Msukaligwa Spatial Development Framework

Legislation / Policy Review and Vision Draft 3

Status Quo Analysis Draft 2

Proposals Draft 1

SEPTEMBER 2019

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1 INTRODUCTION

1.1 Background

The main objective of the project as stated in the term of reference is to do a targeted review of the Msukaligwa SDF 2010 to ensure the SDF meets the requirements of SPLUMA and the 2016 SPLUMA By-Law.

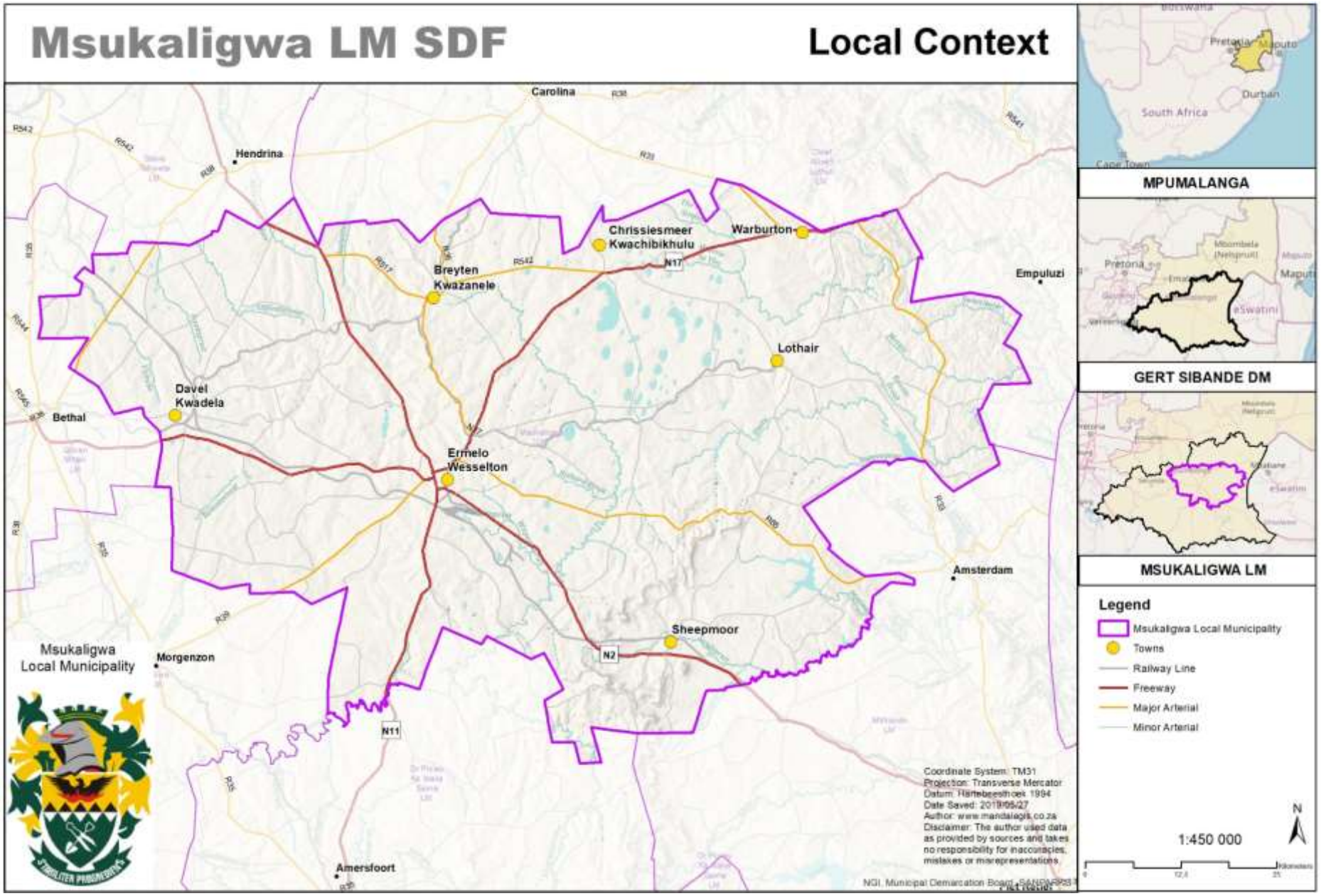
Msukaligwa Municipality is located in Mpumalanga. It is a predominantly rural area, covering 6016 km^2. The municipality has a total population of approximately 164 608 people with a relatively low population density of 27.3 people per square kilometre.[1] Msukaligwa is one of the seven Local Municipalities within the Gert Sibande District:[2]

Local Municipality	Main Admin Location
Chief Albert Luthuli	Carolina
Dipaseleng	Balfour
Lekwa	Standerton
Msukaligwa	Ermelo
Mkhondo	Piet Retief
Dr Pixley Isaka Ka Seme	Volksrust
Govan Mbeki	Secunda

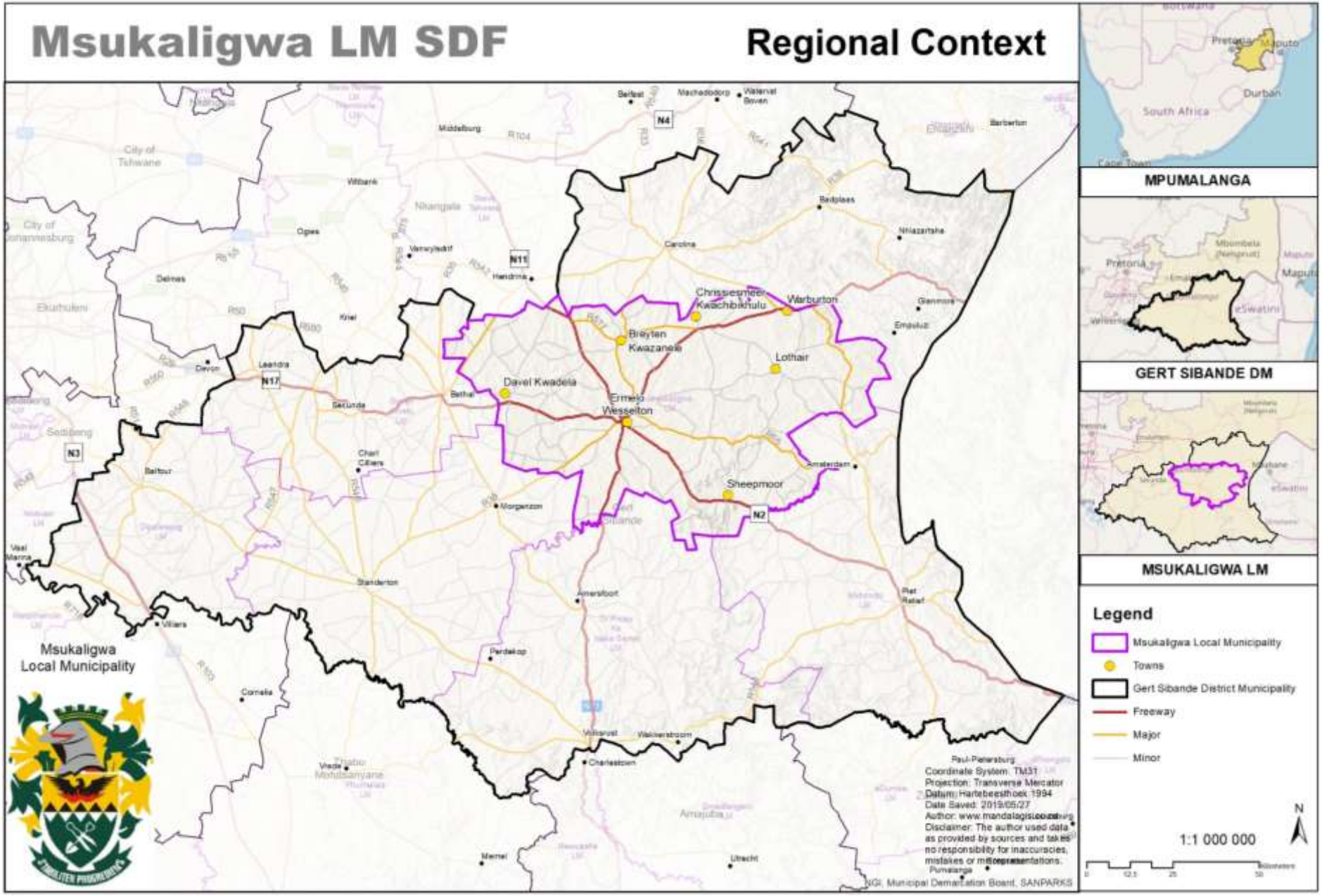
Table 1: Gert Sibande Municipalities

Ermelo/Wesselton is the highest order urban settlement in Msukaligwa, located at a central point to a range of regional routes (road and rail) including the N17, N11 and N2. The main settlements in Msukaligwa are Ermelo/Wesselton; Breyten/KwaZanele; Chrissiesmeer/KwaChibikhulu; Davel/KwaDela; Warburton/Nganga; Lothair/Silindile; and Sheepmoor.[3] The municipal area, including settlements and main routes are shown on **Map 1: Local Context** below. The regional context of Msukaligwa, showing its location in the Gert Sibande District and relative location to other major towns in the region is illustrated on **Map 2: Regional Context** below.

[1] StatsSA 2016 Community Survey.
[2] Gert Sibande District. 2018. Gert Sibande Integrated Development Plan 2018-19.
[3] Msukaligwa Local Municipality. 2019. Draft Integrated Development Plan 2019-2020



Map 1: Local Context



Map 2: Regional Context

1.2 Purpose of SDF

A Spatial Development Framework (SDF) is a core component of a Municipality's economic, sectoral, spatial, social, institutional, environmental vision. A Municipal SDF is prepared in terms of the Spatial Planning and Land Use Management Act, 16 of 2013, and is regarded as a mechanism to direct future growth and achieve the desired spatial form of the Municipality.

More specifically, it is a framework that seeks to guide the overall spatial distribution of current and desirable future land uses within a municipality in order to give effect to the vision, goals and objectives of the municipal IDP. The aims of an SDF are to promote sustainable functional and integrated human settlements, maximise resource efficiency, and enhance regional identity and unique character of a place.

A credible SDF must have at least the following characteristics in terms of the DRDLR SDF Guidelines 2017:[4]

1- It is based on an agreed vision and planning principles that promote equity and sustainability;
2- It is aligned with relevant national and provincial policy;
3- It reflects a clear understanding of the reality of the municipal spatial environmental, social and economic systems;
4- It provides sufficient detail to inform Council decision that have a spatial dimension;
5- It includes an implementation plan, with measurable targets;
6- It is realistic in terms of growth prospects and the financial and institutional capacity of the municipality;
7- It is aligned with the municipal environmental management framework where applicable;
8- It enjoys a high level of buy-in from all stakeholders;
9- It provides guidance for the municipality's land use management systems; and
10- It is clear, succinct and accessible to a wide audience.

1.3 SDF Role and Purpose and Content Requirements

SDFs are legislated in terms of the Spatial Planning and Land Use Management Act (SPLUMA), 16 of 2013. SPLUMA regulates that national planning system and instruments. As part of the prescribed instruments, it requires each municipality to prepare an SDF.

In section 12 of SPLUMA, the role and purpose of the SDF are explicitly stated as follows:

12. (1) The national and provincial spheres of government and each municipality must prepare spatial development frameworks that—
(a) interpret and represent the spatial development vision of the responsible sphere of government and competent authority;
(b) are informed by a long-term spatial development vision statement and plan;
(c) represent the integration and trade-off of all relevant sector policies and plans;

[4] DRDLR SDF Guidelines, 2017 http://www.ruraldevelopment.gov.za/services/299-spatial-planning-and-land-use-management/538-sdf-guidelines#.XN5lqel7nIU

(d) guide planning and development decisions across all sectors of government;
(e) guide a provincial department or municipality in taking any decision or exercising any discretion in terms of this Act or any other law relating to spatial planning and land use management systems;
(f) contribute to a coherent, planned approach to spatial development in the national, provincial and municipal spheres;
(g) provide clear and accessible information to the public and private sector and provide direction for investment purposes;
h) include previously disadvantaged areas, areas under traditional leadership, rural areas, informal settlements, slums and land holdings of state-owned enterprises and government agencies and address their inclusion and integration into the spatial, economic, social and environmental objectives of the relevant sphere;
(i) address historical spatial imbalances in development;
(j) identify the long-term risks of particular spatial patterns of growth and development and the policies and strategies necessary to mitigate those risks;
(k) provide direction for strategic developments, infrastructure investment, promote efficient, sustainable and planned investments by all sectors and indicate priority areas for investment in land development;
(l) promote a rational and predictable land development environment to create trust and stimulate investment;
(m) take cognisance of any environmental management instrument adopted by the relevant environmental management authority;
(n) give effect to national legislation and policies on mineral resources and sustainable utilisation and protection of agricultural resources; and
(o) consider and, where necessary, incorporate the outcomes of substantial public engagement, including direct participation in the process through public meetings, public exhibitions, public debates and discourses in the media and any other forum or mechanisms that promote such direct involvement.

SPLUMA also stipulates the minimum contents of a municipal spatial development framework to be as follows:

"21. A municipal spatial development framework must—
(a) give effect to the development principles and applicable norms and standards set out in Chapter 2;
(b) include a written and spatial representation of a five-year spatial development plan for the spatial form of the municipality;
(c) include a longer term spatial development vision statement for the municipal area which indicates a desired spatial growth and development pattern for the next 10 to 20 years;
(d) identify current and future significant structuring and restructuring elements of the spatial form of the municipality, including development corridors, activity spines and economic nodes where public and private investment will be prioritised and facilitated;
(e) include population growth estimates for the next five years;
(f) include estimates of the demand for housing units across different socioeconomic categories and the planned location and density of future housing developments;
(g) include estimates of economic activity and employment trends and locations in the municipal area for the next five years;
(h) identify, quantify and provide location requirements of engineering infrastructure and services provision for existing and future development needs for the next five years;
(i) identify the designated areas where a national or provincial inclusionary housing policy may be applicable;
(j) 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;
(k) identify the designation of areas in the municipality where incremental upgrading approaches to development and regulation will be applicable;

(l) identify the designation of areas in which—

(i) more detailed local plans must be developed; and

(ii) shortened land use development procedures may be applicable and land use schemes may be so amended;

(m) provide the spatial expression of the coordination, alignment and integration of sectoral policies of all municipal departments;

(n) determine a capital expenditure framework for the municipality's development programmes, depicted spatially."

1.4 Other Legislation

While SPLUMA is the law mandating the SDF process, the provisions of other legislation do have to be followed in its preparation and implementation. The impact of this legislation is not as direct or detailed as SPLUMA, but rather sets the framing conditions within which the SDF has to be prepared. Of highest relevance are the following:

- The **Constitution** of South Africa, which amongst others assigns powers and functions to the three spheres of government and provides for the right to access basic services
- Municipal Systems Act (**MSA**), 32 of 2000, which regulates the relationship between the Integrated Development Plan (IDP) and SDF. The MSA essential requires that the SDF must provide a spatial rationale to the IDP.
- The National Environmental Management Act (**NEMA**), 107 of 1998; and National Environmental Management: **Biodiversity Act**, 10 of 2004, which provides for environmental management processes and instruments. The Mpumalanga Biodiversity Sector Plan, 2014, is a contextualised instrument flowing from these provisions and will be used for direct guidance in the preparation of the SDF.
- The Municipal Finance Management (**MFMA**), Act 56 of 2003 and the annual Division of Revenue Act (**DORA**) have implications for implementation in terms of project funding and permissible funding mechanisms and budgeting processes. These pieces of legislation directs the municipal budgeting process, to which the SDF should lend a spatial rationale.
- The **Housing** Act, 107 OF 1997 (amended 1999, 2001) regulates the roles of different spheres of government in the human settlement development process. This is relevant for the implementation of projects. For implementation of project, the Municipality and Provincial Human Settlements Department should use to SDF for alignment purposes in housing delivery.
- Other sectoral legislation dealing with powers and functions include the Land **Transport** Act, 5 of 2009 and the **Infrastructure** Development Act, 23 of 2014. In this context, again the municipal and provincial SDFs are instruments to be used for alignment of planning and project implementation.

1.5 Planning Process

The Department of Rural Development and Land Reform SDF Guidelines[5] propose a multi-stage process to compile a municipal SDF. In the preparation of the Msukaligwa SDF, this process was used as a basis, with time frames and deliverables customised for local circumstances where necessary. The process for the first three project phases were as follows:

Phases	Dates	Audience / Members	Venue	Main Project Phases	
				Start Date	End Date
Phase 0: Inception Meeting	3 May 2019	None established	Gert Sibande DM	n/a	
Phase 1: Policy Context and Vision Directives				3 May 2019	30 May 2019
• **Draft Report Submission**	30 May 2019	Cogta	-		
• **Policy Context and Vision Directives Presentation**	30 May 2019	IGSC & PC	Gert Sibanade DM		
• **Policy Context and Vision Directives Presentation**	21 June 2019	PC	Msukaligwa LM		
• **Newspaper notice of SDF review**	31 May 2019	n/a	n/a		
Phase 2: Spatial Challenges and Opportunities				1 June 2019	30 July 2019
• **Draft Report Submission**	19 July 2019	Cogta	-		
• **Spatial Challenges and Opportunities presentation**	30 July 2019	IGSC & PC	Nelspruit Cogta		
• **Spatial Challenges and Opportunities presentation**	22 August 2019	PC	Msukaligwa LM		
• **MLM Council Approval: Phase 2**	29 August 2019	Msukaligwa LM	Msukaligwa LM		
Phase 3: Spatial Proposals				1 August 2019	30 September 2019
• **Draft report submission**	18 September 2019	Cogta	-		
• **Spatial Proposals presentation**	25 September 2019	IGSC & PC	Nelspruit Cogta		
• **Spatial Proposals presentation**	10 October 2019	PC	Msukaligwa LM		

[5] DRDLR SDF Guidelines, 2017 http://www.ruraldevelopment.gov.za/services/299-spatial-planning-and-land-use-management/538-sdf-guidelines#.XN5lqel7nIU

Phase 4: MSDF Implementation Framework	November 2019			1 October 2019	30 November 2019
Phase 5: Final MSDF	February 2020			1 December 2019	28 February 2020

Table 2: SDF Process

(To be completed according to project progress.)

1.6 Document Structure

The document will contain the following sections:

- Section 1: Background and Introduction
- Section 2: Policy Context
- Section 3: Vision
- Section 4: Status Quo Analysis
- Section 5: Synthesis: Spatial Issues and Opportunities
- Section 6: Spatial Proposals
- Section 7: Implementation Framework

2 POLICY CONTEXT

2.1 Introduction: Policy Context

In this section, policy and other strategic guidance with direct relevance for the Msukaligwa SDF will be examined. The implications for the Msukaligwa SDF will be highlighted. It should be noted that this section is not intended to be a comprehensive list of all policies. The focus will be on recent and relevant policy with a direct impact on the Msukaligwa SDF.

2.2 National Policy and Strategic Direction

In addition to the SPLUMA requirements for SDFs as described in the section above, a range of strategic planning instruments, policies and position papers set the strategic direction for spatial development at a national level. National policy and legislation are usually framed as direction-giving, as opposed to local-specific. The focus will be on policy and legislation that provides specific spatial directives.

2.2.1 National Development Plan, Vision 2030

The National Development Plan (NDP) focuses on the following areas; for each of these specific actions and targets have been set:

- Economy and employment
- Economic infrastructure
- Transition to a low-carbon economy
- Inclusive rural economy
- South Africa in the regional and the world
- Human settlements
- Education, training and innovation
- Health care for all
- Social protection
- Building safer communities
- Building a capable state
- Fighting corruption and enhancing accountability
- Transforming society and uniting the country

The NDP sets the overall development direction for the country, also suggesting a National Spatial Development Framework to provide a spatial interpretation of the NDP at national scale.

While the NDP is not specific regarding local spatial direction, there are some policy elements that are of relevance to Msukaligwa and could influence its spatial development. These include:

- Moving towards a non-carbon economy, e.g. in South Africa decreasing the reliance on coal-fired power stations is a big issue. Msukaligwa's economy is partly reliant on coal mining and transport. It would be necessary to identify opportunities to diversify the economy to buffer the impact of a decreased reliance on coal in future.
- A move away from this sector will require the diversification of the local economy toward the tertiary sector and greener solutions like renewable energy
- Consideration of alternative, higher value adding economic sectors and related skills that would be required to support such sectors. E.g. more focus on secondary sector (manufacturing) and tertiary sector (outsourced services such as call centres, etc.) For some sectors reskilling / ABET initiatives may be required.
- Related to the above, linking into regional opportunities. Msukaligwa is well place regionally, with major roads and rail flowing through Ermelo acting as a central place.
- Eliminate health and other social infrastructure backlogs; find alternative ways of delivering health / social services in dispersed rural areas where thresholds are not high enough to support permanent facilities. This is especially relevant for the small towns in the area.
- Reactivate rural economies, activated through improved infrastructure and service delivery, a review of land tenure, services to small and micro farmers, a review of mining industry commitments to social investment, and tourism investments.
- Establishing a network of viable rural nodes where communities can access services will be important for rural development in Msukaligwa.
- Among its high level directives, the NDP notes certain spatial focus areas. Of relevance are:
    - Ermelo – Richards Bay freight corridor (via the N2) which is noted as an important national corridor
    - Ermelo - N17 link to eSwatini (former Swaziland)
    - Msukaligwa with its mining resources, agriculture and natural environmental assets could also be considered a resource critical area.

2.2.2 Medium Term Strategic Framework (MTSF), 2014-19

The current MTSF is the government's strategic plan for the electoral term that ended in 2019. It is expected that it will be reviewed and a new MTSF be released for the electoral term that just commenced. It contains the actions and targets for Government. To give effect of the objectives of the MTSF, 14 Outcomes have been formulated which are:

1) Quality basic education
2) Long and healthy life for all South Africans
3) All people in South Africa are and feel safe
4) Decent employment through inclusive growth
5) A skilled and capable workforce to support an inclusive growth path
6) An efficient, competitive and responsive economic infrastructure network
7) Vibrant, equitable, sustainable rural communities contributing towards food security for all
8) Sustainable human settlements and improved quality of household life
9) Responsive, accountable, effective and efficient local government
10) Protect and enhance our environmental assets and natural resources
11) Create a better South Africa and contribute to a better Africa and a better world

12) An efficient, effective and development-oriented public service
13) A comprehensive, responsive and sustainable social protection system
14) A diverse, socially cohesive society with a common national identity

For each outcome, a set of sub-outcomes with specific targets and indicators have been set. The targets with associated actions and indicators are focussed at national and provincial scale. For example, Outcome 7 (Rural Development) has a sub-outcome relating to "increase access to quality infrastructure and functional services, particularly in education, healthcare and public transport in rural area' where quantitative targets have been set, e.g. for the number of households provided with electricity.

These targets are set at national level, and provincial and local targets set in strategic planning processes should contribute to achieving the national target. The impact on the SDF is at a strategic level, e.g. ensuring that natural resources are mapped at a local scale and not impacted on by development proposal, identifying areas that still lack access to basic services, prioritising agricultural areas for food security, etc.

2.2.3 Spatial Planning and Land Use Management Act, 16 of 2013

Development principles contained in SPLUMA should guide spatial planning in the country. The spatial principles are:

(a) The principle of **spatial justice**, whereby—

(i) past spatial and other development imbalances must be redressed through improved access to and use of land;

(ii) spatial development frameworks and policies at all spheres of government must address the inclusion of persons and areas that were previously excluded, with an emphasis on informal settlements, former homeland areas and areas characterised by widespread poverty and deprivation;

(iii) spatial planning mechanisms, including land use schemes, must incorporate provisions that enable redress in access to land by disadvantaged communities and persons;

(iv) land use management systems must include all areas of a municipality and specifically include provisions that are flexible and appropriate for the management of disadvantaged areas, informal settlements and former homeland areas;

(v) land development procedures must include provisions that accommodate access to secure tenure and the incremental upgrading of informal areas; and

(vi) a Municipal Planning Tribunal considering an application before it, may not be impeded or restricted in the exercise of its discretion solely on the ground that the value of land or property is affected by the outcome of the application;

(b) the principle of **spatial sustainability**, whereby spatial planning and land use management systems must—

(i) promote land development that is within the fiscal, institutional and administrative means of the Republic;

(ii) ensure that special consideration is given to the protection of prime and unique agricultural land;

(iii) uphold consistency of land use measures in accordance with environmental management instruments;

(iv) promote and stimulate the effective and equitable functioning of land markets;

(v) consider all current and future costs to all parties for the provision of infrastructure and social services in land developments;

(vi) promote land development in locations that are sustainable and limit urban sprawl; and

(vii) result in communities that are viable;

(c) the principle of **efficiency**, whereby—

(i) land development optimises the use of existing resources and infrastructure;

(ii) decision-making procedures are designed to minimise negative financial, social, economic or environmental impacts; and

(iii) development application procedures are efficient and streamlined and timeframes are adhered to by all parties;

(d) the principle of **spatial resilience**, whereby flexibility in spatial plans, policies and land use management systems are accommodated to ensure sustainable livelihoods in communities most likely to suffer the impacts of economic and environmental shocks; and

(e) the principle of **good administration**, whereby—

(i) all spheres of government ensure an integrated approach to land use and land development that is guided by the spatial planning and land use management systems as embodied in this Act;

(ii) all government departments must provide their sector inputs and comply with any other prescribed requirements during the preparation or amendment of spatial development frameworks;

(iii) the requirements of any law relating to land development and land use are met timeously;

(iv) the preparation and amendment of spatial plans, policies, land use schemes as well as procedures for development applications, include transparent processes of public participation that afford all parties the opportunity to provide inputs on matters affecting them; and

(v) policies, legislation and procedures must be clearly set in order to inform and empower members of the public.

The spatial application of the development principles in Msukaligwa means a focus on the following:

- Addressing rural development and access to services in areas currently not serviced or where low levels of development persist.
- Management of sprawling human settlements to ensure a more compact form for more efficient service delivery and to limit impact on natural resources. Ensuring that former “buffer zones” separating area are used for infill development.
- Identification of areas where important resources should be protected, e.g. natural areas or productive agricultural land.
- Identifying areas for targeted investment to address specific challenges in terms of access to services and economic opportunity.
- Through the SDF, guiding the development of an appropriate land use management system.

2.2.4 National Infrastructure Plan (NIP)

The NIP was established to integrate strategic infrastructure projects nationally to promote:

- re- industrialisation through manufacturing of inputs, components and machinery;
- skills development aimed at critical categories;
- greening the economy; and
- empowerment.

Eighteen Strategic Integrated Projects (SIPs) have been identified. While not much spatial information is available in the public domain for all the specific SIP projects, some projects have been identified that may have an impact on Msukaligwa.:

- SIP1, which mainly deals with minerals in the Waterberg area, also includes a freight transport component down to Richards Bay. This new part of this link will consist of rail from Lephalale in Limpopo to Ermelo. No information on time frames was available at time of writing.
- The energy generation focussed SIP9 includes resource areas for coal. In the short to medium term while coal powered energy is still the main source of energy nationally, the coal fields situation in Msukaligwa may play a role as a resource area, with implications for road and rail based transport of coal to power stations.
- SIPs 11 and 18 focussing on rural development and infrastructure backlogs may be applicable to some areas in Msukaligwa, although not specific information is available at the stage of writing.

2.2.5 National Spatial Development Framework (2019, draft)

At the time of writing, a new draft National Spatial Development Framework was being finalised. While no final document was available, it does appear that some of the direction-giving elements emanating from the draft NSDF were included in the new Mpumalanga Spatial Development Framework (MSDF).

The MSDF will be used as reference point to inform the Msukaligwa SDF to ensure that this new framework is considered in the formulation of the Msukaligwa SDF. Should a final NSDF become available during the course of SDF formulation, its provisions will be considered and included.

2.2.6 National Transport Master Plan (NATMAP) 2050

The goal of NATMAP is to develop a dynamic, long-term and sustainable land use, multi-modal transportation system for the development of networks, infrastructure facilities, interchange and termini facilities, and service delivery strategies for South Africa. The core directives are to:

- Place greater emphasis on developing rail as a transportation medium,
- Ensure greater integration between land use development and transportation planning; and
- Put more emphasis on enhancing development of several priority national transport corridors.

Msukaligwa will be directly affected by some of the long term projects proposed in NATMAP 2050:[6]

- A new high speed rail is proposed to link Gauteng to Durban, which will pass through Ermelo, indicated as [30] on figure below. This however appear to be a longer term project.
- A more likely project is the upgrade of the freight rail from Ermelo to Richards Bay, and the extension of freight lines from the north through Ermelo (part of SIP1). These are indicated as [72] and [104] on the figure below.

[6] Extract from maps contained in NATMAP 2050 document. http://www.transport.gov.za/documents/11623/39906/13_ImplementationMethodology2017.pdf/a79d2a45-eb3b-4d67-ada9-ed63af4d3308

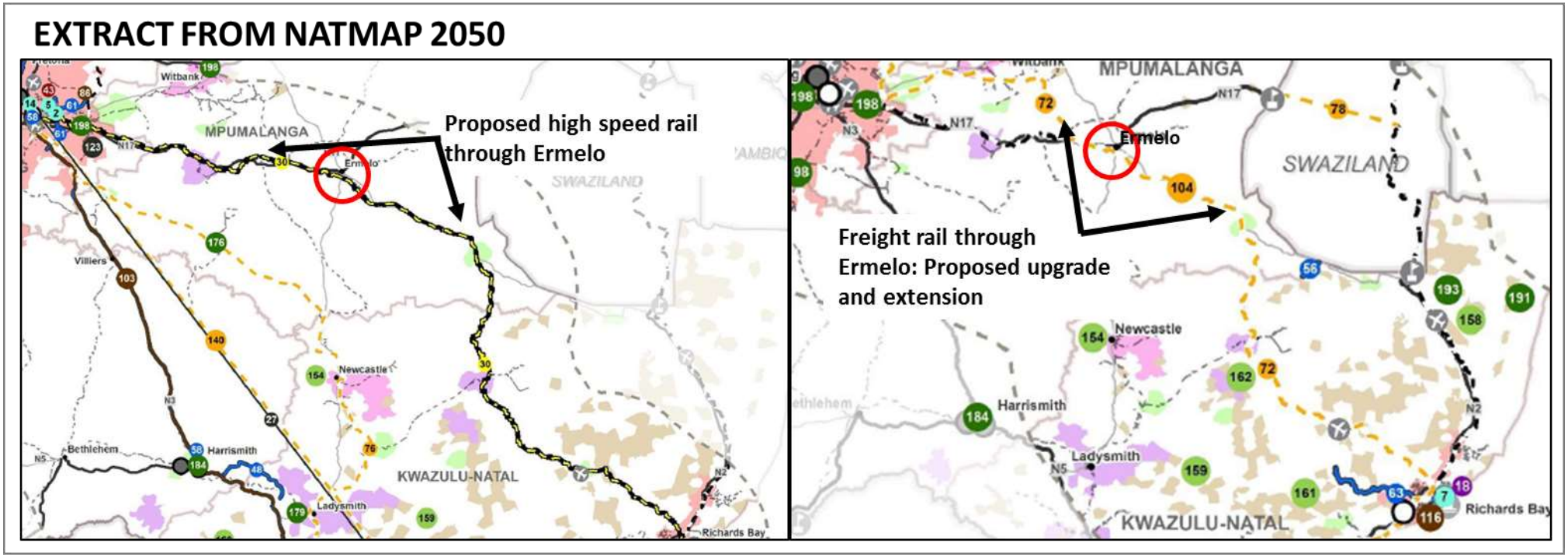


Figure 1: Proposed Rail (NATMAP 2050)

2.2.7 Comprehensive Rural Development Programme, 2009[7]

The DRDLR states that the "CRDP is focused on enabling rural people to take control of their destiny, with the support from government, and thereby dealing effectively with rural poverty through the optimal use and management of natural resources. This will be achieved through a co-ordinated and integrated broad based agrarian transformation as well as the strategic investment in economic and social infrastructure that will benefit the entire rural communities." To ensure the achievement of rural development objectives, a three-pronged strategy including agrarian transformation, rural development and land reform is proposed:

[7] http://www.ruraldevelopment.gov.za/DLA-Internet/content/pages/CRDP_Background_and_Framework.jsp.

- Agrarian Transformation: increased production and the optimal and sustainable use of natural resources; livestock farming and cropping, including the related value chain processes; the establishment and strengthening of rural livelihoods for vibrant local economic development; the use of appropriate technology, modern approaches and indigenous knowledge systems; and food security, dignity and an improved quality of life for each rural household.
- Rural development: the establishment of economic and social infrastructure.
- Land Reform: Increasing the pace of land redistribution; fast-track the settlement of labour tenant claims, especially in KwaZulu-Natal and Mpumalanga; speeding up the settlement of outstanding land restitution claims; and effective support to all land reform programmes through land planning and information.

In terms of impact on the Msukaligwa SDF, the first consideration would be any land claims and land reform initiatives and their impact on development proposals.

Secondly, the Department of Rural Development and Land Reform recently launched the Agri Parks Programme with the aim to support the agricultural sector in selected nodes across the country. The model includes a central node (Agri Park), linked to Farmer Production Support Units (FPSUs) that will lend more direct support to local farmers. There is no designated Agri Park in Msukaligwa, as Mkhondo is the preferred site for an Agri Park in the Gert Sibande District. Msukaligwa has been designated for Farmer Production Support Units (FSPUs) in the following locations:[8]

Municipality	Location of FPSU	Main Commodities	Priority
Msukaligwa	Sheepmore	Vegetables, livestock, grains, fruit (appels, berries), dry beans	Phase 1
	Chrissiesmeer		Phase 2
	Ermelo		Phase 3
	Breyten		Phase 4

Table 3: Msukaligwa FSPUs

The FPSU concept is described in more detail in the figure below:[9]

[8] Gert Sibande District Rural Development Plan, 2017.
[9] DRDLR. http://www.ruraldevelopment.gov.za/agri-parks/362-agri-parks/1144-farmer-production-support-unit-fpsu#.XOT-8-l7nIU

Figure 2: FPSU Concept

2.2.8 Integrated Urban Development Framework (IUDF) 2016

The (IUDF) focuses on the spatial transformation of human settlements or a New Deal for South African towns and cities. The IUDF contains four strategic goals:

- Spatial integration: To forge new spatial forms in settlement, transport, social and economic areas.
- Inclusion and access: To ensure people have access to social and economic services, opportunities and choices.
- Growth: To harness urban dynamism for inclusive, sustainable economic growth and development.
- Governance: To enhance the capacity of the state and its citizens to work together to achieve spatial and social integration.

To implement the strategic goals, the IUDF contains nine policy levers which are:

- Integrated urban planning as the basis for achieving integrated urban development, which follows a specific sequence of urban policy actions
- Integrated transport
- Targeted investments into integrated human settlements
- Integrated infrastructure network systems
- Efficient land governance, which all together can trigger
- Economic diversification and inclusion
- Empowered communities
- Effective governance and financial reform

Following the approval of the IUDF and IUDF Implementation Framework (2016-2019), the implementation of the framework is set to proceed as follows:[10]

- CSP: Supports the eight metros with work across all nine levers of the IUDF.
- ICMP: Funds mobilised for 37 intermediate cities – methodology is being tested through two pilot projects in uMhlathuze and Polokwane.
- SALGA: Small town regeneration programme with an initial focus on the Karoo as an economic development region.
- Partnerships with research institutes, universities, donor agencies and other stakeholders to foster an 'urban think-tank' and enhanced advocacy for urban development
- Work taking place across the nine levers with participation from a number of departments and agencies.

Large Semi -diversified	Mining	Manufacturing	Service Centre	Low GVA/High Pop/High density
Emfuleni	Rustenburg	Mogale City	Matlosana	Bushbuckridge
Msunduzi	Matjhabeng	Newcastle	Maluti a Phofung	Makhado
Mbombela	Emalahleni	Govan Mbeki	Nkomazi	Greater Tzaneen
Polokwane	Madibeng	uMhlathuze	Thulamela	Mafikeng
	Rand West	Drakenstein	Sol Plaatjie	Enoch Mgijima
	Steve Tshwete	KwaDukuza	Mogalakwena	King Sabata
	Merafong	Alfred Duma	Ventersdorp/ Tlokwe	
	Gr Tubatse/ Fetakgomo	Metsimaholo	George	
	Ba-Phalaborwa	Stellenbosch	Gr Giyani	
	Lephalale		Ray Nkonyeni	

Figure 3: IUDF Intermediate Cities

At the time of writing, Msukaligwa LM was not directly impacted by the first round of IUDF implementation[11]. No settlement in Msukaligwa has been classified as either a metro or intermediate city, implying that all settlements would resort under the category of small towns.

[10] COGTA, 2018 at http://www.cogta.gov.za/?p=4574
[11] COGTA, 2018. Presentation to DBSA Infrastructure Dialogues workshop 17 May 2018

2.2.9 Human Settlements Policy

At the time of writing, the Human Settlements Master Spatial Plan was mentioned in presentations and other documents, but no final version of the document was available for review. The National Strategy for Sustainable Development (Breaking New Ground) (2004) is as such still regarded as the official human settlements policy. The plan promotes the creation of a non-racial, integrated society through the development of sustainable human settlements and quality housing. It sets the following objectives:

- Accelerate housing delivery;
- Improve the quality of housing products and environments;
- Ensure asset creation;
- Ensure a single, efficient formal housing market; and
- Restructure and integrate human settlements.

In the absence of specific spatial guidance at a national level, the Provincial human settlements plan and Provincial SDF will be consulted to inform the Msukaligwa SDF.

2.2.10 National Water Resource Strategy, 2013

The Strategy deals with the protection and use of water resources at a national scale. The south western part of Msukaligwa is part of the Upper Vaal Catchment, which is one of the strategic water areas. No large scale projects are planned for the Msukaligwa area in terms of the lists contained in the strategy document. Of importance to Msukaligwa is to recognised the significance of protection of its water resources for regional benefit. For local spatial planning, the implications are to identify the relevant water sources, and ensure that these are not adversely impacted on by human development (e.g. settlements, agriculture, mining, etc.). Environmental data on strategic water resource areas will be used to delineate such areas in the SDF process.

Spatial form should also adhere to the SPLUMA principles to ensure efficient development.

Information contained in the strategy, e.g. water transfer areas, will be considered in the Status Quo Analysis.

2.2.11 Draft National Climate Change Adaptation Strategy, 2019

The vision stated in the Strategy is:

> To transition to a climate resilient South Africa, which will follow a sustainable development path, guided by anticipation, adaptation and recovery from a changing climate and environment to achieve our development aspirations.

The Draft Strategy outlines nine interventions at a national scale that at present has no direct spatial implication for Msukaligwa. Some of the mechanisms and research emanating from the Strategy may be applicable in future.

Figure 4: National Climate Change Interventions

2.3 Provincial Policy and Strategic Direction

More specific direction-giving detail is provided at a Provincial Scale, with more direct implications for the Msukaligwa SDF. The following were considered to be relevant:

2.3.1 Mpumalanga Vision, 2030 (2013-2030)

The Mpumalanga Vision 2030 document was developed as a province-specific implementation framework for the National Development Plan. The Mpumalanga Vision 2030 document formulated a developmental rationale for the province which was based on the following eight Key Drivers:

Key Driver 1:	Nodal Development	Key Driver 2:	Business, Commercial and Industrial Development
Key Driver 3:	Tourism Development	Key Driver 4:	Forestry Development
Key Driver 5:	Agricultural Development	Key Driver 6:	Mining and Energy Related Development
Key Driver 7:	Urban Development	Key Driver 8:	Rural Development

These Drivers have been taken into account in the formulation of the new Mpumalanga SDF. For the purpose of the Msukaligwa SDF, direct spatial guidance will as such be taken from the Mpumalanga SDF.

2.3.2 Mpumalanga Spatial Development Framework (MSDF), 2019

The MSDF interprets national policy in a provincial contexts and provides directs spatial guidance for the future development of the Province. In terms of the MSDF, Msukaligwa are part of both the provincial tourism belt and provincial mining belt. Ermelo is regarded as a key economic growth and innovation centre with a focus on mining, transport/logistics and agriculture. Ermelo is also defined as a regional service centre that should provide high level social services to surrounding areas. Msukaligwa is set to play an increasingly important role in provincial connectivity and corridor development, with Ermelo as a central node for a number significant existing and future corridors (freight rail, passenger transport, road transport).

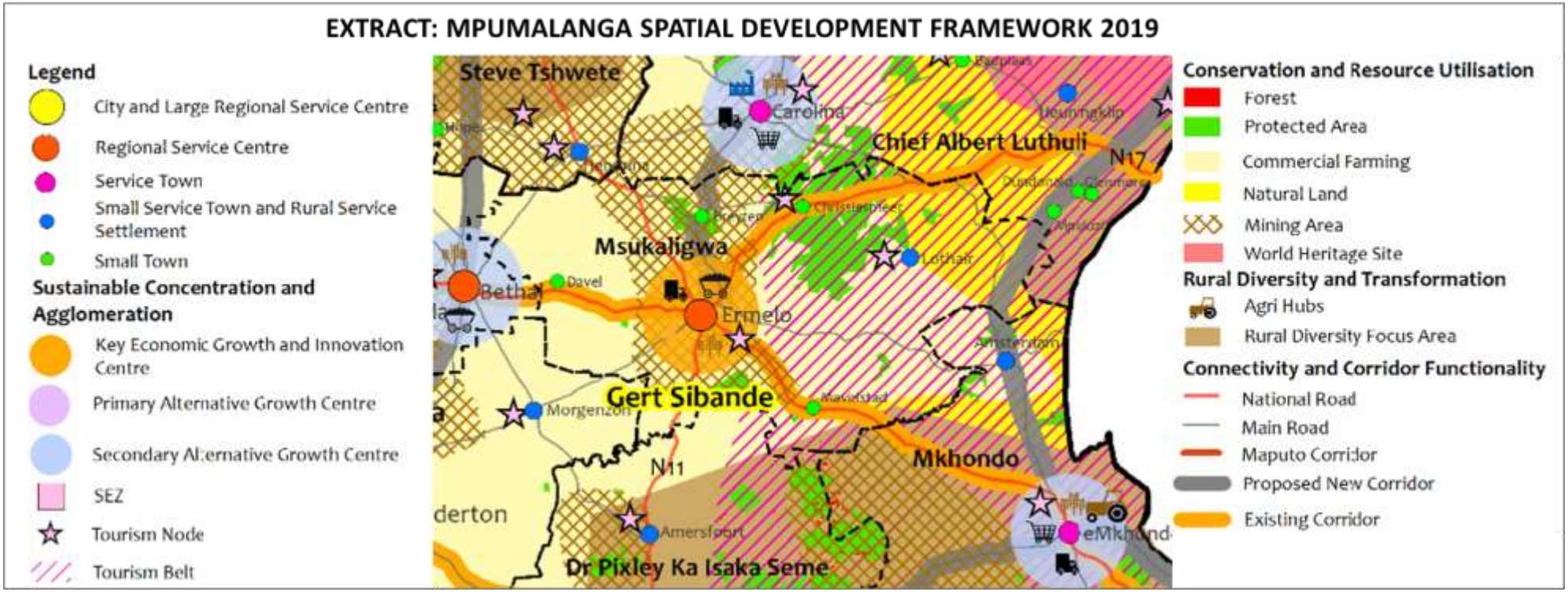


Figure 5: MSDF

Msukaligwa is also specifically included as a spatial focus area in relation to the following strategies contained in the MSDF:

- Ermelo is a node along various major existing and proposed corridors, including:
  - N17-N12 Corridor, linking Gauteng and KZN.
  - N11 Limpopo-Mpumalanga-K24 Corridor, linking Limpopo from Mokopane / Groblersdal.
  - Proposed passenger rail corridor along N17 to eSwatini.
  - Ermelo is noted to have an important role to play to strengthen regional linkages and economic infrastructure.

Current and proposed corridors are shown on the figure to the right.

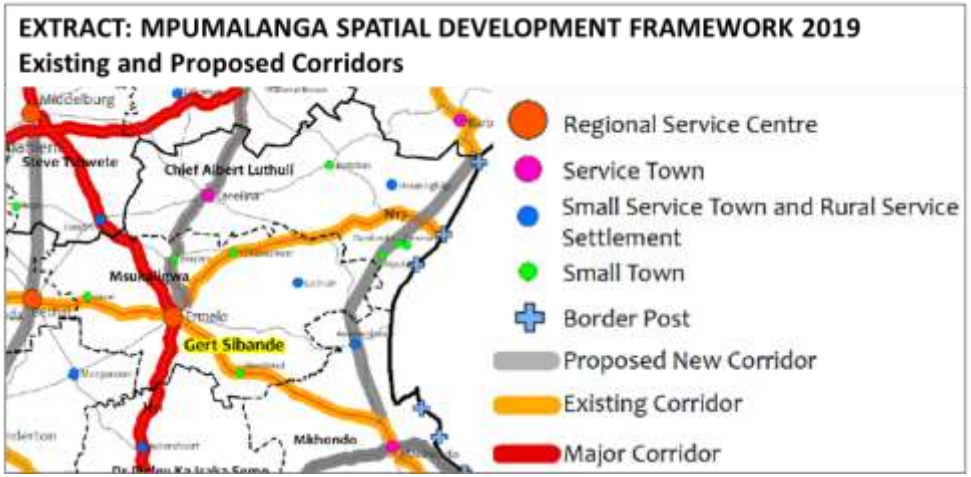


Figure 6: Corridors

- It is proposed to strengthen the economic bases of the key urban centres, with Ermelo being a key focus area for agriculture and related activities, mining, utilities and power generation, as well as transport and logistics.
- Ermelo is included in the spatial targeting to leverage on existing resources for industrial, mining and commercial uses.
- In a strategy to exploit the "Fourth Industrial Revolution", it is suggested to develop business incubation centres and innovation centres, as well as training and educational institutes, at various towns including Ermelo
- The Lake District at Chrissiesmeer is one of the area targeted for the development of underdeveloped and undeveloped tourism areas and development of necessary tourist facilities.
- Township economic development is proposed for various areas in Msukaligwa i.e. Kwachibikhulu, Kwadela, Kwazenele, Phumula, Silindile.
- It is proposed that the environmental heritage and conservation areas, biodiversity hotspots and ecological corridors should be treated as a special Biodiversity Management Zone to be actively protected, managed and enhanced so as to ensure that these are not degraded by mining, forestry, agricultural and human settlement activities. This includes the Chrissiesmeer Lakes District.
- High agricultural potential exists across most the Msukaligwa and should be managed and protected.
- It is proposed that "Special Control Zones" be developed to regulate mining activities Mpumalanga Lakes District (including Chrissiesmeer).
- It is proposed to consolidate settlement development and growth by way of infill development and densification of human settlements in the identified Strategic Development Areas (SDA's) and housing priority areas, including identified restructuring zones in identified Restructuring Zones in Ermelo.
- Improving the water reliability and water quality in priority areas and densely populated areas is set as a strategy, with Msukaligwa LM being included as one of the Priority 1 areas.

The detailed spatial proposals in the MSDF will be taken into account in the proposals made in the Msukaligwa SDF. The MSDF pulls together significant aspects of sectoral plans and policies in the province, and will be regarded as the overall provincial spatial guiding framework.

2.3.3 Mpumalanga Industrial Development Plan (MIDP), 2015

The MIDP aims to promote industrialisation in the province by establishing Industrial Centres of Competence in targeted industrial sectors within specific regions.

The following hubs are proposed:

- Mining and Metals Technology Park- A comprehensive facility for promoting industrial development within the mining and metals manufacturing sectors. This should be logistically well-positioned, adjacent to the N4 between eMalahleni and Middelburg and have a size of around 600 hectares.
- Forestry Technology Park- It will provide a platform for inter-firm cooperation, and lead to specialisation and improvement in quality standards for exports out of the Province. The park will be based at Sabie.
- International Fresh Produce Market- A site has been identified close to Nelspruit and the Riverside Park mixed-use regional node. Development has commenced.
- Petrochemicals Technology Park- The Park is aimed at stimulating economic growth and job creation, both through small, medium and micro-sized enterprise (SMME) incubation and large-scale production. This park is based at Secunda.
- Agro-processing Technology Park- The park has been proposed within the Nkomazi SEZ. The proposed Technology Park will serve as a hub for the development of other rural nodes, such as the proposed agro-processing hub in Bushbuckridge linked to the Dumphries C Irrigation Scheme and the Giba Community Property Association farming development near Hazyview.

Msukaligwa is not directly impact by the MIDP and its priority hubs.

2.3.4 Mpumalanga Biodiversity Sector Plan (MBSP), 2014

The Mpumalanga Tourism and Parks Agency prepared to MBSP in order to guide the use of land in an environmentally sustainable way. According to the MBSP Handbook, "The MBSP is an up-to-date, fine-scale plan that identifies a province-wide network of Critical Biodiversity Areas (CBAs), and Ecological Support Areas (ESAs) that:

- Achieve national and provincial biodiversity targets on the least amount of land possible
- Have the least conflict with other forms of land-use
- Favour areas that are important for freshwater ecosystems and water security
- Promote adaptation to climate change and connectivity across the landscape."

The MBSP also includes provisions on climate change.

The GIS layers available as part of the MBSP are very fine grain and will be used to inform the Msukaligwa SDF directly in terms of identifying critical biodiversity areas and other relevant environmental information. Large parts of Msukaligwa are regarded as sensitive especially on its eastern side, including the lakes at Chrissiesmeer.

2.3.5 Climate Change Adaptation Strategies for Mpumalanga, 2015

The Climate Change strategies proposed centre on eight themes, for which specific strategies are proposed. The strategies are mainly about research, partnership development and other institutional issues. At present, these strategies does not have any direct spatial implication for Msukaligwa. The application of the SPLUMA principles, and taking into account the MBSP as described above, will however make a contribution to ensuring greater climate change resilience in Msukaligwa.

Focus Area	Strategies
Agriculture	• Formally establish and strengthen strategic long-term partnerships for Climate Smart Agriculture. • Secure, dedicate, and allocate substantial funding to carry out studies within the province. • Fund and implement a comprehensive climate change awareness and skills-building programme within the farming communities.
Forestry	• Conduct further research into the development of more climate resilient trees. • Revise site classification models. • Review the Sector Disaster Management Plan for Forestry
Rural and Urban Livelihoods and Settlements	• Devote resources to identifying and providing training on alternate sources of livelihood for different regions and communities within Mpumalanga. • Create and strengthen support business development mechanisms for smallholder farmers. • Redouble efforts to improve overall socio-economic security and wellbeing. • Improve building practices and strengthen monitoring. • Leverage existing financial mechanisms. • Enhance disaster management and response. • Improve information dissemination. • Make better use of SPLUMA.
Terrestrial and Aquatic Ecosystems	• Develop a specialized climate change management programme to focus on protection of Mpumalanga's two main terrestrial ecosystems in the face of climate change. • Identify and integrate specific climate-change related priorities and metrics when next revising the Mpumalanga Biodiversity Sector Plan (MBSP). • Expand protected areas and promote the protected area expansion strategy. • Enhance the use of ecological infrastructure to create natural buffers that create resilience against extreme weather events.
Tourism	• Formally establish and draw resources to a scientific research project to better understand the impact of ecosystem and biodiversity changes on the tourism sector in Mpumalanga. • Identify suitable buffers around protected areas so as not to negatively impact on tourism on reserves. • Identify most sensitive or vulnerable tourist sites and site-specific adaptation measures.
Water Supply	• Establish a cross-sectoral, inter-departmental governance framework to help integrate and mainstream climate change adaptation into all water related operations. • Ensure that proposed water related infrastructure projects explicitly integrate climate change resilience into their planning and design stages. • Raise performance and efficiency of water service delivery for domestic use, with aggressive quantitative targets.
Human Health	• Formally join, participate in, and leverage capacity and information from global climate change health networks and knowledge-sharing platforms. • Secure, dedicate, and allocate substantial funding for better climate-related health surveillance and monitoring in the province and to carry out studies within Mpumalanga on health impacts of climate change. • Fund and implement a comprehensive public health and climate change awareness and adaptive capacity building programme.

Focus Area	Strategies
Disaster Management	• Secure, dedicate, and allocate funding for research on specific climate-related disaster risks for Mpumalanga, based on climate change scenarios, including identifying geographic hotspots for each major disaster type. • Develop and implement public awareness and training programmes based on this evidence base to educate people about climate change related disaster risks and responses. • Strengthen overall disaster prevention, disaster management, and disaster response in the province through broad-based capacity building of first responders and relevant officials.

Table 4: Mpumalanga Climate Change Adaptation Strategies

2.3.6 Mpumalanga Human Settlements Master Plan, 2013

The Plan contain the following spatial objectives:

- Promote the availability of residential and employment opportunities in close proximity to each other;
- Contribute towards the correction of historically distorted spatial patterns of settlement in towns by filling the strategically located vacant strips of land between segregated communities, and providing for economic and social integration;
- Optimise the use of existing resources including bulk infrastructure, roads, transportation and social facilities; and
- Contain the phenomenon of urban sprawl in urban areas through the introduction of an Urban Development Boundary/ Urban Edge which will contribute towards the development of more compact towns through processes of infill development and densification – especially around economic activity nodes and along public transport corridors.

The spatial objectives will be applied to the local context of Msukaligwa. In terms of specific spatial implications for human settlement development, Ermelo has been identified as one of the five primary nodes and Breyten and KwaZanele as two of the 40 tertiary nodes in the province. However, at the time of writing, the 2013 document was under review. Its spatial guidance have been incorporated into the new MSDF. For the purpose of the Msukaligwa SDF, spatial guidance will be taken from the MSDF.

2.3.7 Mpumalanga Tourism Strategy (MTS), 2018

The vision for the MTS is “to encourage and support inclusive growth that will sustain and transform the tourism sector, enhance the livelihood of the people and strengthen the competitiveness of the province and a tourism destination”.

The objectives of the MTS are shown in the figure to the right.

Figure 7: MTS Objectives

The new Tourism Strategy is not spatially referenced in detail, but does refer to some place-specific initiatives of relevance for Msukaligwa which include:

- Industrial / agricultural and township tourism for Gert Sibande District to be investigated
- Revitalisation of existing tourism routes and areas (as identified in previous strategy), most of which are located north of Msukaligwa. In Msukaligwa, the Chrissiesmeer area is recognised as an important tourist attraction

Strategies such as place marketing and tourism events will be taken into account in SDF proposals for developing the tourism sector in Msukaligwa.

2.3.8 Provincial Comprehensive Rural Development Programme

Msukaligwa does not form part of the Mpumalanga CRDP focus areas which are Bushbuckridge, Chief Albert Luthuli, Dr JS Moroka, Dr PIxley Ka Isaka Seme, Mkhondo, Nkomazi and Thembisile Hani.

2.4 District Policy and Strategic Direction

2.4.1 Gert Sibande Spatial Development Framework, 2014

The Gert Sibande SDF identified Ermelo as a primary / secondary node, and Breyten, Chrissiesmeer, Lothair and Davel as tertiary / rural nodes. It clearly illustrated the central position of Ermelo in the national and regional movement system, both road and rail.

The area around Chrissiesmeer was identified as a biodiversity conservation node.

The east of Msukaligwa was part of the tourism belt, with the west designated for agriculture and mining.

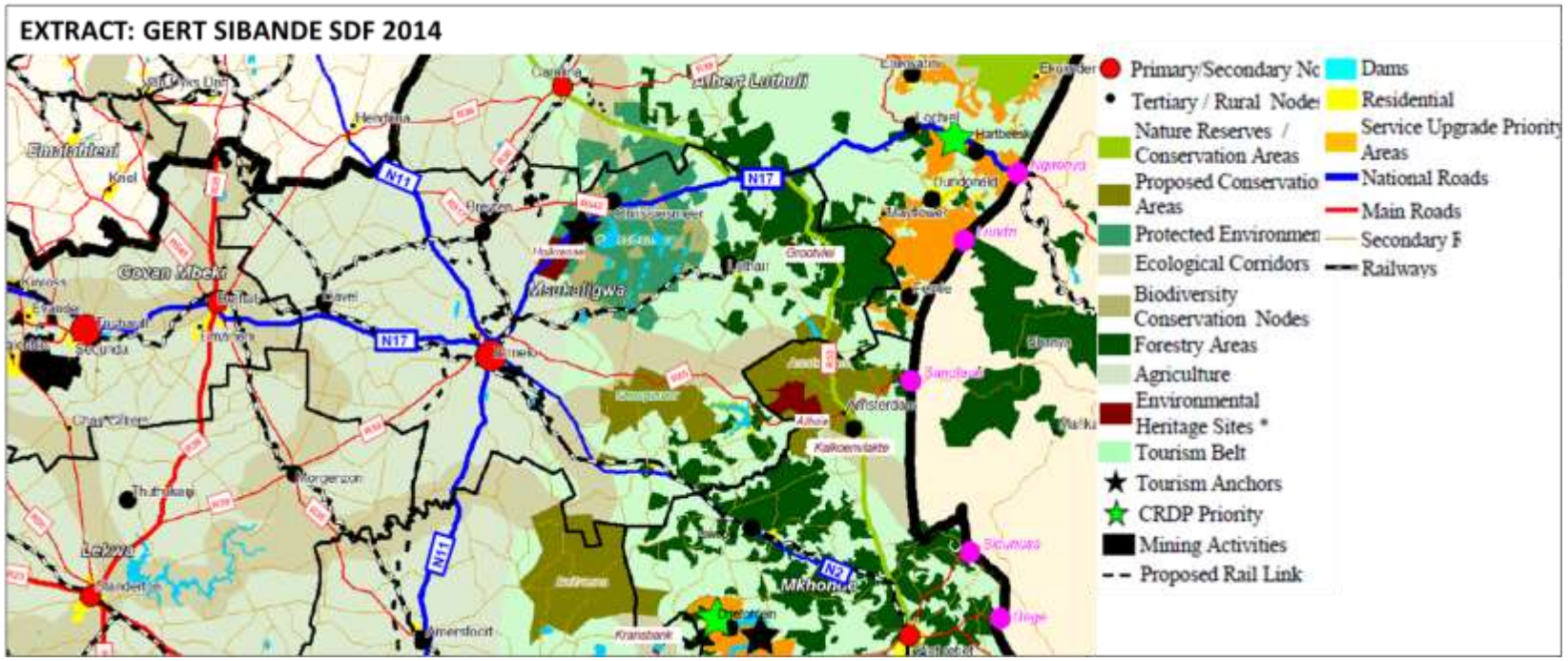


Figure 8: Gert Sibande SDF

2.4.2 Gert Sibande Rural Development Plan (GSRDP), 2017

The purpose of the GSRDP is to address the needs of people who live in extreme poverty and who are subjected to underdevelopment in the rural parts of the Gert Sibande District. It is intended to enhance the impact of intensified and targeted government and private investments in these areas through an assessment of current developmental realities and potential in these areas, culminating in interventions that will bring change in the livelihoods of people. The intention of the GSRDP is also to ensure inclusion of rural areas in spatial planning and land development, with the GSRDP to be incorporated into the District SDF and Local SDF's while projects identified will feed into the District and Local IDP processes. The GSRDP proposes are series of rural development mechanisms, depicted in the figure below.

Figure 9: Rural Development Mechanisms

Mechanism	Description
Economic Infrastructure	Invest in infrastructure that will enhance economic development and job creation: irrigation systems, dams, electricity networks, transport infrastructure, agro industries, farming equipment and markets
Market Infrastructure Development	Support the development of agro -food market infrastructure
Agricultural Business Mechanism	Improving food security by means of the development of a more professional, intensive, organized and open agricultural business/ market mechanism that will help ensure food safety and improve farmers' income
Rural Industrialization	Encourage investment in the agro-industrial sector
Land reform	Effective land reforms and agricultural services are needed in all regions to be able to reduce poverty
Productivity and Competitiveness	Offering financial incentives to increase small farmer productivity by means of improving the productivity and competitiveness of agriculture and the whole food production chain
Technical Support	Providing technical assistance and research information for farmers. Programmes which initially involve a limited number of activities and employ simple, practical technologies should get preference
Institutional Structure	Institutional structures involving public and private sector are required to facilitate support programmes and funding allocation

For more detailed planning and intervention, Rural Intervention Areas are identified, as shown below:

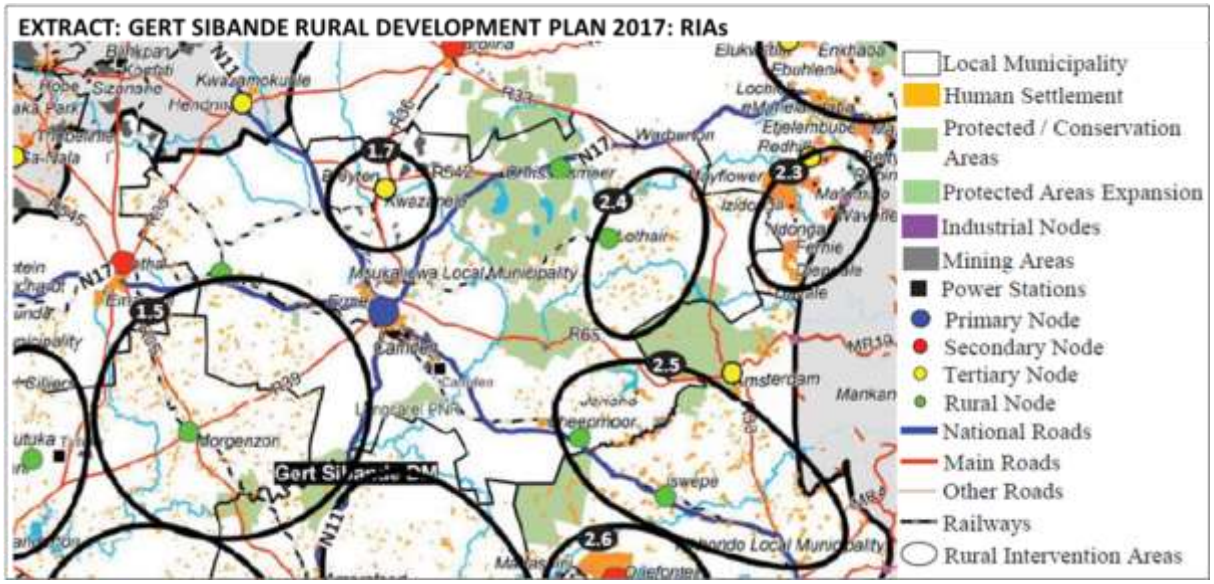


Figure 10: Rural Intervention Areas

The following Rural Implementation Areas (RIAs) are fully or partially located in Msukaligwa:

- RIA 1.5: The same principle was applied in the triangular shaped rural area between Bethal, Ermelo and Amersfoort where Morgenzon can be strengthened as a Rural Node serving surrounding rural communities.
- RIA 1.7: The Breyten-Kwazanele node is central to this Rural Intervention area which is located between Bethal, Ermelo and Carolina. This area is characterised by a number of Land Reform initiatives.
- RIA 2.4: Lothair is the most prominent node within this Rural Intervention Area. It forms part of the forestry belt and a number of Land Reform initiatives are located in the area.
- RIA 2.5: This area includes the forestry areas to the north of route N2 between Ermelo and Piet Retief with Sheepmoor and Iswepe being the main nodal points. There are several incidences of informal settlement in these forested areas with Mondi currently working on the establishment of 9 agri villages in the area.

The proposals for the RIAs are as follows:

- Rural Intervention Area 1.5:
  - Consolidate activities around Morgenzon where there are a number of land reform initiatives underway (Morgenzon is not located in Msukaligwa but part of the hinterland of this RIA is).
  - Potential for poultry, vegetables, livestock, soya and maize
- Rural Intervention Area 1.7:
  - This is an area of high intensity in terms of Land Reform activity (Breyten node)
  - Mining pressure may increase significantly in future
  - Agricultural activities: livestock, maize, deciduous fruits
  - FPSU proposed in area
- Rural Intervention Area 2.4 (Lothair):
  - Settle land claims in and around Lothair
  - Potential for forestry, wool and maize farming
  - Establish wool handling or beneficiation facility
  - Train CPA farm beneficiaries in productive tree farming
  - Establish black-owned co-op to establish grain silo/ share in TWK silo
- Rural Intervention Area 2.5 (Central Core Forestry Area):
  - Served by Amsterdam, Sheepmoore, and Driefontein FPSU's
  - Forestry activity in core and livestock, grains (maize and beans) and vegetables in surrounding areas
  - Establish black-owned co-op to establish grain silo or give small farmers access to silos at Iswepe
  - Train the CPA farms to farm productively with trees
  - Compile business plans for tree farms with emphasis on how to generate income while trees are maturing
  - Provide crucial infrastructure to CPA tree farms:
    - Transport (transportation of harvested trees to mills)
    - Firefighting equipment
  - Formulate strategy for small agri-villages in forests with Mondi/ Sappi initiative

2.4.3 Gert Sibande Integrated Development Plan 2018-19

The IDP sets out the vision and mission of the District:

Vision - A community driven district of excellence and development

Mission - To support and coordinate our local municipalities to provide excellent services and development

The spatial development rationale set out in the Gert Sibande IDP is based on the following development principles, and will be taken into account when formulating the SDF:

- Actively protect, enhance and manage the natural environmental resources of the District by way of the guidelines provided in the GSDM Environmental Management Framework (EMF).
- Optimally capitalise on the strategic location of the District through strengthening of the five national/provincial economic corridors, and to functionally link all towns and settlements to one another and to surrounding regions.
- Establish a functional hierarchy of nodal points in the Gert Sibande District area to optimise the delivery of social and engineering infrastructure/services, promote local economic development, and protect valuable agricultural land.
- Provide a full range of social services at all the identified nodal points, in accordance with the nationally approved Thusong Centre concept.
- Consolidate the urban structure of the District around the highest order centres by way of residential infill development and densification in Strategic Development Areas (SDAs) identified in Municipal Spatial Development Frameworks.
- Ensure that all areas in the GSDM (urban and rural) are at least provided with the constitutionally mandated minimum levels of services as prescribed by the NDP and enshrined in the Constitution.
- Utilise the Chrissiesmeer-Heyshope-Wakkerstroom precincts as Tourism Anchors around which to develop and promote the eastern parts of the District (around route R33) as a Primary Tourism Corridor.
- Promote forestry within and along the identified Primary Tourism Corridor.
- Promote intensive and extensive commercial farming activities throughout the District, and facilitate Agrarian Transformation within the CRDP priority areas.
- Facilitate and accommodate mining in the District in a sustainable manner in order to support local electricity generation and industrial development.
- Unlock the industrial development potential of existing towns through developing industry specific Special Economic Zones/Economic Clusters throughout the District, in line with the Mpumalanga SDF and the Mpumalanga Vision 2030 Strategy in accordance with the following sectors:
    - Agricultural Cluster
    - Forestry Cluster
    - Industrial Cluster
    - Enhance business activities (formal and informal) in the Central Business Districts of identified nodal points in the District, and consolidate business activities around Thusong Centres and modal transfer facilities in rural areas.

The IDP is also clear regarding the land use management challenges in the District. The formulation of updated SDF for the district and local municipalities is one of the steps to be taken towards establishing a fully-fledge land use management system, to be followed by the compilation of Land Use Schemes.

Furthermore, the IDP provide important developmental data that will be taken into account in the formulation of the Msukaligwa SDF.

2.5 Local Policy and Strategic Direction

2.5.1 Msukaligwa Integrated Development Plan 2019/20

Vision: A Beacon of Service Excellence

Mission:

- Enhancing community participation to steer development initiatives towards community needs;
- Advocating and stimulating local economy to promote economic growth and development;
- Improving good governance and measurable service delivery techniques;
- Enhancing effectiveness and efficiency in the utilization of available resources;
- Empowering our communities and the vulnerable groups in particular;
- Working in partnership with all its stakeholders; and
- Continuously mobilizing resources to achieve high standards in service delivery

Strategic Objectives:

- To provide sustainable and reliable services to communities
- To improve the viability and management of municipal finances
- To strengthen the fight against fraud and corruption
- To build a capable workforce to deliver services
- To strengthen public participation, corporate governance and accountability
- To coordinate efforts to address unemployment and poverty
- To ensure long term planning that provides for social cohesion and spatial transformation

The IDP provides a summary of community priority needs, which clearly points to a need for basic service delivery, followed by housing provision.

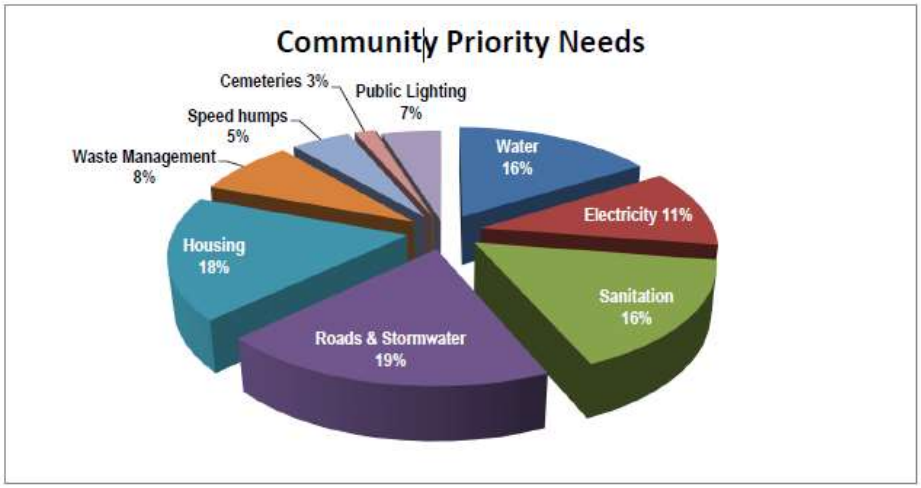


Figure 11: IDP: Community Priority Needs

In the preparation of the SDF, the guidance provided by the vision mission and objectives will be taken into account where spatially applicable. The spatial implication of major projects will be considered. The IDP will also be used for data on service backlogs and similar issues.

2.5.2 Msukaligwa Spatial Development Framework, 2010

Although the current SDF is fairly dated, the spatial structure proposed in the document will be taken into account in the review process. Strategic spatial planning is based on a long term vision for an area, meaning that many of the proposals, e.g. the nodal and movement structure, would not necessarily change.

The proposed land use structure is shown on the overall SDF map. The SDF 2010 proposes a nodal hierarchy as follows:

- Primary Node : Ermelo/Wesselton
- Secondary Node : Breyten/Kwazanele
- Tourism Node : Chrissiesmeer/Kwachibikhulu
- Rural Service Centres: Davel/Kwadela, Lothair/Silindele, Warburton/Nganga, Sheepmoor

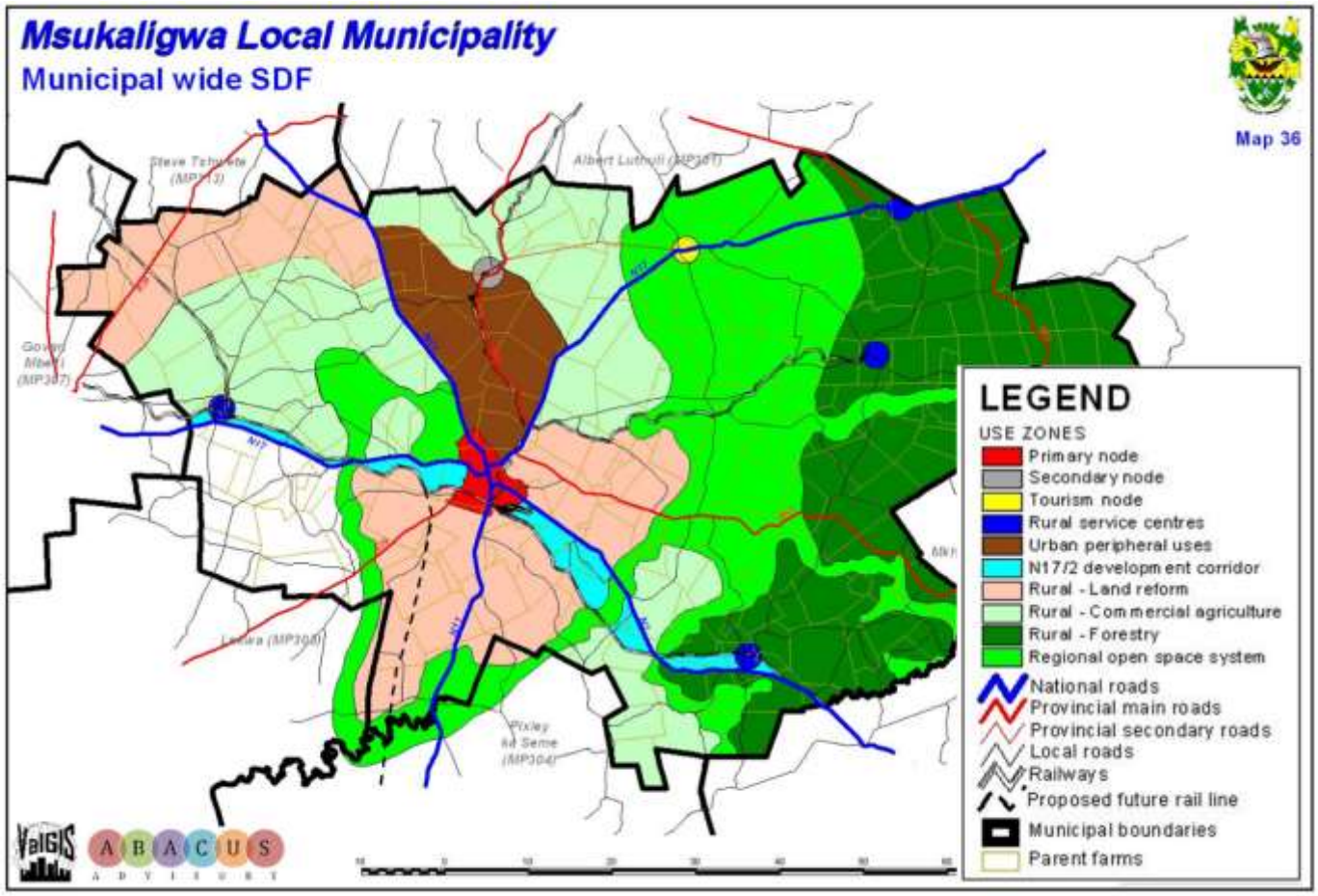


Figure 12: Msukaligwa SDF 2010

It recognises the N17/N2 Development Corridor as an important structuring element. It proposes an urban edge to protect natural and agricultural areas. The eastern part of the municipal area is designated for forestry and parts of the regional open space system, also forming part of tourism development. It designates areas in the west for commercial agriculture and land reform, whilst designating the area between Ermelo and Breyten for urban peripheral uses. These uses include rural residential and agricultural holdings, mining and related uses, low intensity service industries and transport-related concerns, intensive agriculture and beneficiation of agricultural produce, etc.

Assessment of the SDF pointed out that the current SDF does make provision for addressing spatial disparities and protected national resources.

In addition to the overall SDF, spatial development guidelines for the three main nodes were also included. These focused on more specific land uses, areas for expansion, and urban edges.

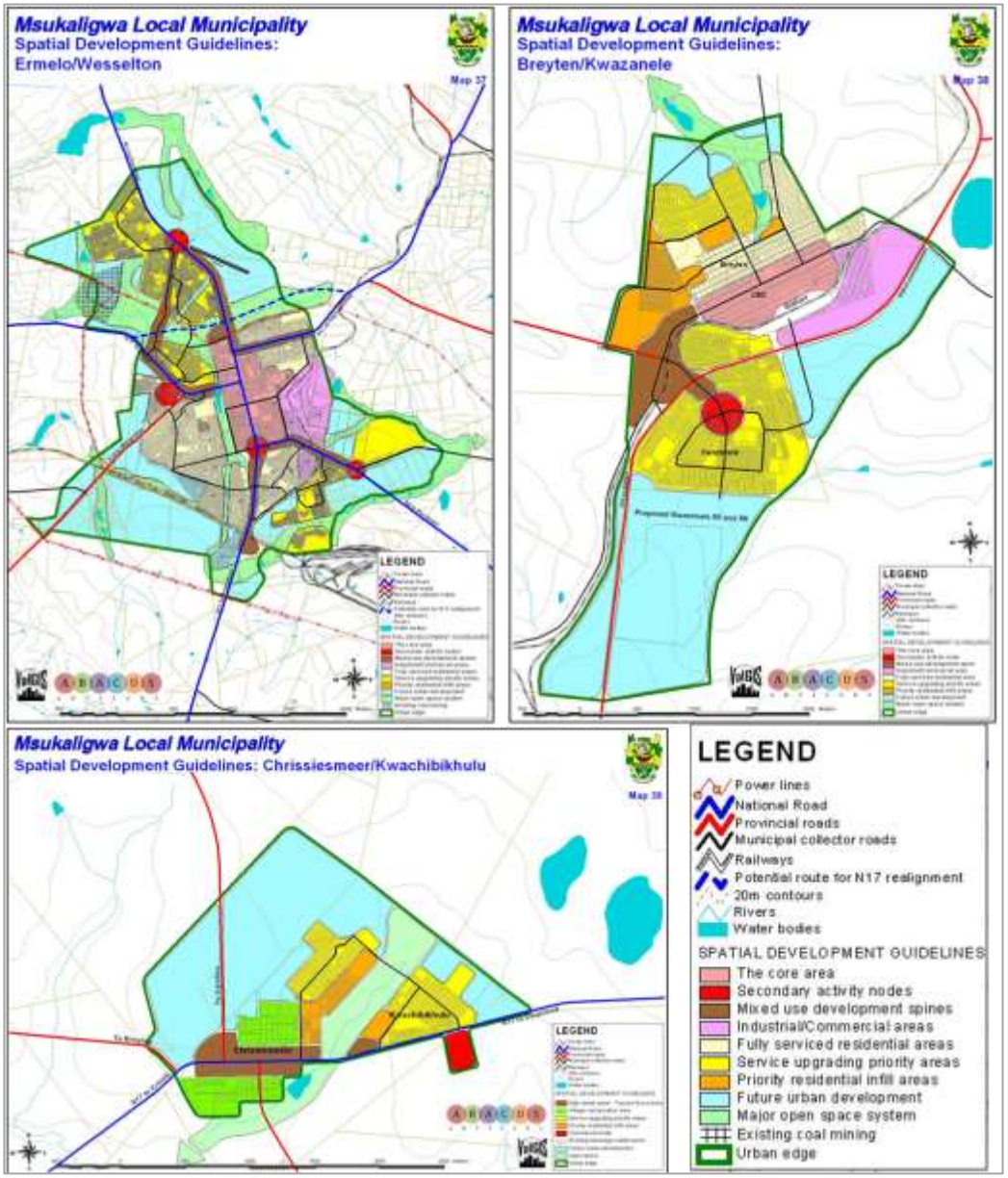


Figure 13: Local Spatial Guidelines 2010

2.5.3 Msukaligwa / Chief Albert Luthuli Environmental Management Framework (EMF), 2010

It is stated in the EMF that the purpose of the EMF is to "serve as a management and decision-making tool that provides authorities with information about the 'state of the environment' and the associated planning parameters. It will identify and spatially represent areas of potential conflict between sensitive environments and development proposals thus assisting in integrating social, economic and environmental factors into planning.

The main components of the EMF are as follows:

1- Environmental Management Zones: Attributes with similar environmental sensitivities are combined to create zones with associated land use management requirements:
   - Zone 1: Conservation
   - Zone 2: Agriculture
   - Zone 3: Forestry
   - Zone 4: Tourism
   - Zone 5: Urban/residential
   - Zone 6: Mining
   - Zone 7: Industrial and commercial

   The management zone guidelines, indicating appropriate land uses and other actions per zone (Table 5.3 of the EMF), will be used as an input in formulating the land use proposals for the SDF.

Other supportive components of the EMF, to also assist with development and land use management at a lower scale than the SDF, are included in the EMF.

2- Consolidated Environmental Attributes Map (CEAM): The CEAM consolidates environmental sensitivity attributes at any one point. A sensitivity code is calculated through the addition of environmental sensitivity ratings and the Predominant Sensitivity for a given feature. This code gives an indication of all sensitivity ratings that occur within a feature, and the development constraints linked to these attributes. The Predominant Sensitivity Rank identifies the most sensitive attribute in the area which always predominates.

3- Spatial Decision Support Tool: (SDST): The environmental attributes layers and CEAM together form the basis of the SDST, which is based on an Arc GIS platform. The SDST is able to identify and report on attributes' sensitivity and development constraints in the MALLM area.

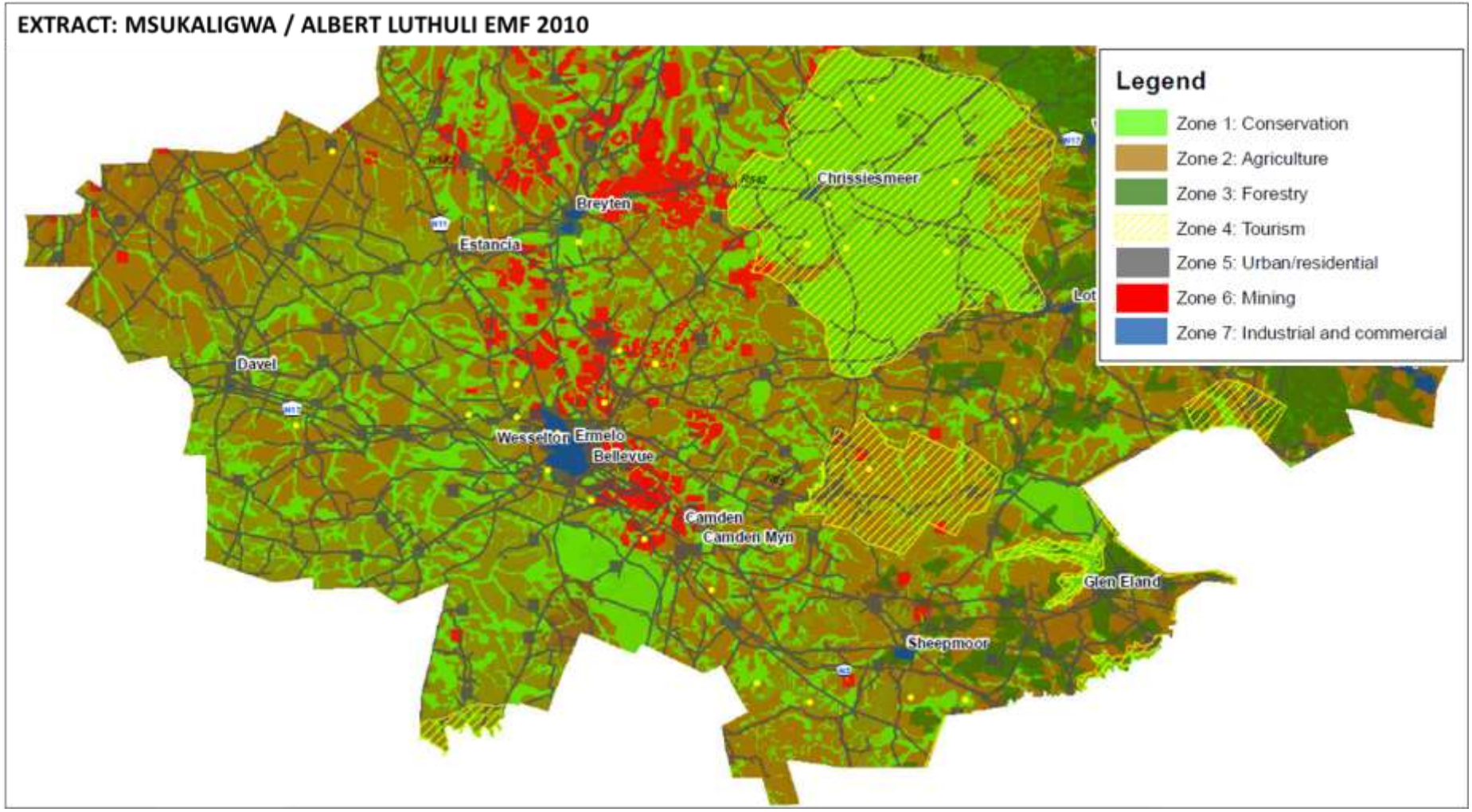


Figure 14: EMF Management Zones

2.5.4 Land Use Management

A spatial planning and land use management by-law has been jointly promulgated in April 2016 for the following local municipalities that form part of the Gert Sibande District:

- Chief Albert Luthuli

- Dipaleseng
- Dr Pixley Ka Isaka Seme
- Lekwa
- Mkhondo
- Msukaligwa

The by-law requires that a Steering Committee oversees the preparation of the SDF, as is currently the case. The by-law also provides for circumstances around a departure from the SDF by development applications and how to deal with such situations.

The provision of this bylaw will be taken into account where land use management proposals are made as part of the Msukaligwa SDF. Msukaligwa does not yet have a wall-to-wall land use scheme as required by SPLUMA. In the development of a new land use scheme, it will have to be kept in mind that mines will also be subject to land use zoning, similar to all other land uses in the municipality.

2.5.5 Horizontal Alignment

The current SDFs for surrounding local municipalities are aligned to the current Msukaligwa SDF in terms of:

- Use of nodal hierarchy.
- Main movement lines, i.e. regional roads and rail, that connect to Msukaligwa.
- Rural land uses, e.g. agricultural and forestry areas, as well as conservation and mining areas.

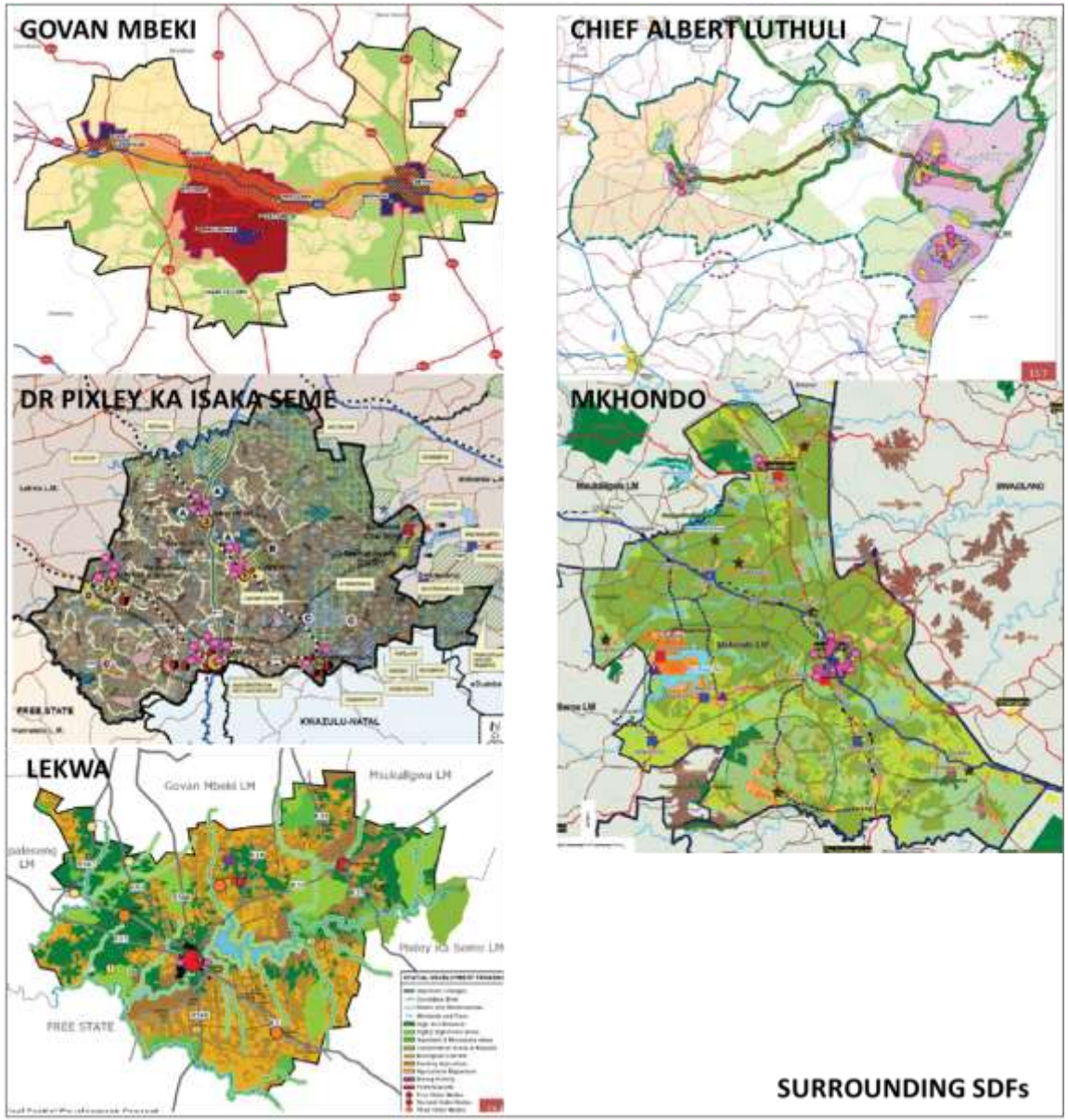


Figure 15: Surrounding SDFs

No specific issues or conflicting proposals were identified in current local SDFs of surrounding municipalities.

Current SDF proposals, as well as SDFs currently being reviewed, will be taken into account when formulating the reviewed Msukaligwa SDF.

2.6 Synthesis: Policy Context

The following emerges a key themes from policy and strategic direction:

- The need to address spatial disparities and stimulate rural development to ensure access to services and economic opportunity prevails. One of the ways to address this is to create a well-connected network of viable rural towns and settlements which provide a range of services and fulfil specific roles in the local economy. The towns / settlements should also be the focus points for housing development.
- The diverse rural nature and natural resources (including ecological systems, agricultural land and mineral resources) of Msukaligwa should be managed and protected.
- Msukaligwa, specifically Ermelo, is located at a central point regionally where road and rail transport both converge and pass through, connecting important national nodes and production areas
- Economic diversification is important for the area, especially in view of moves away from a coal-based economy.

3 SPATIAL VISION

The spatial vision represent the long term development view for Msukaligwa. It will guide the remainder of the document in terms of:

- The issues that will be analyses as part of the Status Quo Analysis, identifying key opportunities and constraints relating to the fulfilment of the vision
- The development objectives and spatial strategies will be formulated with the aim of achieving the vision
- The implementation plan will provide guidance as to the first steps to be taken to fulfil the vision.

The spatial vision is based on the strategic direction set by policy and legislation, as well as the key characteristics of the municipal development context. The key spatial concepts underpinning the vision are:

- Rural development based on a strong, interconnected network of rural nodes, giving access to services and also serving as access point to markets for extensive rural activities such as agriculture, conservation, tourism and mining.
- Protection and sustainable use of natural resources which include productive agricultural land, surface and ground water, mineral deposits and nature areas.
- Enhanced quality of settlements which includes access to basic services, access to appropriate social services, facilitation of economic development and a more compact, connected settlement form to enhance efficiency and prevent the impact of settlement sprawl on natural resources.
- Enhanced regional connectivity for movement of good and people, to ensure that Msukaligwa reaps the benefits of wider regional economies and forms part of regional economic value chains.

The spatial vision is formulated as follows:

Msukaligwa is central to a **diversified, vibrant rural economy** that make optimal use of **natural resources**, supported by a **well-connected network of sustainable rural service and economic nodes**, where **people** have access to services and economic opportunity.

The spatial concepts underlying the vision, as well as the vision statement, will be tested against stakeholder views and inputs.

4 STATUS QUO ANALYSIS

4.1 Introduction: Status Quo Analysis

According to the 2016 CS of Stats SA the 5 leading challenges facing Msukaligwa as perceived by households in the municipal area are the following:
Inadequate roads.
Lack of safe and reliable water supply (in line with Blue and Green Drop reports & scores of Municipalities).
Lack of reliable electricity supply.
Lack of/inadequate employment opportunities (correlate with poverty driver information of the CS).
Inadequate housing.

4.2 Bio-Physical / Natural Environment

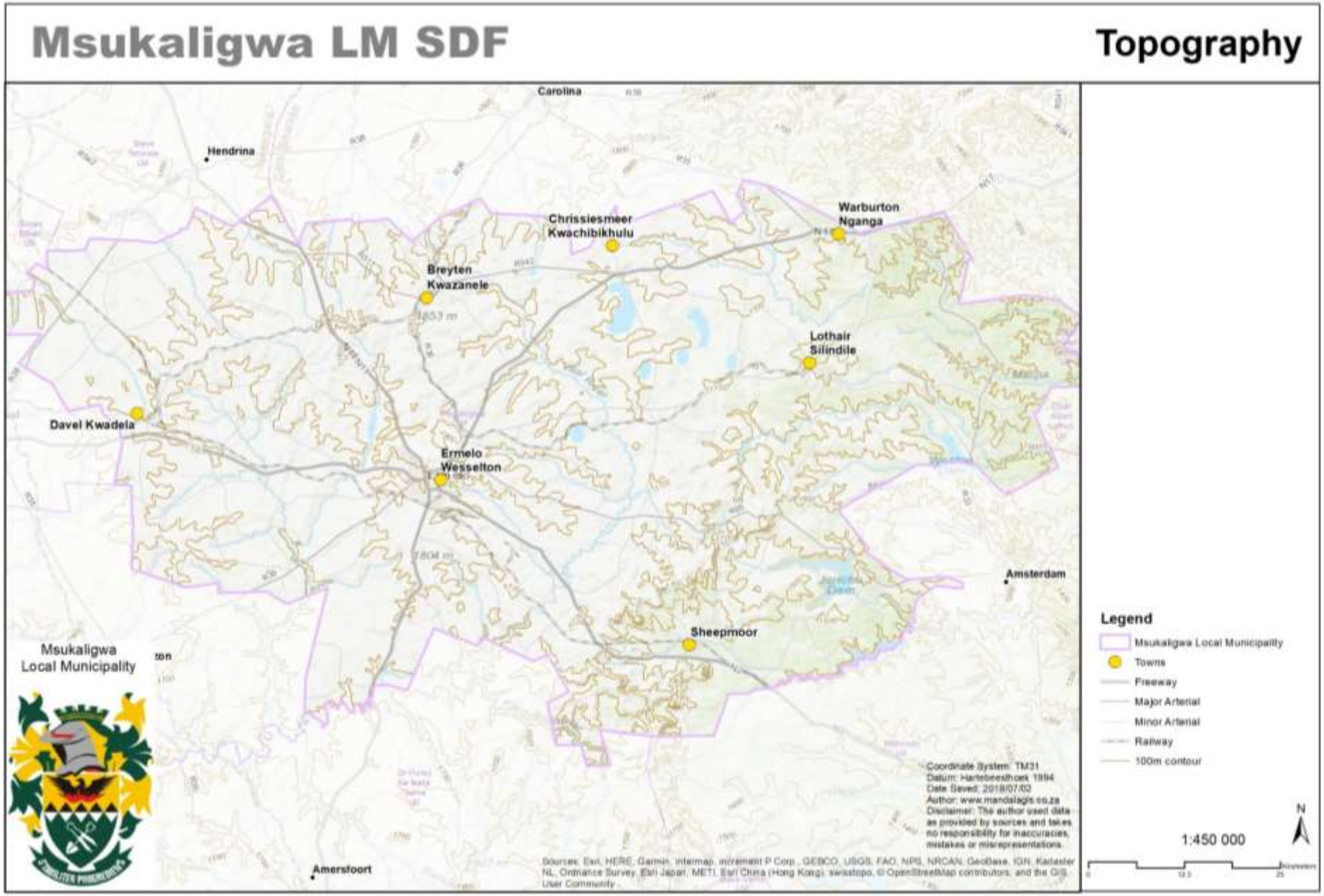
4.2.1 Topography

The area has a gently undulating highland topography, interspersed with valleys cut by water courses. It also features numerous flat pans and vlei areas which will be described in more detail in the hydrology section. The south eastern corner of the municipal area around Sheepmoor is slightly lower lying than the rest of the area, decending in a south easterly direction.

The impact of the area's hydrology on topographical features is the most significant topographical aspect of the area, especially in the north east of the area.

There are no additional factors impacting on development patterns and service delivery in the area, e.g. no major mountain ranges dividing the area or extreme slopes rendering parts of the area uninhabitable.

The topography is shown on **Map 3: Topography** below.



Map 3: Topography

4.2.2 Hydrology

The area's hydrology is one of its distinguishing features. A concentration of pans and freshwater lakes is located in the Chrissiesmeer protected area, which is not only ecologically significant but also a potential tourist attraction. According to the MLM EMF, standing water in the form of dams, lakes and pans comprises about 20% of the municipal area. The pans are fed by rainwater and groundwater, but have no direct surface link to the drainage network.

Numerous other water courses and wetlands are distributed throughout the municipal area. The entire municipal area is affected by the network of smaller watercourses and water bodies in terms of environmental sensitivity. Potential pollutants such as mining and agriculture need to be managed to safeguard the quality and ecological health of water courses, wetlands and lakes.

The sources of numerous significant rivers are found in the municipal area. These include:

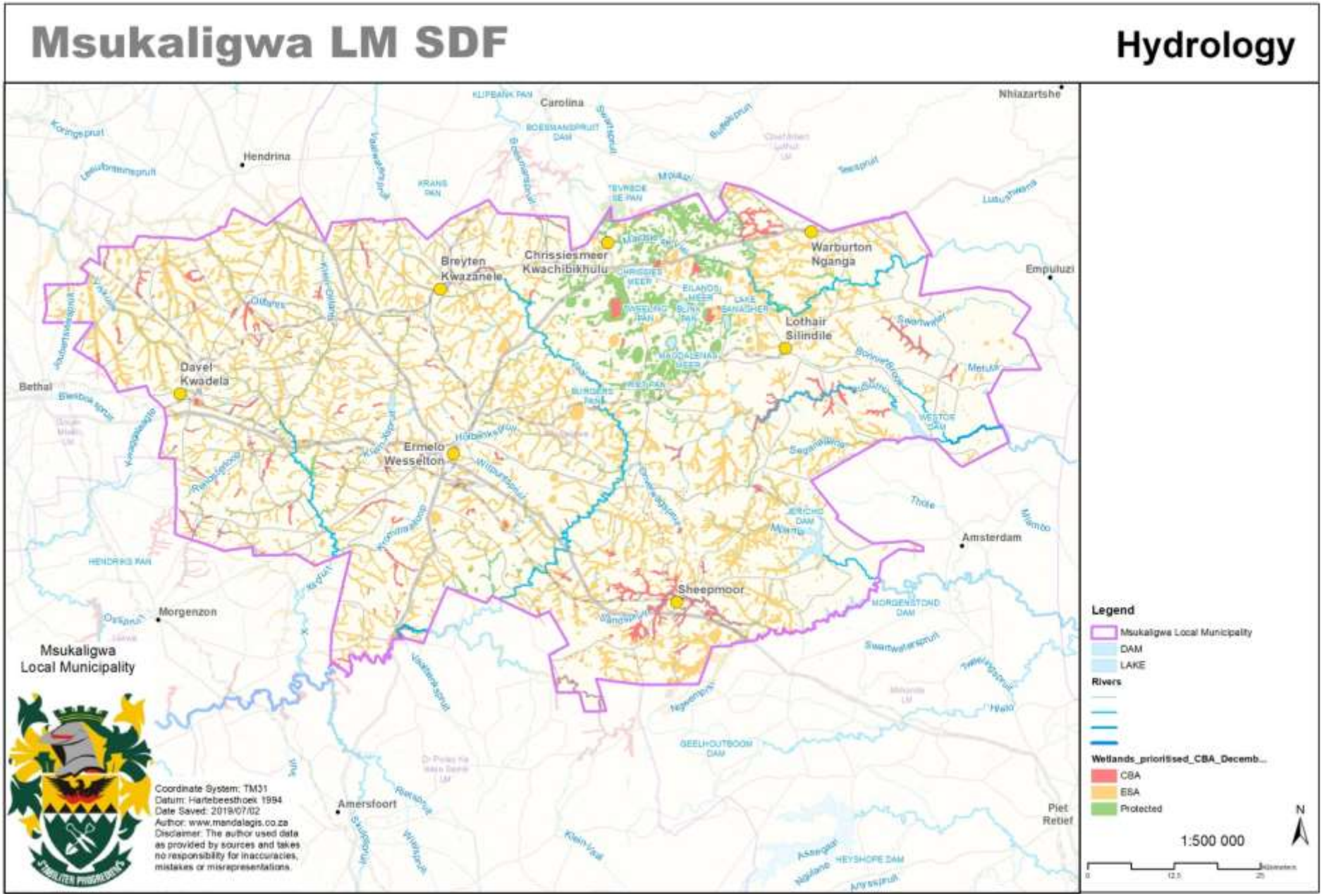
- The Vaal River, flowing centrally in the area in a southern and then southwestern direction.
- The Usuthu River, rising in the northeast of the municipality, flowing eastwards.
- The Inkomati River, flow northwards,
- The Olifants River and Klein-Olifants River rising in north-west of the municipality, flowing northwards.

Parts of the Vaal and Inkomati / Usuthu Water Management Areas (WMAs) cover the western and eastern parts of the municipal area respectively. Rivers in the north flow into the Olifants WMA.

The Jericho Dam and Westoe Dam are located in the south east of the area

The rivers rising in the area play an important part in water security nationally, and it is of critical importance to manage all human activity and development that could impact on the flow volumes and water quality of these water sources.

Main hydrological features are shown on **Map 4: Hydrology** below.



Map 4: Hydrology

4.2.3 Geology

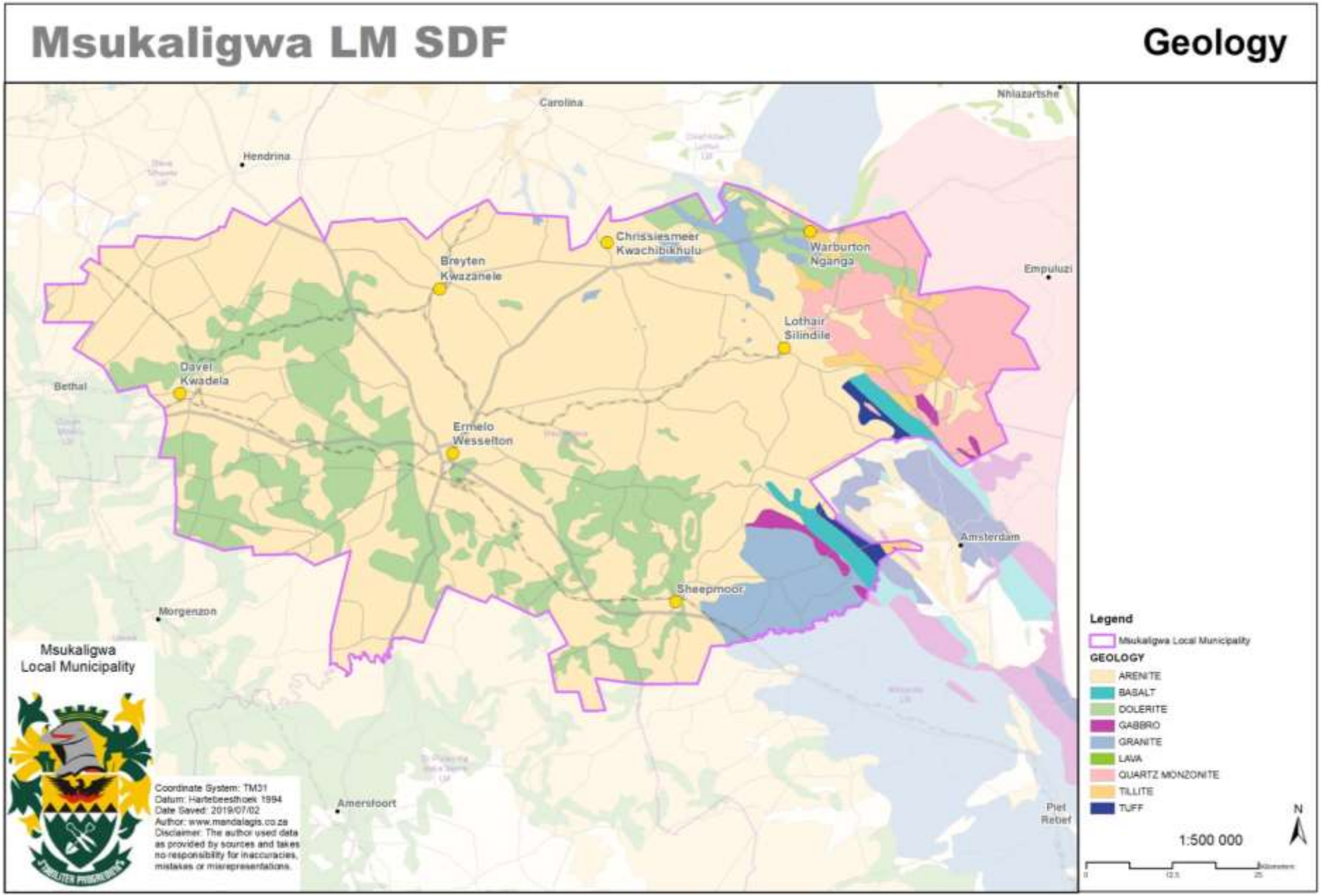
The largest part of the municipal area is underlain by favourable or intermediate geotechnical conditions that do not pose significant impediments to development or human activity.

The municipality is underlain predominantly by arenite and dolerite that forms part of the Karoo Supergroup. Other underlying rock types include quartz monzonite, granite and basalt.

Localised issues may occur which should be taken into account in the case of individual developments after the appropriate investigations, e.g. shallow undermining, or clay in the vicinity of the many wetlands.

The central and western part of the municipality is underlain by the Ermelo coal field, providing the basis for the mining economy in the area. This resource is however nearing the end of its expected potential, giving rise to a need for economic diversification and rehabilitation. Mining and mining potential is discussed in the section on natural resources below.

The main geological sub-types underlying the area is shown on **Map 5: Geology** below.



Map 5: Geology

4.2.4 Sensitive and Protected Areas

The Mpumalanga Biodiversity Sector Plan is a spatial tool that contains spatial biodiversity priority areas for, amongst others, use in land-use and development Planning. [12]

The MBSP classifies ecologically important areas as follows:[13]

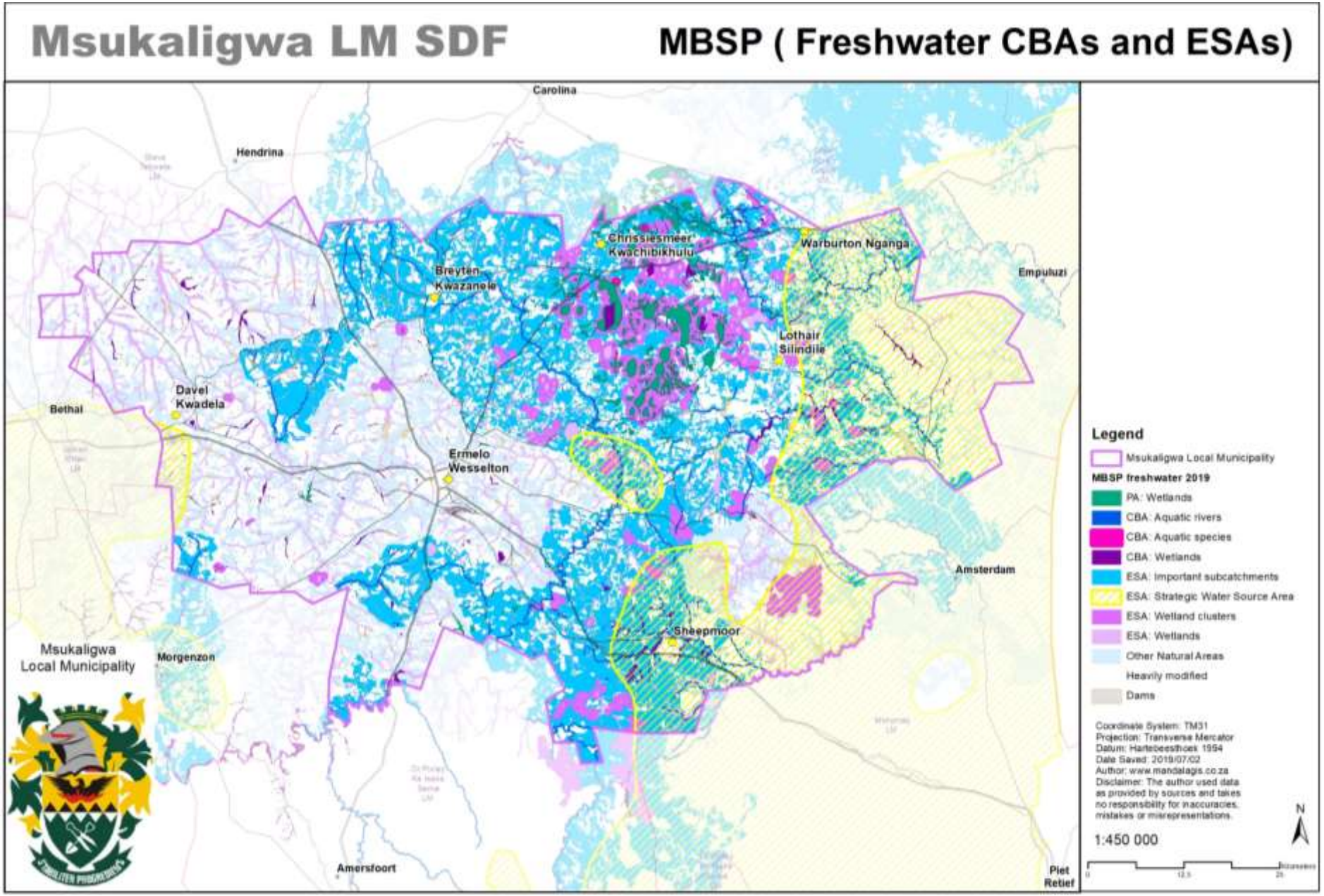
- Protected Areas: Areas that are formally protected by law and recognised in terms of the Protected Areas Act, including contract protected areas declared through the biodiversity stewardship programme.
- Critical Biodiversity Areas: All areas required to meet biodiversity pattern and process targets; Critically Endangered ecosystems, critical linkages (corridor pinch-points) to maintain connectivity; CBAs are areas of high biodiversity value that must be maintained in a natural state.
- Ecological Support Areas: Areas that are not essential for meeting targets, but that play an important role in supporting the functioning of CBAs and that deliver important ecosystem services.

The eastern part of Msukaligwa is very important from a hydrological point of view, and also for the protection of sensitive freshwater ecosystems. The extent of this sensitive area and it components are shown on **Map 6: MBSP (Freshwater Sensitive Areas)** below. This area comprises the protected area in the vicinity of Chrissiesmeer which contains the main lakes, but also the numerous rivers, watercourses and wetlands that occur outside the protected area. In addition, the area forms part of nationally significant strategic water source areas. While the largest concentration of sensitivity occurs in the eastern part, the western part of Mskaligwa also contains wetlands, wetland clusters and important sub-catchments. Of concern is that large parts of the sensitive freshwater areas overlap with human activity such as mining, agriculture and forestry, creating concerns for damage to ecosystems and critical water sources. Towards the east, where strategic water source areas occur, forestry is the predominant land use.

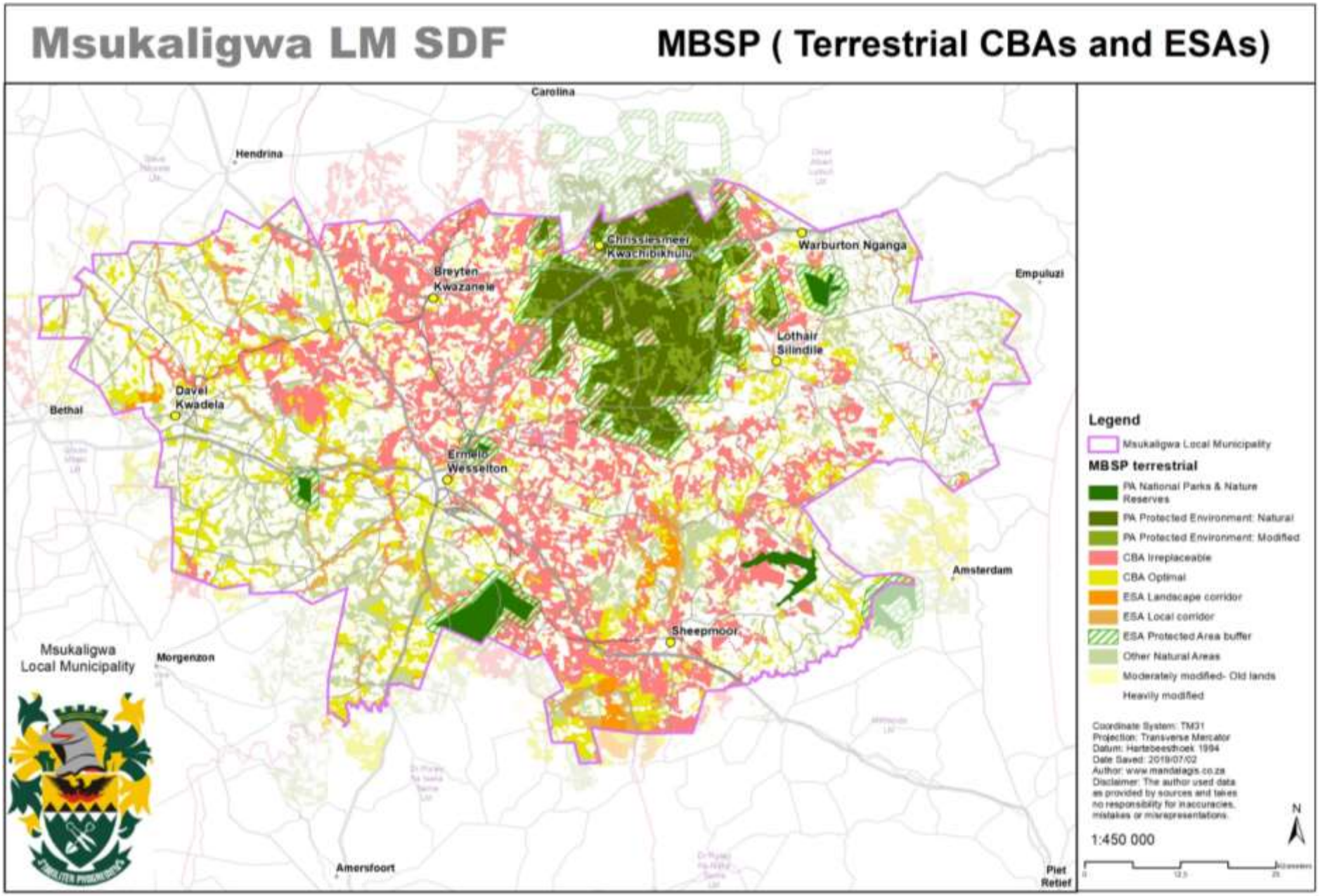
Terrestrial sensitivity is shown on **Map 7: MBSP (Protected Areas / Terrestrial Sensitive Areas).** The central part of Msukaligwa, where the majority of mines a located, has the highest concentration of irreplaceable critical biodiversity areas.

In terms of formal protection, **Map 8: Conservation Ranking** shows the extent of protected areas vs areas that are important to be protected.[14] Areas marked in blue that is not currently protected should be regarded as the highest priority for formalising an official protection status. Whilst mining is an important component of the local and national economy, it also has a potentially negative impact on the natural environment and natural resources. **Map 9: Mining Sensitivity** indicates the areas that are of most concern in terms of potential impact by mining. It should be noted, as also mentioned above, that in Msukaligwa mining does occur in some of the most sensitive areas.

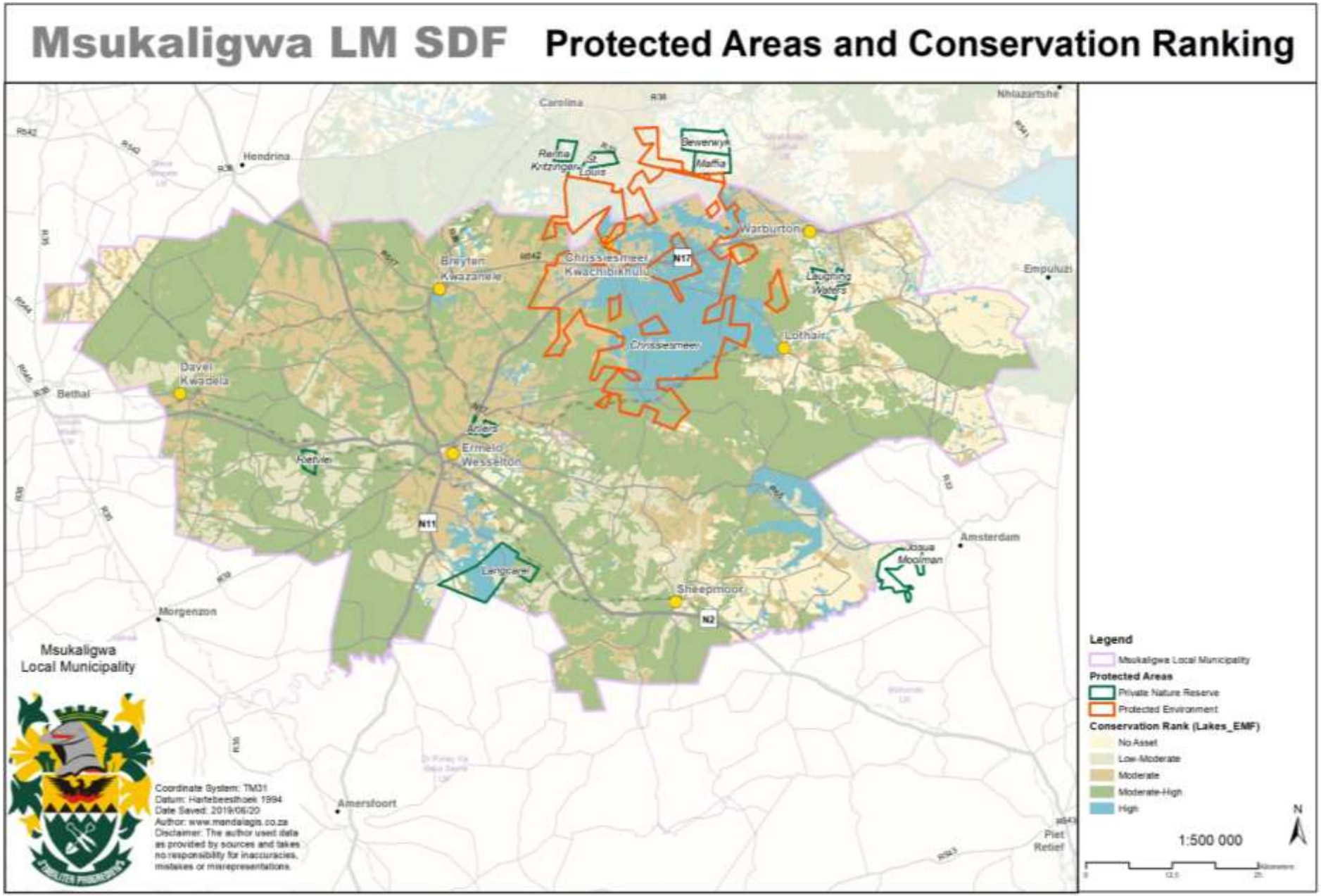
[12] MTPA. 2014. Mpumalanga Biodiversity Sector Plan Handbook. Compiled by Lötter M.C., Cadman, M.J. and Lechmere-Oertel R.G. Mpumalanga Tourism & Parks Agency, Mbombela (Nelspruit).
[13] Ibid.
[14] From 2009 Environemental Management Framework. Jericho Dam is shown as a protected area in more recent data in the MBSP.



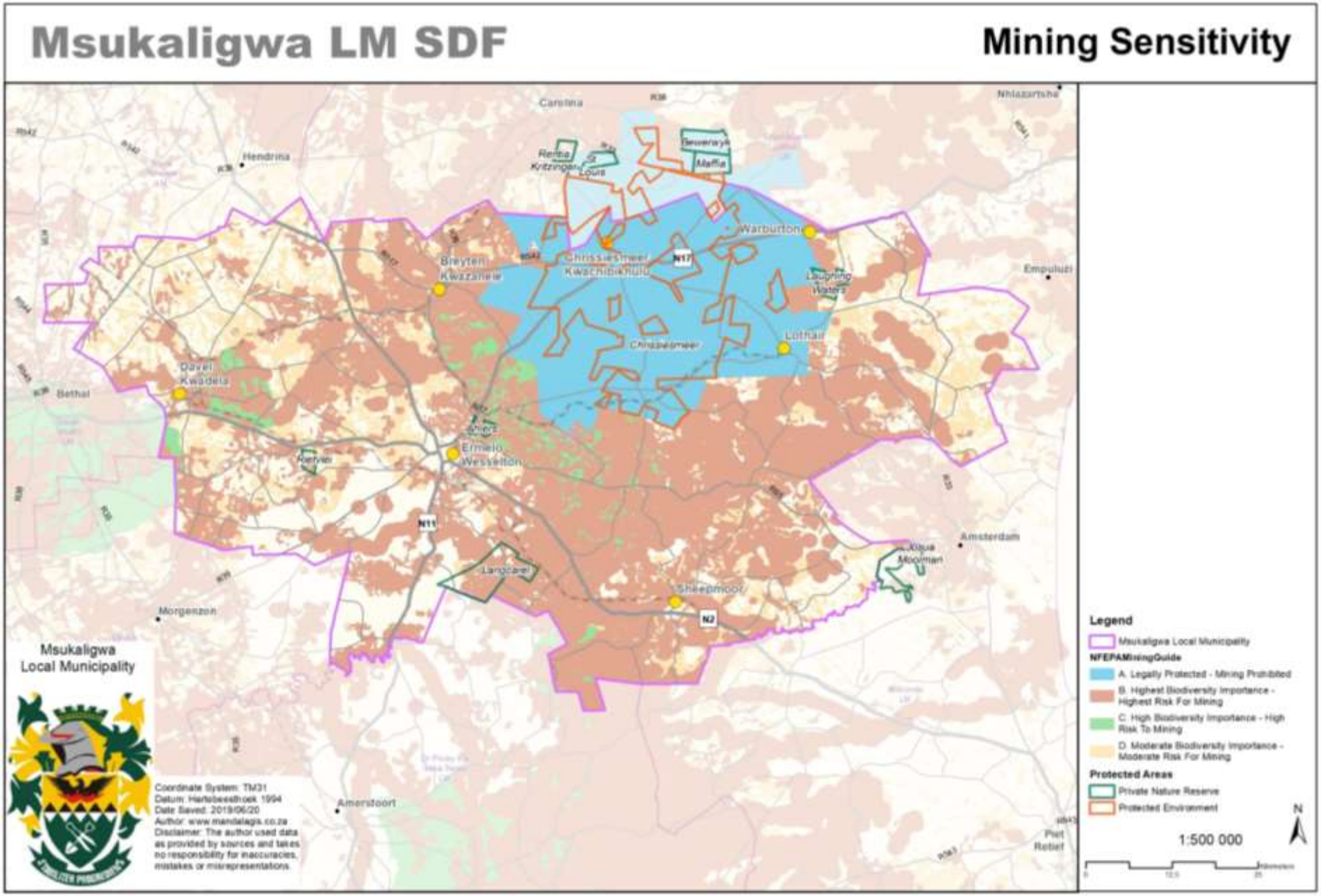
Map 6: MBSP (Freshwater Sensitive Areas)



Map 7: MBSP (Protected Areas / Terrestrial Sensitive Areas)



Map 8: Conservation Ranking



Map 9: Mining Sensitivity

4.2.5 Natural and Cultural Resources

Msukaligwa is richly endowed with natural resources, serving not only as a potential base for the local economy, but also contributing to the national economy and providing ecosystem services to the national population. The key natural and cultural resources in Msukaligwa are:

- Water: Strategic Water Source Areas (SWSAs)[15] that are critical to ensure sustainable national water supply
- Mineral deposits: Part of the Ermelo coal fields, contributing to national electricity generation
- Agriculture: high potential agricultural land contributing to food security
- Tourism: natural and cultural assets in support of tourism

Water:

The Upper Vaal SWSA (in central and south west Msukaligwa) and Upper Usuthu SWAS (eastern part of Msukaligwa) are located in the area. These SWAs are important to ensure that enough water is available in the country to support economic and human development and maintain food security. In Msukaligwa, the SWSAs in the east are located in commercial forestry areas, a potential conflicting use that may have high water demand and cause pollution is not management correctly. In addition to the SWSAs located in Msukaligwa, the headwaters of various significant rivers systems occur in the municipal area, as highlighted in the hydrology section earlier in this report. In view of this, water source and quality management should be elevated to one of the main objectives of spatial planning and development planning in Msukaligwa.

SWSAs are indicated on **Map 10: Strategic Water Resource Areas**.

Mineral Deposits:

Part of the Ermelo Coal fields, where coal mining is still active and a major supplier to national electricity generation, is located in Msukaligwa. Mining activity concentrates around in between Ermelo and Breyton.

The exact number of active mines in the area was not confirmed at the time of writing. Older information from 2010 and 2013 indicated that there are 33 mines within the municipal area, of which 55% are located around Ermelo and between Ermelo and Breyten[16]. The EMF reported noted that six of these mines are located around Chrissiesmeer within close proximity to the sensitive lakes district. There is some sand mining and quarrying taking place for road materials. An additional concern is that given the low quality and limited thickness of much of the resource in the area, coal is likely to be mined using opencast methods.

In terms of the coal fields, it is reported that there have been a number of studies carried out which indicate that production from the Mpumalanga coalfields will begin to decline from 2020. This situation would require not only a focus on rehabilitation of damage to the natural environment, but also have implications for employment and local economic activity. In terms of type of mining activity, it is stated that existing operations are looking at deeper opencast mining, and underground mines are now looking

[15] "Water source areas are those areas that supply a disproportionate amount of mean annual runoff to a geographical region of interest" https://www.wwf.org.za/?9321/Defining-South-Africas-Water-Source-Areas

[16] Albert Luthuli / Msukaligwa EMF 2010

at thinner seams and at pillar extraction whereas in the past the pillars were left behind.[17] While all types of mining have potentially negative environmental impacts, deep opencast mines are significantly difficult to rehabilitate and have a very large environmental and visual impact. A further concert in Msukaligwa is that occurrence of mining in or near some of the environmentally most sensitive areas, include irreplaceable critical biodiversity areas.

In addition to water management, the management and rehabilitation of mining areas, as well as economic diversification, should be prioritised in Msukaligwa. Current mines in relation to sensitive areas are indicated on **Map 11: Mining**.

Agriculture:

Msukaligwa has large areas that have high potential for agriculture (both in terms of land capability for crop farming and grazing). Agriculture is an economic activity that could serve to diversify the economy in the face of declining coal mining in the long term. It is however also yet another land use competing for water and potentially impacting negatively on natural ecosystems. Risks to agriculture include more extreme weather events (droughts and floods) associated with climate change.

Potential for agriculture is indicated on **Map 12: Land Capability** and **Map 13: Grazing Capacity**.

Cultural Assets:

The EMF for the area highlights a number of cultural assets:

- Mpuluzi's Footprint' or 'Goliath's footprint', rock formation near Lothair and Mpuluzi.
- The natural stone bridge across the Vaal River between Chrissiesmeer and Ermelo.
- The Eye of the Vaal River.
- Lake Chrissiesmeer.
- Late Stone Age sites including the Chrissiesmeer site, Welgelegen rock shelter to the south of Ermelo and a site in the Batwa Valley near Breyten.
- An Iron Age sites occur to the west of Chrissiesmeer and north-west of Ermelo.
- Remains of settlements for the Phuthing, Swazi and Ndebele are likely to occur in the area.
- Historical towns: Ermelo, established in 1880 and Chrissiesmeer, established between 1860 and 1886.
- Anglo-Boer War (1899-1902) - remaining blockhouse in Ermelo.
- There are also several declared national heritage sites in the MLM area, a number of which date back to this historic era.

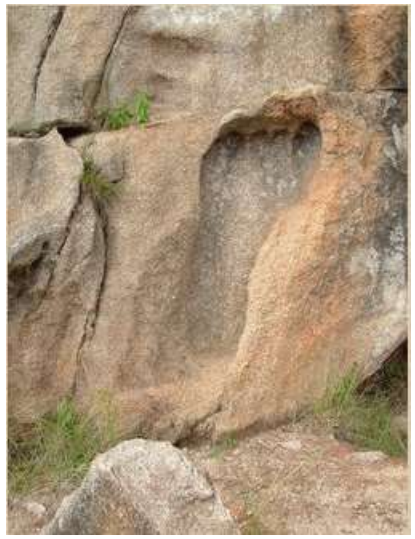
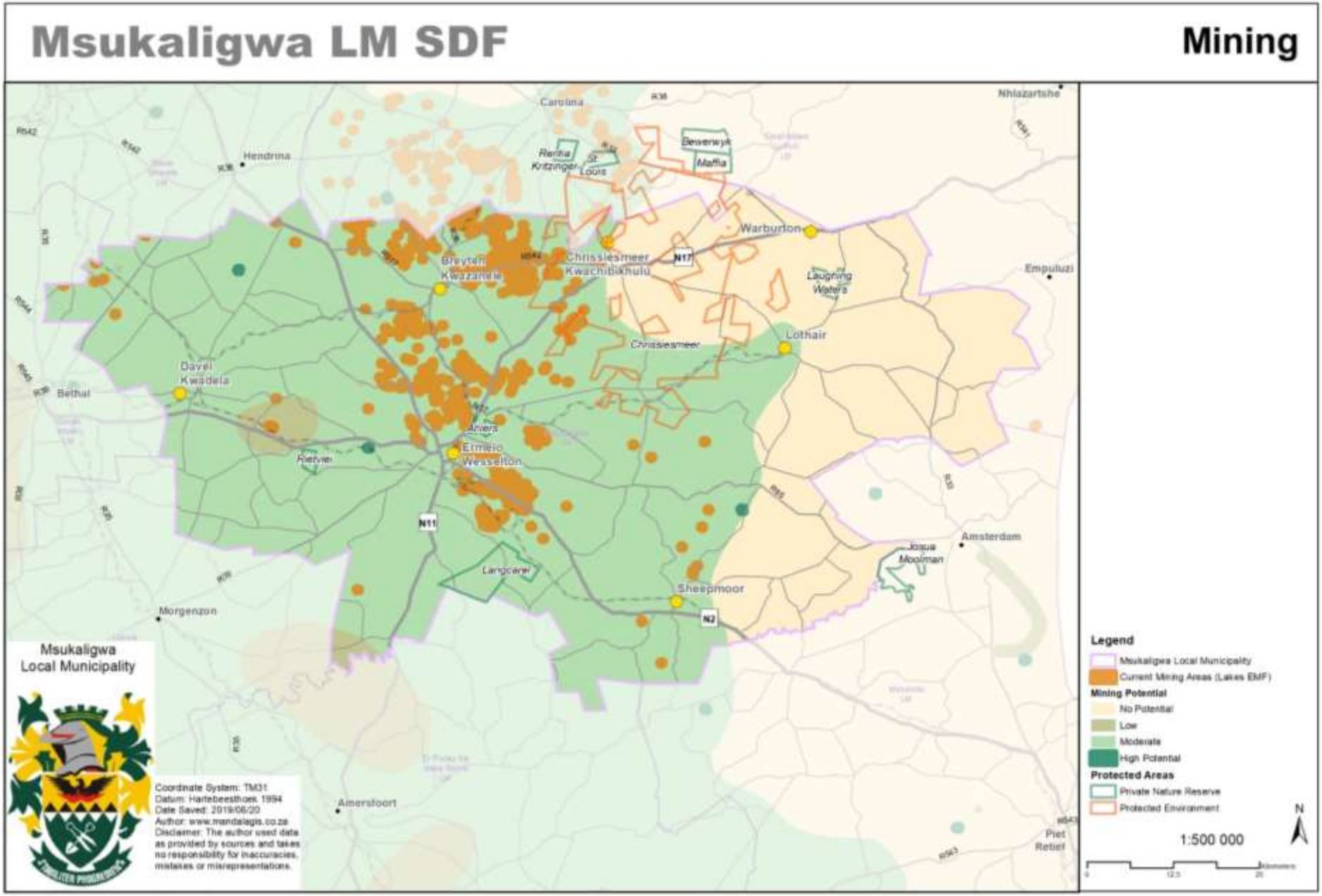


Figure 16: 'Mpuluzi's Footprint'

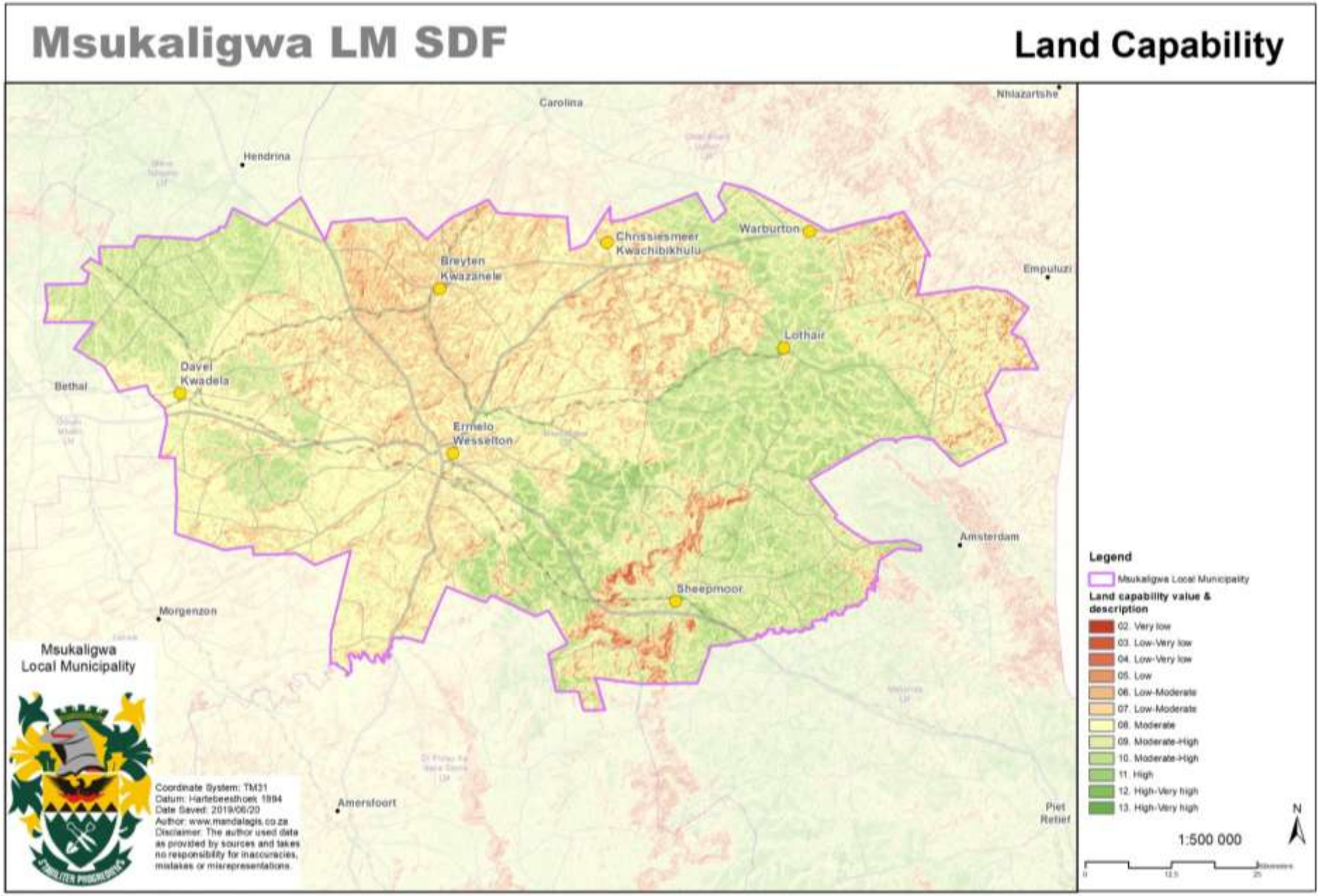
Highest rated areas in terms of tourism potential is shown on **Map 14: Tourism Ranking**.

[17] Mining Review Africa. 2010. "The easy pickings – mostly gone in Southern Africa's coalfields"

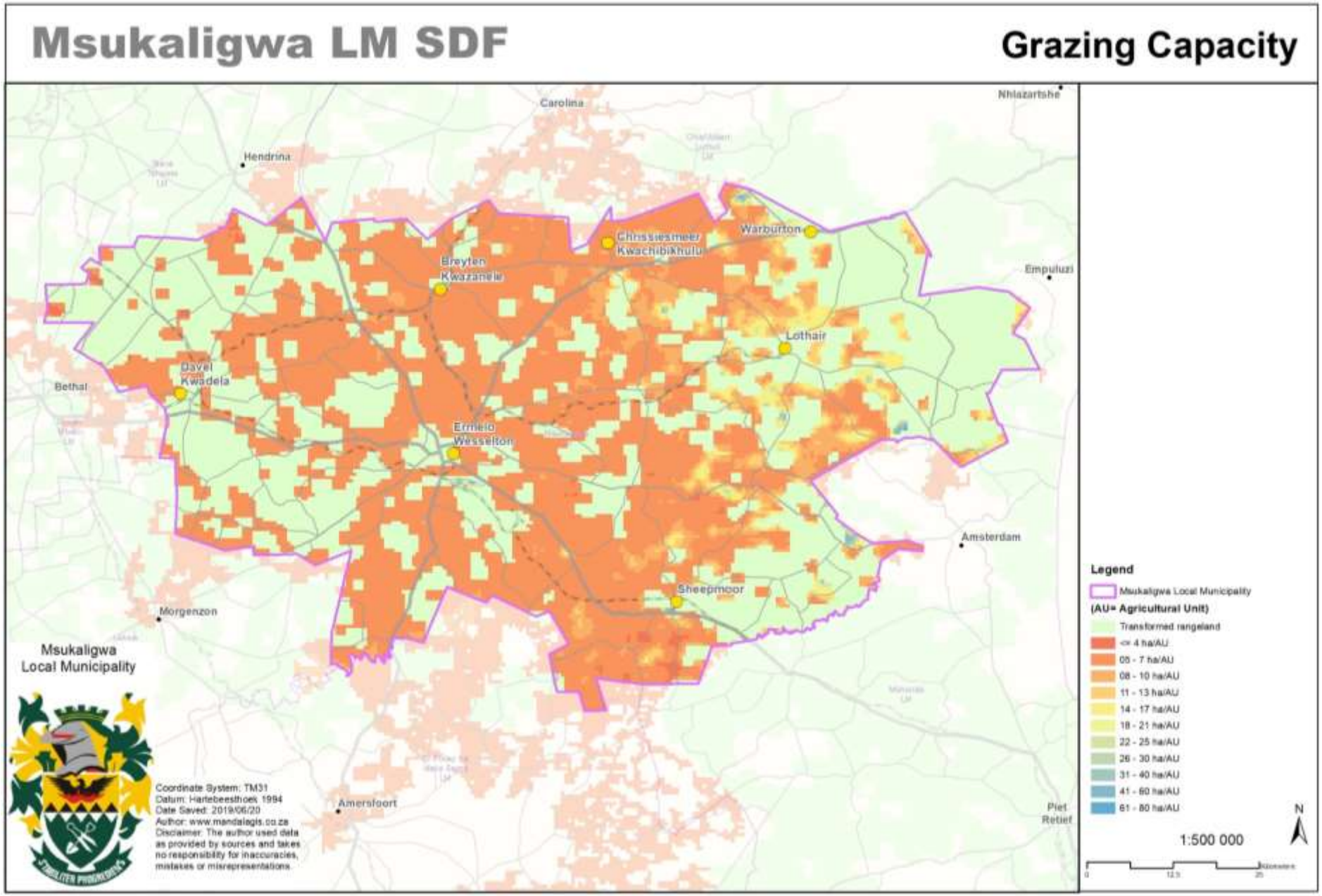
Map 10: Strategic Water Source Areas



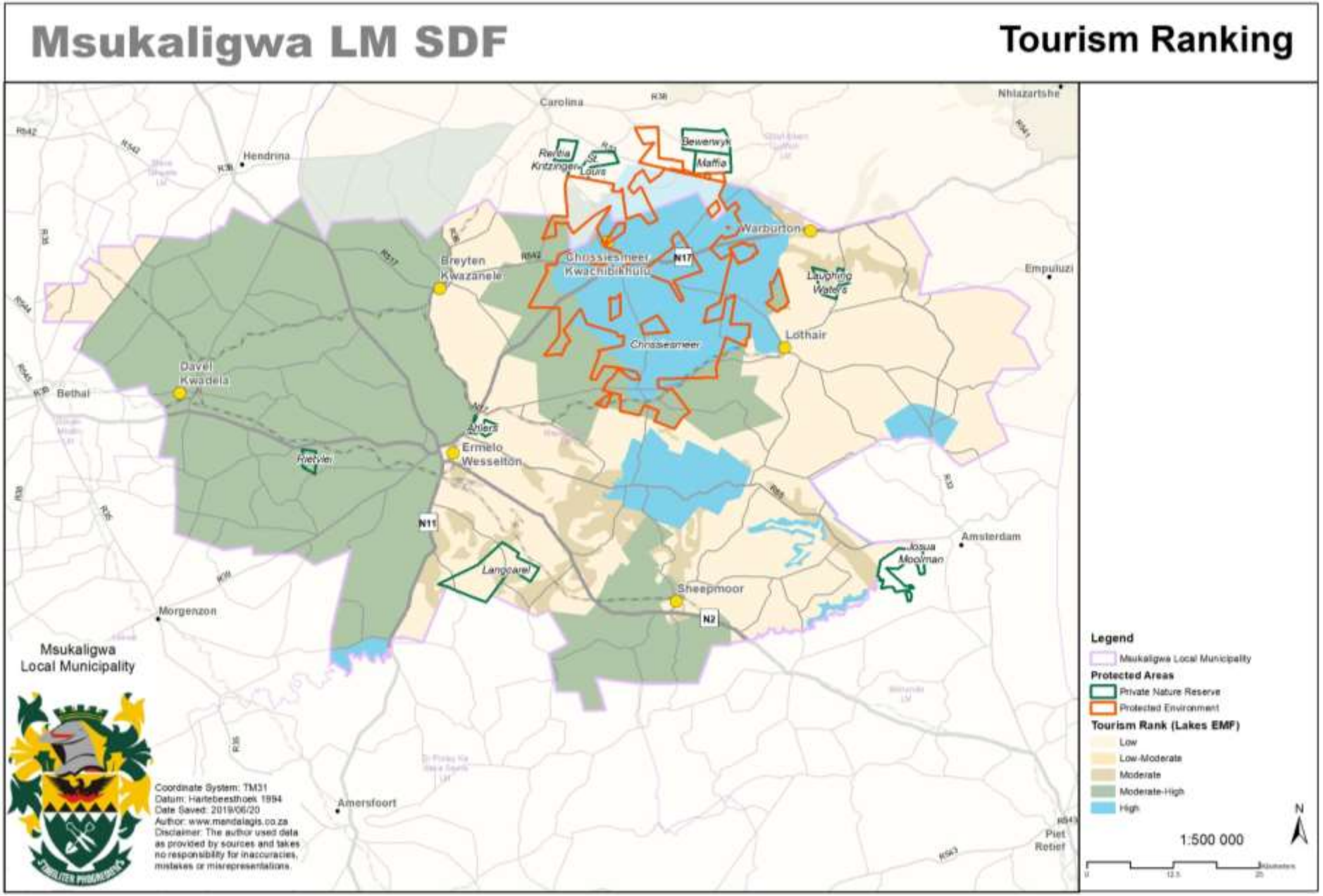
Map 11: Mining



Map 12: Land Capability



Map 13: Grazing Capacity



Map 14: Tourism Ranking

4.2.6 Climate and Climate Change

As an area where a large part of the economy is reliant on agriculture and forestry, as well as the source area of some of the main strategic waterways of the country, the potential impact of climate change could have serious repercussions.

Current climate and forecasted changes by 2050 are summarised below:

Current Climate		**Projected Climate Change 2050**				
Temperature	**Average Rainfall**	**Scenario:**	**Projected change in Temperature**	**Average Rainfall**	**Extreme Rainfall Days**	**Very Hot Days**
Min: 8.24°C Avg: 14.50°C Max: 20.76°C	Avg: 1033.99mm	RCP 4.5	**+ 2.04-2.77**	**- 47.67mm to 68.46mm**	**- 1.84 days — 0.80 days**	**+ 0.08 days to 8.26 days**
		RCP 8.5	**+ 2.53-3.04**	**- 64.16mm to 144.47mm**	**- 1.74 days — 1.90 days**	**+ 0.08 days to 13.26 days**
Climate Hazards						
Drought	Decrease over eastern half, increase across centre and greater increase towards western half					
Very Hot Days	Number of very hot days (above 35°C) – between 6 and 8.2, with greater tendency in central and eastern parts					
Flood Hazard	High flood hazard in western part, medium hazard for most of remainder of municipal area. Very low flood hazard in lakes district					
Fire Hazard	Likely around settlements, with biggest risk area around Ermelo / Wesselton					
Source: CSIR Greenbook 2018 https://riskprofiles.greenbook.co.za/						

Table 5: Climate and Climate Change

On average, the area can expect increased temperatures, lower average rainfall and an increase in number of very hot days by 2015. Main climate risks are droughts, increased number of very hot days, flood hazards and fire hazards as indicated above.

Changes in temperatures will have an impact on the type of crops and livestock, as well as overall productivity of agriculture and forestry. Flooding and fires also poses risks to settlements and infrastructure, in addition to rural uses such as agriculture and forestry. Increased droughts may affect availability of water not only in Msukaligwa but also in wider catchment areas with headwaters in Msukaligwa.

Programmes to manage impact on agriculture, forestry, water availability and settlement resilience will have to be prioritised.

4.3 Socio-Economic Trends and Conditions

4.3.1 Demographic Profile

Msukaligwa has a relatively small population, with a fairly high growth rate of 2.2%. The total population increased from 149 377 in 2011 to 164 608 in 2016. In 2016, just more than 14% of people in the Gert Sibande District resided in Msukaligwa.[18] In 2016, 51 089 households resided in Msukaligwa, representing 15.3% of the total District number of households. Average household size decreased from 3.6 to 3.2 from 2011 to 2016.

	2011 StatsSA	2016 StatSA	2030 Projection	2050 Projection
Total Population	149 377 (40 932households)	164 608 (51 089 households)	196 342	238 555

Table 6: Total Population

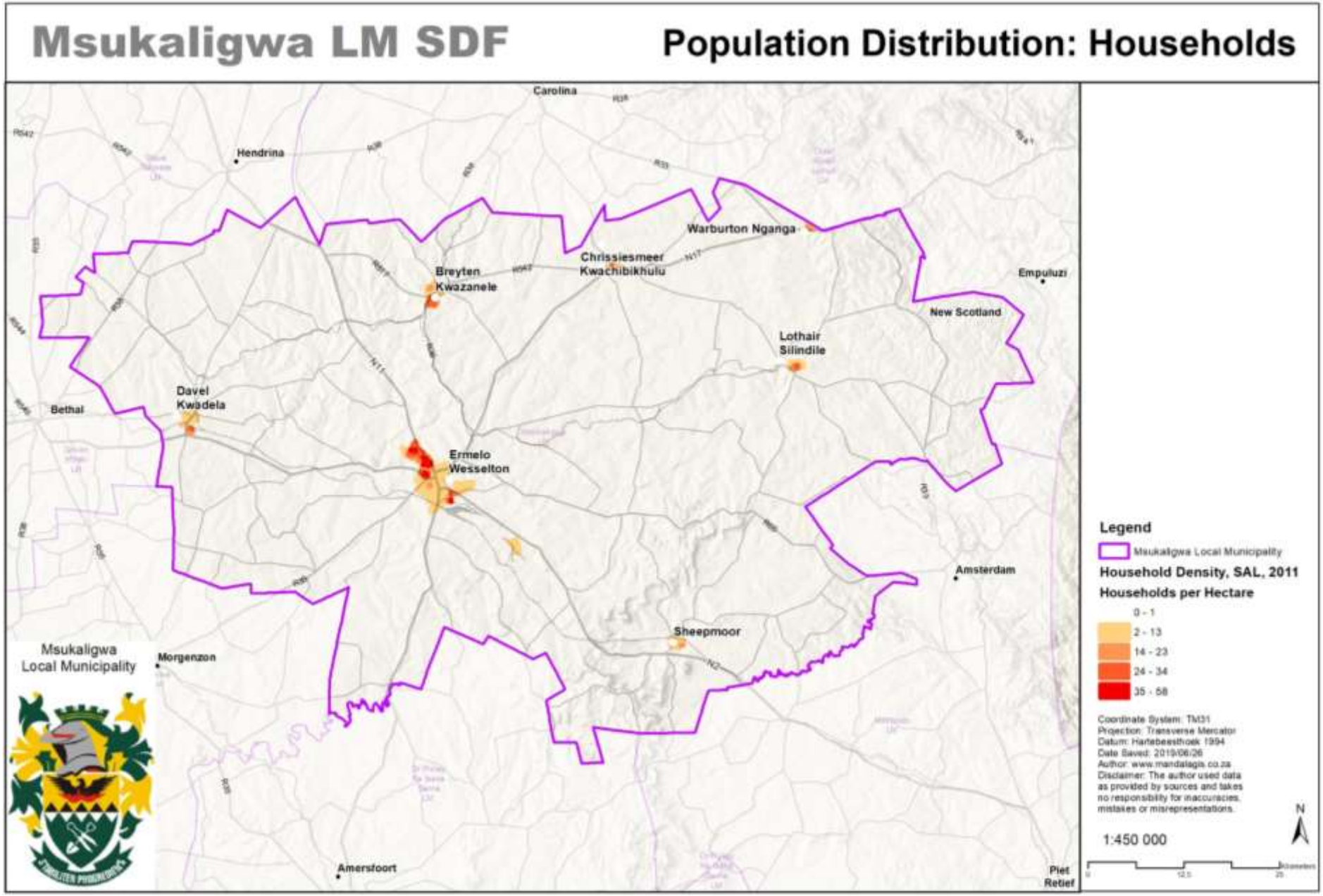
Spatially the population is concentrated in the towns and settlements of Msukaligwa. Close to 60% of the total population in Msukaligwa lives in the main node of Ermelo / Wesselton, followed by 10% in Breyten / KwaZanele. Around 16% of the population lives across the rural wards. A trend of urban migration can be observed between 2016 and 2050, with the population living in Ermelo Wesselton increasing to 67% of the total population in 2050. The spatial distribution of population is shown on **Map 15: Population Distribution Households** and **Map 16: Population Distribution Persons**. Quantitatively, the spatial distribution of population is as follows:

Area	Population 2011	% of Total 2011	Population 2016	% of Total 2016	Projected Population 2030[19]	% of Total 2030	Projected Population 2050	% of Total 2050
Ermelo / Wesselton	87 340	58,47%	96 219	58,5%	123 932	63,12%	159145	66,71%
Breyton / KwaZanele	14 813	9,92%	16 323	9,9%	18 896	9,62%	22 843	9,58%
Chrissiesmeer / KwaChibikhulu	5 881	3,94%	6 480	3,9%	5 094	2,59%	5 979	2,51%
Davel / KwaDela	4 665	3,12%	5140	3,1%	5 353	2,73%	5 631	2,36%
Lothair / Silindile	10 174	6,81%	7 905	4,8%	7 108	3,62%	7 843	3,29%
Warburton / Nganga	2 562	1,72%	2 823	1,7%	3 516	1,79%	3 932	1,65%
Sheepmoor	2 841	1,90%	3 130	1,9%	3 403	1,73%	3 936	1,65%
Remaining area (predominantly rural)	21 101	14.13%	26 587	16,2%	29 040	14,79%	29 246	12,26%
TOTAL	**149 377**	**100%**	**164 608**	**100%**	**196 342**	**100%**	**238 555**	**100%**

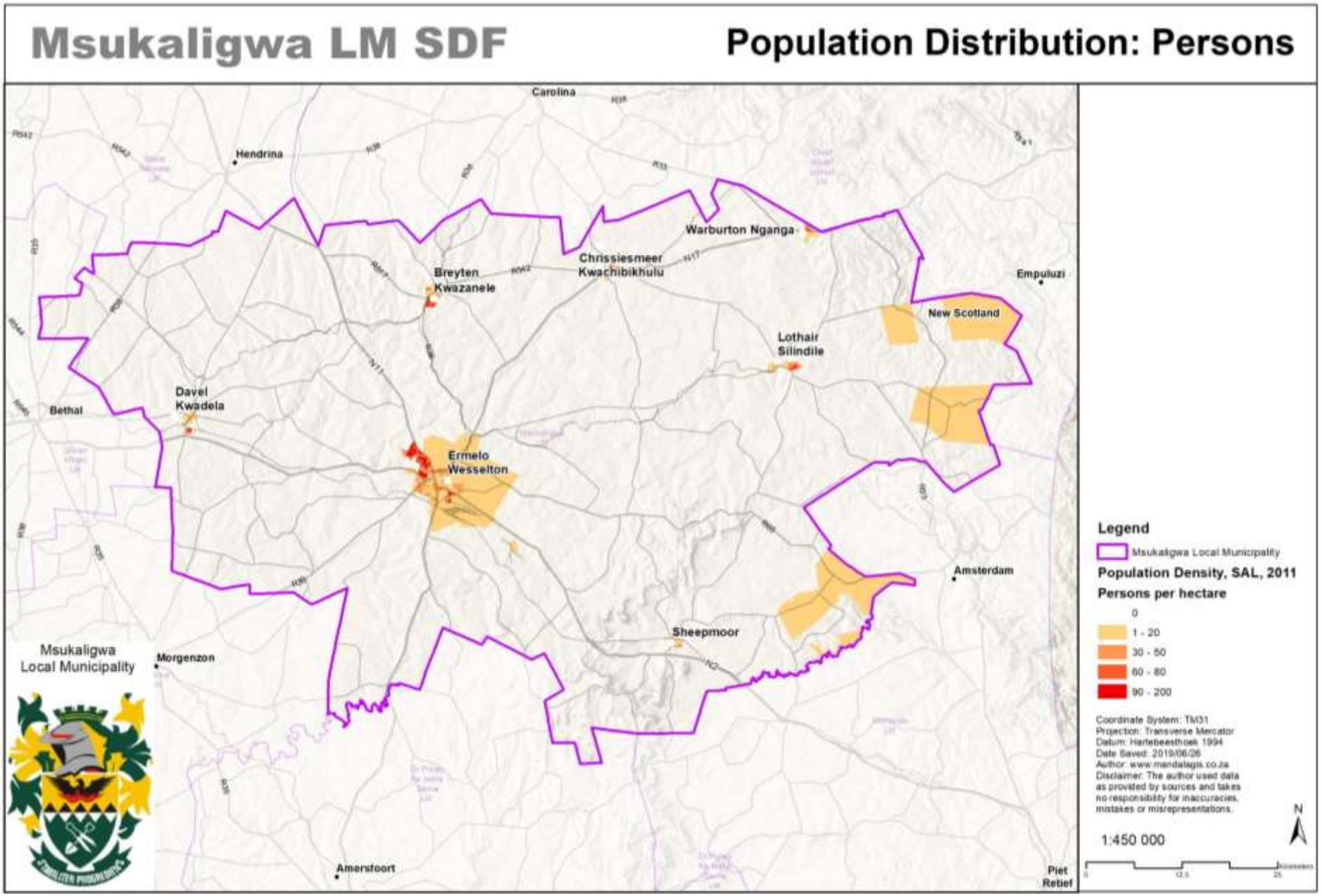
Table 7: Spatial Distribution of Population

[18] Population statistics quoted from this section was obtained from StatsSA (Census and Community Survey) and Mpumalanga Department of Economic Development and Tourism: Socio-Economic Profile of Msukaligwa, December 2018, unless stated otherwise.

[19] Projections for 2030 and 2050 from CSIR Greenbook 2018 accessed at https://riskprofiles.greenbook.co.za/



Map 15: Population Distribution: Households



Map 16: Population Distribution: Persons

Msukaligwa has a fairly young population, with the youth population (15-34 years) forming 41.2% of the total population. The general trend is a decrease in the number of children between 5 and 14 years since 2001, with an increase in the 25-43 age group. This may indicate a period of decreased birth rates / decreased population growth. Just over half the population (51.1%) was female in 2016.

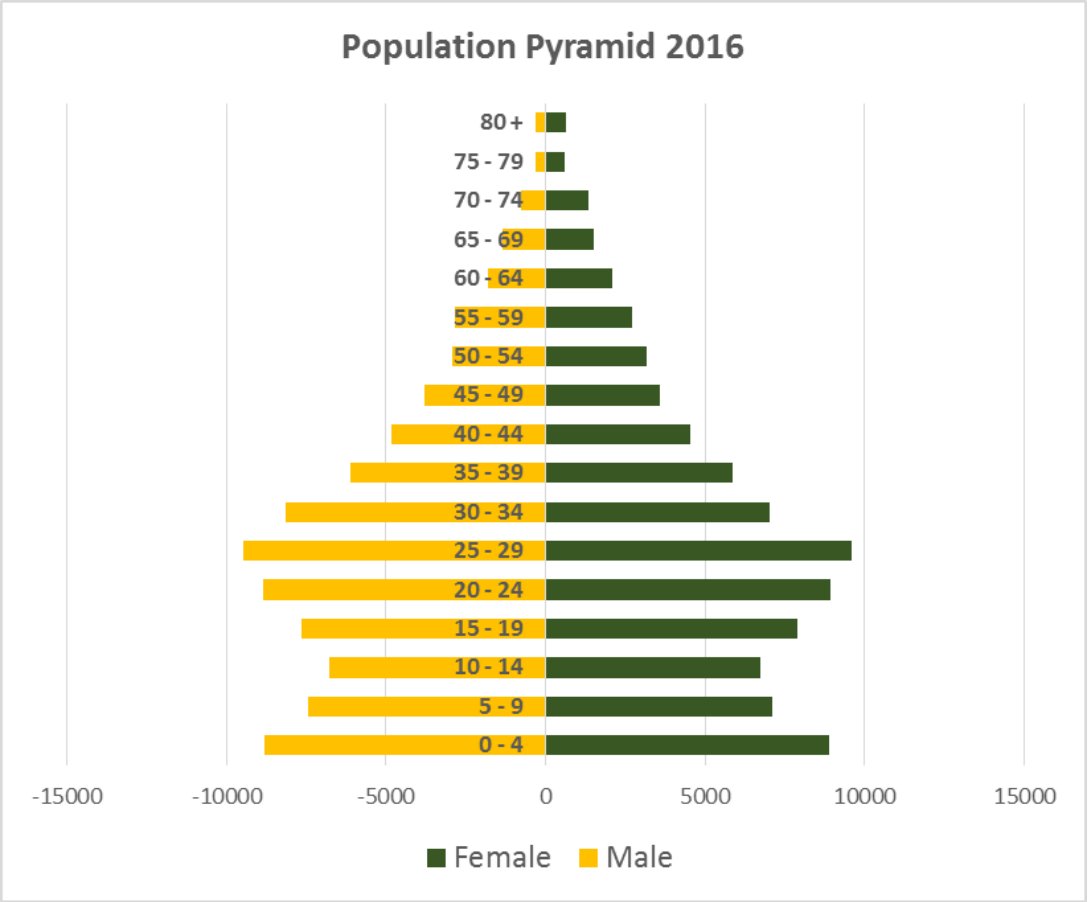


Figure 17: Population Pyramid

In terms of racial distribution, in 2016 91.7% of the population wass Black African. This is an increase from 88% in 2011. The White population showed the biggest decrease from 2011, from 10% to 6.8%.

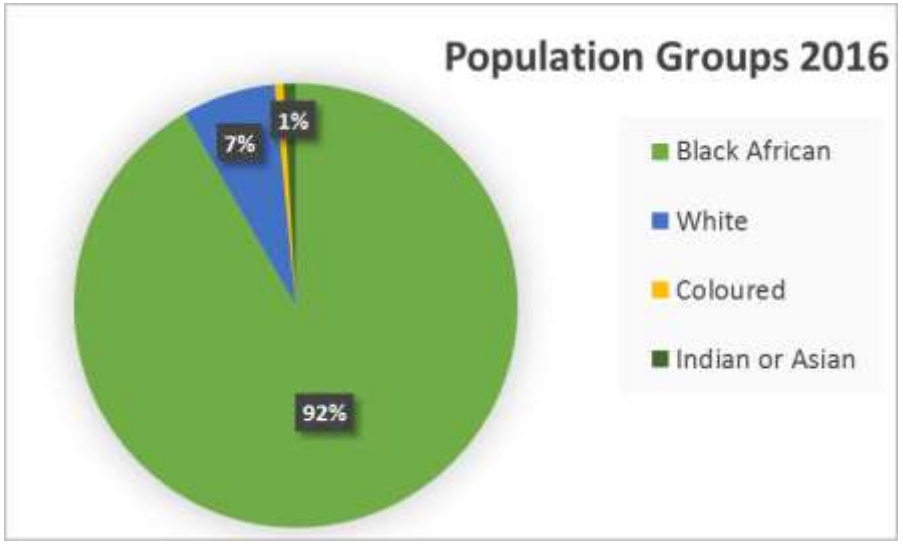


Figure 18: Population Groups

In terms of health conditions, positive trends have been established in terms of number of newly confirmed HIV infections, total number of people on anti-retroviral treatment and immunisation coverage. Neonatal and maternal mortality rates have however increased, as has death of children in facilities under 5 years old. The declining trends are a concern as they are also indicators of general socio-economic living standards/conditions:

Indicator	**Baseline – 2014/15**	**2017/18**	**Trend 2014/15 to 2017/18**
HIV 1st test positive (as proportion of 15-49 yrs population)	17.4%	7.9%	
Total clients remain on ART	11 747	18 231	
Infant PCR test positive around 10 weeks	-	1.2	N/A
Immunisation coverage <1 yr rate	65.1	92.2	
Neonatal mortality in facility rate per 1 000 live births	3.7	11.3	
Maternal mortality rate per 100 000 live births	104.7	250.1	
Death in facility under 5 years	4.2	5.5	

Table 8: Health Indicators

In terms of education levels, Msukaligwa's grade 12 pass rate deteriorated slightly from 80.6% in 2014 to 80% in 2017, which was the 8th highest of the municipal areas of the Province. The area achieved an admission rate to university/degree studies of 37% in 2018.

The DEDT demographic profile document[20] highlights that the deteriorating Matric pass rates may have a negative impact the employability of the youth. There is also a challenge is to accommodate the educated young people in the area as inadequate appropriate economic opportunities exist. It would be a priority to provide adequate educational infrastructure and skills development activities to meet the needs of the community.

[20] Mpumalanga Department of Economic Development and Tourism: Socio-Economic Profile of Msukaligwa, December 2018.

Persons 20 and above who achieved matriculation and post matriculation qualifications increased from 33.8% in 2011 to 39.7% in 2016. The statistic which is most concern is a declining functional literacy rate that went down sharply from 58.1% in 2001 to 42.7% in 2016, in spite of more people completing matric and fewer people with no schooling. This may point to a decline in the quality of basic education in the area.

Education Indicator	2011	2016	Trend 2001- 2016
% Population 20+ with no schooling	12%	10.6%	
% Population 20+ with matric and post matric qualification	33.8%	39.7%	
Functional Literacy Rate (%)	51.4%	42.7%	

Table 9: Education Indicators

4.3.2 Local Economy and Employment

The economic growth rate for Msukaligwa was at 3.0% per annum on average over the period 1996 to 2017 and forecasted average annual GDP growth for 2017-2022 relatively low at 1.3%. The contribution of Msukaligwa to the Mpumalanga economy was around 4.3%, making it the fifth largest local economy in the province. It is the second largest economy in the District, contributing around 15.5%.[21]

In 2017, the dominating sectors in the local economy was mining, community services, trade (including industries such as tourism) and finance. Msukaligwa has a comparative advantage in economic sectors such as agriculture, transport and mining. Finance and Agriculture achieved the highest (albeit slim) growth in contribution from 2014 to 2017. The contribution of utilities, mining and trade declined slightly.

According to the DEDT, tourism expenditure in the area was 4.3% of the local GDP, indicating the tourism potential in the area; this equalled tourism spending of R627 million in 2017.

Economic Sector	2014	2017	Change
Agriculture	5,3%	6,0%	**0,7%**
Community Services	18,4%	**18,5%**	0,1%
Construction	2,7%	2,7%	0,0%
Finance	13,3%	**14,2%**	**0,9%**
Manufacturing	5,1%	5,1%	0,0%
Mining	20,8%	**20,3%**	**-0,5%**
Trade	18,5%	**18,2%**	**-0,3%**
Transport	11,3%	11,3%	0,0%
Utilities	4,5%	3,8%	**-0,7%**

Table 10: Economic Sector Contribution

[21] Mpumalanga Department of Economic Development and Tourism: Socio-Economic Profile of Msukaligwa, December 2018.

The composition of the Msukaligwa economy is illustrated to the right: [22]

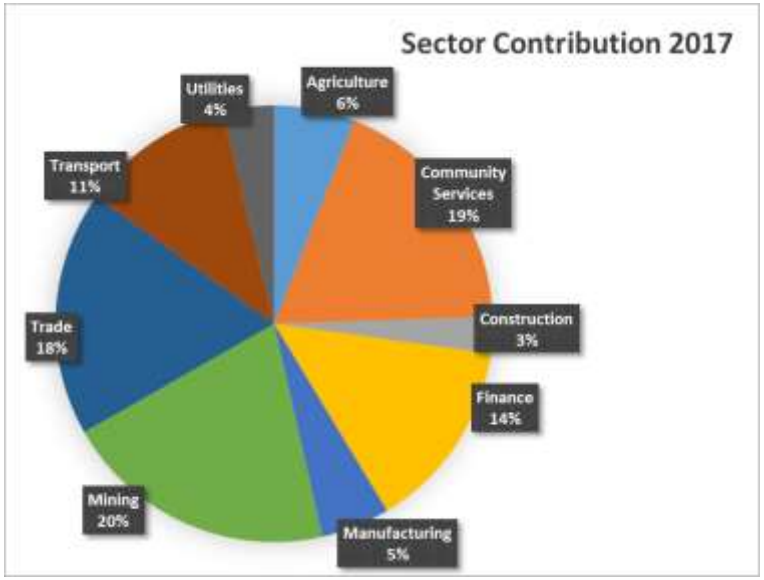


Figure 19: Economic Sector Contribution

Msukaligwa's unemployment rate was the 6th lowest among all the municipal areas of Mpumalanga. The unemployment rate deteriorated slightly from 23.1% in 2014 to 24.1% in 2017. Unemployment rates are higher for females at 29.8% and for males at 24.1%.

Trade is the largest contributor to employment, followed by community services and mining. Mining is the sector that showed the biggest decline in contribution to employment from 2014 to 2017, followed by trade. Community services showed the biggest growth, followed by construction and finance.

Of special concern are the high youth unemployment rate of 34.5%. The largest employing industries in Msukaligwa are trade (including tourism), community services, mining, finance and manufacturing. Contributing to the growing unemployment rate is the low the total employment increase between 2014 and 2017 at almost 1 000 jobs per annum.[23] Community services, construction, manufacturing and agriculture had a growing share of total employment, while the share of mining declined.
/

Employment Sector	2014	2017	Change
Agriculture	6%	6,3%	0,3%
Community Services	14,5%	**15,3%**	**0,8%**
Construction	7,9%	8,5%	**0,6%**
Finance	11,2%	11,6%	**0,4%**
Manufacturing	9,9%	10,1%	0,2%
Mining	14,7%	**12,8%**	**-1,9%**
Trade	21,1%	**20,6%**	**-0,5%**
Transport	4,5%	4,7%	0,2%
Utilities	2,5%	2,4%	**-0,1%**

Table 11: Employment Sector Contribution

[22] Mpumalanga Department of Economic Development and Tourism: Socio-Economic Profile of Msukaligwa, December 2018.
[23] Mpumalanga Department of Economic Development and Tourism: Socio-Economic Profile of Msukaligwa, December 2018.

The composition of employment in Msukaligwa is illustrated to the right:[24]

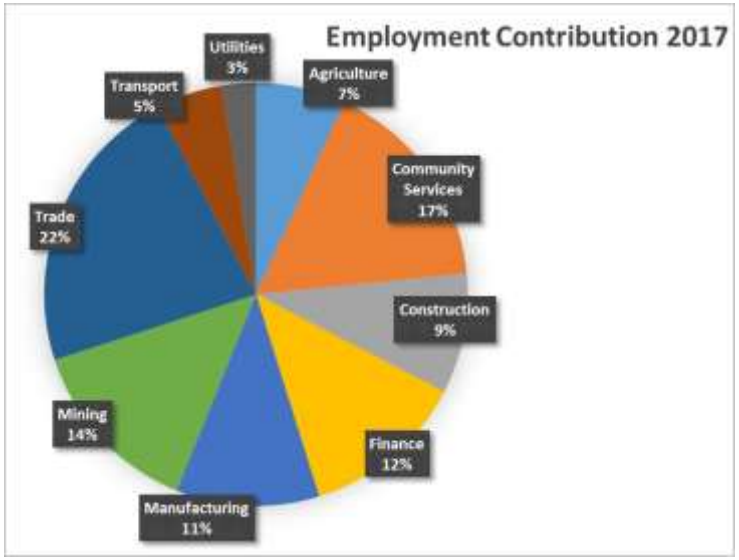


Figure 20: Msukaligwa Employment Sectors

Msukaligwa had a slight improvement in the Human Development Index (which comprises life expectancy, education and income) from 0.60 in 2014 to 0.62 in 2017. It ranks eights highest among the local municipal areas in the province. Poverty in Msukaligwa increase slightly as measured by the share of the population living below the poverty line, i.e. 42.9% of the total population. This is a very high percentage, and represents a total number of people of 68 491 in 2017. The number of indigent households in Msukaligwa was 10 891. In the same year, Msukaligwa's poorest 40% of households shared only 8.2% of income, which indicates a very high level of inequality in the area.[25]

Poverty Indicators	2011	2017	Trend
Poverty Rate	33.6%	42.9%	↑
People in Poverty	56 823	68 491	↑

Table 12: Poverty Indicators

In terms of future economic development, coal mining can be expected to remain an important sector for the short to medium term. It should however be noted that this sector can be expected to decline in the medium to long term due to limited coal resources, and a move away from a coal based economy locally and globally in view of climate change mitigation. The current transport and logistics sector may also over the longer term be impacted on by a decline in coal mining, as a substantial portion of transport in the area is of coal. The economic analysis referred to above states that Msukaligwa also has a comparative advantage in agriculture. This sector however does

[24] Mpumalanga Department of Economic Development and Tourism: Socio-Economic Profile of Msukaligwa, December 2018.
[25] Mpumalanga Department of Economic Development and Tourism: Socio-Economic Profile of Msukaligwa, December 2018.

not provide employment to replace an ailing mining sector. Alternative development sectors will have to be explored, e.g. cultural and eco-tourism, trade, beneficiation of agricultural produce, non-coal transport and logistics and an increased services sector. Threats to economic growth such as inadequate infrastructure, skills shortage and distance from markets will however have to be dealt with or considered. An average annual growth is of only 1.6% is predicted for Msukaligwa from 2016-2021, which is lower than the population growth rate and would cause poverty levels to deepen in not addressed.[26]

4.3.3 Social Facilities and Amenities

Social facilities are located in towns and rural settlements, with the exception of schools, where a wider distribution throughout rural areas can be observed. The highest order social services and largest quantity of social services occur in the main node, i.e. Ermelo / Wesselton.

Numerous education and health facilities are located in Msukaligwa. Schools primarily occur within main towns, but are also distributed throughout the rural landscape. The bulk of higher order health care facilities are in Ermelo (e.g. hospitals), while clinics, including mobile clinics, are more evenly distributed in other towns and settlements.

It is noted in the IDP that "with the development of Ermelo extension 32, 33 and 34 with a total of ± 2134 housing units and neighbouring New Ermelo settlement with ± 1650 housing units there is a need for a high school in that area and the development of Khayelihle close to Emadamini and Thusi Ville, additional Primary Schools and High schools are needed."

Education Facility	Number	Health Facility	Number
Day Care Centres	40	Private Hospital	1
Primary Schools	71	Primary Health Care Clinics	10
Secondary / High Schools	17	Mobile Clinics	4
Combined Schools	12	Government Hospitals	1
Private Schools	3	Infectious Hospital (TB)	1
FET Colleges	1	Dentists	4
ABET Centres	9	Gynaecologists	1
		Social Workers	12
		Private Doctors	20

Table 13: Education and Health Facilities

Nine libraries are available in Msukaligwa. Services include circulation of library material such as books, periodicals, CD's and audio-visual material, free internet and Wi-Fi connectivity, and computer usage. A mobile library is being considered to serve remote / rural areas. Libraries are located in town and settlements, with the exception of Sheepmoor and Lothair:

- Ermelo
- Wesselton
- Breyten

[26] StatsSA in Gert Sibande District Municipality, IDP 2018-19

- Davel
- KwaZanele
- Chrissiesmeer
- Cassim Park
- Silindile and
- Thusiville

In terms of an agreement with the provincial Department of Cooperative Governance and Traditional Affairs, provision has been made for two Thusong Service Centres (TSCs) at Breyten and Wesselton respectively. At present only the Breyten TSC is operating and the following departments/institutions are operating at the centre:

- Municipal offices and services pay point
- Licensing (learners and drivers licenses)
- Library Services
- Department of Social Services
- Department of Home Affairs
- Department of Labour
- Department of Local Government
- Computer Training Centre

The Wesselton / Ermelo TSC has been put on hold by the Department due to financial constraints. There is another Thusong Service Centre that is under construction at Lothair and is being financed by Xstrata mines as part of their social responsibility.

Stand-alone Home Affairs and Labour offices are located in Ermelo, as well as a SASSA service office. The Department of Rural Development and Land Reform and the Department of Education also have offices in Ermelo. There is not SARS office in Msukaligwa.

All towns / settlements have postal services. At smaller settlements, e.g. at Warburton, Lothair and Sheepmoor, postal services are running on an agency basis.

In terms of safety and security, a Community Safety Forum has been established between the South African Police Service (SAPS), South African Defence Force, Taxi Associations, Transport industry and the community. Police stations are located in all towns / settlements with the exception of Sheepmoor. The main Magistrate's Court is located in Ermelo, with a Branch Court in Breyten and Periodical Courts in Chrissiesmeer, Davel, Lothair and Sheepmoor.[27]

A summary of social facilities per node is as follows:

[27] http://www.justice.gov.za/maps/areas-mp.html

Town	Police Station	Public Sport Facilities	Public Libraries	Community Halls	MPCC / TSC	Post Offices	Pension Pay Points	Courts	Home Affairs	Labour
Ermelo / Wesselton and surrounds	2	9	4	5	-	1	2	1	1	1
Breyten / KwaZanele	1	4	2	2	1	1	1	1	1	1
Chrissiesmeer / Kwachibikhulu	1	1	1	1	-	1	1	-	-	-
Davel / Kwadela	1	2	1	1	-	1	1	-	-	-
Lothair / Silindile	1	1	1	1	1	1	1	-	-	-
Sheepmoor	1	1	-	1	-	1	1	-	-	-
Warburton / Nganga	-	1	-		-	1	1	-	-	-

Table 14: Social Facilities per Node

The spatial distribution of the certain key social services are indicated on

- **Map 17: Social Facilities: Educational,**
- **Map 18: Social Facilities: Public Health,**
- **Map 19: Social Facilities: Pension Pay Points,**
- **Map 20: Social Facilities: Community Development Centres** and
- **Map 21: Social Facilities: Police Stations.**

There are various measures of service standards that could be applied to determine whether an area has adequate levels of service. Quantitatively, service levels can be measured per population thresholds, or per time / distance accessibility (e.g. 1 service within 5 km or 10 minutes' drive time.) Alternatively, towns and settlements could be classified in terms of service typologies with a certain service area, with certain levels of service recommended per typology. The latter approach is contained in the Mpumalanga Spatial Development Framework, as guided by the National Spatial Development Framework, and will be applied in the spatial proposals in this document.

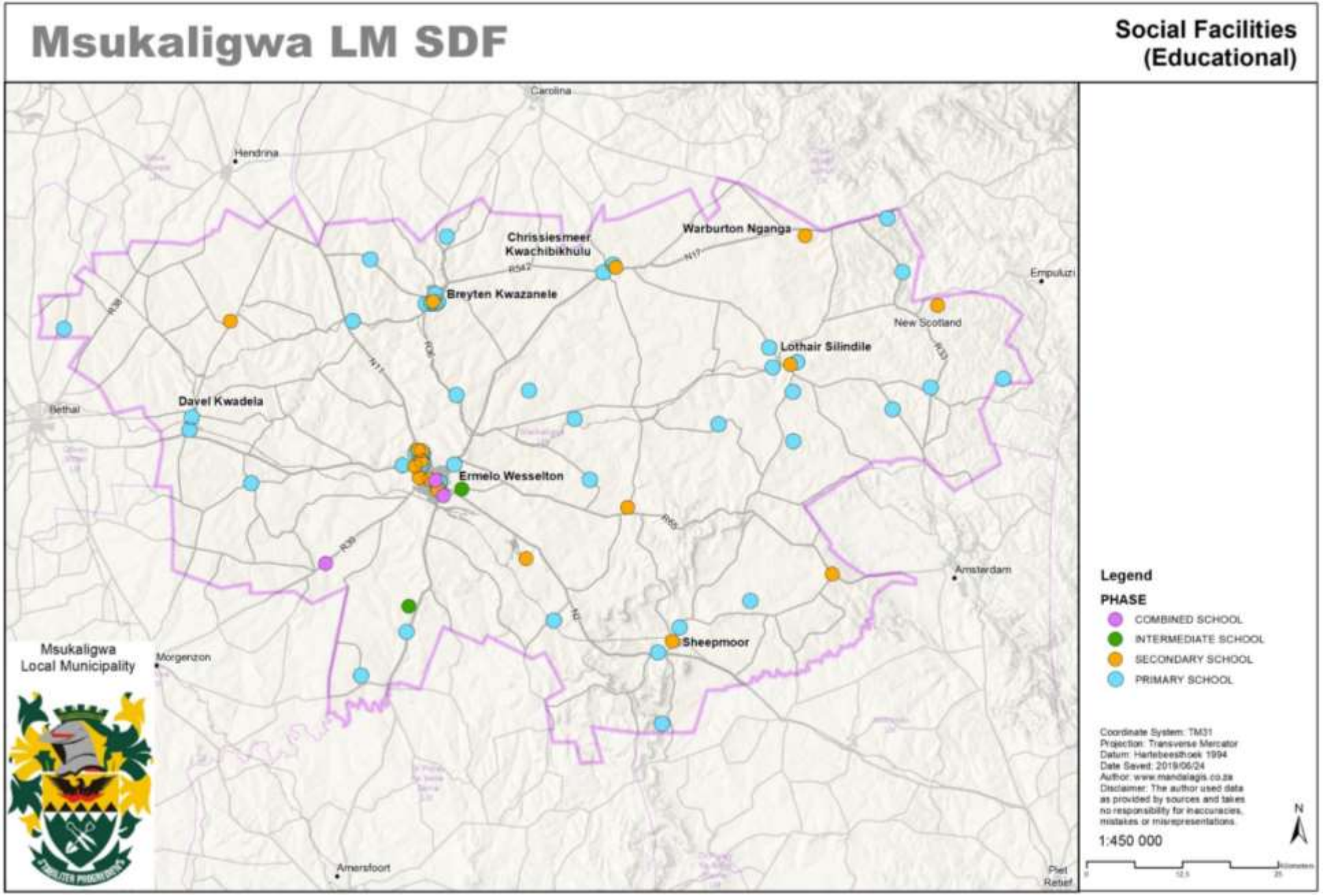
For analysis purposes, to assess overall state of service shortage /service supply, a quantitative measure has also been applied in terms of population thresholds, as indicated in the table below.

In the case of most services, Msukaligwa appear to be well supplied overall in terms of population size. Shortages are experiences in terms of day care centres, fire stations, post offices and well as pension pay points / SASSA services.

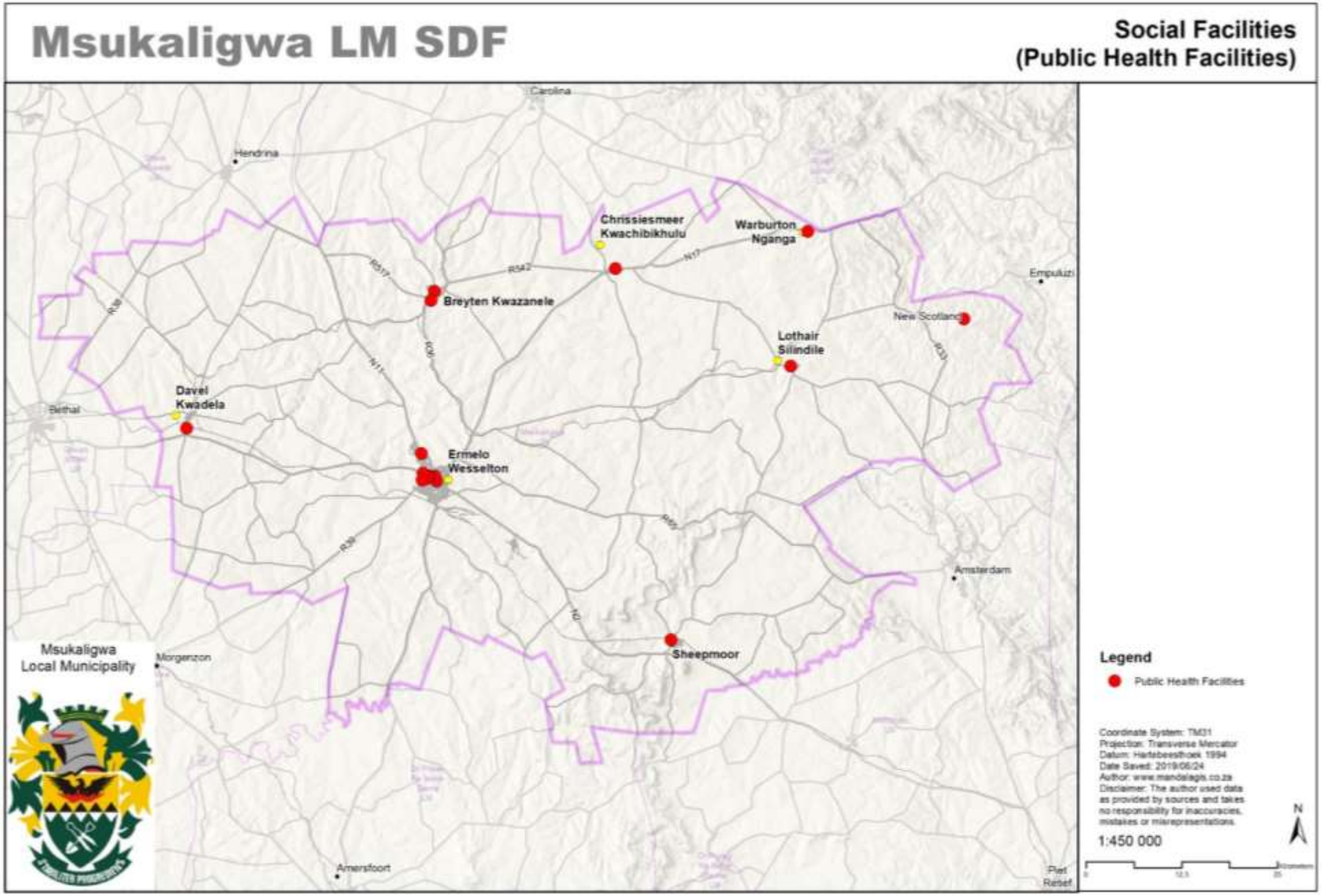
It however has to be kept in mind that although some services appear to be "over supplied", e.g. the number of schools, it must be kept in mind that services should also be accessible to people in small towns, rural settlements and other rural areas, hence requiring a higher total number of facilities.

ESTIMATED REQUIREMENT OF SHORTFALL OF KEY SOCIAL FACILITIES				
	Current Population 2016:	164608		
Facility	***Adapted Standard***	***Current Facilities***	***Required Facilities***	***Shortfall (-) / Excess***
Education Facilities				
Primary School	1 per 4,000 population	71	41	30
Secondary / High School & Combined Schools	1 per 10,000 population	18	16	2
Day Care Centres	1 per 3000 population	40	55	-15
Health Facilities				
Clinic or Mobile Clinic	1 per 24,000 population	14	7	7
District / Public Hospital	1 per 300,000 population	1	1	0
Social / Cultural Facilities				
Community Halls / Centres	1 per 20,280 population	11	8	3
Thusong Centre	1 per LM	2	1	1
Library	1 per 20,280 population	9	8	1
ICT Access Point	In Libraries	9	8	1
Other				
Fire Station	1 per 60,000 population	1	3	-2
Police Station	1 per 60,000 population	7	3	4
Post Office	1 per 20 000 population	7	8	-1
Public Sport Facilities	1 per 30 000	19	5	14
Municipal Office	1 per LM	2	1	1
National Services				
Home Affairs	1 per 160 000	3	1	2
Labour Office	1 per LM	2	1	1
Magistrate's Court	1 per LM	1	1	0
SASSA / Pension Pay Points / Grant Pay Points	1 per 20 000 population	7	8	-1
All standards adopted from the guidelines for Human Settlement Planning and Design by the CSIR_RED BOOK; CSIR Guidelines for the Provision of Social Facilities in South African Settlements First Edition: August 2012 and "Making Urban Places", 1996, Behrens & Watson, defined as international standard.				

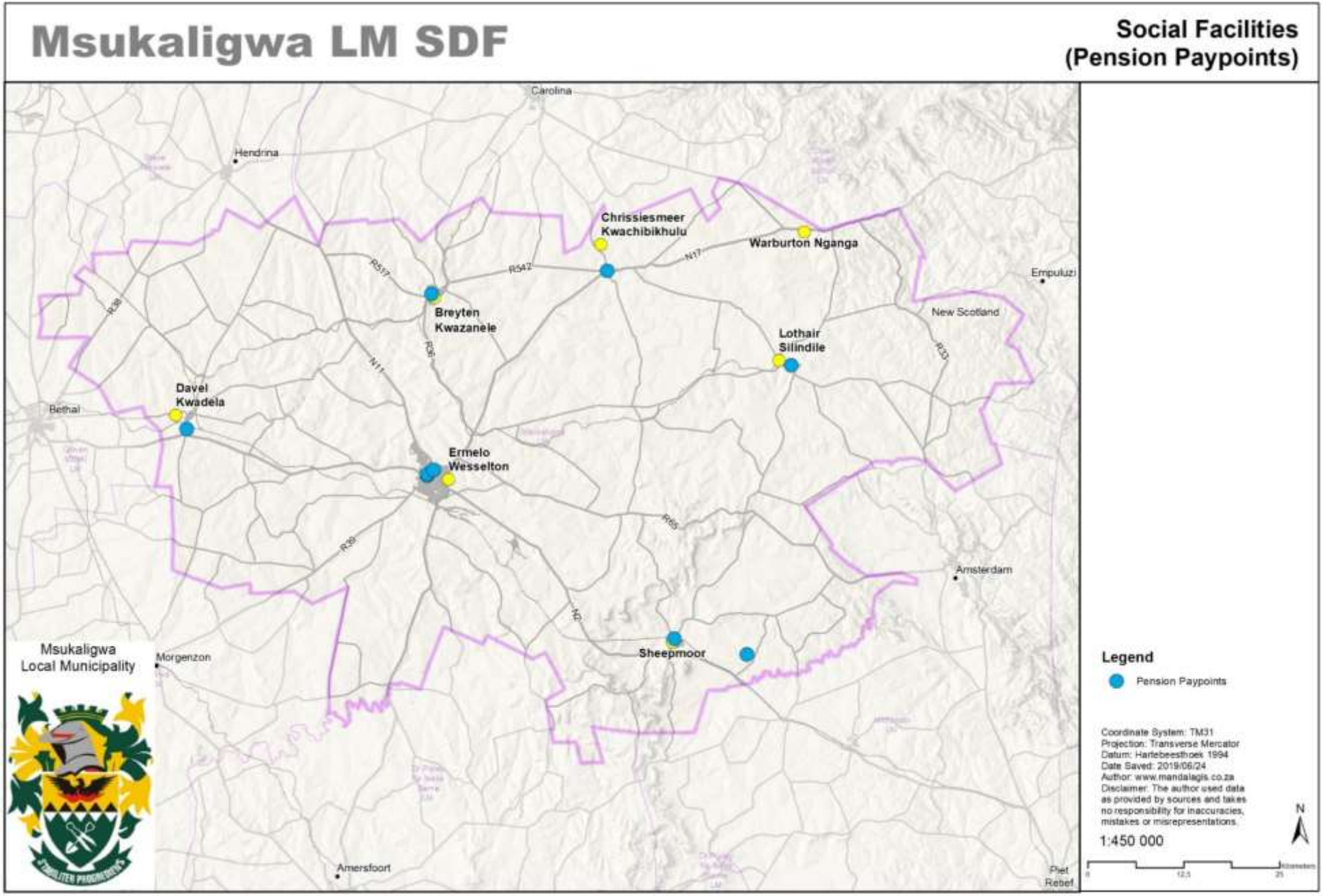
Table 15: Social Service Levels



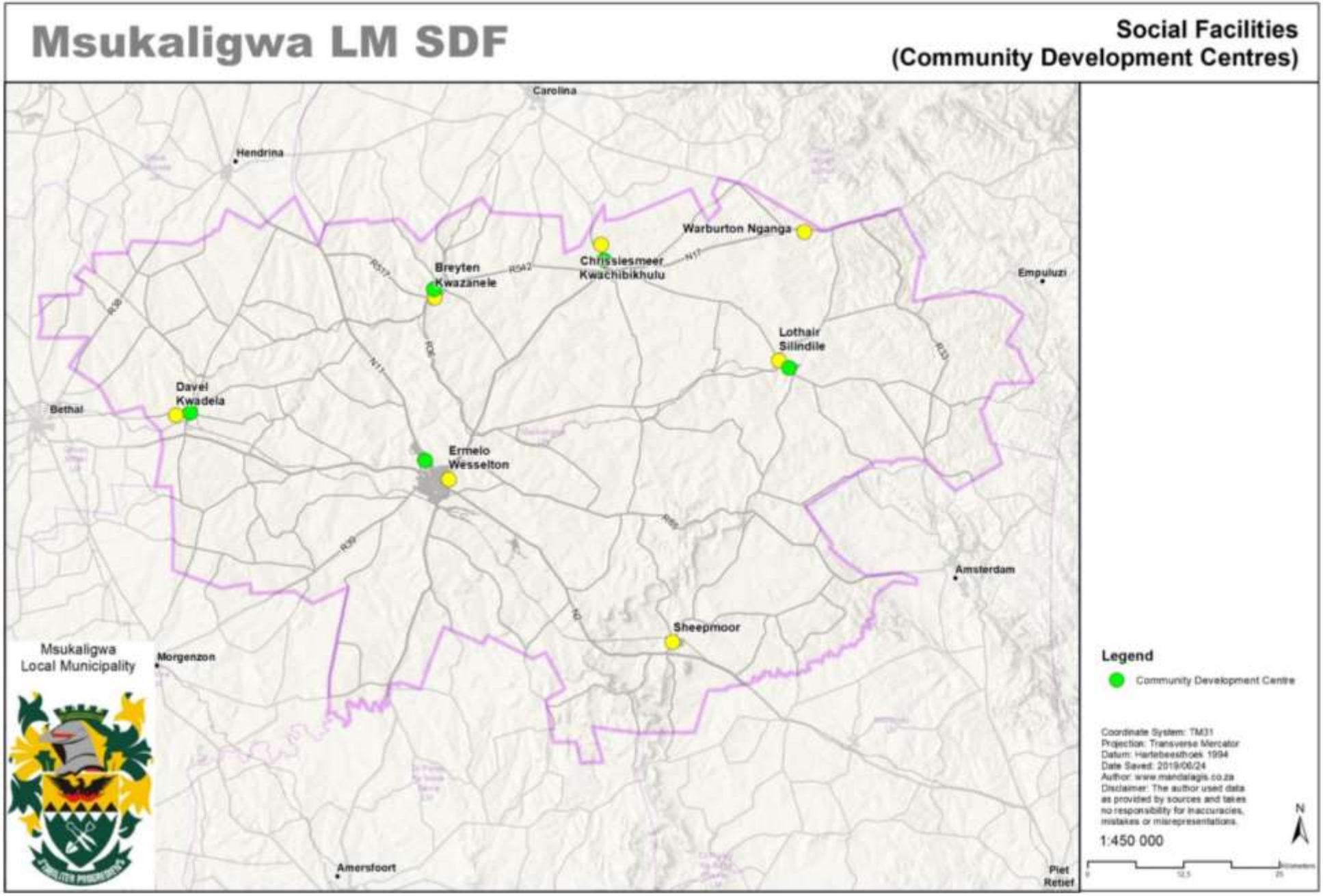
Map 17: Social Facilities: Educational



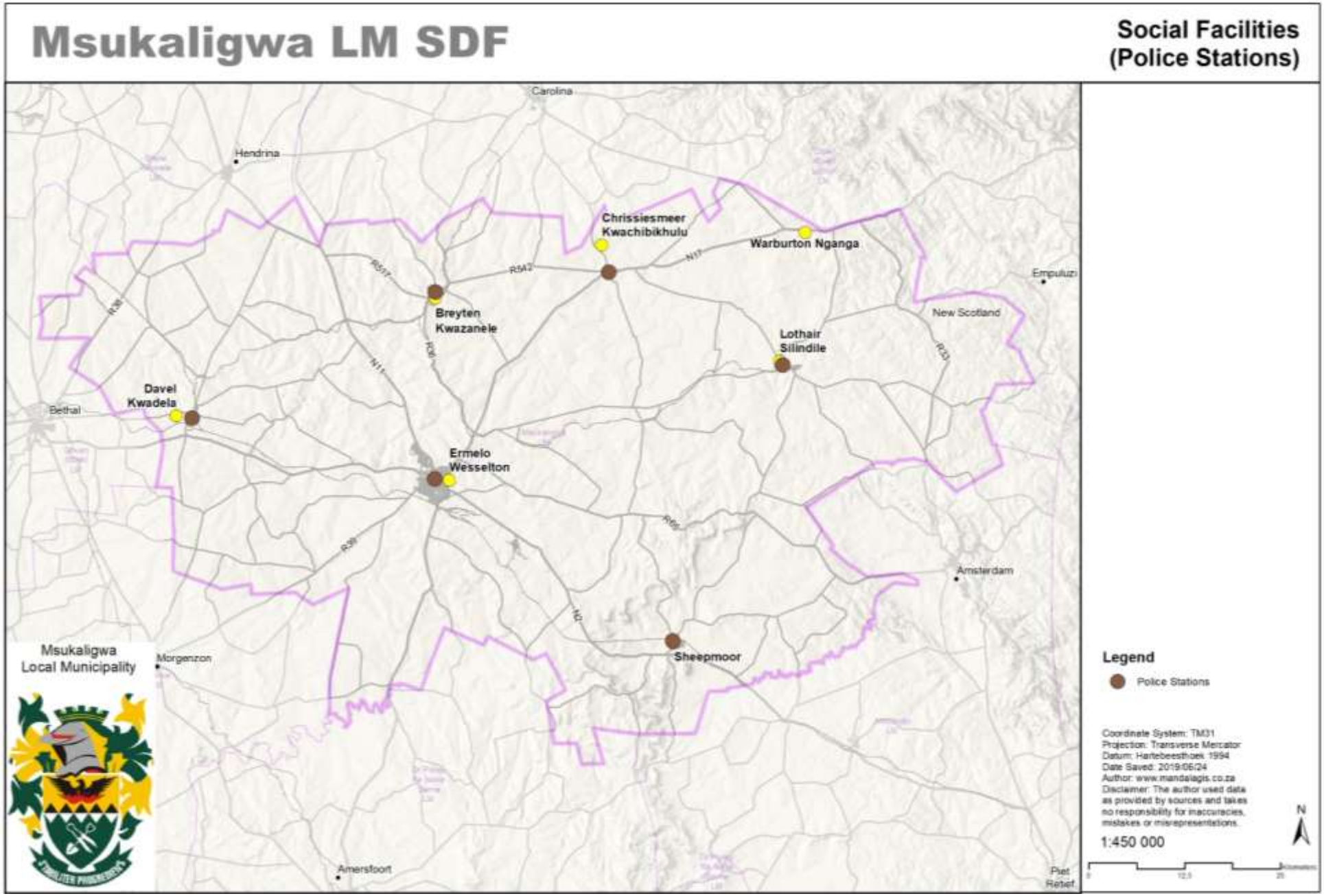
Map 18: Social Facilities: Public Health



Map 19: Social Facilities: Pension Pay Points



Map 20: Social Facilities: Community Development Centres



Map 21: *Social Facilities: Police Stations

4.3.4 Land Ownership and Land Reform

Land, both farm portions and formal erven, is predominantly privately owned in Msukaligwa.

There are however larger tracts of land owned by various government spheres and agencies. In terms of farm portions, government ownership occurs in the north east corner of the area, around Ermelo, in a strip flowing north west from Ermelo to the municipal boundary, and also near Breyten and Sheepmoor.

In towns, a pattern of municipal and government owned land surrounding the core towns emerge, mostly in the form of traditional "town lands" that often date back to the establishment of the settlements. Chrissiesmeer is the exception in this regard. In Nganga, a large portion of erven is municipal owned. This pattern of public ownership presents an opportunity for spatial restructuring, e.g. the development of higher density housing in towns, closely surrounding towns in the urban edge, or infill development on erven located in town.

Ownership is indicated on **Maps 22 to 29** below, firstly showing the ownership of farm land in the municipality as a whole, and then zooming in on specific settlements.[28]

At the time of writing, no updated land reform information have been obtained - this section of the report will be updated as soon as information is obtained.

Information in the Municipal IDP, also indicated to be outdated, indicates land claims in the north east corner of Msukaligwa that has been settled, as well as gazetted claims to the north of Ermelo / Wesselton. In consideration of land claims, aspects such as environmental sensitivity and agricultural potential will have to be kept in mind.

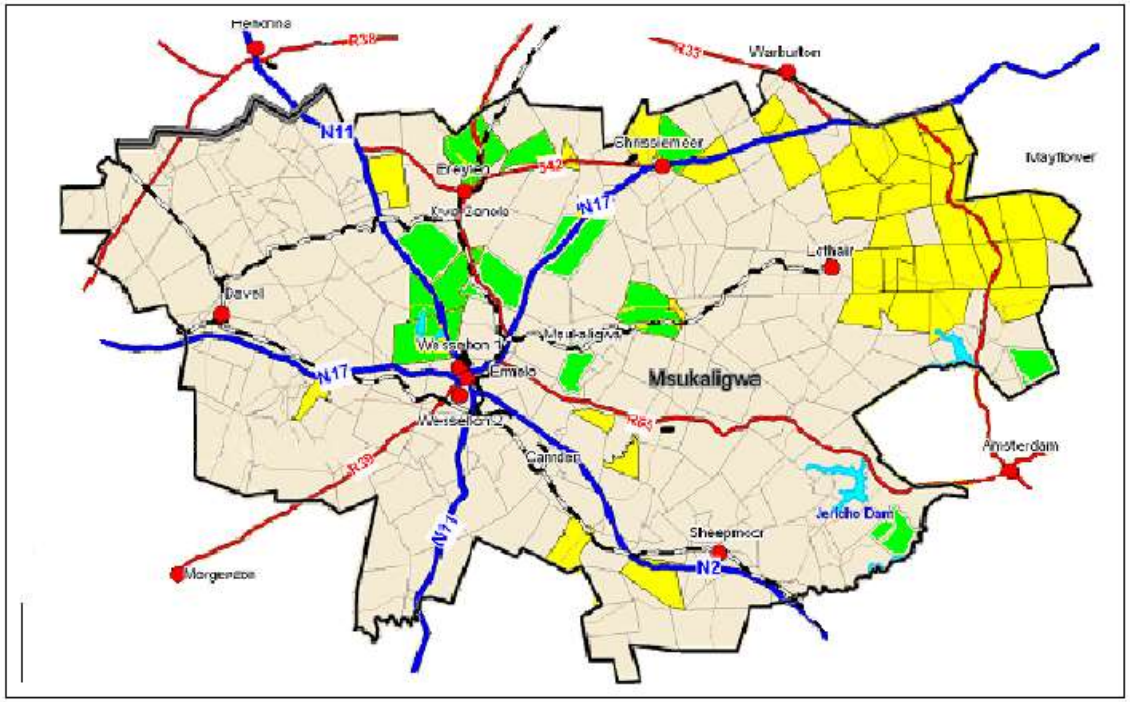
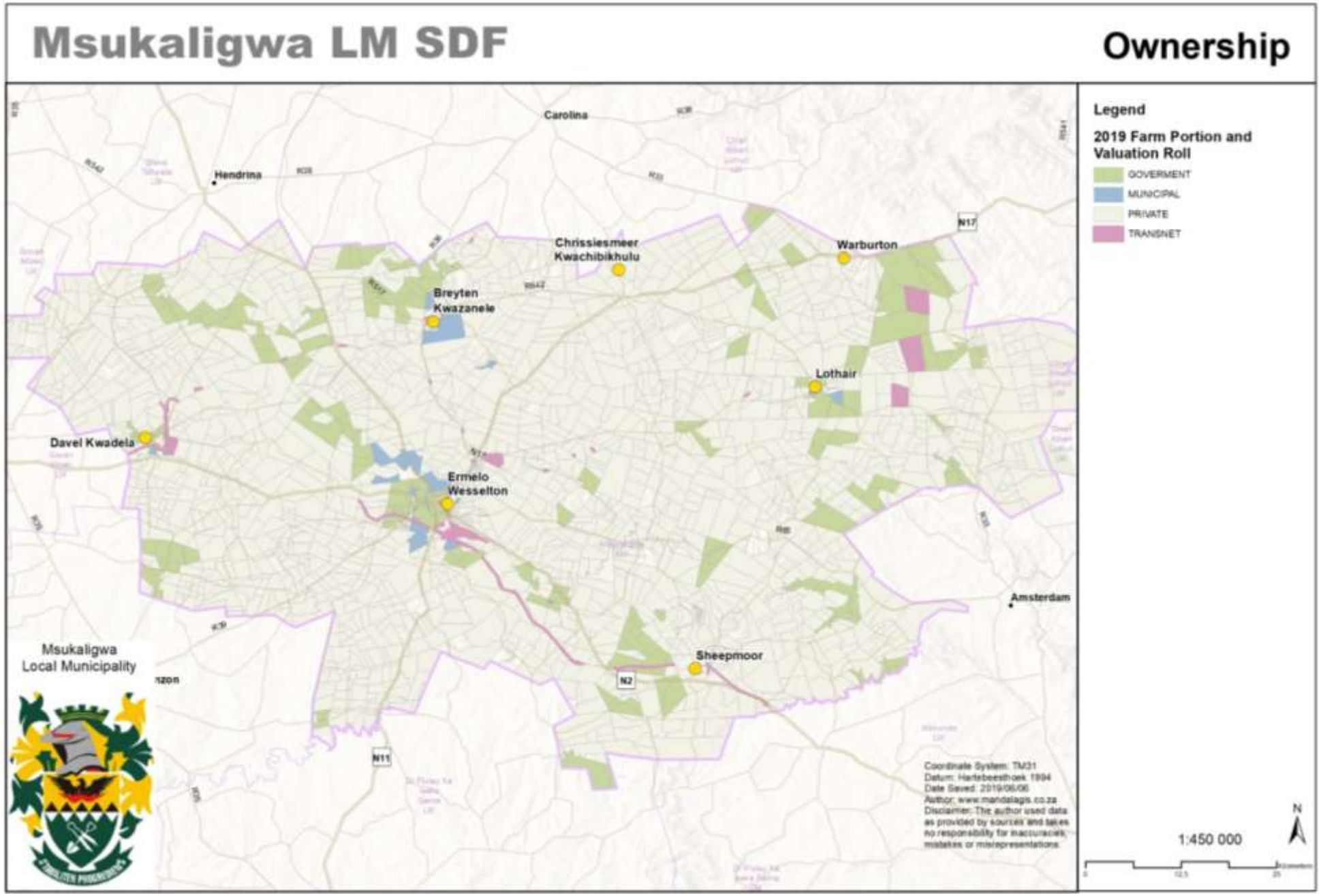
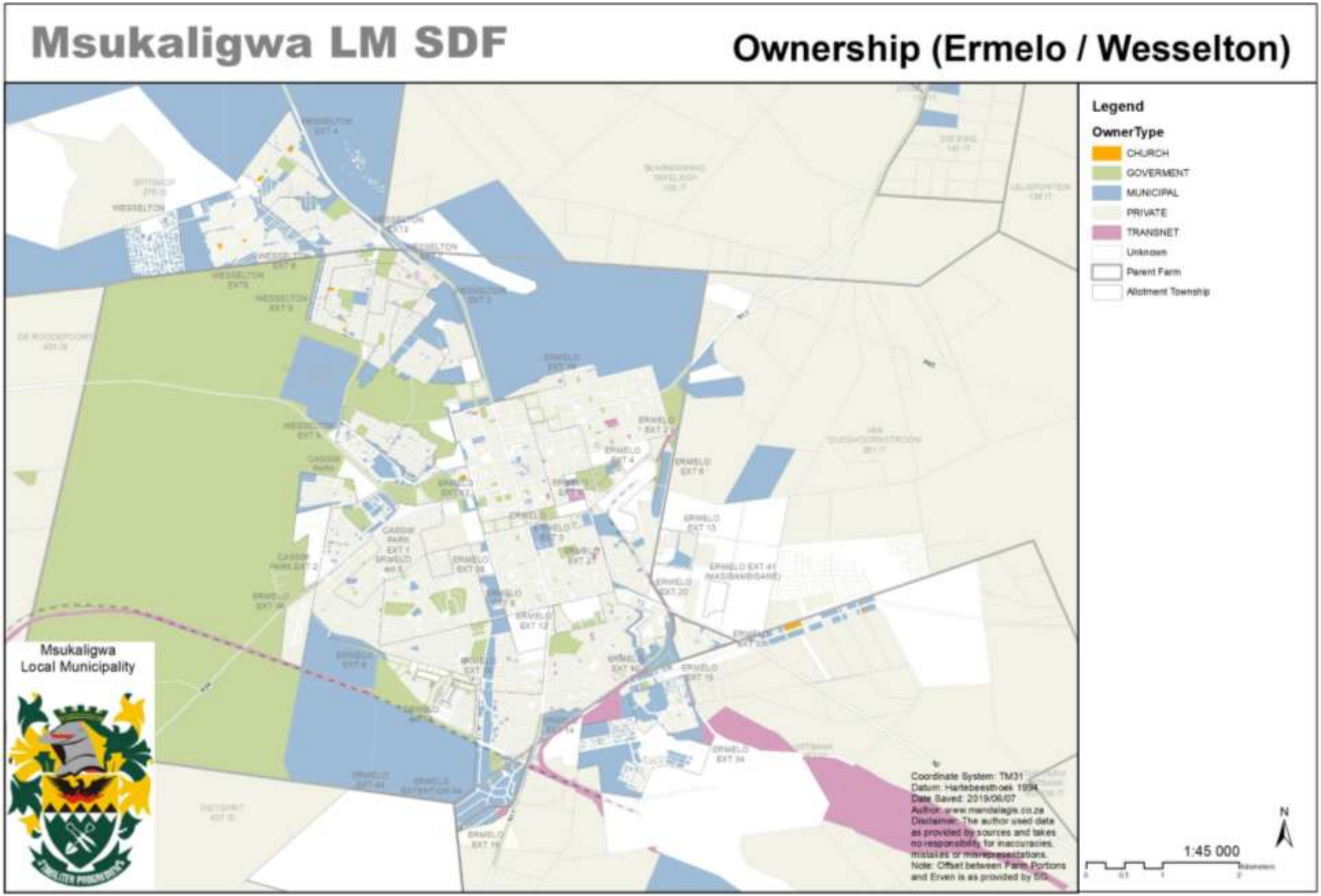


Figure 21: Land Claims (IDP)

[28] Source: Msukaligwa municipal valuation roll.



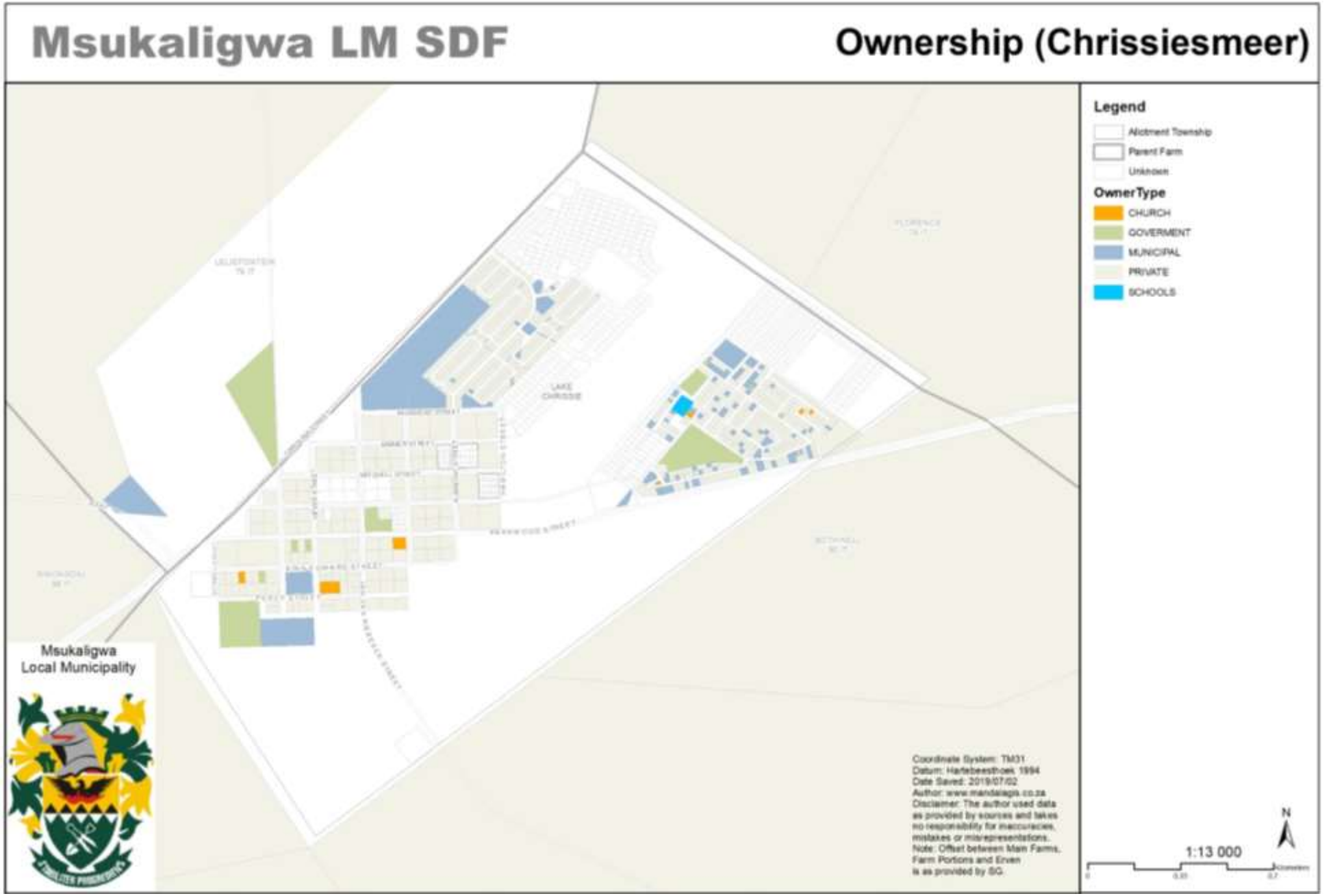
Map 22: Ownership



Map 23: Ownership: Ermelo / Wesselton

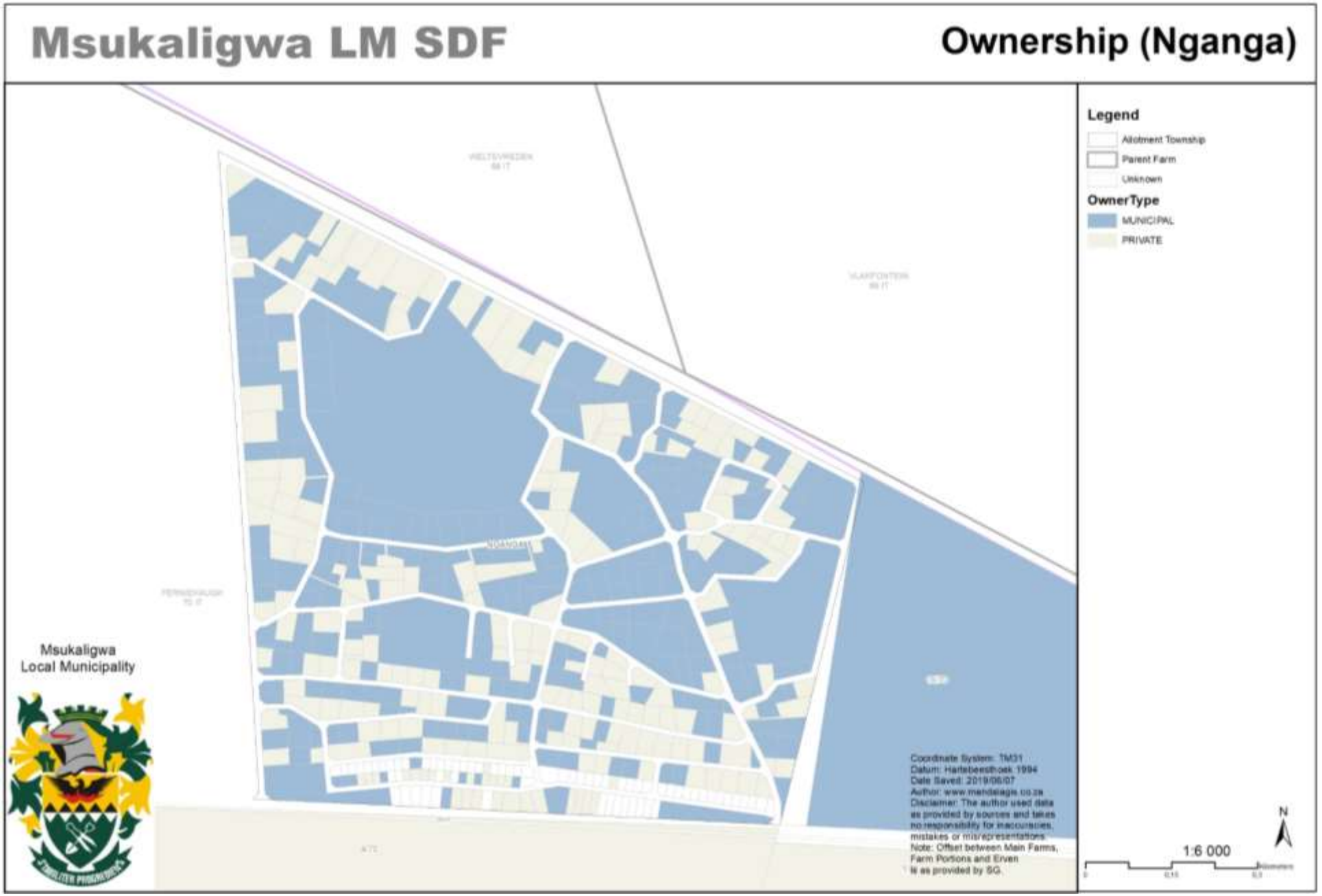
Map 24: Ownership: Breyten / Kwazanele

Map 25: Ownership: Davel / Kwadela



Map 26: Ownership: Chrissiesmeer

Map 27: Ownership Sheepmoor



Map 28: Ownership: Nganga

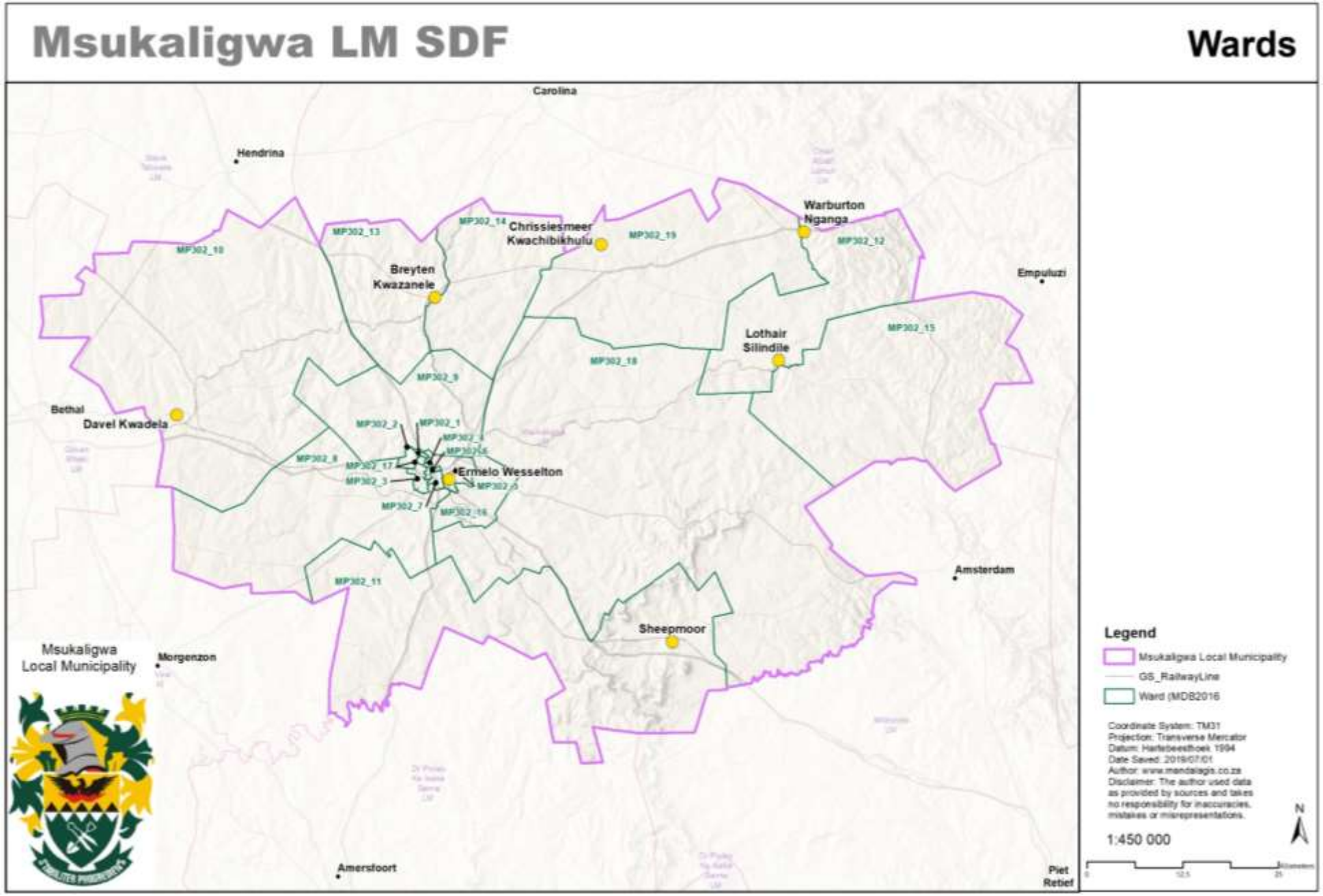
Map 29: Ownership: Sindile

4.3.5 Administrative Boundaries

Msukaligwa comprises 19 Wards, with wards 1-9 and 17 clustered within Ermelo / Wesselton. The remainder of the wards are evenly distributed across the municipal area, in some cases incorporating a portion of town or settlement and together with the surrounding rural area. Wards vary in size according to population density (e.g. smaller in Ermelo/Wesselton than in the remained of the rural areas).

The wards are however not demarcated according to functional features, e.g. the urban edge, the service area around a specific town or according to specific land uses (e.g. conservation, agriculture of forestry). For this reason, the ward boundaries will not be a guiding consideration in the preparation of the SDF which should be an overall strategic spatial plan for the entire municipality. The focus of the SDF will be aspects such as overall spatial structure, functional linkages between nodes and similar matters.

Wards are indicated on **Map 30: Wards** below.


Msukaligwa LM SDF
Wards
Carolina
Hendrina
Warburton
Nganga
Chrissiesmeer
Kwachibikhulu
Breyten
Kwazanele
Empuluzi
Lothair
Silindile
Bethal
Davel Kwadela
Ermelo Wesselton
Amsterdam
Sheepmoor
Msukaligwa
Local Municipality
Morgenzon
Amersfoort
Piet
Retief
MP302_1
MP302_2
MP302_3
MP302_4
MP302_5
MP302_6
MP302_7
MP302_8
MP302_9
MP302_10
MP302_11
MP302_12
MP302_13
MP302_14
MP302_15
MP302_16
MP302_17
MP302_18
MP302_19
Legend
Msukaligwa Local Municipality
GS_RailwayLine
Ward (MDB2016
Coordinate System: TM31
Projection: Transverse Mercator
Datum: Hartebeesthoek 1994
Date Saved: 2019/07/01
Author: www.mandalagis.co.za
Disclaimer: The author used data as provided by sources and takes no responsibility for inaccuracies, mistakes or misrepresentations.
1:450 000
N

Map 30: Wards

4.4 Built Environment

4.4.1 Overall Spatial Structure and Land Use

Msukaligwa has a settlement pattern which is typical of many rural areas. Ermelo / Wesselton is the dominant node with a central location, where almost 60% of the local population resides and where the largest variety and highest level of urban amenities are provided. The node not only services the surrounding catchment area, but also serves as a regional transport node as it is a central location where regional road and rail converge and move through.

The remainder of the towns /small rural settlements in Msukaligwa fulfil the role of rural service nodes for their immediate hinterland, and are connected to the main node via road and freight rail. The location of the settlements were mostly determined by the pattern of coal mining in the area. The exceptions to this are Chrissiesmeer (tourist node in the lakes region) and Warburton (located in forestry areas).

The settlement structure is superimposed on a rural landscape which consist of:

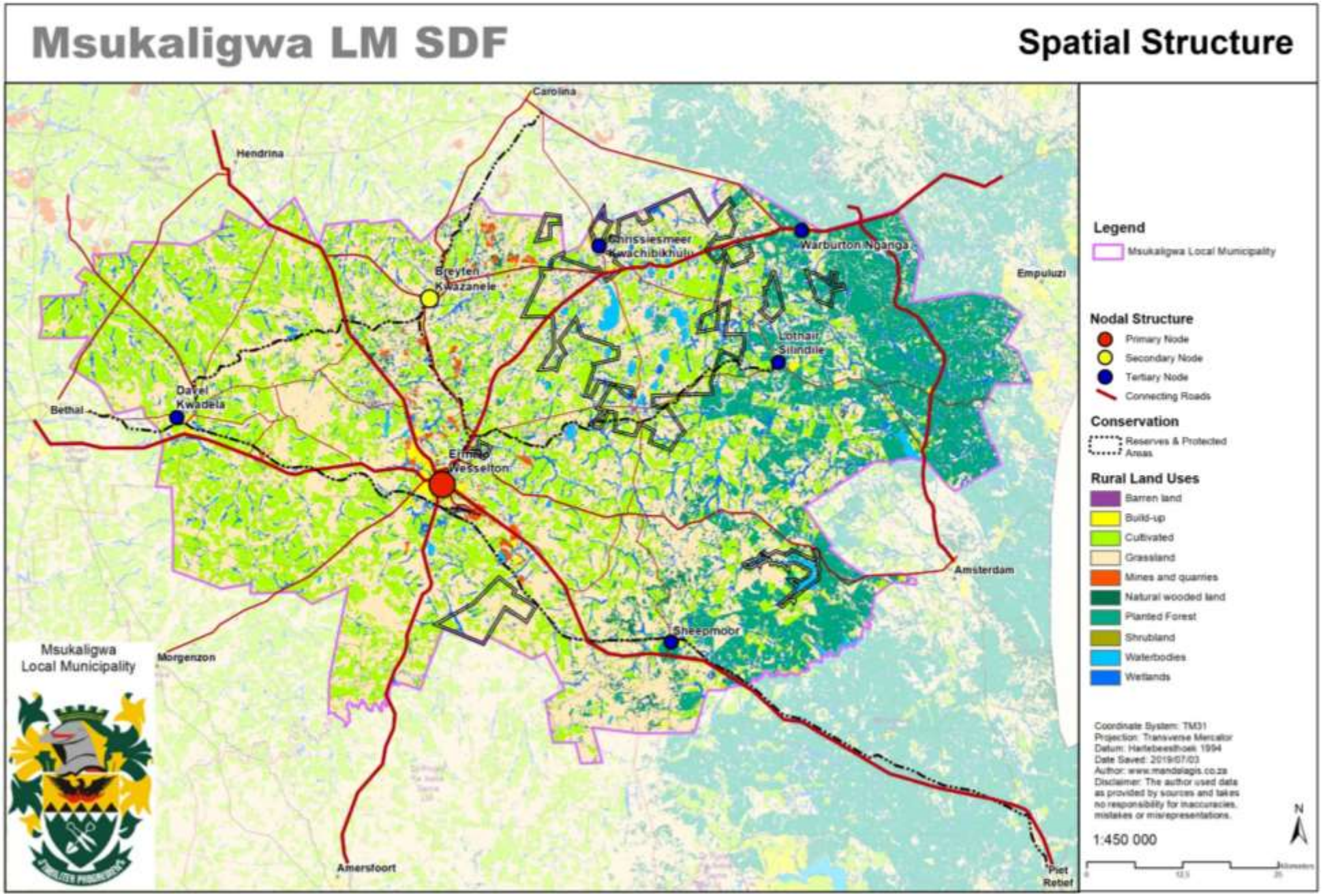
- Forestry areas in the east.
- The lakes district with its sensitive ecosystems in the north east. Water bodies are concentrated in this location, but are also dispersed across the remainder of the area.
- Mining throughout the area, but mostly clustered in the centre from Ermelo to Breyten and also south east of Ermelo.
- Commercial agriculture spread out through the remainder of the area.

The overall spatial structure of the Msukaligwa, including it settlement structure and main rural land uses, is shown on **Map 31: Spatial Structure**.

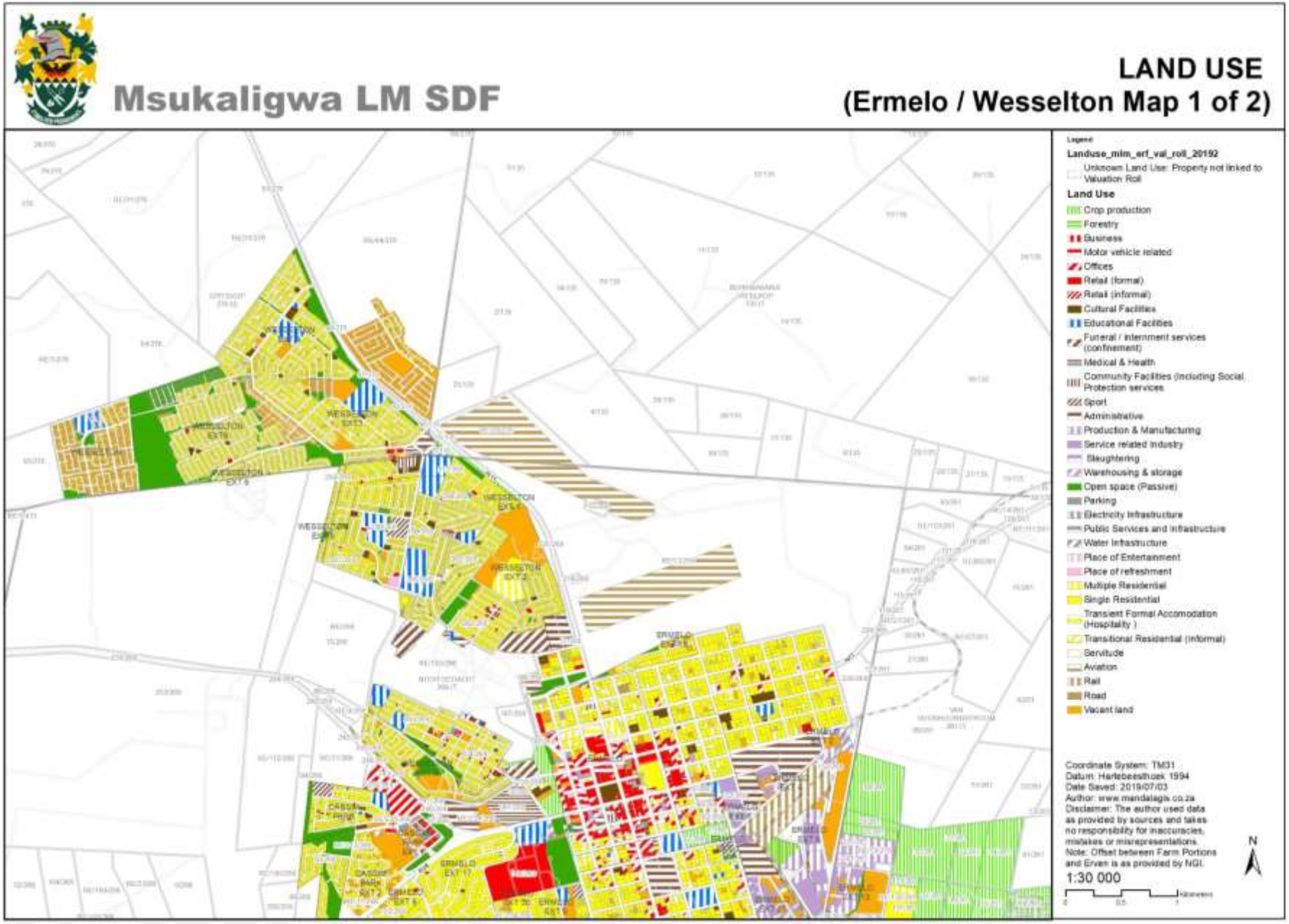
The individual settlements, regardless of size, follow a very similar spatial structure or land use pattern. The settlements typically consist of the former main town and the former township area which located on the fringes or a distance away from the main town. The towns and townships are separated by either roads / rail or open land. This historic lack of integration persists until present day. The main towns typically have a main street with a central business district.

Ermelo follows a similar pattern, the difference being the larger scale of settlements, as well as size and diversity of the central business district.

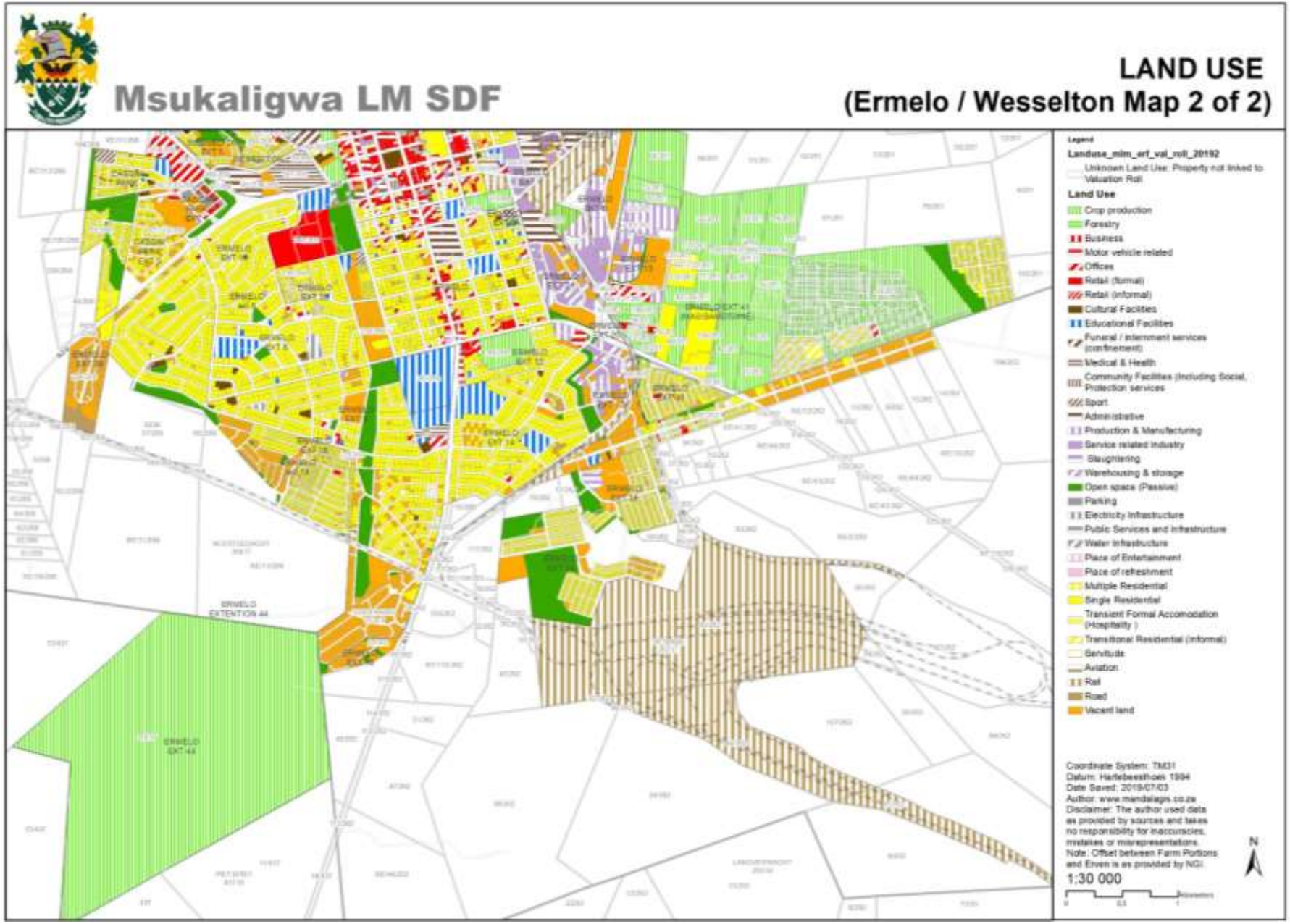
The land use structure of the individual settlements are shown on **Map 32** to **Map 38**.



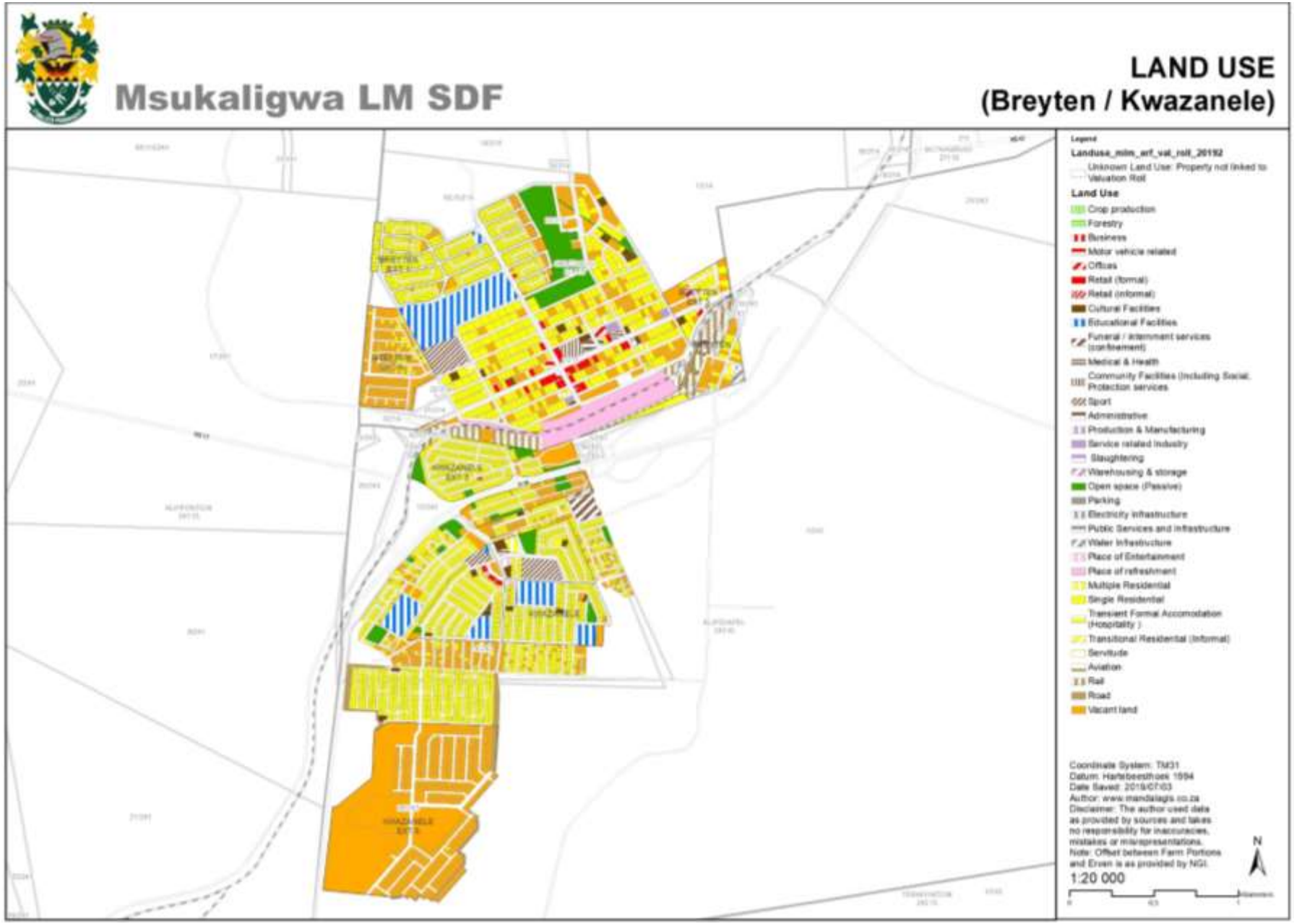
Map 31: Spatial Structure



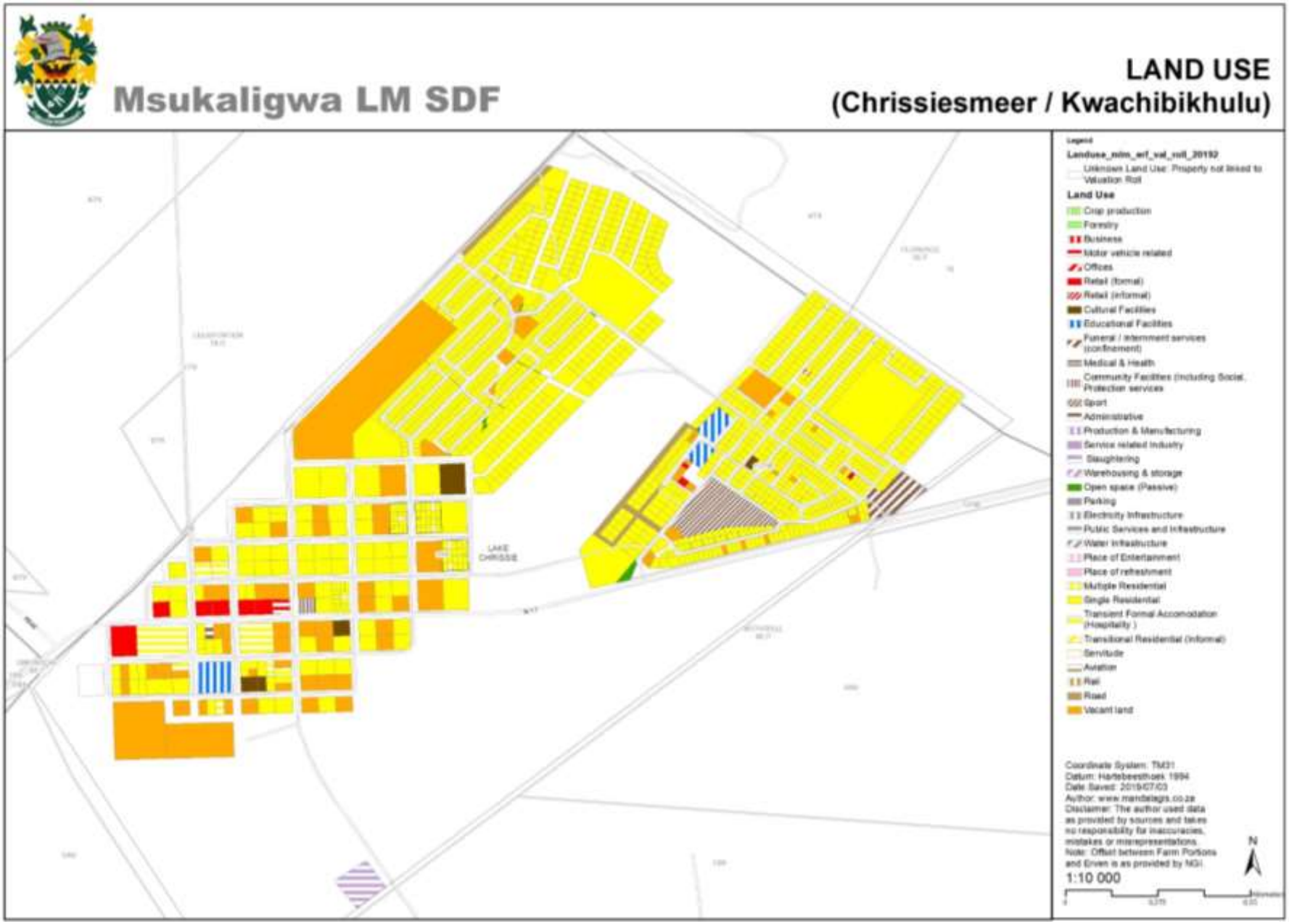
Map 32: Land Use: Ermelo / Wesselton 1



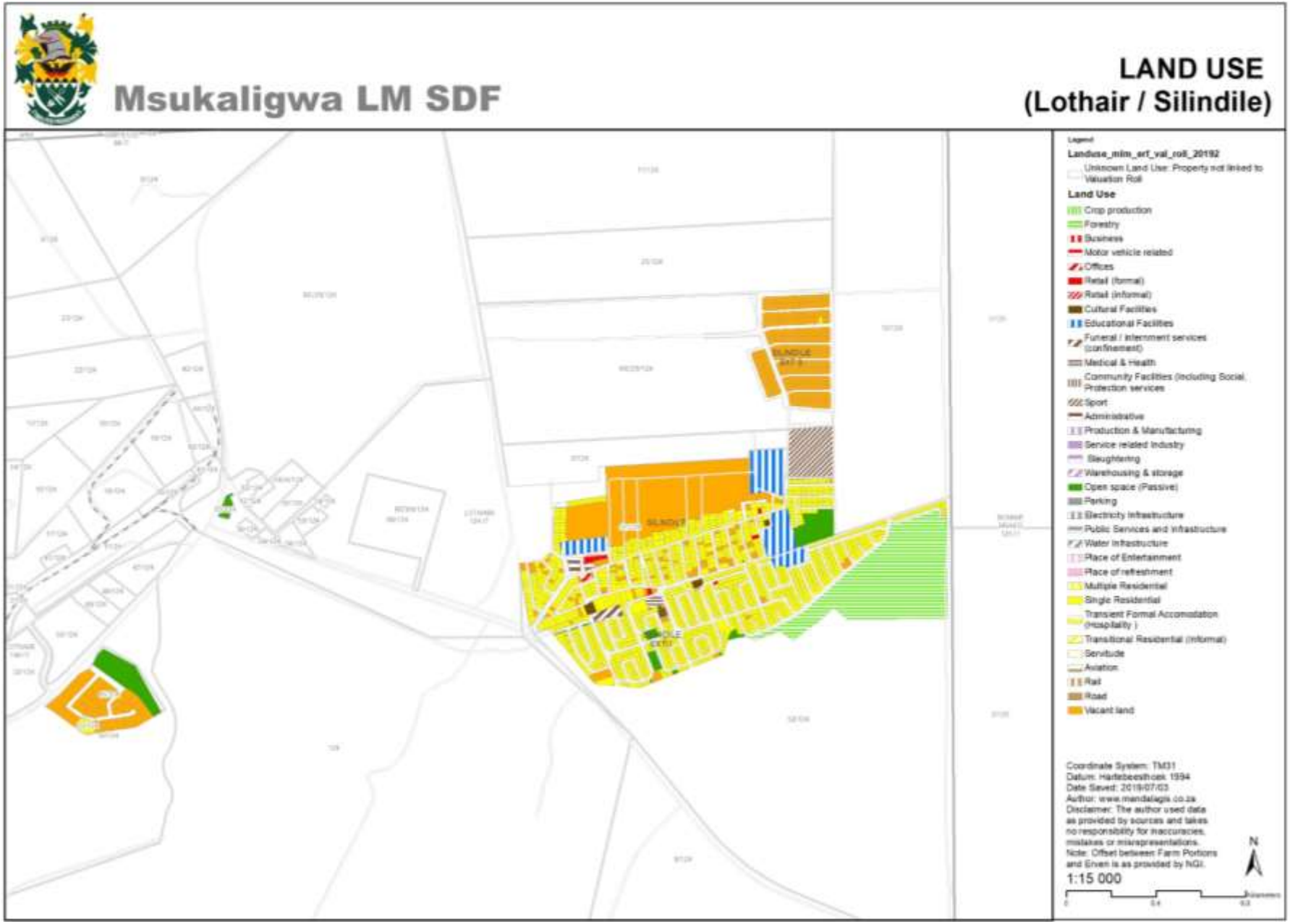
Map 33: Land Use: Ermelo / Wesselton 2



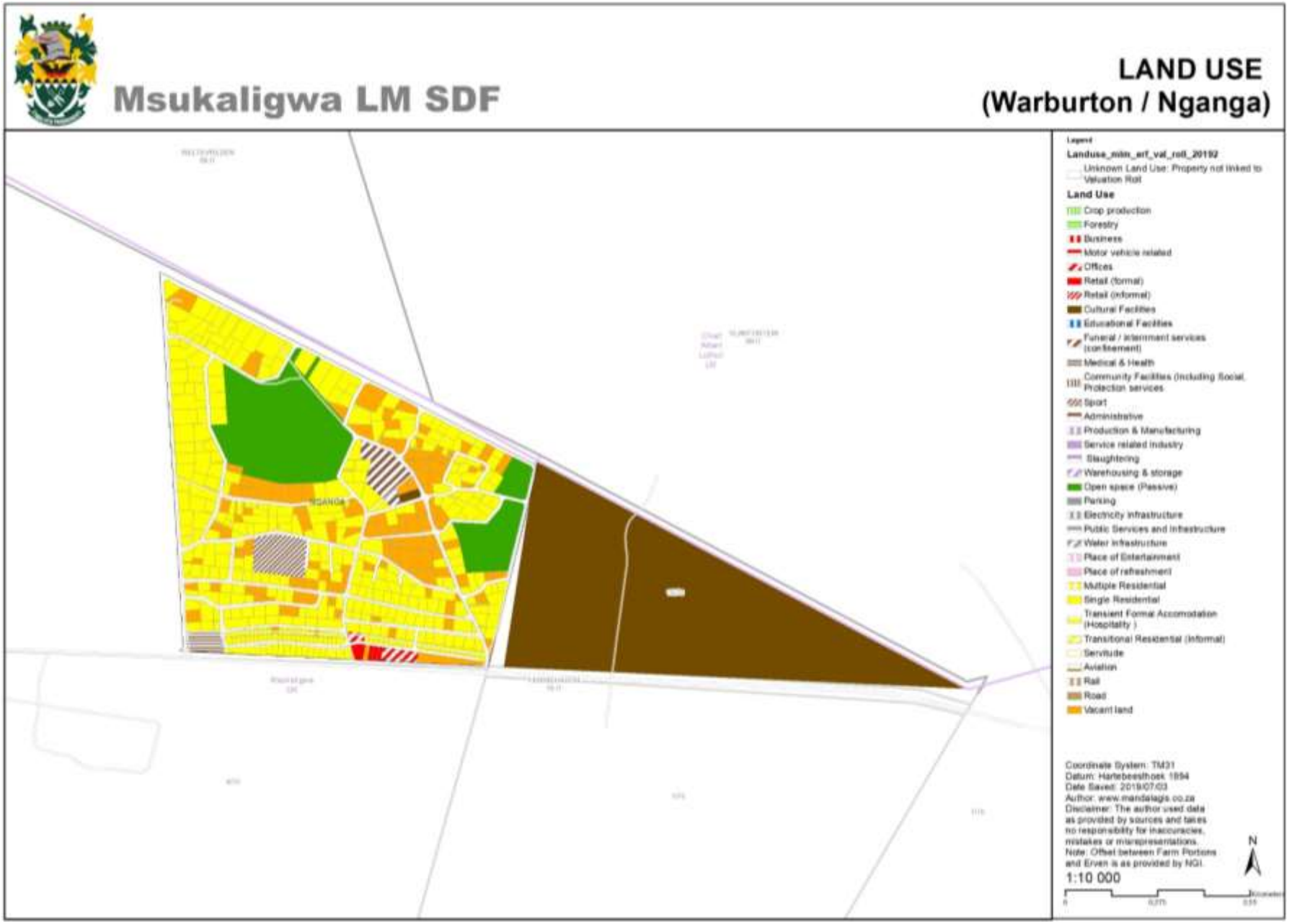
Map 34: Land Use: Breyten / KwaZanele



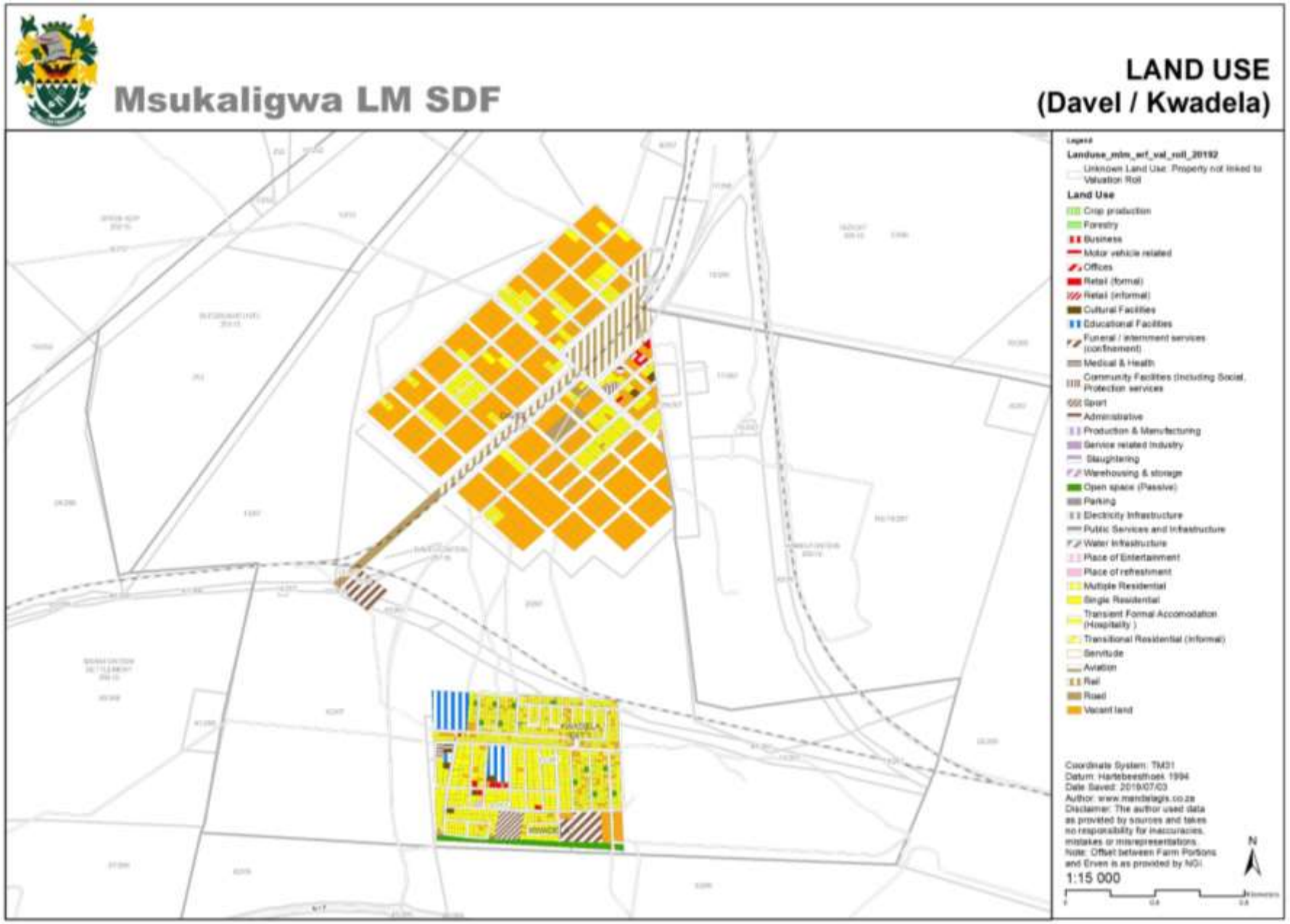
Map 35: Land Use: Chrissiesmeer / Kwachibikhula



Map 36: Land Use: Lothair / Silindile



Map 37: Land Use: Warburton / Nganga



Map 38: Land Use: Davel / Kwadela

4.4.2 Land Use Management

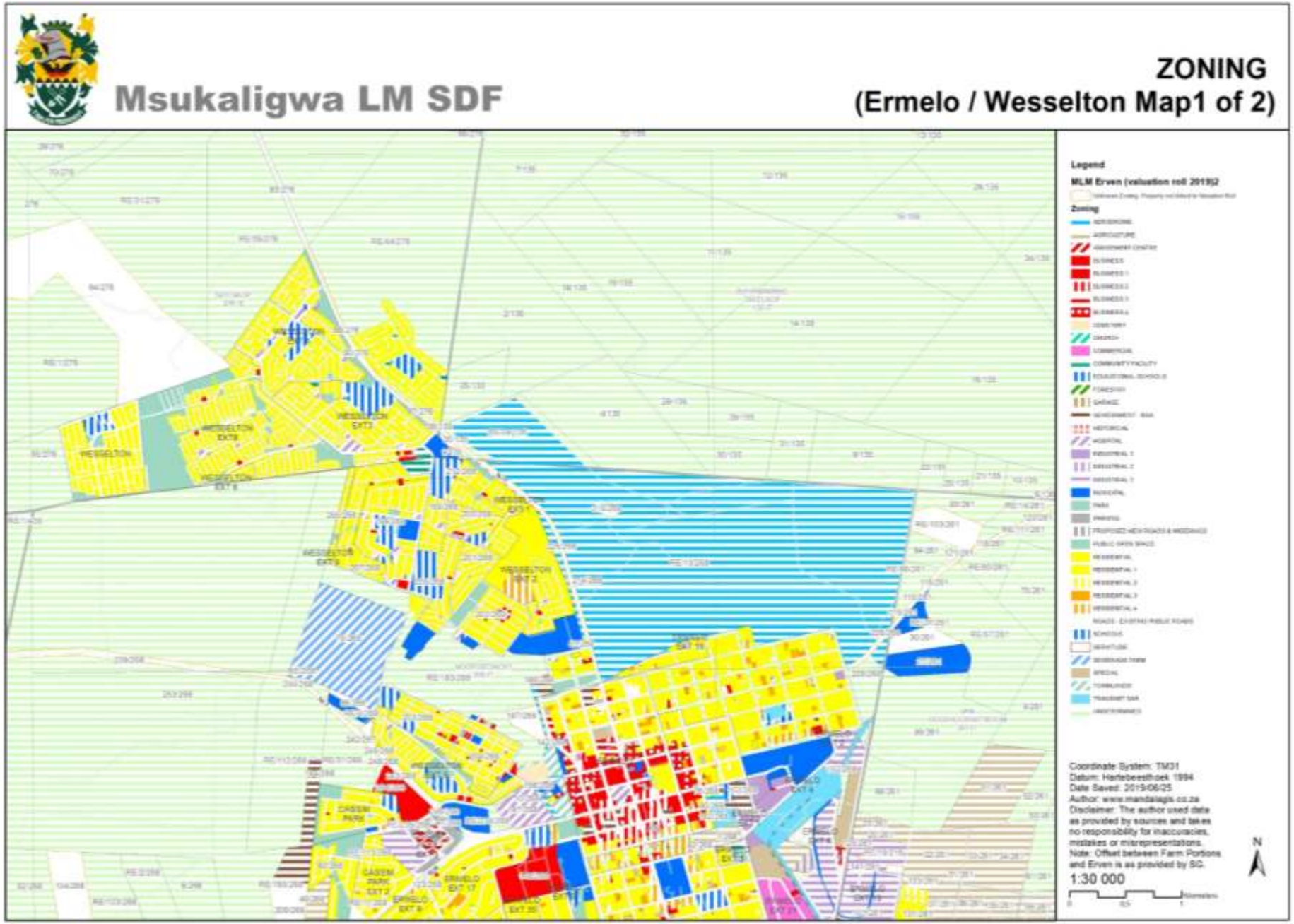
At the time of writing, the Ermelo Town Planning Scheme, 1982 was the only official land use scheme operational in Msukaligwa. The Municipality is in the process of finalising a draft Wall-To-Wall Land Use Scheme, which will replace the existing Ermelo Town Planning Scheme upon adoption. The adoption of the new Land Use Scheme in terms of SPLUMA will assist with the implementation of the SDF and the integration of spatial planning and land use management across the entire municipality.

Whereas the Land Use Scheme will determine land use rights for individual land portions, the processes related to land use management will be regulated by the Spatial Planning and Land Use Management By-Law for Chief Albert Luthuli, Dipaleseng, Dr Pixley Ka Isaka Seme, Lekwa, Mkhondo and Msukaligwa Local Municipalities (2016) in terms of SPLUMA. This would include arrangements regarding Tribunals and application procedures and forms.

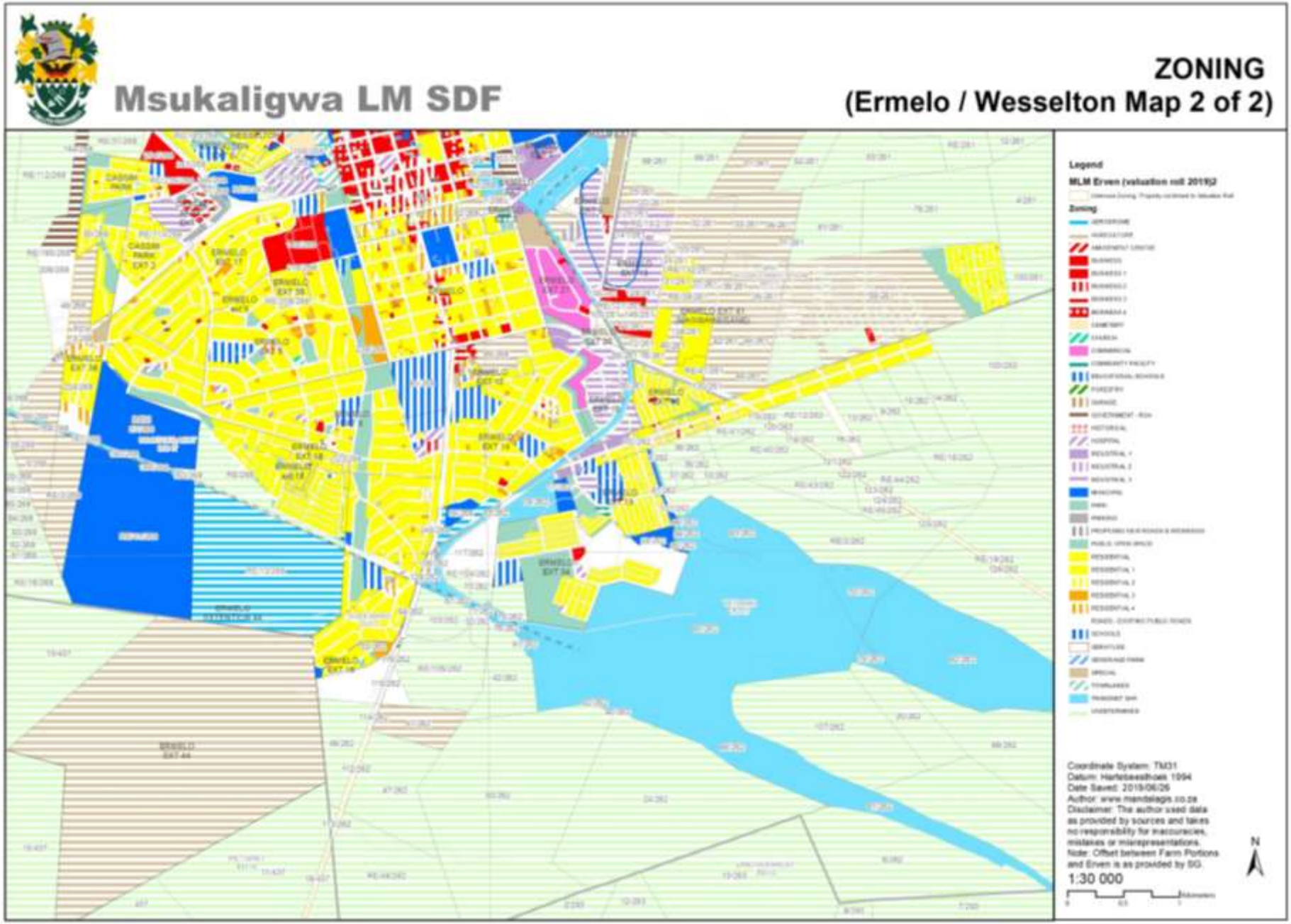
An important role for the Scheme would be to manage potential conflicts between land uses, specifically between mining and other land uses such as residential, agriculture and also sensitive ecosystems. Just like other land uses, mining is also subject to the provisions of the Land Use Scheme[29], which means that the Municipality has the power to manage the scale and nature of land uses associated with mining, ensuring that mining does not encroach on sensitive areas, residential area or high potential agricultural land. Just as the case with other land uses, when granting zoning rights to mines conditions such as traffic management, waste management, screening, landscaping, overlooking, bulk service contributions, etc. can be imposed as part of the zoning conditions. This is in addition to environmental health and mining-specific legislation and regulations intended to mitigate the long term negative impact of mining on areas.

Current zoning as provided by the municipality is indicated on **Map 39** to **Map 25**. The zoning will be formalised in terms of the new Land Use Scheme once adopted.

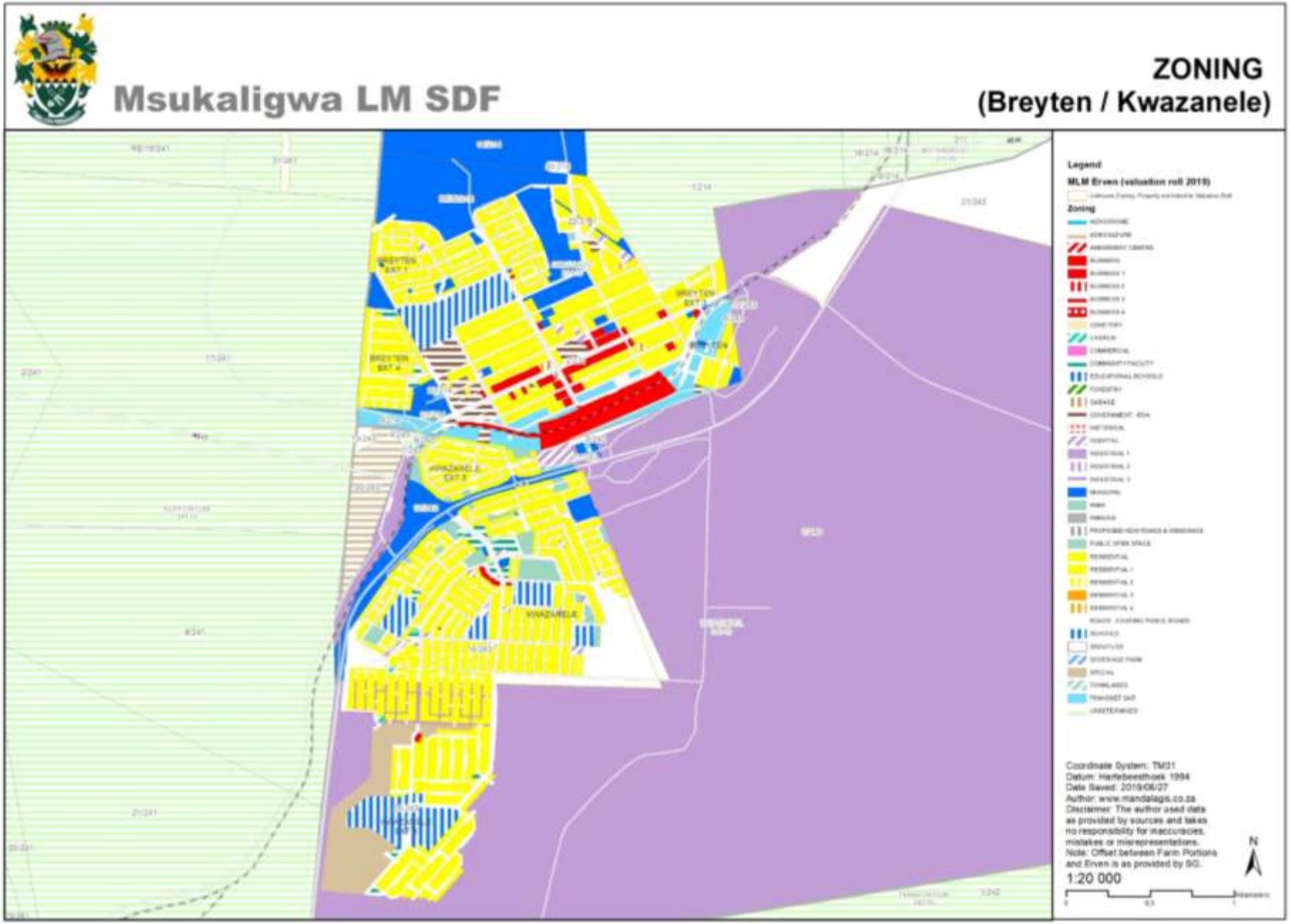
[29] Refer to constitutional court judgement Maccsand (Pty) Ltd vs the City of Cape Town on the 12th of April 2012. It was held that a mining right or a mining permit granted in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) does not entitle the holder of the mining grant to conduct mining activities that are in contrary to the zoning of that land under any legislation which regulates the use of land in the area.



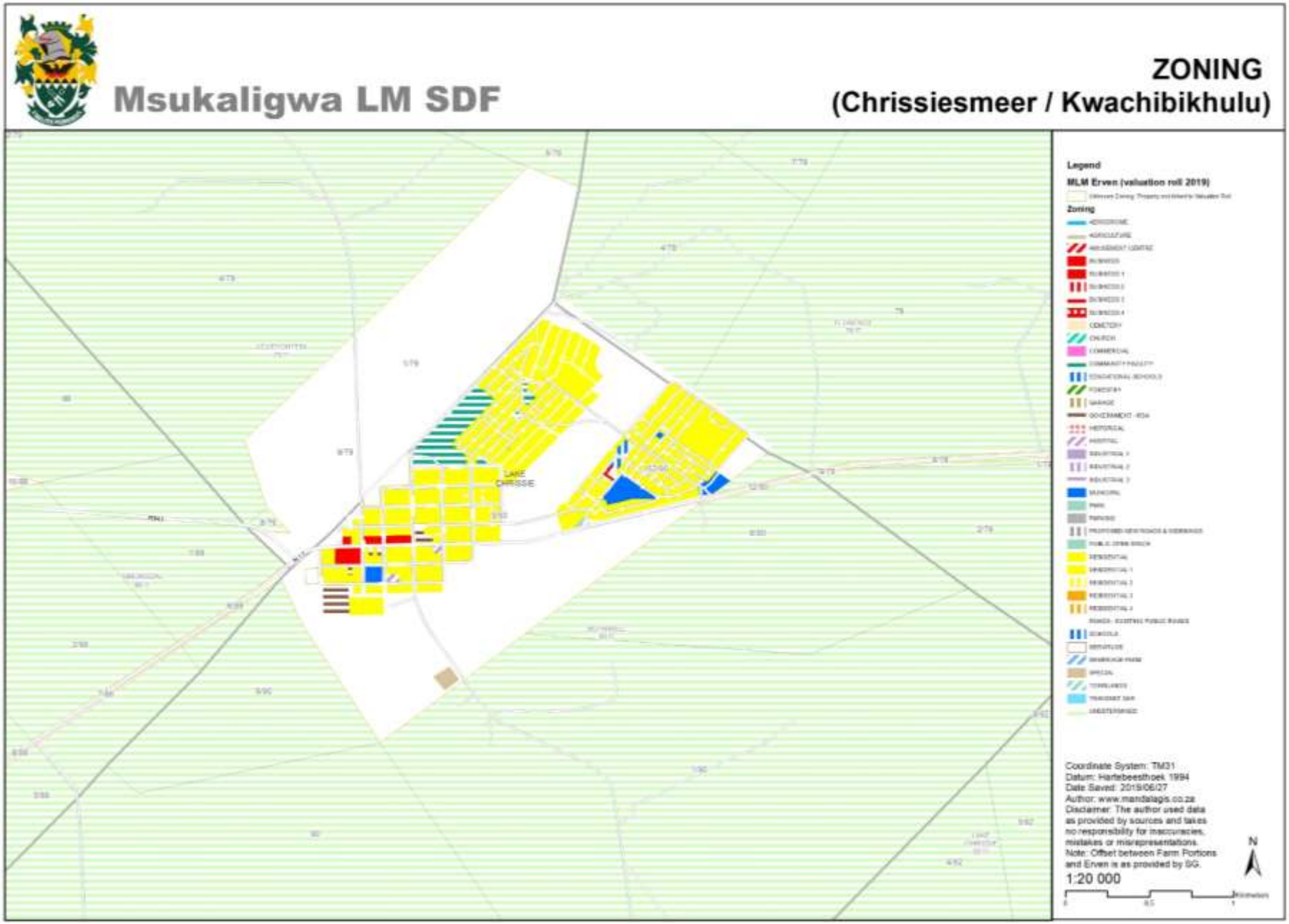
Map 39: Zoning: Ermelo / Wesselton (1)



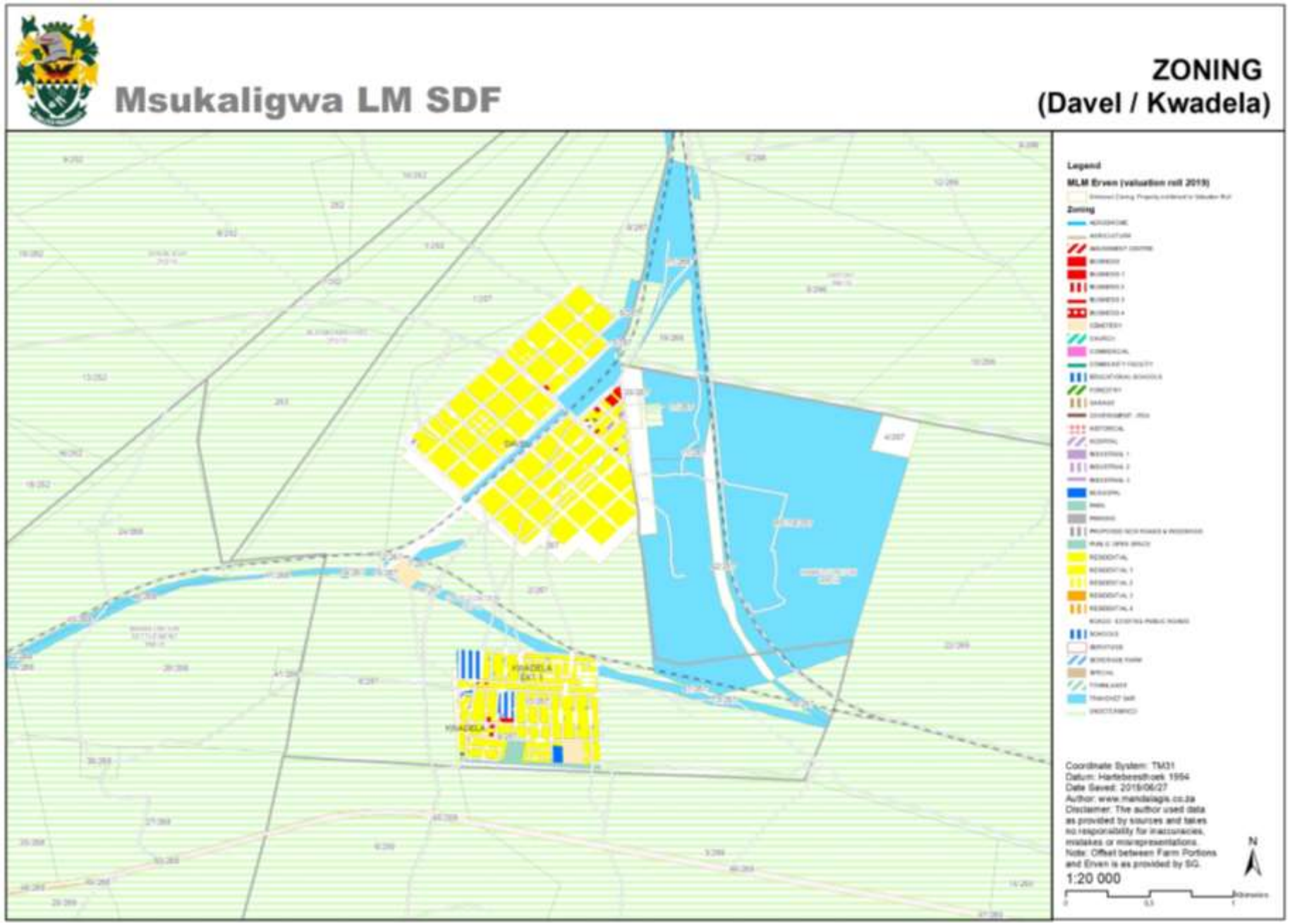
Map 40: Zoning: Ermelo / Wesselton (2)



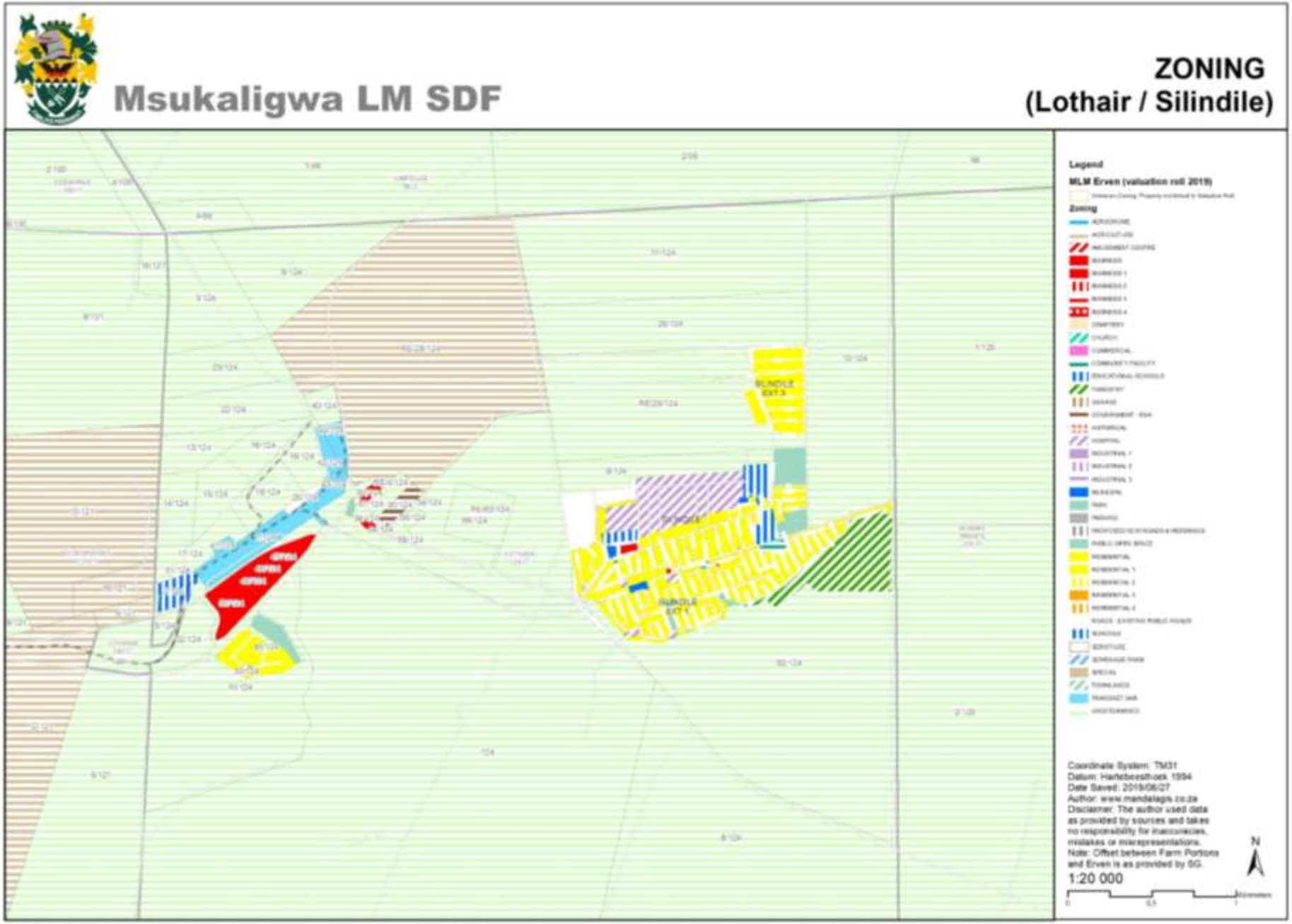
Map 41: Zoning: Breyten / Kwazanale



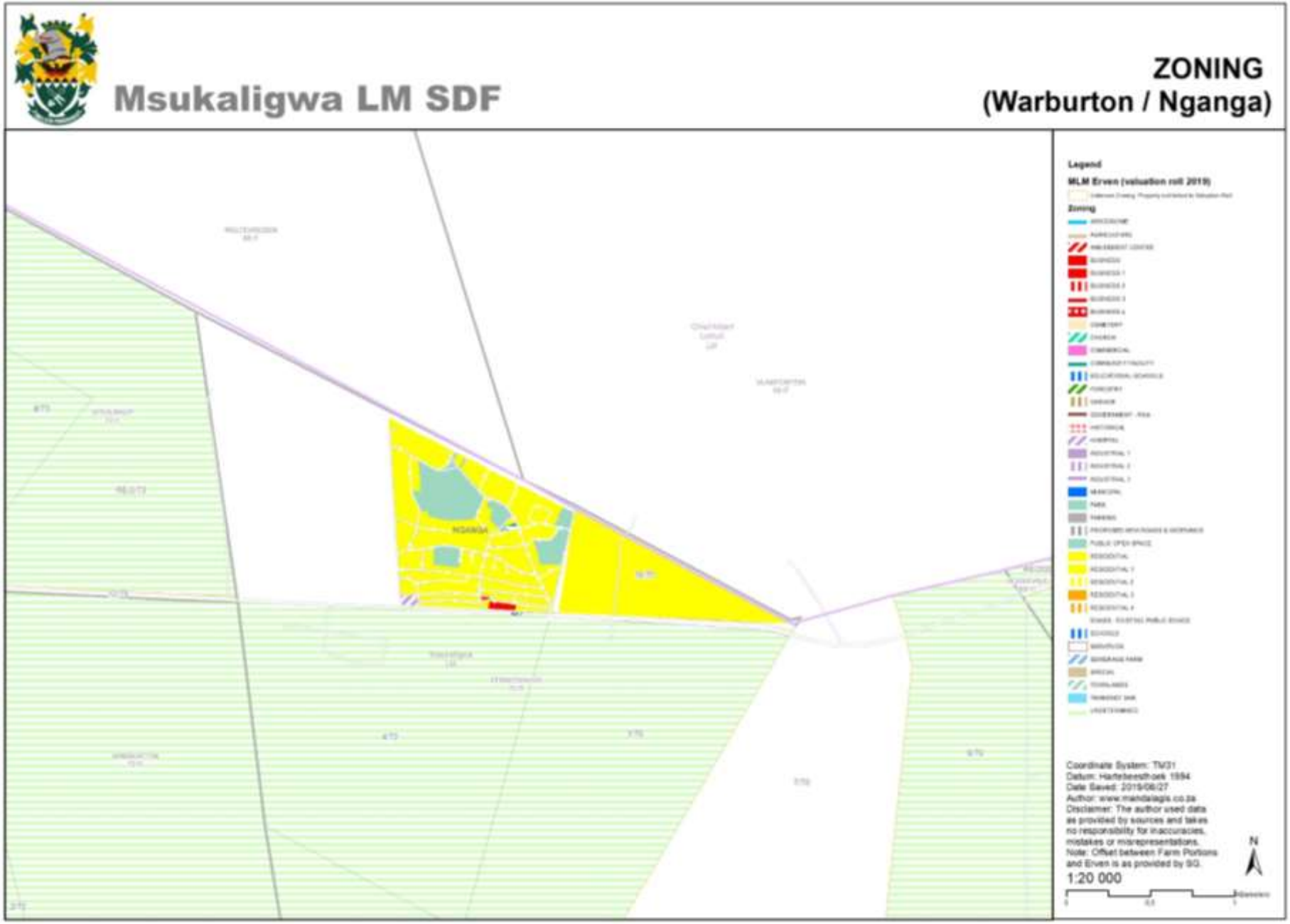
Map 42: Zoning: Chrissiesmeer / Kwachibikhulu



Map 43: Zoning: Davel / Kwadela



Map 44: Zoning: Lothair / Silindile



Map 45: Zoning: Warburton / Nganga

4.4.3 Human Settlements

Formal settlements in Msukaligwa, especially Ermelo / Wesselton, are experiencing in-migration, putting pressure on the provision of housing and services. Provision of land for housing is noted as the biggest challenge in the municipality, specifically land procurement on a limited budget. Mining operations near Ermelo / Wesselton also renders some land unsuitable for development, further complicating the issue.[30]

The migration into urban areas, coupled with the challenges noted above, give rise to the fact that the municipality is facing a challenge of getting rid of the informal settlement In spite of a 15.7% increase in the number of formal dwellings between 2011 and 2016, informal settlements keep growing according to the IDP. According to StatsSA data the number of informal dwellings decreased from 5 715 in 2011 to 4 819 in 2016 – a decrease of almost 896 households, with 9.4% of all households living in informal dwellings. This could indicated that in the three years since 2016, there has been an increase in the number of informal dwellings in spite of good progress made. Low cost housing demand is estimated at 20,000.[31]

Land identified and ready for formalization for residential purposes in the following areas of Msukaligwa:[32]

- 300 in Wesselton, Khayelisha – upgraded and formalised settlements (low cost housing).
- 560 in Wesselton Ext. 7 – BNG (Breaking New Grounds) project.
- 245 in Silindile/Lothair – Mixed settlement
- 346 in KwaChibikhulu / Chrissiesmeer – upgraded and formalised Low cost housing and Mixed settlements
- ±1000 in KwaZanele Ext. 5 and 6 – Low cost housing and mixed settlements
- 5000 in Ermelo Ext.44
- 200 in Wesselton Ext. 2
- 60 in Wesselton Ext. 10
- 200 at Kwa-Zanele Ext 4
- 100 at Ka- Ndleleni Ward 8
- 100 at Sheepmoor
- 100 at Nganga

In terms of housing delivery, a total of 2176 is being developed (data as at June 2018):

Area	Units	Instrument	Completed	Outstanding
Wesselton	626	Project linked housing subsidy scheme	626	0

[30] Msukaligwa Draft IDP 2019-20

[31] Msukaligwa Draft IDP 2019-20 / Mpumalanga Department of Economic Development and Tourism: Socio-Economic Profile of Msukaligwa, December 2018.

[32] Department of Human Settlements in Msukaligwa Draft IDP 2019-20

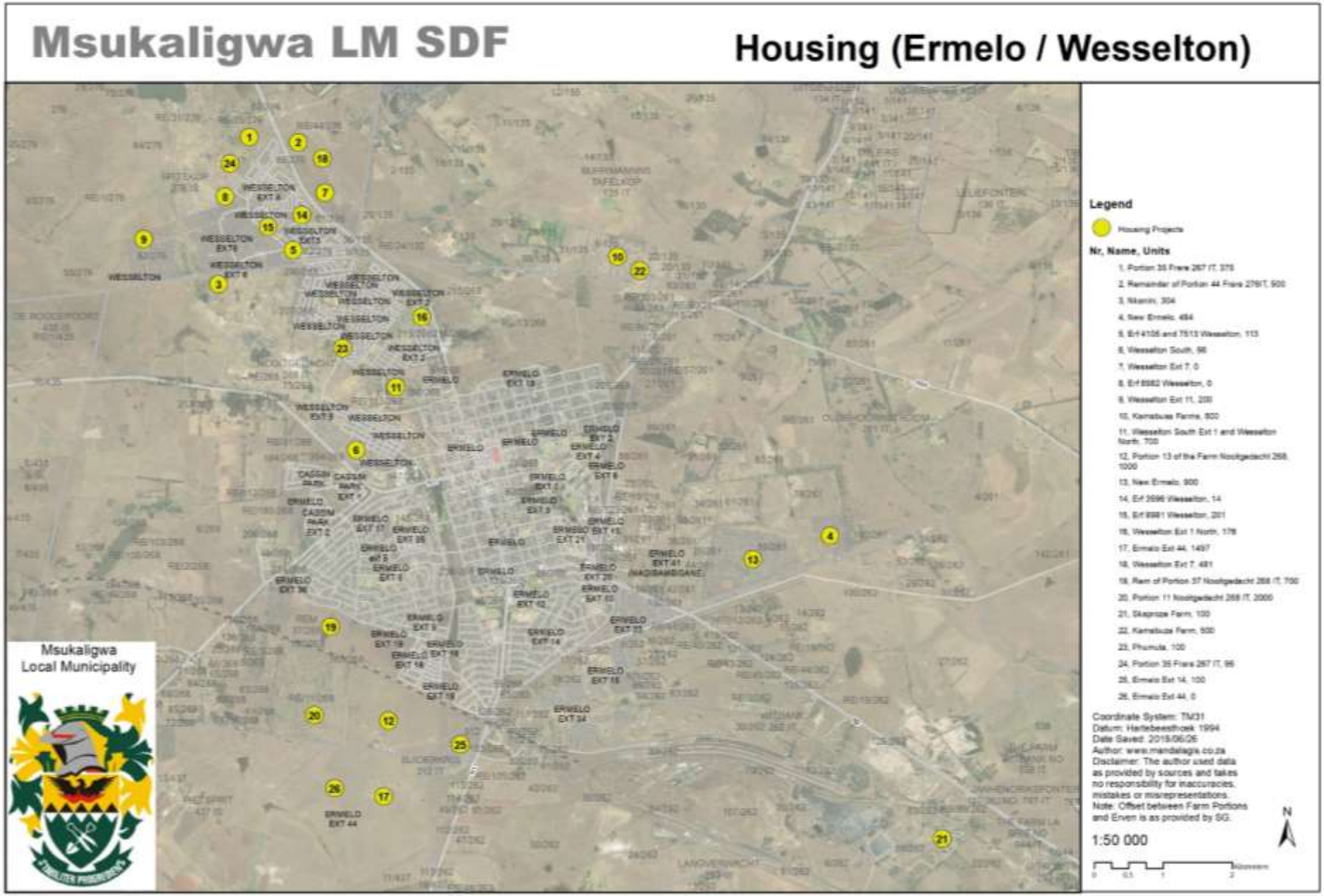
Area	Units	Instrument	Completed	Outstanding
Breyten	600	Project linked housing subsidy scheme	125	475
Ka-Ndleleni (Ward 8)	50	Project linked (farm workers assistance programme	40	10
Wesselton Extension 2,5 and 11	800	Project linked housing subsidy scheme	194	606
Silindile X 2	50	Project linked housing subsidy scheme	0	50
Warburton	50	Project linked housing subsidy scheme	0	50
Total	**2 176**		**984**	**1191**

Table 16: Housing Delivery

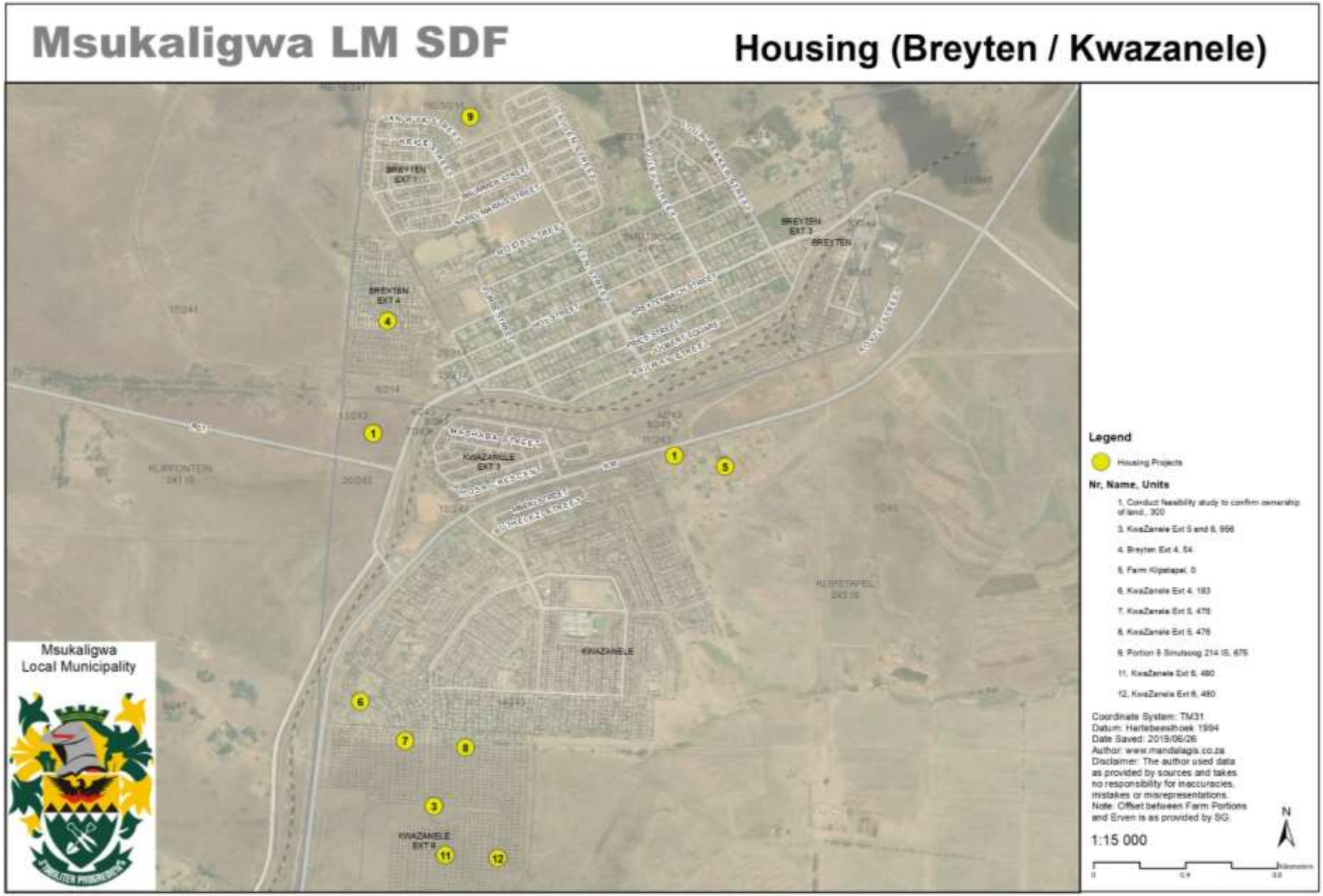
In addition to housing development, the municipality is also intending to provide serviced sites to eradicate the backlog, areas like Silindile Ext. 3, KwaZanele Ext. 6, Kwazanenle Ext. 5 (currently being serviced), and creation of sites on land suitable for construction at Wesselton ext. 5 & 6. It is noted that these areas have been included in the Province's 5 year development program.

The various housing projects are indicated on **Map 46** to **Map 50**. The location and extent of informal settlements are shown on **Map 51** to **Map 58**.

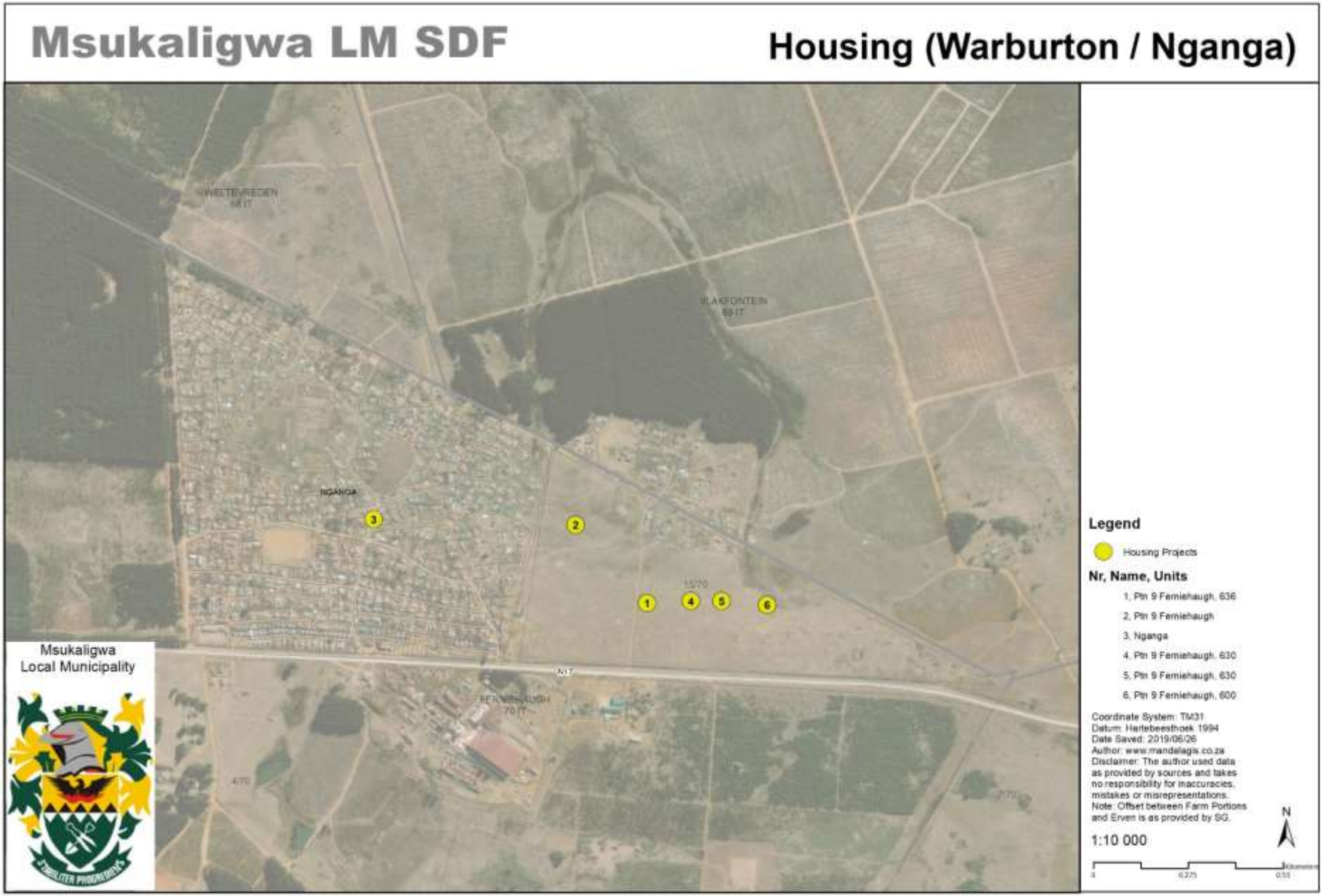
The biggest concern in terms of current and planned housing projects is that fact that many of these projects occur on the fringes of settlements. In some cases that may be the only choice due to availability of space and conditions such as undermining. The challenge the municipality is facing in terms of urban migration and pressure for housing delivery is however also an opportunity that can be used to shape the spatial structure of settlements, form the current segregated form to more integrated settlements. Options such as small infill housing project and social housing on vacant and government owner land in towns should also be considered.



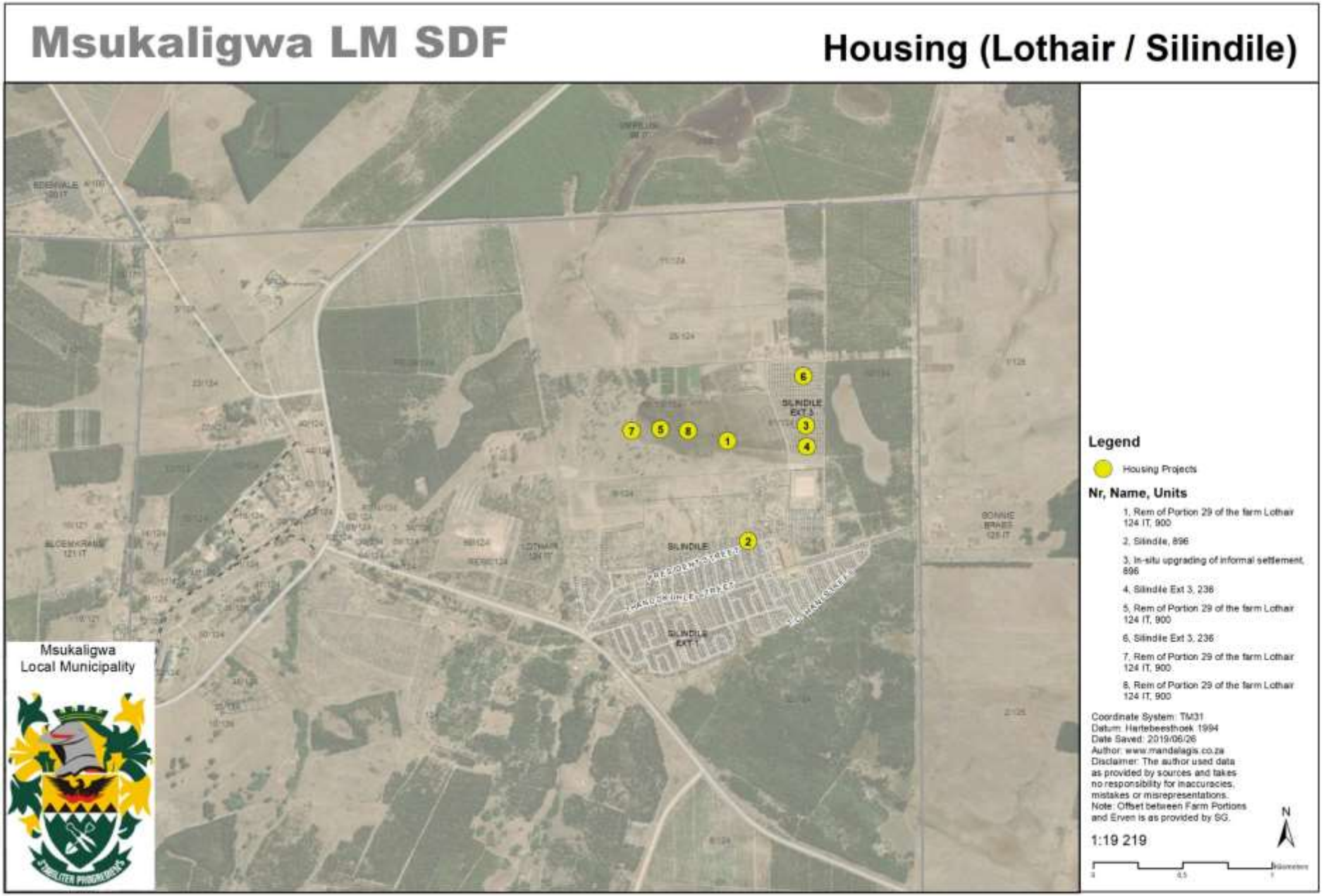
Map 46: Housing: Ermelo / Wesselton



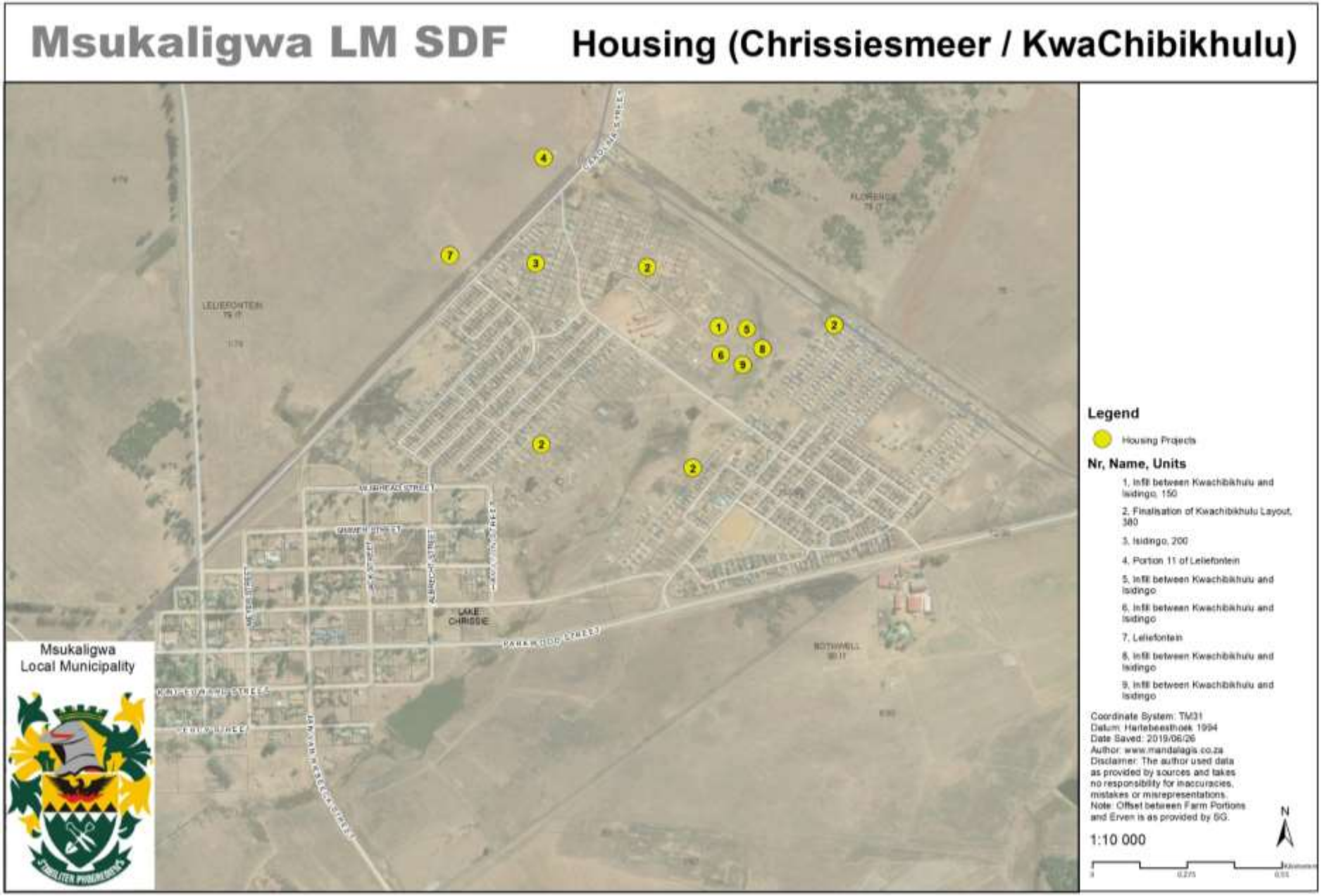
Map 47: Housing: Breyten / Kwazanele



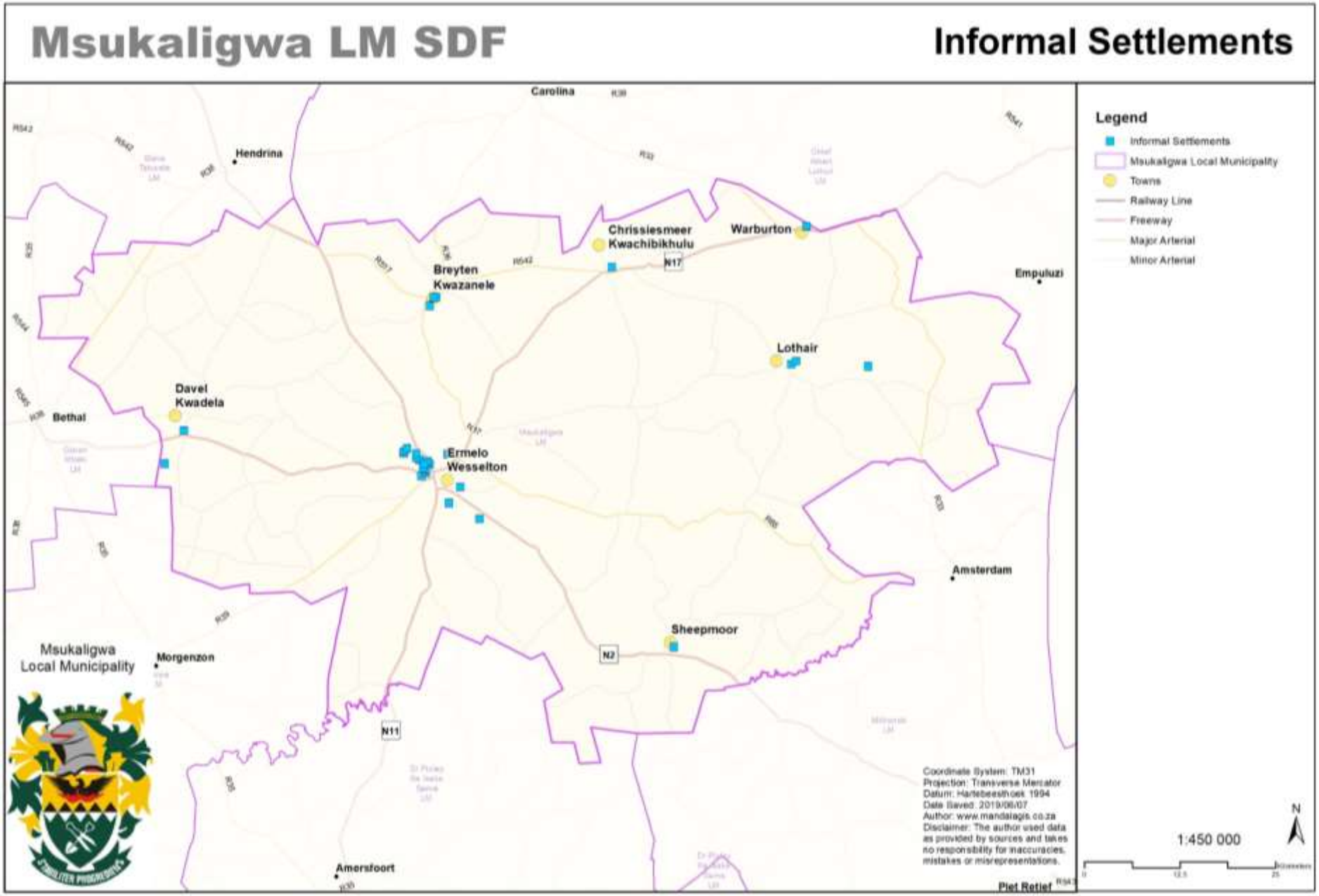
Map 48: Housing: Warburton / Nganga



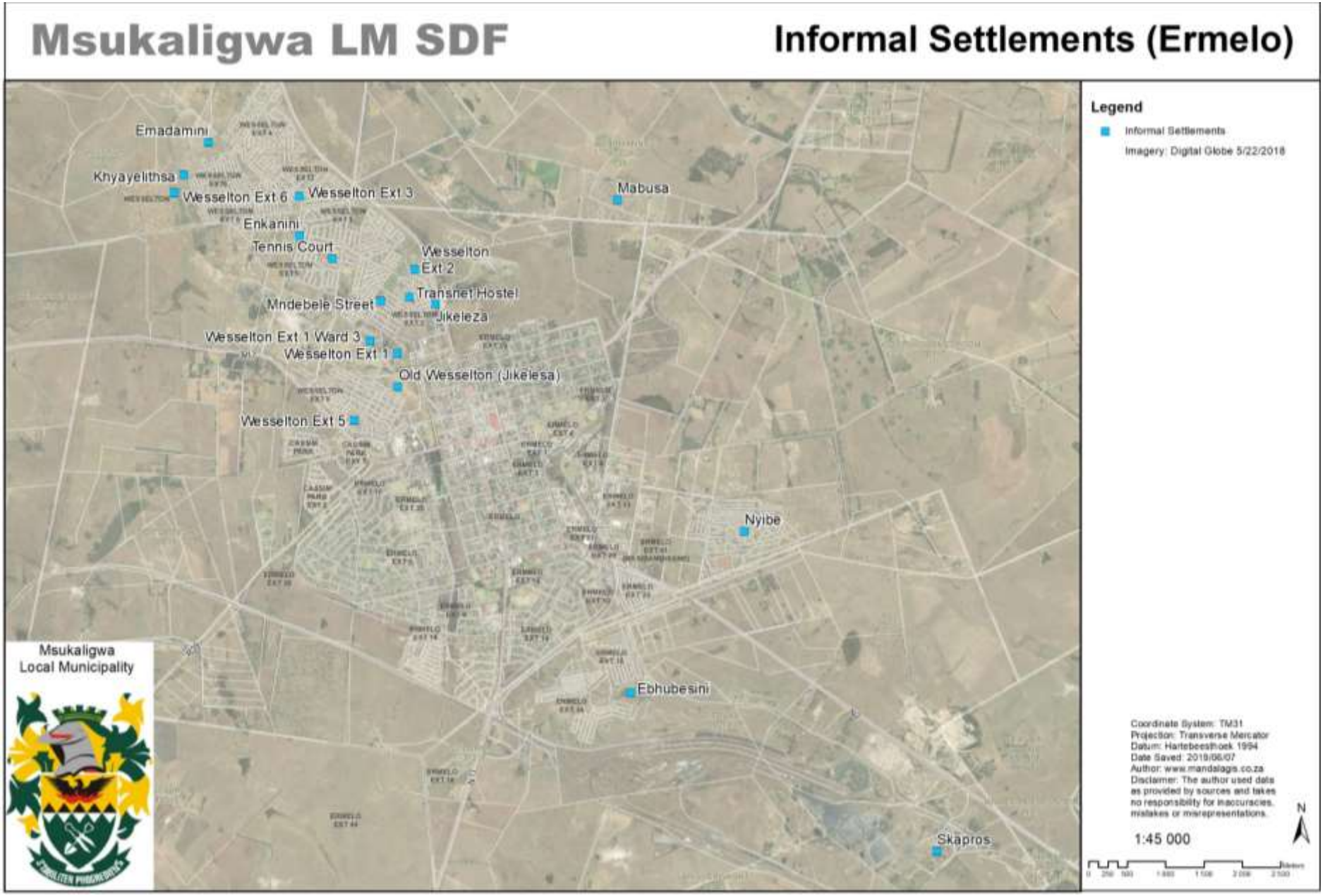
Map 49: Housing: Lothair / Silindile



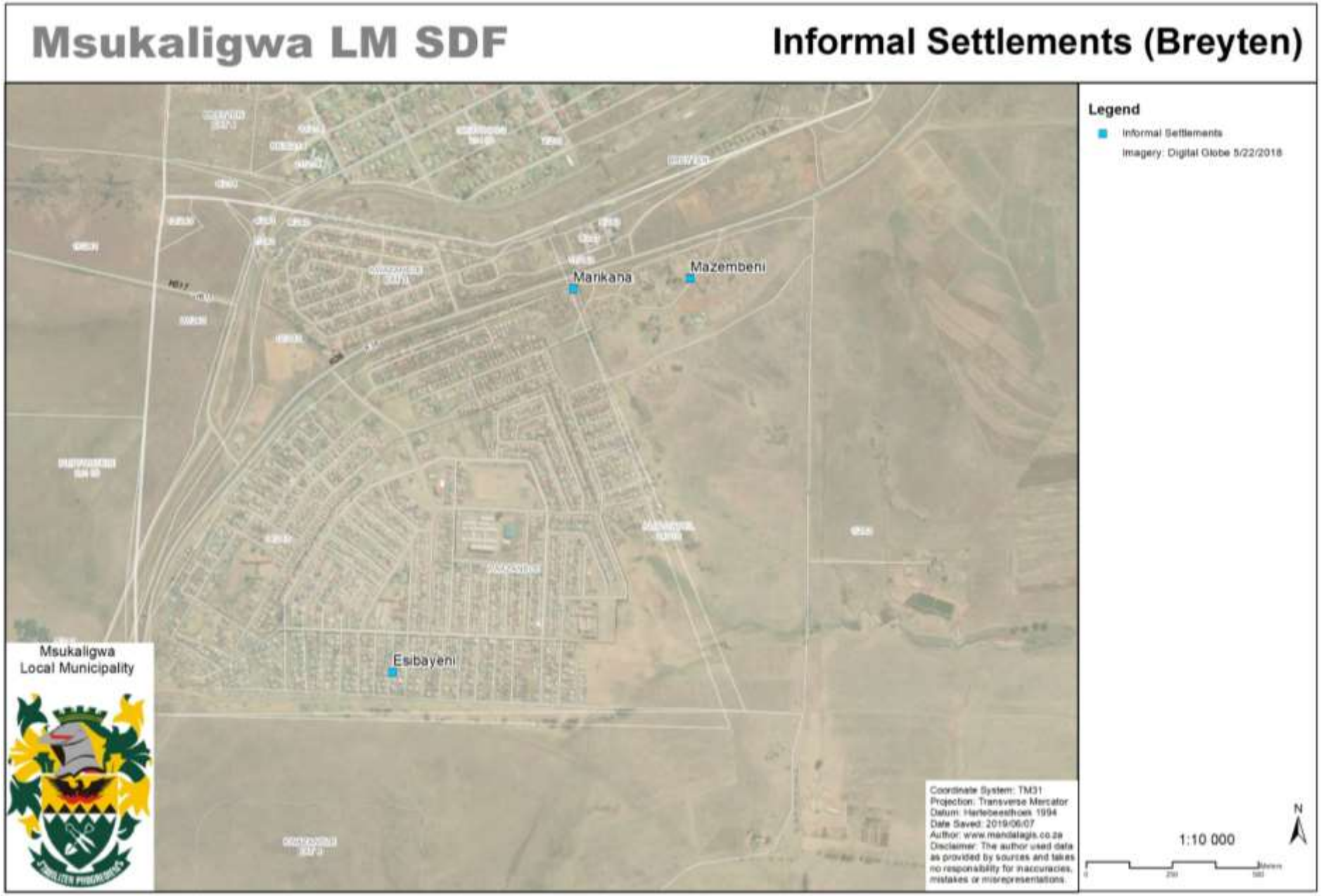
Map 50: Housing: Chrissiesmeer / KwaChibikhulu



Map 51: Informal Settlements

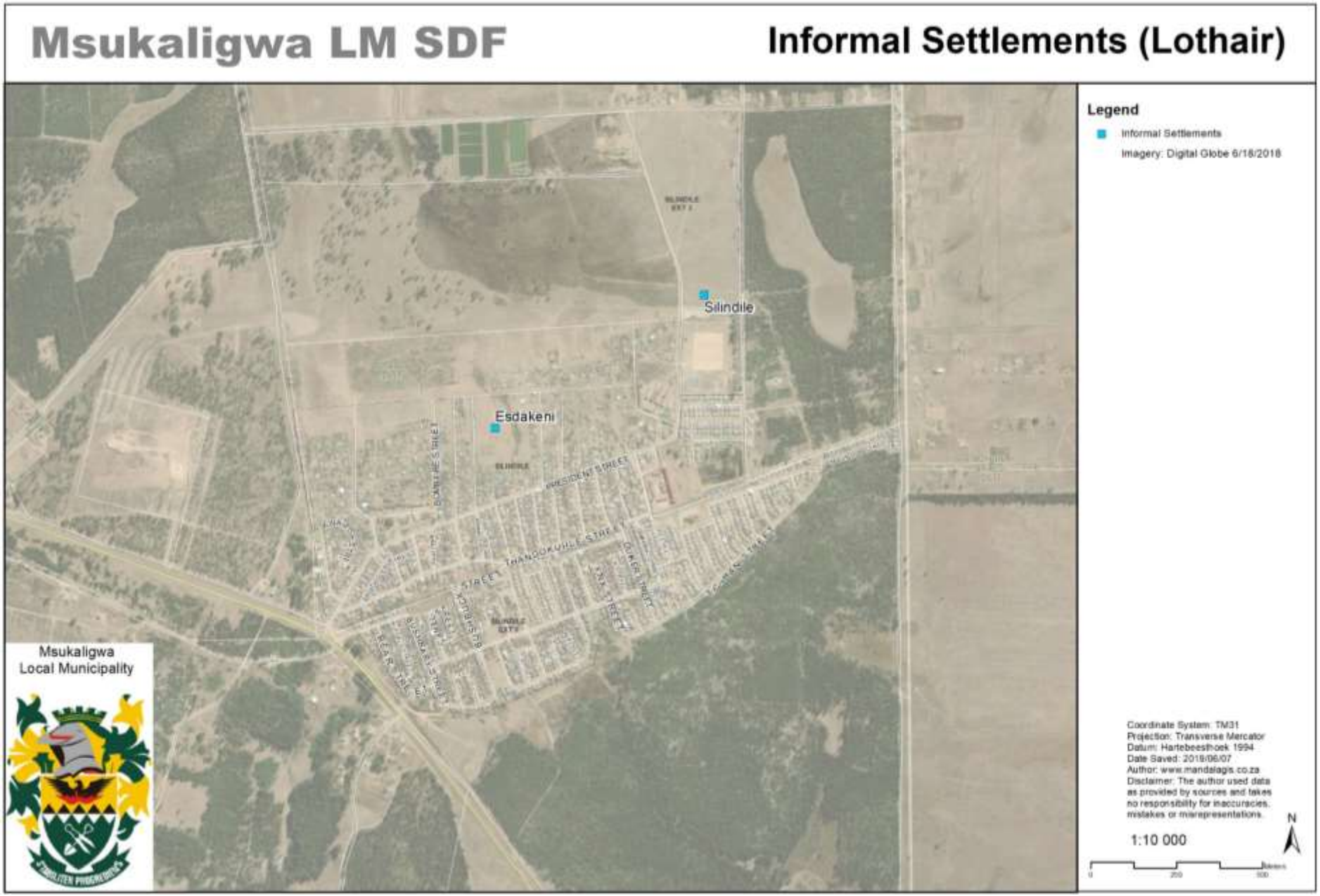


Map 52: Informal Settlements: Ermelo

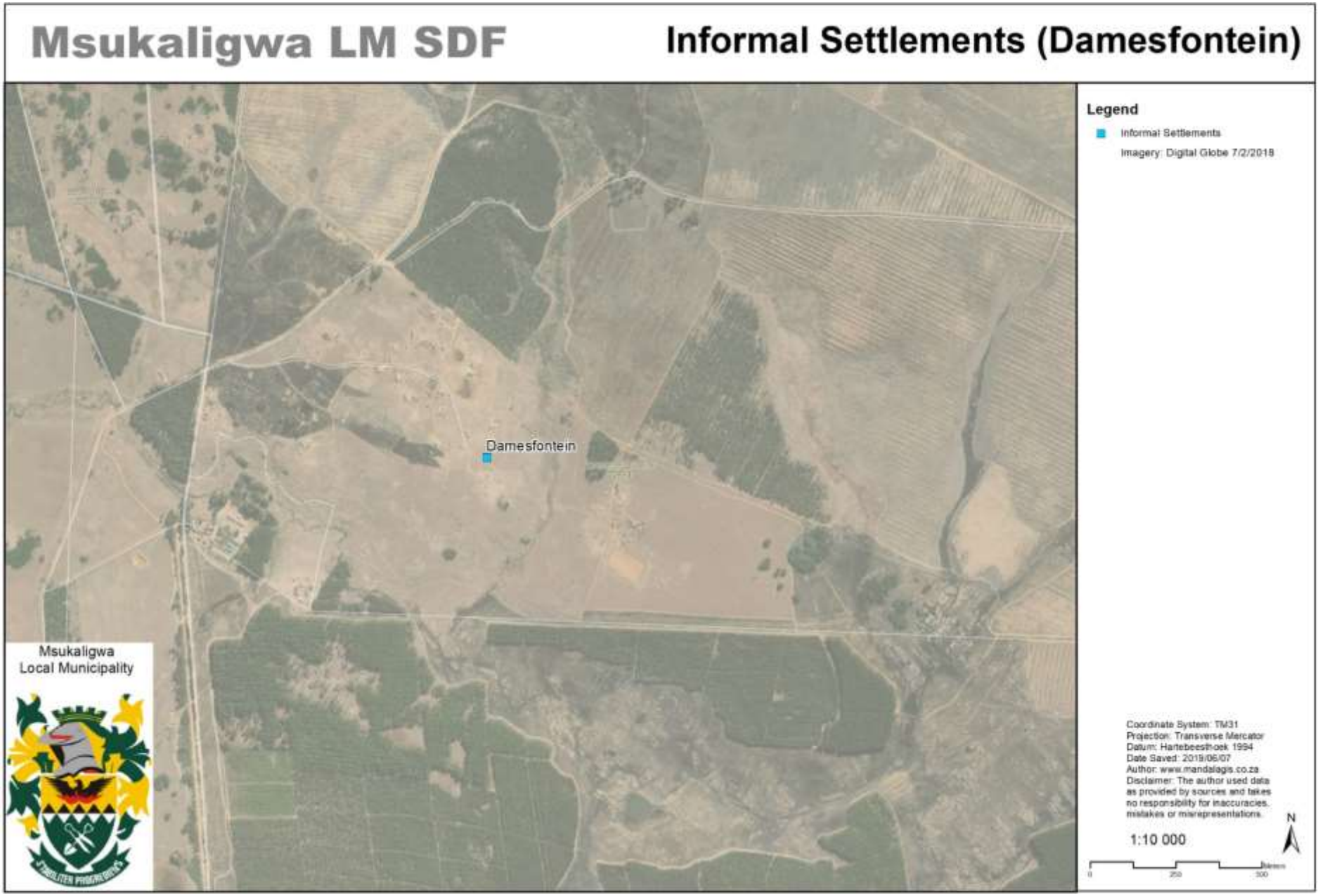


Map 53: Informal Settlements: Breyten

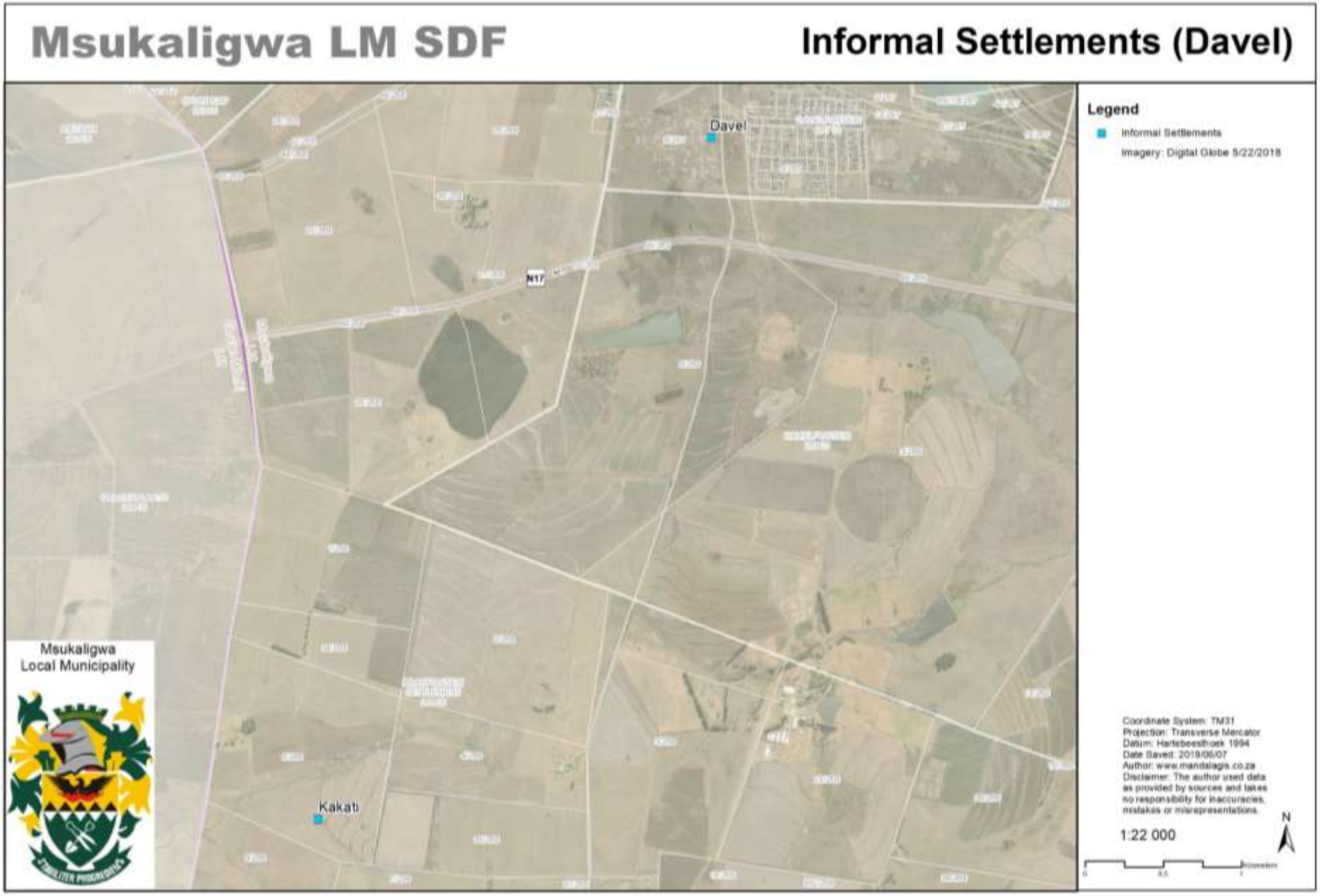
Map 54: Informal Settlements: Sheepmoor



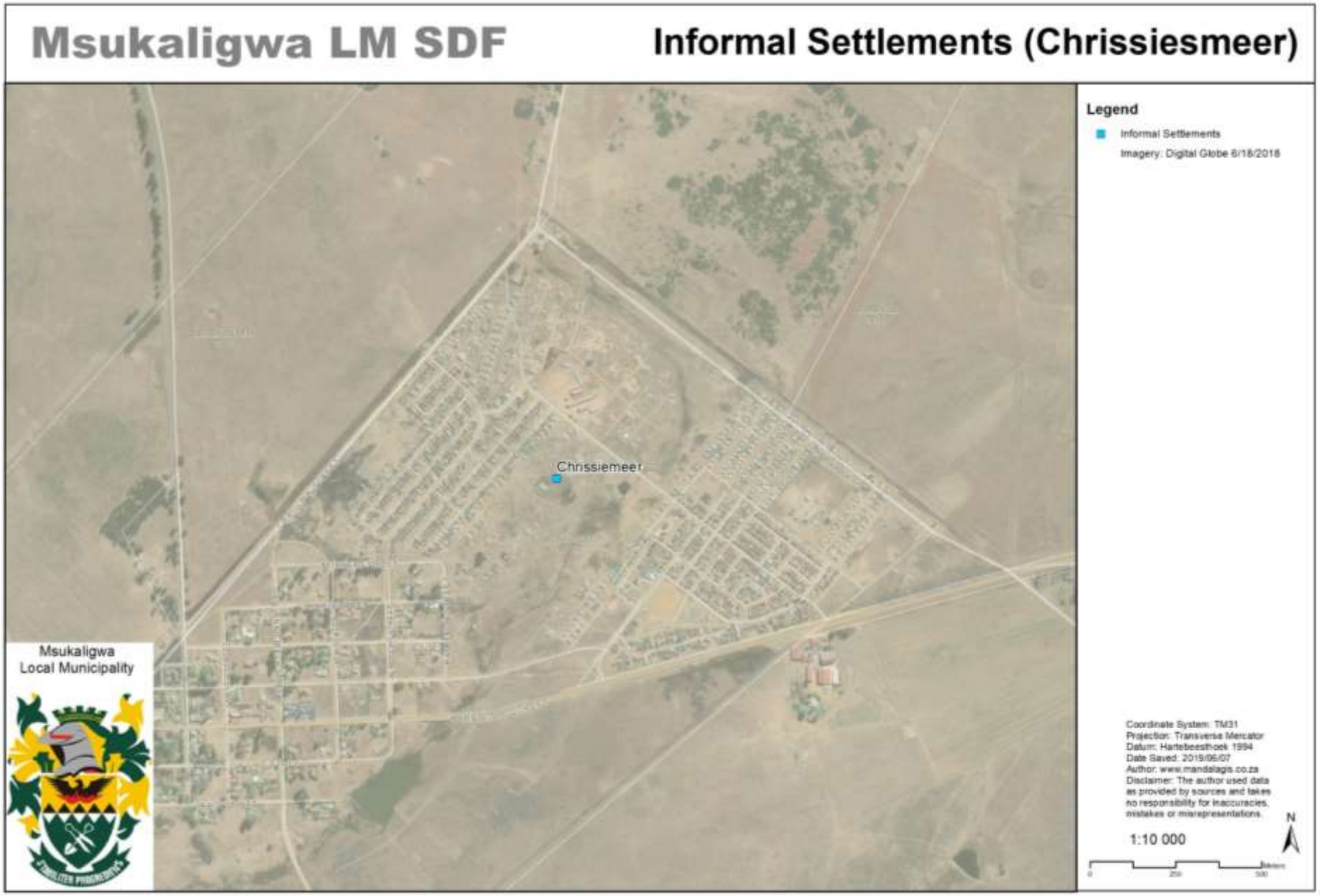
Map 55: Informal Settlements: Lothair



Map 56: Informal Settlements: Damesfontein



Map 57: Informal Settlements: Davel



Map 58: Informal Settlements: Chrissiesmeer

4.4.4 Movement and Transport

The location of Ermelo / Wesselton as a central point in the regional road and rail network is one of the most notable aspects of Msukaligwa's spatial structure.

Three major national roads, managed by SANRAL, travers Msukaligwa, all running through Ermelo:

- N17 running east-west through Msukaligwa, linking Gauteng to the west with Swaziland (Oshoek border post) to the east.
- N11 running north-south through the municipality, linking Middelburg to the north with Newcastle to the south.
- N2, which starts at Ermelo and runs southeast towards Piet Retief, Pongola and Durban via the North Coast.

The regional roads in Msukalikwa are provincial roads and are the following:

- R39, linking Ermelo with Standerton towards the southwest, via Morgenzon;
- R36, running northwards from the N17 ±8km northeast of Ermelo to the N4 at Machadodorp, via Breyten and Carolina:
- R65, linking Ermelo with Amsterdam to the east; and
- R33, running north-south through the eastern part of Msukaligwa, linking Vryheid with the N17, via Piet Retief and Amsterdam.

A number of tarred and gravel rural roads also occur in the area..

Roads in settlements and smaller rural roads are municipal roads. The state of most of the municipal roads especially the gravel roads are bad with poor storm water drainage. This situation is exacerbated by heavy trucks transporting coal that are causing a lot of damage to roads. It is stated in the IDP that the national roads damaged by the heavy trucks are in process of being maintained by the South African National Roads Agency Limited and the maintenance of N11 through the town has been finalized. Eskom has also contributed in funding for maintenance and rebuilding of the truck routes in Ermelo town.

The municipality does not have a road backlog, but maintenance is a big challenge. Bad road conditions also make accessing social facilities more difficult and has a negative impact on economic development.

There are a number of existing freight rail lines traversing Msukaligwa, as follows:

- The east-west Johannesburg/Richards Bay rail line passing through the southern part of the municipality, running roughly parallel to the N17/N2, with stations at Davel, Ermelo and Sheepmoor.
- A north-south rail line running from Ermelo northwards through Breyten towards Carolina.
- A spur branching off the Ermelo-Breyten line running eastwards to Lothair.
- A line running from Davel towards the northwest.

No passenger services are provided on any of these lines.

There are two airfields in the area, namely the Ermelo airfield which has a tarred runway and is registered for day flights, and the Warburton airfield which is mainly used by the forestry companies for fire spotting and fighting.

Minibus taxi transport is by far the most prevalent form of public transport and is used by the vast majority of township residents in the study area. Various taxi associations provide a variety of commuting and long distance services. Most taxi ranks can be classified as informal or semi-formal. Many of these ranks have no surfaced area, shelter or ablutions. Bus transport is primarily rendered on a contract basis to the mines, while there is also a non-subsidized service to some schools in the area.

The low rural population densities within the municipality makes public transport services in these areas uneconomical, leading to further isolation and marginalisation of poor rural communities.

The main movement network (roads and rail) is indicated on **Map 59: Major Roads / Movement**.

Various alternatives are being considered to lessen damage by heavy vehicles. The GSDM Integrated Transport Plan proposed a feasibility study to providing a rail commuter service along the Leandra/Ermelo/Piet Retief railway line which will provide convenient mobility within the district. There is also an initiatives mentioned in the policy section earlier in the document to extend the rail network, and the planned construction of Majuba Rail coal line linking to the existing rail line in Msukaligwa to Majuba power station which is expected to be commissioned in the near future.

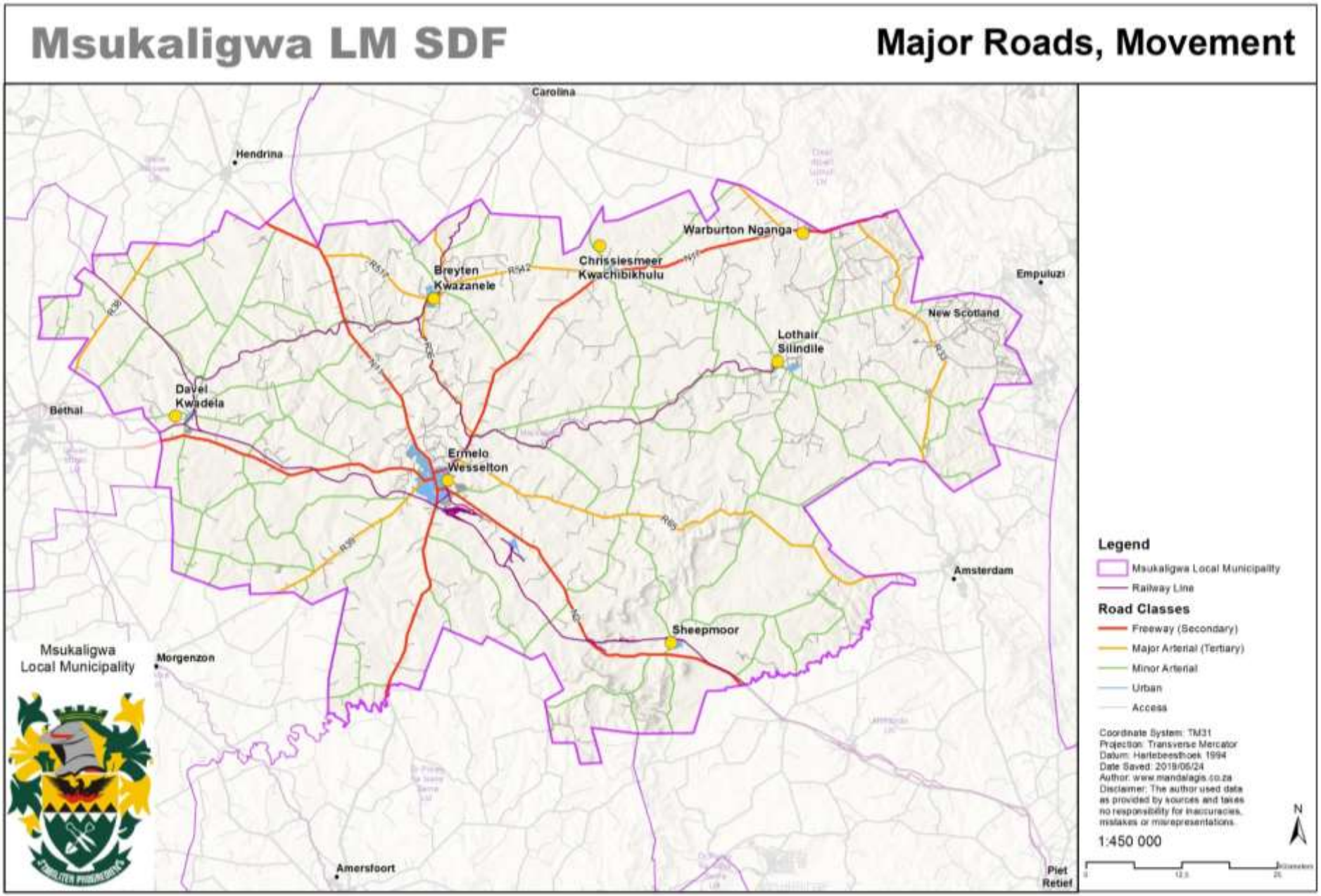
Another proposal is for the construction of a “ring road” around Ermelo / Wesselton by SANRAL with the purpose of redirecting heavy vehicle traffic away from town. The construction of the road appeared to be imminent, with various studies such as environmental impact assessments and an undermining study already completed.

This proposal will alleviate the heavy vehicle traffic through town, but also holds a number of risks:

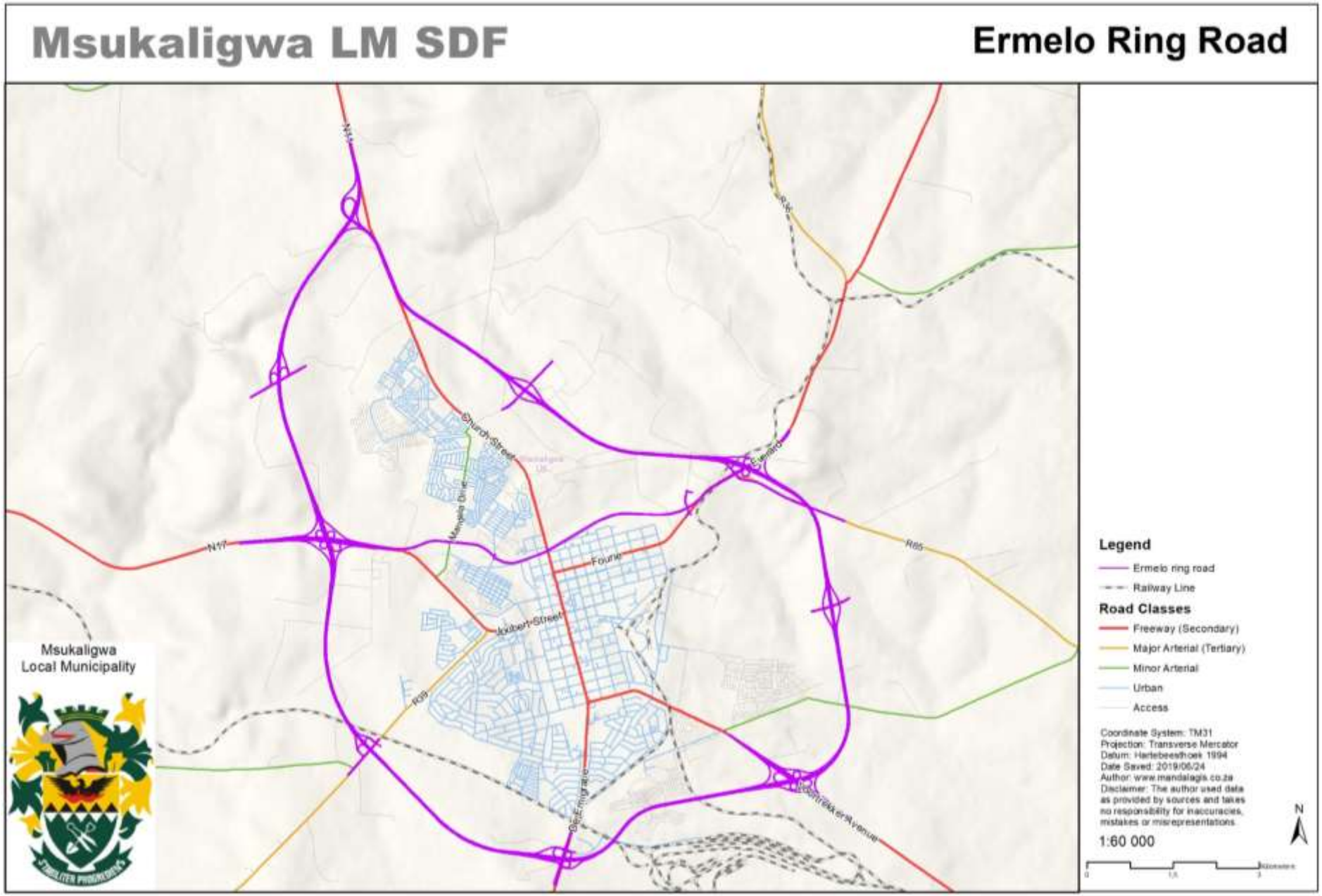
- If the ring road is implemented, not only heavy vehicles will be diverted. It could be expected that a percentage of other traffic (e.g. holiday of business travellers) may also not drive through Ermelo leading to a loss in business.
- Harnessing opportunities from passing traffic (freight and passenger) may be one way to stimulate economic diversification to counter the expected future downturn in mining. Diverting all traffic away from / around town may lead to the town centre area losing “passing feet”, and areas serving passing vehicles (e.g. fuel, food, repairs, and overnight accommodation) may lose business.

Opportunities can however also be created, e.g. special facilities located off the new road to serve passing traffic.

The proposed ring road is shown on **Map 60: Ermelo Ring Road**.



Map 59: Major Roads / Movement



Map 60: Ermelo Ring Road

4.4.5 Water

The towns and rural settlements in Msukaligwa are served by formal water reticulation networks. Just over 93% of households have adequate water supply, with a low backlog of 6.7% remaining. This is an improvement from a backlog of 9.4% in 2001 and 8.3% in 2011. It is also noted in the IDP that the backlog affects mainly rural communities, where water provision is achieved via boreholes. Such communities do have access to water, but not at RDP standards. Challenges in providing boreholes for water include large distances and resistance from private land owners.

The following can be noted in terms of water provision progress and backlogs: [33]

Number of Households: 2016 (StatsSA)	Serviced Households 2016 (StatsSA)	New development since 2016	Progress End June 2018	Backlog End June 2018	% Backlog End June 2018
51 089	46 846	802	47648	3441	6.7%

Table 17: Water Provision

The water sources for the municipality are the following:

- Douglas and Brummer dam: ± 10 Ml/d
- Jericho Dam through Usuthu-transfer pipeline : ±16 Ml/d

It should however be noted that water supply for development is only available from two of these dams, with the power station using the third.

It is noted in the IDP that Department of Water and Sanitation intervened in assisting the municipality by funding 400mm pipeline supplying raw water from the Jericho water scheme at Southern WTW to the Northern WTW (completed in June 2014). This will ensure enough water supply to both purification plants in case of a drought situation. The water from the dams are treated at two purification works:

- Northern Water Treatment Works: 13.2 Ml/d
- Southern Water treatment Works: 12 Ml/d

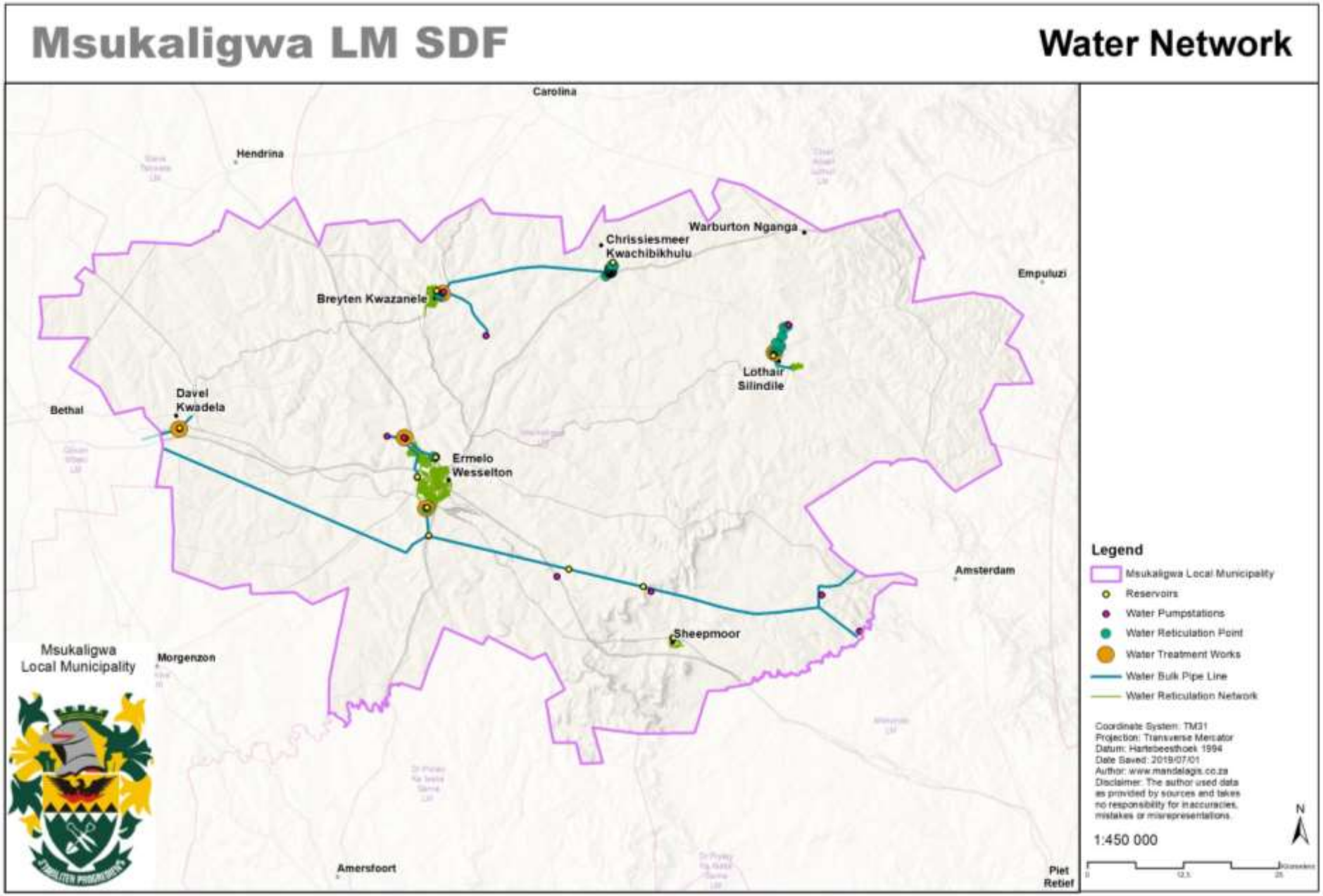
The next step in the distribution system are the reservoirs, as follows:

Reservoir	Capacity in kl	Quantity
South Reservoir	10 000 & 10 000	2
Wesselton Reservoir	5000	1
Airport Reservoir	5000	5
SABC Tower	700	1

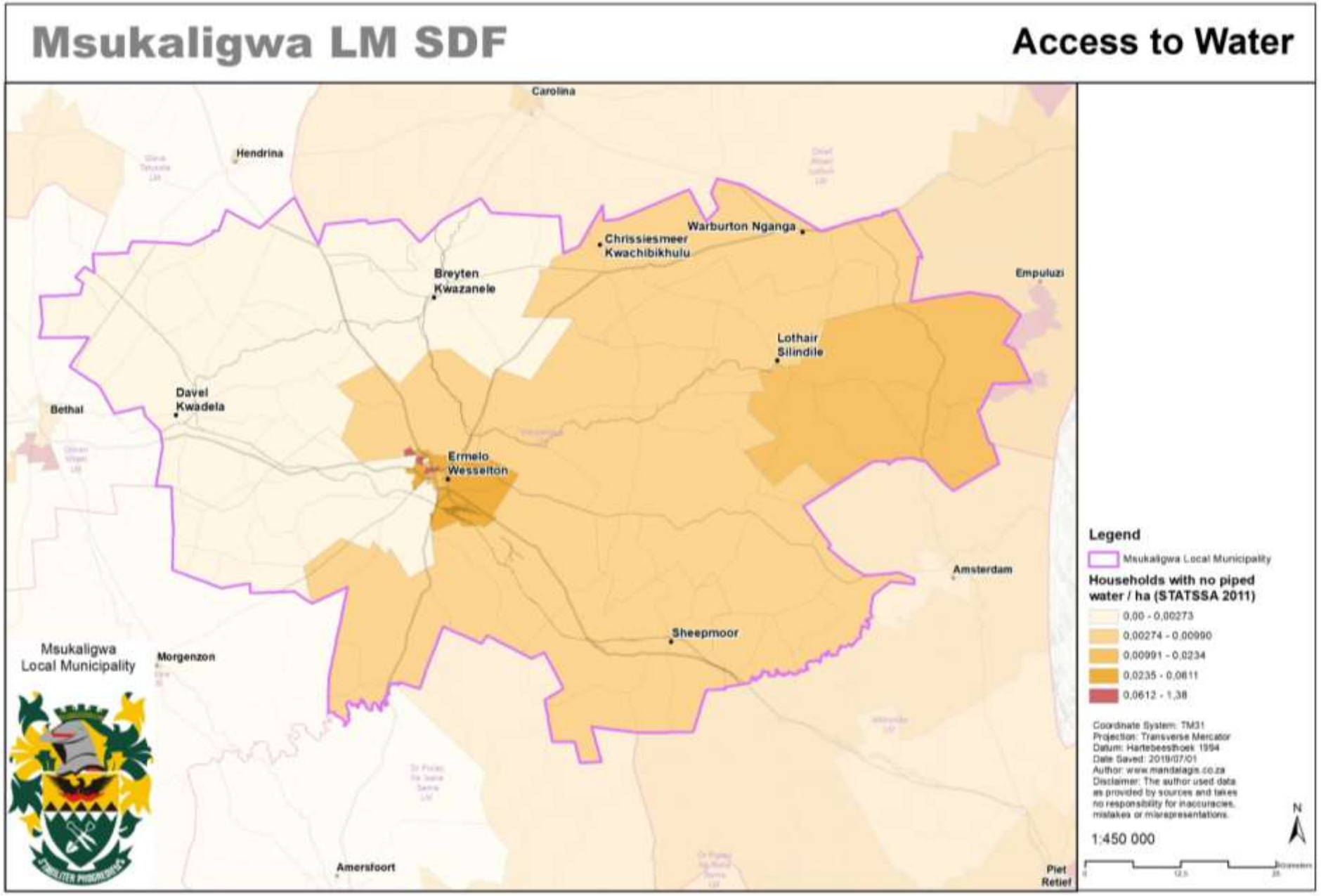
Table 18: Reservoirs

[33] Msukaligwa Draft IDP 2019-20

The spatial location of the water network is shown on **Map 61: Water Network**. The spatial concentration of households remaining without piped water (2016) are shown on **Map 62: Access to Water**. These households are mostly in the rural areas, and in some extensions of Wesselton where provision is still below RDP standard.



Map 61: Water Network



Map 62: Access to Water

4.4.6 Sanitation

Challenges in providing water borne sanitation systems persist in rural areas, due to vast distances and low population density. Water scarcity may also become an increasing challenge in future in view of climate change and alternative systems may have to be considered.

In spite of challenges, progress has been made. Available figures differ slightly, but all point to over 90% of households having access to sanitation. The IDP notes a remaining backlog of 1.5% by June 2018:

Number of Households: 2016 (StatsSA)	Serviced Households 2016 (StatsSA)	New development since 2016	Progress End June 2018	Backlog End June 2018	% Backlog End June 2018
51 089	49 794	519	50 313	776	1.5%

Table 19: Sanitation Provision

The backlog in 2016 (StatsSA) stood at 3.2% total, but with 12 194 households without access to chemical or flush toilets (23.9%). A more detailed look at sanitation and progress with provision are summarised below. Persisting backlogs in spite of number of households with access to flush toilets almost doubling is also an indication of the growing number of households residing in Msukaligwa.

Type of Toilet	2001	2011	2016
Flush toilet (connected to sewerage system)	19,170	28,910	37,969
Flush toilet (with septic tank)	1,187	912	429
Pit toilet with ventilation (VIP)	1,122	1,393	2,006
Pit toilet without ventilation	4,896	4,746	6,442
Chemical toilet	90	321	497
Bucket toilet system	794	457	-
None	2,430	1,987	1,295
Other		2,206	2,451
Total	**29,689**	**40,932**	**51,089**

Table 20: Sanitation Type

A key challenge to providing sanitation services is a lack of bulk capacity. All sewer treatment plants are operating highly over the design capacity, as illustrated in the table below:[34]

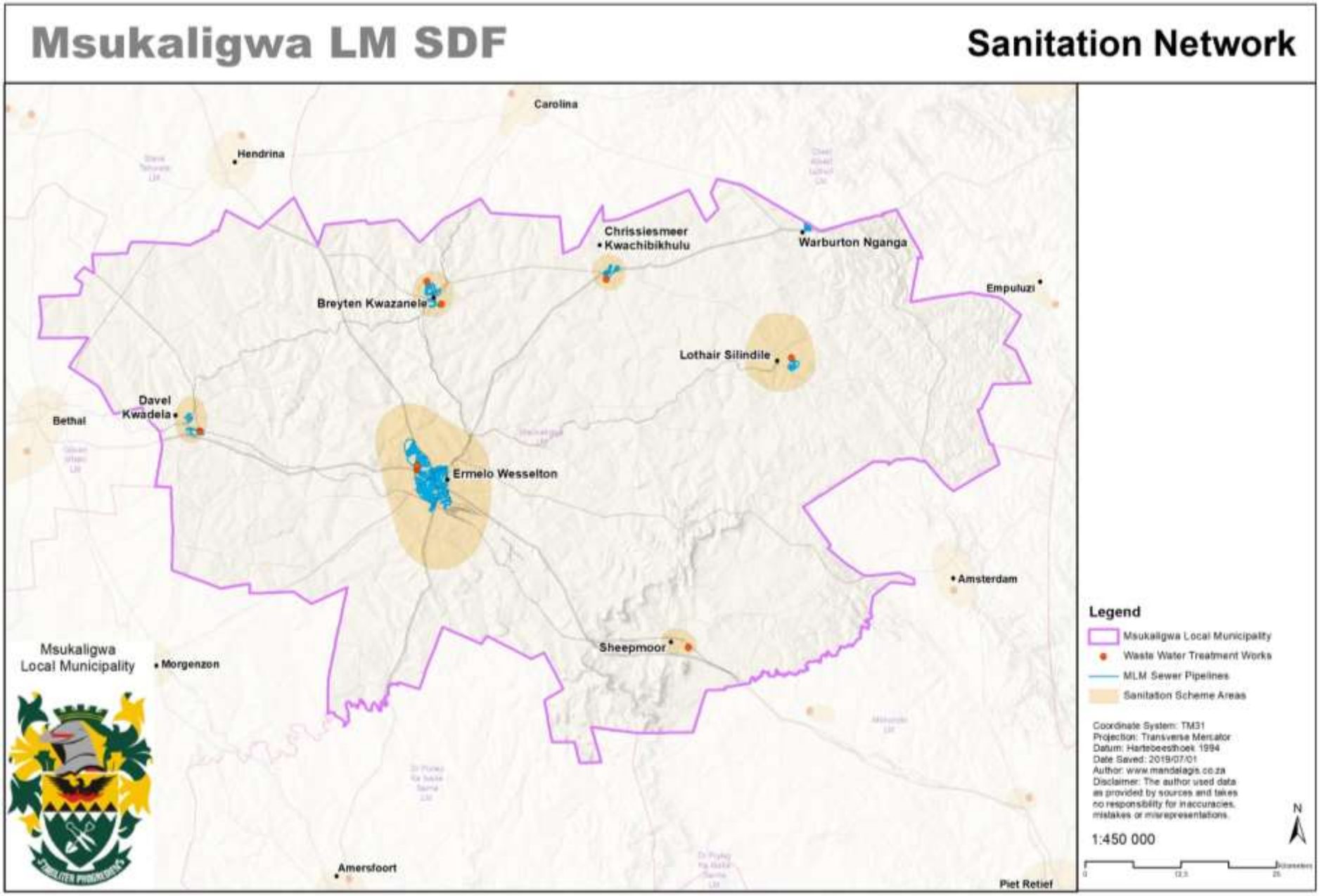
[34] Msukaligwa Draft IDP 2019-20

Municipal Admin Unit	Type of Plant	Treatment Capacity	Required Capacity
Ermelo & Wesselton	Treatment Plant	6 mega litres per day	24 mega litres per day
Breyten	Oxidation ponds	<1 mega litre per day	3 mega litres per day
KwaZanele	Treatment plant	2 mega litres per day	6 mega litres per day
Chrissiesmeer & Kwachibikhulu	Oxidation ponds	<1 mega litre per day	3 mega litres per day
Silindile/Lothair	Oxidation ponds	<1 mega litre per day	3 mega litres per day
Davel/KwaDela	Oxidation ponds	<1 mega litre per day	3 mega litres per day

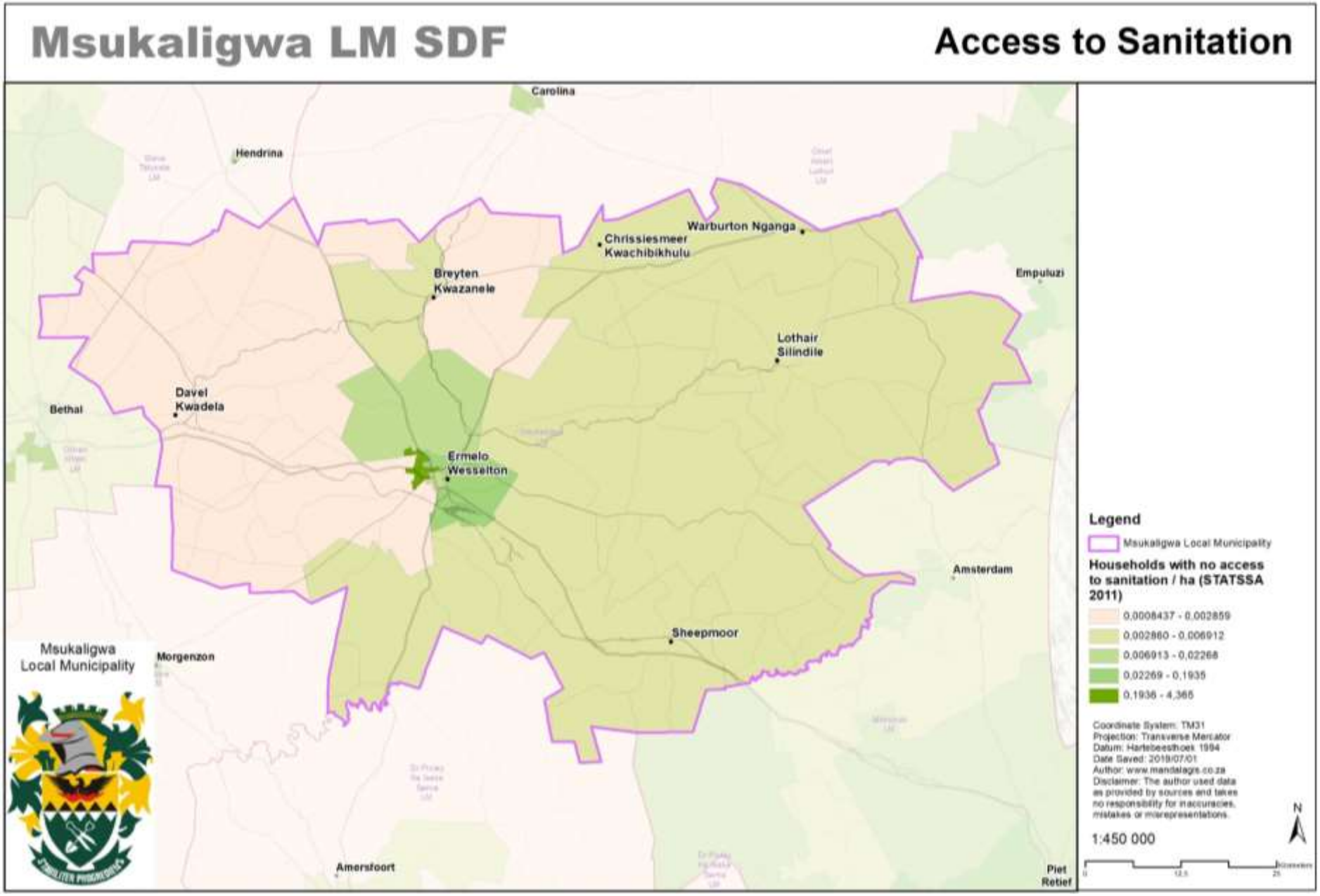
Table 21: Sewer Treatment Capacity

The lack of capacity at treatment plants also holds a threat for surface water and ground water pollution. As described earlier in the report, the hydrological system in Msukaligwa is not only environmentally sensitive, but also plays an important role in water security nationally. Addressing bulk sewer backlog should as such be treated as an urgent priority.

Spatially, in addition to the extensive rural areas, Sheepmoor and Warburton are areas without proper sanitation services. The municipality has installed a sewer network which is not yet completed. The spatial distribution of the sanitation network is shown on **Map 63: Sanitation Network** and concentrations of households without access is shown on **Map 64: Access to Sanitation**.



Map 63: Sanitation Network



Map 64: Access to Sanitation

4.4.7 Waste Management

Waste management is the most challenging in term of basic service provision in Msukaligwa, with a refuse removal backlog of 35% remaining.

The municipality only collects domestic waste, building rubble and garden waste. It is the mandate of industries generating hazardous and industrial waste to dispose these types of waste to registered landfills licensed to dispose hazardous waste. To manage this situation, municipality has a database of industries within its jurisdiction that generate hazardous waste and monitors quarterly the safe disposal of such waste. Mining in the area also generate waste specific to their operations, which should be managed in terms of the conditions of their mining licences. Current provision and backlogs are as follows:[35]

Number of Households: 2016 (StatsSA)	Serviced Households 2016 (StatsSA)	New development since 2016	Progress End June 2018	Backlog End June 2018	% Backlog End June 2018
51 089	33 231	0	33 231	17 858	35%

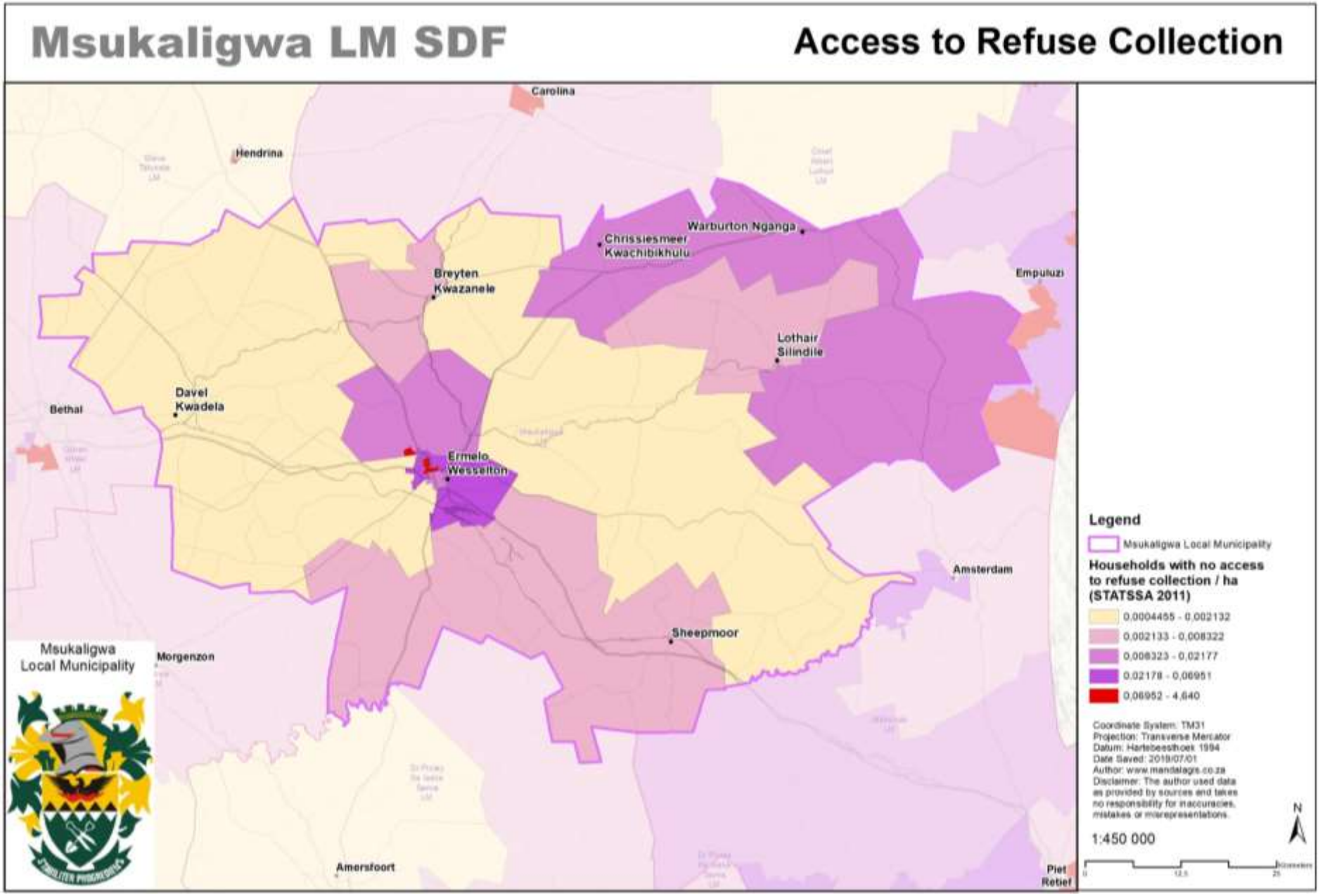
There are two waste disposal sites and three waste transfer stations in Msukaligwa.

Recycling is not done by municipality but by private operators in the area. It is stated in the IDP that to ensure that the goal of waste minimization is realised, communities and individual companies are given space within the jurisdiction of the municipality to reclaim recyclables, and reclamation at source is encouraged. In areas like Breyten, Chrissiesmeer and Warburton, a reclamation project is being piloted.

In view of the lack of municipal waste collection and recycling, this is an economic sector where opportunities for small operators in the private sector could be created.

Areas of concentration where households do not have access to refuse removal is shown on **Map 65: Access to Refuse Collection**.

[35] Msukaligwa Draft IDP 2019-20



Map 65: Access to Refuse Collection

4.4.8 Energy

Both the municipality and Eskom supply electricity to various parts of Msukaligwa. The municipality supplies mostly the even towns / nodes, and Eskom mostly the extensive rural areas. According to the IDP, all formal structures are connected to electricity, which implies that the remaining backlog consist of informal areas only. A summary of provision and backlog is as follows:[36]

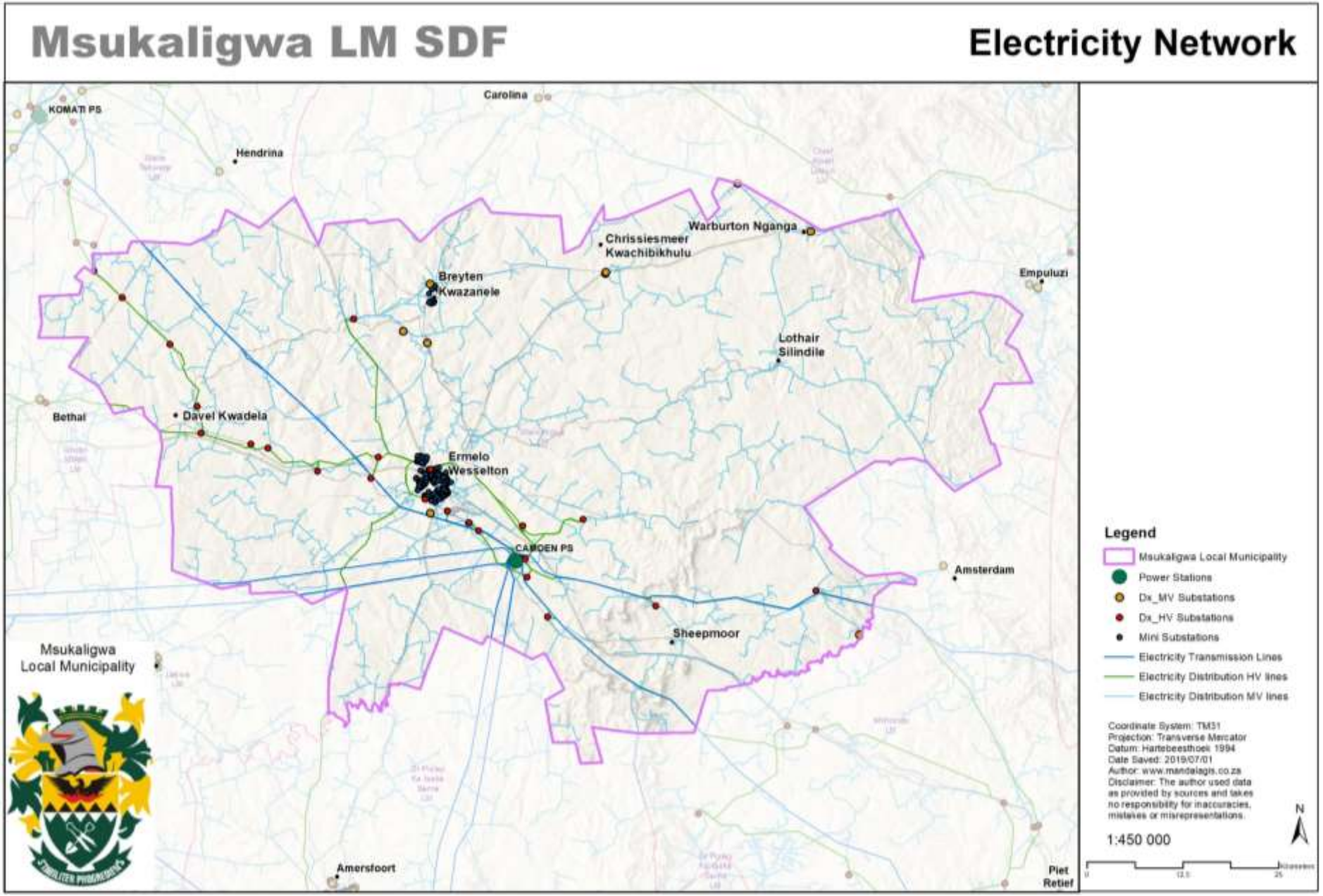
Number of Households: 2016 (StatsSA)	Serviced Households 2016 (StatsSA)	New development since 2016	Progress End June 2018	Backlog End June 2018	% Backlog End June 2018
51 089	44 683	481	45 390	5 699	11.1%

The above backlog of 11.1% is a substantial improvement on the 2011 backlog of 25.2%.

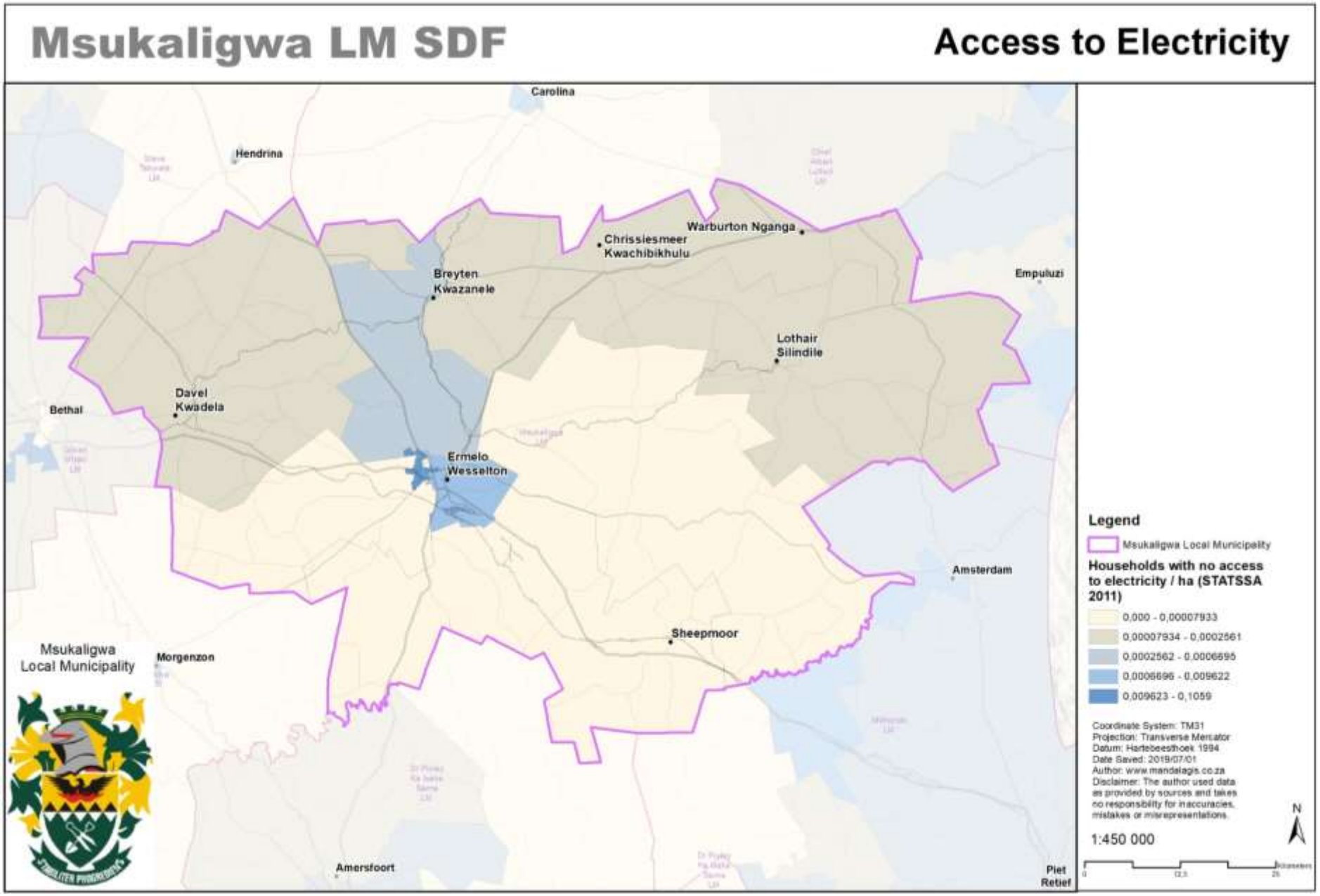
Eskom's coal-based Camden Power Station is located in Msukaligwa south of Ermelo, supplying electricity into the national grid.

The main electricity network is shown on **Map 66: Electricity Network**, and concentrations of households without electricity is shown on **Map 67: Access to Electricity**.

[36] Msukaligwa Draft IDP 2019-20



Map 66: Electricity Network



Map 67: Access to Electricity

4.4.9 Information Technology

As in most rural areas, limited access to information technology persists in Msukaligwa. In 2011, only 34.6% of people in Msukaligwa had access to the internet[37] (no more recent information available). In 2011, only 6.6% of people had access to land lines. Over 90% of people however had access to cell phones, and it can be assumed that in recent times since 2011 many people would have access to smartphones which could give internet access if affordable data coverage was available.

The figure to the right gives an indication of the extent of data coverage by two major service providers.

While most of Msukaligwa is covered by 3G data services, higher speed LTE provision is much lower. No optic fibre cable was available in the area at the time of writing.

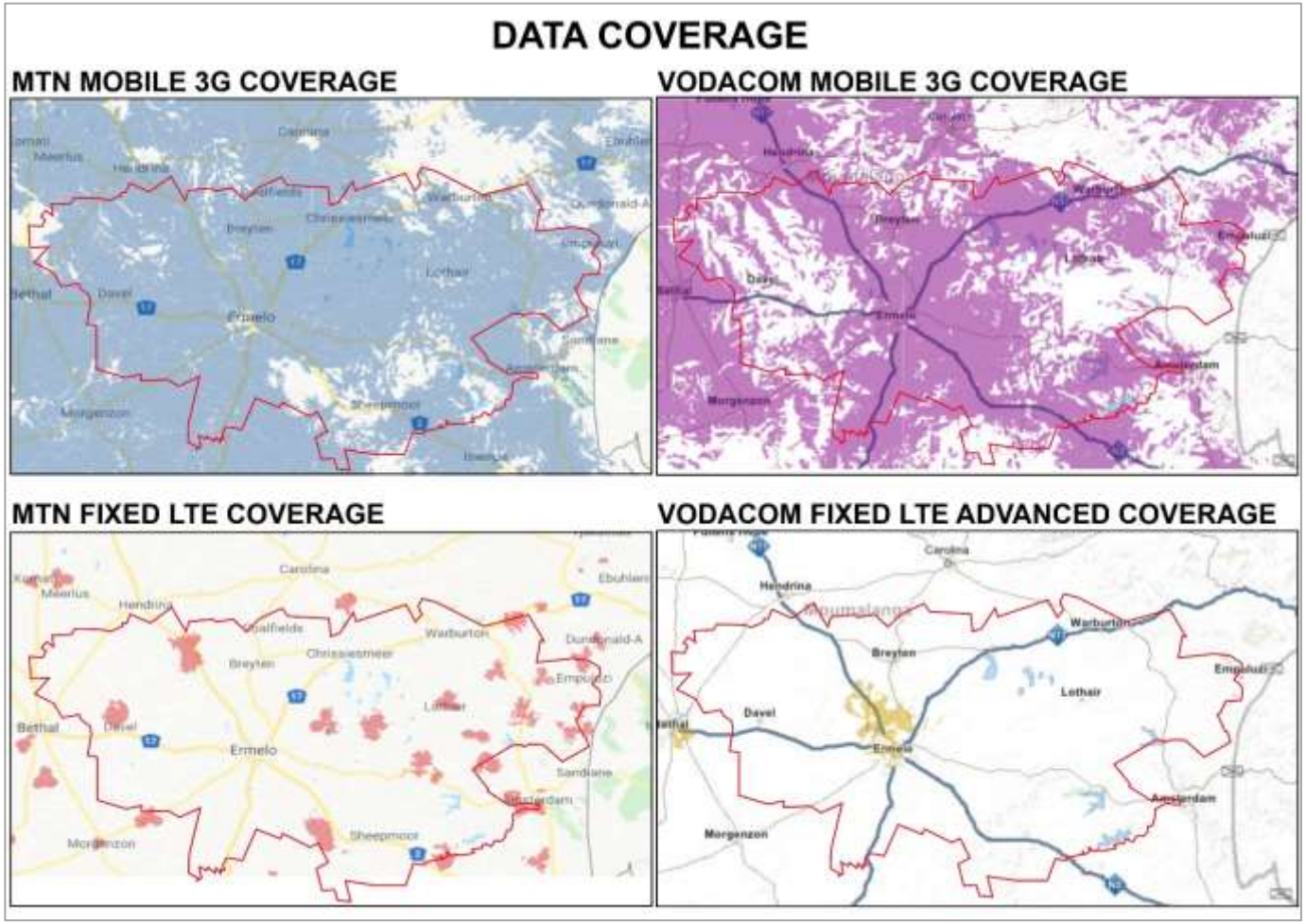


Figure 22: Data Coverage

[37] StatsSA Census 2011

5 SYNTHESIS SPATIAL ISSUES AND OPPORTUNITIES

5.1 SWOT Analysis

In summary, the strengths, weaknesses, opportunities and threats emerging from the analysis are the following:

STRENGTHS	WEAKNESSES
✓ Rich natural resource base – minerals, high potential agricultural land, water resources, natural environment (lakes region) ✓ Established nodal structure as basis for rural service centres and economic activity ✓ Ermelo / Wesselton: location at regional transit point ✓ Social services already concentrated in nodes with only few gaps remaining ✓ Established movement infrastructure (road and rail) ✓ Progress on addressing basic services backlogs (water, sanitation, electricity)	X Typical rural population distribution making it difficult to reach people with services: households outside of nodes living in dispersed manner across wide spatial area with low population densities X Apartheid era internal settlement distribution remains (main town and former 'township') X Limited bulk service capacity; substantial investment required to sustain population growth and support economic growth X Remaining service backlogs (water, sanitation, refuse removal) X Limited IT access X Increasing poverty levels X Relatively low skills levels; declining functional literacy X Lack of land use management mechanisms (SPLUMA implementation not completed)

OPPORTUNITIES	THREATS
⊕ National projects to enhance regional links may strengthen the locational advantage of Ermelo / Wesselton ⊕ Migration into towns – more concentrated population means easier service provision, more connectivity, creating economic potential ⊕ Publicly owned land in and around towns – opportunity for spatial restructuring ⊕ Potential for tourism: cultural and natural assets ⊕ Potential for larger scale beneficiation supported by current nodal structure and transport links ⊕ Legislative investment by mines (social and labour plans): opportunity for service provision and socio-economic development	∇ Declining coal reserves threatens mining economy and employment; related industries; transport industry. ∇ Global and national move away from carbon based economy will lead to decline in mining, coal power generation economy and employment; related industries; transport industry ∇ Competing land uses – mining, agriculture, urban expansion, conservation ∇ Climate change – decreased rainfall and increased temperatures will have impact on agriculture, forestry and settlements ∇ Migration into especially Ermelo / Wesselton – pressure on housing, services and amenities ∇ Population growth exceeding expected and current economic growth ∇ Lack of clarity and lack of progress regarding land reform creating investor uncertainty

Table 22: SWOT Analysis

5.2 Priority Issues

The above analysis lead to the emergence of four key priority issues centred on natural resource management and human development. These are:

5.2.1 Strategic Water Source Areas

Msukaligwa is part of catchment areas which are classified as strategic water source areas at a national scale. The preservation and sustainable use of these water souces is becoming increasingly important in view of climate change. Decisions about the future development of the area should take cognisance of this issue, and not sacrifice long term water security in favour of meeting short term economic or development targets.

5.2.2 Conflicting Land Uses

Management of conflicting land uses for protection of ecosystem services for future economic diversification is a priority in Msukaligwa. This issue is related to the protection and management of natural resources, one of which is the strategic water sources. Msukaligwa is richly endowed with natural resources including water, high potential land, minerals and sensitive ecosystems that occur in attractive natural landscapes. However, these natural resources and the demand to exploit them spatially overlap. Coal deposits occur in environmentally sensitive areas with high potential agricultural land. Similarly, high potential land occur in regions where it may impact on the sensitive hydrological system. As key focus of spatial planning should be the identification of conflict area and ensuring management of impact on a case-by-case basis.

5.2.3 Reliance on Carbon Economy

Currently, the area's economy has a substantial reliance on coal mining. This not only refer to direct contribution by mines to economic output and employment, but also the related industries that form part of the mining value chain. This includes transport and related services. In addition to coal mining, the area also hosts the Camden Power Station. The eventual decline of the mining sector and coal-based power generation, based on declining coal deposits and a move away from a carbon-based economy, is a long term certainty for the area. Emphasis in spatial planning should be on creation of opportunities to diversify the economy to lessen the impact of the decline.

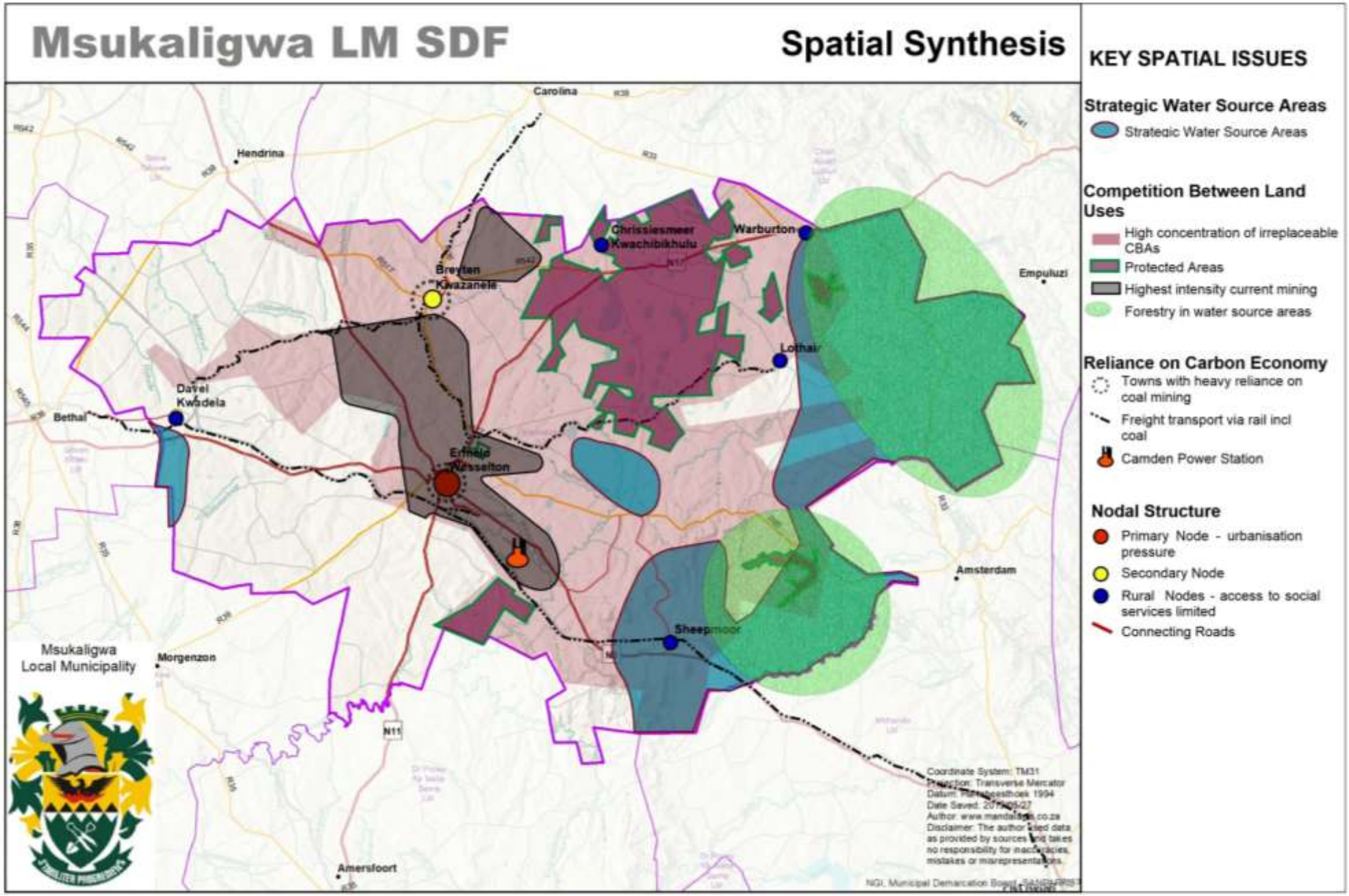
5.2.4 Role of Settlements in Quality of Life

The way human activity is organised and concentrated across space has an impact on quality of life in various ways. Spatial structure has socio-economic implications such as accessibility of basic and social services, social integration between racial and income groups, and facilitating economic opportunity. In Msukaligwa, the dual challenge exists of a dispersed rural population with low access to opportunity and services, while especially Ermelo / Wesselton is facing the pressure of rapid urbanisation causing pressure on service delivery.

The urbanisation also has the danger of reinforcing historic disjointed spatial structure of towns if not managed correctly. Some of the challenges and opportunities inherent to this integrated developmental issue are:

- Developing service delivery models for both dispersed rural areas and rapidly growing towns
- Using urbanisation and service delivery as a way to stimulate economic activity
- Harnessing the dividend presented by higher concentration of people, e.g. more opportunity for economic diversification, higher levels of access to education and skills development programmes, etc.
- Managing urban sprawl to protect natural resources, and managing the impact of mining on human settlements.

The key issues are indicated on **Map 68: Spatial Synthesis**.



Map 68: **Spatial Synthesis**

6 SPATIAL DEVELOPMENT FRAMEWORK

6.1 Vision

Msukaligwa, a **diversified, vibrant rural economy** that make optimal use of **natural resources**, supported by a **well-connected network of sustainable rural service and economic nodes**, where **people** have access to services and economic opportunity.

6.2 Spatial Objectives

The following objectives will guide the spatial framework for Msukaligwa:

1 - Provide a spatial structure that facilitates access to services for all communities

2 - Protect strategic water sources and sensitive eco-systems

3 - Provide space for the diversification of the local economy

4 - Eliminate past spatial settlement patterns

6.3 Spatial Concept

The spatial concept for the future development of the area is based on strengthening the current network of settlements and ensuring relevant levels of service delivery in each level of settlement. Space should be provided in each settlement to accommodate residential expansion and intensification, as well as space for extension of non-residential uses that can contribute to economic development and employment.

The spatial concept is shown below:

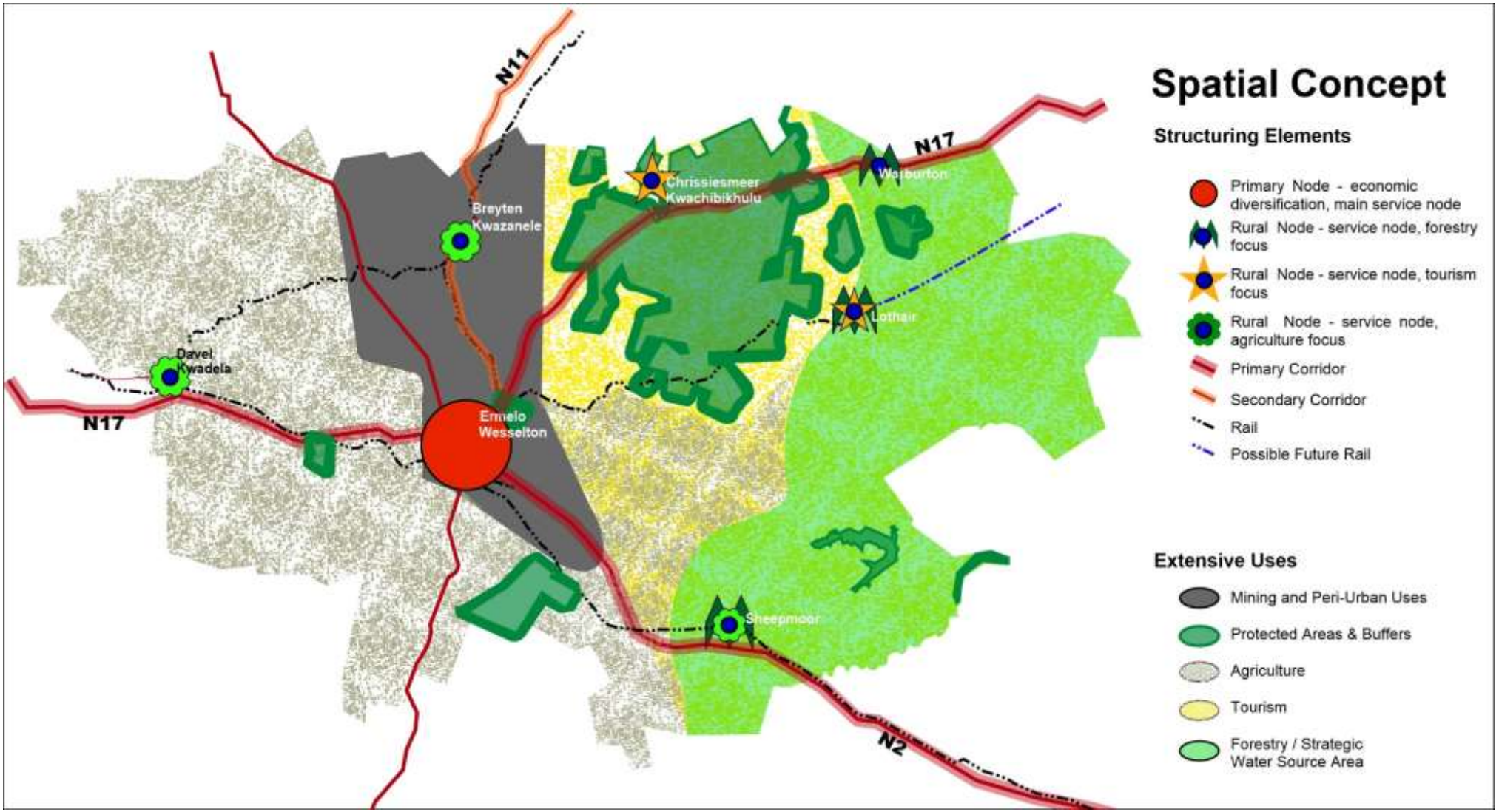


Figure 23: Spatial Concept

The elements of the spatial concept are as follows:

Element	Description
Structuring Elements	
Primary Node: Ermelo / Wesselton	The main urban node in Msukaligwa should be strengthened to fulfil it role as the main service node for its own and the surrounding population, providing the highest social services. It also presents an opportunity for economic diversification due to the its existing presence as the dominant regional node, being the main attraction point for urban migration, and its location at a convergence point of regional movement lines (road and rail).
Rural Nodes: Agriculture / Mining: Breyten / Kwazanele Tourism / Conservation: Chrissiesmeer / Kwachibikhulu Forestry: Warburton Forestry / Tourism: Lothair Forestry / Agriculture: Sheepmoor Agriculture: Davel /Kwadebe	In line with the Provincial SDF, the remainder of the settlements in Msukaligwa is regarded as rural nodes (small towns). In addition to being lower level service centres for their own and surrounding rural communities, each rural node has a specific economic niche focus area centred on mining, agriculture, forestry, tourism and conservation. Each of the rural nodes should act as an anchor point in terms of its specific economic focus.
Primary Corridors: N2, N17	The main corridors are the N2 and N17 that links Ermelo / Wesselton to national various inland development nodes with ports (harbours and border posts). A development model focussing on the development of nodes along these corridors are proposed, in order to intensify development at specific points and achieve economies of scale.
Secondary Corridor: N11	The N11 is less prominent than the primary corridors, but still plays a significant role in linking Breyten and Ermelo to Middelburg and agricultural nodes further to the north (e.g. Groblersdal and Marble Hall) and to the south (Volksrust).
Extensive Uses	
Protected Areas	The sensitive ecosystems in the lakes region have formal protection status. In addition to its environmental role, this area is the main tourist attraction / destination in Msukaligwa. No development or human activity that could be damaging should be permitted in this area, including agriculture and mining.
Forestry / Strategic Water Source Area	The eastern part of Msukaligwa is characterised by existing forestry activities. It is also however a nationally important strategic water source area. The forestry and scattered commercial agriculture in this area should be managed to protect

Element	Description
	the water sources. Long term protection of water sources should be prioritised over short to medium term economic gain, especially in view of climate change risks. No expansion of human activity in the area is recommended.
Mining / Peri-Urban Uses	The coal mining belt that traverses the central parts of Msukaligwa still makes an economic contribution to the region and country. It includes the Camden coal-fired power station south of Ermelo. Over the longer term, rehabilitation of mining areas and a range of alternative peri-urban uses should be considered for this area in view of a decrease reliance on coal.
Commercial Agriculture	Currently commercial agriculture occurs throughout many parts of Msukaligwa, and various area are also included as agricultural focus area in current rural development plans. Some of the current agriculture however occurs in areas that has moderate to low land capability. Agricultural practices may also be threatened by rising temperatures and more extreme weather conditions. The focus of development in these areas should be the development of drought-resistant crops and farming practices tailored to cope with changing climate patterns, as part of the Agri-Park initiative by the DRDLR.
Tourism	The cultural heritage areas in and around Chrissiesmeer, the lakes region and to an extent the forestry region provides marketable tourist destinations. Historic, eco- and adventure tourism strategies should be pursued in these areas.

Table 23: Concept Elements

6.4 Spatial Strategies

The spatial strategies towards achieving the concept and spatial objects are the following:

1 - Solidify a connected network of economic and service centres – in order the achieve efficiency in service delivery and investment while at the same time ensuring that communities have access to social services, it is proposed that the current network of settlements be strengthen to fulfil their respective roles as different levels of service centres. It is proposed that highest order services be limited to the main node, while more basic social services be decentralised to the rural nodes.

2 - Protect the regional open space network is the interest of sustainability and in support of tourism: regionally significant open spaces and strategic water source areas should be delineated and protected.

3 - Delineate focussed rural production areas: The rural hinterland should be assigned specific economic functions to ensure focused investment and support efforts to optimise economic benefits.

4 - Plan for integrated human settlements at a local scale: Local frameworks should guide the development of higher intensity, integrated human settlements and combat continued segregation and sprawl.

6.5 Spatial Framework

The spatial framework will consist of various parts, each indicated specific spatial aspects, which will be combined into a single spatial development framework. The spatial framework is informed by the objectives and spatial strategies, with the spatial concept serving as the long-term spatial vision for the area.

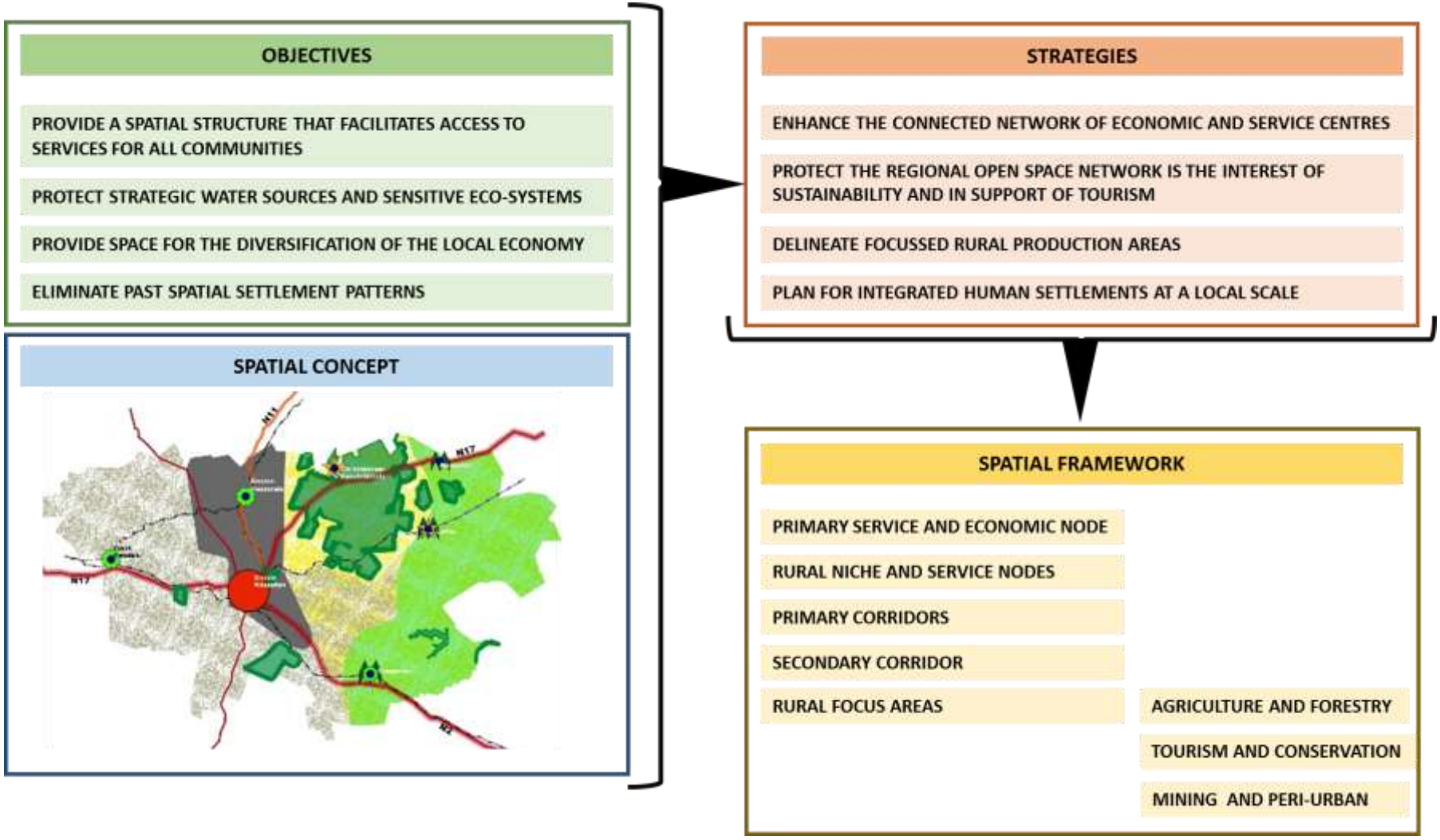


Figure 24: Spatial Framework Components

6.5.1 Nodal Structure

It is proposed that the nodes in Msukaligwa are classified according to the following criteria:

- Level of social service
- Economic focus
- Nodal Hierarchy

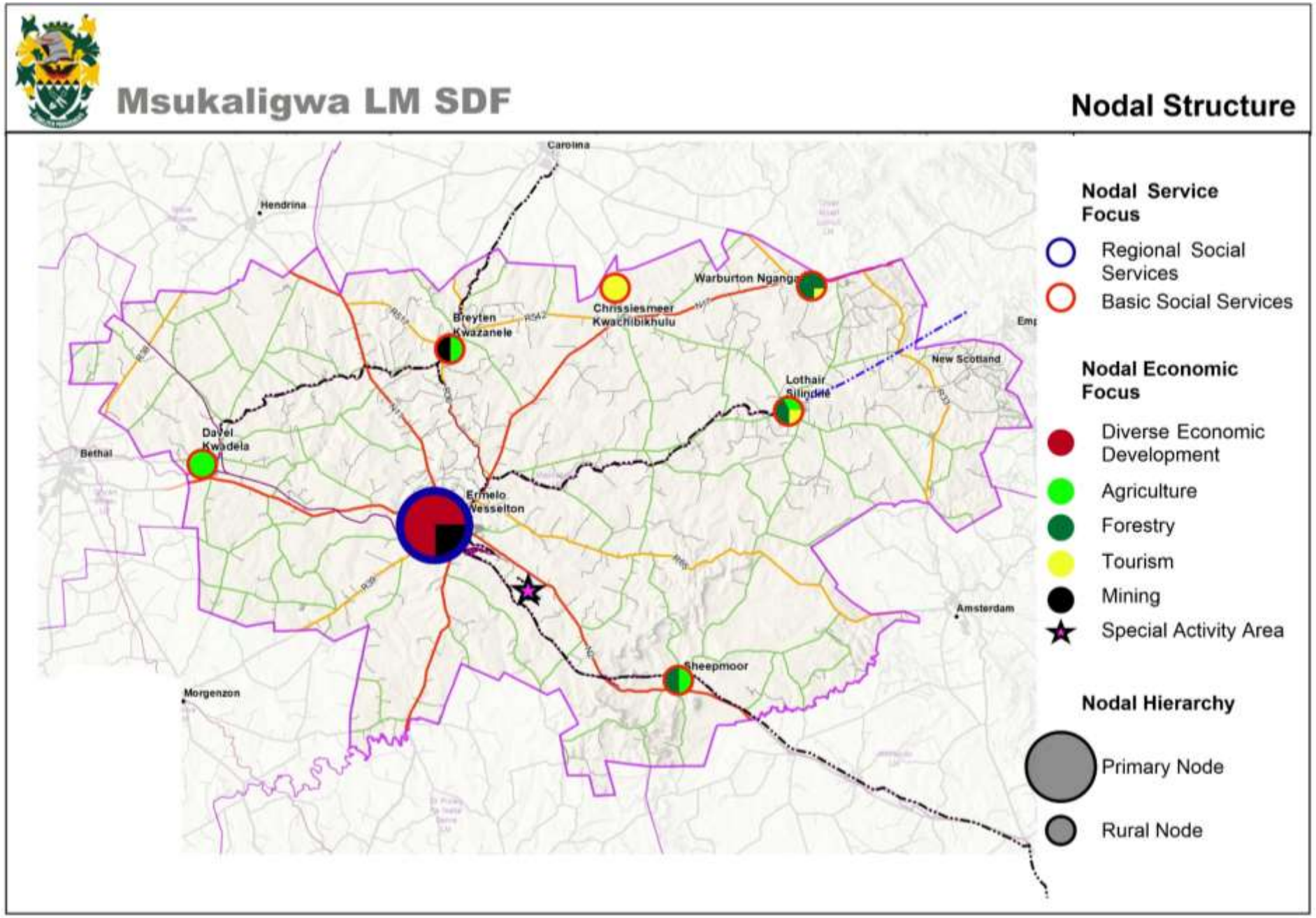
The nodes are classified as follows:

Node	Level of Social Services	Economic Focus	Nodal Hierarchy
Ermelo / Wesselton	Regional social services Basic social services for population in node	Diverse economic development Mining	Primary Node
Breyten / Kwazanele	Basic social services	Mining Agriculture	Rural Node
Chrissiesmeer / KwaChibikhulu	Basic social services	Tourism	Rural Node
Warburton / Nganga	Basic social services	Forestry Tourism	Rural Node
Lothair / Silindile	Basic social services	Forestry Agriculture Tourism	Rural Node
Davel / KwaDela	Basic social services	Agriculture	Rural Node
Sheepmoor	Basic social services	Forestry Agriculture	

Figure 25: Nodal Structure

The nodal classification of Msukaligwa is shown on **Map 69: Nodal Structure** below.

In the section following the map, more detailed guidance will be provided for each node.



Map 69: Nodal Structure

Primary Service and Economic Node: Ermelo / Wesselton	
Focus Area	**Strategic Direction**
Function	• Provide higher order services to the growing urban population, as well as the rural catchment area surrounding the node. • Provide space for economic diversification and higher intensity economic development, with a focus on agriculture and related activities, mining, utilities and power generation, as well as transport and logistics. Support should also be provided to industrial and commercial uses, as well as business incubation centres and innovation centres, training facilities and educational institutes • Provide medium to higher density residential accommodation for the growing urban population
Service Area	• An area with a radius of approximately 40 km around the node, including the rural nodes in Msukaligwa and extensive rural land uses (agriculture, forestry, conservation and tourism, mining and energy generation)
Range of Services	• As a regional service centre, a range of basic and higher order social services should be provided for the resident population as well as the larger region. Basic social services include medical facilities, schools, libraries, internet labs, community sports facilities, community halls, and Thusong centres including pension pay points. Higher order services include branch offices of national departments, municipal offices, magistrate's court, hospital/s, tertiary education (colleges, ABET centres, etc), regional sports facility / stadium, business support centres, etc.
Spatial Framework	
Mixed use central core area	• It is proposed that adequate space be provided for residential densification and the establishment of high intensity non-residential uses, excluding industrial uses. • This would involve the possible redevelopment of some parts of the mid-town areas, as well as established low density residential areas surrounding the current town centre. • It is also proposed that the mixed use core be extended towards Wesselton to ensure a more integrated, connected urban form
Residential areas and local nodes	• Medium density infill should be promoted in residential areas, to prevent continued sprawl and more efficient service delivery. • Social services such as schools, community facilities and open space should be maintained. • New social services should be provided in areas where these are currently lacking. • Social services should be concentrated in or around local nodes as indicated on framework map.
Proposed new residential areas	• Expansion areas for new residential development area provided to the north, south and west of established residential areas. • Areas to the east should only be developed once geotechnical studies have determined that undermining does not pose a threat to development. • Low density residential development should be avoided in favour of medium to high density development (e.g. 3- 4 storey walk-ups) • Local nodes should be developed concurrently to residential development
Industrial Areas	• The current industrial area should be revamped and intensified. • Provision is made for extension of industrial uses in the form of light industries and commercial uses.
Urban Edge	• The planned ring road should be treated as the urban edge, with higher intensity infill development taking place within the ring road as opposed to low density sprawl.

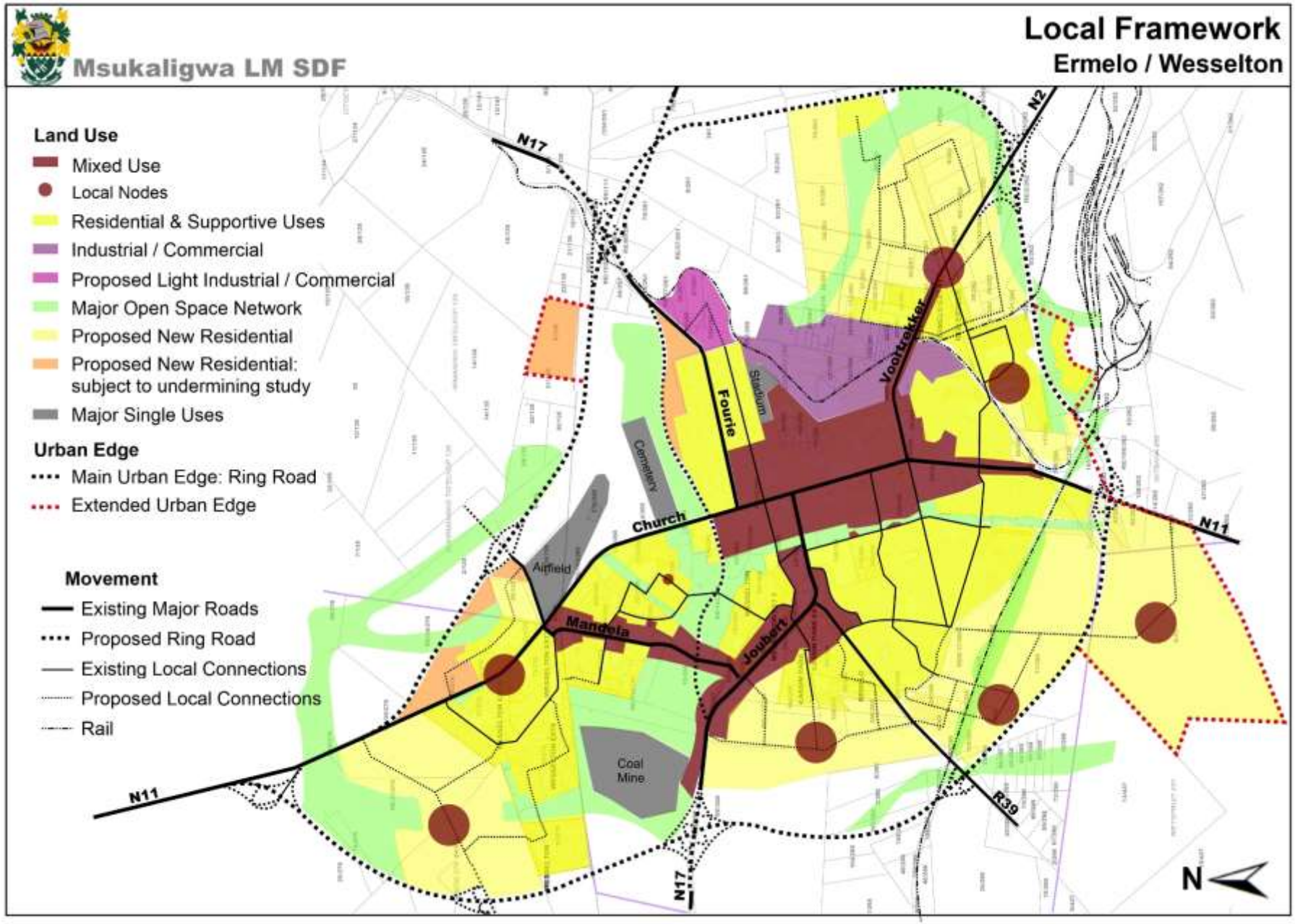
Primary Service and Economic Node: Ermelo / Wesselton	
Focus Area	**Strategic Direction**

	• The only exceptions are:
	  ○ the township Ermelo Ext 44 which already has extended to the south of the ring road. The township boundary should in the case be treated as the urban edge, and
	  ○ human settlement project on portion 8 of Farm Buhrmannns Tafelkop (north of proposed ring road), farm boundary to be treated as urban edge.

Movement	• Internal connectors should be strengthened where existing and established where lacking / included in new developments, as indicated on the framework map

Table 24: Guidelines: Ermelo: Wesselton

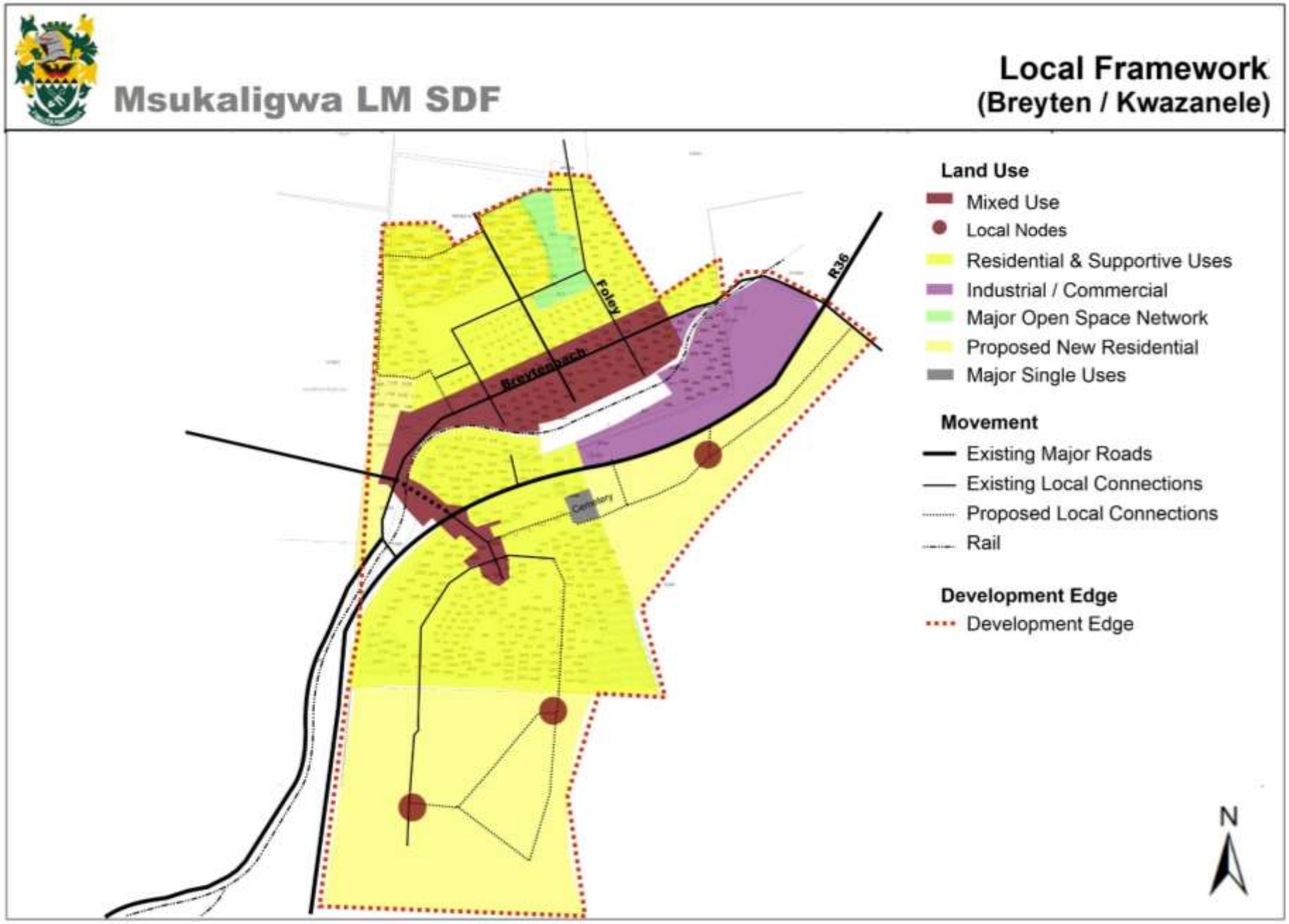
The spatial guidelines for Ermelo / Wesselton is shown on **Map 70: Ermelo / Wesserton** Local Framework below.



Map 70: Ermelo / Wesselton Local Framework

Agriculture / Mining Rural Node: Breyten / Kwazanele	
Focus Area	**Strategic Direction**
Function	• As the second largest settlement in Msukaligwa, provide lower order, basic social services to resident urban population and surrounding rural population. • Located in a current mining area, short to medium term economic development should focus on mining related industries, transport and logistics. The node should also play a prominent role in agricultural production and value addition in future. It is the site of a planned Farmer Production Support Unit as part of the Agri Parks programme. Agricultural focus should be on livestock, maize and deciduous fruits. • Land reform initiatives should be fast-tracked. • Medium density housing should be provided to accommodate a growing urban population.
Service Area	• An area with a radius of approximately 20 km around the node.
Range of Services	• Basic social services, including clinic/s, schools, multi-purpose centre or Thusong centre including a variety of the other services mentioned, pension pay points, library with internet facilities, community hall/s, sport facilities, police station or satellite station, and post office. Due its relative large population size compared to other rural nodes and expected population growth by 2050, a few higher order services such as fire and rescue services, home affairs and labour offices, magistrate court, and adult education and training facilities should be accommodated.
Spatial Framework	
Mixed use central core area	• Adequate space should be provided for residential densification and the establishment of high intensity non-residential uses, excluding industrial uses. • It is also proposed that the mixed use core be extended towards Kwazanele to ensure a more integrated, connected urban form
Residential areas and local nodes	• It is proposed that local nodes providing basic amenities and basic social services be established in existing and planned residential areas, as indicated on the framework map
Proposed new residential areas	• Provision has been made for the extension of residential area within the development edge
Industrial Areas	• The current industrial area in underdeveloped. It provides an opportunity for new development, as well as the development of the Farmer Production Support Unit
Development Edge	• The focus of development should be on intensification of existing development, e.g. redevelopment with higher density residential and infill development on vacant stands. Development should not sprawl beyond the proposed development edge.
Movement	• It is proposed that the existing internal movement network be enhanced, with the emphasis on local link roads as indicated on the framework map.

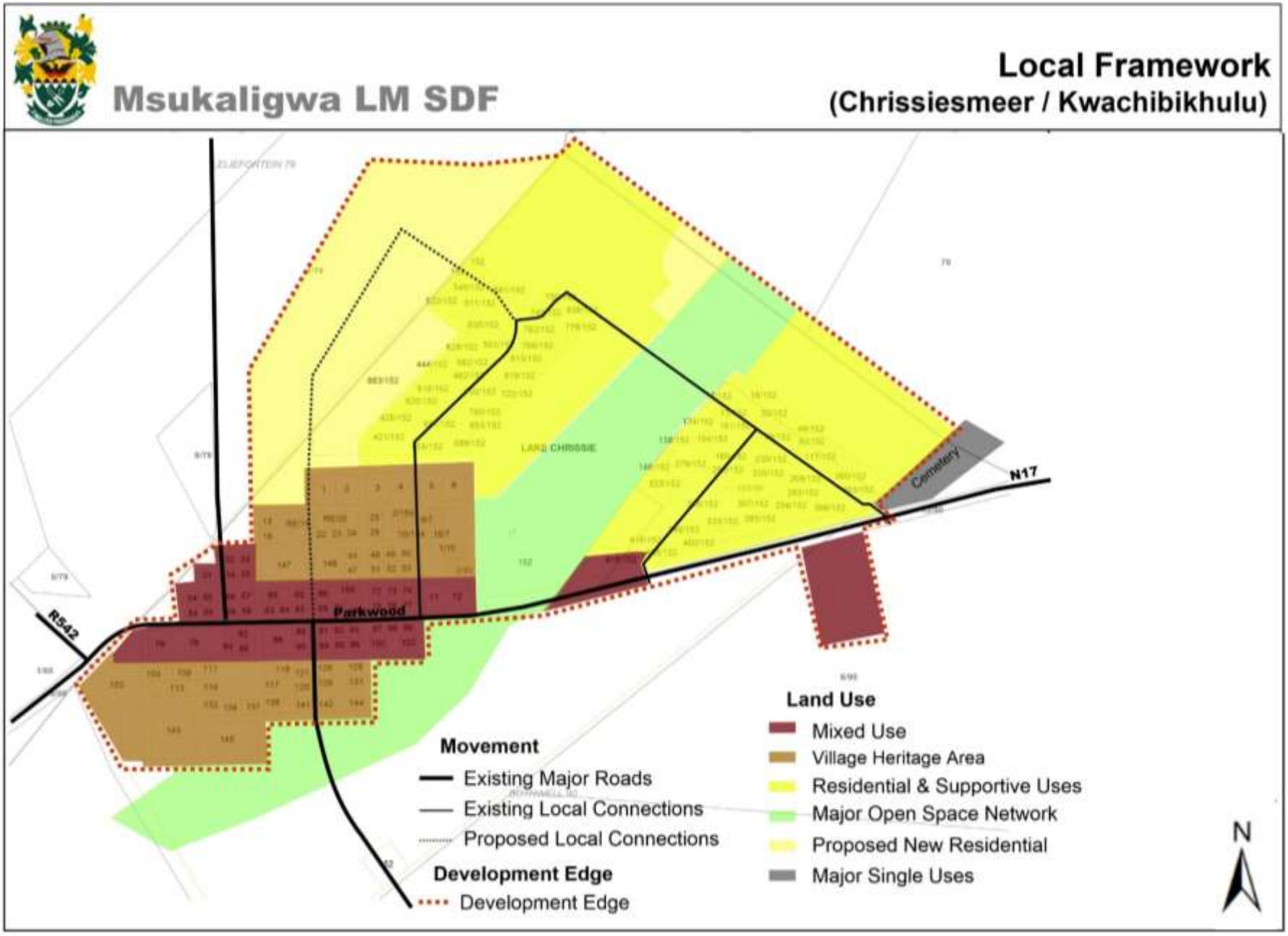
Table 25: Guidelines: Breyten / Kwazanele



Map 71: Breyten / Kwazanele Local Framework

Tourism / Conservation Rural Node: Chrissiesmeer / Kwachibikhulu	
Focus Area	**Strategic Direction**
Function	• The main function of the town is to serve as a tourism destination. It cultural and natural heritage should be protected and managed. • Provision should be made for tourist accommodation, both in the historic town and township areas. • The town is also a small service centre for the resident community and surrounding communities.
Service Area	• An area with a radius of approximately 20 km around the node.
Range of Services	• Basic social services, including clinic/s, schools, multi-purpose centre or Thusong centre including a variety of the other services mentioned, pension pay points, library with internet facilities, community hall/s, sport facilities, police station or satellite station, and post office. Due to its important role as a tourism anchor, the provision of a tourism information centre is important.
Spatial Framework	
Mixed use central core area	• The historic town CBD should be preserved and any new development should be according to its current scale and character. • Development in this area should be intensified according to a detailed urban design plan, focussing on a better definition of the public space and creating more economic opportunity • Provision should be made for a variety of uses focussing on retail, crafts, tourism services, accommodation, restaurants, and similar uses. • Industrial and commercial uses are not recommended
Village heritage area	• Historic buildings should be retained and restored • New infill development should only occur on vacant land and be in line with the existing density and character of the area.
Residential areas	• Existing residential areas should be densified in order to prevent sprawl into the surrounding sensitive landscapes.
Proposed new residential areas	• Provision has been made for the extension of residential area within the development edge
Green belt	• The central green belt is an intrinsic part of the character of the town and should not be further developed / encroached on. • Conservation and active use should be encourage (e.g. similar to hiking trails developed in Clarens), linked to the surrounding conservation areas of the lakes region
Development Edge	• The focus of development should be on intensification of existing development, e.g. redevelopment with higher density residential and infill development on vacant stands. Development should not sprawl beyond the proposed development edge.
Movement	• It is proposed that the existing internal movement network be enhanced, with the emphasis on local link roads as indicated on the framework map.

Table 26: Guidelines: Chrissiesmeer / Kwachibikhulu

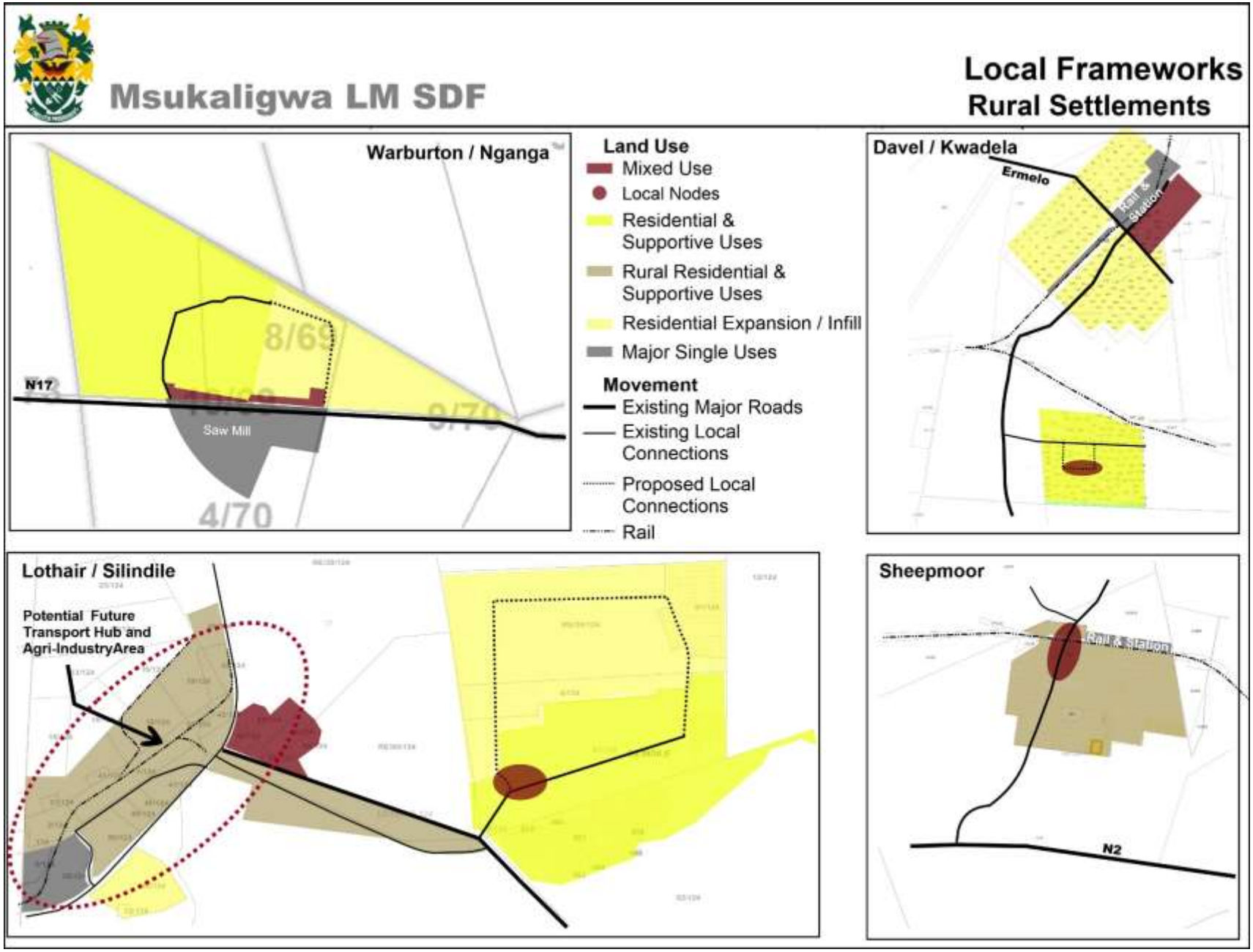


Map 72: Chrissiesmeer / Kwachibikhulu Local Framework

The remaining rural nodes in Msukaligwa are small settlements, which primarily fulfils a service function in the surrounding areas.

Other Rural Nodes	
Focus Area	**Strategic Direction**
Function	• **Warburton**: The key economic activity on which the settlement is relying is forestry. The settlement's reliance on a single sector should be lessened by also tapping into the tourism potential in the area. • **Lothair**: Also located in the forestry area, Lothair has been identified as a potential agricultural node in the Rural Development Plan for the area, with potential for wool and maize farming in addition to forestry. Establishing a facility for wool handling or beneficiation should be considered. The establishment of additional grain silos should also be considered. Settling land claims should be prioritised. Training of emerging / CPA farmer in tree farming would enable them to tap into forestry industry in local area. Should the rail link to Eswatini be realised, the potential exist for creating a transport / logistics focus area and expand agri-processing in the node. • **Sheepmoor:** Identified as a site for the establishment of a Farmer Production Support Unit in terms of the Agri-Park Programme, the economic focus on Sheepmoor is on forestry and agriculture (livestock, grains (maize and beans) and vegetables). Economic initiative such as the establishment of grain silo, training in tree farming and provision of connecting infrastructure should be prioritised. It was also suggested in the Rural Development Plan that a strategy for small agri-villages in forests with Mondi/ Sappi initiative should be investigated. • **Davel / Kwadebe:** The main economic focus of this node is agriculture. Opportunities for beneficiation, additional silos / storage facilities and transport support services should be investigated. • The towns act as small service centres for the resident community and surrounding rural communities. • To ensure access to markets and higher order services, the connectivity of these nodes with the main node (Ermelo / Wesselton) should be strengthened. The upgrade / maintenance of road and rail infrastructure should be prioritised.
Service Area	• An area with a radius of approximately 20 km around the node.
Range of Services	• Basic social services, including clinic/s, schools, multi-purpose centre or Thusong centre including a variety of the other services mentioned, pension pay points, library with internet facilities, community hall/s, sport facilities, police station or satellite station, and post office.
Spatial Frameworks	
Mixed use local nodes	• It is recommended that social services, retail facilities and other economic activities be concentrated in small local nodes within each of these settlements. This will ensure higher levels of access and economies of scale in terms of service provision.
Residential areas	• While these settlements are rural in nature, very low density extensive residential settlement is not recommended. The focus should be on medium density layouts with a regular grid pattern to facilitate service delivery
Proposed new residential areas	• Although the in-migration and population growth is not as high as in the main urban node, provision has been made for the extension of residential areas in each of these rural nodes
Development Edge	• Due to the low intensity development and lack of development pressure, a development edge is not proposed for these setllements.
Movement	• Due to the small size of the settlements, local movement is not a challenge. More important is ensuring physical connections and possibly monthly transport services to the main node.

Table 27: Guidelines: Rural Nodes



Map 73: Rural Nodes: Local Frameworks

Camden Power Station Site (Special Activity Area)	
Focus Area	**Strategic Direction**
Function	• The only area where a new activity nodes is proposed is along the N2 corridor. The Camden Power Station was officially opened in 1967, decommissioned / mothballed in 1989 and recommissioned in 2010. It would be prudent to consider long term development options in the eventual case of the power station be decommissioned should it happen in the long term future. Due to its location along the N2, current rail infrastructure and buildings, the site and possibly buildings should be considered for an alternative heavy industrial use such as mineral beneficiation or alternative power generation (e.g. waste incineration or similar). • The site also includes a residential settlement related to the Power Station consisting of around 350 housing units, with some supportive services, which should be included in detailed planning for the area.
Service Area	• Local residential area only
Range of Services	• Basic social services including mobile clinic, school, and sport facilities.
Spatial Frameworks	
Long Term Future Use	• The exact nature of uses for which the site could be repurposed would have to be the subject of a detailed feasibility investigation which would have to include: o Assessment of environmental degradation and rehabilitation requirements o Existing power station complex: technical assessment of condition and possibilities for retro-fitting for alternative power generation or other alternatives uses o Cost of demolition and complete redevelopment

Table 28: Guidelines Camden Power Station Site

A broad spatial framework is shown on the figure below.

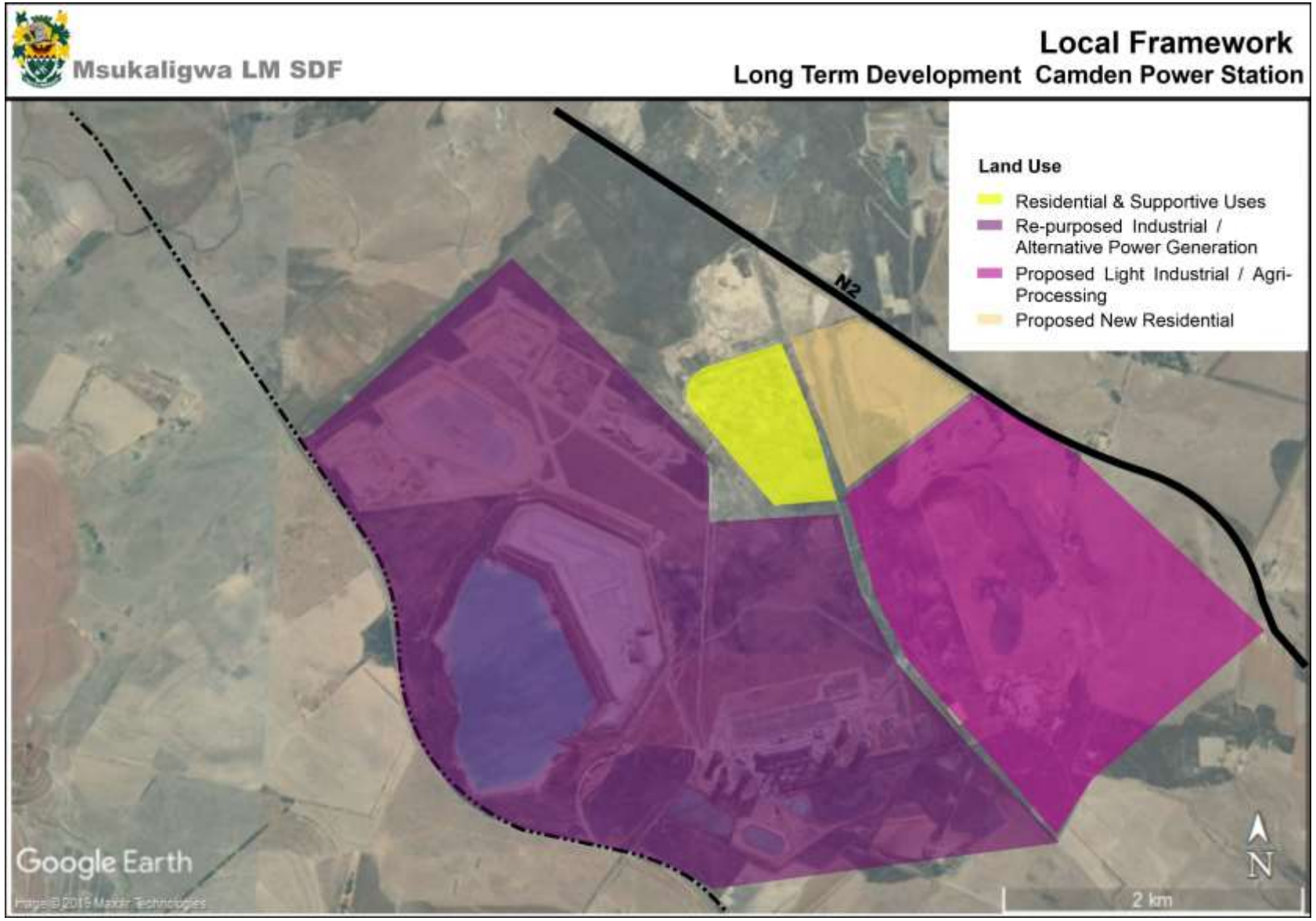


Figure 26: Camden Power Station Site

6.5.2 Corridors

Its regional connectivity is one of the main sources of economic development for Msukaligwa. The main corridors traversing the area from Gauteng to the following destinations are:

- The N17 towards Eswatini
- The N2 towards Richards Bay

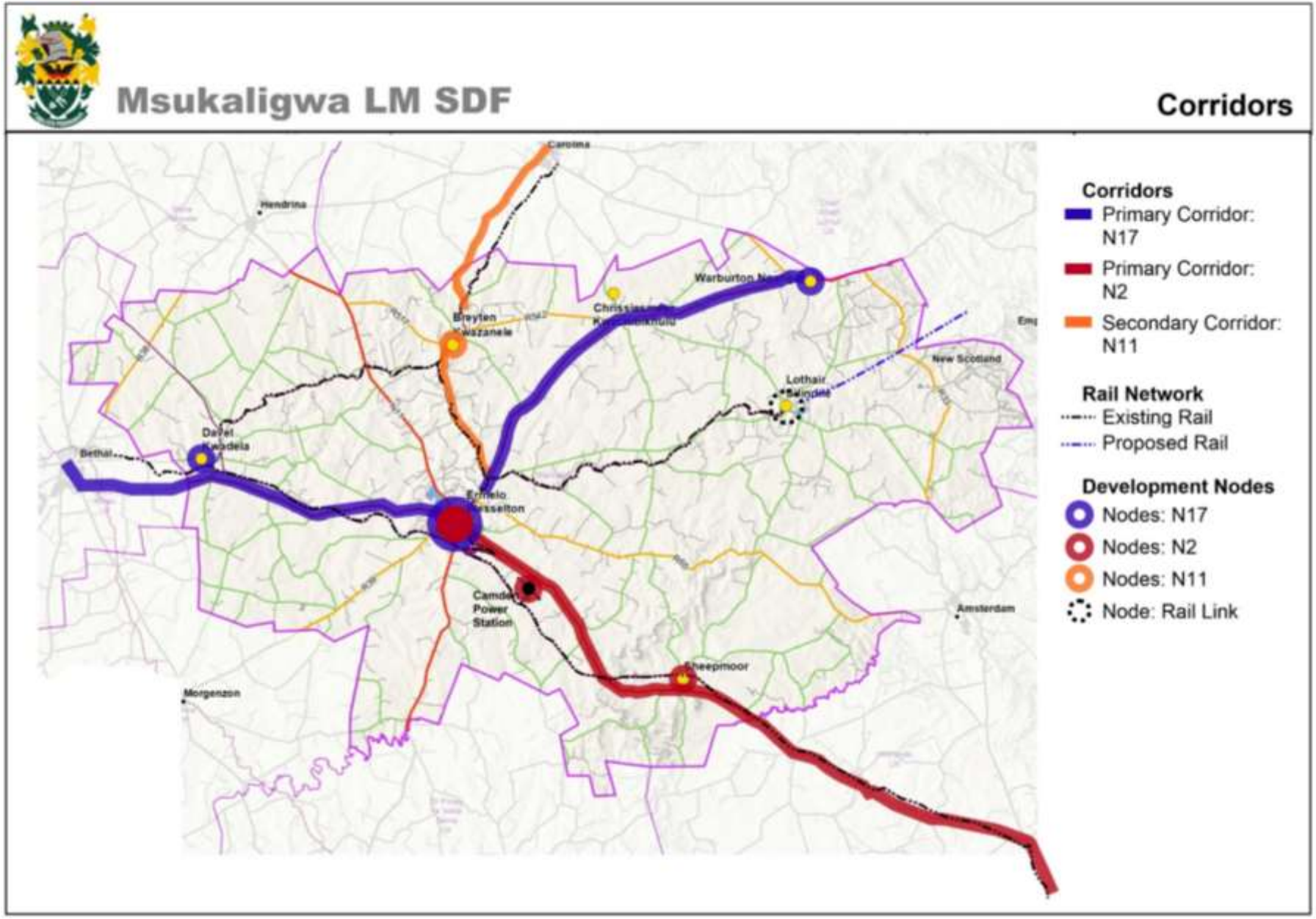
Other corridors include:

- The N11 from Limpopo and providing a link to the N4 Maputo Corridor also links into Ermelo / Wesselton.
- Potentially the planned rail link via Lothair into Eswatini

The development approach proposed for the corridors are as follows:

- Ensure high levels of mobility along the corridors, including (1) regular road and rail maintenance and upgrades as required and (2) prohibiting direct access of high intensity development directly onto the corridors. The main function of the corridors are regional distribution, and this function should be protected in order to support the continued relevance of the corridors.
- Concentrate development in existing nodes as indicated on the map below. The corridors stretch over many kilometres, and the scale of economic activity in the area as well as the need for efficient service delivery means that it will not be feasible to promote high intensity development along the entire length of the corridors. The approach should rather be to provide access to the corridors at specified nodes (e.g. stations, off-ramps, direct passage though nodes), and focus on stimulating high intensity development in the nodes. The economic focus of nodes have already been described in the section above.

Corridors and associated nodes are shown on **Map 74: Corridors** below.



Map 74: Corridors

6.5.3 Agriculture and Forestry Focus Areas

In terms of agricultural development, it is proposed that the recommendations of the District Rural Development Plan for Gert Sibande District Municipality be implemented. The rural intervention areas (RIAs) as indicated on **Map 75: Agriculture and Forestry** below has been identified in this Development Plan. Detailed development initiatives should be formulated in Rural Precinct Plans for each of the Rural Interventions Areas, according to the guidance provided in the District Rural Development Plan. This guidance includes:

The proposals for the RIAs are as follows:

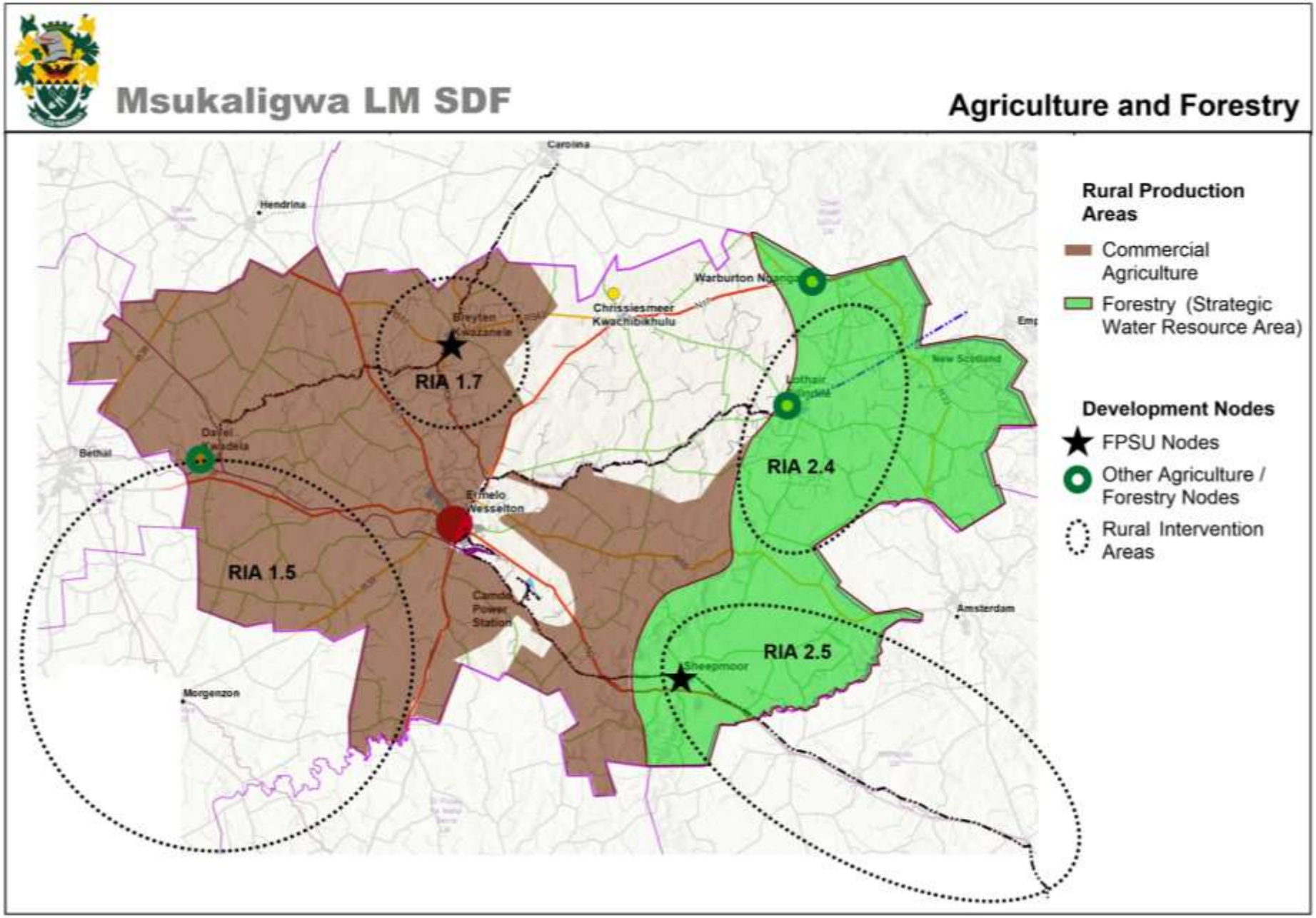
- Rural Intervention Area 1.5:
    - Consolidate activities around Morgenzon where there are a number of land reform initiatives underway (Morgenzon is not located in Msukaligwa but part of the hinterland of this RIA is).
    - Potential for poultry, vegetables, livestock, soya and maize
- Rural Intervention Area 1.7:
    - This is an area of high intensity in terms of Land Reform activity (Breyten node)
    - Mining pressure may increase significantly in future
    - Agricultural activities: livestock, maize, deciduous fruits
    - FPSU proposed in area
- Rural Intervention Area 2.4 (Lothair):
    - Settle land claims in and around Lothair
    - Potential for forestry, wool and maize farming
    - Establish wool handling or beneficiation facility
    - Train CPA farm beneficiaries in productive tree farming
    - Establish black-owned co-op to establish grain silo/ share in TWK silo
- Rural Intervention Area 2.5 (Central Core Forestry Area):
    - Served by Amsterdam, Sheepmoore, and Driefontein FPSU's
    - Forestry activity in core and livestock, grains (maize and beans) and vegetables in surrounding areas
    - Establish black-owned co-op to establish grain silo or give small farmers access to silos at Iswepe
    - Train the CPA farms to farm productively with trees
    - Compile business plans for tree farms with emphasis on how to generate income while trees are maturing
    - Provide crucial infrastructure to CPA tree farms:
        - Transport (transportation of harvested trees to mills)
        - Firefighting equipment
    - Formulate strategy for small agri-villages in forests with Mondi/ Sappi initiative

It is proposed that higher level activities such as the proposed Farmer Production Support Units, agri-processing, logistics (e.g. grain silos), cooperatives, etc. be concentrated in the designated nodes, with a product focus as described for the relevant nodes as above.

The eastern part of Msukaligwa is characterised by existing forestry operations. The same area is however also a nationally important Strategic Water Source Area. While the forestry operations in the area are well established as a source of economic production and employment, the activities should be managed in such a way as to not deplete or pollute to water sources.

The following spatial recommendations are made:

- Human settlement should be concentrated in a few selected areas, in line with the eco-village concept that is currently explored
- Service provision such as sanitation and refuse removal should be prioritised to minimise impact on water quality
- The area should form part of an integrated regional or national strategy towards the protection of strategic water sources
- Sustainable, low-impact tourism should be explored, e.g. limited hiking and camping activities.



Map 75: Agriculture and Forestry

6.5.4 Conservation and Tourism Focus Area

The entire Msukaligwa area is environmentally sensitive and all human activity should be conducted in such a way as to minimise impact. Of special significance is however:

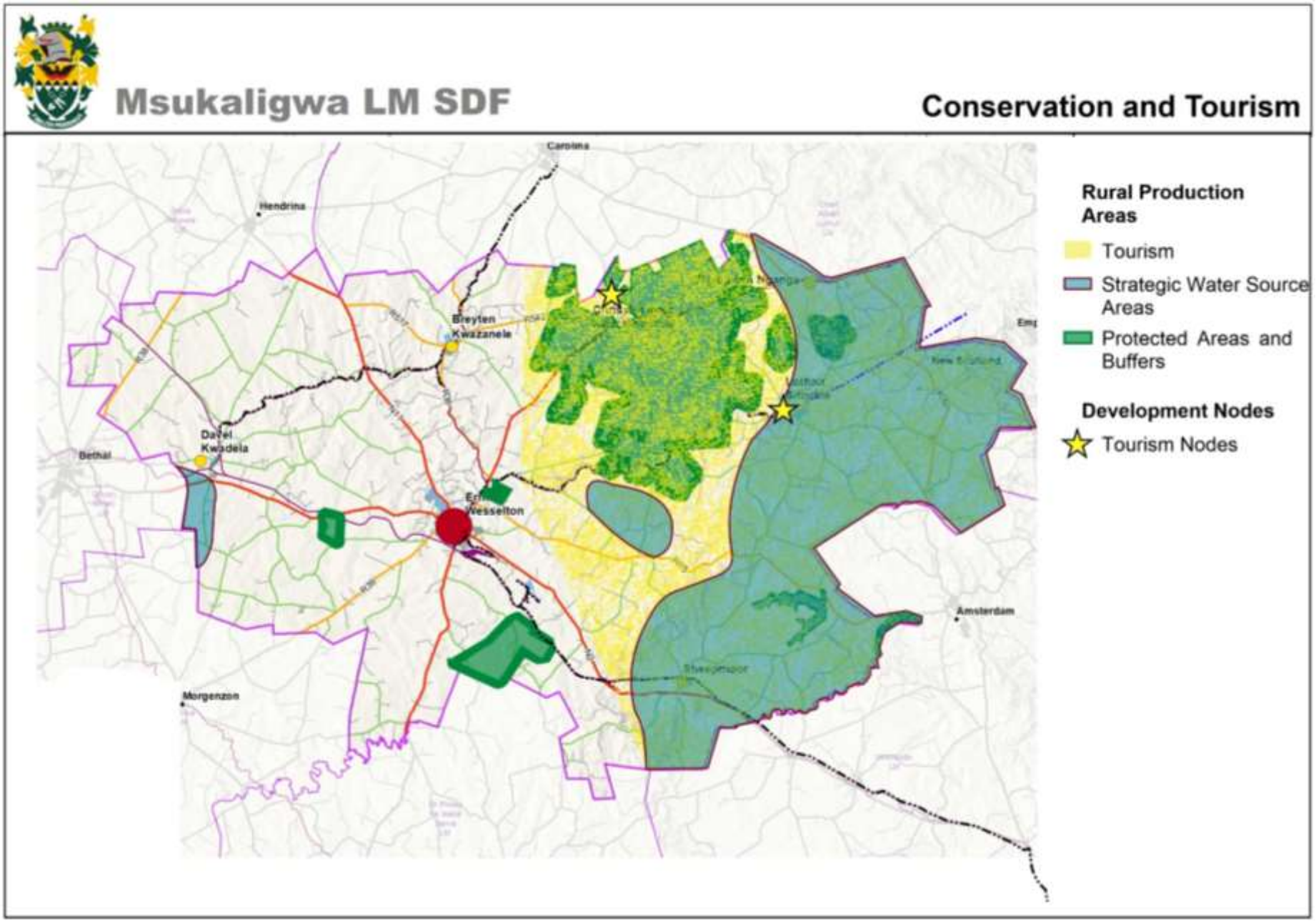
- The lakes region – this natural asset is not only an economic asset for tourism, but also an important ecosystem and an important mechanism to mitigate the impacts of climate change.
- Strategic water source areas and river headwaters – the area makes an important contribution to national water security, and also requires clean water for human development and economic activities such as agriculture. Within strategic water sources area, the protection of the quality of water sources should in all instances be prioritised above any other human activity (e.g. agriculture, mining, forestry or human settlement) or short term economic gain.
- Protected areas – a number of small protected areas exist outside the lakes region. There areas are not only important ecologically, but also from a tourism perspective.

A large number of job opportunities could be created in the tourism sector if correctly marketed. The natural and cultural assets of Msukaligwa, notable the lakes region, has the potential to serve as a major attraction. In addition, the area's proximity to the large markets of Gauteng and good regional connectivity should be harnessed in attracting more local tourists.

The proposed conservation and tourism strategies include the following:

- The development of Chrissiesmeer historical town into a more prominent tourism destination, including themed event/s and more guest accommodation.
- The promotion of nature based tourism such as eco-tourism and hiking trails.
- Promotion of rural guest house/accommodation facilities.
- More focused place marketing as part of a larger Mpumalanga tourism strategy.

Protected areas and tourism nodes and areas are indicated on **Map 76: Conservation and Tourism** below.



Map 76: Conservation and Tourism

6.5.5 Mining and Peri-Urban Uses

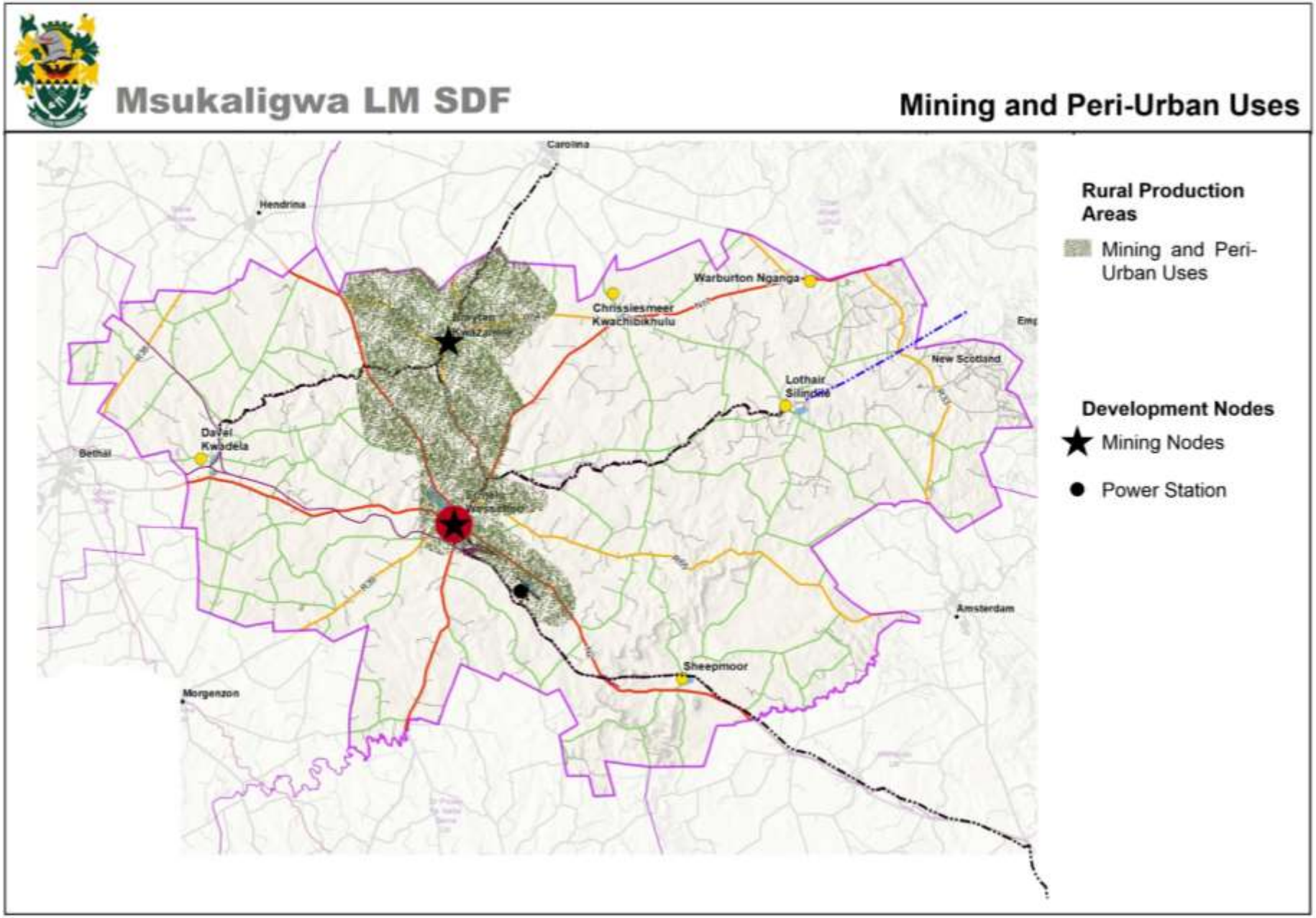
The mining sector still plays a significant part in the local economy, and should be accommodated over the short to medium term. The following is proposed to harness the full potential of mining in the area:

- Joint project implementation: use the IDP process in conjunction with the spatial priorities identified in this SDF to coordinate and consolidate contributions required from mines in terms of their Social and Labour Plans and government projects to uplift local communities and rehabilitate environmental damage.
- Focus on nodes: enhance economic growth by supporting the establishment of supportive services for mining in the identified nodes (Breyten and Ermelo / Wesselton)
- Include mining uses in the wall-to-wall Land Use Scheme of the municipality. This would give the municipality an opportunity to manage the impact of mining on surrounding areas by imposing suitable conditions. It would also enable the demarcated mining uses to be included in other municipal systems such as the valuation roll and billing systems.

The mining belt area also holds other potential that should be harnessed with a long term view of diversifying the local economy to soften the long term impact of eventual decline in mining. Other land uses that should be encouraged in the mining / peri-urban area are:

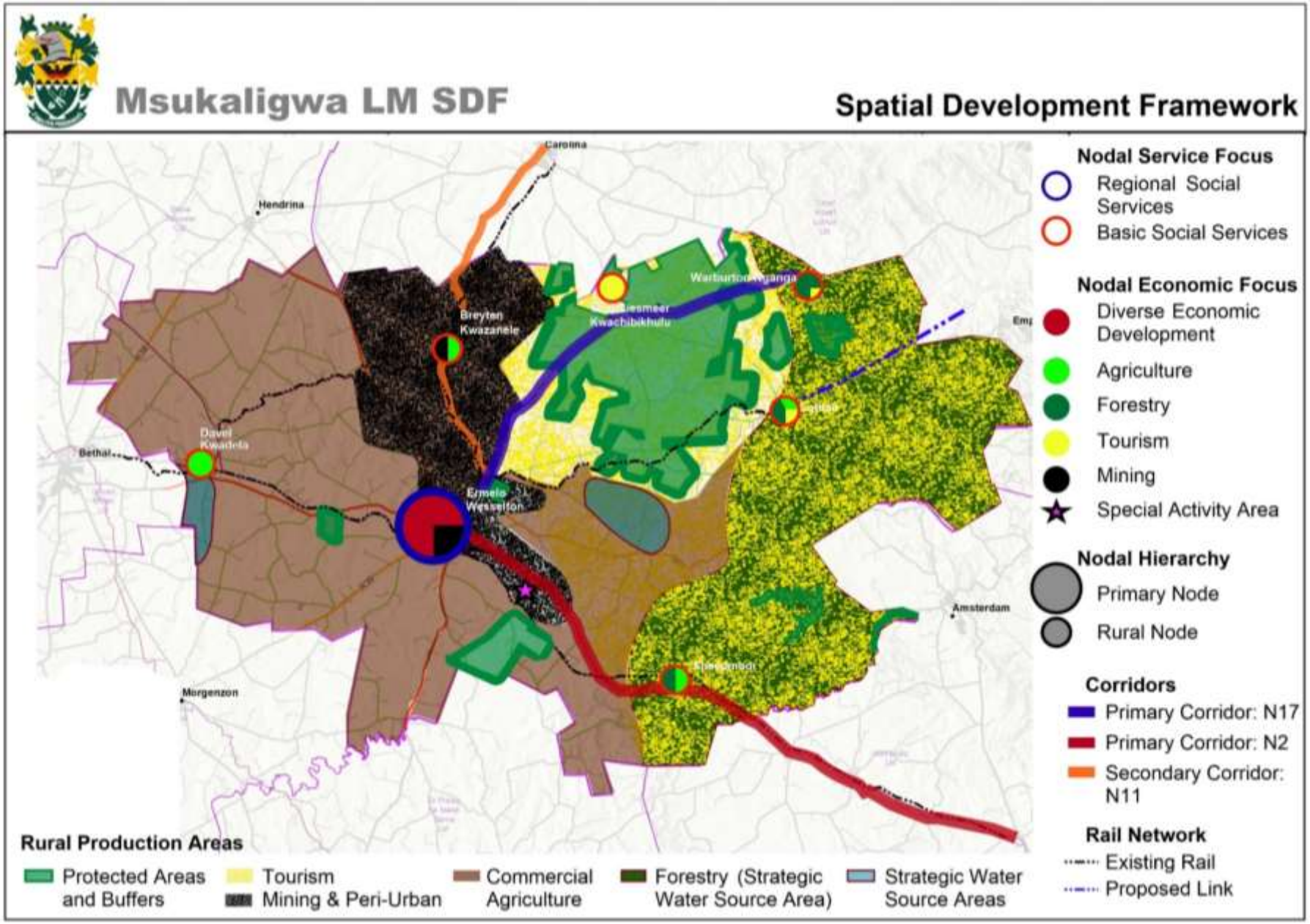
- High intensity small-holder farming: There are some areas of high potential agricultural land within the larger zone that should be used to the optimum as it is close to regional routes and markets
- Local tourism: accommodate near main regional routes north of Ermelo / Wesselton would provide the opportunity for job creation
- Green industries: The existing site of the Camden Power Station and surrounds (south of Ermelo /Wesselton) should be made available for new industrial development in the long term, to manage the long term impact of the Power Station being decommissioned. Existing road and rail infrastructure render the area in the vicinity of the Power Station and the site itself highly accessible creating an opportunity for redevelopment with alternative uses requiring extensive space and good connectivity.

The focus area for mining and peri-urban uses are indicated on **Map 77: Mining and Peri-Urban Uses** below.



Map 77: Mining and Peri-Urban Uses

6.6 Composite Spatial Development Framework



Map 78: Spatial Development Framework

7 LAND USE MANAGEMENT GUIDELINES

The municipality should prioritise the development of a wall-to-wall Land Use Scheme as required by SPLUMA. The approach taken in the Land Use Scheme should be as follows:

- Assign land use categories based on existing uses where there are no existing land use rights (e.g. areas without previous land use schemes) where it is in alignment with the local frameworks
- Prioritise settlements, mining areas and protected areas for assigning of land use rights. All other areas (e.g. extensive agriculture and forestry) can be treated as transitional areas. For settlements where no cadastre exist, prioritise township establishments as part of the formalisation process.
- In order to remain flexible and encourage new development, use broad and simple definitions for land use categories, thus avoiding the need for land use applications for every small change in main land use. For the same reason, include a wide range of secondary uses for each primary land use category, thus enabling land use changes via easier processes.
- Include the urban edge and development edges proposed in the local frameworks in the Land Use Scheme
- Put a system in place to spatially reference the Valuation Roll back to the Land Use Scheme to ensure consistency in valuations and billing

Land use management should also be cognisant of challenges inherent to climate change, and responses should be developed regarding the issues such as the following as part of a new Land Use Scheme:

- Promote increase residential densities of 40 units per hectare or more to increase service and public transport efficiency and limit urban sprawl
- Servicing of new development: Investigate off-grid service solutions especially in isolated rural settlements
- Ensure adequate storm-water systems, to protect both the community and infrastructure from flood damage
- Consider energy-conservation through design, e.g. roof insulation, north-facing windows, overhanging roofs for additional shade in summer, installation of solar energy for housing developments and social facilities, etc.
- Enforce a minimum percentage of linked open space systems in settlements and greening of public spaces with high carbon absorbing and storing species

8 WAY FORWARD

The final part of the SDF will be prepared in the next phase, i.e. implementation guidance.

This section will deal with aspects such as:

- Priority areas for housing provision
- Priority areas for service provision
- Implementation programmes and projects with budget estimates and time frames
- Linkages to municipal systems and processes