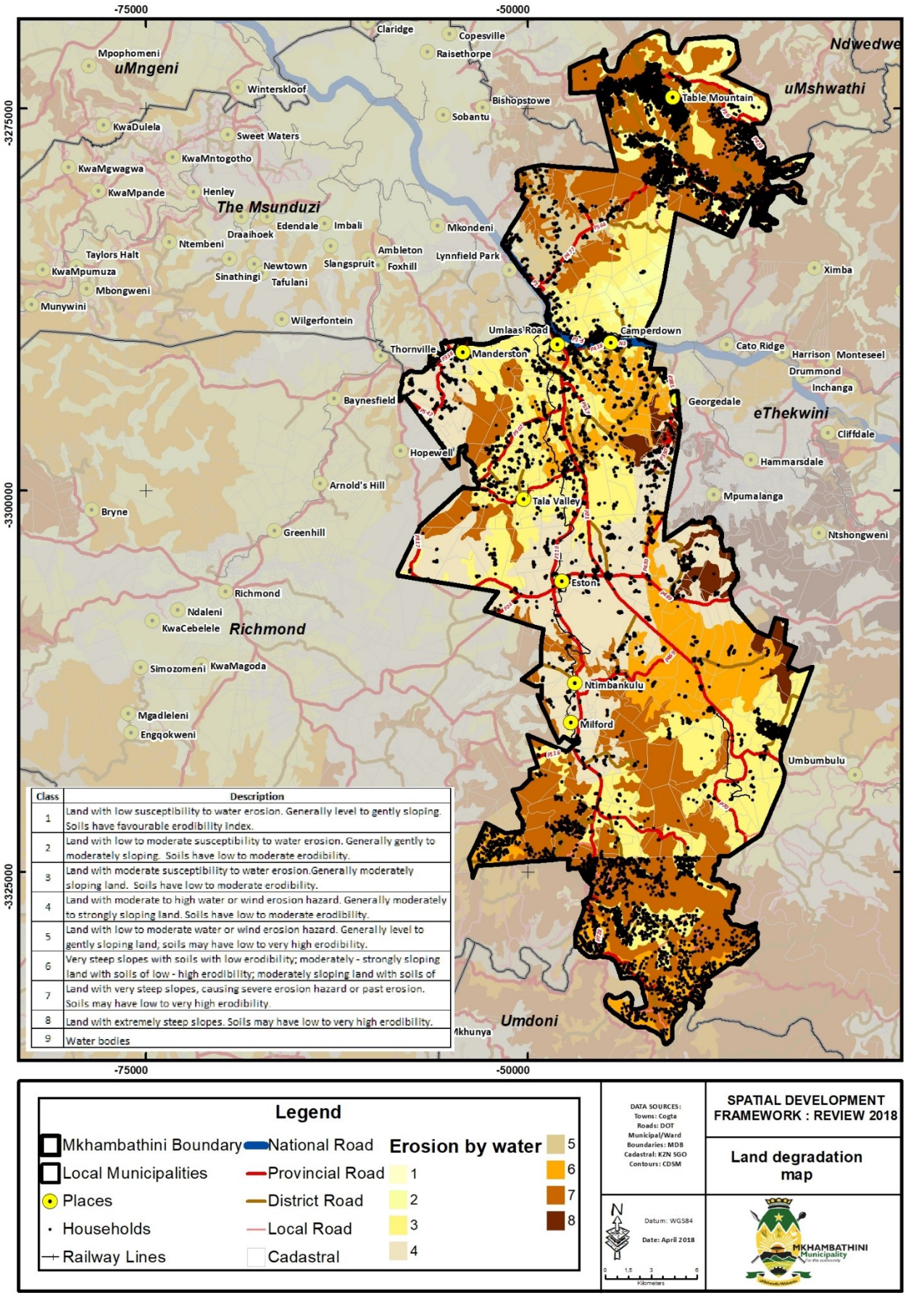
- The susceptible areas along the eastern boundary (indicated as Erosion susceptibility class 7) are characterised by very steep slopes, causing severe erosion hazard or past erosion. Soils in this area may have low to very high erodibility.
- The large areas in the south and north (indicated as Erosion susceptibility class 6) are also characterised by steep slopes and is therefore susceptible to water erosion. Settlements are generally disassociated with very steep slopes (slope gradient 20-40%) but do prevail in areas with moderately to strongly sloping land. It induces risks of land damage from erosion.

Land degradation is usually related to settlement patterns. Factors contributing include:

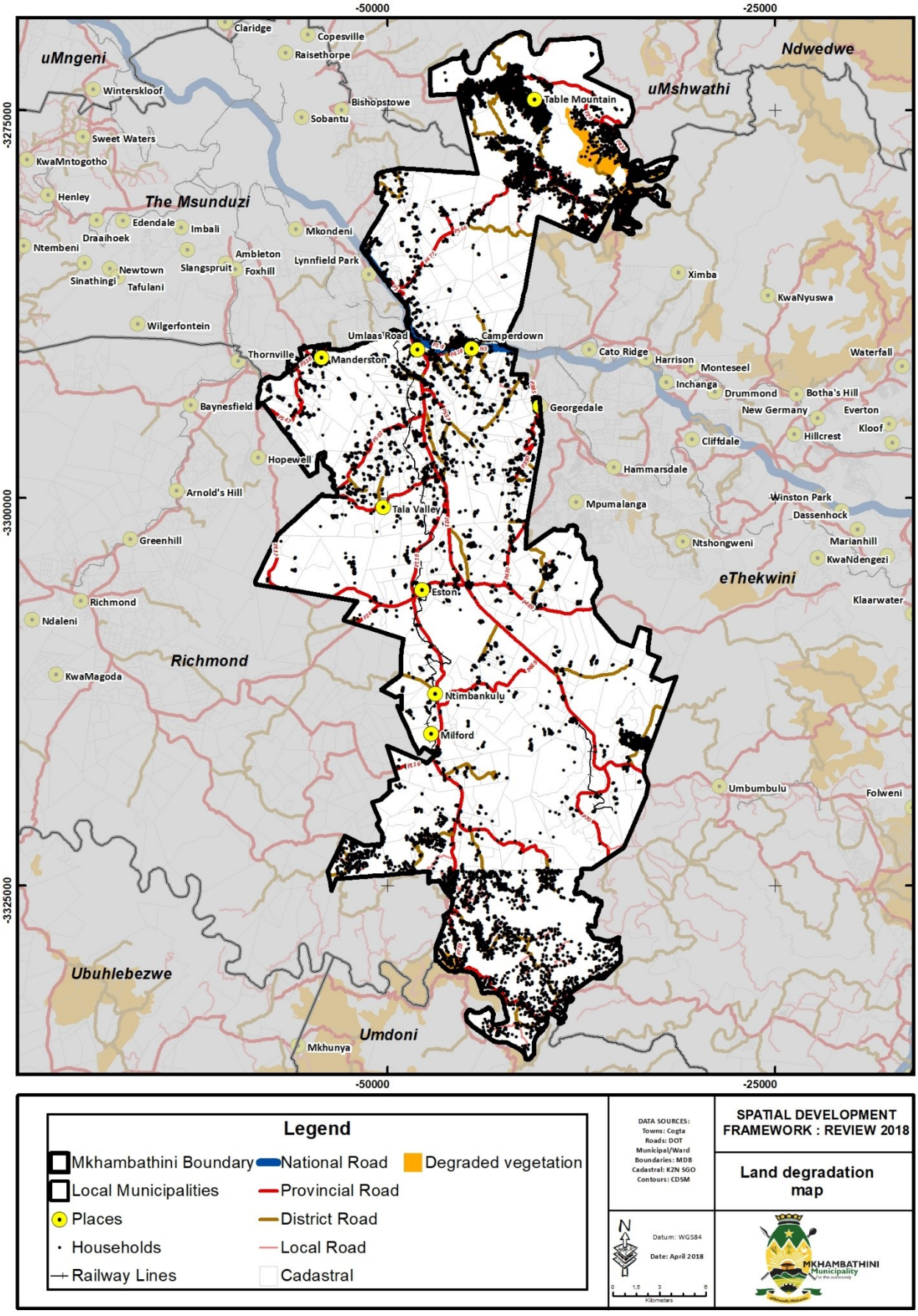
- Stock numbers and trampling patterns of domestic livestock;
- Limitation of drinking points and the concentration of animals around water provision points such as springs;
- Removal of plants for traditional medicines, domestic energy or construction purposes;
- Incorrect veld burning techniques;
- The spread of alien plants; and
- The lack of institutional control.

The state of degradation in Mkhambathini is indicated on Map 26. It would appear that the area affected by land degradation is located in the northern parts of the municipality. Land degradation undermines the productivity of land and is therefore not sustainable over the long-term. Degradation affects ecosystem processes and place pressures on the livelihoods of people. Over the long-term veld degradation may cause a decline in the nutrient status of the soils, a decline in carrying capacity, reduced areas available for crop production and grazing and inevitably less economic returns. In addition, the productivity of soils decline and degraded land may lose its resilience to recover from the effects of drought (also refer to section 7.4).

MAP 25: WATER EROSION POTENTIAL



MAP 26: DEGRADED LAND



9.2 HYDROLOGY AND WATER RESOURCES

A catchment area is an extent or area of land where water from rain drains downhill into a body of water, such as a river, lake or dam. The drainage basin includes both the streams and rivers that convey the water as well as the land surfaces from which water drains into those channels and is separated from adjacent basins by a catchment divide.

The **Hydrological Characteristics** map (maps 27 and 28) depicts the catchment areas and rainfall for Mkhambathini municipality. A total of 10 catchment areas exist within the Local Authority, which is also an indication of the varied topographical changes of the area.

Ecological aspects also need to be considered when considering Catchment Areas/Drainage Basins. The water flowing from the catchment areas, flows to a dam, which is ultimately used for service provision such as water used for household purposes. It is therefore necessary to consider the impact that settlements have on the quality of water, and where sanitation services are critically needed to prevent cholera, for example. The use of pesticides on large scale for agricultural use must be limited where commercial farming can have a negative impact on the quality of water.

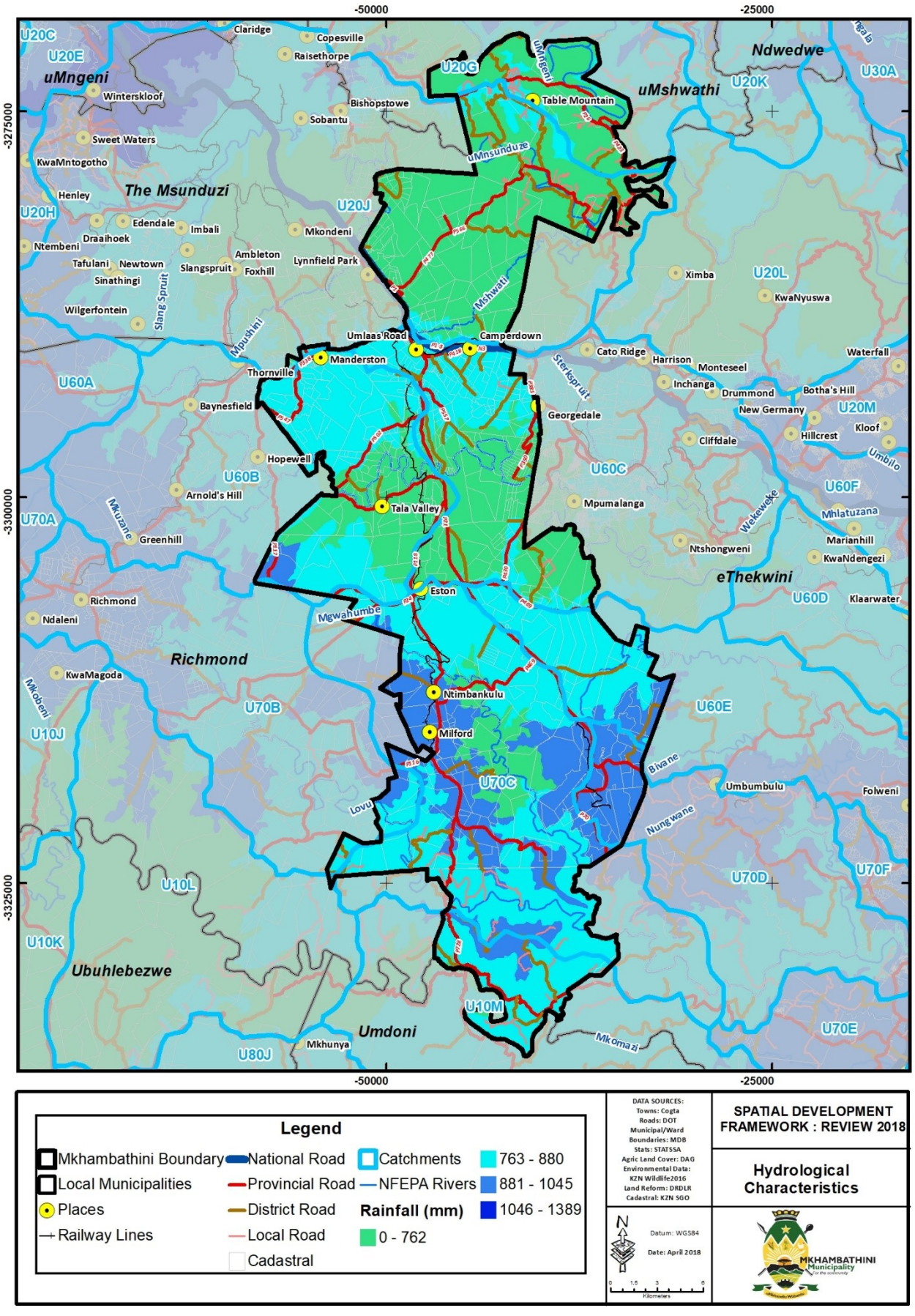
The presence of many rivers and high volumes of water implies that safety of communities also needs to be considered by locating them outside possible flood line areas. The annual average precipitation for the southern half of the municipal area ranges between 913 - 1011mm. The northern half of the municipal area has an average rainfall that is slightly lower, being between 827 and 912mm. The evaporation in the municipality is relatively low, with virtually the entire municipal area falling in the 0 – 1400mm range. Due to medium to high rainfall and low precipitation makes it clear why large areas of the municipality is suitable for sugarcane production and has a relatively high agricultural potential. The central parts of the municipality are further given this advantage by the relatively low gradient of slopes.

The study area is defined by several secondary catchments, namely the uMngeni, uMlazi, Lovu and Mkomazi. The uMngeni River System forms a strategically important catchment that supplies water to a series of water supply dams (Midmar, Albert Falls, Nagle and Inanda Dams) and which is essential for socio-economic development within the Pietermaritzburg-Durban development node. The Mkomazi River System has been identified as important part for future water supply through inter-basin transfer schemes.

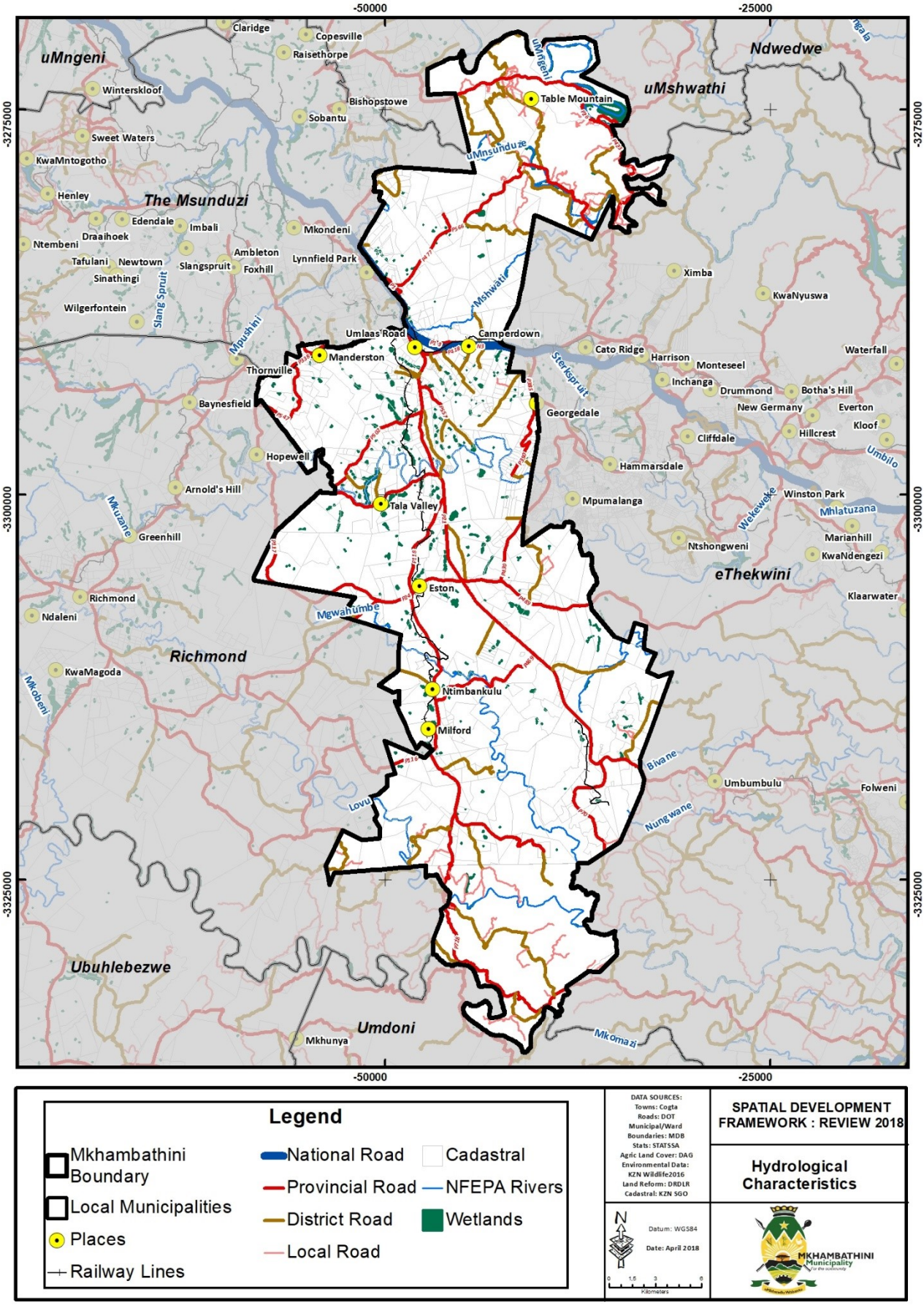
According to the District SEA and EMF, the SDF must consider the implications of the following key sustainability issues for land use planning (District EMF):

- Water Demand and Supply' (i.e. excessive water demand that exceeds available supply); and
- Water Quality (i.e. reduced water quality).

MAP 27: HYDROLOGICAL CHARACTERISTICS



MAP 28: HYDROLOGY (MAIN RIVERS)



The "Water Yield Sensitivity Zone" (map 29), which addresses the water yield and social-ecological importance of the catchments, underscores the need to protect ecological infrastructure to improve the delivery of water-related ecosystem services. As these zones have implications for development, the SDF must consider the development objectives and EIA Guidelines contained in the District EMF. The area in the extreme south of the Municipality and in Ward 7 and the area to the southwest of the N3 (bordering Richmond) is identified by the EMF as a "Very High Sensitivity and Very High Constraint" area (refer to table 17 and map 29).

TABLE 17: WATER YIELD CONSTRAINTS

SENSITIVITY LEVEL	THRESHOLD (Water Yield Potential/Value)
Very High Sensitivity	Catchments with a very high water yield value
High Sensitivity	Catchments with a high water yield value
Moderate Sensitivity	Catchments with a moderate water yield value
Low Sensitivity	Catchments with a low water yield value

Source: UMDM EMF Volume II: Environmental Sensitivity Zones and Assessment Guideline

The "Water Quality Sensitivity Zone" (map 30) underscores the urgent need to:

- Protect sensitive catchments,
- Ensure development is appropriately located; and
- Ensure waste is appropriately managed.

The most northern portion (Table Mountain area and north bordering onto uMshwathi) is identified by the EMF as a "Very High Sensitivity and Very High Constraint" area in terms of water quality (refer to table 18 and map 30). The area bordering this very high sensitive area to the south and up to the N3 is identified as a "High Sensitivity and High Constraint" area. This includes Camperdown and the area that abuts the N3.

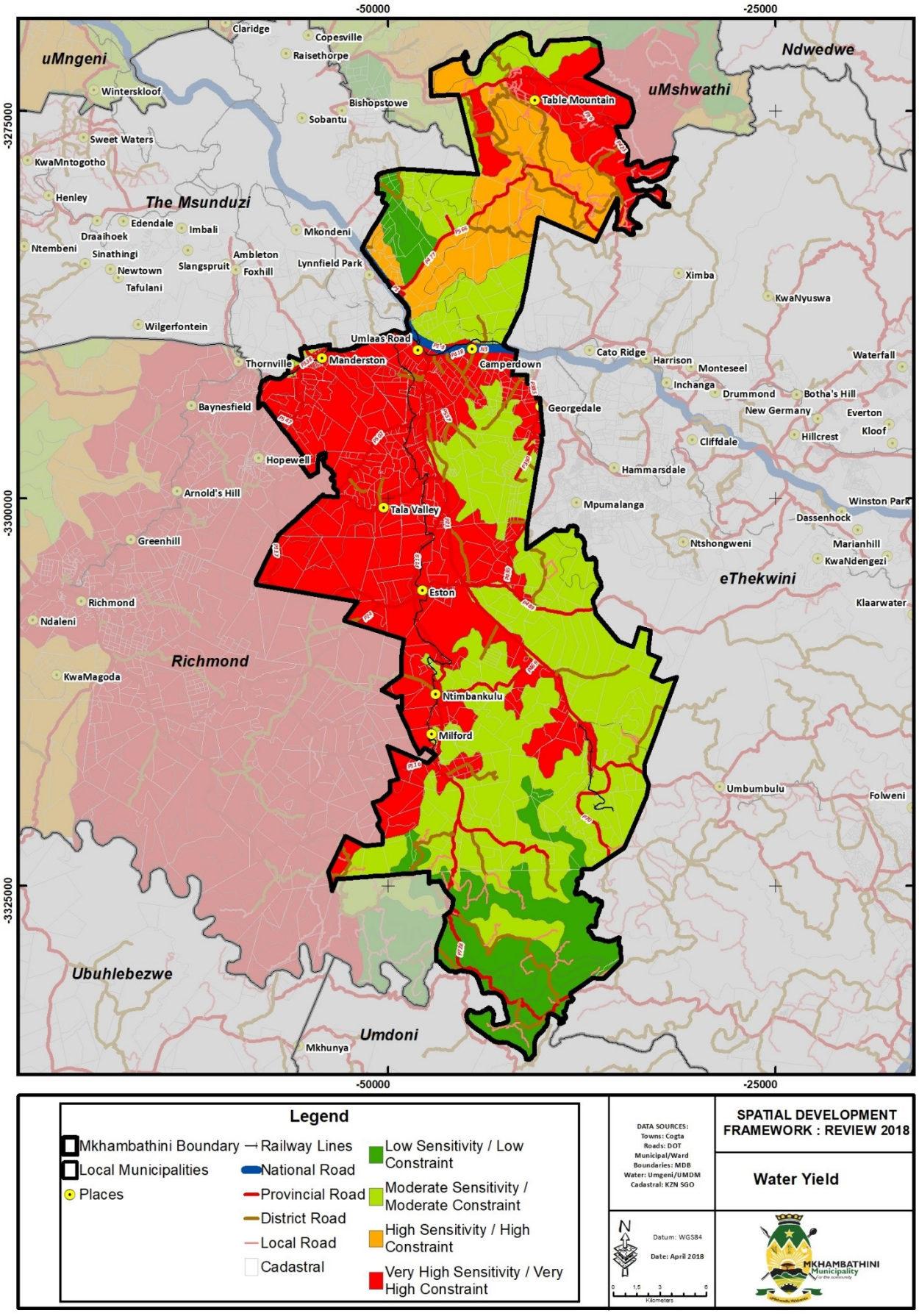
TABLE 18: WATER QUALITY SENSITIVITY

SENSITIVITY LEVEL	FEATURE
Very High Sensitivity	• WQ Zone 1: Quinnary Catchments containing key water supply features. • WQ Zone 2: Proximal catchments influencing key supply features with measured elevated pollutant concentrations. • WQ Zone: 3 Proximal catchments influencing key supply features with high potential for elevated pollutant concentrations.
High Sensitivity	• WQ Zone 4: Proximal catchments influencing key supply features with low pollutant concentrations. • WQ Zone 5: Distal catchments influencing key supply features with measured elevated pollutant concentrations. • WQ Zone 6: Distal catchments influencing key supply features with high potential for elevated pollutant concentrations.
Moderate Sensitivity	• WQ Zone 7: Distal catchments influencing key supply features with low pollutant concentrations.

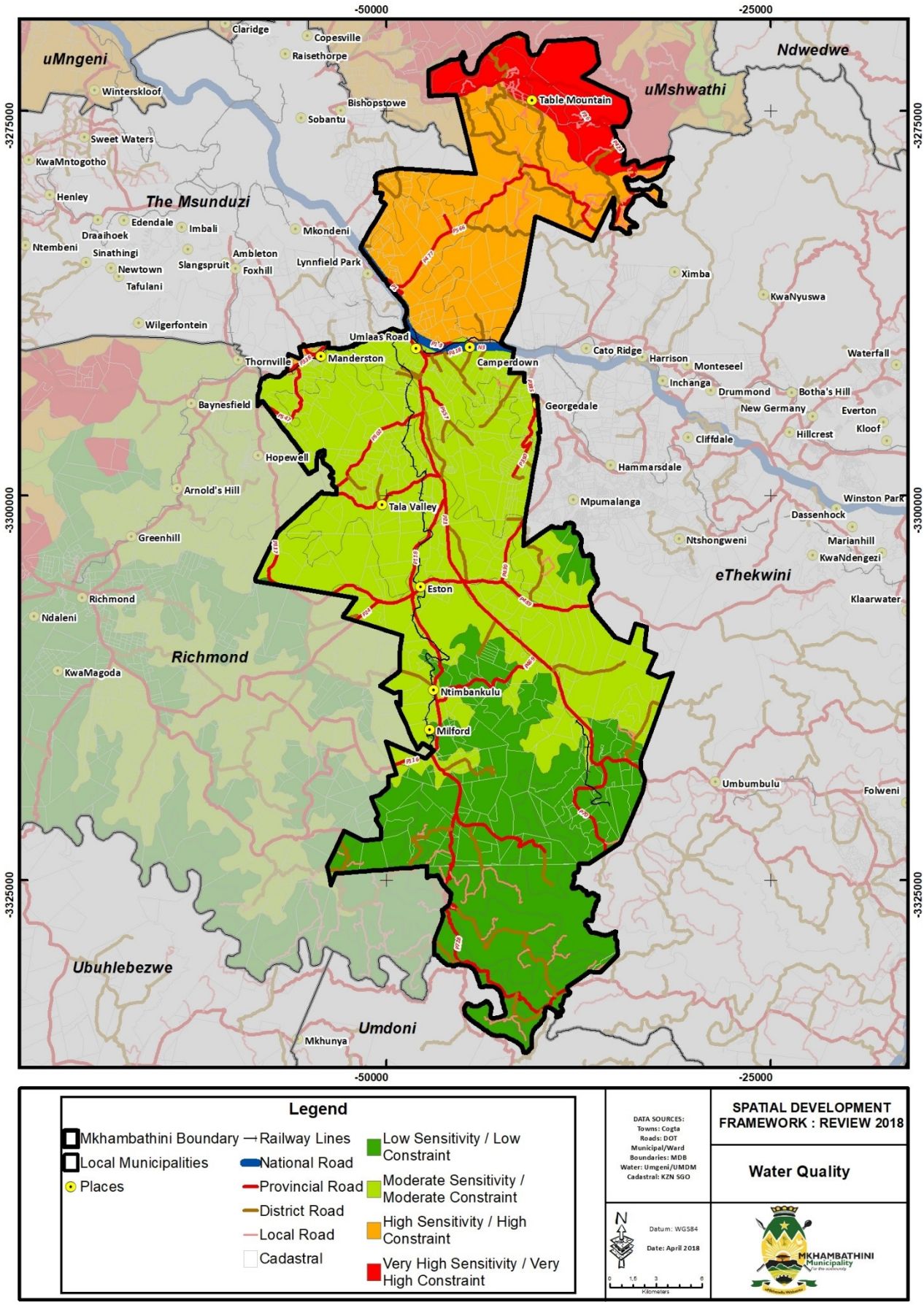
SENSITIVITY LEVEL	FEATURE
	• WQ Zone 8: Catchments not influencing key supply features with measured elevated pollutant concentrations. • WQ Zone 9: Catchments not influencing key supply features with high potential for elevated pollutant concentrations.
Low Sensitivity	• WQ Zone 10: Catchments not influencing key supply features with low pollutant concentrations.

Source: UMDM EMF Volume II: Environmental Sensitivity Zones and Assessment Guideline

MAP 29: WATER YIELD CONSTRAINTS



MAP 30: WATER QUALITY ZONES



9.3 PROTECTED & CONSERVATION WORTHY AREAS

9.3.1 CRITICAL BIODIVERSITY & ECOLOGICAL SUPPORT AREAS

Ezemvelo KZN Wildlife compiled a map depicting Critical Biodiversity and ecological support areas for the uMgungundlovu Municipality Biodiversity Sector Plan (2014). The image below is an extract from this map depicting the Mkhambathini Municipality.

The **Critical Biodiversity Map** overleaf (map 31 and 32) depicts Critical Biodiversity Areas (CBA's) as well as Ecological Support Areas in Mkhambathini Local Municipality. The two environmental areas are defined as follow:

→ CBA's depicts landscapes that need to be maintained in a natural or near-natural state in order to ensure the continued existence and functioning of species and ecosystems as well as facilitate the continued delivery of ecosystem services. Maintaining an area in a natural state can include a variety of land uses compatible with the present biodiversity resources.

→ Ecological support areas (ESA's) are areas that are not essential for meeting biodiversity representation targets/thresholds, but which nevertheless play an important role in supporting the ecological functioning of critical biodiversity areas and/or in delivering ecosystem services that support socio-economic development, such as water provision, flood mitigation or carbon sequestration. The degree of restriction on land use and resource use in these areas may be lower than that recommended for critical biodiversity areas.

The purpose of CBA's is simply to indicate spatially the location of critical or important areas for biodiversity in the landscape. The CBA, through the underlying land management objectives that define the CBA, prescribes the desired ecological state in which we would like to keep this biodiversity. Therefore, the desired ecological state or land management objective determines which land-use activities are compatible with each CBA category based on the perceived impact of each activity on biodiversity pattern and process.

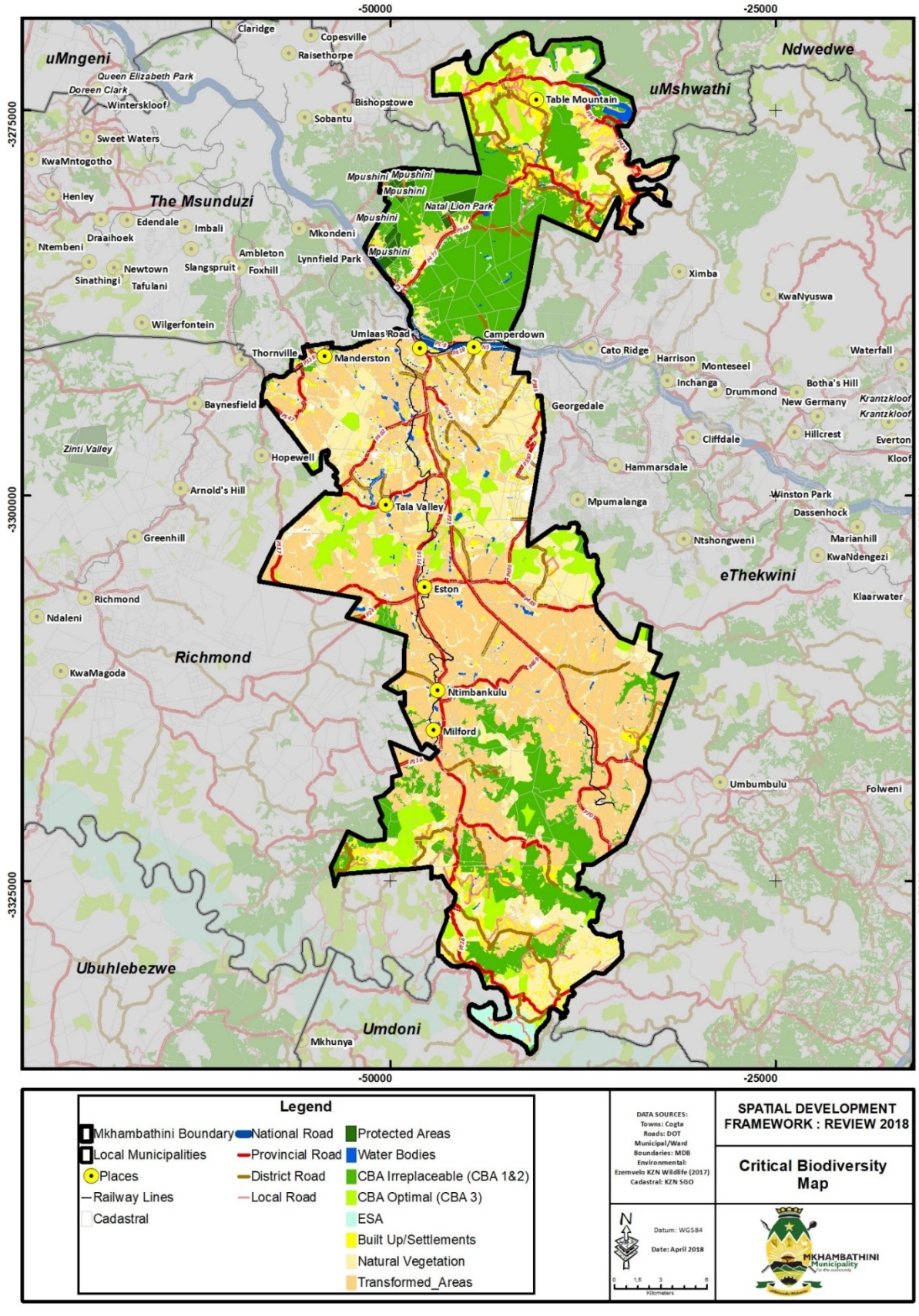
From the map below, it is clearly seen that the largest part of the municipality is classified as Transformed Land Areas where very little conservation status exists. Through rural residential and subsistence farming activities, the land has been transformed from ecological sensitive, to land uses associated with residential activities.

The area from Camperdown northwards is classified as a CBA Irreplaceable (1) area where Critically Endangered eco-systems are functioning, and strict land use management procedures needs to be implemented. A large part of this area is also classified as an ESA area. The largest settlement area is situated on the northern boundary of the municipal area, and includes the areas of Maqomgoo, Nkanyezini and Manyavu situated next to the Nagle Dam.

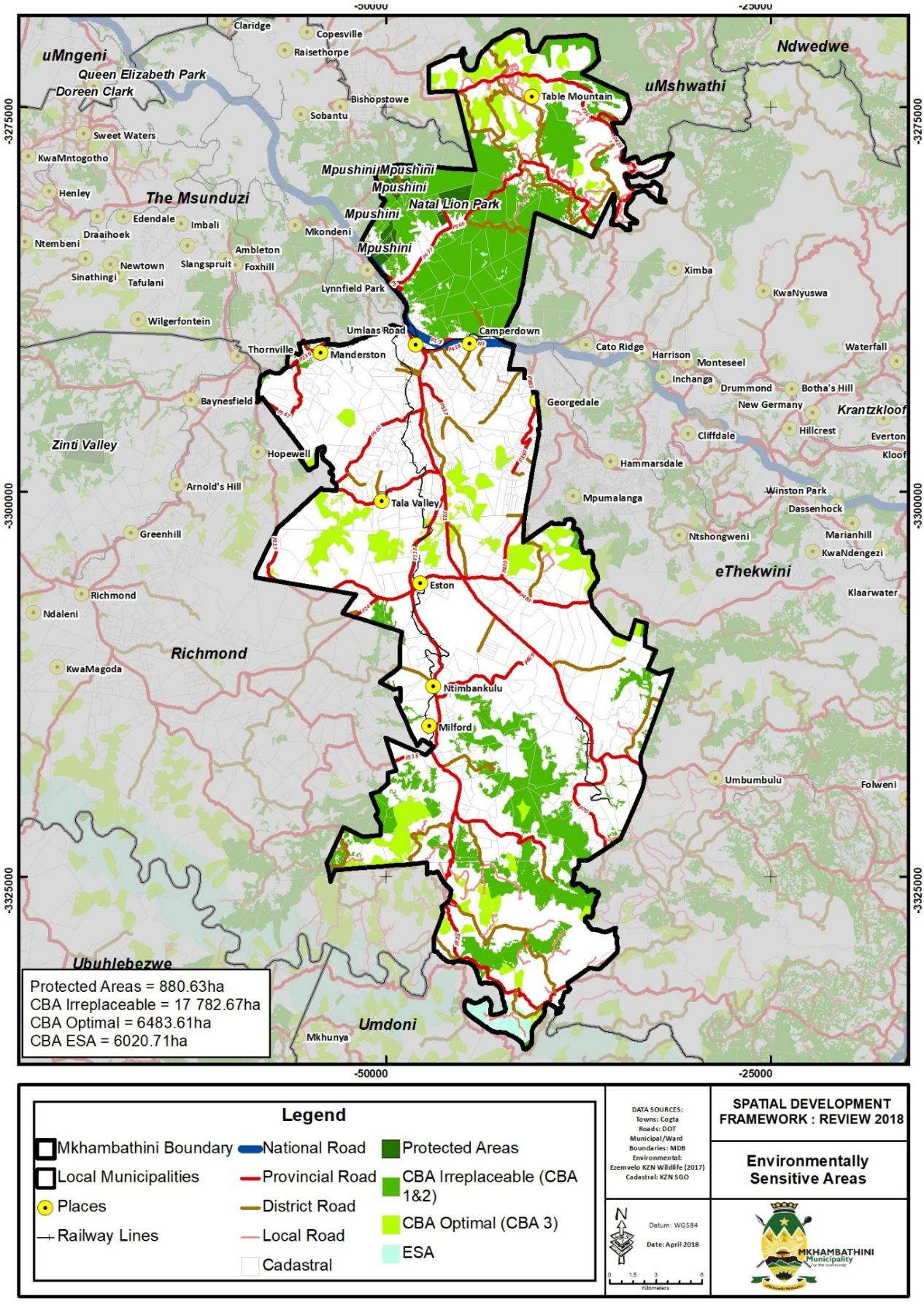
Other smaller residential groupings are situated on the Southern boundary of the municipal area and consist of the areas of Mampungushe and Songeni. CBA Optimal (3) areas are scattered throughout

the central part of the municipal area as well as the southern area. The areas adjacent the uMkomaas River is further classified as an ESA area, as it forms part of the green corridors of the province.

MAP 31: CRITICAL BIODIVERSITY



MAP 32: ENVIRONMENTALLY SENSITIVE AREAS



9.3.2 THREATENED TERRESTRIAL ECOSYSTEMS

Map 33 on the overleaf reflects the threatened status of the vegetation types, which have been listed as threatened terrestrial ecosystems in terms of the National Environmental Management Biodiversity Act (2004)[1]. The purpose of listing these ecosystems are (i.e. land use objectives):

- To reduce the rate of ecosystem and species extinction;
- To prevent further degradation and loss of structure, function and composition of threatened ecosystems; and.
- To enable or facilitate proactive management of ecosystems

The conservation status of ecosystems is measured on the basis of how much of a broad vegetation type's original area remains intact relative to thresholds. The thresholds that apply to the listed threatened terrestrial ecosystems (conservation status of ecosystems) are as follows:

Critically Endangered	Remaining natural habitat <= biodiversity target
Endangered	Remaining natural habitat <= biodiversity target + 15%
Vulnerable	Remaining natural habitat <= 60% of original area of ecosystem
Least Threatened	Remaining natural habitat > 60% of original area of ecosystem

According to NEMBA:

- The Municipality must ensure that SDFs take listed threatened ecosystems into account and apply appropriately restrictive land-use guidelines to listed ecosystems, so that further loss and degradation of natural habitat in these ecosystems is avoided; and
- The zoning schemes or land-use management scheme should include appropriately restrictive zoning categories for ecologically important areas such as threatened ecosystems.

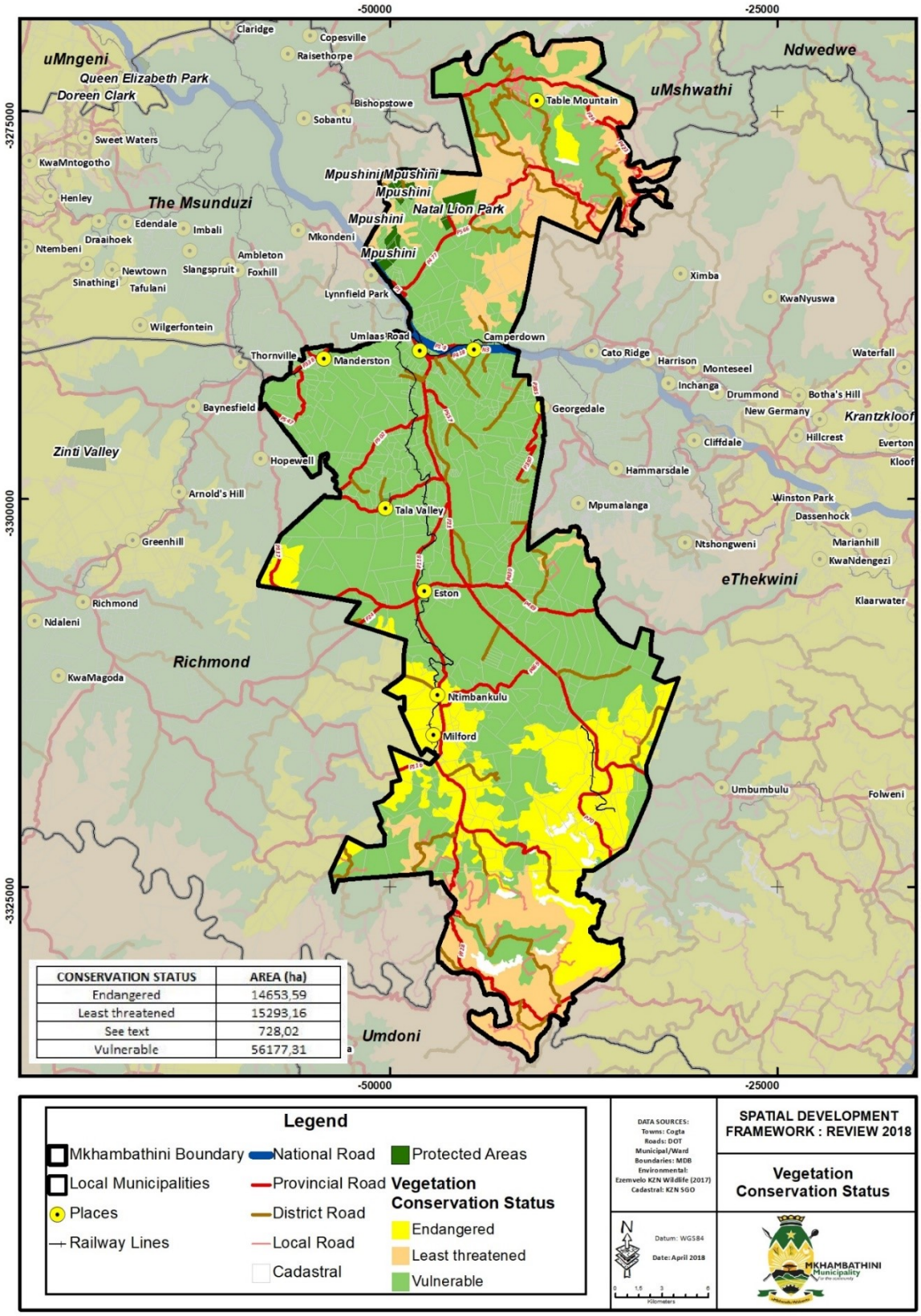
It is noted that these listed threatened ecosystems (especially those areas that are viable for protection) have been included in the CBA Map.

9.4 AIR POLLUTION

Mkhambathini municipality is largely rural; however, there are a number of industries that are sources of particulate and gaseous pollutants. The chicken farms (on the rebound), which render animal products, is primarily a source of odour. The busy N3 highway passes thought the northern part of the local municipality and is a source of pollutants associated with motor vehicles. Agricultural burning in the southern parts of the local municipality particularly associated with forestry and sugar cane is a source of air pollutants. (UMDM SEA: Status Quo Report, 2012)

[1] *National list of ecosystems that are threatened and in need of protection, published in terms of Section 52 of the National Environmental Management Biodiversity Act (Act 10 of 2004) in December 2011. Government gazette No 34809, Notice No 1002 of 9 December 2011.*

MAP 33: VEGETATION CONSERVATION STATUS



9.5 ENVIRONMENTAL MANAGEMENT FRAMEWORK

The uMgungundlovu District Municipality formulated a second Strategic Environmental Assessment and Management Plan (SEA & SEMP) in 2017 to serve as a tool for giving effect to these environmental sustainability goals as well as to build on the outcomes of the first SEA & SEMP (2013) by translating the outcomes into an Environmental Management Framework (EMF).

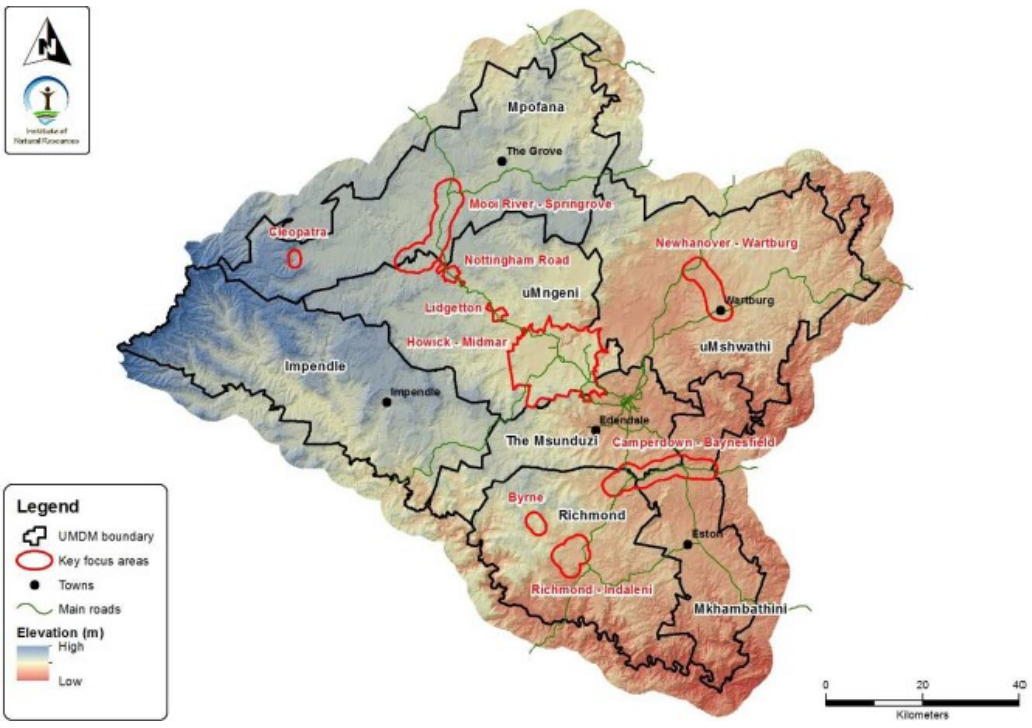
The Environmental Management Framework Regulations of 2010 promulgated under the National Environmental Management Act (Act No 107 of 1998) defines an EMF as "*the study of the biophysical and sociocultural systems of a geographically defined area to reveal where specific land uses may best be practiced and to offer performance standards for maintaining appropriate use of such land*".

As part of the process, the resulting EMF identified several Key Focus Areas based on the analysis of the SEA and SEMP. The Key Focus Areas Map (figure 20) illustrates that the so-called Camperdown-Baynesfield focus area directly impact on the Mkhambathini Municipality and thus the proposals from the EMF for this area would need to be considered during the SDF process. The EMF further identifies Environmental Sensitivity Zones, being wetlands, water quality, water yield, flood risk, biodiversity, agricultural resources and infrastructure services.

9.6 CLIMATE CHANGE

The Umgungundlovu Climate Change Response Strategy (reference 2012) provides information on the potential meteorological changes that are likely to occur in the region over the next decades, and the potential impacts this may have on ecosystems, people and the economy.

FIGURE 20: UMDM EMF - KEY FOCUS AREAS



Source: UMDM EMF -Environmental Management Framework Report (2017)

Based on the models used it is estimated that the region is likely to experience a warmer future, increased frequency and intensity of severe storms and flash flooding, an increase in lightning strikes and an increase potential for drought events. All sectors will be affected and the impacts are likely to be severe. Communities who are dependent on natural resources for their livelihoods will be most vulnerable and at risk in the face of such changes. The climate change work that was undertaken in the district confirmed that the level of socio-economic vulnerability in this region is extremely high, and this is exacerbated by the poor condition of the district's natural capital. Climate change is therefore expected to become a future driver of human vulnerability.

The Disaster Management Plan for the Umgungundlovu District Municipality (2017) reveals that the district already faces regular climate-related disasters such as floods, severe storms and lightning, snow, drought and thunderstorm; and the frequency and intensity of such extremes are expected to increase. The Disaster Profile for the Mkhambathini Local Municipality includes the certainty of flooding and severe storms, especially in wards 1, 2, 3, 4, 5, and 7, with the most vulnerable communities being in the rural areas.

While the disaster management plan includes pro-active and reactive strategies to avoid incidents and build resilient communities, it does not address the underlying causes and/or the physical factors that may contribute to natural disasters and it does not include strategies to build ecosystem resilience. The SDF can bridge this gap by integrating disaster and climate risk management; and promoting strategies to tackle poverty, human vulnerability and economic development on par with issues of ecological vulnerability. To this end, the Mkhambathini SDF should promote a proactive spatial planning response to the impacts of climate change by integrating ecological and community vulnerabilities and promoting climate resilient human settlements strategies.

Map 34 and 35 shows the distribution of existing settlements in relation to steep slopes and flood lines, while Map 36 shows the distribution of settlements in relation to critical ecological infrastructure (including agriculture land). The socio-ecological vulnerabilities are highlighted in table below:

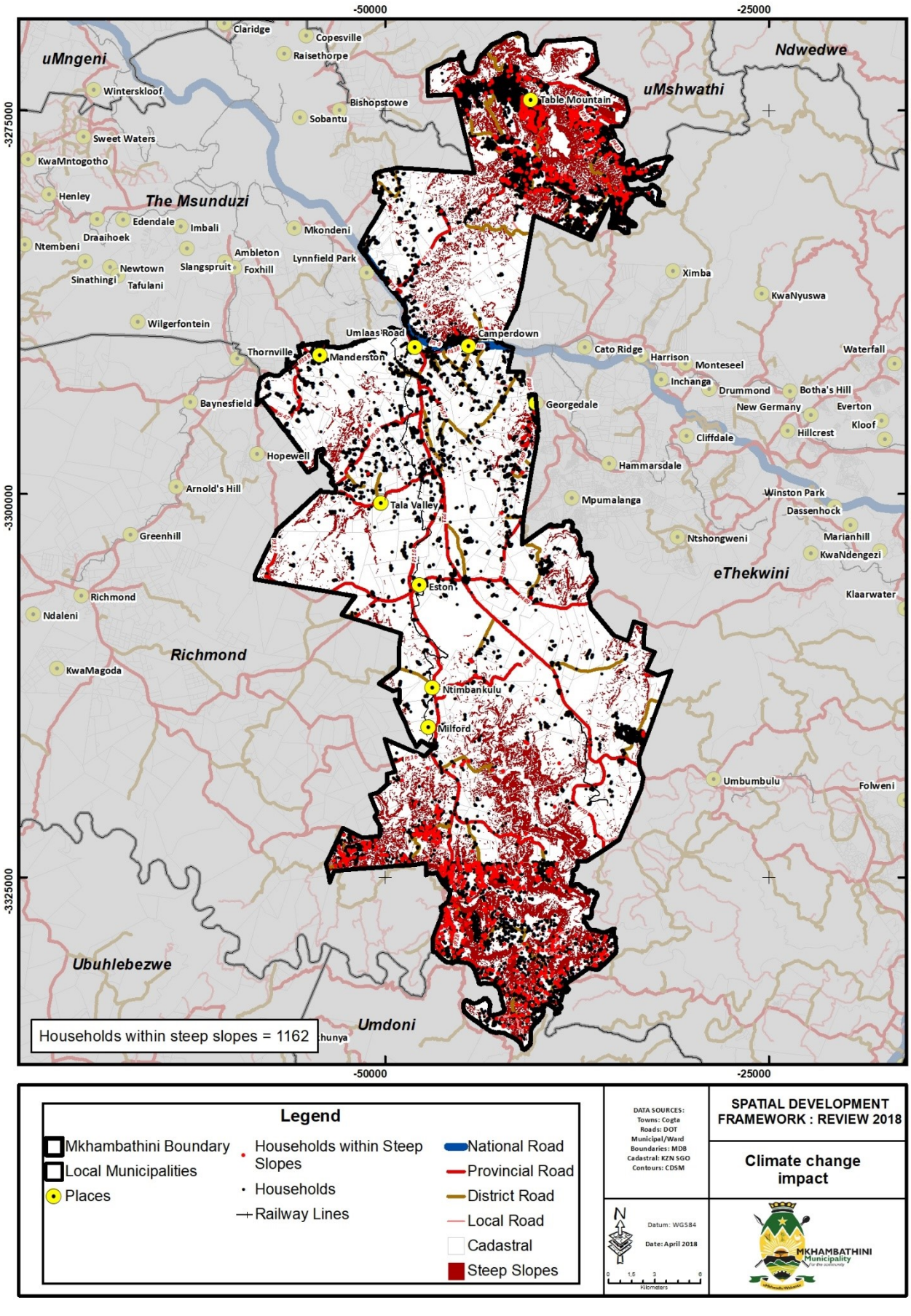
TABLE 19: SOCIO-ECOLOGICAL VULNERABILITIES

Community vulnerability	Ecological vulnerability
• Settlements in areas with ecological vulnerability comprise of households that fall in the low income groups (i.e. high poverty levels), they live in traditional dwellings which are not always structurally secure, they practice subsistence living, and most have low levels of access to basic infrastructure (i.e. potable water, appropriate sanitation and access to electricity). Such communities have little	• There are many settlements that occur in transformed areas which are highly susceptible to erosion. Map 1 shows these settlements in relation to steep slopes. Such areas are vulnerable to increased runoff and increased flood risk due to hardened surfaces and lack of basal cover. Ultimately this affects the water quality in the landscape due to an increase in sedimentation.

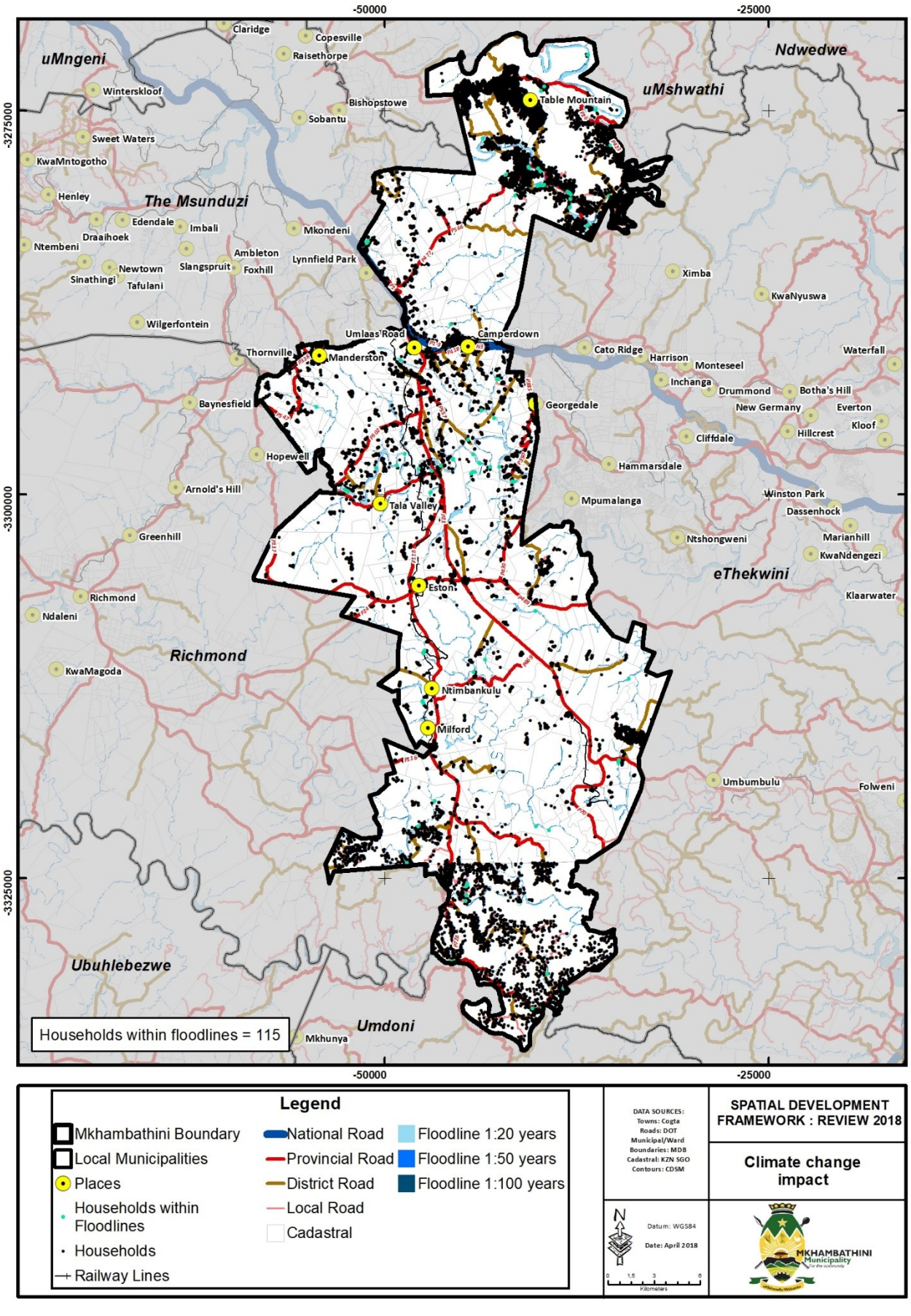
Community vulnerability	Ecological vulnerability
coping capacity (resilience) to adapt to extreme events. • Areas with decreased water quality will impact communities who are dependent on natural water resources such as springs and rivers for their water needs. • Areas with 'compromised' ecological infrastructure and services have lost their potential to "absorb" the shocks of increased extreme weather, i.e. thereby exposing communities to higher risks. • Infrastructure and human life is at risk where settlements occur within flood risk zones (i.e. the 1:100 year flood risk areas). • Communities in degraded areas are more vulnerable to the effects of drought as degraded land often loses its resilience to recover from droughts and/or floods.	• In the extreme south of the study area, where settlements also occur in areas of steep slopes, there are catchments with a very high to high water yield value (i.e. they are important for the production of water). High levels of transformation in these areas will impact the ability of ecosystems to deliver watershed services. Ultimately this would contribute to decreased water quality with associated socio-economic impacts. • Development within flood risk areas negatively impact riverine ecology and hydrology. • Areas where settlements and associated land use may threaten the integrity of important biodiversity resources (i.e. CBAs and ESAs). • Areas where settlements encroach onto scarce agricultural land and/or areas where inappropriate farming activities are occurring on low (restricted) potential land.

This analysis seems to indicate that the communities in ward 7 may be the most vulnerable to the impacts of climate change. The SDF must respond to these rural dynamics in an integrated manner. In other words, human settlement planning in ward 7 must promote climate resilient settlements with strategies to build community and ecosystem resilience.

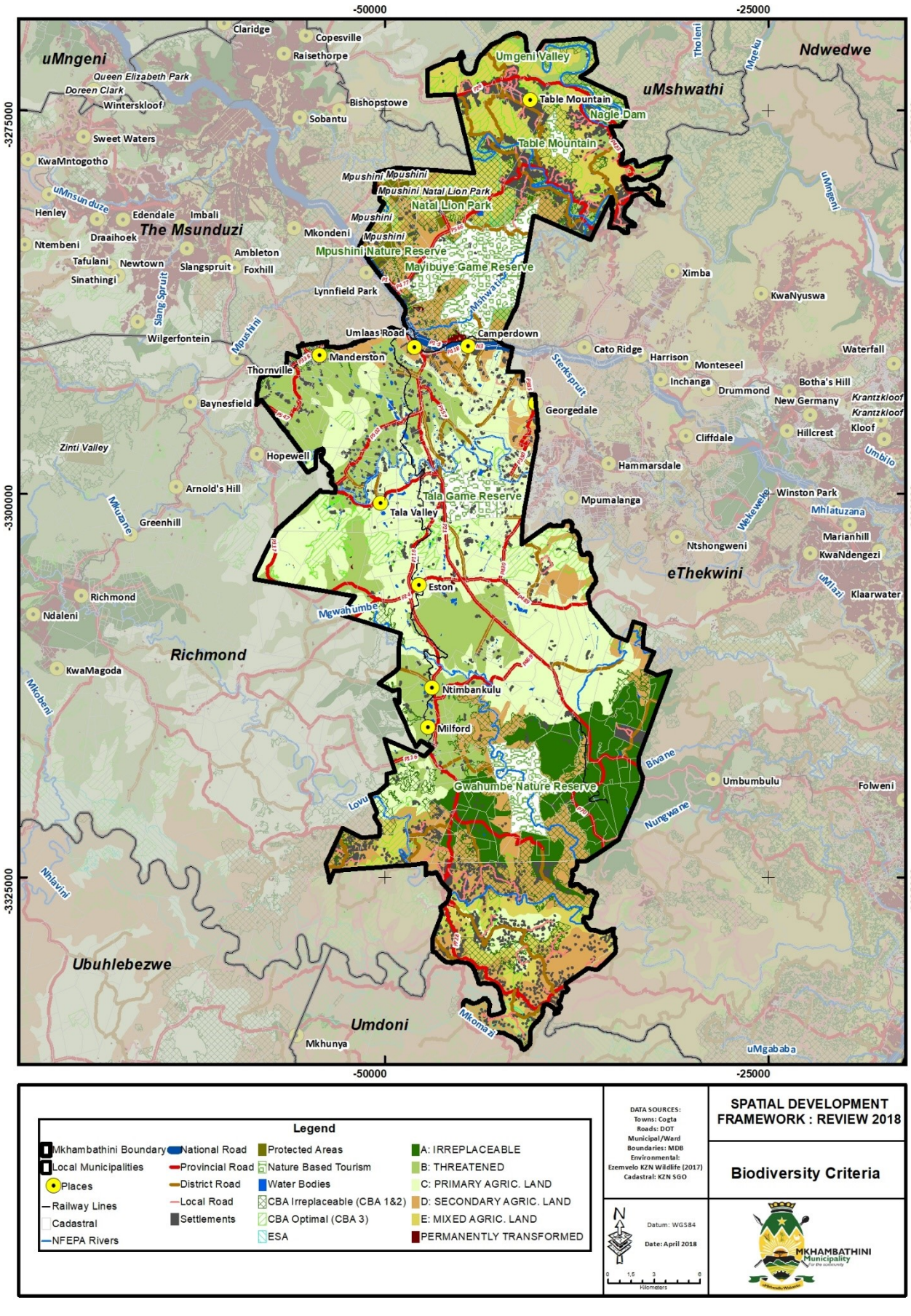
MAP 34: DISTRIBUTION OF EXISTING SETTLEMENTS IN RELATION TO STEEP SLOPES



MAP 35: DISTRIBUTION OF EXISTING SETTLEMENTS IN RELATION TO FLOOD LINES



MAP 36: DISTRIBUTION OF SETTLEMENTS IN RELATION TO CRITICAL ECOLOGICAL INFRASTRUCTURE (INCLUDING AGRICULTURE LAND)



10 SUMMARY OF DEVELOPMENT TRENDS

The following broad SWOT analysis summary provides an indication of the development trends and directives, which should be considered and/or addressed during the SDF formulation process.

STRENGTHS	WEAKNESSES
• Strategically located in terms of its position between provincial notes (Pietermaritzburg and Durban) as well as the **national corridor (N3).** • Camperdown is located in the centre of the municipality and serves as a **growing service centre.** • Large areas with good **agricultural potential.** • Established **Agricultural and manufacturing sectors.** • Fairly diverse **Eco and Adventure Tourism Attractions.** • **Growing population** with an evident migration info the area. • **Good access** between rural settlements and the service centres.	• Small rural municipality with **limited private development**. • **Lowest rainfall region** within the district. • **Steep terrain** within the north and south where majority of poverty-stricken communities are located, impedes service provision. • **Scattered rural settlement** pattern, hampering cost effective service delivery. • **Backlogs** in water, sanitation, roads and electricity infrastructure. • **No Waste Water Treatment Works.** • **Reduced employment opportunities** within Agri-processing sector.
OPPORTUNITIES	**THREATS**
• Located along the busiest corridor within the province which open a lot of **trading and storage opportunities.** • Potential exists to develop and **intensify the role of Eston and Ophokweni** as secondary nodes. • **Increased industrial investment** along Umlaas Road towards Msunduzi. • Relatively **good agricultural land** and opportunities exists to develop this sector even further. • Land claims (restitution) have progressed very well and this provides opportunities for **agrarian reform**. • **Diversification of agricultural production** and Agri-processing opportunities around Eston (poultry production and sugarcane). • Opportunities to establish a **poultry hub** associated with the N3 corridor. • Further development, integration and collective promotion of **tourism attractions**.	• High and **rising unemployment levels** linked to especially the economic contraction of the chicken production industry. • Growing pressure to **protect sensitive** vegetation such as Ngongoni and Bushveld Valley. • Anticipated increase in f**amilies migrating to Camperdown.** • Servicing the **Peri-Urban Settlement** emerging at Broadview. • **Land degradation** within valuable agricultural zones. • **Settlement encroachments** into environmental areas. • Poor water quality due to **contamination from scattered settlements**. • High susceptibility to water erosion in north and south. • Extreme events. • Flood risk – communities located in flood line. • Erosion – susceptible areas in north and south.

The principles of spatial justice and sustainability together with efficiency, spatial resilience and good administration should form the basis in addressing past imbalances and focus resources towards targeting key areas of poverty concentration within Mkhambathini Local Municipality, while systematically improving access to land and proper land management. These poverty concentrations are most prevalent in the far southern areas of Mkhambathini and in particular in wards 1,2, 6 and 7, among other areas. Sustainability should reflect all aspects of spatial planning and development within the municipality by conserving environmental sensitive areas and promoting prime agricultural land in one breath.

The Mkhambathini municipality is characterised by inequalities manifested in the dichotomy between the well-developed and well-endowed and agriculturally productive commercial sectors in wards 3 and 4 and the underdeveloped, under resourced subsistence agriculture in wards 1,2,5,6 and 7. Concentration of economically productive agriculture in wards 3 and 4 predominantly means that the majority of people residing in the rural areas on traditional authority land are excluded from commercial agricultural activities. However, the Mkhambathini IDP identifies scope for out grower schemes and strategic partnerships with major poultry producers.

Based on the above identified disparity between areas in the municipality, it is clear that there are certain areas, specifically the southern parts and the northern parts of the municipality which need investment and development to attempt to address past imbalances in the municipality. The principle focus should be to concentrate social services and infrastructure development where it will have the greatest impact and where the needs are the greatest. The highest number and concentration of people are located around Table Mountain in the north. The municipality will need to attempt to improve access to land and proper land management practices in Traditional Authority areas, so as to assist it with sustainable service delivery on this land and ensure economic security to residents through land tenure practices.

Efficiency in spatial planning should ensure optimal use of infrastructure while promoting residential and employment opportunities without compromising settlement patterns through urban sprawl but rather implement streamlined development with efficient decision-making. A diverse combination of land uses supporting each other is critical to ensure spatial resilience in maintaining flexibility in spatial plans, policies and land use management systems ensuring that rural and urban development are in support of each other. Linked to this, the municipality will have to identify land which has the highest agricultural value and ensure rehabilitation of such, where needed.

The municipality has an existing competitive advantage with the N3 and adjacent railway traversing the relative centre of the municipality. This offers opportunities for access to larger markets like Durban, Pietermaritzburg and the greater Gauteng area. A further opportunity that exists is the strong poultry industry in the municipality and the scope for strategic partnerships between impoverished areas and the major poultry producers.

Infrastructure investment in the municipality will need to focus on the establishment of a local Waste Water Treatment Works and expanding from areas with existing higher levels of infrastructure

investment like the Camperdown area and the northern traditional settlements around the Table Mountain area. This will assist in promoting efficient and sustainable service delivery and could assist in discouraging settlement sprawl in an area which is already problematic to service due to is topography and split settlement patterns.

This investment focus of the municipality should not detract from the need to ensure that rural and urban development is in support of each other. Therefore, the uses promoted in denser settlement should aim to promote rural development and in particular those related to agrarian reform and development in the areas adjacent to the denser rural settlement service centres.

Together with discouraging urban sprawl, the municipality will need to focus its social and economic infrastructure investments in areas where diverse land use will encourage complex service systems, which will enhance development opportunities. It would be preferable to promote diverse land uses in areas, which already have this in place to a certain extent, and therefore, the expansion of land uses around settlements like Camperdown/ Umlaas Road, Table Mountain, Ngwekazana and oGagwini areas.

Positive change in terms of good administration will ensure sectoral and spatial integration in all land improvement and development with full legislative compliance in all aspects to prepare, maintain and adhere to comprehensive municipal spatial planning policies and strategies. The municipality needs to ensure that it has the necessary institutional capacity to ensure effective land use management to achieve legislative compliance in all aspects of land development, which in turn should promote efficiency and sustainability of development initiatives in the Mkhambathini Municipality.