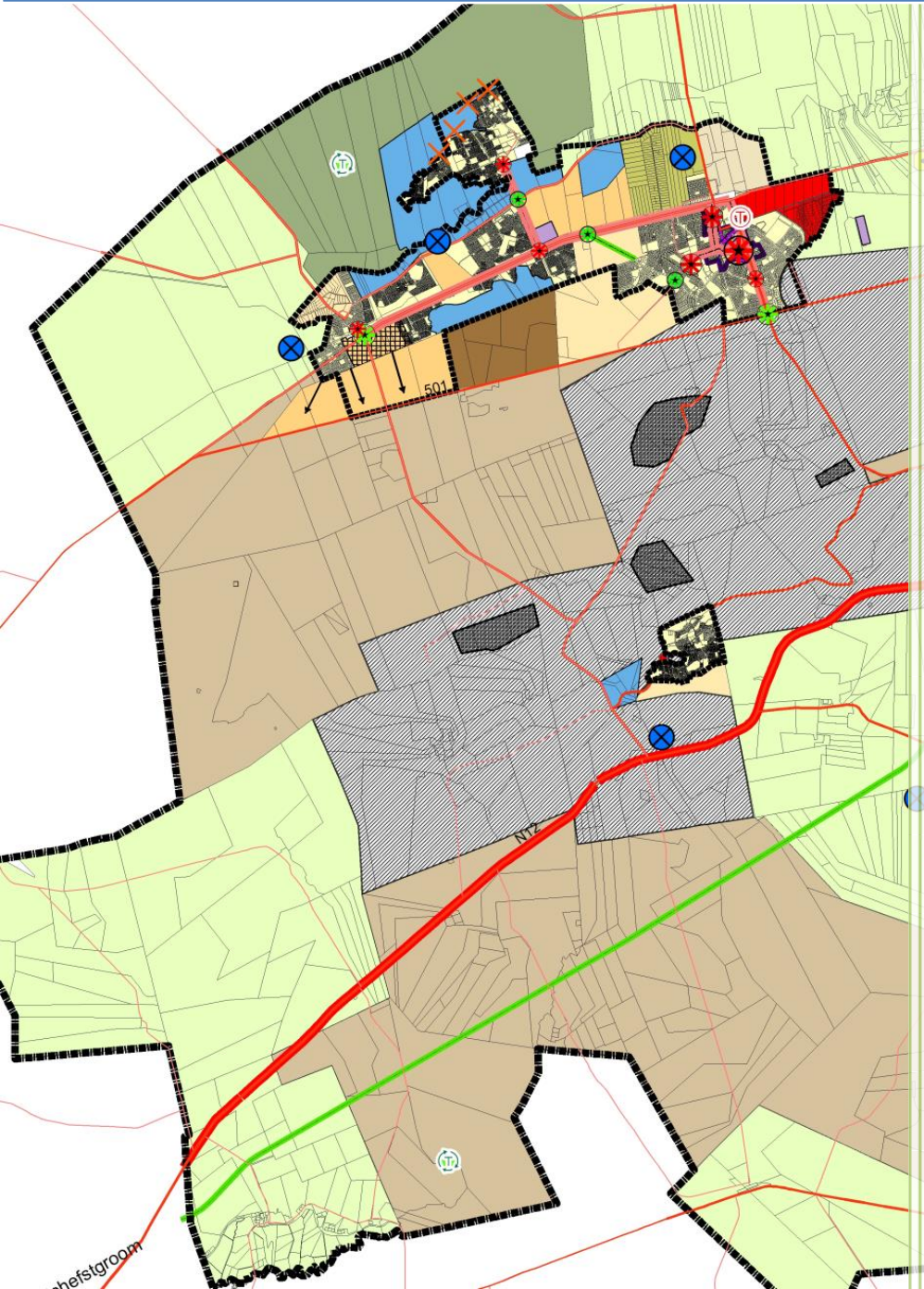


2016

EXECUTIVE SUMMARY OF THE MERAUFONG MSDF

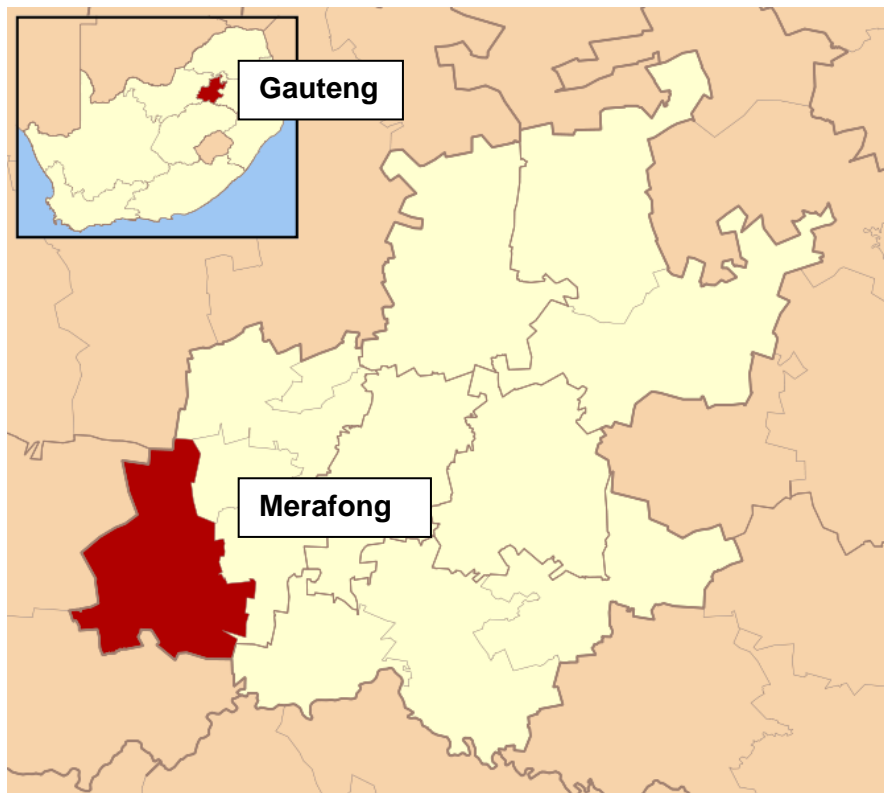


1. Introduction

The Merafong Municipal Spatial Development Framework (MSDF), forms part of a hierarchy of plans feeding into the Integrated Development Plan (IDP). The Spatial Development Framework serves as an input into the IDP and concentrates on the spatial aspects of development planning, whereas the IDP focuses on broader developmental issues.

During 2013 the Spatial Planning & Land Use Management Act (Act 16 of 2013) (SPLUMA) was promulgated this legislation puts forward principles to influence spatial planning, land use management and land development. It also provides for national and regional spatial frameworks as well as provincial and municipal frameworks, meaning that a package of plans will be undertaken from national to municipal level to direct spatial planning as well as land use management, while providing for uniform regulation of land use management. The general principles endorsed by this Act is that spatial planning, land use management and land development must promote and enhance five main Development Principles, namely Spatial Justice, Spatial Sustainability; Spatial Efficiency; Spatial Resilience, and Good Administration.

It is important to note that this summary does not contain all the information that the full report contains and that an executive summary cannot be used to do planning or important decision making.



Merafong City Local Municipality (referred to as the Municipal Area) is located in the southwestern extreme of the Gauteng Province. The municipal area is bordered by Tlokwe municipality and Ventersdorp municipality (North West Province) in the West and Mogale-, Randfontein- and Westonaria municipalities in the north and east.

2. Synthesis of the primary policy documents on a national and provincial level

From the National Development Plan, the National Outcomes and the Gauteng Multi Pillar Program, which are deemed the most important policy directives in Gauteng, 5 broad themes are discernible namely:

1. Economy, Employment And Economic Infrastructure
2. Protection Of The Environment
3. Human settlements, Social Development And Urban Liveability
4. Rural Development
5. Development Oriented Public Service

The synthesis into themes assists with contextualising these policies down to ground level and these themes have been taken up into analysis and strategies that address the analysis. The 5 themes have been summed up very shortly as follows:

| 1. Economy, Employment And Economic Infrastructure | |
|--|--|
| National Development Plan | <p>Objective 3: Economy and Employment.</p> <ul style="list-style-type: none"> ▪ Spatially the focus is on reducing the cost of living, increasing the standard of living of the poor and removing constraints on economic growth and development. <p>Objective 4: Economic infrastructure.</p> <ul style="list-style-type: none"> ▪ In terms of spatial planning the emphasis is placed on consolidating and expanding transport and logistics infrastructure and improving public transport. |
| National outcomes | <p><u>Outcome 4: Decent Employment Through Inclusive Economic Growth</u></p> <ul style="list-style-type: none"> ▪ Output 1: Faster and sustainable inclusive growth ▪ Output 2: More labour absorbing growth ▪ Output 3: Multi-pronged strategy to reduce youth unemployment ▪ Output 4: Increased competitiveness, to raise net exports, grow trade as a share of world trade and improve its composition ▪ Output 5: Improved cost structure in the economy ▪ Output 6: Improved support to small business and cooperatives ▪ Output 7: Implementation of the expanded public works programme <p><u>Outcome 5: A Skilled and Capable Workforce to Support Inclusive Growth</u></p> <ul style="list-style-type: none"> ▪ Output 1: Establish a credible institutional mechanism for skills planning ▪ Output 2: Increase access to programmes leading to intermediate and high level learning ▪ Output 3: Increase access to occupationally-directed programmes in needed areas and thereby expand the availability of intermediate level skills ▪ Output 4: Increase access to high level occupationally-directed programmes in needed areas ▪ Output 5: Research, development and innovation in human capital for a growing knowledge economy <p><u>Outcome 6: An Efficient, Competitive and Responsive Economic Infrastructure Network</u></p> <ul style="list-style-type: none"> ▪ Output 1: Improving Competition and Regulation ▪ Output 2: Ensure reliable generation, distribution and transmission of electricity ▪ Output 3: To ensure the maintenance and strategic expansion of our road and rail network, and the operational efficiency, capacity and competitiveness of sea ports. ▪ Output 4: Maintenance and supply availability of our bulk water infrastructure ▪ Output 5: Communication and Information technology ▪ Output 6: Develop a set of operational indicators for each segment |
| | |

| | |
|------------------------------|--|
| Gauteng Multi-Pillar Program | <ul style="list-style-type: none"> ▪ RE-INDUSTRIALISE GAUTENG AND SOUTH AFRICA: re-build the manufacturing sector in Gauteng, increasing manufacturing output and increasing employment in manufacturing and related up and downstream sectors. ▪ TAKE THE LEAD IN AFRICA'S NEW INDUSTRIAL REVOLUTION: Entrench and expand on Gauteng's status as the Gateway to Africa to realise the economic opportunities offered by the continent. ▪ MODERNISATION OF THE ECONOMY: Focus on economic modernisation through deployment of research, innovation science and green technology ▪ RADICAL ECONOMIC TRANSFORMATION: Interventions in key sectors of the economy to unlock growth and employment potential and bring in blacks, youth and women and revitalise township economy. |
|------------------------------|--|

| 2. Protection Of The Environment | |
|----------------------------------|---|
| National Development Plan | <p><u>Objective 5: Environmental sustainability and resilience</u></p> <ul style="list-style-type: none"> ▪ The focus is on environmental sustainability and resilience in the face of change through an equitable transition to a low-carbon economy, which will also have implications on spatial planning and development in Merafong. |
| National outcomes | <p><u>Outcome 10: Protection and Enhancement of Environmental Assets and Natural Resources</u></p> <ul style="list-style-type: none"> ▪ Output 1: Enhanced quality and quantity of water resources ▪ Output 2: Reduced greenhouse gas emissions, climate change impacts and improved air/atmospheric quality ▪ Output 3: Sustainable environmental management ▪ Output 4: Protected biodiversity |

| 3. Human settlements, Social Development And Urban Liveability | |
|--|--|
| National Development Plan | <p><u>Objective 8: Transforming Human Settlements</u></p> <ul style="list-style-type: none"> ▪ Discusses the spatial planning system of South Africa and focusses on transforming SDFs into spatial contracts that are binding across national, provincial and local levels; encouraging cross boundary planning and cooperation between municipalities and provinces and it also promotes having an explicit spatial restructuring strategy identifying priority precincts for spatial restructuring. <p><u>Objective 12: Building Safer Communities</u></p> <ul style="list-style-type: none"> ▪ In spatial terms, community participation should be increased and design interventions should be implemented where possible. |
| National outcomes | <p><u>Outcome 1: Improve the Quality of Basic Education</u></p> <ul style="list-style-type: none"> ▪ Output 1: Improve the quality of teaching and learning. ▪ Output 2: Undertake regular assessment to track progress. ▪ Output 3: Improve early childhood development. ▪ Output 4: Ensure a credible outcomes-focused planning and accountability system <p><u>Outcome 2: Improve Health and Life Expectancy</u></p> <ul style="list-style-type: none"> ▪ Output 1: Increasing life expectancy ▪ Output 2: Decreasing maternal and child mortality rates ▪ Output 3: Combating HIV and AIDS and decreasing the burden of disease from Tuberculosis ▪ Output 4: Strengthening health system effectiveness <p><u>Outcome 3: All People in South Africa Protected and Feel Safe</u></p> |

| | |
|------------------------------|--|
| | <ul style="list-style-type: none"> ▪ Output 1: Address overall levels of crime and reduce the levels of contact and trio crimes ▪ Output 2: Improve effectiveness and ensure integration of the Criminal Justice System (CJS) ▪ Output 3: Combat corruption within the Justice, Crime Prevention and Security Cluster to enhance its effectiveness and its ability to serve as deterrent against crime ▪ Output 4: Manage perceptions of crime among the population ▪ Output 5: Ensure security at the border environment ▪ Output 6: Secure the identity and status of citizens ▪ Output 7: Integrate ICT systems and combat cyber crime ▪ Output 8: Corruption <p><u>Outcome 8: Sustainable Human Settlements and Improved Quality of Household Life</u></p> <ul style="list-style-type: none"> ▪ Output 1: Accelerated delivery of housing opportunities ▪ Output 2: Improve access to basic services ▪ Output 4: More efficient land utilisation ▪ Output 4: Improved property market |
| Gauteng Multi-Pillar Program | <ul style="list-style-type: none"> ▪ PLANNING OF NEW HUMAN SETTLEMENTS: Modernisation of human settlements through green and high density settlements ▪ MODERNISATION OF PUBLIC TRANSPORT: Planned urbanisation and urban development: Radically improve on better urban planning, public transport. ▪ DECISIVE SPATIAL TRANSFORMATION: Through public transport and new sustainable and integrated human settlements and new cities. ▪ ACCELERATING SOCIAL TRANSFORMATION: Modernise education and build smart schools; improve quality of care and modernise health institutions and rollout NHI; tackle urban poverty and social development challenges; dramatically improve community safety. |

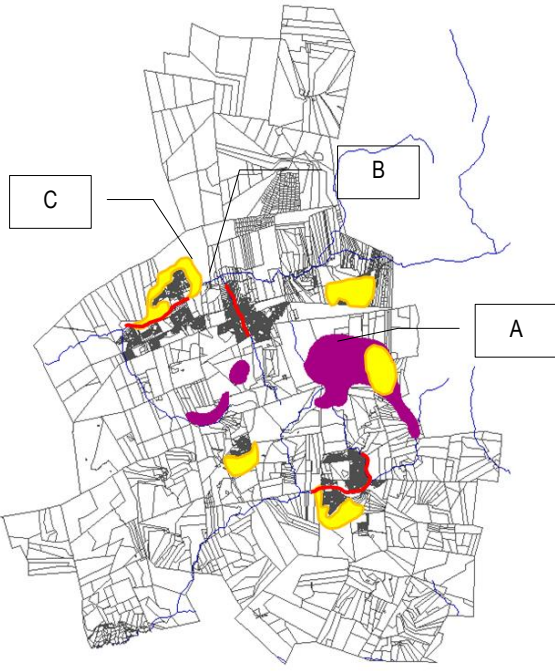
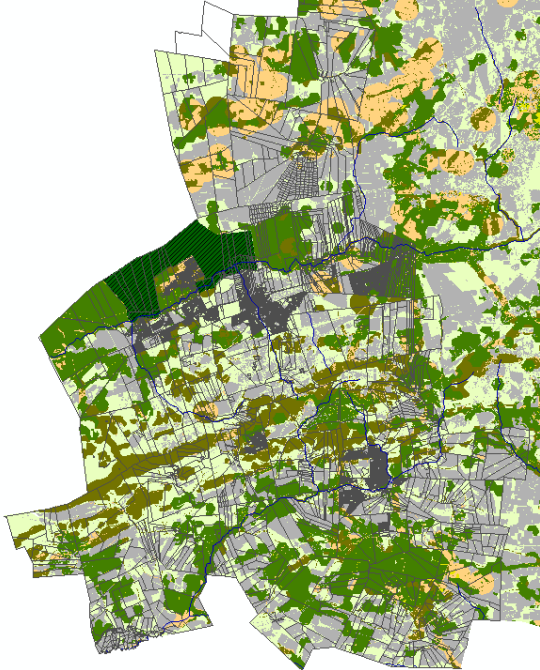
| 4. Rural Development | |
|---------------------------|--|
| National Development Plan | <p><u>Objective 6: Inclusive rural economy</u></p> <ul style="list-style-type: none"> ▪ A more inclusive rural economy can be established through integrated rural development. Spatially the focus is on research and the development of adaptation strategies for the protection of rural livelihoods and expansion of commercial agriculture. |
| National outcomes | <p><u>Outcome 7: Vibrant, Equitable and Sustainable Rural Communities and Food Security</u></p> <ul style="list-style-type: none"> ▪ Output 1: Sustainable agrarian reform ▪ Output 2: Improved access to affordable and diverse food ▪ Output 3: Rural services and sustainable livelihoods ▪ Output 4: Rural job creation linked to skills training and promoting economic livelihoods ▪ Output 5: Enabling institutional environment for sustainable and inclusive growth |

| 5. Development Oriented Public Service | |
|--|--|
| National Development Plan | <p><u>Objective 13: Building a capable and developmental state</u></p> <ul style="list-style-type: none"> ▪ Proactive steps are needed to resolve coordination problems between different government entities and government in general needs to be more accessible to the public. |
| National | <p><u>Outcome 9: A Responsive, Accountable, Effective and Efficient Local Government System</u></p> <ul style="list-style-type: none"> ▪ Output 1: Implement a differentiated approach to municipal financing, planning and support |

| | |
|-------------------------------------|--|
| <p>outcomes</p> | <ul style="list-style-type: none"> ▪ Output 2: Improving access to basic services. ▪ Output 3: Implementation of the Community Work Programme ▪ Output 4: Actions supportive of the human settlement outcome ▪ Output 5: Deepen democracy through a refined Ward Committee model ▪ Output 6: Administrative and financial capability ▪ Output 7: Single window of coordination <p><u>Outcome 11: A Better South Africa, a Better and Safer Africa and World</u></p> <ul style="list-style-type: none"> ▪ Output 1: Enhanced African agenda and sustainable development ▪ Output 2: Enhanced regional integration ▪ Output 3: Reformed global governance institutions ▪ Output 4: Enhanced trade and investment <p><u>Outcome 12: A Development-Orientated Public Service and Inclusive Citizenship</u></p> <ul style="list-style-type: none"> ▪ Output 1: Service delivery quality and access ▪ Output 2: Human resource management and development ▪ Output 3: Business processes, systems, decision rights and accountability management ▪ Output 4: Tackling corruption in the public service |
| <p>Gauteng Multi-Pillar Program</p> | <ul style="list-style-type: none"> ▪ TRANSFORMATION OF THE STATE AND GOVERNANCE: Build developmental state capabilities through better organisation and professionalisation; promote activist, purpose-driven and results-based government; active citizenry, sectoral engagement and community mobilisation. ▪ MODERNISATION OF THE PUBLIC SERVICE: Build green and smart public services and infrastructure to deliver services effectively and efficiently: build a connected government; vertically, horizontally, back office, intranet, and government to citizens, citizens to government etc. |

3. Spatial analysis

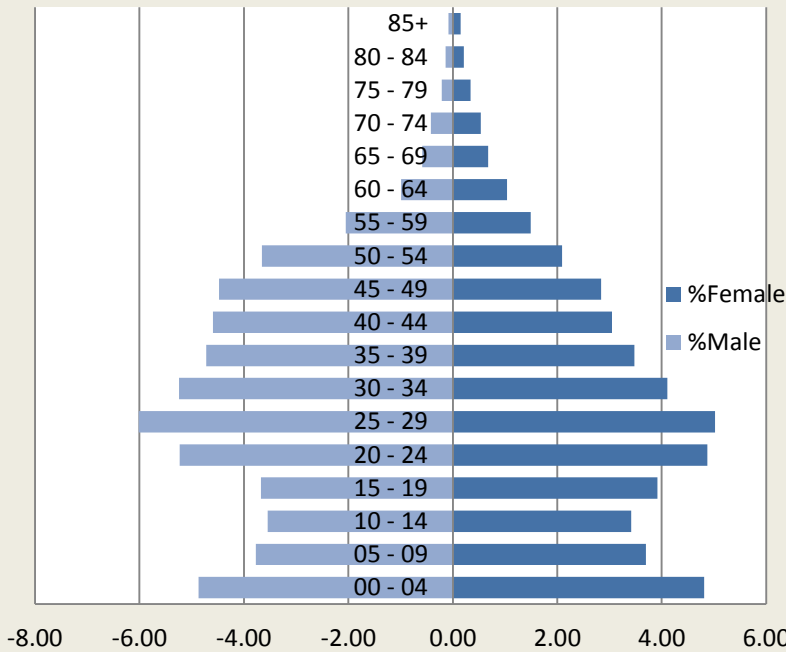
Biophysical Analysis

| Biodiversity and ecosystems | |
|---|--|
| <p>Legacy challenges</p> <ul style="list-style-type: none"> ▪ Invasive Alien Plants associated with mining tailing storage facilities and villages. (A in the Figure). ▪ Pollution of soils and water associated with mining. |  |
| <p>Current challenges</p> <ul style="list-style-type: none"> ▪ Water pollution from urban runoff, agriculture, mining and municipal sewage spills. (B in the Figure) ▪ Some veld types are not sufficiently protected, especially grassland types. ▪ Moderate development pressure on high value agricultural land and valuable grassland. ▪ Habitat over-utilisation and destruction near previously disadvantaged areas. (C in the Figure). | |
| <p>Future challenges</p> <ul style="list-style-type: none"> ▪ Avoidance of creating isolated pockets of natural vegetation. ▪ Migration of animal and plant species due to climate change. ▪ Aquatic ecosystem destruction due to decanting from closed mine shafts. | |
| <p>Current strengths</p> <ul style="list-style-type: none"> ▪ Variety of different habitats within 3 biomes and 6 veld types. ▪ Significant amount of land lies untransformed or only partially transformed. ▪ Existing provincial nature reserve (Abe Bailey) within a major ecological corridor and Critical Biodiversity Area. ▪ Mining ownership has left some potential areas for conservation undisturbed. |  |
| <p>Opportunities</p> <ul style="list-style-type: none"> ▪ Protect existing eco-corridors and hotspots through the establishment of conservancies and managing development in the following areas: <ul style="list-style-type: none"> - Gatsrand - Wonderfonteinspruit-Moorriver - Losberg and Klein Losberg ▪ Promote the creation and protection of micro-scale corridors to avoid isolated pockets of biodiversity by acting as Ecological Support Areas. | |

Socio-Economic

Demographics And Social Development

Population Pyramid



According to the Stats SA census 2011 the population of Merafong is 197 520. This is 1.6% of the total Gauteng population. Between 2001 and 2011 the Merafong population has declined by 2.4% from 215 868. This population decline is mainly attributable to mine labourers being laid off and the closure of some mine shafts. Some migrant labourers have moved away after losing their jobs. In contrast to this the population of Gauteng has experienced significant growth reaching over 12 million. Figure (left) illustrates the population pyramid of Merafong. The pyramid is indicative of a constrictive (Slow growth) profile where most of the population is concentrated in the economically active population group and is male dominated. The Merafong population has a gender ratio of 118.59 males per 100 females. This has decreased from a ratio of 132 males per 100 females

| INDICATOR | 2001 | 2011 | |
|-----------------------------|---------|---------|---|
| Total population | 210,481 | 197,520 | ▼ |
| Young (0-14) | 22,4% | 24,1% | ▲ |
| Working Age (15-64) | 72,5% | 72,5% | ▶ |
| Elderly (65+) | 2,4% | 3,4% | ▲ |
| Dependency ratio | 33% | 37,9 | ▲ |
| Sex ratio | 135,1 | 118,6 | ▼ |
| Unemployment rate | 28,1% | 27,2% | ▼ |
| Youth unemployment rate | 39,9% | 37,8% | ▼ |
| No schooling aged 20+ | 12,9% | 6,5% | ▼ |
| Higher education aged 20+ | 4,4% | 7,1% | ▲ |
| Number of households | 56,336 | 66,624 | ▲ |
| Average household size | 2,1 | 2,7 | ▲ |
| Female headed households | 24,6% | 29,4% | ▲ |
| Formal dwellings | 67,7% | 74,7% | ▲ |
| Housing owned/paying off | 36,7% | 29,8% | ▼ |
| Flush toilet connected | 83% | 81% | ▼ |
| Weekly refuse removal | 68,2% | 74,9% | ▲ |
| Piped water inside dwelling | 29,7% | 52,9% | ▲ |
| Electricity for lighting | 80,1% | 82,8% | ▲ |

in 2001. Most of the population falls within the younger stages of the economically active age group. This implies that youth unemployment is high.

Although the population has declined, the number of households has increased during the same period from 56 336 to 66 623. The increase in the number of households has concurrently reduced the average size of households to 2.97 persons per household. This can mainly be attributed to the significant presence of migrant labourers from rural areas such as parts of the Eastern Cape. These men work in the mines and send a large portion of their income back home to their families. Another factor which is having an effect around the country is the greater availability of housing stock which enables extended family members to move into different houses and form nuclear family units, where extended families used to live under one roof in many cases.

Merafong is characterised by the presence of many

different cultures and languages as illustrated by the differing language choices. The variety of languages can be attributed to migrant labourers, specifically IsiXhosa speakers from the Eastern Cape. The other three prominent languages namely Setswana, Sesotho and Afrikaans are more characteristic of this region. There has been a general improvement in socio-economic conditions however the progress is generally slow and some indicators have deteriorated.

Legacy challenges

- Separate social development during apartheid causing a lagging effect amongst the previously disadvantaged.

Current challenges

- Decreasing population
- Increasing dependence ratio
- High unemployment especially amongst the youth
- In-migration of low education job seekers and out-migration of skilled labour in Merafong.

Future challenges

- High probability of mass layoffs in the mining sector in the long term which will result in high unemployment and social decay.
- The current lowering in unemployment and youth unemployment is not sustainable in the long term.

Current strengths

- Large pool of semi-skilled and technically skilled labour.
- Improvements in living conditions are discernible.
- The dependency ratio is relatively low.
- The gender ratio is improving which will lead to more sustainable family units.

Opportunities

- Invest in infrastructure related to sectors that require technical knowledge in order to retain the technical skills base.
- Build on the gains made in terms of human development by providing more social development opportunities. Focus on allowing people to help themselves by providing resources for them to start Community Based Organisations and micro enterprises.
- Dependency levels are low, however it is increasing. This opportunity should be utilised and basic services and social 'buffers' should be developed to face increasing levels of dependency.

Employment And Space

As is the case with most cities and towns in South Africa, there are great distances between places of residence and work caused by apartheid spatial policies. Although spatial restructuring of Merafong's urban areas are underway, there are still many challenges that remain. The previously disadvantaged areas of Khutsong and Kokosi are experiencing the greatest burden from these commuting distances.

Legacy challenges

- Segregation of people and places through government policy.
- Scattered development of mining villages.

Current challenges

- Long commuting distances
- Lack of transport options
- Employment concentrations remaining in place.
- Drawing capital investment into previously disadvantaged areas.

Future challenges

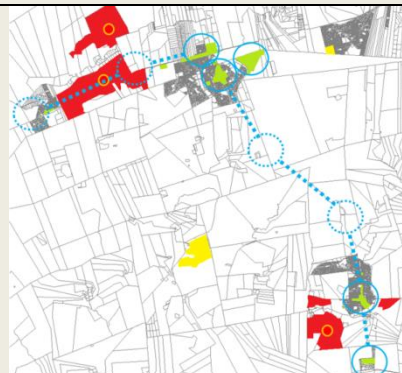
- Developing a viable and sustainable public transport system.
- Drawing investment into previously disadvantaged areas remains a problem

Current strengths

- The ability and will to restructure urban areas into more efficient forms exists.

Opportunities

- Develop a primary development and commuter corridor that connects all urban areas.



Urban Structure, Morphology, Land Use and Activity Patterns

Merafong municipality is primarily rural in nature with significant tracts of mining and agricultural land. Scattered unproclaimed settlements dot the central mining belt and proclaimed townships are located close to the belt on the northern and southern side. This scattered settlement pattern is a result of under-regulated mining surface rights, where mining companies established mining dormitory villages without any regards for post mining use and the municipalities governing these spaces did not apply proper spatial logic. This is over and above the apartheid legacy that Merafong shares with the rest of South Africa. Despite policy interventions, development is still occurring mostly along apartheid divisions and not breaking through these divisions. Most post-apartheid subsidised housing developments have the same layouts as during apartheid. Some settlements such as Khutsong are far removed from economic opportunities and others such as Blybank and Wedela are currently located close to mining operations which will not be sustained indefinitely. Fortunately, through restructuring, based on development corridors, nodes, infill development and growth boundaries, greater integration is obtainable and is already showing results. Urban efficiency is greatly dependent on the structure morphology and land use patterns of an urban area.

Legacy challenges

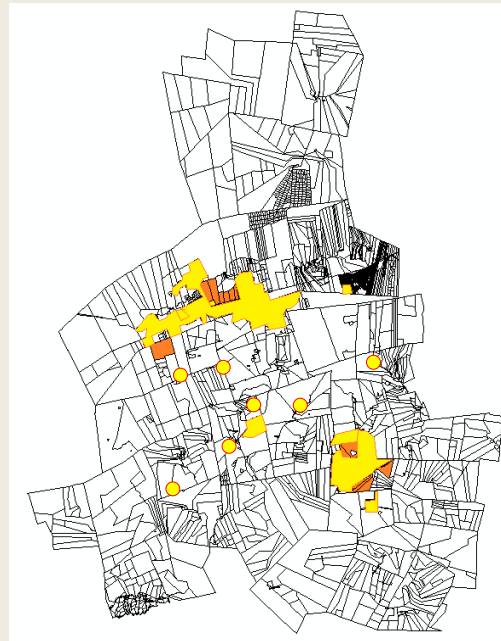
- Scattered settlements
- Urban development in dolomitic areas
- Land use separation
- Spatial exclusion of previously disadvantaged

Current challenges

- Lack of sufficient land use diversity, especially in previously disadvantaged areas.
- Virtually no densification taking place due to a lack of geotechnical data and lack of information on infrastructure.
- Mine owned erven in corridors and nodes remain undeveloped.
- Urban restructuring in the north is adversely affected by dolomite and significant tracts of land lie unused due to bad dolomitic conditions.

Future challenges

- Mine village viability after mine closures
- Adaptive re-use of mine related land uses will be required.

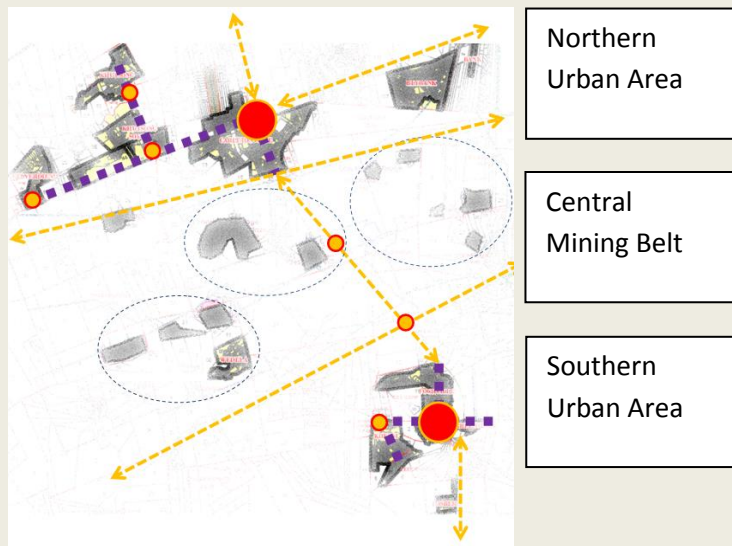


Current strengths

- Existing corridors and nodes help strengthen the sustainability of urban systems.

Opportunities

- Develop new nodes and corridors to strengthen the sustainable development of urban areas and to integrate the north and south.
- Consolidate into 3 development areas namely North, South and Mining Belt, each with its own development constraints and opportunities.
- Opportunities for densification are numerous. Information to support growth management is required.
- Land abandoned due to geotechnical constraints can be utilised for other suitable uses. An investigation into possible uses should be conducted.



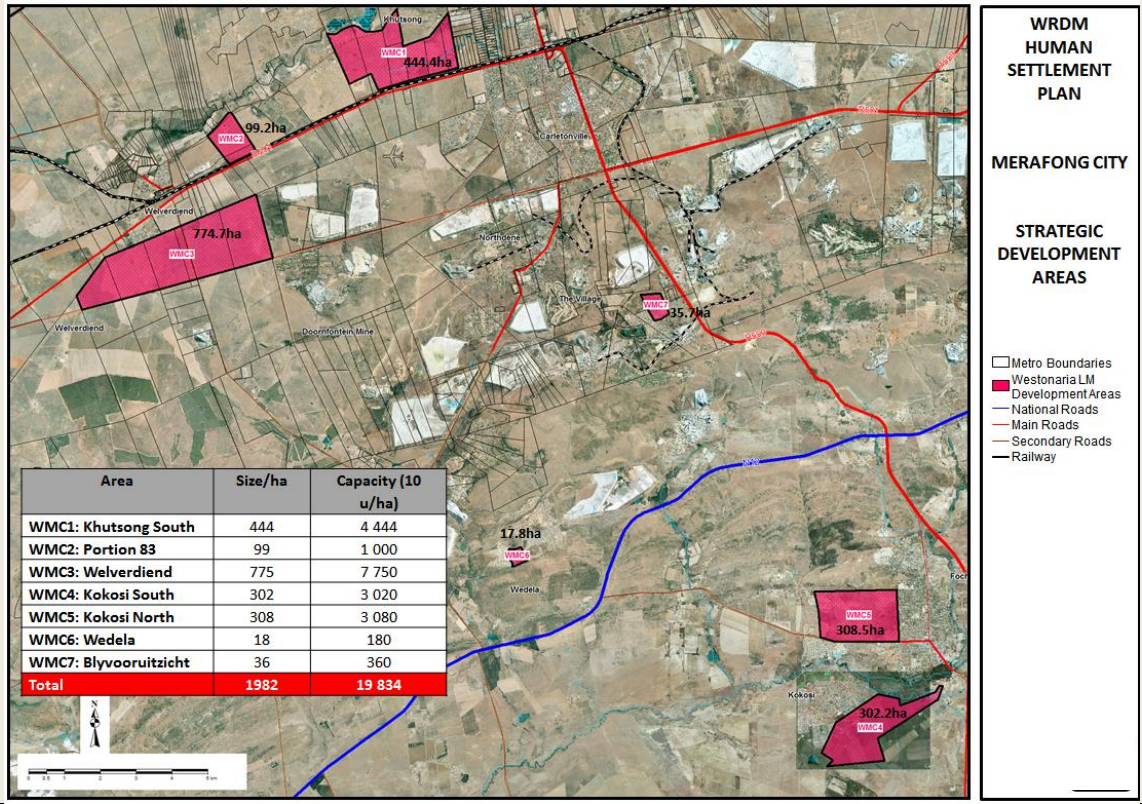
Northern
Urban Area

Central
Mining Belt

Southern
Urban Area

Infrastructure

In Merafong there is a massive gap in information on the status quo of infrastructure. Currently there are no major infrastructural shortages and the Department of Human Settlements finances most of the infrastructure requirements of subsidised housing expansion. Infrastructure master planning is needed urgently in Merafong.



| Code | Project Name | Project Yield | Water Reservoir | | |
|------|--------------------|---------------|--------------------|----------|-------------|
| | | | Mega Litre per Day | | |
| | | | Reservoir | Capacity | Demand |
| WMC1 | Khutsong South | 4 444 | Welverdiend | -6.79 | 2.13 |
| WMC2 | Portion 83 | 1 000 | Welverdiend | -7.27 | 0.48 |
| WMC3 | Welverdiend | 7 750 | Welverdiend | -10.99 | 3.72 |
| WMC4 | Kokosi South X6 X7 | 8 027 | Fochville | 1.04 | 3.85 |
| WMC5 | Fochville X8 | 3 080 | New Reservoir | 18.52 | 1.48 |
| WMC7 | West Wits | 360 | Mining Village | Ample | 0.17 |
| | TOTAL | 24 661 | | | 8.85 |

| Code | Project Name | Project Yield | Waste Water Treatment Works | | |
|------|--------------------|---------------|-----------------------------|----------|--------|
| | | | Mega Litre per Day | | |
| | | | WWTW | Capacity | Demand |
| WMC1 | Khutsong South | 4 444 | Welverdiend | -5.66 | 1.78 |
| WMC2 | Portion 83 | 1 000 | Welverdiend | -6.06 | 0.4 |
| WMC3 | Welverdiend | 7 750 | Welverdiend | -9.16 | 3.1 |
| WMC4 | Kokosi South X6 X7 | 8 027 | Kokosi | -0.8 | 3.21 |
| WMC5 | Fochville X8 | 3 080 | Kokosi | -2.03 | 1.23 |
| WMC7 | West Wits | 360 | Wedela | 0.93 | 0.14 |
| | TOTAL | 24 661 | | | 8.85 |

| Code | Project Name | Project Yield | Electricity | | |
|------|--------------------|---------------|-------------------------|----------|--------|
| | | | Mega Volts Ampere (MVA) | | |
| | | | Substation | Capacity | Demand |
| WMC1 | Khutsong South | 4 444 | Khutsong | 40.61 | 11.11 |
| WMC2 | Portion 83 | 1 000 | Welverdiend | 4.5 | 2.5 |
| WMC3 | Welverdiend | 7 750 | Khutsong | 21.24 | 19.38 |
| WMC4 | Kokosi South X6 X7 | 8 027 | Fochville | -16.07 | 20.07 |
| WMC5 | Fochville X8 | 3 080 | Fochville | -23.77 | 7.7 |
| WMC7 | West Wits | 360 | ESKOM (new) | -0.9 | 0.9 |
| | TOTAL | 24 661 | | | 8.85 |

Legacy challenges

- Scattered settlements with uncoordinated infrastructure
- Urban development in dolomitic areas which impact on water and sanitation services.
- Under provision of services in previously disadvantaged areas

Current challenges

- Lack of information on the status quo of existing infrastructure. Lack of planning and coordination in future planning.
- Inefficient urban structure and low densities reduce economies of scale.
- Regulation standards with regard to infrastructure on dolomitic land are becoming stricter.

Future challenges

- Mine village viability after mine closures
- Adaptive re-use of mine related land uses will be required.

Current strengths

- Existing corridors and nodes help strengthen the sustainability of urban systems.

Opportunities

- Develop new nodes and corridors to strengthen the sustainable development of urban areas and to integrate the north and south.
- Consolidate into 3 development areas namely North, South and Mining Belt, each with its own development conditions.
- Opportunities for densification are numerous. Information to support growth management is required.
- Land abandoned due to geotechnical constraints can be utilised for other suitable uses.

Critical infrastructure bottlenecks

In some areas critical infrastructure projects have been halted due to funding constraints. The freezing of these projects are blocking significant urban and economic development projects from continuing. About 10 township establishments and a number of 'game changer' economic projects are being held back. This is hampering the restructuring of the local economy and causing a worsening of the tax base imbalance currently experienced (worsening cross-subsidisation ratio). The unblocking of these bottlenecks is of paramount importance and will eventually threaten the viability of the municipality if not addressed. Many of these situations have been worsened by under spending on economic infrastructure and a lack of infrastructure maintenance.

Khutsong South – Welverdiend area

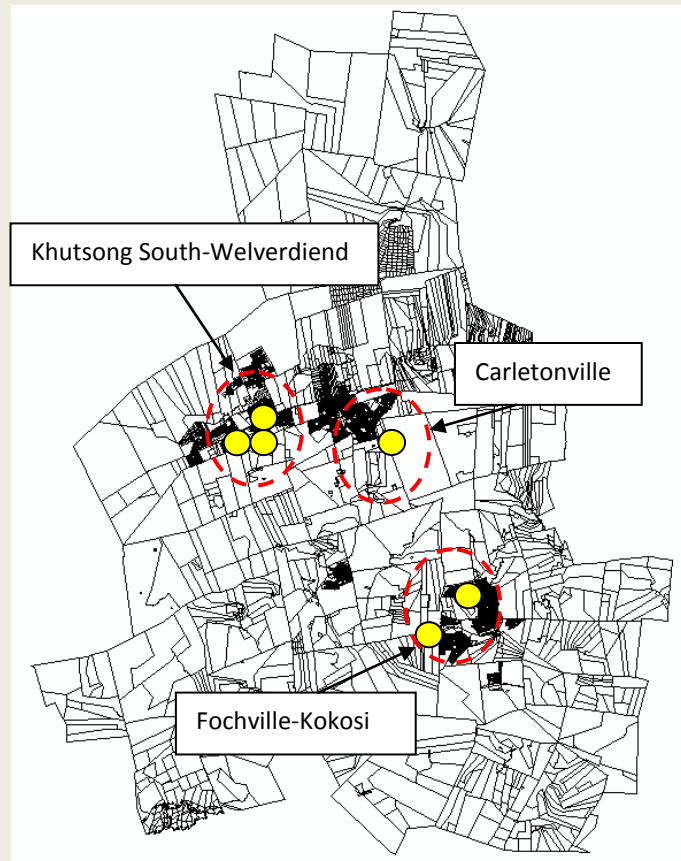
- 20 MI Water reservoir (Khutsong South) – R 70,000,000
- Of the required 48 hour water holding capacity, currently 0 hours available.
- Bulk Supply Khutsong South 132kV Substation - R86,000,000
- Bulk supply Khutsong South secondary network - R17,500,000
- Projects halted:
 - Khutsong South Extension 6 and 7 (±1519 erven mixed typologies)
 - Chief Albert Luthuli (Varkenslaagte) mixed use development (±10 000 erven mixed housing including BNG, Walk-Ups, FLISP and Social Housing as well as retail, office and government institutional developments)
 - Welverdiend Gap housing development (256 erven)
 - Welverdiend mixed use node (Truck stop and retail with envisaged expansion)

Fochville - Kokosi area

- 30 MI Water reservoir – R159,000,000
- Kokosi Waste Water Treatment Works modular addition – R98,500,000
- Projects halted:
 - Fochville Extension 3 (156 Middle income units)
 - Fochville Extension 7 (700 High income erven)
 - Fochville Extension 8 (1429 Gap market erven)
 - Fochville Extension 14 (± 50 Industrial erven)
 - Kokosi Extension 7 (3211 Mixed typologies with business uses)
 - Residential densification within the designated Restructuring Zone.

Carletonville area

- 20 MI Water reservoir – R 70,000,000
- Of the required 48 hour water holding capacity, currently 0 hours available.
- Projects halted:
 - Merafong Bioenergy Park (Thousands of job opportunities in the balance)
 - Merafong Solar Farm Cluster (Up to a thousand job opportunities in the balance)
 - Residential densification in the designated Restructuring Zone.
 - Carletonville Heritage Precinct urban renewal.



4. SPATIAL DIRECTIVES

From the policy directives on national, provincial and district level coupled with the results from the spatial analysis, the following spatial development strategies have been developed as a response:

1. IMPROVE URBAN EFFICIENCY AND RECTIFY APARTHEIT SPATIAL DISPARITIES
2. IMPROVE URBAN AND RURAL LIVEABILITY
3. FACILITATE SUSTAINABLE ECONOMIC GROWTH AND DIVERSIFICATION
4. PROTECT NATURAL AND AGRICULTURAL RESOURCES

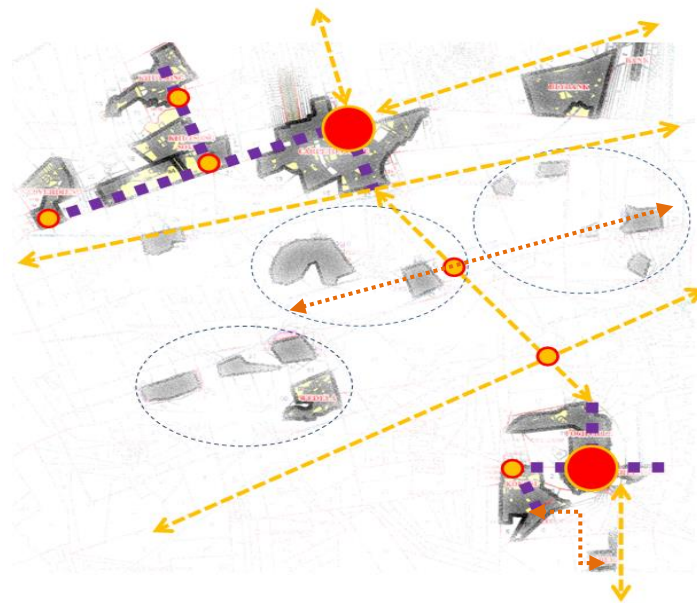
These will now be discussed in detail.







| 1. IMPROVE URBAN EFFICIENCY AND RECTIFY APARTHEIT SPATIAL DISPARITIES | |
|---|--|
| POLICY | Integrate segregated urban areas and restructure the urban form to meet current and future challenges with greater efficiency. |
| OUTCOMES/ DESIRED STATE | <ul style="list-style-type: none"> ▪ An efficient system of towns functioning as an integrated network. ▪ Reduced costs of infrastructure provision. ▪ An urban system that offers convenience and choice to its inhabitants and users. ▪ An urban system that provides universal access to all users. ▪ An urban system that encourages business development by providing in the needs of all kinds of enterprises. |
| IMPLEMENTATION STRATEGIES | <ul style="list-style-type: none"> ▪ Re-align the urban structure of Merafong settlements into 3 distinct urban areas namely the northern, central and southern urban areas. Connect all 3 urban areas through a primary development corridor that will restructure settlements into the desired state. ▪ Develop infrastructure in accordance with the restructuring strategies. ▪ Establish a hierarchy of nodes and corridors to facilitate restructuring. ▪ Implement 3 growth management boundaries in order to manage growth in a sustainable manner: <ul style="list-style-type: none"> ✓ A land use intensification boundary, within which appropriate mixed land uses and densification are encouraged. ✓ An urban development boundary, which contains urban development and indicates where future urban expansion may take place. ✓ An Urban–Rural Interface boundary, within which appropriate mixed land uses are allowed. ▪ Determine settlement viability of mine settlements and develop accordingly ▪ Integrated transport and mobility should form part of decision making processes. |
| POLICY ALIGNMENT | From the national and provincial primary policy synthesis: Grouping 2 and 5 |

Urban restructuring

The status quo of urbanization in Merafong lends itself to a future desired state where the scattered settlements of today have developed into three distinct urban areas namely the northern, central/mining

belt and southern urban areas. The northern area comprises of Welverdiend, Khutsong, Khutsong South and Carletonville. It is the most populous and economically active area in Merafong. For the most part this urban area will restructure with more ease than the other areas because of its population size which enables nodal development along the corridor. The central area comprises of Blyvooruitzicht, West Wits, Driefontein, Elandsrand, Wedela and Deelkraal. Most urban areas are unproclaimed mine villages and occur in a scattered pattern. This area will create the most problems because of the scattered nature of the mostly small settlements and also the state of mine operated infrastructure. The southern area will comprise of Fochville, Kokosi, Greenspark and Losberg Industrial. Settlements in this urban area are grouped closer together which reduces the cost of services; however the combined populations of these settlements are smaller, offering fewer opportunities for nodal development. It is of great importance that even though these 3 urban areas are separated by topographical barriers and each has its own distinct constraints and strengths, they are integrated with each other as much as possible. In order to achieve the desired growth characteristics a hierarchical network of nodes and corridors will be utilised as the main structuring tool. The network will be dominated by the primary development corridor that connects all 3 urban areas. It will also form the backbone of future public transport. As such all major economic, institutional and residential developments will take place along this corridor. The main development corridor links all the most important nodes and all major/strategic future nodes are also connected by the corridor. Secondary corridors branch out to connect areas currently removed from the main development axis. The restructuring of Merafong's settlements into the proposed future form will greatly improve the efficiency of urban systems to perform their functions in sustaining the livelihoods of citizens.



| | |
|---|-----------------------------------|
|  | Primary development nodes |
|  | Secondary development nodes |
|  | Transport linkages |
|  | Development spines |
|  | Village service delivery clusters |
|  | Proposed new transport links |

The hierarchy of nodes and corridors

Nodes

These are areas where a higher intensity of land uses and activities will be supported and promoted. Nodal development improves efficiency as it provides easy access and creates thresholds for a variety of uses and public transport services. Typically any given municipal area would accommodate a hierarchy of nodes that indicates the relative intensity of development anticipated for the various nodes, the varying sizes of the nodes, and the dominant nature and activity of the nodes.

Nodal types

In terms of retail classifications by the South African Council of Shopping Centres (SACSC) centres (Nodes) can be divided into two types namely planned and incremental/unplanned. Planned centres include shopping centres and incremental include individual developments of erven that are not coordinated to complement adjacent or opposite erven developments, such as a CBD.

For planning purposes the nodes in Merafong have been divided into 5 main types and each type can consist of different sized nodes. The 5 main types are:

- ❖ Neighbourhood nodes
- ❖ District nodes.
- ❖ Regional nodes.
- ❖ Central Business Districts
- ❖ Speciality nodes.

Corridors

Corridors are links between nodes, along which an increased intensity of development will naturally be attracted and should be encouraged. Similar to nodes they improve access to opportunities. Corridors should provide an appropriate level of access to the opportunities along the corridor and would typically include public transport routes.

There is differentiated between 4 different types of corridors:

- ❖ Development Corridors
- ❖ Future Development Corridors
- ❖ Mobility Corridors
- ❖ Ecological corridors/zones

The Primary Development Corridor

As mentioned the Primary Development Corridor aims to restructure Merafong's scattered urban areas into an integrated city consisting of the north, the mining belt and the south. The following figure depicts the spatial logic behind the locality of the Primary Development Corridor including the current and proposed economic nodes, areas of employment and residential areas of high unemployment.

Growth Management Zones

In order to achieve the desired state of an integrated urban system, the municipality's urban areas are divided into different Growth Management Zones. These GMZs support the nodal and corridor network in restructuring urban areas to a more sustainable and efficient form. Also of great importance is the relationship between transport and land use. Transit Oriented Development (TOD) has to be applied to enable an efficient public transport network. Unfortunately residential densities in the area will in the foreseeable future not reach the targets attained by metros which will limit the number of public transport options available in future.

Therefore the entire municipality is divided into 6 Growth Management Zones in order to guide residential development:

| 1. HIGH DENSITY ZONE | |
|---|---|
| Areas within these zones will form the future cores of the urban system where most people will live, work and 'play'. These zones will be characterised by higher densities in residential and economic land uses and the greatest diversity in land use. Most amenities and institutions will be located within these zones because they will be the most accessible through public transport. These areas will be developed in terms of the principles of Transit Oriented Development and as such must contain the widest variety of housing typologies. Higher density applications may be considered outside this zone in areas adjacent to the spine of the primary Development Corridor as well as areas where it will strongly promote urban efficiency (Especially in terms of engineering services, public transport and urban renewal/revitalisation). | |
| Target Dwelling units /Hectare | Up to 80 du/Ha |
| Coverage | Up to 80% |
| Floor Area Ratio | Up to 2.7 |
| Height | 3 Floors |
| Additional rooms | 2 on properties that have not been redeveloped. |
| Boarding houses | Allowed on properties that have not been redeveloped. |
| Second dwellings | Allowed on properties that have not been redeveloped. |
| Residential land uses | Free standing homes, town houses, |
| Guidelines | <ul style="list-style-type: none"> ▪ All new developments are subject to SANS 1936 (2012) as well as engineering service availability. Locate major public transport hubs in this zone and integrate them into the urban fabric. ▪ Increase housing densities, encourage mixed higher densities & different housing tenure options and attempt to locate the bulk of Gap housing initiatives within this zone. ▪ Due to dolomitic constraints in the northern urban area, larger high density buildings are more practical and obviously have a lower cost per unit. ▪ Increase Non Motorised Transport accessibility and increase pedestrian safety. ▪ Encourage mixed land uses where appropriate. Locate retail on ground level and residential uses on upper floors. ▪ Within sectional title developments that do not have yard/erf space for every unit, communal recreation space has to be provided to the satisfaction of the municipality. ▪ Developments with limited access have to make provisions for a waste receptacle to the satisfaction of the municipality. ▪ The developer shall landscape the street space in front of the property with trees. Parking areas that are not covered shall be planted with trees to the satisfaction of the Municipality. |

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| | <ul style="list-style-type: none"> ▪ Surfaced on-site and/or surfaced on street parking for visitors shall be provided to the satisfaction of the municipality. ▪ Once the status quo of service infrastructure has been established more specific parameters can be attributed at the street block level. Extensive infrastructure upgrades may be required in the long term. |
|--|--|

| 2. AFFORDABLE INCREMENTAL DENSIFICATION ZONE | |
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| <p>Densification on a smaller incremental scale is encouraged within this zone. The envisaged densification can take the form of second dwellings, subdivisions, and boarding houses (Up to 8 rooms). This zone makes provision for central town rental opportunities to develop. Many centralised areas are in a state of disrepair and incremental densification will breathe new life into these areas. It is expected that young individuals, young families and lower middle income residents will be accommodated in these areas. Increased densities may be considered adjacent to development corridors.</p> | |
| Dwelling units /Hectare | Between 10 and 30 |
| Coverage | 50 - 60% |
| Floor Area Ratio | 1 |
| Height | 2 Floors |
| Additional rooms | 3 in addition to primary residence (Including old servant's quarters), not allowed if an additional dwelling unit exists. |
| Boarding houses | Allowed |
| Second dwellings | Allowed. Not if there are additional rooms constructed in addition to old servant's quarters. |
| Residential land uses | Free standing homes, boarding houses, additional rooms |
| Guidelines | <ul style="list-style-type: none"> ▪ Higher density developments could be considered subject to spatial suitability. ▪ All new developments are subject to SANS 1936 (Northern urban area) as well as engineering service availability. Lower densities are less desirable and moderate densification is encouraged up to 30 dwelling units per hectare with an average of ± 15 dwelling units per hectare per street block. ▪ In dolomitic areas small building footprints and additional water services may be problematic. Boarding houses are more feasible. ▪ The construction of small rooms with cheap building materials is prohibited. Any additions must conform to the architectural style of the primary structure on a property or the prevalent style of the neighbourhood. ▪ Once the status quo of service infrastructure has been established more specific parameters can be attributed to the street block level. |

| 3. SUBSIDISED HOUSING AND INFILL ZONE | |
|--|---|
| Predominantly freestanding subsidised housing units. Mixed typologies are encouraged | |
| Dwelling units /Hectare | Up to 40 |
| Coverage | 50 - 60% |
| Floor Area Ratio | 1 |
| Height | 2 Floors |
| Additional rooms | 2 |
| Boarding houses | Allowed |
| Second dwellings | Allowed |
| Residential land uses | Free standing homes, second dwellings and additional rooms |
| Guidelines | <ul style="list-style-type: none"> ▪ Higher density developments could be considered subject to spatial suitability. ▪ All new developments are subject to SANS 1936 (Northern urban area) as well as |

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| | <p>engineering service availability.</p> <ul style="list-style-type: none"> ▪ No development may in the opinion of the municipality degrade the small town/rural atmosphere of Merafong. Building styles should preferably fit in with the surrounding environment. ▪ Any additions to existing buildings or second dwellings must conform to the architectural style of the primary structure on a property or the prevalent style of the neighbourhood. ▪ Once the status quo of service infrastructure has been established more specific parameters can be attributed to the street block level. |
|--|---|

| 4. MEDIUM DENSITY ZONE | |
|--|---|
| Single residences, second dwelling units and town houses are encouraged within this zone. Within nodes and along corridors this can take the form of walk-ups with business on the ground floor. | |
| Dwelling units /Hectare | Between 10 and 25 |
| Coverage | 50 - 70% |
| Floor Area Ratio | 1 |
| Height | 2 Floors |
| Additional rooms | 2 |
| Boarding houses | Not allowed |
| Second dwellings | Allowed |
| Residential land uses | Free standing homes, second dwellings and town houses |
| Guidelines | <ul style="list-style-type: none"> ▪ Higher density developments could be considered subject to spatial suitability. ▪ All new developments are subject to SANS 1936 (Northern urban area) as well as engineering service availability. ▪ No development may in the opinion of the municipality degrade the small town/rural atmosphere of Merafong. Building styles should preferably fit in with the surrounding environment. ▪ Any additions to existing buildings or second dwellings must conform to the architectural style of the primary structure on a property or the prevalent style of the neighbourhood. ▪ An erf size of 250 m² and 400 m² shall be maintained with a maximum density of 25 dwelling units per Hectare. ▪ Within sectional title developments that do not have yard/erf space for every unit, communal recreation space has to be provided to the satisfaction of the municipality. ▪ Developments with limited access have to make provisions for a waste receptacle to the satisfaction of the municipality. ▪ The municipality may at its own discretion, relax the density restriction with up to 10% especially in instances where the topography, storm water, or erf dimensions merit it. A minimum erf size of 250 m² shall still be maintained. ▪ Once the status quo of service infrastructure has been established more specific parameters can be attributed to the street block level. |

| 5. LOW DENSITY ZONE | |
|---|--|
| This is the typical suburban zone characterised by low density free standing homes. The zone is predominantly a high motor vehicle use area. Areas within this zone will remain in a similar state than they can be found currently; however some incremental densification, mostly in the form of second dwellings will be allowed. Land use changes are not inhibited and as long as proposed changes conform to policies they are not discouraged within | |

| | |
|---|--|
| this zone. Moderately higher densities are encouraged within nodes, and mixed land uses are generally more desirable. | |
| Dwelling units /Hectare | Between 10 and 12.5 |
| Coverage | 50 % |
| Floor Area Ratio | 1 |
| Height | 2 Floors |
| Additional rooms | Not allowed |
| Boarding houses | Not allowed |
| Second dwellings | Allowed |
| Residential land uses | Free standing low density urban and rural |
| Guidelines | <ul style="list-style-type: none"> ▪ All new developments are subject to SANS 1936 (2012) as well as engineering service availability. Low to medium density residential densities is acceptable and mixed tenure options are encouraged. ▪ On the edges of this zone an appropriate interface with the bordering zone is required. ▪ Urban sprawl beyond this zone is not allowed. |

| 6. PERI URBAN ZONE | |
|--|--|
| <p>This zone is a transition area where urban transforms to rural. The zone may contain a mix of high intensity rural, low density residential and lower bid rent urban uses. Each area has its own unique character which must be considered. Many areas are undergoing a process of land use intensification, however residential densities must remain low to reduce environmental impacts in un-serviced areas and to retain the existing character. Some isolated areas within this zone are not located directly outside an urban area, but still have the same characteristics.</p> | |
| Dwelling units /Hectare | 5 Or less |
| Coverage | 50 % or less |
| Floor Area Ratio | N/A |
| Height | 2 Floors |
| Additional rooms | Not allowed in proclaimed urban areas with residential zoning |
| Boarding houses | Not allowed, except for farm workers on agricultural zoned land |
| Second dwellings | Allowed |
| Residential land uses | Free standing low density urban and rural |
| Guidelines | <ul style="list-style-type: none"> ▪ All new developments are subject to SANS 1936 (Northern urban area). ▪ Residential densities must remain low. A general guideline base density of 2 units per hectare (2u/h) and lower is preferable. ▪ Subdivisions of land are allowed as long as they do not equate to the same densities as township establishments. ▪ Mixed land uses are encouraged where acceptable; however caution should be taken before approving noxious activities and the comments of neighbouring land owners is very important. Land use changes must be in keeping with the semi-rural nature and feel of the environment. ▪ In general, land uses that require larger land areas to function and simultaneously have low land rent values may locate within this zone (At the discretion of the municipality). Mitigation measures may be required if unsightly activities can be injurious to the aesthetic and/or natural environment. ▪ Ecological corridors may occur within this zone that should be respected and protected through Land Use Management and Site Development Plans. |

7. RURAL ZONE

This zone encompasses rural areas throughout Merafong excluding small holdings. The zone is dominated by agricultural land uses including intensive and extensive farming. It is important to conserve the rural character of the area and also to protect agricultural land from development. The aim is to keep this zone in its rural state with only land uses allowed that are appropriate within a rural aesthetic setting. The protection of high value agricultural land and ecologically sensitive areas is very important in this zone.

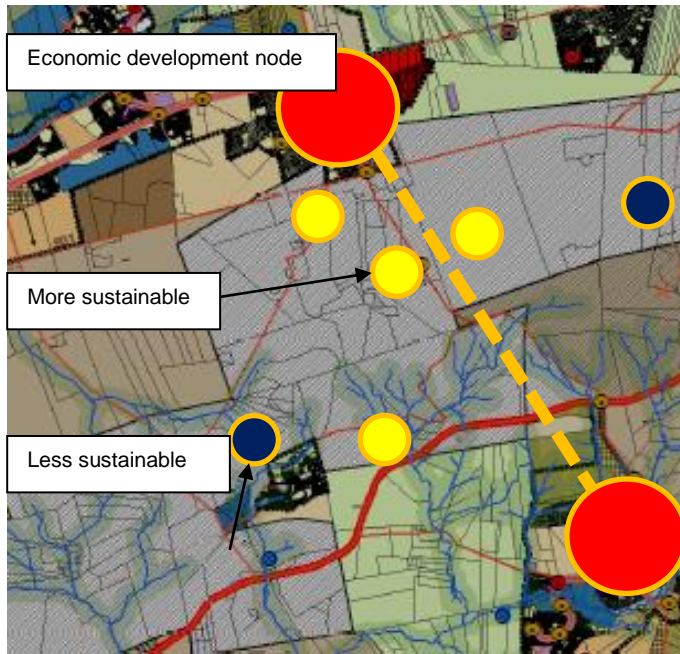
| | |
|-------------------------|--|
| Dwelling units /Hectare | 10 or less |
| Coverage | 50 % or less |
| Floor Area Ratio | N/A |
| Height | 2 Floors |
| Additional rooms | Not allowed, except for employees on appropriately zoned land |
| Boarding houses | Not allowed, except for employees on appropriately zoned land |
| Second dwellings | Allowed |
| Residential land uses | Free standing low density rural |
| | <ul style="list-style-type: none">All new developments are subject to SANS 1936 (Northern area). |

8. MINE VILLAGE ZONE

This zone encompasses mining lease areas that contain mining villages and/or hostels. No further development within this zone should be allowed unless it is linked to the Primary Development Corridor and contained within an established township.

| | |
|-------------------------|--|
| Dwelling units /Hectare | 10 or less, except for hostels and flats. |
| Coverage | 50 % or less, except for hostels and flats. |
| Floor Area Ratio | N/A |
| Height | 2 Floors, except for hostels and flats. |
| Additional rooms | Not allowed |
| Boarding houses | Not allowed, unless it forms part of an established township. |
| Second dwellings | Not allowed, unless it forms part of an established township. |
| Residential land uses | Free standing low density with hostels and flats |
| | <ul style="list-style-type: none">All new developments are subject to SANS 1936.Development is generally restricted because most localities are unsustainable and unviable as functional urban areas. |

Settlement viability and sustainability



Mponeng.

Infrastructure developed by the mines valued at billions of Rands will be left behind after mining activities have ceased although some areas will be completely rehabilitated to a natural state. Although many structures will be stripped for salvaging/recycling a lot of usable infrastructure elements will remain. Unfortunately most of these mines are in locations that make the continued use of these facilities for other purposes unfeasible.

Some mining areas are located close enough to economic nodes or corridors to promote further development and adaptive re-use of infrastructure and facilities for future development. The following areas fall under the above mentioned criteria: **West Wits, the western portions of West Driefontein and Blyvooruitzicht and to a lesser degree,**

Integrated Transport and mobility

Settlement elements and networks should be organised in such a way that urban transport is efficient and can be used as a control instrument in development management.

- The current settlement pattern would require a public transport network that is very similar to a dispersed radial network. This type of network is very inefficient with a low passenger turnover.
- The network is currently undergoing a shift because of the newly implemented spatial policies. An example of this is the Khutsong south extensions. If the spatial proposals in the SDF are implemented correctly the network will take on the form of a hub and spoke network (Refer to the figure below)
- A hub and spoke network is more efficient with a moderate to high passenger turnover and more people using public transport than with a dispersed radial network.
- The Primary Development Corridor will form the spine of Public Transport in future with primary Public Transport node localities located along the corridor. Transit Oriented Development and Universal Access principles are focused on these nodes. It will serve to organise the chaotic dispersed radial system into a more rational hub and spoke system as indicated below.

2. IMPROVE URBAN AND RURAL LIVEABILITY

| | |
|---------------------------|---|
| POLICY | Create a liveable environment for the community where basic needs are met, the cost of living is bearable, amenities and employment is accessible and urban space is aesthetically pleasing and healthy. |
| OUTCOMES/ DESIRED STATE | <ul style="list-style-type: none"> ▪ Public facilities are adequately provided for in the right localities with the necessary amenities. ▪ All social facilities contribute to human development, meeting basic needs and act as social development safety 'nets' to protect human rights and human dignity. ▪ Urban design provides quality of place and the maximum utilisation of spaces for their most appropriate uses. ▪ The urban environment is aesthetically pleasing and unique ▪ Green infrastructure provides ecosystem services to the benefit of the human and natural environment. ▪ All residents have adequate housing with different options of tenure. |
| IMPLEMENTATION STRATEGIES | <ul style="list-style-type: none"> ▪ Social infrastructure development ▪ Sustainable human settlements ▪ Improve urban design and green infrastructure in order to promote universal access and create a unique identity. Develop an Urban Design Framework. ▪ Rural development ▪ Promote or enforce principles of design and land use patterns that reduce crime, the fear of crime and also promote safety. |
| POLICY ALIGNMENT | From the national and provincial primary policy synthesis: Grouping 3, 4 and 5 |

Social infrastructure

Social infrastructure is the combination of basic facilities which are necessary for human development. It includes facilities such as schools, churches, clinics, community halls, sports facilities etc.

For a summary of available facilities and deficits per town, refer to the local level assessment. The following estimates were calculated using the **CSIR Guidelines for Human Settlement and Design and the CSIR Summary Guidelines and Standards for the Planning of Social Facilities and Recreational Spaces in Metropolitan Areas**.

The new Khutsong South extensions have the largest deficit in primary schools. The construction of a new combined primary and secondary school between Kokosi and Fochville is underway. This school will relieve demand pressure in the area until Kokosi Extension 6 and 7 have been completed. Then another facility will be needed. Wedela and Carletonville also have deficits, however through the provision of larger sized facilities the problem can be overcome for the medium term.

Khutsong is the only area that is experiencing a supply deficit with regards to secondary schools. The problem is serious with thousands of new subsidised units being constructed without a school. The

construction of the new combined primary and secondary school between Kokosi and Fochville will ensure adequate supply in the medium to long term.

The provision of clinics in Merafong's formal urban areas is sufficient. The number of clinics relative to the population is higher than average due to the fragmented distribution of urban areas

Regarding community halls, there is a need for a larger scale facility in Kokosi and two large and two smaller scale facilities in Khutsong. On a district level, Khutsong has a sizable deficit in sports facilities. The land to develop these facilities is available.

Wedela is the only formal urban area where the municipality does not have sufficient land for sports facilities available. In addition to acquiring new land (which is difficult in the Wedela area due to the topography) more intensive use and sharing of facilities should be encouraged.

Sustainable human settlements

The creation of sustainable human settlements involves 2 broad processes. Firstly the provision of sufficient housing stock with different tenure options to supply in the demand for housing. Secondly the creation of sustainable and viable settlements with a good urban liveability is also of critical importance. This section deals with the first and the next section deals with the second.

Housing delivery in Merafong City occurs in four different forms, namely:

- State funded, low cost housing in which the municipality serves as a developer.
- Private sector developments targeting mainly the middle to upper income groups.
- Affordable rental accommodation and social housing.
- Informal settlement up-grade.

The housing plan considers the full range of housing products and land which is suitable for such products.

Northern urban area

There are 11 193 informal settlement households within the northern conurbation. The informal settlements located on the periphery of Khutsong have access to basic services, such as water, sanitation and high mast lighting, whereas the informal settlements located on farm land around the Carletonville area, basically only have access to water and basic sanitation. All of these areas are however subject to dolomitic conditions, and in terms of SANS 1936, no informal structures may be permitted on dolomitic land. *In situ* development of these informal settlements is therefore not an option, and all of these informal settlements need to be relocated to suitable safe land.

Southern urban area

The southern conurbation consists of the Fochville, Kokosi and Greenspark areas. The majority of informal settlements are located in and around Kokosi, on the periphery of Greenspark and in the farming areas surrounding Fochville. There are 2848 informal settlement households within the southern conurbation. The informal settlements located in and around Kokosi and on the periphery of Greenspark have access to basic services, such as water, sanitation and high mast lighting, whereas the informal settlements located on farm land around the Carletonville area, basically only have access to water and basic sanitation. As indicated above, all of these informal settlements need to be relocated. Kokosi Extension 99 will always have to remain a transit area, as the water table is too high and township establishment cannot be considered. The other areas are either affected by servitude areas, graveyards or private properties, and *in situ* development cannot be considered. As indicated in Figure 5, all of these informal settlements have been earmarked for relocation to Kokosi Extension 6 and 7 or Greenspark

Extension 1 areas. The households that do not qualify for subsidized housing will have to be accommodated in other forms of housing typology, such as bonded houses, rental stock or social housing.

Mining belt

The mining belt consists of Wedela, and the following mining villages are located within the mining belt:

- West Wits
- East & West Driefontein
- Elandsridge
- Deelkraal
- Blyvooruitzicht
- Doornfontein

The informal settlement at Deelkraal can be accommodated at Deelkraal itself through the CRU project by Harmony Gold, or accommodated in a subsidized housing project in Wedela Extension 4.

The informal settlements at East Driefontein created problems for both Goldfields Mining Company and the Municipality for many years. Based on the location of East Driefontein Village, and in terms of the concept and requirements for sustainable settlements, and in terms of the Merafong City SDF, the informal settlements at Driefontein cannot be formalized. In view of the fact that East Driefontein is a mining village and not a proclaimed township, the informal settlements have to be relocated to the Khutsong area. The area indicated in Figure 7 has been earmarked for this purpose. In terms of the housing plan, the housing demand of 7009 households in the mining belt can therefore be addressed as follows. It is however important to note, that the 5437 informal settlement households of the East Driefontein area will have to be accommodated in the northern conurbation as part of a Presidential Package. Due to the complicated nature of housing problems more solutions are required. Therefore further investigation into backyard units and the “site and service” concept is needed.

Rural development

The following is an extract from the Draft Merafong Rural Development Framework:

The framework has 6 goals based on the Gauteng Comprehensive Rural Development Strategy and the needs and potential of Merafong:

- Promotion of Sustainable Land Reform in Merafong;
- Support of Rural Infrastructure Development, Access to Services and Sustainable Livelihoods.
- Job Creation Linked to Skills Training and Capacity Building.
- Sustainable Use of Natural Resources and Protection of the Environment.
- Good Governance
- Risks and Vulnerability

| 3. FACILITATE SUSTAINABLE ECONOMIC GROWTH AND DIVERSIFICATION | |
|---|--|
| POLICY | Facilitate the development of new economic drivers and the diversification of the economy and to revitalize stagnant economic activity nodes. |
| OUTCOMES/ DESIRED STATE | <ul style="list-style-type: none"> ▪ A broader economic base consisting of a mix of mining, agriculture and manufacturing. ▪ A more diverse non-basic sector that absorbs local purchasing power. ▪ Accelerated economic growth in leading sectors that stimulates job creation. ▪ Provide for the needs of the informal economy and to facilitate harmonious co-existence with the formal sector. ▪ A more developed economy will enlarge the tax base, which will in turn provide more capital for municipal investment. |
| IMPLEMENTATION STRATEGIES | <ul style="list-style-type: none"> ▪ Enable industrial development through the provision of industrial land and infrastructure according to demand coupled with well researched incentives for investment. Develop an Industrial Development Strategy for Merafong to guide municipal actions in this regard. ▪ Enable faster development and growth of the agricultural sector and its associated value chains. ▪ Target decaying areas within development nodes for urban renewal initiatives. ▪ Develop new strategic nodes with base economic potential in order to utilise their latent potential. ▪ Continuously identify spatial threats and constraints to economic development and mitigate. ▪ Create an enabling environment for informal enterprises to thrive without adversely affecting the formal sector. |
| GUIDING PRINCIPLES | <ul style="list-style-type: none"> ▪ Enable non-basic economic expansion through land provision and Land Use Management. Designate more land for business and services expansion. ▪ Economic development and job creation is of great importance and as such administrative processes related to Land Use Management, building plan assessment and property disposal should prioritise economic development activities. |
| POLICY ALIGNMENT | From the national and provincial primary policy synthesis: Grouping 1, 3, 4 and 5 |

Implementation strategies:

Industrial development

In order to “kick start” industrial investment in Merafong investment incentives are required. Once the municipality has reached a satisfactory level of industrialisation the approval of new incentive packages can be stopped or reviewed to be more appropriate to the conditions of that time.

It is necessary to create a critical industrial mass by increasing the number of industrial businesses. Once this critical mass has been reached a state of conjunctive symbiosis will be obtained within industry clusters and disjunctive symbiosis in general.

At major industrial development zones the focus is on investment attraction of predominantly small, medium and large enterprises whilst at minor industrial development zones the focus is on small and micro enterprises as well as industrial service enterprises and mixed uses of an unaesthetic nature.

Agriculture and its value chains

Merafong has significant tracts of high value agricultural land and has the second highest agricultural production in the West Rand. Unfortunately a significant proportion of viable land is not utilised because it is locked in mine ownership without any mining taking place. Of all the West Rand municipalities, Merafong has the largest share of agriculture in its economy and the municipality contributes 42% of the agricultural production in the district. With an average growth per annum of 7% the Merafong agricultural sector has far outpaced the district (-5%) over a 10 year period. Catalytic projects are very important for the development of the agricultural sector in Merafong. Agro-Processing will have the best catalytic effect. The benefits derived from these projects can be enjoyed throughout the sub-sector instead of just the particular project. Therefore these projects add much more value than ordinary projects and can set the sub-sector on a new growth trajectory. It is of great importance to create an environment that is conducive to the development of the Agro-Processing subsector:

Urban renewal and investment attraction

Two primary areas of attention have been identified, namely the Carletonville CBD (Node CBD1) and the Fochville CBD (Node CBD 2). Node CBD 1 is the more important of the two and needs an intervention as soon as possible. The business audit that was conducted as part of the Merafong Growth and Development Strategy revealed that the city appearance is perceived as one of the factors contributing to an environment that is not conducive to the attraction and retention of business activities. The urban environment has a very significant impact on its residents on a physical, economic, social, cultural and psychological level. Furthermore the environmental quality of city spaces can have a big influence on aspects such as urban livability, crime, sense of community, aesthetics, etc. The quality of urban environments in Merafong City is a matter of concern and should be addressed.

Erf 4698 Carletonville is a park in the Central Business District (CBD). It also forms part of a planned terminating vista (In urban design, a terminating vista is a building or monument that stands at the end or in the middle of a road, so that when one is looking up the street the view ends with the site). The site has an important apartheid heritage within the local context since it acted as a gathering place for protest action and local activists used the space to address crowds from an elevated area. Commemorative trees were planted honoring mayors elected from the apartheid era until recently. Plaques were erected next to the trees. Unfortunately the park has become an unused space and the state of the gardens has deteriorated excessively due to neglect by the municipality. Many of the commemorative trees have since died. Instead of the space contributing to the urban wellbeing of Carletonville it is currently a 'dead space' and detrimental to the development of the CBD. Directly across the street from the previously mentioned park is the Carletonville Civic Centre which contains an auditorium, a banquet hall, side hall, dance hall and the largest public library in Merafong. There is also a sizable portion ($\pm 4\ 500\text{ m}^2$) of surfaced parking at the back of the facilities. These facilities are currently not being used to their full potential.

Given the problematic situation depicted a catalytic development is needed to revive the old part of the CBD and to instil pride in the town and attract investment. The connectivity between the two sides

separated by Annan road has to be improved and the entire area needs to be made more pedestrian friendly in order to draw in people. In order to improve the connectivity and pedestrianise the area it is proposed that the existing vista be strengthened. Terminating vistas are considered an important method of adding aesthetic appeal to a city/town, and to emphasise important structures or monuments. A significant development is required on the eastern side to act as an activity node where the vista terminates. An integrated mixed use development is proposed that utilises the existing strengths and opportunities of the area comprising of the following:

A. Convention centre

- Re-purposed and rebranded civic centre offering more uses for the existing facilities. Many corporate events related to mining and other types of business can be accommodated and given the short distance from Johannesburg and O.R. Thambo International Airport major events could also be hosted.

B. Hotel

- Hotel built at the back of the convention centre. Currently no hotel exists within Merafong and there are business tourism opportunities related to existing economic activities as well as the proposed Convention Centre.

C. Heritage Square and vista

- Public space with events infrastructure e.g. sunken amphitheatre
- Heritage walk from the civic centre through Flint street to municipal head office – Themed: A date line through history
- Traffic calming at all street crossings
- Tree lined walkway that strengthens the visual effect of the vista.

D. Mining heritage museum with theme park elements

- Mining museum that celebrates mining history in Merafong and gold mining
- Theme park elements in the form of an underground basement that simulates underground mining and a mining train that offers rides. These theme park elements can boost the viability of the museum because smaller museums tend to struggle if not boosted by additional attractions.

E. Niche retail/service and residential units

- Niche market retail/service, partially associated with the museum, Convention Centre and library.
- Different sized sectional title residential units on the first floor above business, focused on middle to higher income and younger market segments.

New strategic nodes

A number of strategic nodes have been identified that could be instrumental in unlocking latent economic growth within the municipality. The following nodes have been identified:

- Bio energy eco-industrial Park.
- Khutsong South Business District.
- Carletonville Bloubos.
- N12 industrial and logistics node.
- West Wits future node.
- Fochville Office Park future node.
- Kokosi Ext 7 mixed node.
- Losberg expansion to heavy haul railway.

| 4. PROTECT NATURAL AND AGRICULTURAL RESOURCES | |
|---|--|
| POLICY | To protect and actively manage the natural environmental resources in Merafong in order to ensure a sustainable coexistence between urban, mining, agricultural and ecological land uses. |
| OUTCOMES/ DESIRED STATE | <ul style="list-style-type: none"> ▪ Sustainable development that will keep resources intact for future generations. ▪ Urban and rural land uses and systems that will be resilient in the face of climate change. |
| GUIDING PRINCIPLES | <ul style="list-style-type: none"> ▪ Protect and enable ecosystem services in urban and rural areas. ▪ Actively expand green infrastructure for ecological, economic and social purposes. ▪ Minimise environmental impacts of developments. ▪ Mitigate impacts of local activities on neighbouring areas. ▪ Mitigate and manage impacts caused by climate change ▪ Urban pollution, especially storm water pollution, should be minimised. ▪ Mining pollution should be addressed. ▪ Improve on unsustainable farming practices near previously disadvantaged areas. |
| POLICY ALIGNMENT | From the national and provincial primary policy synthesis: Grouping 2, 3 and 5 |

In most cases the protection of strategic resources are grouped into separate areas of concern like environmental, economic, cultural, etc. There is however a worldwide movement towards the integrated management of strategic resources in order to recognise and manage the interrelated nature of different resources so that the status alteration of a specific resource does not adversely affect the status of another resource. This trend is clearly reflected in South African environmental legislation. The protection of strategic resources is interlinked with all the other development strategies and is affected by them and it also affects them on various levels. Merafong lacks proper policy guidelines regarding its strategic resources which need to be addressed. A state of the environment report will be compiled, which will address environmental issues. One aspect of environmental management that has of yet not received enough attention is the encroachment of alien vegetation in Merafong. If this problem is not addressed soon it will become a very costly issue and will have the ability to cause irreparable damage to the environment.

5. THE SDF MAP

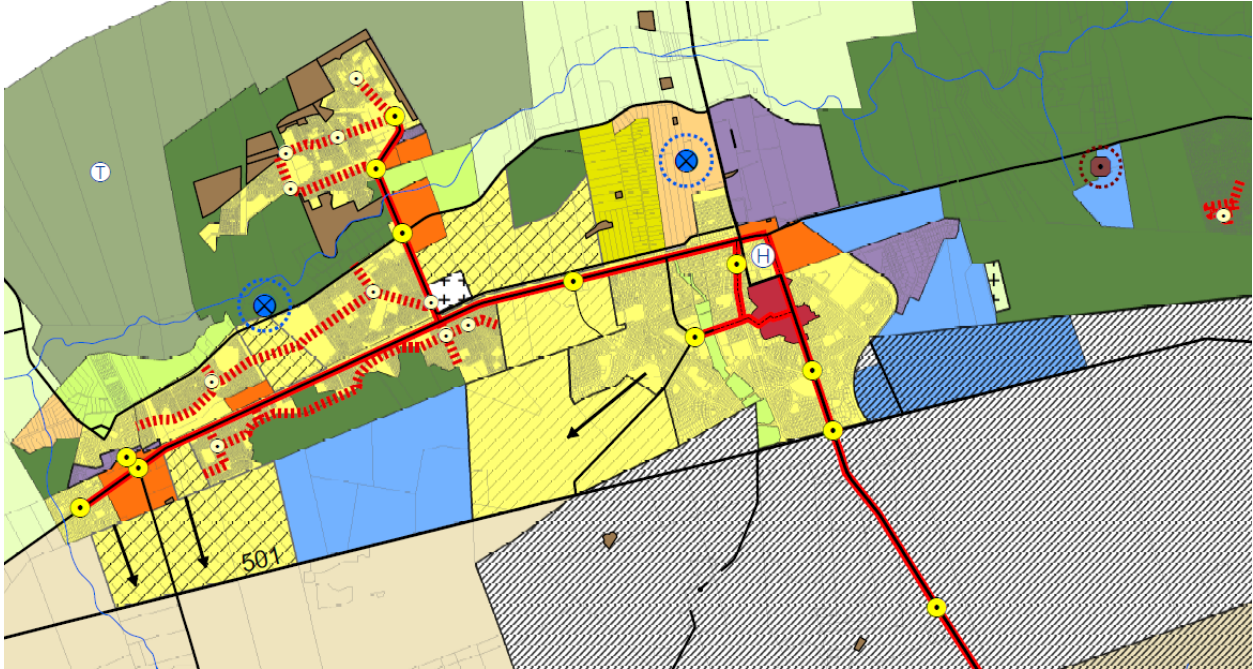
For maps visit the Town Planning Section In Halite Street Carletonville, Room G 21

Legend

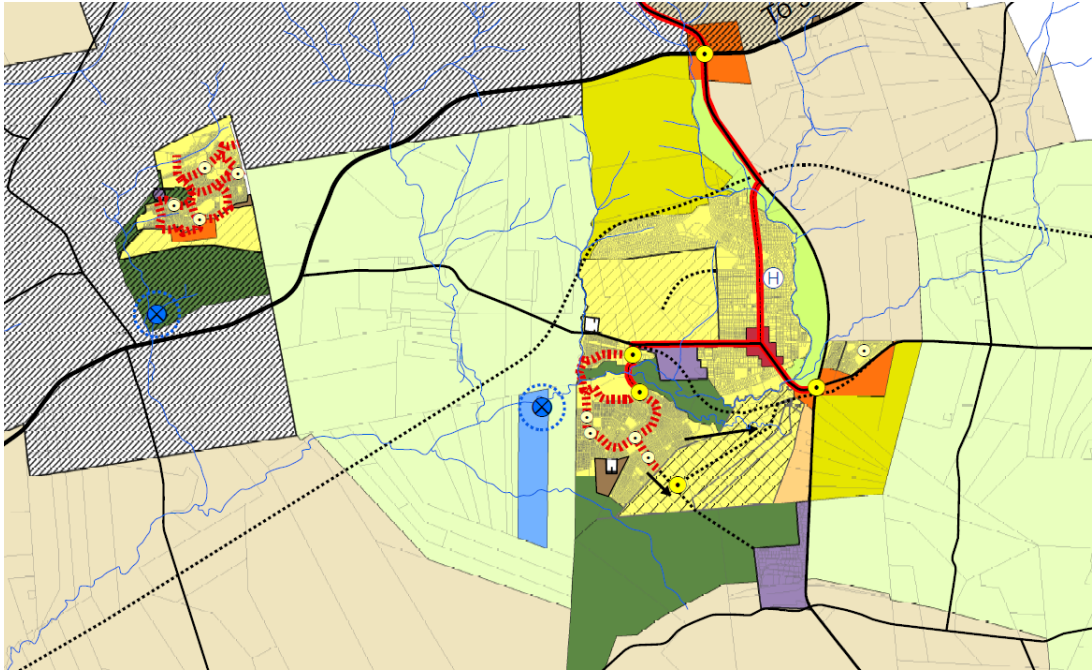
| | |
|---|--------------------------------------|
|  | 800 m Buffer |
|  | 500 m Buffer |
|  | Tertiary Node |
|  | Secondary Node |
|  | Tourism |
|  | Health Care |
|  | Landfill Site |
|  | Waste Water Treatment Plant |
|  | National Road |
|  | Main Road |
|  | Secondary Road |
|  | Arterial Road |
|  | Growth Direction |
|  | Activity Street |
|  | Activity Corridor |
|  | Development Corridor |
|  | Proposed Road |
|  | Central Business District |
|  | Informal Settlements |
|  | Mining and Renewable Energy |
|  | Eco Recreation and Conserveation |
|  | Peri_Urban Mixed Use |
|  | Industrial and Large Commercial Zone |
|  | Renewable Energy Zone |
|  | Mixed Use |
|  | Peri Urban Residential |
|  | Residential (Private Sector) |
|  | Residential (Public Sector) |
|  | Cemetery |
|  | Intensive Agriculture |
|  | Extensive Agriculture |
|  | West Rand Mega Agri-Park Zone |
|  | ABE BAILEY NATURE RESERVE |



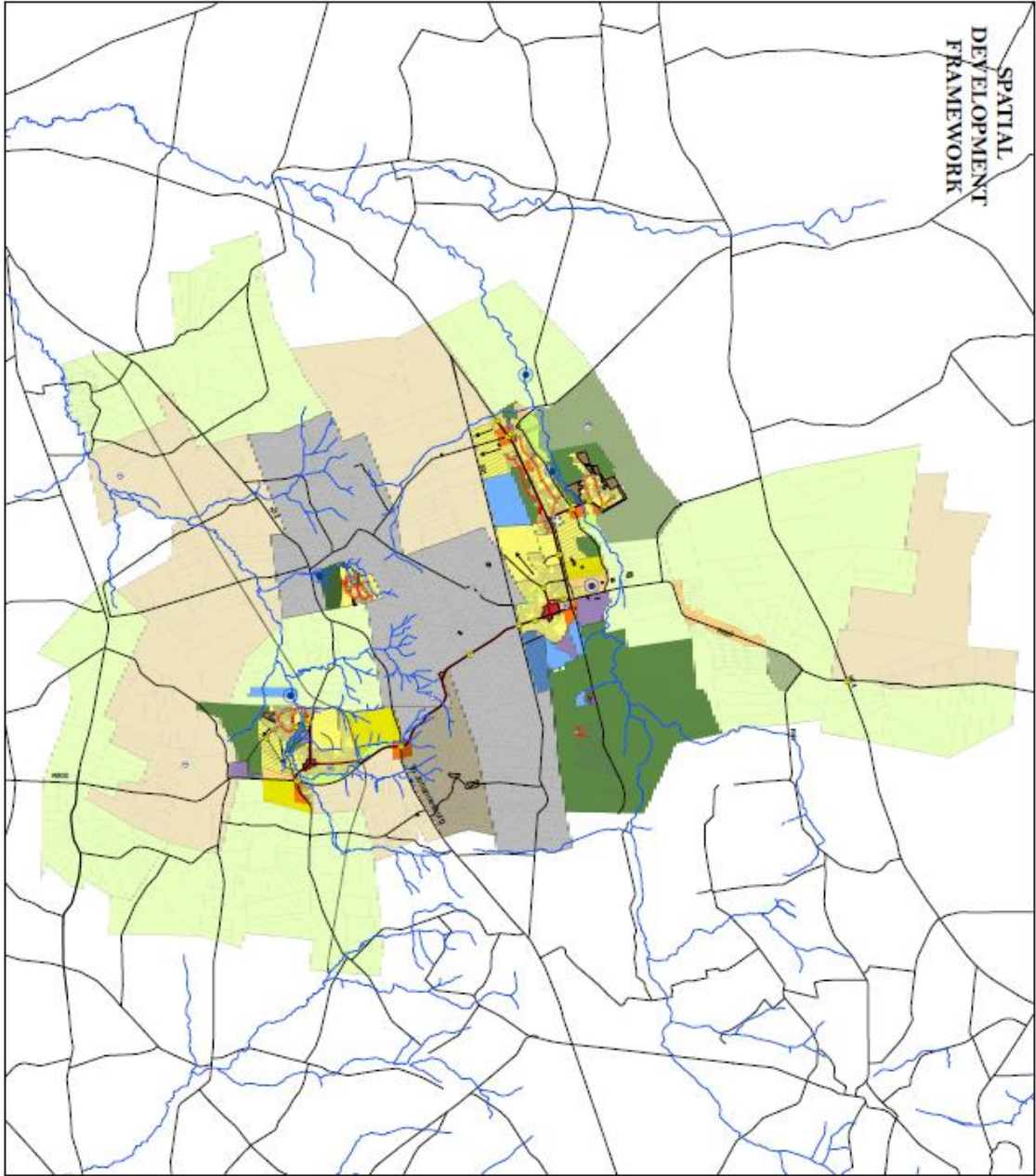
Map Legend



Northern Conurbation (Carletonville) (Above)



Southern Conurbation (Fochville) Above)



**SPATIAL
DEVELOPMENT
FRAMEWORK**

**MERAPONG CITY
LOCAL ECONOMIC DEVELOPMENT
PLANNING & ENVIRONMENTAL
MANAGEMENT
TOWN PLANNING**








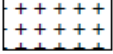






- Legend**
- 800 m Buffer
 - 500 m Buffer
 - Tertiary Nodes
 - Secondary Nodes
 - Town
 - Health Care
 - Landfill Site
 - Water Water Treatment Plant
 - National Road
 - Main Road
 - Secondary Road
 - Aerial Road
 - Growth Corridor
 - Admity Street
 - Admity Corridor
 - Development Corridor
 - Proposed Road
 - Central Business District
 - Informal Settlements
 - Water and Renewable Energy
 - Eco Recreation and Conservation
 - Port Urban Wood Use
 - Industrial and Large Commercial Zone
 - Renewable Energy Zone
 - Mixed Use
 - Port Urban Residential
 - Residential (Private Sector)
 - Residential (Public Sector)
 - Community
 - Intensive Agriculture
 - Extensive Agriculture
 - Waste Land/Mega Agriculture Zone
 - ASEAN/LEST NATURE RESERVE









Merapong City
Local Economic Development
Planning & Environmental
Management
Town Planning

SDF Main Map

| SDF map legend descriptions | |
|---|---|
| Map legend feature | Description |
| Primary Development Node (Central Business District)  Central Business District | These nodes are the focus points of economic activities in Merafong with the highest order functions and also the greatest variety of functions including high density residential; retail of consumer goods, semi-durable and durable goods; a variety of services including business-, personal-, professional- and industrial services; government offices, social institutions, and entertainment. Refer to Section 5.1.2 |
| Secondary Development Node  Secondary Node | These nodes serve sub regional/district areas. Land use diversification and intensification is encouraged within these nodes (Including residential densification) It is preferred that business activities be on the ground floor and residential and office uses on the floors above. Sized from community to regional level. Refer to Section 5.1.2 |
| Tertiary Development Node  Tertiary Node | These nodes are located within neighbourhoods and serve a smaller area with a focus on convenience and a limited footprint. Sized from a corner shop up to neighbourhood level. Refer to Section 5.1.2 |
| Primary Development Corridor | It is an integrated urban corridor associated with a central spine where public transport will primarily flow through. Transit Oriented Development and the bulk of facilities, activity nodes and urban infrastructure will be located along the corridor in order to obtain higher rates of efficiency and integration. Refer to Section 5.1.2 |
|  Activity Corridor | Linear development areas where increased development intensity is encouraged. Refer to Section 5.1.2 |
|  Activity Street | Lower order corridors put in place to promote the development of micro enterprises in appropriate localities, especially in previously disadvantaged areas. Refer to Section 5.1.2 |
|  Health Care | A sizable health care institution such as a hospital where ancillary uses such as a pharmacy, frail care/assisted living facility, medical consulting, etc. Is permissible in the immediate vicinity. Refer to Section 5.1.2 |
|  Tourism | General area where tourism related land uses are promoted subject to environmental constraints. Developments in the area have to take cognisance of and give consideration thereto. |
| | Occurrence/grouping of informal residential structures. To be resettled in more sustainable areas. Further expansion to be controlled and redirected to transfer |

| | |
|--|--|
|  Informal Settlements | areas where services are provided. |
|  Landfill Site | Roopoot Regional Landfill that serves the entire municipal area and includes ancillary land uses such as recycling. Noxious. Agricultural production within 500 meters of the site should be for bioenergy or biofuel purposes exclusively. |
|  Waste Water Treatment Plant | Municipal Waste Water Treatment Works with ancillary uses such as a Waste-to-Energy plant. Could be noxious. Preferred buffer of 800 meters. |
|  National Road | Major national transport corridor. N12 and N14 traverse Merafong. |
|  Growth Direction | Desired future direction of expansion. |
|  Proposed Road | Proposed future road needed to avoid bottlenecks and to promote good accessibility. |
|  Mining and Renewable Energy | Mining leasehold areas. Subject to mining surface right permits. Mining shafts and associated uses such as processing plants, support services, renewable energy plants, existing residential villages. |
|  Cemetery | Areas designated for current and/or future cemeteries. |
|  Residential (Private Sector) | Residential expansion, private sector driven development. Predominantly low and medium densities. |
|  Residential (Public Sector) | Residential expansion, public sector housing projects. Medium to high density. Could include gap market development by mining companies. |
|  Mixed Use | These are urban areas where a mix of land uses is encouraged and could include non-traditional mixes such as retail and industrial. However care has to be taken not to mix incompatible uses. Heavy polluting, odorous, noisy and unsightly industries are excluded from this zone. |
|  Industrial and Large Commercial Zone | Industrial, light industrial, service industry and commercial. Including noxious industries in certain localities. Refer to Section 5.1.2 |
|  Renewable Energy Zone | The production, storage and transmission of renewable energy such as solar or bioenergy with all relevant ancillary uses which could be noxious. Refer to Section 5.1.2 |
|  Peri Urban Residential | Transition between urban and rural land uses. Lower density residential, agriculture and tourism. Could include non-intrusive agri-business (Except in Watersedge) |

| | |
|--|--|
|  West Rand Mega Agri-Park Zone | Land parcels where activities associated with the West Rand Mega Agri-Park will enjoy preference over other uses (where practical). These include agricultural production, hydroponics, aquaponics, aquaculture, farmer support functions, etc. Refer to Section 5.1.2 |
|  Peri_Urban Mixed Use | Urban-Rural transition uses such as: <ul style="list-style-type: none"> ▪ Agriculture ▪ Agricultural small holdings ▪ Low density residential. ▪ Other peri-urban, low bid rent uses (Very low income per square meter) including <ul style="list-style-type: none"> ✓ service enterprises that deliver their services off-site (e.g. plumbers), ✓ light open air manufacturing, ✓ smaller transport enterprises, ✓ small scale non-commercial storage, ✓ agri-business, ✓ building material suppliers, and ✓ suitable uses that do not require (and per square meter cannot afford) full municipal services in an established township. No uses may lower the amenity of the surrounding environment. Only small enterprises less than 20 employees (No limit on agriculture). Visual screening may be required by municipality in terms of Merafong tree Screening Standards. Refer to Section 5.1.2 |
|  Intensive Agriculture | Valuable agricultural land to be protected. Suitable for intensive agricultural purposes subject to environmental protection constraints. |
|  Extensive Agriculture | Land areas with less favourable soil conditions. Suitable for agricultural purposes subject to environmental protection constraints. |
|  ABE BAILEY NATURE RESERVE | The Abe Bailey Provincial Nature Reserve. Conservation and tourism. Intensive development should not be permitted directly next to the nature reserve. Refer to Section 5.4 |
|  Eco Recreation and Conesevation | These are areas of high biodiversity that contain sensitive terrestrial and/or aquatic ecosystems that should be preserved. Controlled recreation and tourism activities such as bird watching, fishing, hiking, picnicking, etc. are encouraged. Refer to Section 5.4 |
| <ul style="list-style-type: none"> ▪ These development zones/areas do not grant land use rights directly. The correct land use rights in terms of the applicable land use scheme have to be obtained. ▪ In order to avoid misconceptions, users of this document are strongly encouraged to <ol style="list-style-type: none"> a) make sure what their existing land use rights (Zoning rights) are, and to b) contact the Spatial Planning & Environmental Management Section before making any investment decisions based on these development zones/areas. ▪ Contact details: 018 788 9039/9696 | |

For more information refer to the complete document.