

# SPATIAL DEVELOPMENT FRAMEWORK FOR GREATER TUBATSE LOCAL MUNICIPALITY

## FINAL SDF DOCUMENT

PREPARED FOR:

PREPARED BY



GREATER TUBATSE MUNICIPALITY

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## SECTION 1: SPATIAL INTERPRETATION OF THE IDP OF THE MUNICIPALITY

### 1. BRIEF

The Terms of Reference describes the brief for the 'Spatial Interpretation of the IDP of the municipality part of the as follows:

"Due to the fact that a Spatial Development Framework is a spatial representation of the Integrated Development Plan, understanding, but most importantly interpreting the IDP spatially is seen as the first phase of the process. This section deals with the interpretation of the IDP of the municipality. The following deliverables are discussed:

- o The vision and the mission statements in the IDP and its spatial implications.
- o The interrelationship of the municipality's vision and that of the district from a spatial manifestation point of view.
- o Key relevant principles and strategies as contained in the IDP and how they are translate spatially.
- o Delineating the municipal boundary and its wards, and
- o Map indicating the main pressing needs and the proposed multi-sectoral projects" (Terms of Reference-Municipal Spatial Development Framework, p2-3)

### 2. VISION

The vision of Greater Tubatse Municipality (GTM) as stated in its Greater Tubatse Municipality IDP: 2006-2011 is ***"To develop Tubatse as a Platinum City, in an integrated manner, to improve the quality of life for all."***

### 3. MISSION STATEMENTS

"The mission statement of the GTM is to promote:

- Local accountable democracy through active community participation;
- Economic advancement to fight poverty and unemployment;
- Accessible, needs satisfy service rendering in a sustainable and affordable manner:
- Municipal transformation and institutional development: and



- Environmental management to ensure a balance between safe human settlement and the economic base of the municipality”(p 78, GTM IDP, 2006-2011).

#### **4. INTERPRETATION OF THE VISION AND MISSION STATEMENTS**

Although both the vision and mission statements do not provide direct guidance as to how the spatial structure of GTM should be organized/framed they provide some indirect clues that should inform spatial planning.

The GTM vision has three components, the first being the physical/spatial dimension, which is to develop the municipal area as a Platinum City. The notion or concept of a Platinum City denotes that development of the municipal area is driven or lead by mining and processing of platinum-group metals and presumably the associated minerals such as chrome and vanadium. If such mining activities has pre-eminent role in the development of GTM the logical extension of this assertion is that the other economic sectors e.g. manufacturing, agriculture and tourism though important are not in the same category as mining. In other words the economic activities based on platinum industry will take precedence or priority over other sectors. It should be noted that although the platinum mining is generally the most lucrative because of export value, the Greater Tubatse Area has abundant other mineral deposits such as chrome, vanadium, slate, silica and magnetite. Although this is not discussed in the vision the IDP sees mining sector in general as critical to economic development of the municipality. In this regard it states, “Although there are several mines in the area, the existing resources remain unexploited. Investment in this sector is important as it brings with it investment in infrastructure, result in creation of jobs and generates many other economic spins off”. The section of GTM IDP: 2006-2011 dealing with the ‘*Profile of the Economy*’ (pages between 57 to 60), though not part of an exposition of the vision, argue why the manufacturing, trade, tourism and agricultural sectors will have minimal contribution henceforth in municipal economic development. In certain part of this section it is stated “...mining still presents the largest opportunity in the GTM area to a sustainable base...” (GTM IDP: 2006-2011, p58). It is also mentioned that the “Three large platinum mines are planned and under construction in the area, and it is anticipated that these will create approximately 6000 job opportunities”(ibid, p58). This is proportionally a very high number of jobs that can be created by any GTM economic sector in the short term. The

mining sector is second largest contributor to employment in the area at 17% after the public sector at 22% (ibid, p59). The mining sector has the potential to significantly increase its contribution to employment opportunities. The jobs to be created by the mining sector constitute a third of the existing 19227 jobs (GDSM ISDF, p11) If the unemployment is to be reduce by half in 2014, which is part of the millennium goals the whole of the district municipality area must create at least 5700 jobs (GDSM ISDF p11), the contribution of platinum mining and processing is key in this regard.

The second component of vision is that developing of municipality, as a Platinum City must proceed in an integrated fashion, which means stringing together a range of facets in order to achieve the widest impact. Integrating the different facets means the awareness and attempts to mitigate the negative consequences of mining and processing raw materials associated with as a Platinum City. This is a more holistic view of the development path to Platinum City status. In terms of spatial development the vision suggests integration of mining with various economic sectors, consideration of social, environmental, institutional and human resources etc consequences of the chosen development path. The component of the vision is instructive to the process and output of spatial framework plan in the sense that a wide range of factors/issues should be brought to bear (integrated) in formulating the plan.

The third component of the vision is that development of Greater Tubatse Municipality as a Platinum City should not only be integrated but should result in improve quality of lives of all. Essentially this means the benefits of development of Greater Tubatse Municipality, as a Platinum City should be widely shared by the inhabitants of the municipal area. This is probably intended to correcting the past policies and practices of marginalizing certain social groupings such as Africans ,women , rural communities , youth, physical disabled etc from participating and benefiting from mainstream development endeavours. This component of the vision challenges the process of Spatial Development Framework to be inclusive and ensure that the living conditions of many are improved.

The IDP further proposes five mission statements that should be promoted by the GTM . These mission statements are listed in Section 3 above. The first mission statement to be promoted by GTM is active community participation in the civic and administrative

affairs of the municipality in a local accountable democracy. It is therefore important that the local communities are consulted in the process synthesizing the information necessary to understand the development problems and formulation of solutions to such problems. Compilation of the Strategic Spatial Framework should allow inputs of a range of interested and affected parties including the relevant municipal staff and councillors, business organizations, traditional leadership, political parties, community based organizations, non-governmental organizations, ordinary residents etc.

The second mission statement to be promoted by the municipality is the economic advancement to contribute in rolling back the pervasive poverty and unemployment. It is estimated that the unemployment rate in the GTM is 73% (GSDM ISDF ,p11). "According to the Demarcation Board's municipal information poverty relates to households with no income and those that earn less than R18 000 per annum. ... the vast majority of households within the economic towns of GTM (41%) have no income , (7%) earn between R0 to R4800 per annum , ..[And] 25% households earn between R4800 to R19200. ... Only 1% of households have an annual income of greater than R153600 (GTM IDP: 2006-2011, p55). The proportion of households with no income in the surrounding villages increase to 45% (GTM IDP: 2006-2011, p55). This basically suggests that economic advancement should result in material improvement in household and personal income of residents. This should be specifically achieved by both creating employment opportunities for local communities and targeted strategies to alleviate poverty by stepping up service delivery that will ensure food security to the poor. The proposed spatial development framework should therefore play an important role in encouraging economic development activities of various types and in different parts of the municipality that will raise earnings of local population. In the long term the planned economic activities should ensure that the local residents have more than subsistent existence and do not depend on government welfare programmes.

The third mission statement to be promoted by Greater Tubatse Municipality is providing accessible services in a sustainable and affordable manner. The formulation of the strategic spatial framework should facilitate the provision of accessible, sustainable and affordable public services. The structuring of settlement pattern and location of various social facilities and engineering services such as schools, health facilities, police

stations, halls, roads, water supply, sanitation facilities etc will be key in this regard. These issues will be determined in the formulation of the Strategic Framework Plan.

The fourth mission statement to be promoted by the municipality is ‘ municipal transformation and institutional development’ this mission statement has minimal impact on the process of formulating and output of the spatial planning framework as these specifically related internal overhauling of municipal structures. Institutional development will only be tangentially dealt with in the spatial planning framework.

The last mission statement that will be promoted by the municipality is the management of biophysical environment such that economic development takes into account the safety considerations of human settlements and the protection of the natural environment. Essentially economic development cannot occur at the expense of safe human settlement and secure natural environment. In the spatial planning framework it will therefore be important the location, type, form of economic development activities does not negatively impact on the safety of human settlement and integrity of natural environment.

## **5. INTERRELATIONSHIP OF MUNICIPALITY’S VISION WITH THAT OF THE DISTRICT**

The vision of the Greater Sekhukhune District Municipality is stated as thus: ‘ A custodian of Integrated Sustainable Service Delivery in Partnership with Local Municipalities and Communities” (GSDM IDP 2005/06, p38). There seems to be a correlation and a level of complimentarity between visions of the local municipality and that of the district. However the emphasis is somewhat different. The district ‘s integrated service delivery focus will enhance GTM’s “improvement of quality of life for all” and ensure that the GTM also intensify its economic growth aspirations based on the Platinum city concept.

At both district and local municipal there is perverse poverty in particularly former Lebowa homeland areas that require carefully targeted state service delivery interventions. In terms of narrow definition the unemployed persons as a proportion of labour force amounted to 43.5% in 2001. Using the expanded definition “... which adds the persons who could not find work, even if they had not made an effort to look for work

in the week before the census, the district unemployment rate was 72% in 2001” GSDM IDP 2005/06, p26). The average households and individuals without any income was 39% and 81.5 respectively in 2001. GSDM IDP 2005/06, p26-27). It is therefore understandable for the district council to emphasize the service delivery ostensibly to poor communities. The Greater Tubatse Municipality seems to emphasize that the integrated improvement of quality of life through exploitation of the municipal area mineral wealth on the path towards the Platinum City status. At the district level it is integrated sustainable service delivery (we assume by government sector) will provide the platform to improve the human conditions. The consequence of different in emphasis at district and local municipality levels on the spatial planning framework is that settlement servicing with both social and engineering infrastructure will be dominant at district level and platinum mining, processing, beneficiation etc will be dominant at local municipal level.

## **6. STRATEGIES OF THE INTEGRATED DEVELOPMENT PLANNING AND HOW THEY TRANSLATE SPATIALLY**

There are a few of strategic goals of GTM listed in the IDP that have a spatial dimension which are grouped under three different objectives. The complete list of the GTM’s objectives and strategic goals is provided below as Table 1:

<b>OBJECTIVES</b>	<b>STRATEGIC GOALS</b>
Co-operative Governance and Informed Decision-making	<ul style="list-style-type: none"> <li>• Enhance the revenue from own and other sources</li> <li>• Ensure sustainability and maintenance of Inter and intra – governmental relations.</li> <li>• Ensure sustainability and maintenance of effective community and stakeholder</li> <li>• Develop sustainable Council and community structures</li> <li>• Implement and manage an effective communication system</li> <li>• Develop and sustain customer relationship management competencies for all – Councillors,</li> </ul>

	Ward Committee members and Employees
Social environmental Sustainability	<ul style="list-style-type: none"> <li>• Capacitate communities to care after municipality's interests</li> <li>• Capacitate communities through alternative service delivery solutions</li> <li>• Ensure community social, health, educational and safety well-being</li> <li>• Ensure environmental well-being</li> <li>• Develop effective environmental compliance monitoring system</li> <li>• Ensure employee satisfaction and well being</li> </ul>
Advanced Economic Growth	<ul style="list-style-type: none"> <li>• Manage economic development through integrated growth and development strategies</li> <li>• Promote and network Public Private Partnerships</li> <li>• Increase economic opportunities through economic growth</li> <li>• Brand Platinum City</li> <li>• Develop a high performance culture</li> </ul>
Optimised Infrastructural Services	<ul style="list-style-type: none"> <li>• Optimally leverage capital investment</li> <li>• Improve access to basic and other service delivery in a sustainable manner</li> <li>• Maintain and upgrade municipal assets</li> <li>• Prioritise and optimise resource allocation and utilisation of resources</li> <li>• Develop and apply service standards</li> </ul>
Organisational Excellence	<ul style="list-style-type: none"> <li>• Increase financial viability</li> <li>• Practice Governance</li> <li>• Develop and upgrade support and operating systems and procedures for around governance</li> <li>• Engage in change and diversity management to create a developmental learning local</li> </ul>

	<p>government</p> <ul style="list-style-type: none"> <li>• Develop and retain the best human capital through institutional development, capacity building strategies to ultimately become an employer of choice</li> </ul>
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**Table 1:** Goals and objections.

The relevant objectives to the strategic spatial framework are the following: co-operative governance and informed decision making, social and environmental sustainability, advanced economic growth, and optimised infrastructural services. Each of these objectives have a few subsidiary strategies that can translate into spatial planning.

The intent of the first objective i.e. co-operative governance and informed decision-making is 'increased municipal income'. The primary strategy under this objective that should inform the proposed spatial plan is to 'enhance the revenue from own [municipal] and other sources'. The proposed spatial order should therefore augment the municipal rates base by encouraging appropriate rateable land development in various parts of the municipal area. In this regard the municipal landholdings whenever available should be given priority in creating income for the municipality. This does assume that the municipality has real-time or up to date system to records for all rateable properties. The other strategies under the first objective are to 'Ensure sustainability and maintenance of inter and intra-governmental relations', 'ensure sustainability and maintenance of effective community and stakeholder relations', 'Develop sustainable Council and community structures', and 'Implement and manage an effective communication system' although they do not directly inform the content of the spatial plan, they indicate the desired processes that should be followed in formulating the spatial plan. To this end formulation of the GTM spatial plan, of necessity requires participation of affected and interested public authorities, organs of the municipality, and community-based organization through a sustained and open communication process. Therefore the formulation of strategic spatial framework will at various stages solicit genuine participation of interest groups.

Under social and environmental sustainability objective of Integrated Development Plan the important strategies in terms of spatial plan is to 'Ensure community social, health,

educational and safety well-being' and 'Ensure environmental well-being'. The aim of the social and environmental sustainability objective is according to the Integrated Development Plan (IDP) to capacitated communities. The Strategic Development Framework should contribute to capacitating communities by giving pointers as to where these social, health, educational and security and safety facilities should be provided as part of settlement planning. Whenever possible the type, nature, size, standards etc of these facilities should also be indicated. This constitutes norms and standards set the benchmarks in the relationship between social facilities and the number of tempered by distribution of household within the settlement. It is also important that the environmental integrity is not sacrificed in the pursuit of spatial development but the biophysical and cultural environments should be made complimentary to spatial and economic development. The Strategic Development Framework should therefore not only be mindful of these issues but also use them as the building blocks.

Another key objective of the IDP is "Advanced Economic Growth" with the following strategies viz 'Promote and network Public Private Partnerships', 'Increased economic opportunities through economic empowerment 'ensure integrated development for economic growth ', and 'Brand Platinum City ' that are relevant to spatial planning. Promoting and networking public private partnership will be for example pertinent to unlocking the mining potential of the municipal area. This may require creative co-operation between the mining houses, municipality and service authorities in provision of engineering services, social facilities housing, etc. This arrangement could even extend to creation of business and job opportunities for the local enterprises and population respectively. Increased economic opportunities through empowerment suggests that the spatial plan should also benefit more the historically disadvantaged groupings such as women, blacks, rural communities, youth etc when creating jobs and business opportunities. The envisaged integrated development means that economic growth should be balanced and sustainable over the longer term. It should not favour one sector to the destruction of others but all strands should be harmoniously weaved together for the widest possible benefit. Branding platinum city of necessity require platinum mining to be a lead sector. The spatial plan should start to indicate how to attract and retain these mining enterprises, particularly in relation to what services to be offered and where in space should these be provided. The spatial plan should also address the sectors of



the local economy that can be galvanised the mining activities both on the down and upstream of the mining cluster value chain.

The final objective of the IDP that is relevant to the spatial development framework is the optimisation of the infrastructural services. The pertinent strategies under this objective include the optimally leveraging of capital investment. This means that as much as possible additional value should be extracted from existing infrastructure. This means the spatial plan should in the first instance try to take advantage of the investment already made in services. This however may include improvement or reconfiguration of the services to meet additional development. The municipality will support development that will optimise infrastructural investment. Urban development should therefore focus on areas where the multiplier effect has undoubted potential. Consequently there is isolated urban development should be encouraged unless there is a compelling reason. The proposals developed on section 3 built on this.

## **7. MUNICIPALITY'S BOUNDARIES AND WARDS**

Greater Tubatse Municipality is located north of the N4 highway, Middelburg, Belfast and Nelspruit, and east of the N1 highway, Groblersdal and Pietersburg. The municipal area is approximately 4 550-km<sup>2</sup>. It forms part of the Sekhukhune District Municipality hence under the Limpopo Province. GTM is bounded by Fetakgomo Locality Municipality to the north west, Makhuduthamaga Local Municipality to the west, Greater Groblersdal Local Municipality to the South, Lepelle-Nkumpi to the north, Elias Motswaledi to the south west, Drakensburg Local Municipality to the east and Thaba Chweu to the south east. The locality map is depicted on Map 1 (a).

There are 29 identified wards within the jurisdiction area of GTM, all with one councillor per ward. These wards vary in physical and with population sizes. For instance, ward 1, 2 and 3 are by far the largest in extent and the majority of other wards are located in the north-eastern region of the GTM. Study area and wards is depicted on Map 1(b). The wards that accommodate more than 10 000 households are wards 1, 13, 12, 29, 21, 4 2, 19,10,and 27 (GTM IDP, 2006-2011).

## **8. THE MAIN PRESSING NEEDS**

In terms of the development fortunes the GTM municipal area can be divided into two broad areas that have contrasting characteristics. Two contrasting swathe of land in terms of level of development owe their existence to erstwhile apartheid planning policies that is very difficult to undo. The northern part which was part of former Lebowa homelands is characterized by very scattered but numerous rural settlements that are poverty stricken area and are essentially subsistence based, and the southern part which was part of former White South Africa is far more developed and diversified and where extensive agricultural commercial farms and forestry are. The latter includes Burgersfort, Steelpoort and Ohrigstad, referred to as urban nodes (The areas of pressing need are shown on Map 2). Inevitably the nature of interventions in these two parts of GTM should be different as the focus therefore should largely be on service delivery to the north and economic growth to the south.

## **9. PROPOSED PROJECTS**

The list of proposed projects within GTM municipality as they appear in the IDP excluding the projects with no financial commitment have been reviewed. In general, the list comprised of projects that will be implemented in the next 3 financial years (2007-2009). The projects where there is no financial commitment is viewed as a wish list that will turn into real projects once funds have been allocated. Most of these proposed projects are located in rural settlements and in tribal lands where majority of population is and where grinding poverty is pervasive. Consequently they focus on service delivery, in order to alleviate suffering and make living more bearable. There are also some infrastructural projects that are aimed at unblocking economic development.

These proposed projects are depicted on Map 3.

## SECTION 2: SPATIAL ANALYSIS

The Section 26 (e) of the Municipal Systems Act, (Act 32 of 2000 stipulates that each and every municipality must formulate a Spatial Development Framework (SDF) as part of its Integrated Development Plan (IDP). SDF is a plan that indicated where certain types of land uses and associated development are permissible and where certain activities are likely to be restricted. Consequently the SDF describes the desirable future pattern of land use and development within the municipal area. In this way it forms the basis of land use management.

The aim of a Spatial Development Framework is to provide general direction of preferred land use which therefore guide decision-making and action over a multi-year period aimed at the creation of integrated and habitable built and natural environment. In other words the SDF aims at informing the decisions of different organs of State as well as creating a framework to guide and facilitate spatial investment of both private and public sector entities.

### 10. DELIVARABLES

This section of the SDF (Spatial Analysis of the Current Reality) discusses in details the following deliverables:

- o The existing policies, plans, resolutions and by-laws in the municipality pertaining to spatial planning.
- o The municipal –wide spatial issues (in relation to the needs and the projects identified).
- o The settlement spatial patterns and dysfunctionalities.
- o The spatial implication of applicable provincial and national plans.
- o Identification and analysis of the existing nodal points.
- o Major structuring elements, urbanisation trends and spatial implications.
- o Strategic roads and transportation networks (district, provincial and municipal roads)
- o The municipal investment and spending patterns.
- o Location and trends of basic services and infrastructure.
- o Location of low-income houses.

- o Environmental conservation and sensitive areas and the impact which development may have on the environment.
- o The areas of agricultural potential and land currently affected by land claims.
- o The major sporting nodes or areas with relevant infrastructure.
- o The spatial relationship between urban and rural areas.
- o The relationship between the spatial issues and the vision of the municipality.

## **11.PROCESS AND METHODOLOGY**

This section of SDF involved the collection and collation of data in the GTM to identify factors and issues that have an impact on the development prospects of the area. This was mainly a desktop exercise whereby secondary information from available strategic documents was utilised, site reconnaissance and interview conducted with key informants.

This document is structured to address the following issues in the GTM area:

- The Legal Framework;
- Spatial Analysis of the current reality;
- Sectoral Analysis; and
- Municipal Investment and Spending.

## **12. LEGAL FRAMEWORK**

### **12.1 SPATIAL DEVELOPMENT PRINCIPLES AND POLICIES**

Like all other settlements Greater Tubatse spatial pattern reflects the vestiges of an apartheid planning system that focused on racial stratification of communities. The system compartmentalised communities and provided uneven services and facilities such as social services and amenities and basic municipal infrastructure resulting in fragmented and attenuated spatial form. This saw the concentration of infrastructure, social and economic activities in the former white areas with the former Lebowa homeland territory suffering serious neglect. Over the last ten years various legislative framework and policies have been introduced to overcome the largesse of the past spatial planning theories, programmes and practices.

This section provides the broad summary of the pertinent legislation and policy documents that function as a “hacking block” for spatial planning and development of land in Greater Tubatse Local Municipality Area. In other words these are the statutory prescripts that the municipality needs to take into cognisance when formulating a Spatial Development Framework.

### **12.1.1 PLANNING AT A NATIONAL LEVEL**

There are various legislations aimed at correcting the historic spatial dimension of development. The key national laws include:

- Municipal Systems Act
- Development Facilitation Act
- White Paper on Spatial Planning and Land Use Management

#### **a) Municipal Systems Act**

In order to address the spatial-related challenges, Section 26 (c) of the Municipal System Act (32 of 2000) prescribes that every municipality should formulate a Spatial Development Framework (SDF) as an integral part of their Integrated Development Plan. This awards the municipal SDF legal status as part of the in IDP process. The SDF is a base plan that indicates the desired patterns of land use, directions of growth, urban edges, special development areas and areas that need conservation. The SDF also gives land development guidelines in relation to:

- Provision for development of rural and urban areas;
- Recognition of existing informal land developments;
- Discouragement of urban sprawl and land invasions;
- Equitable access to land; and
- Tenure security

The current Spatial Development Framework, which is the revision of the previous one, completed in 1995 has to be approved by Council in order to achieve its legal status. Its contents must also cover all the issues as set out in the Municipal Structures Act.

## **b) Development Facilitation Act**

Development Facilitation Act (DFA), 1995 (Act 67 of 1995) was set out to introduce the extraordinary measures to facilitate and speed up the implementation of land related projects and development programmes. DFA sets out the Chapter 1 principles whose intentions are to guide land development and planning. These principles are binding to all future actions, the laws, by-laws, regulations and policies that are given effect at all levels of government spheres, national, provincial and local.

The Chapter 1 principles of DFA for land development serve to guide the administration of any physical plan, transport plan, spatial development plan or any similar plan administered by any competent authority in terms of any laws. The chapter 1 principles of DFA, are stipulated in section (3) of DFA, (Act 67 of 1995) as the general principles of land development. The following is the list of Chapter 1 principles pertinent to Spatial Development Framework: -

\*Policy, administrative practice and laws should provide for urban and rural land development and should facilitate the development of formal and informal, existing and new settlements.

\*Policy, administrative practices and laws should discourage the illegal occupation of land, with due recognition of informal land development processes.

\*It is stipulated that policy, administrative practice and laws should promote efficient and integrated land development in that they-

- Promote the integration of the social, economic, institutional and physical aspects of land development;
- Promote integrated land development in rural and urban areas in support of each other;
- Promote the availability of residential and employment opportunities in close proximity to or integrated with each other;
- Optimise the use of existing resources including such resources relating to agriculture, land, minerals, bulk infrastructure, roads, transportation and social facilities;
- Promote a diverse combination of land uses, also at the level of individual erven or subdivisions of land;

- Discourage the phenomenon of "urban sprawl" in urban areas and contribute to the development of more compact towns and cities;
- Contribute to the correction of the historically distorted spatial patterns of settlement in South Africa and to the optimum use of existing infrastructure in excess of current needs; and
- Encourage environmentally sustainable land development practices and processes.

\*Members of communities affected by land development should actively participate in the process of land development.

"The skills and capacities of disadvantaged persons involved in land development should be developed.

\*Laws procedures and administrative practices relating to land development should be clear and generally be available.

\*Policy, administrative practices and laws should promote sustainable land development at the required scale.

\*Land development should result in security of tenure, provide for the widest possible range of tenure alternatives, including individual and communal tenure, and in cases where land development takes the form of upgrading an existing settlement, not deprive beneficial occupiers of homes or land or, where it is necessary for land or homes occupied by them to be utilised for other purpose, their interest in such land or homes should be reasonably accommodated in some other manner.

\*Policy, administrative practice and laws relating to land development should stimulate the effective functioning of a land development market based on open competition between suppliers of goods and services."

(Development Facilitation Act, 67 of 1995)

In sum, there are five concern that underpin the Chapter 1 principles, viz

- The need to create new forms and structures for settlements for better land development planning projects;

- The need to speed up land development programmes;
- The need to provide better planning systems;
- The need to promote security of tenure; and
- The need to promote a sound environment.

The ultimate test of the Spatial Development Framework is the extent to which it complies with the Development Facilitation Act, Chapter 1 Principles.

### **c) White Paper on Spatial Planning and Land Use Management**

The broad aim of the White Paper on Spatial and Land Use Management is to facilitate land allocation to the uses that provide the best and sustainable use of land and integrated management of land resources. The White Paper sets out the norms and principles essential for land use and planning. Some of the critical norms and principles are:

- Spatial restructuring of the previously distorted and inefficient settlements;
- Promotion of the sustainable use of land;
- Redistribute resources to areas of greatest need and development potential;
- Stimulate economic development in both rural and urban areas; and
- Support the equitable protection of land rights.

The Greater Tubatse Local Municipality should take into consideration the above principles when formulating the SDF.

## **12.2 PLANNING AT A PROVINCIAL LEVEL**

### **12.2.1 Limpopo Spatial Rationale**

Limpopo Spatial Rationale (2003) proposed a hierarchy of settlements for the province by identifying different levels and scales of growth points and population concentration points. This strategy identifies criteria that should be used to identify the category of any settlements within the pre-determined hierarchy. From the criteria it is therefore possible to assign any settlement found in GTM to its rightful spot hierarchy. The strategy further specifies the hierarchal level of selected settlements in the GLTM. Naturally the Spatial Development Framework should use this as a frame of reference unless there are good reasons to deviate from this. For example this strategy sees Burgersfort as pre-eminent



settlement and in all probability the Strategic Development Framework will adopt the same view.

### **12.2.2 Limpopo Growth and Development Strategy**

The Provincial Growth and Development Strategy (PGDS) was developed due to the need to put in place a development framework that should guide growth and development in Limpopo. With its strong emphasis on improving the quality of life and sustainable development, the PGDS aims to create a conducive environment for the people of the province to participate in the provincial economy. It is informed by the mainly by the National Spatial Development Plan (NSDP), and all provincial documents that have a bearing on growth and development in Limpopo. The primary objectives of PGDS are:

- To improve the quality of people's life;
- To promote employment opportunities and sustainable economic growth;
- To address unique social issues; and
- To promote participatory and efficient governance.

The PGDS identifies development of corridors as one of the development strategies to concentrate economic activities within a defined spatial area. A few of these corridors traverse GTM area.

#### **a) Dilokong corridor**

Dilokong corridor is identified in the Limpopo Growth and Development Strategy (2005) and was earlier identified as a Spatial Development Initiative (SDI) (1999) by the national Department of Trade and Industry. This corridor runs from Polokwane, along R37 through Burgersfort to Lydenburg. The section of the Dilokong corridor running through GTM is expected to attract mining related industry, retail and service businesses, medium density housing, higher order social activities, etc, concentrated in settlements like Driekop, Riba Cross, and Mecklenburg. The Spatial Development Framework must reflect on these proposals.

**b) Jane Furse Corridor**

This corridor serves mostly traditional and communal rural areas along the road between Jane Furse and Lydenburg. "This corridor is classified as the secondary corridor within the Sekhukhune District. It has however become an important service point." (GSDM ISDF, p30). Provision of services within this corridor is critical to support its development.

The Spatial Development Framework must consider this proposal.

**c) Burgersfort Stoffberg Corridor**

This corridor runs from Burgersfort via Steelpoort to Stofberg. Along this corridor there are a couple of mines and related heavy engineering activities taking place hence the corridor play an important in the development of mining industry. The further development of this corridor will increase economic development of the areas surrounding the corridor, particularly the linear settlements along the R555 and Steelpoort River. (GSDM ISDF, p30).

This proposal will have to be factored into the Spatial Development Framework.

**13. SPATIAL ANALYSIS OF THE CURRENT REALITY****13.1 MAJOR STRUCTURING ELEMENTS**

Certain key characteristics give the GTM its distinct spatial pattern (see Map 7 – Settlement Pattern). These are:

**13.1.1 Roads**

Roads have been identified as one of the decisive spatial structuring elements within the area of GTM. The major function of roads is to connect key urban nodes, rural settlement and major facilities. In GTM the major roads either allow formation of nodes or settlements at certain appropriate points along the road which become an anchor of spatial development agglomeration, e.g. Burgersfort, Ohrigstad and Steelpoort or smaller settlements such as Kgautswana, Alverton, Penge, etc. or a continuous band of spatial development along a longer road section, e.g. settlements between Mecklenburg and Driekop. There are also numerous rural settlements in linear formation along access through roads in former Lebowa homeland territory.

There are four major provincial arterial routes traversing GTM, i.e. The R555 that runs from Middleburg to Burgersfort; R37 that runs from Polokwane to Lydenburg; R36 that runs from Lydenburg to Hoedspruit / Blydepoort and Jane Furse road that connects Jane Furse and Lydenburg. "These roads are critical for the survival of the area as they serve as the means of transportation and the economic hub of the areas" (GTM IDP 2006-2011, p: 55). For instance, the proposed Dikolong Corridor, which runs along R37, presents an opportunity to create better accessibility and visibility at both regional and local scales. The strip of land immediately adjacent to the R37 can attract land uses that require regional accessibility and visibility. Such land uses are business, higher order social facilities, e.g., hospital, police station, high density housing, etc. Some short distances away from the movement route the land uses that only require local connectivity such low-density housing, low order facilities, e.g., primary school can locate. The GTM area is well connected from North to South with limited east- west cross linkages into settlement away from R37.

The GTM area is characterised by dispersed, small and numerous rural settlements that are spread across the northern and the north-western parts. The northern and the north western areas are historically part of the former Lebowa homelands where the African population was allowed to settle on permanent basis. These settlements function as hinterland or back waters of three towns, viz, Burgersfort, Steelpoort and Ohrigstad where there are employment opportunities and high order retail facilities. Burgersfort has a strong pull because of its size and diverse activities thus link to disproportionately high number of settlements in GTM. Burgersfort surrounding hinterland stretches as far as 50 km in all directions. "Burgersfort forms a focal point for traffic as various regional access roads converge at Burgersfort. Provincial Route 33 between Polokwane and Nelspruit Provincial Route 555 between Middleburg and Ohrigstad intersect in Burgersfort." Sekhukhune District Municipality –Central Tubatse, Driekop, Parktiseer and Burgersfort: Trends Report and Detail Development Plans- November 2003.

Access road determines how the settlements are formed. Almost all the first order settlements are situated along major roads, i.e. Provincial Roads. This is a very important factor for economic growth and development over the long term. Also, railway line and stations reinforce the development in these first order settlements.

Road linkage is not only the factor in urban spatial pattern but also in rural settlement. For example, almost all rural settlements have at least one major road link connecting to urban nodes. Generally these link roads are continuous, passing through one village to the next as if the villages are 'beads on a string'. Usually a rural settlement has a central spine through road with a couple of crosslink roads into the main link road at either regular or irregular intervals. In the eight clusters of settlements only two i.e. Penge and Taung (see Section 4 for details), have dead end spine road as in most cases it is loop allowing at least two points of access roads.

### **13.1.2 Topography**

The GTM area is highly mountainous hence development occurs mostly in valleys. Settlements sizes are small and scattered due to extensive broken terrain. In fact the ridges and the mountains forms linear dividers between the settlements.

"In certain areas the topography is very steep creating impossible mountainous terrain which is barely inhabited. The ridges further divides the municipal areas creating pockets of homogenous composition, which determine growth and development potential" (GSDM: Central Tubatse-Driekop, Praktiseer and Burgersfort: Trends Report and Detail Development Plans; p. 4)

The terrain dictates that larger settlement development occurs mainly in flat, low lying areas in-between the mountain ranges. Generally the roads run at the bottom of the basin/ valleys. It is therefore not surprising that the major roads, i.e. R555, R37 and R36 and Jane Furse to Lydenburg road) for most part run parallel to rivers. The position of cross-link roads is dictated by topography that is flatter to allow the road to pass through at reasonable flat grades. Where these roads passes through wide basin, particularly in former Lebowa homeland a motley of settlements have grown around these major roads. In other words there is clustering of series of settlements for almost the entire length of the road, e.g. Mecklenburg-Driekop (R37), Mapareng -Tswenyane (R36) and Mampuru to Eerste Geluk (parallel to R555). There is hardly undevelopment land between these settlements. In former 'white areas' the spatial development spatial development is contrasting as it tends to be more nodular therefore not continuous. For example, there is approximately 20 km of vacant of intervening land between Steelpoort and Burgersfort and about 50 km between Burgersfort and Ohrigstad along R555.

Even the scattered rural villages have located within more developable basin almost parallel to mountain range. The central spine road (normally the bus and a taxi route) usually runs along the flatter alignment in the basin. The settlements normally rise up the slope on either side of the spine road until the gradient becomes too steep for minimum un-retained cut and fill earth platform (usually more than 30 % gradient). Usually along the spine road at interceptory locations certain social and commercial (e.g. halls, businesses, etc) are located. The communal standpipes are generally also located along these spine roads that become the hive of social and commercial activities associated with non-residential development. As such they could be described as activity streets along which public transport (busses and taxis) moves and social commercial and engineering services are located.

Generally the settlements are linear in form as they are bounded by the undevelopable ridges and on either side of the access through road, usually located on low-lying grounds adjacent to the stream.

### **13.1.3 Mining Belt**

There is the abundance of precious mineral deposit in a North-south direction on west part of the study area. The mining related development follows the eastern limb of the bushveld complex from the der Brochen in the south to Twickenham mines in the north and beyond the local authority boundary (see Map 5 –Land Uses). The eastern limb of the bushveld complex (mining belt) is emerging as important structuring element of the GTM spatial development, which will be increasingly dominant in future. The mining activities will affect mainly the western quadrant of the study area. “With a number of mining activities throughout the local municipality more pressure is exacted on the provision of housing and infrastructure needs, the existence of the nodal point in Mecklenburg, Driekop, Burgersfort and Steelpoort, further add to the housing and infrastructure provision needs” (GTM IDP 2006-2010, p: 35). It is expected that retail and the service businesses will respond to the opening of mines and the development of housing by also locating close to these areas. In time, this may eventually alter the current fragmented spatial pattern by creating few large urban settlements, if the expected scale of mining activities materialise.

The proposed Dikolong SDI corridor which builds on the energy generated by the new mines viz, Marula, Twickenham, Modikwa starts to exhibit how the location of the platinum group metal is to reconfigure the spatial structure of GTM. The anticipated housing, rental and industrial development in Burgersfort and Steelpoort will reinforce these two towns as foci of urban development in GTM. In fact the anticipated development will transform the two small towns beyond recognition.

#### **13.1.4 Tenure Arrangement**

The fourth and final structuring element of GTM spatial pattern is tenure arrangement. Though the municipal area of GTM is dominated by about ninety very large original farms distributed across the municipality. The north-western areas have comparatively smaller, multiple, diffused and attenuated settlements than the few but compact settlement on eastern part. The former comprise mainly of tribal land (See Map 4: Tribal Authority Areas) and were part of the former Lebowa homeland territory where Black population had been forced by apartheid laws and policies to settle. The registered owners of the various farms in former Lebowa territory are the state (RSA, South Development Trust and still Lebowa government), traditional communities and authorities. In these areas the traditional authorities, still prefer to settle the households affiliated to particular clan. At different times the traditional authorities powers to allocate land were supplemented by local magistrate, relevant officials of Lebowa government, and also national government. The apartheid policies that expected African people to only settle permanently only in these areas. Land allocation procedures led by the tribal authorities and simple quantum of African population resulted in a particular settlement pattern i.e. myriad of small settlements. This is further underscored by lack of formal settlement planning in former Lebowa territory.

The southern and the eastern parts (in the vicinity of Steelpoort, Burgersfort and Ohrigstad) of the municipal area is comprised of privately owned land and mainly used for agricultural purposes as urban settlement development or subdivision of farms were prohibited or made difficult by laws of the previous era. The apartheid laws further prohibited African households to settle on these permanently farms unless they were workers on the farm. In spite of removal of apartheid laws the traditions and practices in accessing land have hardly changed. The tribal land is still allocated on the patronage basis with little formal settlement planning. The continuation of historic pattern of

ownership of land and current use makes it very difficult to reverse the legal uncertainties and inability to formal planned the human settlements resulting in poor provision of engineering services. The current locations of many planned housing is doing little to address this (see Section 20).

## **13.2 URBANISATION**

### **13.2.1 URBANISATION TRENDS / PATTERN**

The information available from demographic data suggests that a significant portion of population, men in particular migrate to urban centres outside the municipal area to find work. There were virtually no discernable in-migration people in the Sekhukhune region, particularly from other provinces. There has been a suggestion that there may be some internal movement of people within the Sekhukhune region following job opportunities. There is however no firm statistical data to confirm this. The anecdotal evidence based on windshield surveys does suggest movement to settlements closer to mines, urban centres/ population growth points and closer to movement routes given the number of new and under-construction houses on such locales. The prevalence of housing units for rental (rows of self-contained units), free standing single or two roomed units, housing units constructed of very light weight building material suggest temporary place of abode or impermanency. The dwelling units are unlikely to accommodate a typical stable rural households. This may point to recent arrival trying to find a foothold in the new settlements. This may indicate embryonic movement of people to more urban setting where they have found or could find employment. A social survey may provide more definitive answers in this regard as most available is at least few years old before the advent mining led development.

The urban cores in GTM are essentially the towns of Burgersfort, Steelpoort, and Ohrigstad (see Map 5 –Land Use). These towns have always been historically small because of the miniscule the scale of economic activities. For instance, in these towns there were only 500 housing units in 2001/02. These towns function as service centres of the surrounding villages and commercial farms, which have very low economic bases. The existing spatial pattern of this part of GTM is dispersed with low densities (see Map 7 –Settlement Pattern). The majority of villages are located a distance from each other and thus make it difficult to provide the high services that are sustainable with higher number of housing.

The new wave of urbanisation is driven by the mining related activity. The increased economic activities that these mines are generating in the municipal area will see increased an influx of people. This will change both the quantity of population and most probably the population densities in certain concentration points. The mining activities are also likely to cause meaningful shifts in the current dispersed settlement pattern, particularly along the mining belt where the ore body is located. In response to demand propelled by the mining activities in the last four years the GTM have received the unprecedented mining driven forty-odd township establishment applications. These applications are dominated by residential development, followed by mines, retail and industrial development. Most of these developments are located in and around Burgersfort. Few are located in Steelpoort with nothing in Ohrigstad. There is however one major residential township in the offing in Ohrigstad.

The eastern part is largely not susceptible to, in the fact that it has barely reacted to the development explosion led the mining activities. It is driven mostly by farming activities such as crop farming, which occurs along two rivers, i.e. Speekboom, and Ohrigstad. There is also a nascent tourism industry trying to find its feet in this part of the GTM. Agriculture and conservation based tourism industry generally do not result in large-scale urbanisation.

### **13.3 SETTLEMENT HIERACHY**

The Limpopo Spatial Rationale, 2002 and the Limpopo Growth Development Strategy identify hierarchy of settlements for the Limpopo Province, which provide a framework to analyse spatial development trends in Greater Tubatse Local Municipality. The settlement hierarchy is as follows:

- First order settlements (Growth points)
- Second order settlements (Population concentration points)
- Third order settlements (Local Service Points)
- Fourth order settlements (Village service areas)



### **13.3.1 Growth Points**

There are three categories of growth points. They are described in terms of their relative importance in the proposed hierarchy.

#### **13.3.1.1 Provincial Growth Points (PGPs):**

This is the most important type of growth point and it is the highest order in the hierarchy. Most PGPs provide service delivery function to the local people, job opportunities and usually large social and institutional facilities such as tertiary institutions, and government facilities, respectively. Concentration of large number of people is also one of the characteristics of PGPs (GSDM LED 2003). Provincial Growth settlement within the GTM area is only the town of Burgersfort.

Burgersfort is located where the sections of R555 and R37 are coterminous virtually at the centres the Greater Tubatse. It is one of the major trading towns in Limpopo. It consists of higher order land uses such as retail shops, warehouses, government offices (e.g. Municipal offices), transport interchange facilities, e.g. taxi and bus rank, railway station; social facilities, etc. serving the hinterland of about 50 km. This town is located roughly in the geographic centre of the municipal area and this makes it accessible to the majority of people. "Burgersfort is also a municipal capital of Greater Tubatse Local Municipality, which increases its status in the region. Thus an urban core is created which is strategically located within the municipal area as it is within the economic growth zone, along major arterials feeding into and out of the area (GTM IDP, 2006-2011, p: 65). Burgersfort also function as place of employment for people within and surrounding the GTM area.

A number of housing developments are planned on the northeast side of Burgersfort. By and large it is former Anglo Platinum mining land that has been developed into housing. As argued elsewhere these housing developments are a response to the recent growth of the mining sector. This has also triggered numerous retail and service businesses. The attached list of recent land development application as provided by the Greater Tubatse Local Municipality is a testimony to this (see annexure A)

The town is also starting to experience problem characteristic of growing urban area, viz, the growth of informal settlements, traffic congestion on certain road section, rising

land prices, declining capacity of bulk engineering infrastructure, etc. It also seems that the recent housing development is not match by the required social facilities, such as schools and halls.

The town is among the fast growing small towns in and around Limpopo. It serves as retail and service node for the hinterland as the industrial development has not taken root.

#### **13.3.1.2 District Growth Points (DGPs):**

These centres also play a significant role in service delivery. The aim of growth points is to serve both businesses and the communities. Steelpoort is identified as the second order of settlement hierarchy within the GTM. Steelpoort in comparison to Burgersfort, comprised more of manufacturing industries and mining related suppliers whilst the latter is more dominated by the retail and service centre.

This growth point mostly serves the mining community. There are about six operating mines around the town. Steelpoort town is characterised by a mixed used development; including heavy engineering enterprises; suppliers to the mines; transport facilities; building material suppliers; distributors/ wholesale, medium density housing and small retail component. About sixty per cent of the town's industrial township, i.e. Steelpoort Ext 7 is occupied. Some of the service businesses related to mining have even emerged in fringe areas in the former Lebowa i.e. Tukakgomo and Eerste Geluk, Mapodile just south of Steelpoort.

#### **13.3.1.3 Municipal Growth Points (MGP):**

Municipal growth points have less economic activities as compared to the district and provincial growth points. These municipal growth points serve mainly the surrounding farming areas and most have higher order goods. However, in traditional rural villages the economic sector is relatively small. There are few local businesses but supported by a large number of population (GSDM LED, 2003). In GTM the municipal growth points are Ohrigstad, Driekop and Mecklenburg. These settlements except Ohrigstad are expected to grow faster due to mining related development occurring around them. More services need therefore to be rendered in these settlements.

Ohrigstad is a small rustic town located along major roads of R36. The town is stagnant with little building activity taking place. There are number of vacant stands and business premises in Ohrigstad. These properties are also poorly maintained. This blight is the sign that Ohrigstad is declining or under pressure. It currently serves as a service centre for the surrounding farms. The area has potential for tourist-based accommodation and as a refreshment stop-over for visitors passing by.

Mecklenburg is located in the former Lebowa homeland territory along the R37 Dikolong Corridor. The settlement of Mecklenburg is anchored by the police station and the hospital, and surrounded by the series of hills forming an amphitheatre around an extensive flat land. The settlement is formed along the movement spine road (R37) and a number of roads taking off this main route at almost regular intersection. Generally, the housing densities in these areas are not more than 10 units per ha.

#### **13.4 Population Concentration Points (PCPs):**

“These are clusters of individual settlements with large number of people and high population densities” (GSDM ISDF, 2005 p: 21). Usually these settlements have a small or no economic base but with meaningful social facilities and a substantial number of people. “In most instances the PCPs form part of the settlement cluster that also has one or more growth points within a cluster. The PCPs are mainly located adjacent to the tarred road or intersections of main district roads which provide accessibility to job opportunities elsewhere” (GTM SDF, 2005 p: 25). In GTM, there are two population concentration points; those are Riba Cross and Praktiseer. Praktiseer is a fast growing settlement that is merging with Bothashoek. Some of the informal settlements around the east and south of Praktiseer e.g. Gamatodi are in the process of being formalized.

#### **13.5 Local Service Points (LSP):**

LSPs are those settlement with a population of 5 000 people or more and do not form part of any clusters. Most of these settlements are dispersed and it is only in few instances where two or more settlements grouped to each other (GSDM ISDF, 2005). “The potential for self-sustained development is limited by the lack of development in these settlements” (GTM SDF, 2005 p: 29). However, some LSPs have a potential to develop based on population growth or servicing function potential. Some of these settlements have well-developed social facilities and are big in size compared to the

third and fourth order settlements. The LSP settlements in GTM are; viz, Kgautswana, Maakongywane, Masakeng, Mophalema, Mampuru and Extension, Molokela A and B and Leboeng. Most of these settlements are small in sizes, and are located a distance from each other and this makes it difficult to provide public facilities unless these are sited adjacent to a movement route (taxi or buses).

### **13.6 Village Service Point:**

“This category of settlements in the settlement hierarchy has been identified to allow for circumstances in mainly traditional rural areas where three or more settlements are located in such a way that they are interdependent or linked to one another by means of a specific social infrastructure” (GTM SDF p: 29). These settlements are mutually dependent on these services. The settlements are small and have small number of people. For instance, there is only one high school in Maretlwaneng, Maadiswane and GaMmamogolo (north west of Penge).

## **14 SECTORAL ANALYSES**

### **14.1 DEMOGRAPHIC PROFILE**

This section reflects the demographic characteristics of Greater Tubatse Local Municipal area. This will cover a qualitative and, where applicable, a quantitative summary of demographic variables and social infrastructure of the area. The population figures and projections used here are based on Statistics South Africa, Census 1996 and 2001.

#### **14.1 Population**

Demographic information is regarded as vital baseline information for the interpretation, evaluation and projection of social and human conditions, needs and requirements. In this subsection the focus is on characteristics of Greater Tubatse Local Municipality population that impacts on local economy and its manifestation on of the spatial development of the area.

The population statistics for Greater Tubatse Local Municipality vary greatly depending on the source of information used. According to the Statistics South Africa, 2001, the total population of this municipality is approximately 270 124 which makes Greater Tubatse Local Municipality a municipality which highest population (27.9%) within the

Greater Sekhukhune District Municipality (as shown in Table 2 below). It also appears from 1996 to 2001 census results that there has been a positive population growth in most of the local municipalities.

Municipality	Population 1996	%	Population 2001	%
Makhudumathaga	267 951	30	262 921	27
<b>Greater Tubatse</b>	<b>228 531</b>	<b>26</b>	<b>270 124</b>	<b>28</b>
Greater Groblersdal	217 198	24	220 739	23
Greater Marble Hall	95 911	11	121 323	13
Fetakgomo	83 947	9	92 092	10
<i>Greater Sekhukhune</i>	893 538	100	967 197	100

Table: 2. Population figures. Source: (Stats SA, 1996 & 2001)

It is important to understand the population distribution within Greater Tubatse Local Municipality (GTM) as this gives pointers on urbanisation and settlement patterns. The following table indicates the population of GTM per ward. In total, there are 29 wards within this municipal area. The GTM area is comprised of 5 proclaimed towns, and about 166 villages

Population	Ward No.
20926	1
13852	13
13693	12
13379	29
13286	21
12878	4
11425	2
11055	19
10665	10
10187	27
9986	20
9490	8
9154	6
9032	24
8734	9

Population	Ward No.
8485	18
7830	22
7703	7
7647	25
7576	14
7527	26
7410	15
7276	23
7100	28
6728	17
6407	16
3711	11
2974	3
627	5

Table 3. Population of GTM per ward. Source: (GTM Integrated Waste Management Strategy Plan, 2005 p: 22)

It is not surprising that Ward 1 which forms part of Burgersfort which is the epicentre of urbanisation has the highest population within the local municipality as it accommodates 20 926 people, followed by ward 13 (Mecklenburg); ward 12 (Driekop); 29 which includes Ga-Maepa, Ga-Rantho, Ga-Mphana and Ga-Ratau; 21 which is Praktiseer, Ga-Matodi, Mabelana, Mafoto and Matsepulana and 4 which is Riba Cross. Ward 5, which includes GaMaeseng, Mashamthane and Bathau is identified as the ward with smallest number of population. Ward 1 is one of the wards that have recorded highest population growth in recent years. The African population, which is fairly equitably distributed throughout the entire municipal area averages around 98% of the composition. The majority of people are located in urban areas, that is, ward 1 (Burgersfort) and 3 (Steelpoort). This is simply because these are the areas of employment opportunities (GTM Integrated Waste Management Strategy Plan, 2005)

## 14.2 Population Composition

### 14.2.1 Population Growth

Population growth / concentration points are clusters of individual settlements with large numbers of people and high population densities. GTM have three population growth points and this is where most number of people are concentrated (GDSM ISDF 2005). The projected population growth within the growth points as identified in the Limpopo Growth and Development Strategy over the period 2005 to 2015 show that it will be more than double. This will have far more serious implications for the demand for services in the municipal area.

Growth Point	2005	2010	2015
Burgersfort	13 389	24 525	28 431
Steelpoort	4 015	9 845	11 414
Ohrigstad	1 313	2 115	2 621
<b>Total</b>	<b>18 717</b>	<b>36 485</b>	<b>42 466</b>

Table 4: Projected population for growth points (2005-2015). Source: GTM IDP, 2005).

### 14.2.2 Gender and Age Distribution

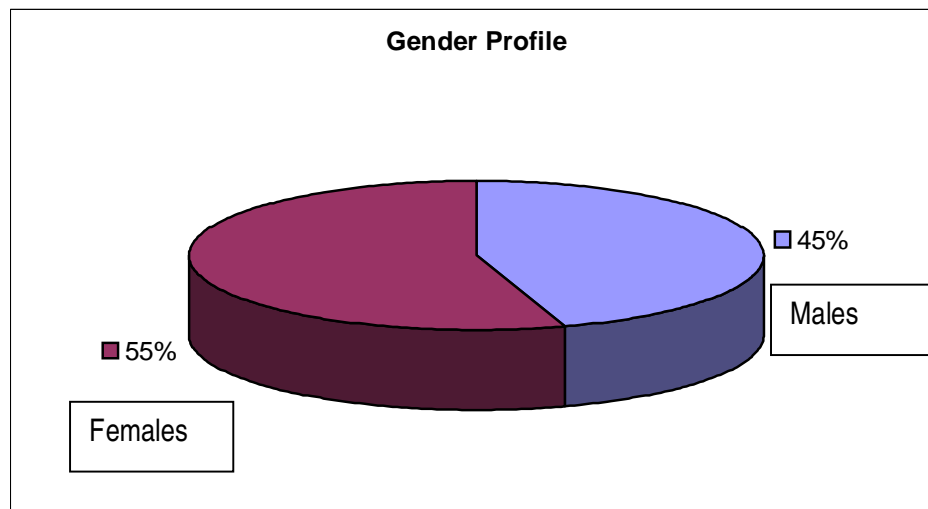


Figure 1. Gender Profile. Source: Stats SA, 2001

Figure 1 shows that the population of women is much higher than the national average.

### 14.2.3 Age co-horts

Municipality	Age Group (yrs)	Male	Female	Total	Percentage
Tubatse	0-17	67895	68990	136885	<b>51%</b>
	18-64	49252	70351	119603	<b>44%</b>
	65+	4182	9446	13627	<b>5%</b>
	Total	121329	148787	270116	<b>100%</b>

Source: Table 5: Age breakdown (GSDM Integrated Water Service Plan, 2005,p: 45)

The age group below 18 years comprise approximately 51% of the population, meaning the population is largely young. The male-female ratio is almost equal at the age of between 0 and 17 years. This substantially changes when comparing male-female distribution in the economical active age cohorts, i.e. 19 – 65 year where there are more women. This may suggests that more men seek employment in outside economic centres of Gauteng, Limpopo and Mpumalanga provinces.

## 15. MIGRATION

There is limited information on migration pattern at the municipal level hence this section relies broadly on the Greater Sekhukhune District Municipality trends. “The 1996 Census indicates usual and previous residence of citizens but only at provincial level. It is deducted that only 12 960 people or less than 2% of the population of almost 720 000 people of Sekhukhune and Magisterial districts gave any other province as the usual place of residence. Labour migration is unlikely to cause a difference of more than 2% on population number of Sekhukhune district at any point in time (GSDM Strategic Plan, 2002 listed in Greater Tubatse Spatial Development Framework). This suggest there is very little in-migration into Sekhukhune district including GTM from other provinces

“The other issue on migration dimension is the issue of permanent shifts in settlement pattern by people in search for new residences closer to transport routes and higher levels of services. This is predominantly an urban phenomenon, which is being favoured by site and service programme of the National Department of Housing or where the land is available on fringes. This is however less applicable to rural areas such as Sekhukhuneland. Even in the event of some household members moving, perhaps generated by the emergence of new employment opportunities within the district, it



seems that most of the dependent family remain in the original settlement. Household members who leave in response employment opportunities return to the original settlement on a continuous basis, meaning that the source settlement is retained” (GSDM Strategic Plan, 2002 listed in GTM SDF, 2005: p: 31). As stated in Section 3.5 a scientific research is necessary to confirm the extent of such in-migration.

The implications are that the population growth rates between the small, scattered settlements and growth points and population concentration areas are unlikely to differ very much. Settlements adjacent to growth points and concentration areas may however consolidate over time as a result of population growth and marginal addition of people, as the mining activities presents an opportunity for population growth (GSDM Integrated Waste Management Strategic Plan, 2002). In other words the small and diffused settlements are likely to be static whilst certain urban and peri-urban settlements may grow much faster depending on the economic base. The settlements planned in Praktiseer, Driekop ad Mecklenburg seems to affirm this trend.

## 16. EDUCATION

Education level		Percentage
None	29526	10.9
Pre-school	5080	1.9
School	106709	39.5
College	217	0.1
Technikon	149	0.1
University	104	0.0
Adult education centre	94	0.0
Other	185	0.1
Not applicable	128060	47.4
Total	270124	100.0

Table 6: Education level for Greater Tubatse. Source: StatSA, 2001

The above table shows that a large proportion of people have primary and secondary education but, only 0.0 % to 0.1 % of the population managed to complete the tertiary. This means low levels of literacy and numeracy. The spatial development framework should ensure that access to educational facilities is significantly improved.

The low education levels in Greater Tubatse present serious challenges in terms of the availability of high-level skills which may result in importation of personnel to drive mining development.

## 17. INCOME DISTRIBUTION

According to the Demarcation Board 's municipal information poverty relates to households with no income and those that earn less than R18 000 per annum. The graph below shows that the average household income of GTM is very low.

Income per annum	Greater Tubatse	Percentage
No income	24066	42.8
R1 - R4 800	4227	7.5
R4 801 – R 9 600	12536	22.3
R9 601 – R 19 200	6425	11.4
R19 201 - R 38 400	4637	8.6
R38 401 - R 76 800	2688	4.8
R76 801 - R153 600	1077	1.9
R153 601 - R307 200	351	0.6
R307 201 - R614 400	105	0.2
R614 401 - R1 228 800	27	0.05
R1 228 801 - R2 457 600	61	0.1
R2 457 601 and more	22	0.04
Not applicable (institutions)	13	0.02
Total	56235	100

Table 7: Average Household Income. Source: Stats SA, 2001

There is a widening gap between the former 'white' part of South Africa, i.e. the first economy and the former homelands (second economy) villages. The former Lebowa homeland part of Greater Tubatse is characterised by pervasive poverty and high rate of unemployment. From the table above it is evident that the large percentage (42.8 %) of the economic active population have no income, 7.5% earns less than R4 800 per annum, following which 22.3 %households earn between R4 801 and R9 600 per annum. A small share 0.06 of the economically active population in Greater Tubatse

earns R153 601 and more per month. It is expected the recent economic growth driven by mining related activities will have a positive effect on the average household income and standard of living.

## 18. EMPLOYMENT

Status	Census 1996	1996	Census 2001	2001
Employed	10710	18.1%	12195	31.9%
Unemployed	48552	81.9%	26038	68.1%
Not economically Active	45514		84251	
N/A	91141		110467	
Unspecified	268			
<b>Total</b>	196185		232951	

Table 8. Employment Status. Source: GSDM Cross Border Feasibility Study, 2003)

There is an increase in the number of employed people as from 1996 to 2001 as shown in the Table 8 above. However that does not mean the unemployment rate has been reduced. The number of new jobs that are being created in the mining sector are insufficient to cater for all the new job seekers every year, resulting in a steadily worsening unemployment rate. The unemployment rate for Sekhukhune District is more or less equal to the one of Tubatse Local Municipality at 69%. This picture may have somewhat changed since 2001 given the number of platinum group mineral mines that have been commissioned in the last five years.

The high unemployment rate and low household incomes in this area imply that there is insufficient disposable income and therefore low buying capacity per household. This may suggest that many households are not in a position to pay for services and municipal rates and taxes. This in turn impacts on the financial capacity of the Greater Tubatse Local Municipality to efficiently perform their functions and duties.

## 19. HOUSEHOLD SIZES

It is estimated that there are 56 231 households in GTM, with an average of 4.8 persons per household. There is a preponderance of Black African constituting 99% followed by

0.8% of white population. The most spoken languages are SePedi (90.2%) and SiSwati

	Rural '96	Urban '96	Rural '01	Urban '01	Household '96	Household '01
GTM	99%	1%	98%	2%	4 2 530	53 851

(4.1%) (Steelport Environmental Scoping Report –Draft, 2006)

Table 9: Rural population vs. urban population between 1996 and 2001. Source: (Demarcation Board 2004)

Table 9 suggests that only 2 % of the population is found within urban areas. This must relate to the historic boundaries of Burgersfort, Steelport and Ohrigstad towns. These figures are somewhat misleading as the majority of the unplanned settlements are functionally urban areas as the residents are no longer primarily living off land, i.e. tilling land and keep livestock and hunting). Furthermore urban lifestyle is reflected on the extent of land available for exclusive use by each household, housing material and house design.

## 20. HOUSING

Until recently the combined housing units in existing towns of Burgersfort, Steelport and Ohrigstad did not exceed 500 units. Therefore the bulk of the 53 000 units within GTM are found in rural and peri-urban settlements. For historically reasons these rural or peri-urban settlements occurred within the former Lebowa homeland part of the municipality. (See section 3.4)

Generally these rural settlements are very small with most of comprising of less than 1000 housing units. There are close to 180 settlements spread across the GTM area (See Map 5 –Land Use). Although the settlements are scattered they are only found in the northern and northwestern parts of the municipal area. There is virtually no housing development in the southern part of the GTM.

The biggest complex of settlements occur around the Praktiseer/ Bothashoek / GaMatodi /Manoke where about 40 000 people reside, which is more than 15% of the total population. Another expansive cluster of settlements is the band along R37 (Dilokong Corridor) that include Mecklenburg and Driekop. There are other eight

clusters of settlements (see Map 6: Clusters: Low Cost Settlements) that are comprised of relatively fewer housing units. These include a linear grouping of settlements (Parallel to R555) from Mampuru in the south to Eerste Geluk in the north. The Mampuru - Eerste Geluk settlements mainly accommodate people working in the mines, retail and industries around Steelpoort. The other clusters of settlements are around Alverton-Mahlasi, Kgotlopong-Kgautswana, Matokomane-Taung, Mabotsa-GaMoraba, Makubu-Matloulala, Mapareng-Tswenyane, GaMaepa- GaMalekana and Penge and its environs.

The majority of these settlements are unplanned. There are however few planned and formal housing development within the GTM that were planned prior to 1994 i.e. Mecklenburg A and B, Penge, Driekop, Mapodile/EersteGeluk and Praktiseer. These settlements except Mecklenburg A and B and Driekop in the main enjoy full engineering services like waterborne sewerage, water connected to plumbing fixtures inside the house, some or most roads are surfaced with asphalt, regular waste disposal and electricity. These settlements together provide about 6000 residential erven.

The unplanned villages generally have poor services characterized by gravel roads, self-made pit toilets and lack of electricity and solid waste disposal. However in most settlements water is provided on the standpipe at least along the main road. Some of the settlements are reticulated with electricity.

As stated above, historically the former “white towns” of Burgersfort, Steelpoort and Ohrigstad had limited housing stock. Before the recent housing development associated with the expansion of platinum group minerals mining activities there were only 405 formal houses in these towns (299 on township erven and 106 on farm portion) as late as 2001/2002. High level of engineering services was generally provided in these areas including housing on the farm portions. In the farm portions there was reliance to on-site services, e.g. septic tanks, water boreholes, etc.

Until very recently the formal housing stock in the entire municipal area was about formally demarcated housing erven estimated to be about 6000, which is just 10% more of the total housing stock. A significant number of housing in these areas is still rudimentary in terms of quality of material and construction technology. Most of these houses are in Driekop, Mecklenburg and parts of Praktiseer, This underscores the

importance of formalizing housing in peri-urban settlements in appropriate locations so that the residents can have more secure tenure, high level of engineering and several services can be extended and housing could be improved.

In terms of the report prepared by EastCon for Steelpoort Valley Producers Forum about 8500 additional housing is required to accommodate new mining workers and their families in the short term. These housing units will be distributed as follows: Burgersfort (3500) Praktiseer (2500 residential erven), Driekop (2000 residential erven) and Steelpoort (500 residential erven). In 2003, specific sites were identified to locate the required housing units. The proposed housing development at Driekop (part of Dilokong Corridor) is located on the eastern side of Madikwe Mine but on the western side of R37 on the farm Hendricksplaats 281 KT. At Burgersfort, housing is proposed in five different locations on portions of farms Leeuwvallen 297 KT, Aapiesdoorndraai 297 KT, Witgatboom 316 KT and Mooifontein 313 KT. These farms are vacant properties from eastern, to northern and western parts of the existing town.

At Praktiseer the proposed development is located to the east and south of the existing township at Praktiseer 275 KT and Aapiesdoorndraai respectively. At Steelpoort a medium income housing i.e. Steelpoort Extension 1 and 4 was recently completed on the portion of Goudmyn 337kT on the western side of R555. Between 2002 – 2006 residential township of Burgersfort Extensions 10, 15, 16, 26, 30 and 34 in Burgersfort town yielding just more than 2500 erven were approved. This is a testimony to rapid demand for housing.

The GTM IDP: 2006-2011 lists a number of planned housing projects in the area. These housing projects range from upgrading existing housing in Praktiseer and Dresden, RDP housing in various settlements, rural housing in numerous villages throughout municipal area and two community resettlement projects at Dresden and Bobididi. More than half of housing projects on the list do not have committed funding which makes it unclear how they will be initiated. Furthermore each of the planned projects tends to be very small. The majority of these are between 20 – 50 units in scale and in scattered and remote locations i.e. away from planned urban development areas and bulk infrastructure. Such plans of housing development may be contradict to the Limpopo Spatial Rationale that requires that" ..... serious attention should be given to the

implementation of projects that are in support of successful establishment of a more functional settlement hierarchy and support priority development nodes” (GSDM ISDF p: 5).

## **21.ENGINEERING SERVICES**

Access to basic services such as water, sanitation, electricity, refuse removal and roads are considered as key municipal services, that are a constitutional right of every person in South Africa. The responsibility for provision of these services is vested with local municipality as outlined in Section 84 of the Municipal Structures Act (No.117 of 1998 as amended).

The provision of engineering services include water and sanitation, electricity, transportation, roads, refuse removal and telecommunications and cemetery. This section discusses existing engineering services within Greater Tubatse Local Municipality (GTM), as they impact on the spatial development.

### **21.1.1 WATER**

#### **(a) Water Source and Network**

This relates to water supplied through the municipal system. There are three main sources of water within GTM:

- Abstraction from surface sources within the area of jurisdiction (dams, springs, large rainwater collectors such as natural rock surfaces or streams). There are 3 main rivers in GTM from which water is collected, i.e. Spekboom, Steelpoort, Tubatse and Olifants rivers.
- Abstraction from groundwater sources within the area of jurisdiction (boreholes or dug wells);
- Purchase from external sources (e.g. a water board).

(GSDM WSDP, 2005)

There are five water schemes within the Greater Tubatse Local Municipality. These are:

- Lebalelo water scheme (northern portion)
- Penge local sources (north eastern portion)
- Lower Steelpoort Tubatse water supply scheme (central portion)

- Blyde Local source (eastern portion)
- De Hoop 1,8, and 13 water scheme (western portion)

Historically piped potable water at GTM was available only in the towns of Burgersfort, Steelpoort and Ohrigstad, few ‘black’ formal townships e.g. Praktiseer and Eerste Geluk, mines and public institutions, e.g. hospital, police stations, etc. Most public institutions had their own supply system, mainly from boreholes. Recently the water supply network has been extended for domestic uses to many villages within the former Lebowa homeland territory. In the rural or peri-urban areas the water is provided mainly through standpipes on the streets. It is therefore not surprising that “ ....32 % of the people obtain their water from natural resources which includes rivers, streams and rainfall, 42 % of people obtain water from public taps, 11 from a borehole and only 6 % from an on site tap” (GTM IDP: 2006-2011, p 45).

Based on the census data, 2001, and discussed in Demographics section of this report the total households are expected to have increased from 2001 to 2005( See Section 4.1 ), It is expected that the proportion of urban households will increase gradually in future as people move from scattered (remote) villages to denser population concentration points where more services are available. The voluntary movement of young people away from remote rural settlements will reduce water demand at these places in future and increase water demand at the concentration points where the people are moving. It is important to prioritise planning of larger and denser settlements where people are migrating towards for service delivery to ensure greater impact.

The protracted drought in Sekhukhune region has forced the public authorities to speed up the extension of water network or delivery of water through tanks in the rural / peri-urban areas. This demand has been exacerbated by the increasing densification of few settlements where population is gravitating towards. The recent proliferation of mining activities, edging closer to twenty in the municipal area will be more than double the amount of water required in the future. In this regard the estimated total mining water demand was between 27.2 and 38.5 milliliters per day in 2005 and is projected to be between 76.1 and 100.1 by 2020.



The recent investigation by the Department of Water Affairs confirmed that most feasible option to improve water supply in this drought stricken region was to construct De Hoop dam and bulk raw water distribution system with connections of Olifants via Lebalelo Water Scheme. The construction of the dam has been approved and will commence this year i.e.2007.

**(b) Consumer Profile:**

There are five categories of consumer profile; viz. households, mines, industrial, commercial and the others, which refers to users such as irrigation, institutional, etc. There is no available database on the number of commercial users in Greater Tubatse Local Municipality. However, it can be noted that there is a spatial concentration of commercial activities at urban nodes i.e. Burgersfort, Steelpoort and Ohrigstad.

“Total consumption (for commercial activities) can be estimated as a small fraction of domestic consumption and is unlikely to change much in the foreseeable future. Other consumers include agriculture and government institutional users” (GSDM WSP, 2005, p: 38). The commercial users are highly competitive users with well-established water rights.

Platinum mines are by far the greatest consumers of water in Sekhukhune district, followed by irrigation and domestic use. The (mines) water needs are likely to increase even further in the medium term. Irrigation needs are also likely to increase considerably with the rehabilitation of former government irrigation schemes (RESIS Project by Department of Agriculture) that is currently underway. The spatial plan should take cognisance of the need to extend water infrastructure particularly to meet water requirements of mines and households.

**21.1.2 SANITATION**

Only 4 % of households have access to waterborne sewerage systems and they are concentrated in and around Burgersfort, Steelpoort and Ohrigstad. The three towns within Tubatse Municipality are served with potable and waterborne sewer system. These services are of high standard with few interruptions. In rural areas, it is estimated that 25% of all villages are served to RDP level of service. Generally, sanitation facilities in some villages are in poor state (GSDM Cross Border Feasibility Study, 2003).

Most industrial consumers are in the existing urban centers (e.g. Burgersfort) and discharge their effluent into the municipal sewers for treatment at the Waste Water Treatment Works. The list of the current status of Wastewater Treatment Works is indicated below:

LOCATION	TYPE	PRESENT CAPACITY	REQUIREMENTS
Burgersfort	Conventional	1.5 MI/day	Increase capacity to 5 MI/day Refurbish
Praktiseer	Ponds	0.4 MI / day (est.)	Presently being upgraded
Penge	Conventional	Unknown	Investigate replacing with ponds.

Table 10. List of wastewater treatment works and oxidation ponds, Source: (GDSM WSP 2005)

There are also oxidation ponds at GaMapodile and Ohrigstad and sewer treatment plant in Steelpoort whose capacities are unknown. “The Steelpoort sewerage plant is in poor state of repair as a result of some of the equipment not functioning as per design specifications. There is a clear overloading of the plant due to chemical toilet and septic tank discharge at treatment work “. (GTM IDP, 2006-2011, p 48). “However there is a planned sewerage works downstream for Steelpoort and Winterveld” (ibid, p48).

Type	Service	GTM
Full	Full waterborne	1 579
Basic	Pit Latrine	26 564
Below Basic	Bucket or Latrine	185
	None	9 469
	Unspecified	263

Table 11: Level of sanitation services. Source:( GSDM Cross Border **Feasibility Study, 2003**)

Almost 50 % of the households use VIP (Ventilated Improved Toilets) toilets with few still uses bucket systems. In terms of the National Sanitation Policy, there are a variety of forms, or equivalent of VIP as long as it meets certain criteria, in terms of cost, structures,

health benefits and environmental impact". Bucket latrines are the most obvious that does not meet IDP requirements.

There is a massive backlog of water and sanitation infrastructure and an absolute shortage of bulk water sources. Droughts result in a lowering of the water table to the extent that many boreholes cease to function. Outside the towns and formal townships, much of the community cannot even access the national RDP bare minimum standard and there are serious questions about the ability of communities to pay for any improved level of service given the employment and household income levels.

The envisaged increase urbanisation within the GTM will invariably require substantial investment in bulk sanitation infrastructure.

### **21.1.3 TRANSPORTATION**

#### **a) General Overview**

This section of the report draws mainly from the Greater Tubatse Input into the Sekhukhune District Municipality Public Transport Plan, 2004 Volume of 4. There are three modes of public transport found in the GTM area, viz, road transport, railway transport and air transport. With regard to public road transport, there are two types that provide service to the community in remote areas, i.e. buses (Greater North Transport) and mini-taxis. It is important to note that there are no subsidized services in the GTM area. Great North Transport is the only bus operator that provides commuter services, and has a total of 16 routes in the municipal area. It can be noted that there are very few metered-taxi within the GTM area. The survey also noted that light delivery vehicles were used to transport learners along villages in the major transport routes. The route utilisation analysis and the observation of leaving times and number of passengers left in the queues when the sample vehicles left suggest there is generally oversupply of taxis.

The route utilisation survey recorded 405 taxi vehicles and 18 Great North Transport buses providing service in this municipal area. The survey also showed a high volume of weekend operations to transport shoppers from rural hinterlands to Burgersfort. The taxi route survey showed that there were 71 taxi and bus routes in Greater Tubatse Municipality but in this survey the outward bound and inward bound route were individually

identified. These routes virtually penetrate all the villages around the urban centers of Burgersfort, Steelpoort and Ohrigstad.

The spatial structure of GTM particularly the radial nature of public transport into and from Burgersfort town sees this town function as a focal point but there is no real inter-modal system to speak of. The buses and the taxis do not feed each other but generally compete along the same routes. The buses however tend to pick the denser routes. The Burgersfort town is a hub and to a lesser extent Steelpoort function as transport interchange where passengers can change routes within the GTM area or beyond. In the main passenger do not change the mode of transport but they are dropped off by taxi then board another taxi.

In terms of destination Burgersfort function as fulcrum of the local taxi movement with the rest going to either Ohrigstad or Steelpoort. There are long distance taxis operating from three urban nodes going to areas beyond municipal boundaries such as Witbank, Jane Furse, Middleburg, Tembisa and Johannesburg.

Railway transport of general freight is only rendered in Ohrigstad, Burgersfort and Steelpoort, while air transport is available from private airfields at the mines around Burgersfort and Steelpoort. There is no passenger train service, particular referring to daily commuter service, operating in the area (GSDM Cross Border Feasibility Study, 2003).

#### b) Road Infrastructure Analysis

The road network of Greater Tubatse is approximately 798.9 km in extent. 39 % of this is a surfaced road and the 61% is comprised of un-surfaced roads. This means the majority of the nodes depend on un-surfaced roads for access to socio-economic opportunities (GTM Local Economic Development -Phase 2, 2007). These un-surfaced roads are particularly found in scattered villages. Most of these roads are poorly maintained and thus transport routes are limited by deteriorating roads. These roads are mainly used by buses and taxis to transport passengers in the area. Both surfaced and un-surfaced deteriorate during rainy seasons and lack of storm water drainage and bridges worsen the problem. When roads become impassable traveling time and maintenance costs to vehicles increase.

There is however a fair road networks system that links most areas in Tubatse with major provincial road such as R555, R36 and R37. R37 (which has recently become a national road) connects GTM to other municipal areas and it forms part of the Dilokong Corridor. This mobility road enhances the ease and the rapid movement of vehicles.

Generally, most villages are well serviced and accessible as the taxi or bus run along the central spine route (See Sections 3.1 and 3.2). Because of the topography housing development generally forms a band or strip with no more than five rows of stands parallel to the central spine road. As argued above, the road system of GTM does promote efficient movement of people to various destinations. This makes public transport critical to the movement of goods and service. But this is undermined by the fact that the settlements are dispersed and have low population densities leaving public transport less frequent. Integration and densification of selected settlements is thus desirable to overcome these problems. In section 3.1 it is argued that the central spine road usually links a series of villages, which significantly improve circulation amongst villages and the three urban nodes. Within the settlement cluster (see Section 4.8) walking along the central spine route to the next village is possible.

The busiest roads are Road R37 and R555. These serve also as the main collector routes from the major urban nodes such as Burgersfort, Steelpoort and Bothashoek and the respective villages. These urban nodes are main areas where passengers are concentrated hence are perceived as the major generators of traffic. The mining activities along Road R37 and the villages located along this road also generate high volumes of public transport on this route. It was therefore recommended in the Local Economic Development report that the rehabilitation of R37 should be prioritized.

The availability of stable public transport and different modes of transport (taxis and buses) is a strength that is acknowledged in GTM area. However lack of infrastructure has become a challenge. There is lack of public transport facilities, as the overwhelming majority of the taxi facilities are informal. There are only eight identified formal public transport facilities. The state of taxi ranks is as follows:

- 28.6 % of taxi facilities are on street facilities;
- 85.7 of taxi facilities are informal facilities;
- 8.6 % of taxi facilities have lighting;

- 17.6 % of taxi facilities are paved;
- 2.9 % of taxi facilities have public phones;
- 14.3% of taxi facilities have offices;
- 11.4 % of taxi facilities have shelters; and
- 14.3 % of taxi facilities have ablution facilities

(Public Transport Plan [Draft], 2004, Vol 2 of 4)

Loading and off-loading facilities need to be provided to cater for all the public transport operators, especial along major routes.

Rail transport system on the other hand is unable to meet the demand of transport service in the mines. The increasing mining activities in the GTM put more pressure on the road resulting in traffic congestion, accidents, high repair and maintenance cost, etc which all combine to reduce productivity. Lack of maintenance and upgrade of road increase the economic inefficiencies of road. There is a need to encourage haulage of goods, to and from the mines to rail system, particularly those in bulk.

### **c) Current Road Proposals**

Due to increased traffic congestion along the major route of R37, it is proposed in the Public Transportation Plan of 2004 that the public transport facilities along Dikolong Corridor (R37) should be developed to ensure that mine workers have ease of access to transport. It was also suggested loading and off-loading facilities for public transport at strategic points in the villages be provided. Due to dominance of taxis in the area there is a need for the provision of taxi facilities.

In addressing the accessibility challenges, the National Department of Transport developed a rural transport development programme and the Integrated Mobility and Access Project (IRMA). IRMA was launched in Greater Tubatse in 2006. [According to the National Public Transportation Plan, 2007, six 'rural 'district municipality were earmarked for IRMA programme. Sekhukhune District is one of the selected municipalities with Tubatse being the targeted local municipality]. The projects that will be implemented in Greater Tubatse focuses on the upgrading of roads and the construction of cycle and pedestrian paths. They are budgeted for R10 million and are expected to be implemented over 3 years (National Public Transportation Plan, 2007).

Currently, there is no comprehensive plan for transport in GTM. However the Greater Sekhukhune District is in the process of developing a Road Master Plan that will audit the information that the district has in terms of the road network and will further suggest strategies for road maintenance (GSDM IDP 2005/6, 2<sup>nd</sup> Draft). The GTM IDP, 2006-2011 lists three plans funded by the Development Bank of Southern Africa namely, the Infrastructure Investment Plan I, Infrastructure Investment Plan II and the Road Infrastructure Plan (Burgersfort). There is one major road reconstruction project, i.e. R37 Eastern Link By-Pass Road in Burgersfort aimed at reducing traffic flow through Burgersfort CBD. Most of the other projects listed on the GTM IDP and on Limpopo Road Agency programme are largely of road maintenance nature in both urban and rural areas i.e. rehabilitation and tarring of road. However there is a specific budget allocated for tarring of roads to villages.

#### 21.1.4 ELECTRICITY

According to data from GTM, a total of 11200 households were receiving free basic electricity by 2005. This is only 27 percent of the 40829 households whose income was R800 and below per month in 2001, when using a policy to determine the free electricity delivery (GTM IDP, 2006-2011).

A table below shows that 25072 households used electricity for lighting in 2001. This represents 47 per cent of the total number of households in GTM. This figure had grown to 32851 by 2004 representing 61 per cent of household, assuming no increase in number of households. Taking into account the estimated increase, the number of households using electricity as a proportion of total households is 55.5 percent (GTM IDP, 2006-2011,2005)

Year	Electricity for lighting	Other Sources	Total household
2001	25072	28779	53851
2004/5	32851	39275	59241

Table 12. Comparison of Sources of energy used for lighting in GTM (2001 - 2004) Source: Municipal Demarcation Board, 2005 & Questionnaire completed by GTM for this review

The number of households using electricity grew by 7779 between 2001 and 2004. This is a 13 percent improvement. The real growth in the number of households using

electricity during this period outstripped growth in number of households and is therefore positive real growth (ibid, 2005).

The only provider of electricity in the region is Eskom; which has installed basic infrastructure to provide electricity to all the formal dwellings in Burgersfort, Ohrigstad and Steelpoort. For most part, the rural population has no electricity (GSDM Integrated Waste Management Plan, 2005). Lack of access to electricity to some villages poses a problem to the GTM as it impacts negatively on local economic development and community projects. It is then important that the municipality speed up the process of electrification.

In terms of the bulk infrastructure Eskom has indicated the greater part of GTM is supplied by Tubatse substation (132 kV) and there are four transformers which are in turn supplied by Tubatse Substation. Each transformer has 40 MVA. At the moment each transformer is about 50 % loaded meaning there is spare capacity.

#### 14.1.5 REFUSE REMOVAL / WASTE MANAGEMENT

Waste management services are rendered in few areas of GTM by municipality or independent contractor in private properties. Dumping and burning of waste is the more common way of disposing waste. Refuse removal needs refuse dumps (landfill sites, etc) to enable a healthy and safe dumping process. Most villages in Tubatse lack access to these services. The rate of improvement in refuse removal has also been very slow. Starting off a low base of only 6.7 per cent of the households having their refuse removed by municipality weekly, the situation only improved to 9 per cent of the households by 2004 (GTM IDP 2006-2010,2005)

Year	Minimum standards	Other or no services	Total
2001	3623	50228	53851
2004/5	5383	53858	59241

Table 13. Comparisons of the provision of refuse removal service in GTM (2001/ 2004) *Source: Grater Tubatse Integrated Development Plan 2006-2010,2005-Municipal Demarcation Board, 2005 & Questionnaire completed by GTM for this review*



Only 2.9 percent of the total households in the municipality have experienced a positive improvement with regards to refuse removal. The number of households receiving below standard refuse removal service had increased by 3625 and exceeded the 2001 backlog.

The Burgersfort landfill is the only permitted site in the GTM. It is classified as a GCB site, i.e. general communal site waste disposal site with no significant leachate production.

According to Tubatse Waste Management Plan, 2005, there are five areas that are being serviced by the municipality (service point), either by an own refuse removal service or by outsourcing services to contractors, namely Steelpoort, Burgersfort, Ohrigstad, Mapodile and Praktiseer.

Solid waste disposal and industrial waste disposal infrastructure is needed as there has been an emergence of many industries thus the high demand. There is little of these waste disposal facilities in place within GTM. Some are not regulated to ensure to ensure environmental soundness, health and hygiene. Bigger generators of waste illegally dump waste in places, which seems appropriate to them such as holes created by erosion, river valleys, old quarries, etc. Accumulation of waste can also be seen along the roads. Dumping and burning of waste is a common way of removing waste in the area usually not far away from the generating point. Pit burning in household backyards is also typical in rural areas.

Local municipality renders waste collection and cleaning service. Waste is collected and deposited in landfill sites. Bins and containers are provided in public areas for collection of waste. Waste collection is done on Monday to Friday. In Burgersfort business and household waste is collected daily except on Sundays. However, waste is not collected in time and it was reported that the personnel is not enough for the rendering of efficient service.

In year 2005 it was estimated that 50 000 t/a of waste was generated throughout GTM but only 5% was collected. The projected population in 2025 is 415 000 which will generate 75 000 t of waste. This would require significantly improved operations on parts of the local

authority to extend its service to all households and substantially improve landfill capacities. In most rural settlement the average residential erven is +/-1 000 m<sup>2</sup> even, which suggests that it will be increasingly difficult to dispose refuse the backyards either in pits or by burning.

The landfill sites in Steelpoort, Praktiseer and Ga-Mapodile were either already closed or planned to be closed. There is a process underway to establish a regional landfill site in Burgersfort. The appropriate site has been identified and a positive Record of Decision from the provincial environmental authority has been issued. Currently, there is a process underway to obtain the necessary license and proclaim the site. Alternative landfill site have been identified in Praktiseer and GaMapodile.

In conclusion, the key challenge facing GTM is the need to provide solid waste disposal services for the growth and population concentration centers such as Bothashoek and mining establishments.

#### **21.1.6 CEMETERIES**

There are currently four cemeteries within the GTM area that are located in Burgersfort, Ohrigstad, Praktiseer and GaMapodile. There is only one proclaimed cemetery, i.e., in Ohrigstad. Other three cemeteries are being planned. The cemetery in Burgersfort is owned by Catholic Church and is almost full. The municipality had identified a site on state owned land for a new cemetery. The environmental investigation has been done and the record of decision (ROD) has been issued in this regard. However, the process to transfer land rights to the relevant owners is underway.

The cemetery site in Praktiseer has been fenced and is operational; however there has been never a formal procedure to proclaim the site. On the other hand the cemetery site in GaMapodile has been proclaimed but the general plan was withdrawn due to land claims lodged over the land. In this case, ROD has not been issued.

It is presumed that people in rural areas continue to use informal graveyards as their burial sites. Increasingly sites are set aside for a common/ shared burial area though not formalized in each village. In other words there is less and less use of individual family grounds.

The provision of cemeteries needs to be considered in the spatial plan particularly where there is concentrated urban development. There is already a plan for 10 000 housing units in GTM should also makes provision for cemeteries.

## 22. LANDOWNERSHIP

The landownership investigation was conducted through Aktex (DeedsWeb) in large farm areas and the Provisional Valuation Roll was used in formally laid out settlements to establish trends discussed below:

### Properties within the former Lebowa homeland territory

No. Of Farms	Extent	Ownership	%
35	69320.2347	Government of Lebowa SA Development Trust Tribal Land	56
25	43251.6038	RSA	37.4
7	11793.6509	Private	9.3
<b>67</b>	<b>124365.4894</b>		<b>100</b>

Table 14: Land Situated Within Former-Lebowa Boundary

The landownership within the former Lebowa area is predominantly in the hands of the State, Government of Lebowa, SA Development Trust and a small proportion is privately owned (see table 14and Map 8: Landownership)

Some townships of GTM are owned by national government as a result of pre-1994 constitutional negotiations that saw national government as the successor in-title of all homeland government's assets. However, some of these properties have been transferred to the local authority that is an appropriate level of government where they should be managed, viz Praktiseer Extension 1 and 2, GaMapodile and Mecklenburg B.

Penge on the other hand is not proclaimed as a township. It is owned by the provincial government of Limpopo and there are processes underway to formalise it since 2001/2002.

In the township of Tubatse Extension 1 the erven have been transferred to residents. However many residential erven; some vacant and others built up; business erven, social facilities e.g. for churches, police stations, schools, crèches, community halls etc, are owned by the Northern Province government. Ordinarily the management of most social facility erven is a municipal function in terms of the constitution. This anomaly should therefore be corrected.

The balance of land within the former Lebowa territory that comprise of villages settled by various tribes or clans and vast unoccupied woodlands is owned by Republic of South Africa, Government of Lebowa, South African Development Trust and few traditional authorities.

The residents on the rural/ peri-urban settlements are allocated the land parcel that they are settled upon by traditional authorities. They neither have formal title deed nor any other real right document to the land they occupy. Theoretically these cause uncertainties as to the rights of the occupiers of the land who invariably improve it at their cost but cannot dispose their properties to whomever by transferring title deeds at Deeds Office. Hypothetically these occupiers and users of land can be unfairly dispossessed their properties by the same authorities who allocated them. Post 1994 the Parliament passed few laws such as Informal Protection of Land Rights Act 31 of 1991, Communal Land Rights Act, 110 of 2004 and Extension of Security of Tenure Act 12 of 1997 to provide better protection from arbitrary decision of traditional authorities.

The reason most villages are located in government or tribal land is that the previous era government had established Trust whose raison desire was to procure such landholdings to settle the clans.

### **Properties within former 'white' Republic of South Africa**

Properties in parts of GTM that constituted former 'White' Republic of South Africa is

distributed as followed:

No. Of Farms	Extent	Ownership	%
15	16208.0890	Government of Lebowa SA Development Trust Tribal Land	12
13	17404.8141	RSA	13
21	103343.2545	Private	75
<b>49</b>	<b>136955.1576</b>		<b>100</b>

Table 15. Properties within former “whites” Republic of South Africa

In the three urban nodes of Burgersfort, Steelpoort and Ohrigstad the properties are generally privately owned with a few even accommodating public facilities such as parks, public roads, municipal offices, taxi ranks, that are publicly owned etc. In Burgersfort the local authority own the entire Burgersfort Extension 10 that is developed for about 500 low cost houses. It is however assumed that these even will eventually be disposed to private residents at appropriate time.

All the recent housing and industrial township development in Burgersfort and Steelpoort has occurred on the privately owned mainly to accommodate mine workers; viz. Anglo Platinum (Burgersfort Extension 16 and 20) and Samancor Ltd and Vanadium Technology (Steelpoort Extension 1, 2 and 7).

The unavailability of appropriately well- located public land in the urban centres reduces the role that could be played by the Greater Tubatse Municipality in spatial development to guiding and persuading land owners and developers and reacting to their development applications. If municipality owns strategic land parcels it would have been better place to instigate development in its own terms to drive the municipal vision.

Acquiring suitably located land within and around the three urban centers of Ohrigstad, Steelpoort and Burgersfort by the local authority should be given serious consideration given the anticipated economic development. Once development gathers pace land values will be prohibitively expensive for the municipality to enter the property market. In other growth areas like the Dilokong Corridor the land is wholly owned by government but vested in traditional authorities. Some negotiations with of the traditional structure will be necessary in order obtain approval to start development. The Department of Land

Affairs will require that the development only proceed on tribal land if it is not supported by the chief and/ or the community at large. The local authority may also have to enter into negotiations with Department of Land Affairs and the relevant tribal authority to secure tribal land in key growth points.

### **23. AREAS WITH AGRICULTURAL POTENTIAL**

Much of the extensive agricultural activities in GTM occur closer to water sources, viz. Ohrigstad River, Speekboom River, Steelpoort River and Olifants River, where the flood plains have fertile soils and the irrigation opportunities are in abundance (see Map 5 – Land Use).

There are approximately 19 agricultural schemes in the Greater Sekhukhune District area that are commercially viable but due to lack of expertise the output has been rather low. Two of this agricultural scheme viz, Steelpoortdrift and Tswelopele are within the GTM boundaries. Most of the schemes are located along the Olifants (North) and Steelpoort catchment in the south.

On the northern section of the town of Steelpoort where most of the commercial agricultural activities have been taken place along the Steelpoort River and Speekboom River, the land is under pressure from the residential developments, which seem to be moving in the north and northwesterly directions towards the river. Already a township, viz, Burgersfort Ext 3 has been approved in Portions 5, 13, 61 and Remainder of Portion 27 of farm Leenwallei 296 KT.

In both towns of Steelpoort and Burgersfort, the agricultural activities are situated closer to the urban core consequently the rapid urban development leads to increasingly lost of some cultivated land as it become too valuable to remaining agricultural. A balance has to be achieved in order to ensure that economic activity which provides most employment opportunities in the region is to a degree protected.

At the Burgersfort node, on the northern, north-western and southern edge of the urban core, and on the south along R37 there are commercial irrigated farms along the Speekboom River and Waterval River, respectively.

Parallel to R37 road, between Burgersfort and Mecklenburg, along the Moopetsi and Motse Rivers there is also a number of agricultural sub-schemes. Most of these sub-schemes are managed by the local villages' communities.

The Olifants River flows southwardly from the adjacent area of Lepelle-Nkumpi Local Municipality, traversing the study area on the northern section towards the villages of Phiring and Makupong. The agricultural potential around this area is reduced by the mountainous, deep gorges and generally rugged terrain, thus dryer and therefore less productive. Along this river the agricultural activities are prominent on the eastern section, towards the edge of the study area, where the terrain is gentler thus allowing cultivation on the riverbanks.

Along the R36 (Tzaneen to Lydenburg) and R532 (To Bourke's Luck) there are also extensive commercial agricultural activities along the road taking advantage of the Ohrigstad river floodplain.

Though in the areas of the former Lebowa government territory the farming schemes are mainly subsistence there is potential to produce for market, especially since there is a proposed De Hoop dam.

Generally, the region has good soil for agricultural practices and there is also quite a range of produce in the area such as maize, beans, paprika, wheat, cotton, citrus and beef. The secondary activities have not yet been tapped, i.e. processing and packaging of the produce. Farming still has a lot of untapped potential and with further developments and improvements in this industry more jobs can be generated which will have further economic spin-offs that are to benefit the region.

#### **24. NATURAL ENVIRONMENT**

In certain areas the topography is very steep creating an impassable mountainous terrain, which is barely inhabited and cultivated. This allows for an uneven development pattern and to some extent impedes built environment (GTM IDP, 2006/11, p66). Without the encroachment of built-up areas and more than 70 % of the municipal area has been left in its natural state.

The terrain in municipal area exhibit a range of valuable and distinct natural features that should be protected and harmoniously integrated into physical development and be exploited in a sustainable manner to benefit all in the region, especially the underdeveloped tourism and conservation industries (see Map 5 –Land Use).

The three rivers traversing the area are important in that they are natural habitats for a range of fauna and flora species that also sustain livelihood of both rural and farming communities. Due to its importance to the primary economic sectors the rivers should be regarded as zones of conservation, meaning this water resource should be protected from uncontrolled growth of settlements, mining, extensive agriculture, sewage disposal and other pollution sources.

A number of inhabitable mountain ranges generally running parallel to river systems are spread throughout the municipal. These rugged mountains area provide scenery and natural habitat. Unfortunately no environmental investigation has been conducted to determine whether any of the Red Data species area are found in these areas. These high-lying areas should be conserved to retain the natural vegetation and characteristics with the aim of accommodating possible future tourism (GTM IDP, 2006/11, p66). The extensive natural environment provide opportunity for tourism activities including caravan parks, hiking, trails, mountain biking, sky diving, game parks, themed overnight accommodation, country estate, etc.

“A holistic conservation approach should be adopted whereby rivers, ridges and vegetation are protected from unjustified exploitation” (GSDM: Central, Tubatse, Driekop, Praktiseer, Burgersfort Trend Report and Natural Development Plan, p: 4). Within the region there are couple of cases where the environment has been kept in its natural states through a number of private game and nature reserves.

Mount Sheba Nature Reserve, Crystal Spring Game Reserve, Ohrigstad Dam Nature Reserve, Mount Anderson Nature Reserve are all located along the R36, but can also be access-off R533 to Pilgrim’s Rest. On the north there is Blyde River Canyon Nature Reserve located off-R36 along the R532 to Bourke’s Luck. Along the R555 to Stoffberg from Burgersfort there is Khumula Game Reserve and Magapa Nature Reserve. Although most of these are just outside the municipal area they could be taken



advantage of by providing complementary facilities or consolidating them into the eastern part of GTM.

Two areas in the municipal area have been identified as highly sensitive in terms of environment. The first lies on the northern boundary of the region along the Olifants River stretching from the villages of Maretlwane and Makoloto up to Morathong along the R527 to Hoedspruit; the area is endowed with forestry, deep gorges and waterfalls, etc. and has been identified as the very sensitive environment area due to these features.

The second is the area bordered by the R36 to Hoedspruit on the west, by R532 to Bouke's Luck on the south and the study area boundary on the north east has been identified as one of the most sensitive area.

## **25. TOURISM**

Tourism in GTM is underdeveloped as most tourist attraction places are found beyond the boundaries of GTM, particularly the world's famous Blyde River Canyon and a couple of game farms e.g. Kruger National Park, Malamala Game Reserve, etc east of the municipal area. However the municipal area has a potential to develop tourism industry, as it is very rich in tourist attractions particularly cultural diversity, historic places and the natural beauty of the land associated with dramatic topography. The eastern part of the municipal area (around length of R36) is a better place to lead the exploitation of tourism potential, as it is the part of the well-marketed Panaroma Route. This scenic route along R527 start at Pilgrim's Rest in the south through Graskop, Blyde River Canyon, Blyde Dam, Echo Caves off R36 to Abel Erasmus and Strydom Tunnel in the north.

"The Panaroma Route is one the seven tourist regions in Mpumalanga Province. The Panaroma route "leads through the rugged mountain range of the northern Drakensburg, passes through the north-eastern part of Great Escarpment, the inland Plateau declines abruptly and steeply and opens up a fantastic views of plains of the lowveld on thousands metres below" ([www.africa-explore.co.za/ct-panaroma\\_route](http://www.africa-explore.co.za/ct-panaroma_route) html). The four tourist attractions in the northern reaches of the route, namely, The Strydom Tunnel, Abel Erasmus Pan, Museum of Man and Echo Caves are within the GTM area. Ohrigstad a quaint village, nestles in the valley on the foothills of the Drakensburg

Mountains is known as the gateway to the Panaroma. Ohrigstad is ideally located to be used as the base or stop over from which to explore the Blyde River Canyon, Bourkei's Luck Potholes, God's Window, Three Rondavels and game reserves. Unfortunately there are very few overnight accommodations in this town and environs.

Ohrigstad is situated on the valley along R36 between Lydenburg and Abel Erasmus Pass. This is the old town, which was established in 19<sup>th</sup> century. It owes its existence as a service centre to the surrounding rural community. Currently, the town is static in terms of growth; buildings are dilapidated and some commercial premises have closed down. There is less potential for this town to grow if it relies on the existing economic base. However, it is ideally located to be used as base from which to explore the Blyde River Canyon and Pilgrim's Rest. Furthermore, it can build on its rustic feel and its role as a gateway various tourist facilities in the region to position itself as a stop over and refreshment centre for passing tourists.

There are two identified accommodation establishments, i.e., country game lodges, in Ohrigstad, namely, Iketla Lodge and Hannah Game Lodge. Iketla Lodge is located near the Blyde River Canyon and en route to Kruger National Park and therefore serves as a tourist accommodation facility.

"The scenic Ohrigstad valley combined with panaroma and abundance of activities make for an ideal weekend breakaway". This could include fly-fishing, game viewing, white water rafting, 4 x 4 trails, horse riding, hiking and other exciting activities. The areas around the Ohrigstad also have a potential for game, equestrian, golf, trout, etc country estate providing rented or secondary home for business persons and professionals based in Gauteng which is only four hours drive away.

Ohrigstad as a stop over centre for tourist travelling to various destinations along Panaroma Route will have to provide more restaurants, rest rooms, entertainment facilities, and overnight accommodation facilities such as hotels, guest houses. The good views include the dramatic vantage points, river systems, natural landscape, the green valleys of the eastern part of Greater Tubatse will serve as attractions for tourist and transient residents with a wide range of places of interests such as game farms, farmstays, etc.

The above indicates that the tourism potential of traditional rural areas has not been encouraged. There are number of tourist facilities in former Lebowa territory that has not explored viz Mahubehube Caves in Bothahhoek, Mankele and Ga-Mokgotho water falls and dramatic topographical relief around Penge, discontinued mining settlement of Penge and Taung , old coach wagon in Leboeng, King Sekhukhune statue at Tjate and miraculous trees (with healing powers) at Phiring. These tourist attractions related to the generally ignored cultural history and areas of African people. Lack of convenient access, support infrastructure including marketing and on-site infrastructure and facilities ensures that these facilities do not play their rightful role in tourism industry. The existence of the world reknown Panorama route nearby provides an opportunity to divert some of the tourist already in the area to the se forgotten attractions. Opening up another tourism route linking these attractions is the key first step to promote rural natural and cultural attraction spots.

## **26.LAND CLAIMS**

Approximately 50% of the land in Greater Tubatse Local Municipality is under claims. The claims are almost exclusively in rural areas that were part of the former Lebowa territory. Only one claim is found in near an urban area, and that is, in Steelpoort with none in Burgersfort and Ohrigstad.

In the first quarter of 2007 the records of the Limpopo Land Claims Commissioner indicated that a total of 52 land claims lodged. Out of 52 land claims that were lodged in GTM, 13 have been gazetted and 39 are in the process of being gazetted. The offices of the Land Claims Commissioner in Greater Tubatse in Limpopo were investigating the claims, as required in terms of the Restitution Act.

In Greater Tubatse, the claimants are previously disadvantaged people, that include the communities, tribal authority and individuals. 48 % of land claims have been submitted by the communities, 24 % by tribal authority, and 18 % by individual persons (private claimants). Successful land restitution is sometimes undermined by the profile of beneficiaries who, mainly as a result of our colonial and racist past, have limited financial resources, skills, etc required for productive utilisation of the land resources once handed over to them.

It is unclear whether land restitution will substantially affect the spatial pattern. Most of these properties being claimed are outside the urban nodes and commercial agricultural land. The land being claimed generally is around the existing rural settlements. Since more than 70 % of the claims have been submitted by community or tribe this will just widen the rural land that is under communal control. Generally the claimed land is neither inhabited nor cultivated. As long as the settlements are not suddenly going to dedensify and spread up the impact of spatial pattern will be minimal.

The Mecklenburg and Driekop growth points and a section of Dilokong corridor are however within areas affected by land claims. Similarly the northern end of mining belt is located on properties that are being claimed. This is also not expected to affect the prospect of both mining and urban development. The affected communities and tribal authorities are likely however to demand to be parties in such development. There are already precedents in this regard therefore it should not hamper development. The examples in this regard are partnerships between Bakubung-Ra-Ratheo Community and Wezizwe Platinum Mines; and Bafokeng Community and Anglo Platinum both in North West Province. In both cases the community become shareholder in the mining project.

## **27. MINING REHABILITATION ISSUES IN PENGE**

Penge is an old asbestos mining town located in the north of Greater Tlokoeng area. It was one of the largest asbestos mine in the world in the 1920s. It was closed down in the 1992, which was followed by the emergence of illegal occupation of mining houses and related mining buildings by approximately 3 000 residents. Asbestos mine dumps were not properly rehabilitated and they are already starting to affect negatively the physical environment. Flattened asbestos mine dumps occur in and around the settlement mainly covered with soil in areas that are either not fenced or have had fence stolen (Site Visit and Assessment Penge Asbestos Hazards Report, 2007).

The area was never formally proclaimed as a township and hence the recent attempts by the Department of Local Government and Housing to formalise or to upgrade the illegal village into a township. The township establishment application was prepared. During investigation it was found that Penge is still polluted with asbestos and therefore was deemed unsuitable for settlement development or human habitation. Rehabilitated

asbestos mines are currently being exposed due to overgrazing by variety of animals, digging, gathering of firewood and erosion. "Asbestos waste is widespread around the village and is still detectable in water from Olifants River which flows past the mine. Asbestos was also used in infrastructure such as roads, sidewalks, and buildings all of which are in dangerous state of disrepair (Draft Report: Viability of Penge, 2007). The Environmental Impact Assessment was carried out by Eco Rehab, and it was concluded formalisation of the township would not be supported since, asbestos mine dumps would pose a threat to people's health and well beings as it causes fatal diseases such as mesothelioma, lung cancer and pneumoconiosis. "Penge is an environmental health disaster and should be deemed permanently uninhabitable" (Site Visit and Assessment Penge Asbestos Hazards, 2007, p: 12).

Despite the fact that Penge is proposed as one of the provincial node and that there has been housing projects already earmarked by Limpopo Department of Local Government and housing, it is recommended that development be discontinued (Mail and Guardian, May 2007). The indications are that any new buildings and repairs to the infrastructure will invariably disturb large amount of asbestos waste and increase threat to both residents and workers.

The current spatial development plan will probably not consider this area as one of the urban node because of health hazards associated with erstwhile asbestos mining. This could be reversed in future spatial development if it can be shown that the asbestos problems could be mitigated.

## **28. LAND USE MANAGEMENT SYSTEM**

Currently the GTM has no unified land use management system across its municipal area. Historically parts of the GTM area fell into self- governing territory of Lebowa and province of Transvaal. The apartheid laws resulted in different land use and ownership regulations being applicable in the two areas. The Black Laws Amendment Act 56 of 1944 specifically excluded the application of the provincial townships ordinances in self governing territory "Instead, separate regulations regarding township establishment and development in the urban areas were published in terms of the Proclamation R293 of 1962 entitled Regulations for the Administration and Control of Township in Black Areas promulgated in terms of the Black Administration act 38 of 1927 and Development Trust

and Land Act 18 of 1936” (p102, van Wyk, Planning Law,1999). Evidently Praktiseer, Mecklenburg A and B, and GaMapodile were established in terms of this proclamation. Although Proclamation R293 has no elaborate land use management system but it does make provision to alter the building and use of various facilities within the township at the discretion of township superintendent, or Commissioner. The rest of the traditional settlements and the land within former Lebowa territory were regulated in terms of Proclamation R188 of 1969 entitled Black Areas Land Regulations. This proclamation” ... contains measures to designate areas for arable and residential allotment, to control, maintain and develop such land and to issue occupational permits (Permission to Occupy Certificates) for residential, business, church, school and arable allotments (p16, Greater Tubatse Spatial Development Framework,2005). The proclamation however contains no land use planning provisions (p103, van Wyk, Planning Law, 1999).

Development within the former Transvaal province part of GTM is regulated though the Town-Planning and Township Ordinance 1986 (Ordinance No 15 of 1986). In terms of this Ordinance three Town-Planning schemes for Burgersfort, Steelpoort and Ohrigstad were enacted. The town-planning schemes provide detailed measures to manage land uses within each scheme area. Recently the Greater Tubatse Land Use Scheme was compiled in order to harmonize the different schemes operating in the municipal area. The Map 6 of mainly areas around Burgersfort was promulgated in 2006. Currently the municipality is working on Map 6 for Steelpoort area that will be promulgated with the Greater Tubatse Land Use Scheme 2006 scheme clauses. There is not indication when a similar exercise will this be done for Ohrigstad. The Map 6 series generally exclude rural areas. Consequently development in these areas of the Greater Tubatse Municipality relies on other laws such as Development Facilitation Act, Proclamation R293 of 1962, Less Formal Township Establishment Act, etc. that allows specific use zones to be created through township application.

In order to overhaul the fractured or non-existent land use management in various parts of GTM a consultant has appointed by the Provincial Department of Local Government and Housing to prepare a land use management system that will cohere regulation and facilitation of land development across the municipal area. This work was expected to be complete in May 2007. This exercise will afford the opportunity to develop appropriate land development management in former Lebowa territory within the same legal

framework as the more developed urban nodes of former Transvaal province like Burgersfort and Steelpoort. The challenge in preparing this scheme is that it should provide certainty and predictability that will allow the private investor to plan long term but also allow flexibility to adapt to fast changing circumstances.

## **29.MUNICIPAL INVESTMENT AND SPENDING PATTERNS**

“Owing to composition of the area, levels of services, poverty and unemployment the local municipality does not derive any direct income [from] the residents within the rural areas.” (P64, GTM IDP: 2006-2011). The municipality therefore is still dependant on government funding from including national, provincial, and district municipality. (GTM IDP: 2006-2011). The declining capital expenditure from R77, 5 million in 2002-2003 to 41,1 million in 2004-2005 confirm the increasing dependence on external funding.). The types of projects on which external funding can be used is generally pre-determined by the grantor. The municipal spending pattern tends to reflect this.

There was no verifiable data on the level of expenditure of capital budgets. The Greater Tubatse IDP indicates that 74.3 percent of the capital budget was spent in 2004-2005. The 2004/05 level of expenditure is however higher than the district average of 72 percent fore the corresponding period (GTM 2006-2011)

A number of plans in the GTM have been proposed and there are a number of projects that will be implemented in the next 3 financial years. Most of these proposed projects are located in rural settlements and in tribal lands where majority of population is living and where poverty is most prevalent. Consequently they focus on service delivery, in order to alleviate suffering and make living more bearable. There are few infrastructural projects that are aimed at unblocking economic development. The investment of GTM relates to the provision of housing, mainstream economic infrastructure, local economic development projects, social services, physical infrastructure, institutional infrastructure, (e.g. police stations, municipal offices), etc, should consider the development potential of settlements.

As far as municipal investment opportunities are concerned, there are several mines in the area, others with resources exploited and others unexploited. Investment in this sector is vital as it can leverage further investment in infrastructure, resulting in major

economic spin-offs. The tendency is for the mining houses to prepare their own municipal infrastructure (bulk water, electricity, waste disposal) as the local authority is perceived not to have capacity for planning and capital budget to construct service.

In general the emphasis of municipal expenditure has been on service delivery particularly in areas that have ignored previously. The local authority should however be able to equitably balance this with capital investment aimed at creation conducive environment for private sector investment particularly in mining related, tourism, service and retail enterprises. These enterprises are showing great interest in the GTM. Investment in economic infrastructure should start to follow areas with economic potential.

### **29.1 Relationship Between The Spatial Issues And The Vision**

The vision of Greater Tubatse Municipality (GTM) as stated in its Greater Tubatse Municipality IDP: 2006-2011 is “To develop Tubatse as a Platinum City, in an integrated manner, to improve the quality of life for all.” The GTM vision has three components, the first being the physical/spatial dimension, which is to develop the municipal area as a Platinum City. The notion or concept of a Platinum City is assumed to mean development of the municipal area that is driven or lead by mining and processing of platinum-group metals and presumably the associated minerals such as chrome and vanadium. If such mining activities has pre-eminent role in the development of Greater Tubatse Municipality the logical extension of this assertion is that the other economic sectors e.g. manufacturing, agriculture and tourism though important are not in the same category as mining but can be linked to this sector in terms of development potential. In other words the economic activities based on platinum industry will take precedence or priority over other sectors.



### SECTION 3: THE DESIRED / CONCEPTUAL SPATIAL GOAL AND DEVELOPMENT PATTERN

#### 30. DELIVERABLES

The main aim of this section of the Spatial Development Framework is to discuss and illustrate the future spatial structure of GTM area. The deliverables of this section as stated in the Terms of Reference are listed below.

These are to:

- Discuss objectives that will translate the space or the environment into the desired spatial form;
- Align the conceptual diagram with other relevant plans;
- Develop the conceptual framework to spatially map the desired spatial form;
- Recommend the strategic development areas and priority areas for investment;
- Recommend and identify viable land for housing development and supporting infrastructure;
- Point out viable and functional nodal point identify potential nodes and how they should be developed;
- Identify the functional development corridor and how they should be developed to support to support the nodes;
- Determine the development edge and direction for growth for any of the different areas at micro ad macro framework level;
- Delineate functional and integrating municipal / district roads and public passenger transportation network. Proposal for the upgrading and the construction of new roads are made;
- Delineate proposed major bulk infrastructure for the whole municipality and recommend new bulk infrastructure and relevant services;
- Delineate environmental conservation and sensitive areas, major sporting nodes and areas with tourism potential;
- Delineate areas with high agricultural potential and areas affected by land claims, and
- Identify areas needing urgent policy intervention.

### **31. OBJECTIVES OF THE SPATIAL DEVELOPMENT FRAMEWORK**

The GTM is characterized by the dispersed, diffused and fragmented settlement pattern that in general has low population density and threshold. The Greater Tubatse Spatial Development Framework Final Draft: July 2005 states that approximately 60% of the settlements in Tubatse are small i.e. less than 1000 people. These settlements are too small to achieve the economic threshold required to provide higher order social and engineering services so as to strengthen service delivery, bring to bear a range and diverse human resources, skills to function as engine productive process and provide strong consumer demand that have the potential to increase business and household income. Improved service delivery and economic advancement in order to fight poverty and unemployment are two key missions of GTM as set out in the GTM IDP, 2006-2011. Improved service delivery and economic advancement has to occur or take place across land parcels and buildings within the municipal area. As indicated in Section 1 of this report spatial structure should contribute towards these mission statements of the GTM.

The challenge facing spatial planning in Greater Tubatse Municipality arise from a competing number of development issues that require a coherent responses. The sometimes contradictory development issues are mining driven urban development pressures on the western and central parts of the municipal area, provision of social and engineering services in fragmented settlements in the former Lebowa territory mainly in the north, protecting and ensuring responsible exploitation of the valuable environmental and cultural assets on sustainable basis, protection of fertile agricultural land along the major rivers , responsible exploitation of tourism potential of the eastern parts of the study area, and general broadening the tax base for the local authority in both rural and urban areas. In summary a coherent response to development through the SDF should result in improved service delivery and economic advanced but tempered with sound environmental management. In fact this is the third mission statement of GTM listed in the Greater Tubatse Municipality Draft IDP 2006-2010

There are also three related strategic goals of the GTM listed in the current Greater Tubatse Integrated Development Plan 2006-2011 with spatial dimension that should inform the objectives of Spatial Development Framework. These are:

1. Advanced Economic Growth,
2. Optimised Infrastructural Services and

### 3. Social and environmental sustainability.

There are further objectives pertinent to the Spatial Development Framework that are derived from the government spatial development laws and policies particularly the Development Facilitation Act. These are:

- (i) Promotion of integrated land development in rural and urban areas in support of each other
- (ii) Promotion of the availability of residential and employment opportunities in close proximity to or integrated with each other;
- (iii) Optimization of the use of existing resources including such resources relating to agriculture, land, minerals, bulk infrastructure, road, transportation and social facilities;
- (iv) Contribution to the correction of historically distorted spatial patterns of settlement in South Africa and to optimum use of existing infrastructure in excess of current needs;
- (v) Encouraging environmentally sustainable land development practices and process and
- (vi) Land development should result in security of tenure, provide for the widest possible range of tenure alternatives, including individual and communal tenure, and in cases where land development takes the form of upgrading an existing settlement, not deprive beneficial occupiers of homes or land, where it is necessary for land or homes occupied by them to be utilized for other purpose, their interest in such land or homes should be reasonably accommodated in some other manner.

The above -mentioned objectives should guide the formulation of the Greater Tubatse Spatial Development Framework. In other words, the usefulness of the proposed Spatial Development Framework depends on whether it addresses the above listed objectives.

### **32. THE GTM SPATIAL DEVELOPMENT CONCEPT**

Since the study area has neither been managed as a single or unified planning area until recently nor has the land use zoning system been developed, it is characterized by a somewhat unregulated if not haphazard range of land uses. The recent development of numerous platinum group mines is the most dominant cause of changes in historically static land use pattern within the municipal area. The second key determinant of change in spatial pattern is tourism related activities. Although the size or scale of overnight accommodation establishments has not had a major impact on the transformation of urban footprint as many existing properties used as tourist facilities were already existing or spread across farmsteads. Three resettlement projects at Bodidi, Dresden and Kalfontein communities and medium to high income housing at Burgersfort and Steelpoort though small in scale are also at the leading edge of the spatial pattern that is a state of flux. That notwithstanding for most part, a particular land use category tends to be dominant and stable in specific localities of the study area. While a mix of land uses in principle, is a good approach to development, there are potential problems with uncontrolled development in a fast changing environment as they may lead to loss of valuable and sensitive agricultural land and environmental assets, incompatible combinations of mining on one hand and urban development or ecological sensitive areas, and perpetuation of trends in tourism development that ignore the historical and cultural resources of the former Lebowa territory. In order to create order, stability and predictability a spatial development framework is necessary to improve structure and organisation of land use and development.

The vastness of the study area and the strategic nature/level of the spatial framework plan does not permit the determination of a use zone for each and every property in the GTM. What will be attempted in this exercise, however, is to determine a dominant use within each zone coupled with ancillary uses and other/compatible uses that could be permitted in such a zone. To this end the study area has been demarcated into functional zones that share common characteristic e.g. existing land use, access routes, development pressures, development potential, physiographic factors etc.

Map 9 represents the proposed Land Use for the Greater Tubatse Local Municipality based on the objectives outlined in Section 2 above.

The components of the spatial plan that are discussed in more detail below are:

- (a) Mining Belt;
- (b) Activity Corridor
- (c) Urban Nodes;
- (d) Rural Settlements;
- (e) Tourism Corridors/Areas;
- (f) Conservation Areas; and
- (g) Agricultural Areas

### **32.1 ZONE 1: MINING BELT**

Currently the major economic activities of the GTM are mining and agriculture, with mining being the primary contributor to GDP and employment. The GTM area possesses a wide diversity of mineral resources. Mines have been identified as the driving force for economic development in conjunction with their associated manufacturing industries within the area.

Mining is the primary contributor to GDP and employment. There are extensive unexploited deposits such as chrome, vanadium, the world's largest deposit of platinum group metals and iron ore [magnetite] in Tubatse (GSDM: Central Tubatse-Driekop, Praktiseer and Burgersfort; p. 2). The mining related activities are found in the eastern limb of the bushveld complex. The horse-shoe shaped eastern limb of the bushveld complex lies on the western sector of GTM. The eastern limb of the bushveld complex vary in its width from 10-20 km as it passes through GTM area. The PGM bearing ore bodies found in the Merensky and UG2 reefs are usually less than 1.5 m wide and between one to two meters thick (Mining Weekly, October 13-19 2006, p 10 and 18). The two major arterials traversing the GTM viz R555 and R37 essentially run parallel to the ore body. A series of mines including the following platinum mines Twickenham and Marula mines in the north and Modikwa, Winterveld, Steelpoort, Lannex, Kennedy Vale, Twee Riviere, Dwarsrivier and der Brochen in the south follows the configuration of the bush igneous complex.

There are also four chrome mines, viz., Samncor, Tubatse, Eastern Chrome, Assmang, and Thornecliffe along the same bushveld igneous complex and also two andalusite mines, viz, Havelock and Annesley near Penge. " Vanadium is mined and smelted at

only one mine and this product caters for most demand in the country. Slate is mined in the Ohrigstad area and is used to manufacture roof and floor tiles” (GTM IDP: 2006-2011, p58).

Platinum mine is planned by platinum junior Platmin at Grootboom farm close to Steelpoort. The feasibility study has indicated that this mine has 2.5 million PGM ounces (Mining Weekly, September 15-21 2006, p20). Another platinum group metals mine is planned at Spitzkop adjacent to Kennedy Vale. It is estimated that this mine has 9.3 million PGM ounces (January 2007 Mining Mirror). Another junior platinum mining company Tjate Platinum Mining is prospecting at Tjate (April 12,2007, Sowetan). Samancor Chrome was also considering three mining sites in and around Eastern Chrome Mine. There are at least other seven mines at various stages of feasibility studies and exploration within the GTM area. All the mines are within the proposed mining belt (see Map 9).

The platinum groups metals (PGMs) consist of six elements platinum, palladium, rhodium, iridium, ruthenium and osmium. “ PGMs are generally used in applications which depend strongly on their unique properties, such as their inertness with excellent corrosion and oxidation-resistance, biocompatibility, high melting temperature, good conductivity, and electronic and catalytic properties” Mining Weekly, November 10-16 2006, p30. The PGMs are used in automotive catalytic converters for abatement of emissions from petrol-rich engines, white metal jewellery, catalyst in chemical sector e.g. in production of silicone, paraxylene, nitric acid etc, electronic and electrical goods e.g. computers video recorders etc, glass production, medical drugs and equipment and aeroengine turbine blades (Mining Weekly, November 10-16 2006, p30-32).

The increased development of mines and associated concentrator plants in GTM area have positive spin offs in terms of job creation and economic growth. The potential of mining sector to create direct jobs exceeds any other sector. For example it was reported in 2006 that the “ Three large platinum mines are planned and under construction in the area, and it is anticipated that these will create approximately 6000 job opportunities (GTM IDP: 2006-2011, p58). Such number of additional jobs is proportionally very high relative to 19227 total jobs that existed in 2002.

The upstream industries or input suppliers such as equipment, plant, spare parts and consumables hirers and suppliers, aftermarket maintenance and repair service companies, logistics/freight companies, catering/hospitality, technical and staff consultancies, construction materials suppliers, steel suppliers, cable suppliers, specialist subcontractors e.g. sinking and lining of shafts, slurry and water pumps, electricity reticulation etc. will provide indirect employment opportunities to local people. The planned and existing mining operations, also trigger the provision of bulk engineering service such water, road and electricity, sewerage and waste disposal site beyond the requirements of the mining sector. For example the R3, 6 billion phase two of Olifants River Water Resources Development Project that entail "... construction of the De Hoop dam on the tributary of the Olifants river; 25 km of new road, including three bridges; nearly 300km of pipeline; as well as a number of pump stations and balancing reservoirs" is privately financed on the strength of off take agreements with a range of users (Mining Weekly, November 10-16 2006, p12). More important among these users are the 32 existing and potential mines in the area (Mining Weekly, November 10-16 2006, p12). Irrigation schemes, households, industrial establishments and other businesses are expected to benefit from water derived in the project throughout the water stressed Sekhukhune region. The mining houses have even went as far as providing funds to the local authority to address bulk infrastructure problems such as the land for landfill site in Burgersfort and repairs to Steelpoort sewerage plant. Further development of mines in GTM is critical to certain bulk infrastructure rollout across the municipal area given their demand for services and ability to pay.

In 2002 it was estimated that the existing and planned mining development would result in a derived demand of about 10000 housing units within the GTM urban nodes in order to accommodate employees. Such an increased in households with disposable income will invariably increase demand for retail space and other service businesses to support residential development. For example the 2002 survey suggested that only about 10% of households earn more than R 38 000.00 per annum and mining development is expected to completely change this profile. The additional 10 000 housing units is expected to result in 15000- 30000 m<sup>2</sup> retail space assuming a household size of just more than four. (Source Ghyoot, 1992: 51 and Greater Tubatse Spatial Development Framework). In this regard one property agent operating in the area was reported as saying " Mining has affected the residential, commercial and retail market. More

businesses have opened, ranging from food and clothing stores to suppliers of infrastructure, IT and communications”(Mining Weekly, April 6-12, 2007, p8).

Because of the impact of mining development in terms of employment, local wealth creation and provision of engineering, economic and social infrastructure beyond the mines a mining belt is proposed on the western part of the GTM area. The mining activities have a multiplier effect as they lead to economic and spatial development in other sectors like retail, tourism, service and manufacturing industries. It is therefore very important that on the platinum rich eastern limb of Bushveld Complex as passes through the GTM area should primarily be reserved for mine development. The extent of this area is shown in Map 9. Currently it is envisaged there will be more than thirty mines within this belt.

## **32.2 ZONE 2: DEVELOPMENT CORRIDORS**

### **32.2.1 Dikolong Corridor**

As previously discussed in Report 2, the GTM area is well connected with major arterial roads, of which some of them are planned as development corridors. For instance, road R37 forms part of Dilokong corridor that stretches from Polokwane in the north to Burgersfort in the south. This route forms the spine of economic activities. Along this route there are several villages and chrome and platinum mines. The section of R37 corridor through GTM is the most dense in terms of both the number of households and mining activities. This route sees a high volume of freight trucks transporting supplies to and from the mines and retail outlets, public transport (taxis and busses) ferrying people to and from economic and administrative centers of Polokwane, Lebowakgomo, Burgersfort, Steelpoort, Middleburg, Lydenburg and Nelspruit, and also local private cars from homes to social and economic facilities or places of work between the settlements and beyond; through traffic traveling to and from tourist facilities further east of the GTM area.

R37 is therefore an important movement corridor for people and goods. The Limpopo Growth and Development Strategy also emphasis increase in investment in the mining activities along Dilokong corridor which will trigger associated urban development.



“Corridors have a potential in restructuring the currently fragmented settlements into robust, compact and efficient built-up areas. Corridors have an important contribution in:

- The growth and development of the area;
- Realising the economies of agglomeration;
- Supporting more efficient service delivery in the district;
- Creating access to opportunities along the corridors; and
- Supporting public transportation”.

(GSDM ISDF, 2005)

The booming mine development and operation along Dilokong corridor enhances the prospect of mixed urban development on both sides of this route. The existing and the future mines carry with them the seed of new urban development. The corridor already has a high concentration of settlements as people try to get closer to work opportunities, and better services such as social, economic and engineering facilities. The report prepared by EastCon for Steelpoort Valley Producers Forum proposed housing to accommodate mine workers in order of 2000 units in addition of the existing housing stock. This figure could be conservative given the advanced prospecting for platinum and chromite along the corridor. The increase in housing development along the Dilokong Corridor will provide support for public transport i.e. busses and taxis to and from centres of employment, economic and social facilities. Development along this corridor will give impetus to the existing and the proposed possible transport infrastructure as potential users increase. This will improve the quality of resident’s life as it brings them closer to the socio-economic opportunities and reduces transport costs and travelling time.

Corridors have also a potential to ignite economic growth within the Tubatse region. The retail and services businesses are also expected to be attracted to this corridor following the increase in households with higher disposal income and their interceptory position in relation to surrounding villages. The non-residential land uses will be drawn to the corridor because of its visibility to high volume of passing traffic and accessibility at both local and regional scales. The properties immediately adjacent to the road reserve should set aside for business uses, multiple housing, and certain high order social

facilities that require regional accessibility e.g. police station, hospital/clinics, community hall, municipal offices, multimodal transport facilities etc. Notwithstanding the proximity to the R37, direct access into sites from this road should not be permitted, as this will disrupt the free-flowing traffic movement. Although no traffic study has been done there is anecdotal evidence that this road is undercapacity. Throughout the day the road is always busy. Traffic approaching the R37 from the side road, particularly those turning right and taxis that are offloading passengers find it very difficult to join or rejoin the R37. Access to sites should be gained from access road connecting side streets that are intersecting with R37. Where it is important that the buildings face the R37, a service road running parallel or parking located adjacent to R37 should be considered. The properties behind businesses and higher order social facilities can accommodate low density housing and local facilities like primary schools, crèches, etc. The width of the intense urban corridor will vary according to the width of the basin but for most part it will about 2 km on each side of the R37. The development will be most dense, both in terms of number and height of buildings, adjacent to the R37 road reserve and gradually thins out as one moves away. The possible potential areas that will trigger such development include areas such as Mecklenburg, Riba Cross, Driekop and Maroka.

Although the R37 should encourage free flowing movement of traffic, public transport facilities, safe crossing points for pedestrian, restricted informal trading in designated areas should be allowed within the road reserve of this route.

### **32.2.2 Burgersfort -Stoffberg Corridor**

Burgersfort -Stoffberg Corridor is secondary corridor that can also play role in the development of mining. This corridor extends from Burgersfort through Steelpoort to Stoffberg about 90 kilometers away. Although there are about three mines located along this corridor to date, it has attracted limited urban development within its sphere of influence, particularly housing development. Only the Ngwabe settlement, is located adjacent to this road. This could possibly be explained by the private rather than communal ownership of property, and dominance of commercial agriculture along the Steelpoort river basin. There are however numerous guesthouses, camping sites and resorts, a nature reserve and Steelpoort urban node. Most development along this route is concentrate around Steelpoort urban node.

The potential of this corridor seems to lie on attracting further overnight accommodation establishments, retail outlets providing refreshments to those travelling up and down R555, and cluster/s of retail and service businesses (e.g. food outlets, autobanks, filling stations, tourist information center etc) at appropriate intersections that can serve both local communities and tourists (both leisure and business). It is not expected that the urban development along the length of this route will be continuous but will be dotted like 'beads on a string'. There is simply not enough development energy extend to all available land, at least in the short term.

It is therefore recommended that specific locales along this corridor be identified for urban development in the immediate future.

### **32.2.3 Jane Furse Corridor**

Jane Furse Corridor extends from Jane Furse to Lydenburg. Essentially this corridor links the extensive settlement areas in the part of Sekhukhuneland with the Lydenburg economic centre in Mpumalanga Province. Only a short section of this corridor transverses the periphery of the GTM area. This corridor carry a significant volume of commuters but it functions more as a mobility spine rather activity corridor. This simply means that the route accommodates the fast moving vehicles from the origin to destination without many stops along the way. The few stops are mainly along the three mines viz Dwarsriver, Tweerivier and Thornecliffe and the recent settlement area of Kalfontein. Within the borders of GTM the opportunities for further urban development are around these stops where people congregate. Retail and service businesses will be ideal for these locations particularly on piece of land opposite the three above mines (See Map 9). A taxi and or bus facility should also be considered opposite Kalfontein settlement to ensure safe boarding and dropping of passengers.

### **32.3 ZONE 3: URBAN NODES**

Urban nodes are areas that have the highest accessibility and concentration of both public and private investment. These areas are characterised by clusters of various activities and are supported by a viable public transportation system to ensure that they are the "magnets" or anchors that stimulate growth along mobility/activity corridors. These are therefore focal points in corridors as one or more transport connectors link

them. (Ekurhuleni Metropolitan Municipality, *Local Spatial Development Framework for Tembisa-West and Phomolong Chloorkop*, July 2005).

These are the main centres, which are being fed by development corridors and are characterized by concentration of economic activities, job opportunities, and delivery of services to the population of GTM. There are three urban nodes viz Burgersfort, Steelpoort and Mecklenburg in GTM area. In terms of the Limpopo spatial Rationale 2002 these towns have classified as provincial and district municipal growth points respectively.

Although Penge has a potential to become an important urban node in GTM the health risks associated with unrehabilitated asbestos mines has left the area inhabitable. For this reason Penge is not considered an urban node.

### **32.3.1 ZONE 3 (a) Burgersfort**

Burgersfort functions as an economic hub of Greater Tubatse in terms of retail and personal e.g. restaurants, doctors rooms, furniture shops and business services e.g. banks, printers, estate agent etc. The main municipal government offices are situated in this town. However Burgersfort does not offer higher order goods and services hence the population of Sekhukhuneland tends to utilize Lydenburg as their major shopping town and accessing government services.

As previously noted Burgersfort is one of the fastest growing node at local, district and provincial scales. Most recent developments have occurred on the southeastern part of the town particularly housing and some retail component. Further large-scale urban development to the south and southeast of the town is however limited by the following:

- The developable area is well beyond the existing catchment of gravity led services i.e. water purification plant and sewer treatment plant therefore the servicing cost will be relatively higher; and
- The flatter areas in the south-east direction is currently under productive commercial agricultural land.
- The above-mentioned flatter terrain is at least five kilometers from Tshipapedi River and the intervening area is a rugged terrain.

Therefore the mountain range beyond the Tshipapedi River, a tributary of Spekboom forms the logical edge of urban development in the short to medium term. The steep west and south of Burgersfort form the urban edge.

The urban development should therefore be encouraged to go to the immediate north, north-east and north-west direction from Burgersfort CBD for the following reasons:

- The area is much more flatter,
- The area is accessible and close to key transport routes such as R555 and R37,
- The area allows gradual consolidation with existing urban development in Manoke, Bothashoek/Praktiseer and Dresden with the historic Burgersfort Central Business which will increase efficiencies of the urban system.
- The area is generally within the catchment of existing bulk infrastructure like Burgersfort and Praktiseer sewage works that were upgraded recently and also closer to existing water purification plant at Spekboom River and storage facilities.
- The area is close to existing transport interchanges i.e. the Burgersfort railway station, taxi ranks and bus terminus for ease of movement of people and goods.

For these reasons, the focus of development should be on the north, the northeast and the north- west of Burgersfort town centre (see Map 10).

Different parts on the north, north-east and north- west of Burgersfort are suitable for particular land uses:

The land on the south-eastern direction can be set-aside for residential purposes, mainly high income and middle income. Such proposal will reinforce the up-market housing that is planned in different locations on portions of farms Aapiesdoorndraai 297 KT, Witgatboom 316 KT and Mooifontein 313 KT. These farms are vacant properties from southern, eastern, to north-eastern parts of the Burgersfort Central Business District.

Further north-east in the direction of Dresden, on either sides of R555 a variety of land uses is proposed including more affordable housing, industrial development and commercial land uses in appropriate locations particularly along movement spine. The affordable housing should largely be clustered immediately to east of Spekboom River as one drive along the R555. This will include Gamanoke settlement, Havelock mine village etc. The industrial development will cluster around the existing SAMREC

Apiesdoring warehouses up to the intersection of R555 and D1253 to Penge and Praktiseer. Should it be necessary and economic, this industrial could be serviced by a railway spur connecting to the adjacent railway line between Burgersfort and Ohrigstag. In certain selected areas up-market housing may also be suitable e.g. Motaveng medium to high income areas. Careful attention should be paid on mitigating the negative impacts of incompatible land uses, particularly interfaces where different land uses meet. This may include the selection of exact location/position of the land uses, , access points to development precincts, visual orientation of development pockets etc. These issues however can be dealt with at detailed township layout design stage.

In the northern direction towards Bothashoek and Praktiseer affordable housing is proposed and where appropriate commercial agriculture particularly along the Spekboom River should be retained. It was noted previously that commercial agriculture in this part of Burgersfort is under extreme pressure from urban development. It is therefore important to preserve productive agricultural land particularly where irrigation infrastructure has been laid, at least in the short to medium term.

A mix of commercial uses and denser form of housing is proposed on either sides of R37 on the western edge of Burgersfort town. A mix of commercial uses includes retail, service businesses, office development, civic facilities and light/clean industries. This band of mixed uses will form a strip from the intersection of R37 and R555 and extend to the western boundary of the central business district. Multiple housing developments of not more than five storeys is proposed in this area behind the commercial strip. Within the residential areas there should be provision of convenience corner shops at strategic positions. There should also be social and recreational facilities that could be reached by residents on foot. These facilities could be supermarkets, butchery, post office, schools, parks, sportfields, community halls etc.

Further to the west and south of the intersection of R37 and R555 a medium to high income housing is proposed on the east of Steelpoort Road (R555). This housing development will be on the Portions 2 and 38 Leeuwvallei 297 KT farm that abut Skhumula Game Farm. To create a rural feel and integrate this development with the adjacent game farm very large erven should be demarcated.

Diagonally across the intersection of R37 and R555 mixed land uses that include service industry, warehousing, retail and affordable housing are proposed. This area will define the end of Dilokong Corridor. The proposed mixed use will straddle the flat land on both sides of Steelpoort River. The land on the west of the Steelpoort River is public land (owned by RSA) thus making it easier to access and control it for purposes of development.

### **32.3.2 ZONE 3 (b) Steelpoort**

Steelpoort is identified as the heart of booming mining sector as it is located at the center of the mining belt and an array of mining related activities. Steelpoort Chrome Mine, which incorporates Winterveld Eastern chrome mine, is assumed to be the largest chromite mine located in the valleys of Steelpoort.

Steelpoort town is mainly an industrial town that has attracted heavy engineering enterprises; suppliers to the mines; transport facilities; building material suppliers; distributors/ wholesale and non-industrial uses in the area are , medium density housing and small retail component. There are two industrial townships in Steelpoort viz Steelpoort Extensions 3 and 7. About sixty per cent of the town's industrial township, i.e. Steelpoort Ext 3 is occupied. Some of the service businesses related to mining have even emerged in fringe areas of former Lebowa i.e. Tukagomo and Eerste Geluk, Mapodile just south of Steelpoort.

Steelpoort has the best potential to succeed in a range mineral processing and beneficiation activities, as it is well located in relation to the current and future mining activities. For mineral beneficiation and processing establishments to be successful, they should locate in areas where the necessary infrastructure is available, the input products are in close proximity, and the target consumer market is highly accessible. Steelpoort is best location for certain manufacturing industries that are dependant on the mining outputs. As a testimony to this Samancor Chrome which also own Eastern Chrome Mine near Steelpoort recently stated they are pursuing a \$1,3 billion three phased greenfields expansion, [of the smelter] which would add 1,4 million tons of additional ferrochrome capacity between 2010 and 2015. This is part of beneficiation project which include production of 105 000 t/y of chemical-grade chrome ore, chrome –metal (used in aviation sector) and synthetic K3 vitamin (used in agricultural sector) that the company

was keen to locate close to the chrome raw material (p8, September 15-26, 2006). Steelpoort is well place to accommodate such development.

Most of these businesses in Steelpoort Extension 3 and 7 are linked to and dependent on the mining community and to a limited extent provide goods and services to residents of south-east Sekhukhune land. A number of heavy engineering and light manufacturing industries such as suppliers of explosives, tyres, hydraulic hoses and pumps, auto-electrical, diesel engines, generators and compressors, tools and earth engaging plants, waterproofing and rubberlining, steel fabricators, lifting equipment etc that are located in the two industrial parks found in Steelpoort almost exclusively survive on serving the mines. The logistics businesses that include warehousing, road freighter yards, distribution depots etc mainly transport the supplies to and products from the mines but there are few enterprises that distribute consumer goods across the district (e.g. the Coca Cola depot and a few building suppliers).

It is proposed that the industrial development be consolidated around the northern end of Steelpoort, on either sides of the R555 to Burgersfort. The proposed industrial will consolidate the two already existing industrial clusters. There is potential for further industrial development in this part of Steelpoort that is aligned mine and smelter development, operation and maintenance. For example the recently completed R1, 6 billion Lion ferrochrome smelter is considering encouraging development of SMME procurement through the industrial supply park (Mining Weekly December 8-14,2006). In this arrangement the suppliers will use the warehousing and limited manufacturing facilities to be built and serviced by Xstrata (owners of the Lion ferrochrome smelter) and few other mining companies (Mining Weekly December 8-14,2006 p30). Such mining industrial park would ideally be located in this proposed industrial area.

Another smaller industrial component has developed on the road to Lydenburg closer to the following mines Eastern Chrome Mines, Tweefontein Platinum Mine, Thorncliffe Mine and Dwarsfontein Mine. This industrial park almost exclusively accommodates suppliers to mines. The envisaged increase in mine development in this part of GTM suggests that this node must be consolidated by attracting more suppliers. Therefore this industrial development must be extended along the road to Lydenburg. At the moment these industrial establishments are branches of businesses located in other



long established mining cities like East Rand, Witbank and Johannesburg. They largely function as warehouses where supplies that are manufactured elsewhere are stored to ensure rapid response to urgent mine demands. With more mines opening in the GTM there may be sufficient demand to move some manufacturing and assemble activities to Steelpoort.

Large scale engineering plants and mines should be encouraged along the R555 on the eastern side as one moves away from the Steelpoort town. Already the Xstrata ferrochrome smelter, Steelpoort marshalling yard, Samancor Chrome Mines are found on this side of the road. This will allow separation with somewhat incompatible housing and commercial development that should locate on the western side of R555. Further negative environmental impact such as air and visual pollution between heavy engineering industries on one hand and housing and commercial development on the other should be addressed in detailed design stage There are already few mines e.g. in Spitzkop, Grootboom farms proposed on the eastern side of R555. Excluding habitable development on the east of R555 will make it easy to comply with statutory restrictions relating to their distance from mines and also unimpeded mining operations.

Steelpoort town and its environs have recently attracted medium income and worker housing. At Steelpoort about 200 medium income-housing units in Steelpoort Extensions 1 and 4 were recently completed on the portion of Goudmyn 337kT on the western side of R555. Because the mining houses have not recently provided worker accommodation either for sale or rental, the lowly paid workers and possibly the work seekers find temporary accommodation in the surrounding villages particularly from Ga-Maepa to Tukagomo. Based on layout, (see Housing Section of Section 2 of this report) a certain proportion of these houses in these settlements seem rented out. These types of houses seem to accommodate single persons without their families on a short-term basis given the size of units.

It is therefore recommended that the medium income housing be extended in southwards direction between the Steelpoort River and R555 as one moves from Steelpoort town. Low rise housing for workers can also be located on this strip of land. In the short formal low cost and low density housing for workers in Steelpoort should

mainly be located around Tukakgomo as it will be easier to develop such tribal land than privately-held land.

It is proposed that a commercial node should be located at the intersection of the road from Tukakgomo and R555 opposite the proposed Spitzkop mine. This node will function as an initial step to spatially integrate the former Lebowa residential areas into Steelpoort urban core. This node will function as anchor where the current development at Steelpoort and Tukakgomo/Eerstegeluk will meet. This commercial node will accommodate retail facilities, service businesses, and some civic facilities e.g. post office, government offices.

Collectively the land use development proposed above will allow Steelpoort urban node to consolidate its role as a mining and an industrial centre of GTM if not the Sekhukhune district. At a local scale however it will provide retail and government service for residents including those of the surrounding villages.

### **32.3.3 Zone 3 ( c) Mecklenburg Node**

Development corridors are interspersed with clusters of dense urban development comprising of various high order social and commercial facilities and housing. These anchors are characterized by clusters of social facilities such as hospital, police station, community hall, administrative offices, transport facilities, retail such as shops, industries, etc. The development along R37 corridor will be linear in spatial form, comprising of a continuous band of urban development on either sides of the road reserve with intermittent nodular concentration of urban activities at strategic points.

Mecklenburg/ Maroka is one settlement located along the R37 corridor with high developmental potential given its location on the corridor, topography and existing land uses. This node is characterized by small-scale business activities, social facilities and high-density housing. It constitutes much more intense urban development occurring away from the central movement spine that are reinforced by a number of stronger cross-links. These cross links reinforced or encouraged urban development to extend away from the corridor thus creating a node. Such development around the Mecklenburg/ Moroka urban nodes would be characterized by agglomeration and

clustering of infrastructural development particularly roads, stormwater, sewerage, water, electricity and telecommunications.

Currently the settlement of Mecklenburg is built around few high order facilities, viz the police station, magistrate court and the hospital. These high order social facilities are built in the midst of the formal township that is partially serviced. It is expected that with a number of mining activities along R37, retail and housing will gravitate towards this settlement.

It is expected that in terms of higher order service goods and facilities government offices (e.g. municipal offices) development would lead to consolidation of Mecklenburg as an urban node. All other major commercial/ retail activities will therefore follow a government service delivery point. For instance, establishment of petrol filling station, small/ neighbourhood shopping complex, etc could follow to service people working, staying and visiting to provide or access various government services. Clustering of these related activities will improve the economies of localization and infrastructure provision. Some industries and warehousing initially at low scale could also be accommodated in the area to service the existing and future mines. In this case the infill development will follow existing engineering services to the vacant parcel of land in between residential erven.

In conclusion, it is anticipated that the growth of Mecklenburg will feed on R37 corridor, through traffic, provision government services for the surrounding services and surrounding mining shafts. Mecklenburg is expected to be a bigger urban node along R37 when compared to Riba Cross and Driekop.

#### **32.4. ZONE 4: RURAL SETTLEMENTS**

There are two categories of rural settlement envisaged in GTM viz the traditional homesteads in villages and the country estate (see definition below) in aesthetical pleasant locales particularly around Ohrigstad (See Map 13). For purposes of this report the rural settlements are those settlements that are occurring outside the provincial, district and municipal growth points and population concentration points (first order settlement) as articulated in the Limpopo Spatial Rationale, 2002. Essentially the distinguishing characteristic of the rural and urban settlements is that in the former it is

expected that that the households are to some degree for subsistence, economic or leisure reasons dependent on land livestock and wildlife. The population concentration points i.e. Penge, Batau/Praktiseer, Ga-Masha and Ga-Masete are functional part of urban areas and design of the built form reflect this though some households may still till land and keep livestock. Whether or not the ploughing of land and animal husbandry is allowed, for purposes of settlement planning such settlements should be treated as extension of urban settlements as the overwhelming majority of households earn their living through employment in urban centers. All large scale and denser housing projects such that they require urban engineering services should be located in growths points and to a very limited extent in population concentration points. Consequently these settlements should receive priority in terms of bulk infrastructure.

The rural settlements should in the main be consolidated in their current locations (See Map 12). The focus should be on formal demarcation of sites, all weather main access roads, potable water and electricity. It is not expected that sanitation service will include waterborne sewer in rural settlement. The GTM -Local Economic Development Strategy, January 2007 suggests that there is internal migration of households closer to economic centres therefore unmitigated expansion of the traditional settlements should be discouraged particularly those that do not have any economic base and high order facilities and services cannot be provided economically. It is imperative however service delivery as suggested above should continue. It may be better to treat these traditional settlements as clusters in order provide sufficient thresholds for high order services and facilities clustering the settlements simply means the aggregation of nearby settlement for development planning purposes. The settlements within a cluster should be linked by access road to ensure easy movement from one settlement to another settlement that are close to each other. Ideally it should be possible to move from one settlement to the next on foot. For purposes of planning a cluster will be treated as a planning unit where the engineering, social and economic facilities will be shared between or amongst the settlements. For this arrangement to work the facilities should locate interceptory locations to most settlements to facilitate wider access (beyond settlement where it is located). Proposed initial clustering of settlement is depicted on Map 12. Further refinement of clusters perhaps as part of housing development plan should take the following into account; distance between settlements, movement linkages (pedestrian and vehicular), number of households, electoral wards, etc.

The eastern part of the GTM if appropriately packaged can attract a reasonable demand of country estates. Country estate is defined here as a secured residential development usually with a perimeter fence, controlled access, internal access ways are privately owned, and sometimes security patrol is provided and housing scheme designed around a particular theme. These themed country estates include game, trout, equestrian and golf estates. The residential erven are individually owned but the engineering service, communal facilities such as game parks are vested in a joint entity where each erven owners have a share. The good views that include dramatic vantage points, river systems, natural landscape, the green valleys of the eastern part of Greater Tubatse will serve as attractions upon which the country estate are built. This will be an attempt to replicate the success of themed country estate found particularly in Pilgrim's Rest, Dullstroom and Hoedspruit within Panaroma Route.

These estates mainly function as secondary, holiday and week-end homes of Gauteng based professionals and business persons as this only four hours away. The proximity of this area to various game world renown parks, e.g Kruger National Park and Mangel Game Reserve, etc and Blyde Canyon can even allow these homes to be rented out to tourists on daily basis particularly if this managed by a property agent.

These residential estates generally have large erven that usually range from 1000 sq m to 2 ha. The number of erven within each development is usually less than a thousand. Wellness centre, spa, boutique hotels for short term guests, tarred runway for light aircrafts and helipad and small scale retail are some of the facilities usually provided in such developments.

The rural settlement in the form of traditional village and country estate has two contrasting function in GTM space economy i.e service delivery in traditional village to improve the quality of life for disadvantage households. This will largely be a burden in to fiscus. On the other hand country estate provide leisure accommodation, high-income earners that are both local residents and visitors. Country estates will increase rate base of GTM.

## **32.5 ZONE 5. TOURISM AREAS**

Compared to the other regions / local municipalities, GTM is not yet one of the main tourist destination, particularly for international tourists. However the municipal area, particularly the eastern section could function as a tourist overnight or daytime stopover or day visit centre for the local / surrounding residents. The scenic views include the dramatic vantage points, river systems, natural dramatic landscape, the green valleys, cultural and historical resources of the eastern part of Greater Tubatse will be attractions to tourists and transient residents.

### **32.5.1 Leisure and Business Tourism**

There are two categories of tourism viz; leisure and business that are very useful to better understand the reasons and the trends in tourism necessary for planning of tourist products. Leisure tourism relates to visits predicated on holiday or taking time off work, while business tourism is conducted as part of or necessitated by business/ work itinerary. Although the motivation for tourists visiting GTM could either be leisure or business, the facilities and attractions are to a large degree not necessary differentiated. At the moment the observed pattern of the visits and confirmed by the owners and managers of accommodation facilities suggest a high proportion of business tourists. (See GTM -Local Economic Development Strategy, January 2007 and Proposed Eskom Steelpoort Pump Storage Scheme-Draft Tourism Study, November 2006). This demand is generated by people working in the mines currently being developed.

### **32.5.2 Natural Attractions and Wild life**

The eastern side of the study area provides the opportunity to lead the tourism development within the municipal area so as to attract more travelers and tourists. The area is suitable for both entertainment and recreational purposes. There are number of possible activities that can be developed in the area, such as game hunting, golf, bird watching, game drive, 4X 4 tracks, skydiving, hiking trails, bungee jumping, trout/fly fishing white water rafting, hot air ballooning, mountain biking, bush camping bird watching etc. The natural environment with potential could be conserved as game parks or nature reserves. It is recommended that guest houses, game lodges, low rise hotels, restaurants, caravan parks, golf country estate, camping facilities and conference facilities be developed around such identified area.

Another area with a potential for tourism though in an urban setting is **Ohrigstad**, which is located near the eastern boundary of the GTM. The town could be redeveloped as one of the entertainment node where facilities such as restaurants, kiosks, curio shops, bars, etc can be located. Ohrigstad's main assets which underpin the tourism development potential includes:

- Its rustic laid-back character or small town feel, which can give tourists, an experience of quaint town whilst retaining modern conveniences;
- Its location along R36, which is one of the main tourist transit routes from Lydenburg to Maruleng (Hoedspruit and Hazeyview)

These assets constitute potential, which provides the platform to re-orient local economic base. Ohrigstad can function as urban base supporting various tourist attractions spread across the surrounding rural areas and beyond with retail outlets, eateries, bars, etc. It can also provide tourist with overnight accommodation in guesthouses and low rise hotels in more familiar urban setting, ablution facilities or rest rooms, informal trading facilities for arts/craft to tourist passing by.

### **32.5.3 Cultural / Historical and Heritage**

The tourism potential of traditional rural areas have not been encouraged. The tourist attractions have generally not included telling of the history and struggles of indigenous people, their culture and heritage.

There are number of tourist facilities in former Lebowa territory that has not been explored viz Mahubehube Caves in Bothashoek, Mankele and Ga-Mokgotho waterfalls and dramatic topographical relief around Penge, discontinued mining settlements of Penge and Taung, old coach wagon in Leboeng, King Sekhukhune statue at Tjate and miraculous trees (with healing powers) at Phiring (See Map 13). These tourist attractions are related to the cultural history and areas of African people have generally been ignored. Lack of convenient access, support infrastructure including marketing and on-site facilities result in these facilities not playing their rightful role in tourism industry. The existence of the world reknown Panorama route (along R36) nearby provides an opportunity to divert some of the tourist already in the area to these forgotten attractions. Opening up another tourism route linking these attractions is the key first step to promote rural natural and cultural attraction spots.

The recently research work done as part of local economic development study suggests that in the short term it is Tjate Heritage and Echo Caves projects coupled with Klein Drakensburg Escarpment Adventure Trail have most potential and advanced development plans (for details see GTM -Local Economic Development Strategy). At Tjate heritage site an access road, cultural village with overnight accommodation facilities, an interpretation centre, research and development of exhibition material, and restoration of various sites on the terrain are proposed. The development of a 60-bed resort at the Echo caves and establishment of adventure routes with products throughout the escarpment area are also planned. The access routes to these facilities should be improved to allow tourist on passenger vehicles to reach them without much difficulties.

Mankele and Ga-Makgotho waterfalls near Penge have a potential but the regional and local accesses coupled with the lack of unique experience offered by the facilities themselves may detract their potential. At a regional level a road from Penge to R36 (Tzaneen Road) may have to be constructed/upgraded to divert tourists past the waterfalls. This road will run pass Lekgalameeste Nature Reserve and other cultural sites. At a local scale the road from Penge town to the waterfalls is unmade thus at certain points is impassable with the passenger vehicle. The fact that the loop road connecting Penge to R36 is located within Fetakgomo municipal boundary and anticipated cost of improving the road from Penge to the site is very high combine to reduce the prospects of the waterfalls in the short term. It is therefore proposed that a technical and financial feasibility study be conducted before any capital expenditure on this tourist asset is incurred on this project.

The tourist facilities are proposed throughout the undeveloped eastern and southern parts of the GTM area particularly adjacent to surfaced roads. In the short term, these will mainly be guest houses In the north and west parts of GTM area, certain locales of cultural and physiographical distinction could host tourist facilities e.g. Tjate heritage site or hiking and 4x4 trails in the upper reaches of the Olifants River. Map 14 shows the prime area for tourist facilities generally overlaps with conservation area. In other words these areas can accommodate either tourist facilities or conservation activities, as the distinction in land use term is rather artificial.



### **32.6. ZONE 6: CONSERVATION AREAS**

The largest proportion of land in GTM area (probably in excess of 80%) is natural environment. The mines, agriculture and urban development have barely encroached on these wilderness areas. The wilderness generally comprises of bushveld and sparse grassland in limited parts of GTM. It is important to preserve the wilderness for posterity and harvest plant and animal species in a manner that preserve the habitat. The objectives of protecting habitats for animal and plant species occurring naturally in the wilderness area should be conscious of subsistence requirements of local population and income generating tourism.

The GTM area consists of vast plains of bushveld, the rugged topography, natural features such as rivers, an abundance of wildlife, bird species and flora. The expansive vacant land in the south and east is mainly owned by private individuals and in the north and west by tribal authorities. An opportunity exists to revive and re-introduce indigenous species that were previously endemic to the area. Where it is important for biodiversity reasons these areas can be legally protected as per provisions of the National Environment Management Protected Areas Act, 2003. In terms of law there are four types of protected areas viz nature reserves, world heritage sites, forest areas, and mountain catchment areas. Within the borders of the GTM area there is one established game farm i.e., Khumula Game Farm and Crystal Park Game Reserve. It is not clear whether these are established in terms of any legislation. There are however numerous legally protected nature reserves around the GTM borders including Ohrigstad Dam Nature Reserve, Wolkberg Wilderness Area, Blyde River Canyon Nature Reserve and Lekgalameetse Nature. Proclamation protected area in order to preserve ecological integrity of habitat, protecting rare or vulnerable species, conserve biodiversity, ensure sustainable use of natural and biological resources will create or augment destinations for nature based tourism. Environmental investigations will be necessary before specific habitats are set-aside for such purposes.

No development that upset ecological balance should be allowed in the protected areas. However low impact development that encourages appreciation of ecological environment should be allowed in carefully selected locations. The low impact development includes environmentally friendly resorts, bush lodges, cabins and camps, sanctuary of endangered or rare species, breeding and rehabilitation centers.

The activities and facilities that could be offered in these protected areas include game viewing, controlled hunting, bird watching, hiking, trails, mountain biking, sky diving, game parks, conference facilities, caravan parks, team building facilities, restaurant and braai facilities.

Recent experience shows that conservation and eco-tourism projects can also occur in traditional settlements. The successful Bopitikelo cultural and community center located parallel to small business center in Molatedi village near Modikwe Game Reserve and Bwanari Lodge is one such example (Urban Green File March/April 2001). This facility includes overnight accommodation, local theatre, story telling, food, and song, small museum, facilities for ranger training and drama rehearsals and environmental center. Although the target market for this facility are the tourists to Madikwe Game Reserve, it also function as a commercial and information hub for the local community therefore integrated and sustainable.

Another example of community based conservation initiative is at Maluleke village in Pafuri. This area is part of Kruger National Park that the Maluleke tribes were forcibly removed from about thirty-five years ago. After a successful land claim for 24000 ha of land they retained its conservation and protected status as part of Kruger National Park on condition that they have exclusive rights to harvest natural resources as well as its commercialization for tourism ventures (p50, AA Traveller Autumn 2007). The Maluleke community has since concessioned the right to operate area to Wilderness Safaris on profit sharing basis. Wilderness Safaris have re-introduced the game such as giraffe, wildebeest and white rhino. The concessionaire has also built eco-friendly, luxury 520 bed Wilderness Pafuri Camp, Maluleke Cultural Village and six chalet bed and breakfast establishment.

The above-mentioned examples suggest that both the tribal and private land can successfully be committed to nature conservation. The extent of land earmarked for conservation activities is depicted in Map 9.

Conservation should not only occur in pristine areas but also within the built environment, rivers and mountain ranges should also be regarded as zones of

conservation. These natural features should be protected from uncontrolled growth of settlements, mining, extensive agriculture, sewage disposal and other pollution sources. Mountain ranges and rivers provide a spectacular scenery and natural habitat. These high-lying areas and water bodies should be conserved to retain the natural vegetation and ensure the survival of insects, birds and small animals (Greater Tubatse IDP, 2006/11, p66).

### **32.7 ZONE 7: AGRICULTURE**

Agricultural sector is the second biggest employer after mining. The GTM is mainly rain fed and has established commercial farming to include dry-land cultivation and grazing. (GTM IDP, 2006 –2011, p35). Due to broken topography, farming occurs almost exclusively along low-lying areas mainly along the floodplains of main four rivers viz Steelpoort, Ohrigstad, Spekboom, Waterval and Olifants Rivers. These flood plains particularly those of Steelpoort, Waterval, and Ohrigstad Rivers should be reserved for agricultural purposes.

Urban development and agriculture compete for space near and on the foothills, simple because the steep terrain is not suitable for both. There is therefore possibility that the agricultural land can be displaced by urban development (housing, retail, office and industrial). This needs appropriate land use management system that will assist authorities make decision in this regard. It is however proposed that the agriculture should take precedent in all low-lying areas outside the concentrated urban areas (urban cores and corridors). The less arable but undeveloped land in more upslope areas of the expansive woodlands should be set aside for cattle, goat, poultry and game farming for meat.

The recent investigation showed that the citrus, vegetables, seed beans, essential oils and coriander contributed about R160m in value during year 2005. The limitation in terms of available arable land is access to water, and threats of land claims has lead to conclusion that the growth of this sector should based on current agricultural land. “ The value chain should be extended up-stream to include the local production of inputs for the growing of selected fruit and vegetables commodities, such as plant material production, nurseries, pesticides and fertilizers (including organic fertilizers). The value

chain down-stream includes processing, packing and exporting” (GTM LED, January 2007).

The proposed distribution of agricultural activities will therefore not necessarily require additional land for agriculture as these activities could be undertaken on existing agricultural and proposed industrial land (see Map.1.) In order to support subsistence farming and entry of emerging farmers into mainstream commercial farming, the derelict governmental and community agricultural scheme should be reinstated. The focus of assistance in the agricultural sector should be on training skills, capital investment inputs and institution support to organized formation of farmers.

### **33. SPATIAL DIRECTION OF DEVELOPMENT**

Although different forms of development will be encouraged throughout the municipal area, intense urban development will focus on identified urban nodes and activity corridors. Map 15 depicts the direction of growth in various urban nodes within GTM area. It is anticipated that the provincial and district growth points such as Burgersfort, Steelpoort, Ohrigstad and their environs, will function as magnets for intense urban development in the municipal area. These urban nodes will also expand outwards to areas already experiencing development pressure. A variety of land uses will be accommodated in these areas. For instance, high income housing, retail, government services and offices are encouraged at Burgersfort, country estate development is foreseen at Ohrigstad and manufacturing related industries will be developed in Steelpoort.

Large parcels of underdeveloped and developable land are located mostly on tribal owned land where the majority of rural settlements are, i.e. Mecklenburg, Driekop and Riba Cross. It is anticipated that the next generation of urban settlement development will be in these areas. Development will be driven by mining related activities and ancillary housing, retail and business related land use activities. These areas are growing at a rapid rate. In response more than 30 mines in the municipal area are at various stages of development. These nascent areas are expected to merge and form the second urban complex after Burgersfort/ Praktiseer/Bothashoek/ Steelpoort/ Eerste Guluk and GaMatodi.

It is anticipated therefore not surprising that the strategic land with the identified areas of high potential for development are located around the above-mentioned urban complexes (Map 16). The land identified as developable is well located in terms of accessibility, economical provision of infrastructure and proximity to existing urban settlements. Map 16 depicts strategic developable land with cadastral information (for more details, a schedule of cadastral information is provided as annexure B).

### **34. REQUIRED BULK INFRASTRUCTURE**

In Section 2 the existing bulk and link infrastructure in GTM area was discussed in detail. In summary it was indicated that water and to a lesser extent electricity is widely available in most settled part of GTM area including the traditional villages. Although public transport routes particularly taxi routes virtually penetrate almost all settled parts of the GTM area including villages it was noted that rural roads were largely unsurfaced. Such roads are generally impassible during the rainy season. The waterborne sewerage was only provided in the former “white” towns of Burgersfort, Ohrigstad and Steelpoort and proclaimed townships of Praktiseer and Ga-Mapodile. The rest of the GTM rely on long-drop pit latrines.

The foregoing urban development proposals envisage dramatically a different spatial landscape than the current. The emerging spatial landscape will be lead one is lead by mining and related industries, and followed by tourism facilities and derived housing, retail and service business land uses. Such urban development will require bulk infrastructure of unprecedented scale in GTM. Since bulk infrastructure in the main support urban development it will therefore be required mostly in areas of proposed dense urban cores such as Dilokong Corridor anchored by Mecklenburg, Driekop and Riba Cross nodes, Burgersfort/ GaManoke/ Praktiseer/ Bothsahoek/ Eerstegeluk/ Steelpoort and Ohrigstad urban complexes and the mining belt.

#### **34.1 Dilokong Corridor/ Mining belt**

Although patches or fragmented bulk water infrastructure is available in part of GTM the proposed scale of mining and urban development will require augmenting of the network. The proposed bulk water pipe connecting to De Hoop dam and with the network of Lebalelo Water Scheme is important in this regard. Although 20 KV overhead cables transverse this part of GTM, the additional substations, transformers and

switchgears will be required to reticulate this area. The proposed overhead transmission line from Aront to GaMashabela substation to service the mines and surrounding villages and urban development should therefore be expedited.

A new sewer outfall connecting to possibly a new sewer treatment plant will be required to drain Dilokong Corridor. In terms of roads, R37 should be upgraded by widening the road, providing public transport facilities, stormwater facilities and rehabilitating the pavement in order to cope with additional traffic. Certain public transport (buses and taxis) routes D2405, D4140, D4155, D4170 and D4169, serving settlements in the vicinity of the corridor should be upgraded by providing an all weather surface.

#### **34.2 Burgersfort/ GaManoke/, Bothashoek**

This is the biggest settlement in GTM area. Although the water purification and sewer treatment plants of Burgersfort were recently upgraded it is expected that this will not be sufficient for the anticipated urban development (housing, retail and industrial). A detailed investigation will be necessary to determine the extent of the shortfall in capacity. New bulk water pipes and sewer outfall will invariably be required. The traffic congestion along R37 as it passes through Burgersfort CBD requires a by-pass for the through traffic. This will improve amenity and patronage of businesses and office proposed in the CBD. The indications are that the bulk electricity infrastructure has spare capacity of at least 50%. This will therefore suffice at least in the short term.

#### **34.3 Steelpoort / Eerstegeluk**

The spatial plan envisages that the Steelpoort and Eerstegeluk will eventually merge into one urban area. This area is expected to be industrial and mining hub of GTM thus a significant employment centre. The existing sewer treatment and oxidation pond are already stressed therefore there is a need to upgrade them in order to cope with additional urban development that is proposed. In fact a new sewer treatment is necessary. In this regard there is already a new treatment plant that is proposed along Steelpoort River. It will be necessary to build this treatment as a matter of urgency. Upgrade of R555 to repair damage pavement by heavy vehicles and improve road geometry is also critical. The public transport route D1392 that links the adjacent Eerstegeluk and other low cost settlements to Steelpoort should also be upgraded with an all-weather surface.

#### **34.4 Ohrigstad**

As a tourist centre with widely spread/ distributed but not extensive urban development it is still expected on- site service will continue to be use but it is inevitable that the oxidation pond will have to be augmented.

#### **35. CONCLUSION**

To sum up, the above proposals are aimed at improving the structure and the organisation of land use and land development in the context where existing land use management systems are proving inadequate to respond to new dynamic urban pressures. Higher economic development and meeting the basic needs of people or service delivery requirements are key to spatial development in GTM. SDF therefore provides the guidelines to manage development across geographic space.

GTM has experienced the unprecedented development mainly led by the mining sector. There are more than thirty identified mines that are currently at various stages of development, which are the driving force for economic development. More recently the development of tourism sector has also picked up. This is demonstrated by the development of accommodation establishments such as guesthouses. SDF is needed to encourage development of these lead sectors while ensuring that other economic sectors take advantage of development energy of the lead sectors.

To this end mining and manufacturing industries and businesses, are proposed in the central part of the GTM. This is envisaged to bring many employment opportunities, lead to the provision of bulk infrastructure and increase in economic growth. In summary the proposed land uses includes:

- The corridors and urban nodes will trigger mixed urban manufacturing (social facilities, housing, retail, services, etc) development and mining development.
- Facilitation of the tourism related development, i.e. preserve wilderness areas, historical and cultural resources develop tourism route and improve accommodation establishments / development country estates.
- In the rural hinterland and peri-urban areas service delivery (housing, basic, social and engineering infrastructure) are encouraged to improve the lives of the

people. The emphasis is however on settlements that have an economic base to build on.

- Low-lying areas should be set-aside for agricultural purposes in support of subsistence and commercial farming.



## SECTION 4: IMPLEMENTATION STRATEGIES AND PROGRAMMES

### 36.DELIVERABLES

The main aim of the Strategic Development Framework as stated in Section 2 (Status Quo) is to provide a reference framework to guide decision making and actions over a multi-year period aimed at the creation of the integrated and sustainable human settlements including social facilities, engineering services, economic based land uses and natural environment. This section of the Strategic Development Framework report focuses on the identification of the key interventions that are catalytical to the realization of the GTM development vision. To reiterate the vision of the GTM is: “ *To develop Tubatse Municipality as a Platinum City, in a integrated manner, to improve the quality of life for all*”. Section 3 of this SDF discusses in detail how spatial development should be structured in order to contribute to the attainment of this vision. This spatial development plan sketches the desired end-state, but it is a process to ultimately reach that stage. Because the resources i.e. financial, natural and human that can be mobilized to pursue the desired end-state are limited, strategies and programmes are necessary to map to best route to realize the proposed spatial framework. The prioritized interventions should therefore not only bring us closer to the proposed spatial development framework but also have the widest and deepest impact and impetus given the available resources.

This section of GTM SDF discusses the following:

- Formulation of relevant strategies and policies to implement the framework and determine the points of intervention by the municipality.
- Consideration and reconfiguration of the sector plans to facilitate the implementation of the SDF. (Sector plans must always be aligned to advance the interests of the SDF and hence the IDP).
- Recommendation for the revision of the existing policies or strategies where necessary.
- Formulation of relevant transportation, infrastructure and land use integration policy and plans.
- Inclusion of land use management or recommendation for the formulation of land use schemes.
- Propose tools to facilitate urbanisation or migration onto the strategic development areas.

- Recommendation of strategies to facilitate the linkages between rural and urban areas.
- Proposals and strategies on how the municipality can be functionally integrated.
- Link budget with SDF.
- Develop monitoring and evaluation tools to ensure that the SDF is implemented accordingly.
- Proposals on how the SDF should be marketed to attract investment and implementation of projects by sector departments.

### **37. DEVELOPMENT GOALS, OBJECTIVES AND POLICY GUIDELINES**

#### **37.1 Mining and Industrial Development**

##### **i) Goal**

To diversify local economic activities away from the hitherto dominant but unsustainable economic sectors in the long term of government services and agriculture by exploiting abundant mineral resources and instigating the upstream and downstream industrial activities. Mining and industrial development should also be structured to propel demand in derived economic sectors such as housing, retail and certain categories of tourism.

##### **ii) Objectives**

- Create new employment and business opportunities.
- Increase the municipal rates base.
- Create a critical capacity of bulk infrastructure that can be shared with existing and planned housing development.

##### **iii) Policy Response**

a) Areas earmarked for mining and subservient industrial uses are shown and discussed in details in section 3 (this section shows both the existing and the proposed mining belt and industrial areas). It is imperative that these areas in the short to medium terms are protected, by precluding encroachment of uses such as residential settlement, social facilities etc that may preempt mining activities. The strategy would be to delineate the identified areas for future mining and industries. An appropriate legal regime is necessary to achieve this. The duly promulgated Land Use Management System is the

key first step in this regard. This will all be in vain unless the local authority has a capacity to monitor and enforce the system.

b) The local authority has to take more active role in engagement with service authorities (water, electricity, roads, and sewer) to ensure this is provided timeously in planned mining and industrial areas and can be extended to anticipated adjacent housing, retail and tourism developments.

c) The local authority must also actively participate in the release of land particularly tribal land for mining and related industrial development.

### **37.2 Housing Development**

#### **i) Goal**

Establish livable, viable and secure settlements that also support the planned economic activities by accommodating the staff , management abd business owners.

#### **ii) Objectives**

- Promote appropriate housing products for all social groups in GTM area.
- Create new employment and business opportunities in housing provision.
- Increase the municipal rates base.
- Ensure that the housing stock is responsive to the requirements of personnel recruited for new economic sectors (mining executives, middle management and lowly –paid workers).

#### **iii) Policy Response**

a) Guidelines and Planning Standards for Human Settlement Planning and Design contained in the “Red Book” produced by the National Department of Housing should be taken as point of departure in defining the form of housing support retail, social and engineering facilities, but could be adapted to local conditions where necessary.

b) The municipality must assist the disadvantaged households by procuring intergovernmental funding for a range of housing programmes such as, consolidation, project linked, individual and relocation; that are particularly suited to this social group.

c) The Housing Strategy must provide for the consolidation of development in existing rural homesteads within population concentration points, urban affordable housing along major transport corridor, i.e. Dilokong and urban nodes such as Burgerfort/ Manoke/ Bothashoek, Steelpoort/Eerste Geluk, etc, near employment centres.

d) The municipality should also identify locations where housing development will be opportune in terms of proximity to economic land uses and movement routes. Such locations should only be considered where there is availability of municipal infrastructure, and social facilities or can be provided in the case of country estate. Identification of new housing areas in the short term should also be designed to prevent land invasions by directing urban and rural development.

e) Encourage mining houses and developers of large country estates to make a contribution towards affordable housing that can range from making land available, sharing bulk infrastructure, undertake housing projects etc.

f) Medium, high-income housing and country estates in Burgersfort and Ohrigstad should be developed not only to accommodate senior management personnel in the lead economic sectors but also augment municipal rates income and tourism spent of transient residents and visitors.

g) Eradication and upgrading of informal settlements that have emerged on the fringes of urban core areas. A few informal settlements have emerged in urban nodes e.g. in Tukakgomo near Steelpoort, GaManoke, Dithabaneng, Bothashoek and Burgersfort Extension 10 near or in Burgersfort etc. All these informal settlements are close to employment centers i.e. Steelpoort and Burgersfort. In these areas where informal settlements are, affordable housing should be developed and in those areas close to urban core such as Burgersfort Extension 10, a denser form (multiple) of housing should be preferred.

h) Lead discussions with the relevant government departments, e.g., national Department of Land Affairs, provincial department of Public Works and Transport, tribal authorities and communities to release identified properties for housing development on

tribal and state land e.g. Dilokong Corridor and country estates along R555 towards Ohrigstad.

i) The rapid implementation of Land Reform Programmes in support of land redistribution, economic empowerment and job creation will contribute to access to housing, poverty alleviation and economic development. Resolving the land claims in Mecklenburg and Driekop is imperative as will create certainty required for public and private investment in housing development.

### **37.3 Tourism Development**

i) **Goal**

Support growth of tourism businesses in GTM that promotes job and business opportunities.

ii) **Objective**

- Sustainable exploitation of the natural environment to strengthen and consolidate the burgeoning tourism industry in GTM area.

iii) **Policy Response**

a) Undertake an environment audit to determine game, birds, fishes, plants species that are endemic in the municipal area. This will identify the species where the municipality may hold competitive advantage in eco-tourism sector.

b) Lead discussions with the relevant government departments, e.g., national Department of Land Affairs and tribal authorities and communities to release identified properties for nature reserves, cultural and heritage tourism, resorts, etc on tribal and state land e.g. Tjate heritage and Echo Caves projects.

c) Ensure that the land use controls, currently being prepared allow simple and affordable procedures (definition of primary rights, consent use, rezoning) in changing use rights for low impact tourism facilities (e.g. guest houses, tour guides/operators, curio shops, transient trading markets etc).

d) Brand and build the marketing efforts for the proposed new tourist experiences on the already established tourist attractions that are part of the Panorama Route and numerous world renowned game and nature reserves to the east of GTM.

e) Identify sources and pursue intergovernmental, donor funding and soft loans to build the necessary physical infrastructure that are prerequisite for private sector to invest in tourist facilities.

f) Entice private sector to invest in development and operation of more tourist establishments in GTM area.

g) Encourage tourism facilities to locate in areas connected with the urban nodes and surfaced movement networks. This will enable optimal access to these facilities and ensure tourism attractions are supported by complementary land uses and urban infrastructure. This will improve patronage of tourism facilities.

#### **37.4 Physical Infrastructure (Economic, Social and Engineering)**

##### **i) Goal**

Optimize the use of existing and also provide new physical infrastructure to ensure access to basic services by poor households and facilitate economic activities, whilst providing services in a cost effective, efficient and sustainable manner.

##### **ii) Objectives**

- Create livable settlements, and unblock mining, industrial, tourism, and commercial development by coordinating and scheduling provision of required physical infrastructure. A thriving mining, industrial, and tourism, commercial areas will create jobs and business opportunities and also reduce poverty.

#### **iv) Policy Response**

a) Prepare an infrastructure development plan indicating what elements of infrastructure and when it is required to meet the growing demands of settlement, tourism, industrial, mining and commercial development.

b) Currently the powers to provide most physical infrastructure particularly engineering services vest with Sekhukhune District in terms of Local Government Municipal Structures Act. It may be necessary for GTM to request that certain of these powers be vested at local government level in order to better coordinate land release with infrastructure provision. The local authority should be fully aware that this would be futile unless they can augment their capacity in order to deal with these matters.

c) Identify sources and pursue intergovernmental, donor funding and soft loans to construct the required physical infrastructure that is a prerequisite for private sector investment in tourist facilities.

d) Engage other government agencies such as Department of Water Affairs, Spoornet, Limpopo Road Development Agency, South African Road Agency Eskom, Sekhukhune District Council etc that have responsibility to provide bulk, link and reticulation infrastructure in and around GTM on the basis of the infrastructure development plan.

e) Select certain elements of infrastructure that is identified in the infrastructure development plan which the private is either best placed and/or amenable to providing or contributing towards its provision, for example the regional waste site, Steelpoort sewer treatment plant etc. The key issue is that these elements of infrastructure must be identified by the local authority and should be such that its benefits go well beyond a particular private sector entity. It must also lead to job creation, poverty alleviation, or meeting basic needs of poor households. Ideally the private sector entities should be compensated through rebates in bulk services contribution or municipal rates.

f) Synchronise the provision of infrastructure such that it corresponds with land use development in the lead sectors of local economy (i.e. mining, industry, tourism and housing).

g) The ongoing maintenance and upgrading of existing services should be pursued as a more cost effective option to extend the economic life of services.

### **37.5 Transportation**

#### **i) Goal**

Improve accessibility of different parts of GLM particularly opening up rural villages and urban nodes.

#### **ii) Objectives**

- Improve movement of goods, services and people through better road linkages and transport facilities.

#### **iii) Policy Response**

a) The connection of rural and urban areas through a efficient movement network should be promoted to transport goods, services and people to and from centres of production and markets. Public transport facilities in particular are key to moving the majority of people to and from centres of public service and economic activities.

b) Upgrade transport corridors like R37, 36 and R555 that function as life blood of local economy in moving freight, workers and tourists.

### **36.6 Urban Development**

#### **i) Goal**

Support the diversification and enhance efficiencies of the urban economy by reinforcing the emerging mining, industrial, commercial housing, and government services in order to create more jobs, business opportunities and reduce poverty by clustering of urban development in strategic locations.



**ii) Objectives**

Stimulate the new economic activities predicated on urban development by harnessing carefully selected urban spaces to accommodate such activities. The selected urban space goes beyond the confines of former white towns.

**iii) Policy Response**

- a) Strengthen and consolidate selected urban nodes such as greater Burgersfort and Steelpoort to reinforce urban jobs and businesses, residential accommodation and easier access to improved personal and business services.
  
- b) The municipality should enter into dialogues with tribal authorities and private owners of identified land parcels on the ways and means to release such land for urban development.
  
- c) Encourage catalytic development projects on urban nodes Spatial identify by Development Framework. Each project could be implemented through local authorities, other public sector agencies, private sector entities or more than one party as long as it will spur urban development in desired locations it should be pursued.

**36.7 Agricultural Areas**

**i) Goal**

Improve food security for poor households; increase job and business opportunities by protecting arable land and enhancing its productivity.

**ii) Objectives**

- Stabilize and where possible grow the agricultural sector such that at least current productivity levels are retained whilst the GTM economy is being reconfigured.

**iii) Policy Response**

- a) Protect the fertile agricultural land in low-lying areas along main watercourses from encroachment by urban development, mining and informal and rural settlements.
  
- b) Provide institutional and logistical support to subsistence and emerging commercial farmers.
  
- c) Add value to existing agricultural activities particularly horticulture and meat clusters by producing some of the inputs locally and processing and packaging the produce locally.

**37.8 Human Resource Development**

**i) Goal**

The capacitation of the GTM departments responsible for preparing and effecting the SDF. This will invariably lead to review of the existing organisational structure ,posts and the levels of skills as the first step towards creating necessary capacity to meet the challenges set out in this document .

**ii) Objectives**

- Assemble suitable qualified, experienced and motivated staff and political leadership to give effect to the strategies and programmes towards the realization of the proposed Spatial Development Framework.

**iii) Policy Response**

- a) Recruitment of personnel in sufficient numbers to relevant to the GTM departments with appropriate skills, academic training and experience to ensure effective implementation of plans.
  
- b) Continuous staff training to equip them deal with the challenges posed by the strategies and programmes to realize the proposed Spatial Development Framework.

c) Structure processes such there is clear accountability lines to the Council political leadership and other stakeholders in preparing and implementation of Spatial Development Framework.

### 38. IMPLEMENTATION STRATEGIES

The spatial planning of Greater Tubatse Municipality should occur in an integrated and coherent manner, provide the best sustainable use of land, and promote economic growth and efficient service delivery particularly to the poor. This is consistent with the Vision for GTM 2006-2011 (as is stated in the GTM Integrated Development Plan) which envisages that the development of Tubatse municipality as a Platinum City, should be integrated, and also improve the quality of life for all.

The Integrated Development Plan of Greater Tubatse identified an strategic objectives and Key Performances that all departments should work in unison to achieve them. The new strategic objectives are illustrated diagrammatically below:

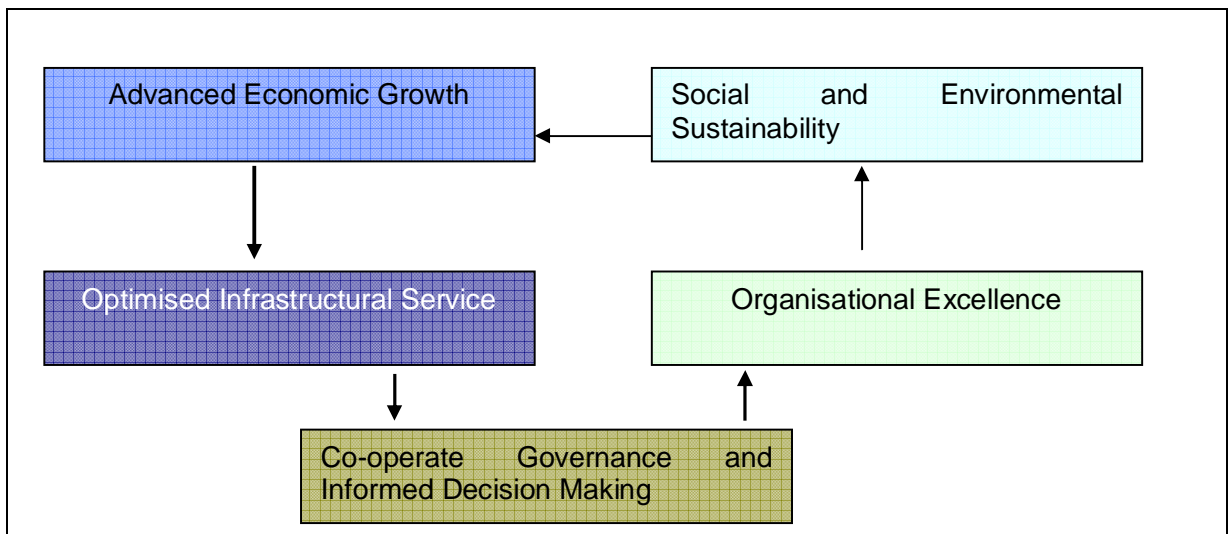


Diagram 1: Strategic Objectives in accordance with GTM Integrated Development Plan.

#### 38.1 STRATEGIES

Based on the above Integrated Development Plan goals, strategic objectives, sectoral plans, the identified development proposals (for details see Section 3), the above listed Spatial Development Framework development goals, objectives and policy responses, the following strategies were developed. These spatial strategies need to be taken into

cognisance when compiling municipal budgets. Most of the strategies are applicable in the short to medium -term period.

STRATEGY	PROGRAMME
<b>37.1 Enhance Mining and Industrial Development</b>	
Expand manufacturing industries.	Facilitate the expansion of mining related manufacturing industries around the existing SAMREC Apiesdoring warehouses, up to the intersection of R555 and D1253 to Penge and mining industrial park in Steelpoort.
Provide bulk infrastructure in the mining belt.	The mining houses, service authorities and the municipality should jointly facilitate provision of the bulk-engineering infrastructure; water, roads, electricity and waste disposal site that can service the mining belt.
Expand mine development.	Discourage any land development that will in future prevent development of mines by protecting areas known to be underlaid with precious minerals.
Facilitate suitable accommodation for senior management of mining and industrial enterprises and their families.	Ensure that there in GTM there is a component of upmarket housing and associated amenities that the senior managers and families expect or are accustomed to. High-income housing at Burgersfort and country housing at Ohrigstad are examples in this regard.
Provide user-friendly information on mining and industrial development opportunities.	Establish a single information unit/centre/desk where information on current land use rights, procedures to alter the use rights, planned

	development projects, planned engineering and social infrastructure projects that the private investor could easily access. This information could be provided on an interactive web portal so that potential investors do not come GTM.
<b>38.2 Promote Housing Development</b>	
Provide urban housing required by mining and related industries	Complete the planning for more than 10000 housing units required to accommodate workers in various mines. The funding for planning these housing estates should be sourced from mining houses and provincial government.
Enter into partnership with the Provincial Department of Local Government and Housing, Tribal authorities, mining houses and land developers.	Formulate the housing strategic plan, which must indicate the scale of demand according to various income groups, indicates possible locations of such housing and delivery agencies for such housing development.
	Matchmake the owners of large land parcels earmarked for housing in terms of housing strategic plan (e.g. tribal authorities, state entities, mining houses, individual commercial farmers, etc) with housing developers including public agencies and non-profit organizations.
	Identify and priotize land to be released land for housing development in growth points, population concentration ,service points and rural villages.

	<p>Compile housing waiting list and related procedures to allocate the planned housing opportunities.</p>
	<p>Coordinate applications for funding of affordable housing and bulk infrastructure to ensure that it fits with housing strategic plan.</p>
	<p>Create dedicated municipal personnel to steer or manage housing development application submitted by in the name of the local authority and comment constructively on applications submitted by others. Such personnel should be available to comment and guide applicants on their strategic plans ideally prior to formal lodgement of the application. The comments and guidance should be informed by the housing strategic plan.</p>
	<p>Undertake tenure upgrading projects in traditional settlements to formalise land rights of these communities.</p>
<p>Implementation of the housing development projects.</p>	<p>Provide affordable houses along R555 to the east of Spekboom River, in Praktiseer, in the northern direction towards Bothashoek and pockets of affordable housing in high and medium income areas as part of inclusionary housing programme.</p>
	<p>Develop middle to high income residential in and around places of Motaveng ,either side of R37 to western edge of Burgersfort town and the west of Steelpoort road (R555).</p>

Restrict uncontrolled and unstructured rural settlement development.	Consolidate high order rural settlement i.e. population concentration and service points through formal demarcation of sites such that provision of engineering services and social facilities is easier.
Facilitate Land Reform.	Facilitate the completion of land restitution programme in areas under land claims particularly where there is already existing urban development such as Mecklenburg and Driekop.
Improve basic service in existing rural housing and settlements.	Provide supporting engineering services and social facilities (e.g. water, electricity, cemetery and sanitation etc) to appropriately located rural settlements and also assist households improve housing stock through various self-help and community lead schemes that is supported by various housing agencies.
<b>38.3 Enhance Tourism Development</b>	
Cohere tourism planning.	Formulate the municipal Tourism Development Plan.
	Identify possible source of fund to prepare Tourism Development Plan, resourcing required institutional arrangement and specific capital projects for tourist infrastructure and facilities.

	Resource a desk/unit that is part of both Local Economic Development and Town Planning Divisions to coordinate tourism development and marketing.
	Enforce compliance with and facilitate development according to spatial development plan in terms of land uses proposed on the eastern part of GTM where tourism related facilities are planned.
Promote the catalytic/lead tourist projects	Open up an internal tourism route to increase accessibility to tourism facilities within hinterland parts of GTM.
	Establish guesthouses, game lodges, low-rise hotels, caravan parks, camping facilities and conference facilities in Ohrigstad and on the eastern parts of GTM.
	Build the infrastructure required for the internal tourism corridor, Tjate heritage site, Echo caves resort.
	Invite private sector through public sector investors and developers to build and operate tourist facilities along the internal tourism corridor, Tjate heritage site and Echo caves.
	Encourage Limpopo Roads Agency to open up the link between R36 to Tzaneen and Penge.



<b>38.4 Provision of Physical Infrastructure</b>	
Plan for accelerated infrastructure provision	Development of Capital Infrastructure Plan.
	Obtain funding for infrastructural development from all possible sources such as housing grants, CMIP etc.
	Augment institutional capacity of the local authority to provide and maintain infrastructure.
Construct, rehabilitate and maintain roads and streets that are the responsibility of the Municipality on an ongoing basis.	Collaborate with mining houses to provide bulk infrastructure to mines and adjacent villages, urban housing, social facilities, industrial and retail facilities.
	Provide all weather surfaces for access roads to all major settlements.
	Encourage South African National Roads Agency Limited and Limpopo Roads Agency to improve R37, R555 by widening, resurfacing and controlling stormwater. These roads are under pressure from heavy vehicles to and from the mines.
Facilitate the provision of basic engineering services in historically disadvantaged areas.	Continue rolling out water and electricity reticulation in previously disadvantaged settlements. In the case of electrification this has to be achieved through Eskom.
Develop, upgrade and maintain sanitation systems to achieve RDP standards for all households.	Install appropriate sanitation system in dense settlements (e.g. Riba Cross, Mucklenburg, Bothashoek).

Upgrade and maintain infrastructure critical to economic development.	Upgrade decaying and severely stressed infrastructure as a result of recent growth explosion in historic urban core areas of GTM (e.g. Burgerfort, Steelpoort, Ohrigstad, Mapodile, and Praktiseer.
	Initiate dialogue with mining housing, provincial government, and Spoornet to investigate prospects of rail services to various mines in GTM.
Improve Public transport system.	Formulate Comprehensive Integrated Transport Plan.
	Establish public transport facilities along economic activity corridors particularly the Dilokong Corridor.
	Provide loading and off-loading facilities at strategic points in the villages and terminus and transport interchanges in urban core areas.
<b>38.5 Urban Cores and Business Development</b>	
Initiate urban development in nodes, i.e. Ohrigstad, Burgersfort and Steelpoort, and various activity corridors.	Develop Land use management policy and procedures for the entire GTM area.
	Encourage development and branding of each urban core area based on its competitive advantage. Mining and large-scale industry should be directed to Steelpoort, upmarket housing, retail, offices and regional government services to Burgersfort complex and country estate and tourist facilities in the vicinity of Ohrigstad.

	Identify locales where the initial housing, industrial, office, retail development will occur.
	Identify urban development anchors e.g. Driekop , Mecklenburg along the proposed activity corridors that will act as catalyst development.
<b>3.1.6 Agriculture Development</b>	
Enhance agricultural production for market and food security.	Cooperation with the Provincial Department of Agriculture and the Agricultural Research Council regarding: <ul style="list-style-type: none"> <li>-Identification of areas suitable for agriculture based on soil analysis for crop suitability, access to water, existing infrastructure etc</li> <li>-Skills and material assistance to emerging and subsistence farmers.</li> <li>-Provide logistical support to formations of emerging commercial and subsistence farmers</li> <li>-Investigate the viability of strategic agricultural infrastructure such as fresh produce market</li> </ul>
Protect areas that have the highest agricultural potential.	All application for the change of land use on designated high potential agricultural area should be discouraged.
<b>38.7 Effective Governance</b>	
Promote sound and participatory governance policies and practices.	Promote the involvement of the community, tribal authorities (public participation), mining houses and businesses in the SDF formulation and implementation.

	In carefully identified areas mobilise private and or community owned resources (Human, land and capita) for project implementation.
Improve the spatial development planning and implementation.	Align and co-ordinate all strategic development plan such IDP, LED's, and sectoral plans with the current SDF.
	Co-ordinate revenue, generation and collection measures for the local authority through sale of services, bulk service contribution in order to augment funding service for provision.
	Monitor and enforce the existing use rights so that property owners pay due rates.
Capacity Building.	-Improve the staff's skills through training . -Improve sharing of information between local authorities, other partners and clients.

### 39. PUBLIC PARTICIPATION

SDF should engender inclusive and participatory processes in its formulation and implementation if it is to improve the conditions of the broad section of GTM residents. To this end interested and affected parties including the relevant municipal staff and councillors, business organizations, traditional leadership, political parties, community based organizations, non-governmental organizations, ordinary residents etc. still need to be consulted in the process of refining and securing a buy-in of the proposed SDF. The SDF should be viewed as a living document that is periodically reviewed and revised, particularly the strategies and programmes, in the light of new information and changing circumstances. This is only possible with the continuous interaction with all interested and affected parties.

#### **40. INSTITUTIONAL ARRANGEMENTS**

All spheres of government are obliged to integrate, so as to render effective and efficient services to the people that improve their lives. It is proposed that an Implementation Forum be established to oversee the SDF within GTM area. This forum should be representative of all stakeholders including the private sector within the area, tribal authorities, community organisations, non-governmental organizations as well as public sector agencies. The Implementation Forum will guide the municipality so that it addresses the most urgent needs of the community, i.e. the identified strategies/initiatives/projects. The functions of the Implementation Forum should include:

- Mobilize goodwill and support for the principle directions of the Spatial Development Framework.
- Ensure that identified programmes can be funded for implementation from different sources.
- Assist formulate criteria to prioritise projects.
- Monitoring progress towards the realisation of the overall vision of the SDF and time –bound short-term interventions.

#### **41. MONITORING AND EVALUATION**

Heads of Departments of Economic and Land Development, Technical, Strategic Planning and Community Services should jointly prepare a report indication progress achieved towards the GTM development vision through the SDF every year. The conclusions of this report should inform the municipal budget and Integrated Development Plan.

This report should be forwarded to the Implementation Forum as described in the Section 5 above for their consideration and inputs. The comments of the Implementation Forum should be appended on the heads of departments report when its served to Mayoral Committee.

The recommendation of the Mayoral Committee should be taken to full council for decisions that will guide revision of SDF, action to be pursued by officials to improve the effectiveness of the SDF in reducing poverty and creating economic growth.

#### **42. DEVELOPMENT / IMPLEMENTATION FUNDING**

Funding is often one of the most constraining factor to effective spatial development programme. The GTM is still largely dependent on government funding, i.e. national, and provincial and district municipality grants. The following sources of funding are however available to the local authority:

- Grants or soft loans from development agencies both international and local.
- The municipal rates and taxes.
- Bulk Service Contributions.
- Sale of engineering services particularly water.
- External borrowing from financial service providers

The relatively low financial capacity of GTM suggests that most capital projects have to be funded through intergovernmental transfers and those with revenue stream (e.g. water bulks) could be funded through external borrowing. Increasing the municipal rates base becomes critical in this regard.

### **43. CONCLUSION**

In this section the proposed GTM strategies and programme to implement SDF were presented. In summary, to implement strategies identified in this Spatial Development Framework of GTM, the municipality need access to funding and improve internal capacity in order to meet its constitutional obligations to promote social and economic development. The municipality has to ensure that there is sustainable economic development in the urban nodes and sustainable human settlement development in rural communities. In particular, the municipality must provide services that meet the basic needs of the community in cost effective and affordable manner. But this should be buttress by increasing rates base associated with diversifying local economy.

In this regard, the SDF seeks to facilitate the development of GTM over time within which infrastructural services, social facilities, economic development, co-operate governance and organisational structure is progressively improved. It is critically important that the stakeholders of the GTM take ownership of this strategy to facilitate the implementation of the development programmes as soon as possible.

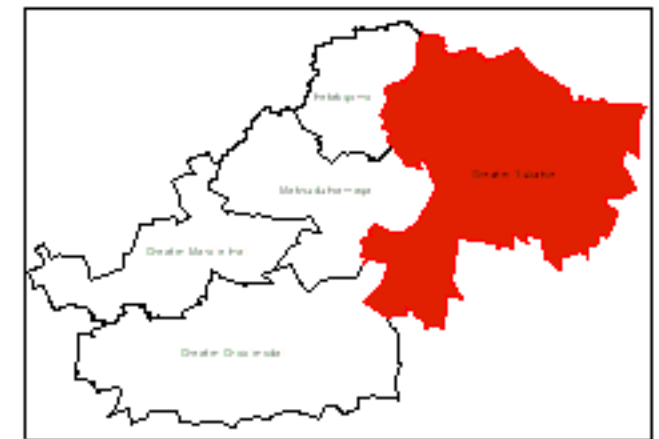
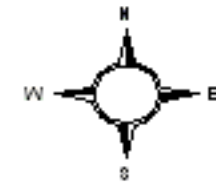
<b>ANNEXURE A</b>	
<b>LAND DEVELOPMENT APPLICATION</b>	
<b>ANNEXURE B</b>	
<b>SCHEDULE OF CADASTRAL INFORMATION</b>	
<b>ANNEXURE C</b>	
<b>MAPS</b>	
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Map 3:	PROPOSED PROJECTS
Map 4:	TRIBAL AUTHORITY AREAS
Map 5.:	EXISTING LAND USES
Map 6.:	CLUSTERS: LOW COST SETTLEMENTS
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Map 16	STRATEGIC DEVELOPABLE LAND

# STUDY AREA AND WARDS



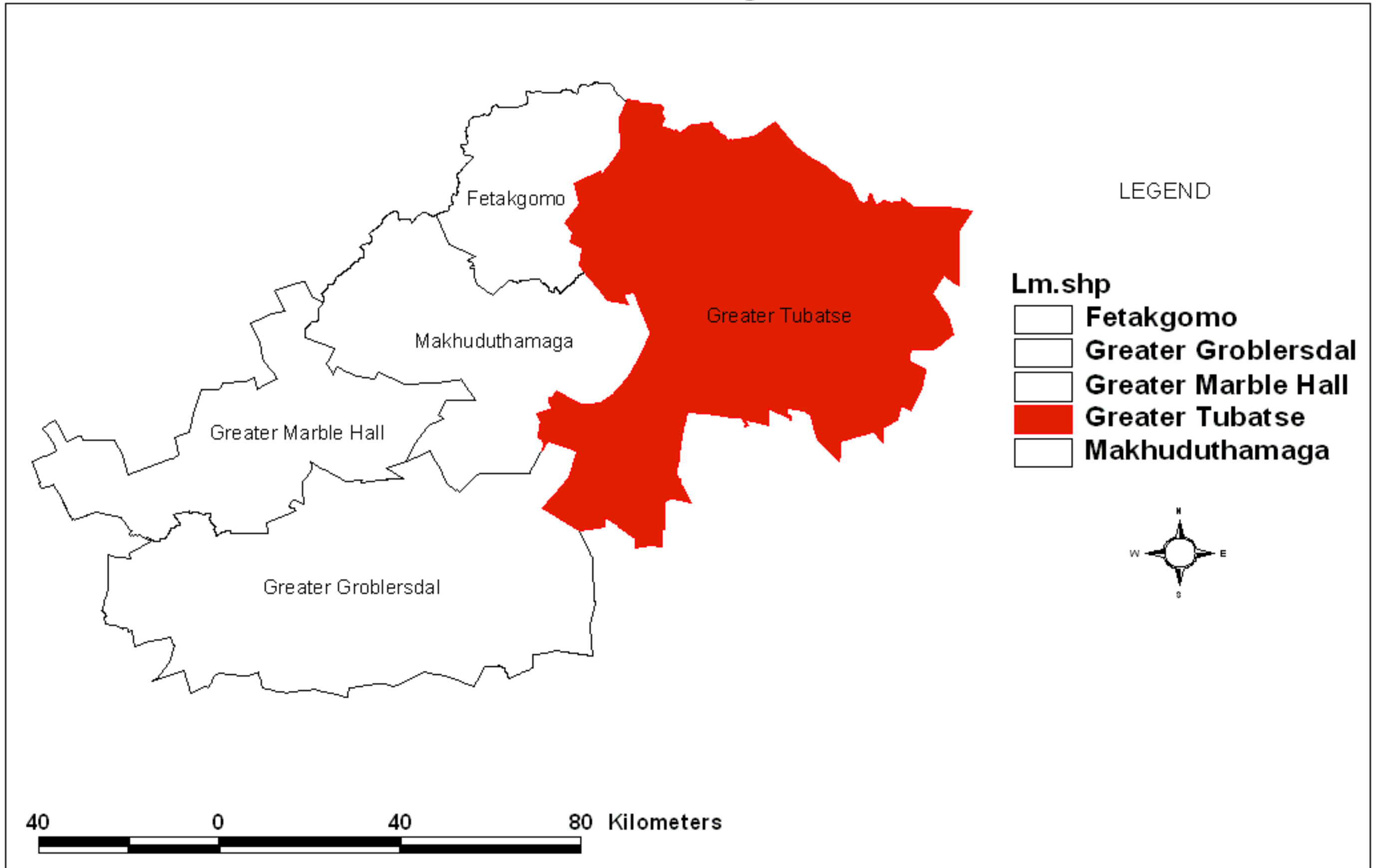
## LEGEND

- Urban node.shp
- ~ River
- ~ Secondary-roads
- Wards
- ~ Main roads
- Greater tubatse



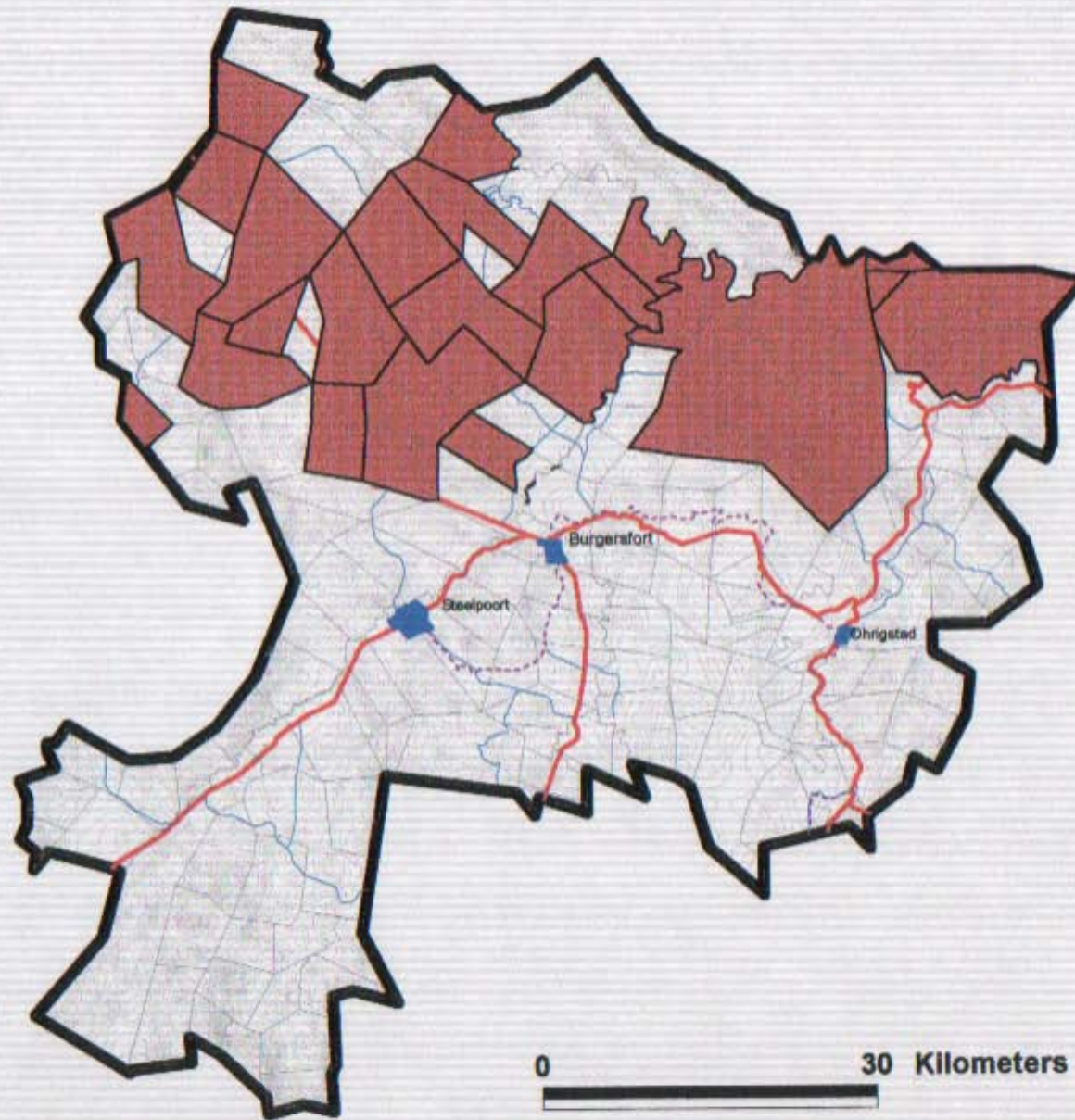


# Locality



# Tribal Authority Areas

Map 1



## Legend:

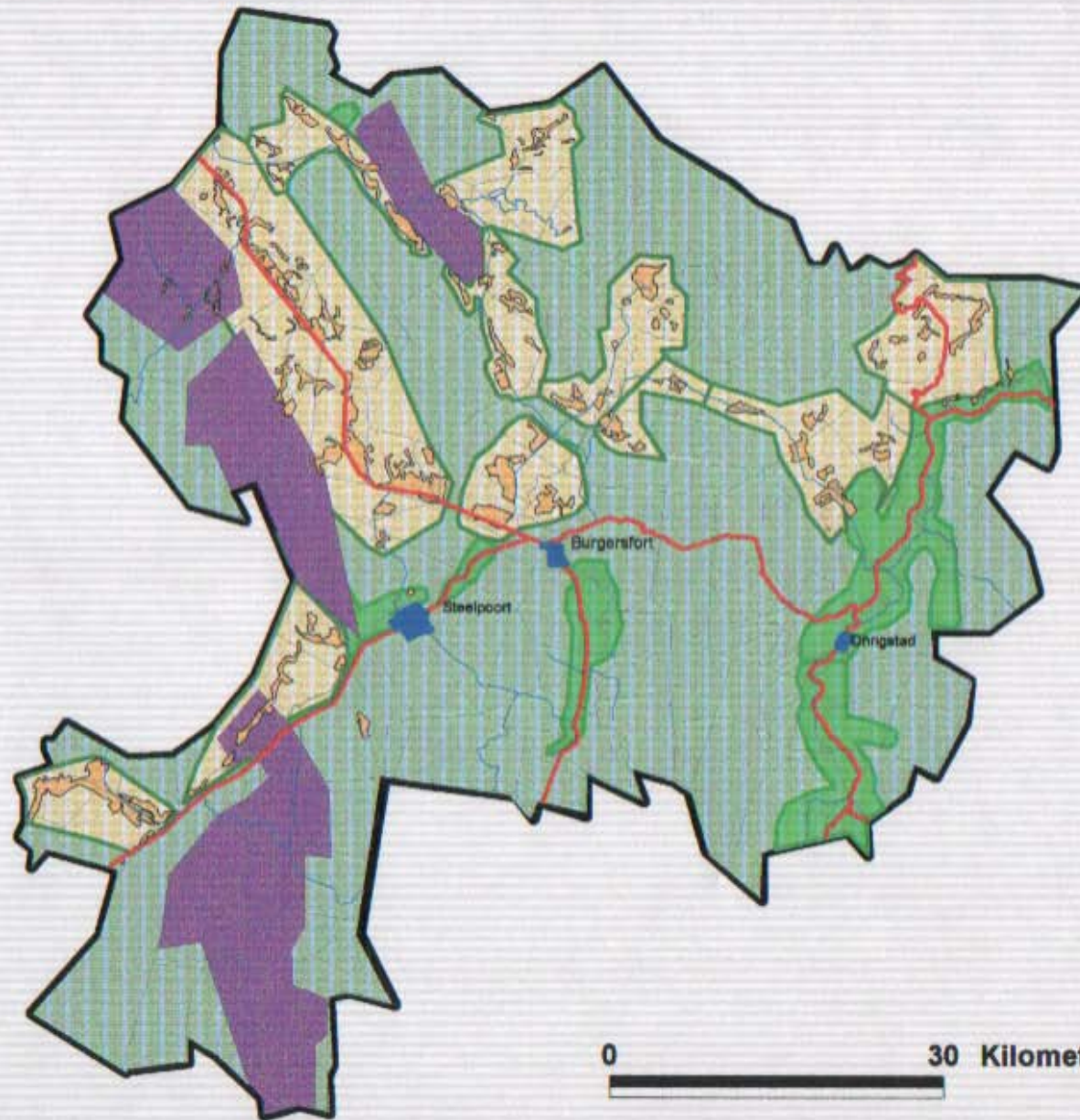
- Original Farms
- Urban Core
- Tribal Authorities Areas
- Main roads
- Secondary roads
- Railwayline
- Contours 30m
- Greater Tswana




0 30 Kilometers

# Existing Land Uses


Map 2

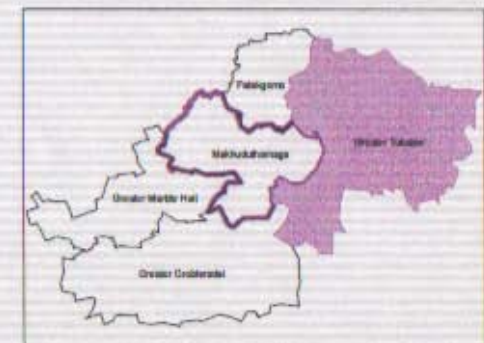


Legend:

-  Original Fams
-  Urban Core
-  Main roads
-  Secondary roads
-  Rural Settlements
-  Mining Belt
-  Village clusters
-  Agriculture
-  Woodlands/ Bushveld
-  Railwayline
-  Contours 30m
-  Greater Tubatse

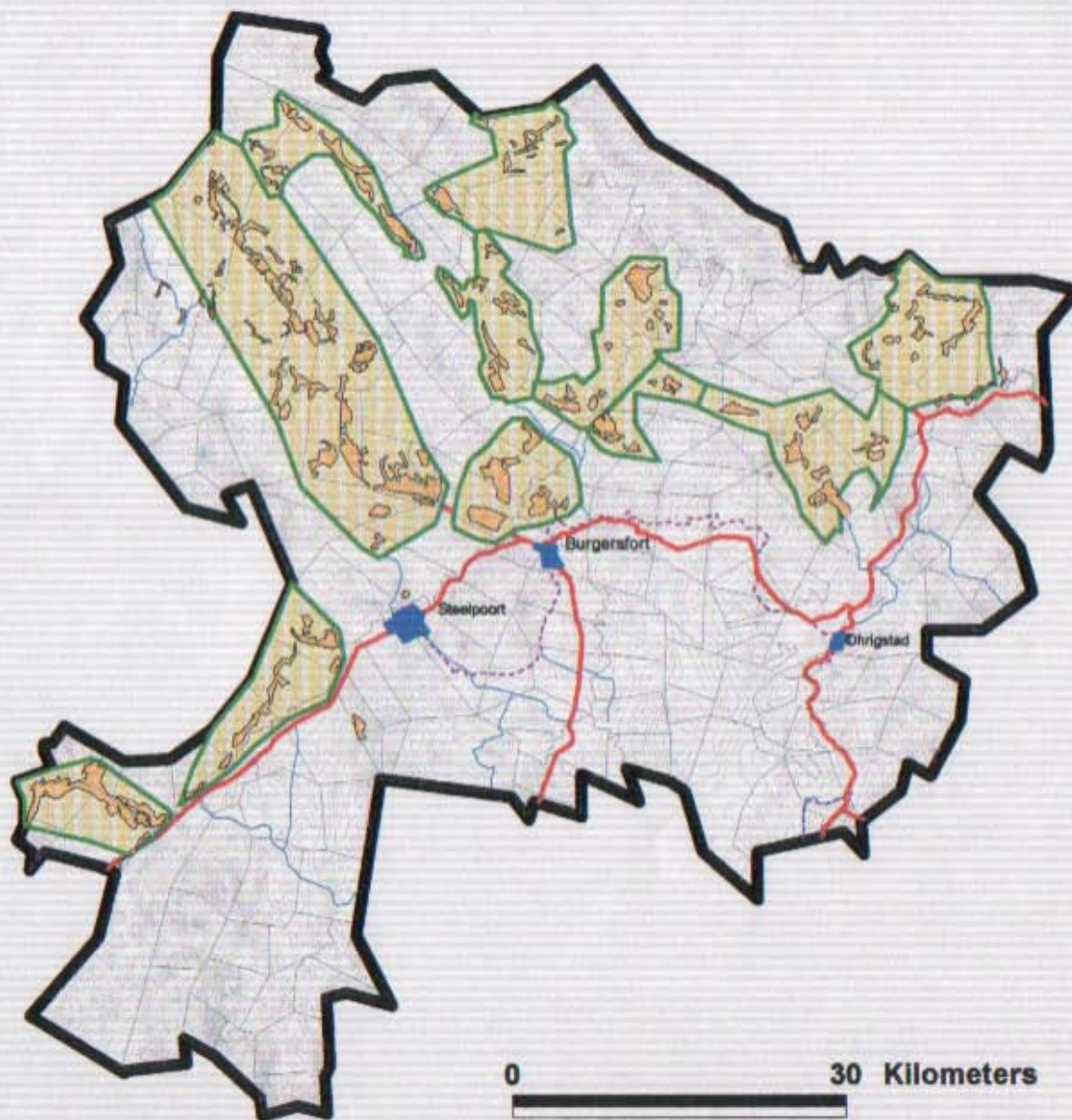


0  30 Kilometers



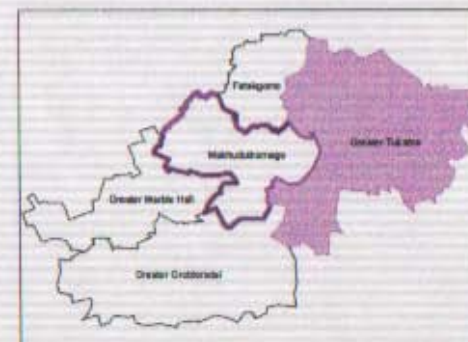
# Clusters: Low Cost Settlements

Map 3



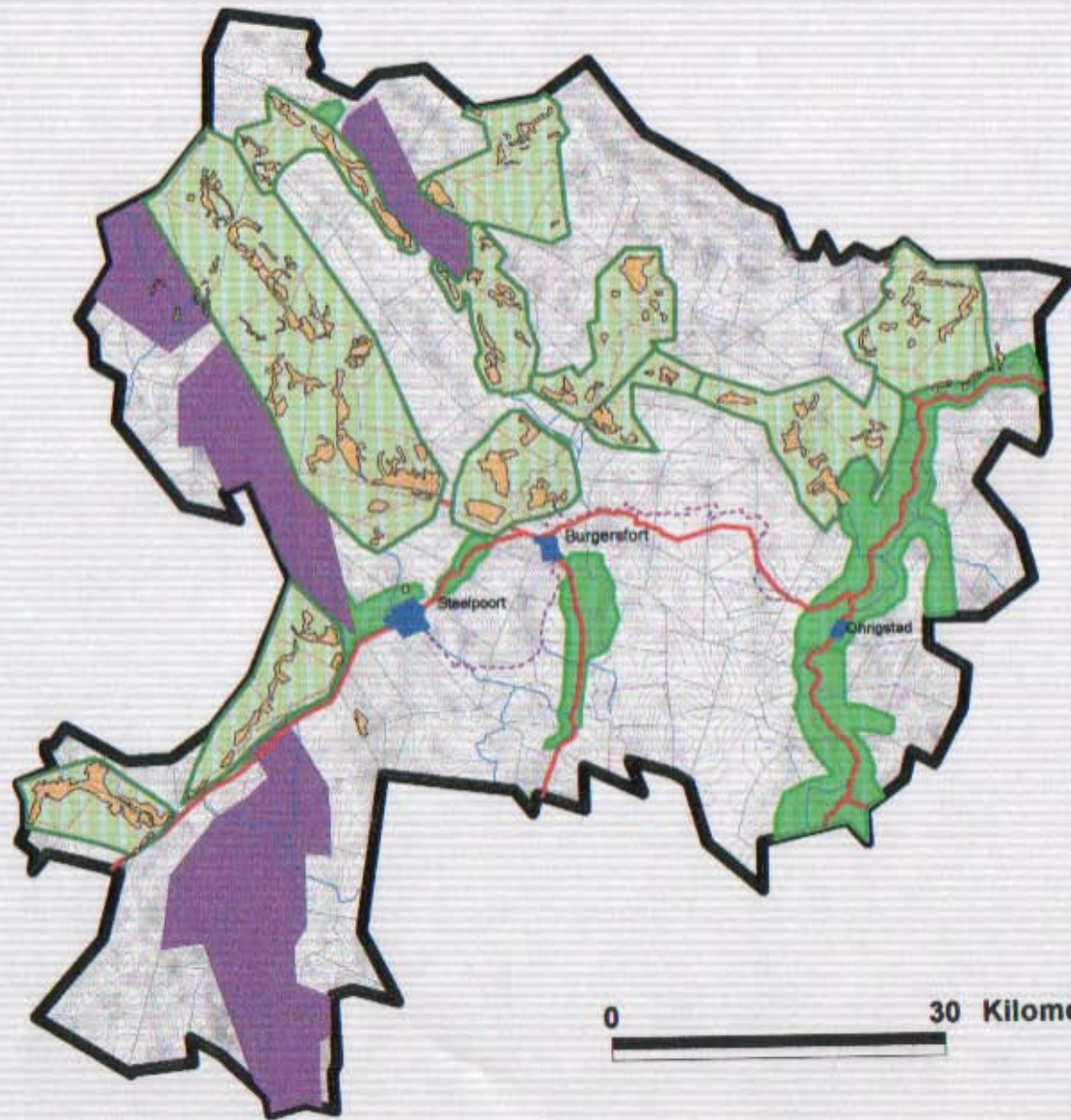
## Legend

- Original Farms
- Urban Core
- Rural Settlements
- Village clusters
- Main roads
- Secondary roads
- Railwayline
- Contours 30m
- Greater Tlhatse



# Settlement Pattern

Map 4

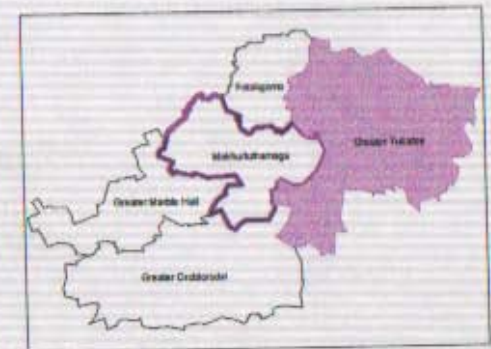


Legend:

- Original Fams
- Urban Core
- Rural Settlements
- Village clusters
- Main roads
- Secondary roads
- Mining Belt
- Agriculture
- Railwayline
- Contours 30m
- Greater Tubatse

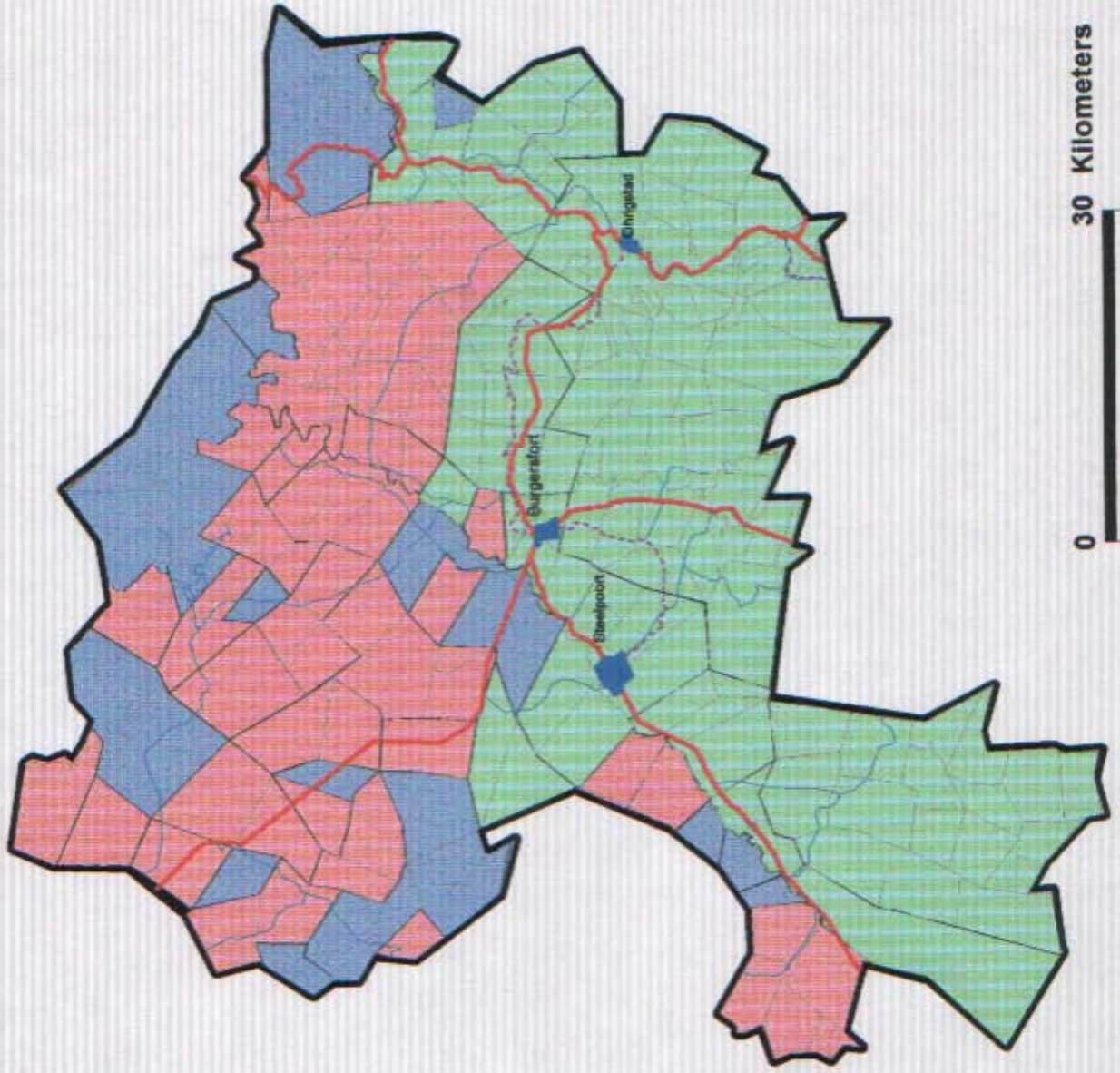


0 30 Kilometers



# Landownership

Map 3

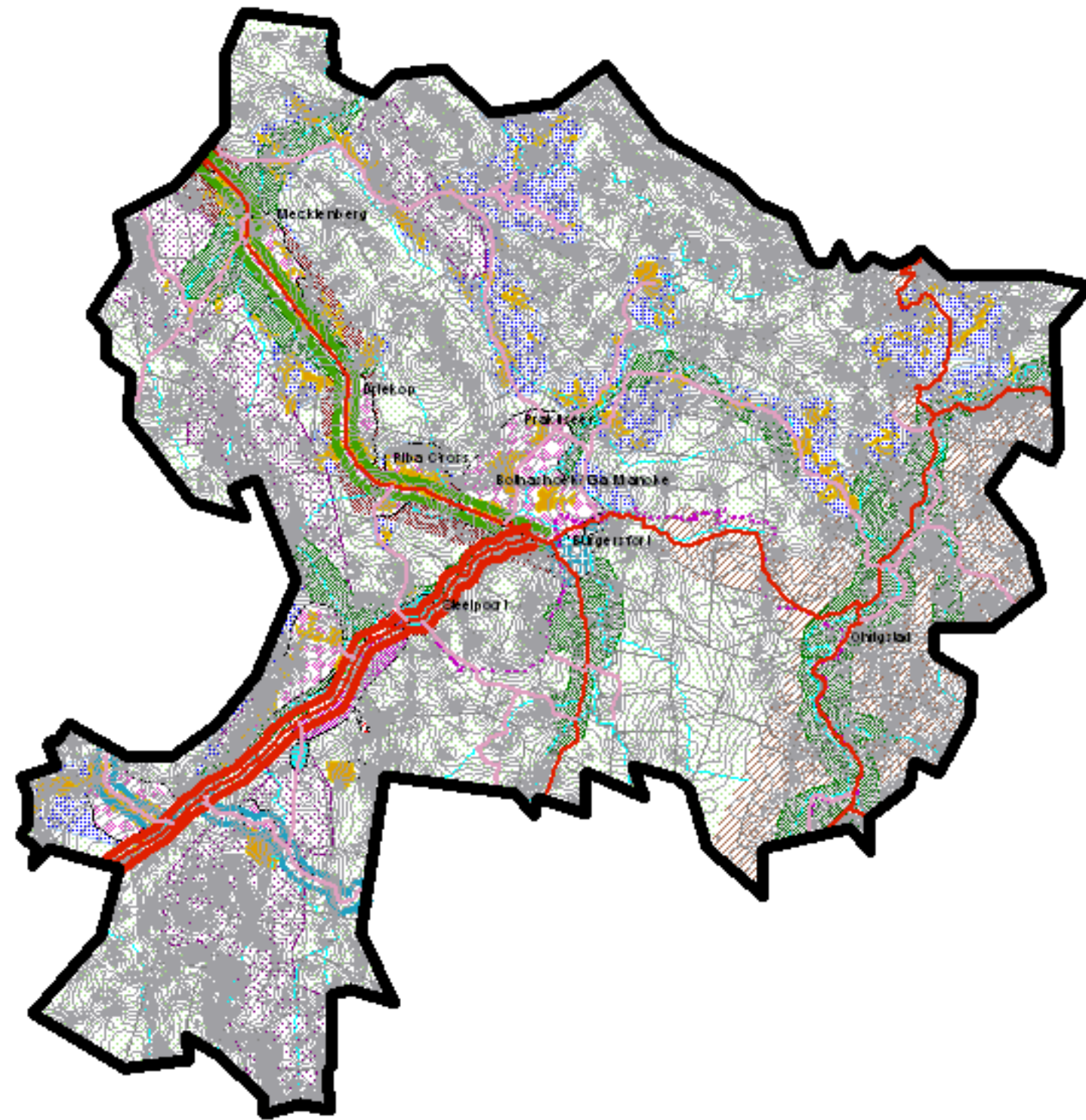


## Legend

- Original Fams
- Urban Core
- Main roads
- Secondary roads
- Railwayline
- Private
- Tribal/ SADT/ Former Lebowa
- RSA
- Greater Tubatse

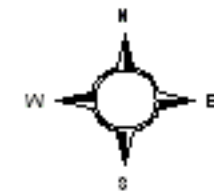


# PROPOSED STRATEGIC LAND USES: GREATER TUBATSE MUNICIPALITY

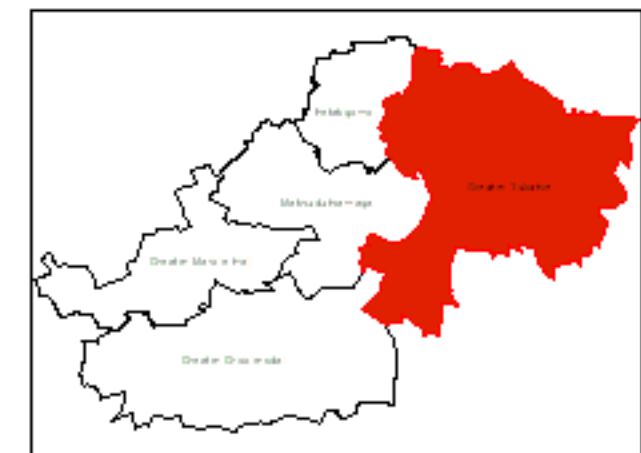


## LEGEND

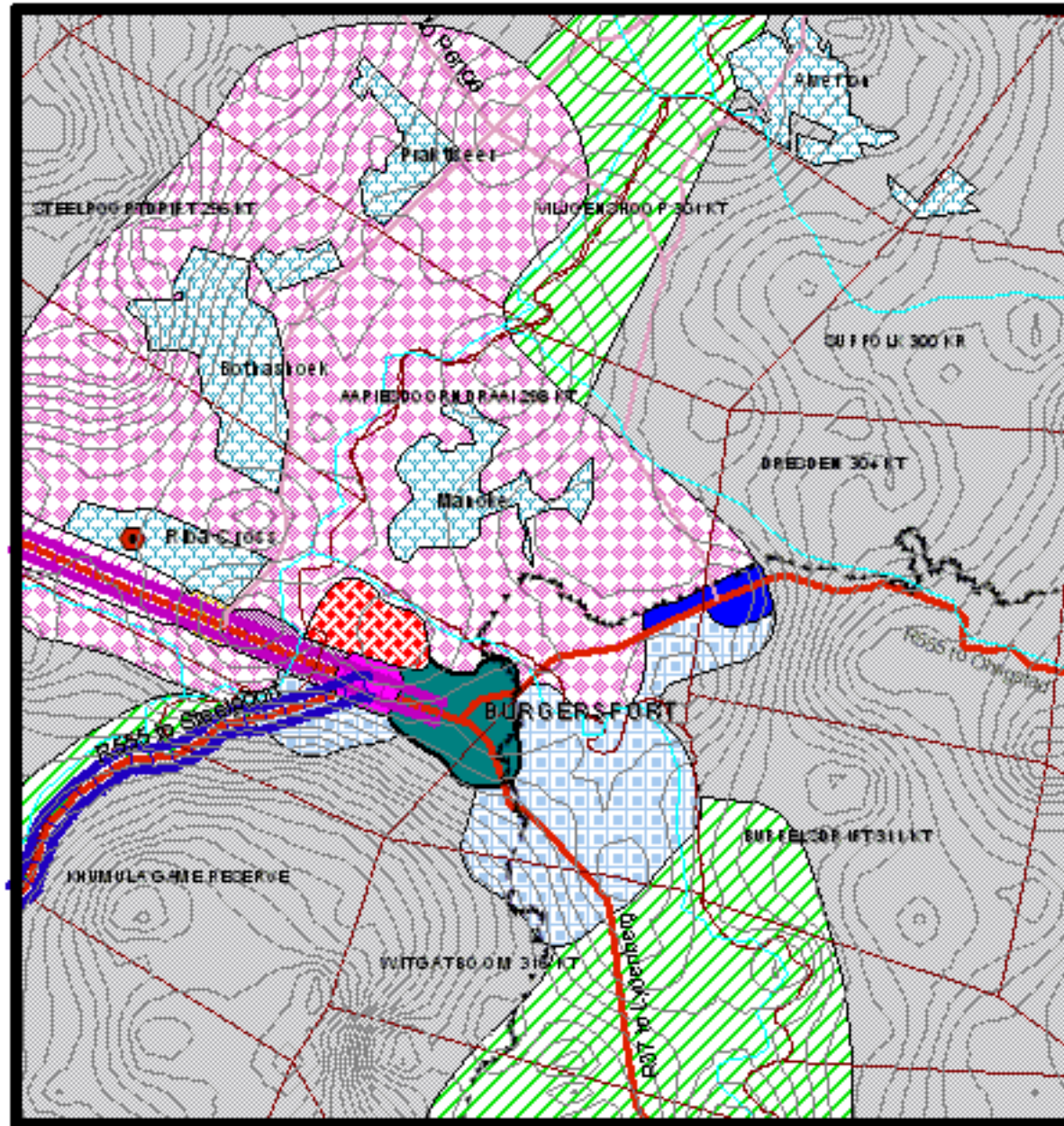
- Greater Tubatse
- Secondary roads
- Main roads
- Botlberg Activity Corridor
- Corbous 30m
- Wena Fuzie-Lydenberg Corridors
- Railwayline
- Botlberg Corridor
- Retail
- Light Industry
- River
- Warehouse
- High income housing
- Mixed use: middle income and retail
- Existing Rural Settlements
- Affordable housing
- Heavy engineering industry
- Office
- Retail & Service businesses
- Agricultural land (short term) shp
- Service Centre
- Original Farms
- Agriculture (Long Term)
- Mining Belt
- Mixed Use (Retail, service industry, urban housing, offices and high-order social facilities)
- Village clusters
- Tourism and Country Estate
- Woodlands/Bushveld



20 0 20 40 Kilometers

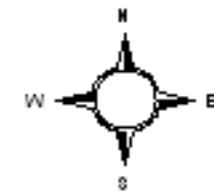


# PROPOSED STRATEGIC LAND USES: BURGERSFORT



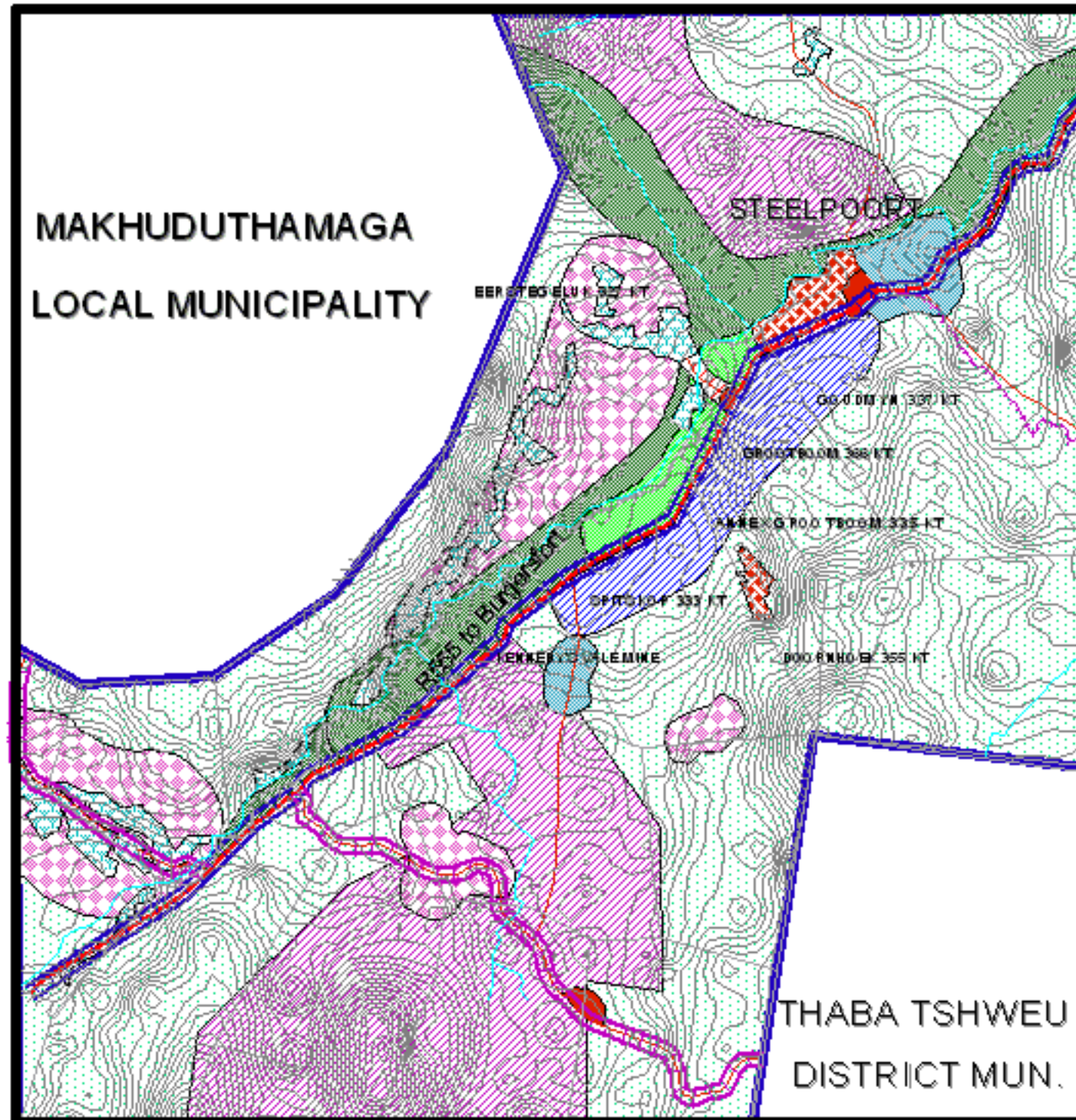
## LEGEND

- Study Area -Burgersfort
- Contours 30m
- Rivers
- Offshoring Activity Corridor
- Original farms
- Railway line
- Secondary roads
- Service centre
- Working corridor
- Office
- Main roads
- Medium Income Housing
- Retail & Service Businesses
- Mixed Use/Middle income housing & Retail
- Service/Light industry
- Warehouse
- Mixed use (Retail, service industry, urban housing, offices & high order social facilities)
- Existing Affordable Housing
- Medium - High income housing
- Affordable housing
- Agriculture
- Bushveld



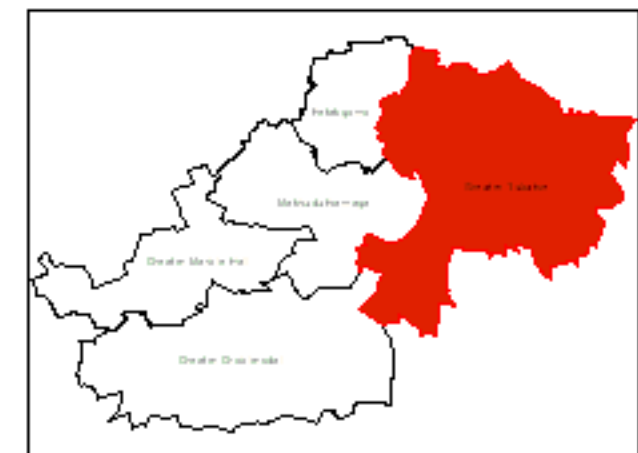
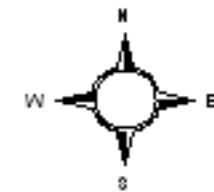


# PROPOSED STRATEGIC LAND USES: STEELPOORT



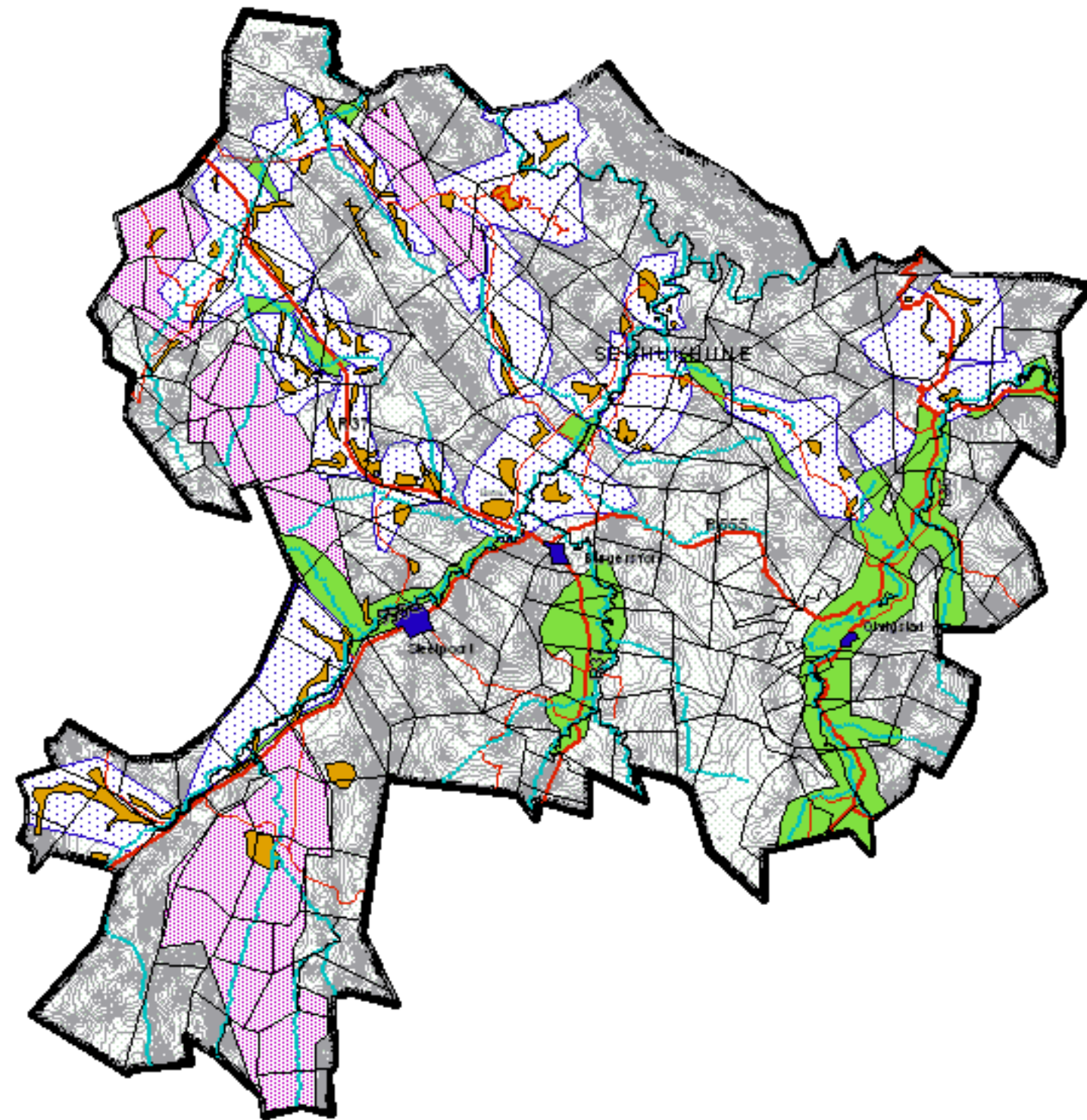
## LEGEND

- Study Area - Steelpoort
- Rivers
- Contours 30m
- Rail way line
- Original Farms
- Jane Furse - Lydenberg corridor
- Greater Tubatse Boundary
- Stoffberg Activity corridor
- Main road
- Secondary roads
- Service/ Light industry
- Mixed Use : Middle income & Retail
- Existing rural settlements
- Affordable housing
- Retail & service businesses
- Mixed use : informal trading, retail and multiple housing
- Agricultural land (short term)
- Agricultural land (long term)
- Heavy engineering industry
- Mining areas
- Bushveld



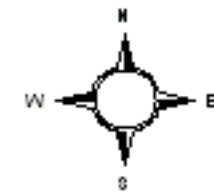
9 0 9 18 Kilometers

# SETTLEMENT CLUSTERING

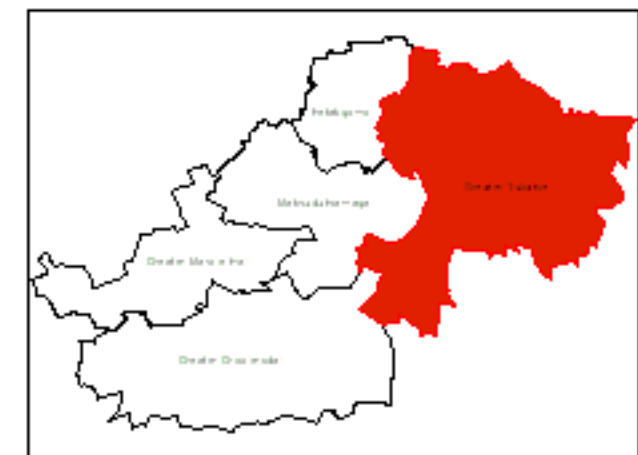


## LEGEND

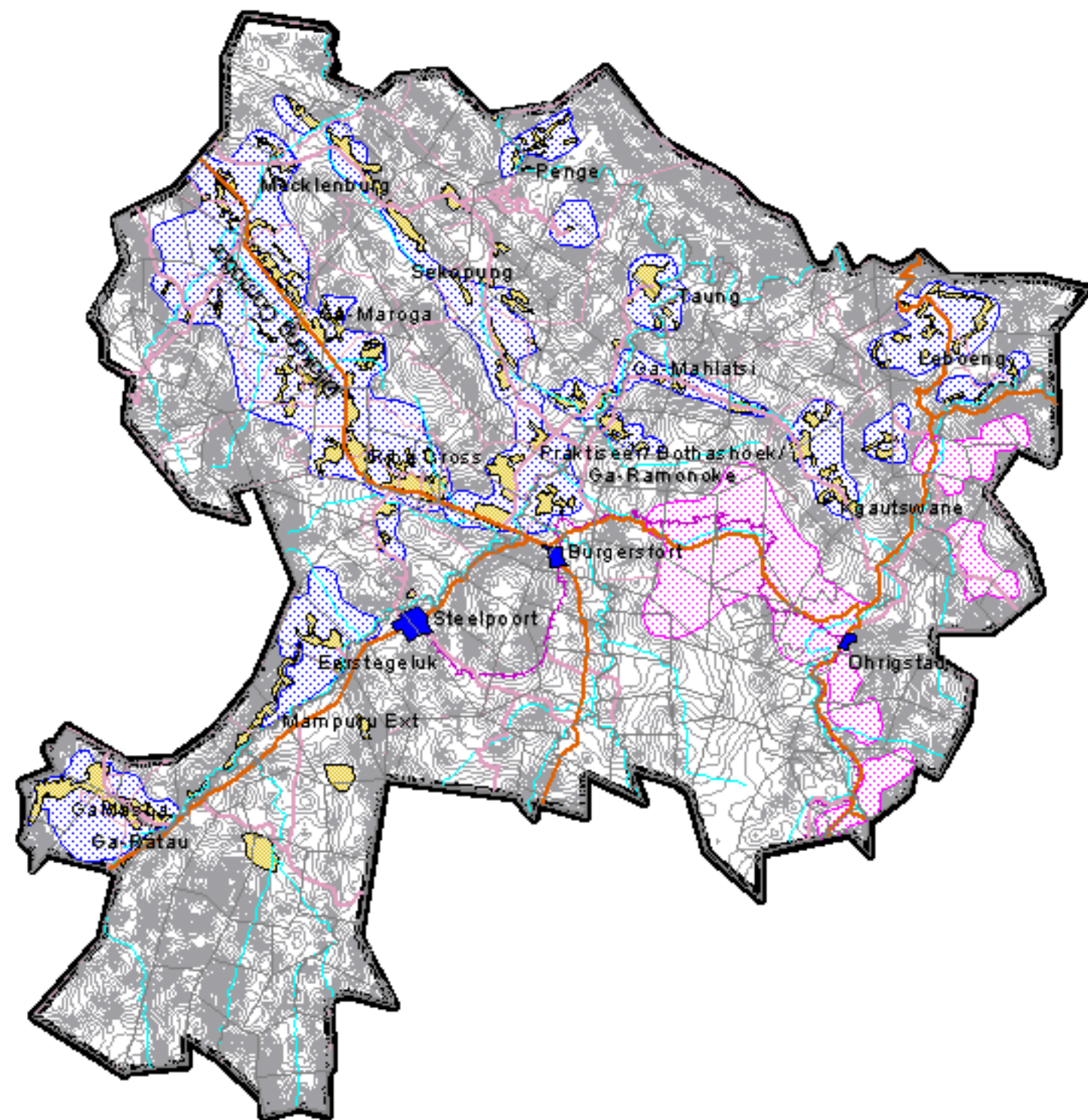
- Urban core.shp
- Farms
- Rivers
- Main Roads
- Secondary Roads
- Existing Rural Settlements
- Village clusters
- Agricultural land.shp
- Mining - belt.shp
- Contours 30m
- Greater Tubatse



20 0 20 40 Kilometers

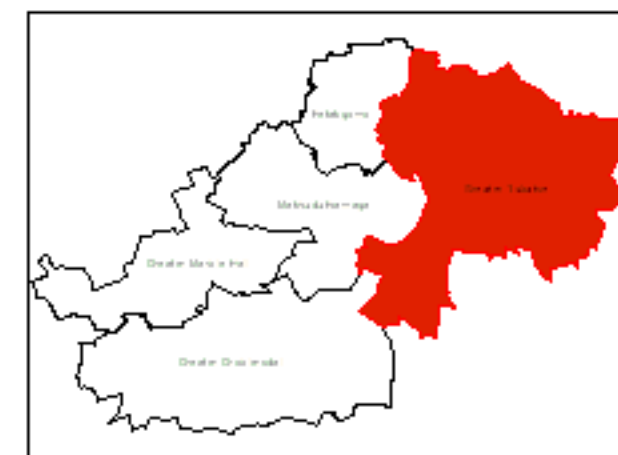
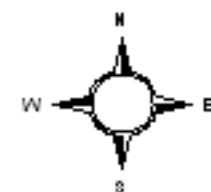


# POSSIBLE EXPANSION AREAS: RURAL HOUSING & COUNTRY ESTATE

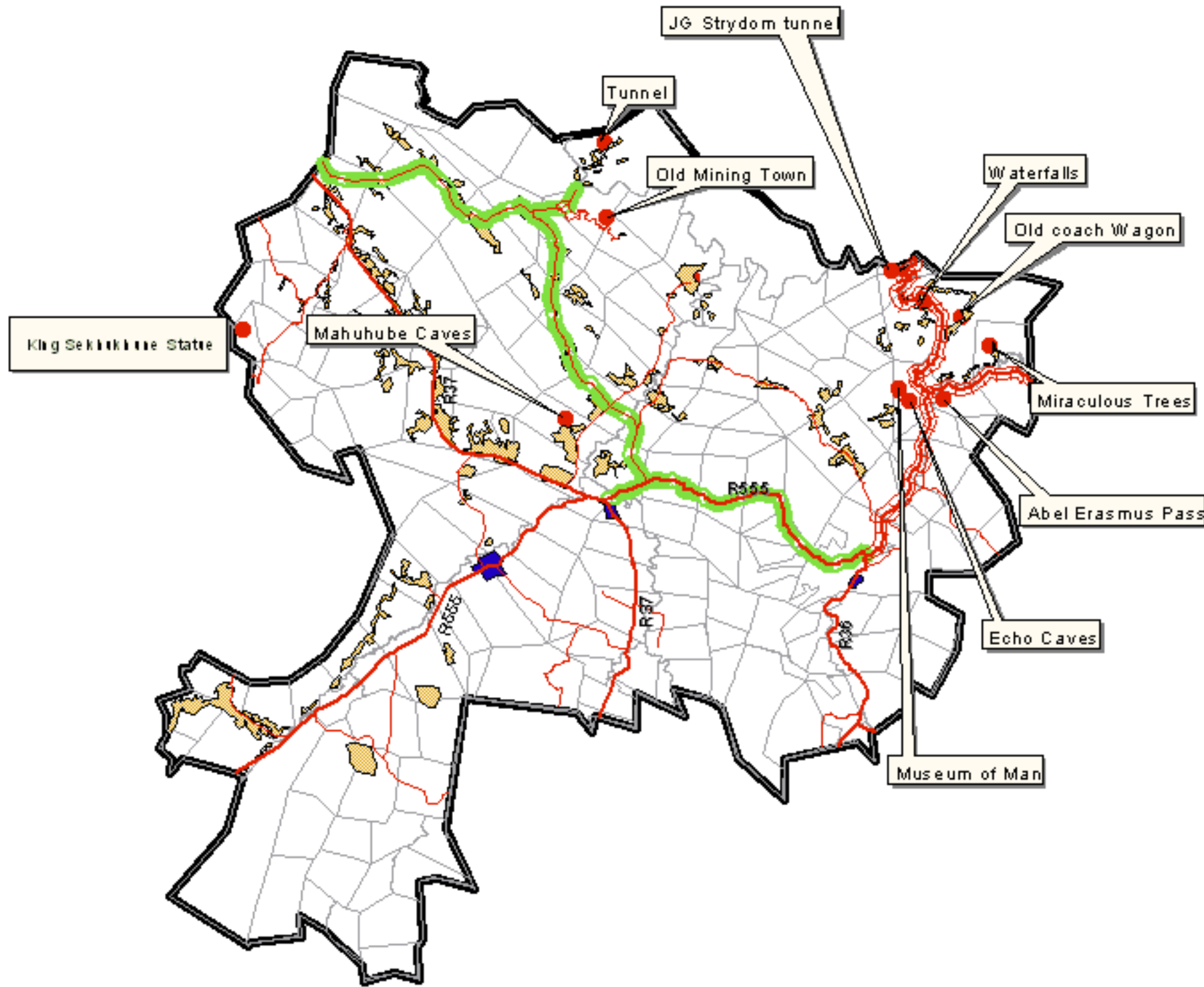


## LEGEND

- Original Farms
- Urban Core
- Main Roads
- Secondary Roads
- Wards
- Rivers
- Existing Rural-settlements
- Railwayline
- Low-Lying Areas: Possible Expansion Areas
- Country Estate
- Contours 30m
- Greater Tubatse

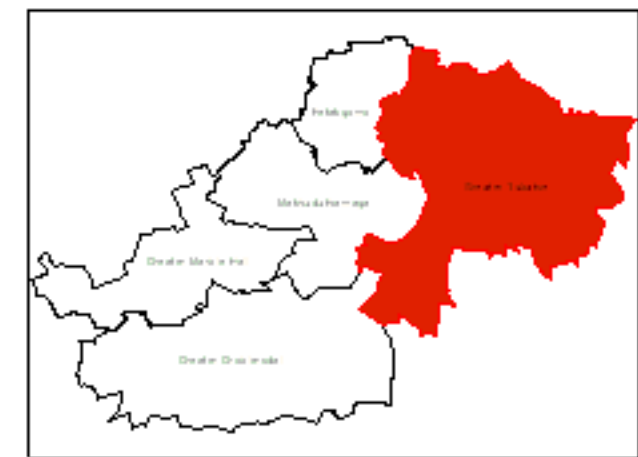
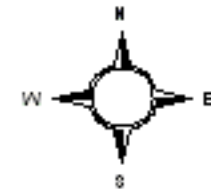


# TOURISM ATTRACTIONS AND ROUTES

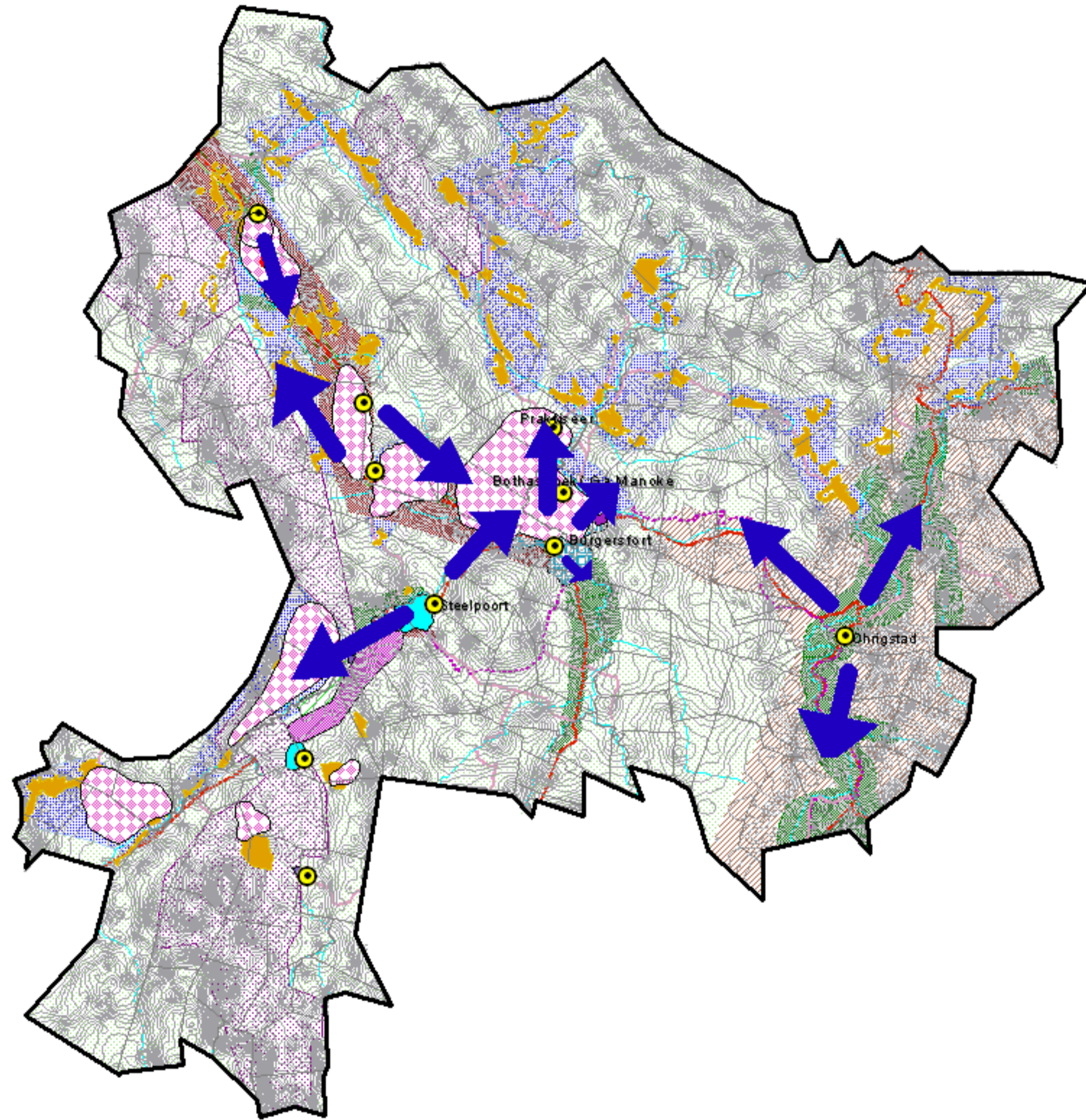


## LEGEND

- Panorama Tourism Route
- Secondary roads
- Main roads
- Proposed Internal Tourist Route
- Rural settlements
- Urban Core
- Tourism Attractions
- Farms
- Greater Tubatse

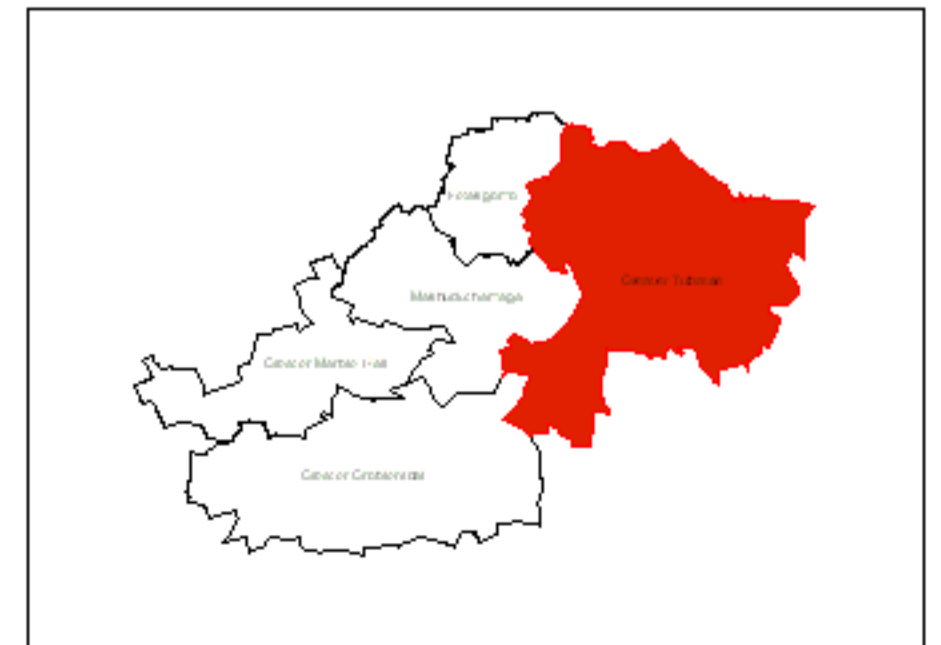
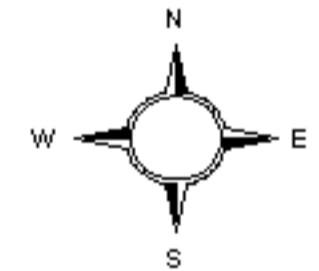


# DIRECTION OF DEVELOPMENT



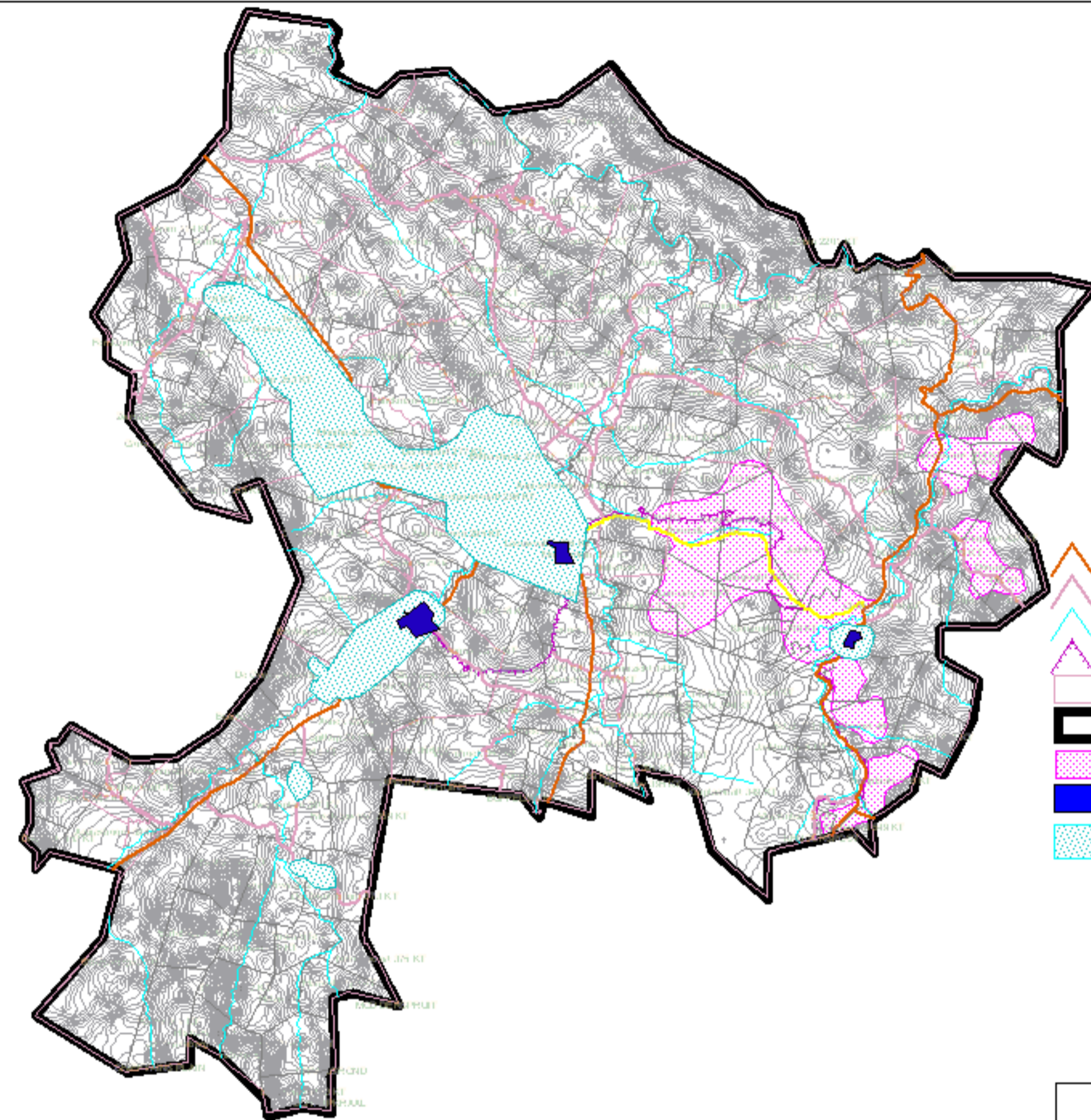
## LEGEND

-  Direction of Development
-  Urban cores, shp
-  Greater Tzaneen
-  Original Farms
-  Retail
-  Light Industry
-  Warehouse
-  Affordable housing
-  Existing Rural Settlements
-  Contours 30m
-  Mixed use: middle income and retail
-  High income housing
-  Heavy engineering Industry
-  Offices
-  Retail & Service businesses
-  Agricultural land (short term) shp
-  Mining Belt
-  Cilekong Corridor
-  River
-  Secondary roads
-  Railwayline
-  Main roads
-  Tourism and Country Estate
-  Mixed Use (Retail, service industry, urban housing, offices and high-order social facilities)
-  Village clusters
-  Woodlands/ Bushveld
-  Agriculture (Long Term)



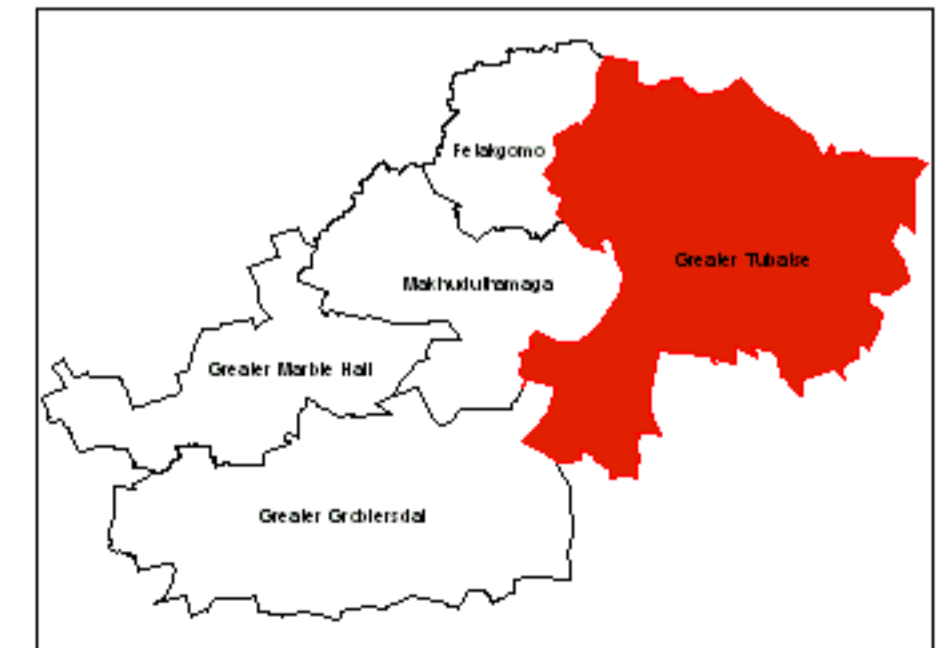
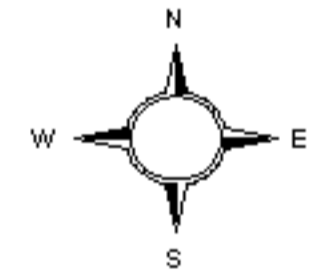
30 0 30 60 Kilometers

# STRATEGIC DEVELOPABLE LAND



## LEGEND

-  Main Roads
-  Secondary Roads
-  Rivers
-  Railwayline
-  Wards
-  Greater Tubatse
-  Developable Land:Country Estate
-  Urban Core
-  Developable Land :Mixed Use



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