



DENSIFICATION POLICY FOR GREATER TZANEEN MUNICIPALITY

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MAP 1: Settlement Map

ACRONYM AND ABBREVIATION

CBD	Central Business District
COGHSTA	Cooperative Governance Human Settlements and Traditional Affairs
CSIR	Council of Scientific and Industrial Research
DAFF	Department of Agriculture, Forestry and Fisheries
DRDLR	Department of Rural Development and Land Reform
DWS	Department of Water and Sanitation
EPA	Economic Potential Analysis
GTM	Greater Tzaneen Municipality
GVA	Gross Value Add
HDA	Housing Development Agency
HV	High Volume
IDP	Integrated Development Plan
LED	Local Economic Development
LEDET	Limpopo Department of Economic Development, Environment and Tourism
MDM	Mopani District Municipality
MDB	Municipal Demarcation Board
MSDF	Municipal Spatial Development Framework

NDP	National Development Plan Vision 2030
NR	Nature Reserve
PGDS	Provincial Growth Development Strategy
PLAS	Proactive Land Acquisition Strategy
RDF	Rural Development Framework
RDP	Reconstruction and Development Programme
RDS	Rural Development Strategy
SDF	Spatial Development Framework
SLA	Service Level Agreement
SPLUMA	Spatial Planning and Land Use Management Act (SPLUMA), 2013 (Act 16 of 2013)
Stats SA	Statistics South Africa
TOR	Terms of Reference

Part A

1. INTRODUCTION

The Densification Policy for GTM has been prepared as part of the Municipal Spatial Development Framework 2017-2022. The policy shall be read in conjunction with the SDF and other planning policy instruments such as GTM Nodal Plan, GTM Rural Development Strategy, GTM Land Use Management Scheme, Spatial Planning and Land Use Management By-Law of Greater Tzaneen Municipality and others.

2. STRUCTURE OF THE REPORT

The Densification Policy consists of two parts. Part A consists of the following:

- ❖ Policy Context and Vision Directives:
 - Policy Context
 - Development Principles of SPLUMA Act, 2013
 - Strategic Densification
 - Vision
 - Densification Objectives and Strategies
 - Purpose of densification.
- ❖ Context, Role and Issues:
 - Brief History of the Development of Human Settlements
 - Nature of Human Settlements in GTM
 - Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis

Part B consists of the following:

- ❖ Areas for Densification
 - Nodes
 - Residential Areas
 - Transport Orientated Development
- ❖ Proposed Densities
- ❖ Density Guidelines and Controls
- ❖ Densification Management

PART A: ANALYSIS

3. POLICY CONTEXT AND VISION DIRECTIVES

3.1 Policy Context

3.1.1 Development Principles of Spatial Planning and Land Use Management Act (SPLUMA), 2013 (Act 16 of 2013)

The following extracts of Section 7 of SPLUMA Act, 2013 are relevant for densification.

Section 7:

“(a) The principle of spatial justice, whereby-

- (i) past spatial and other development imbalances must be addressed through improved access to and use of land;
- (ii) spatial development frameworks and policies at all spheres of government must address the inclusion of persons and areas that were previously excluded, with an emphasis on informal settlements, former homeland areas and areas characterised by widespread poverty and deprivation;

(a) The principle of spatial sustainability, where spatial planning and land use management systems must-

- (ii) ensure that special consideration is given to the protection of prime and unique agricultural land;
- (iii) uphold consistency of land use measures in accordance with environmental management instruments;
- (vi) promote land development in locations that are sustainable and limit urban sprawl; and
- (vii) result in communities that are viable;

(b) The principle of efficiency, whereby-

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

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

3.1.2 Strategic Densification

Strategic densification has been chosen as a principle of this policy because densification should not occur randomly but in an organised, strategic manner and at strategic locations. Through the implementation of strategic densification, it is

anticipated that densification can be accomplished in a positive manner with positive results. Therefore, densification must be implemented with the knowledge and understanding of the following issues:

Social Infrastructure

It is imperative that, through the process of densification, the provision and maintenance of social infrastructure needs to be accomplished. Increasing densities of people in smaller areas without adequately providing for basic social needs and facilities, higher quality living environments cannot be achieved. This would also compromise other areas of the built and natural environment.

Environmentally Sensitive Areas

Through strategic densification, environmentally sensitive areas will be protected as chances of encroachment are decreased. Environmentally sensitive areas should be treated as a resource which cannot easily be rehabilitated once it has been degraded. Therefore, strategic densification should be used as a method of protecting environmentally sensitive areas within GTM.

Transportation

The urban form found in GTM, which is not uncommon to settlements formed in South Africa, is designed around private vehicle usage with limited, undeveloped public transport opportunities. This can be remedied with strategic densification. Therefore, densification should ideally occur around areas of public transport provision and transport modal interchanges.

Protection of Low Density Areas

Not all areas are conducive to higher density developments, due to the character and nature of neighbourhoods, environmental considerations and infrastructure and servicing issues. Certain areas should be preserved and protected for the varying life cycle needs which people have. Lower density areas with larger erven are usually the choice location for homes of families with young children. Such issues should also be considered in terms of densification.

Correcting Spatial Imbalances of the Past

The legislation and policies described above all promote the idea of correcting the spatial form of the past through integrated development. A holistic approach to planning and the development of higher density residential housing should be taken to ensure that development occurs to support the whole community in a fair manner.

Demand against Supply

Due to land being such a scarce resource in the GTM, the supply of land is restricted in terms of development potential. Demand for development must be off set against the actual supply of land and should be done in such a manner as to ensure sustainable use and development of land.

Land as a Resource

In terms of its geographical position, GTM is situated over large areas, which are either environmentally sensitive or have high agricultural potential. Developable land is scarce and limited and should be used in a manner which addresses the scarcity of land as a resource. Through strategic densification, land can be used in an efficient manner which limits risks and optimises the use of land.

Sustainability

Sustainability is a fairly complicated concept to deal with, yet it is very important in terms of development. Densification needs to be planned and implemented in such a manner that not only the specific higher density development is sustainable, but that the urban and natural environment is sustainable, that financial sustainability is achieved for the development and social and service infrastructure is maintained and used sustainably.

Quality Environments

This concept hinges on all of the above mentioned principles as well as elements of good quality urban and structural design. Densification is usually associated with monotonous, unsightly buildings which show no imagination or good function as buildings are usually aesthetically unpleasing. Therefore a holistic design approach should be encouraged to ensure that the quality of living and natural environments is enhanced. Areas with high agricultural potential and areas that are environmental sensitive must be protected and conserved. Policies and regulations must be implemented in order to protect such areas.

3.1.3 Vision

Functional and sustainable human settlements that satisfy community needs

The approach to densification in GTM should build on this vision and strive to provide a clear direction for the municipality’s morphology and development, which supports the ideals and objectives of creating a sustainable, inclusive and productive municipality through densification.

3.1.4 Densification Objectives and Strategies

The table below illustrates the objectives and strategies to achieve sustainable densification throughout GTM.

OBJECTIVES AND STRATEGIES	
OBJECTIVES	STRATEGIES
1. To ensure safe, quality environments for all residents of GTM	<ul style="list-style-type: none"> a. Implement clear guidelines for Urban Design in higher density residential developments b. Implement guidelines for suitable housing options and typologies
2. To ensure sustainable densification in terms of infrastructure capacities and provisions	<ul style="list-style-type: none"> a. Align densification in GTM with bulk infrastructure service delivery and maintenance
3. To ensure environmental protection in the process of densification	<ul style="list-style-type: none"> a. Density to occur in non-sensitive areas b. Apply environmental guidelines and policies all the time.
4. To ensure effective and appropriate decision making in terms of density proposals	<ul style="list-style-type: none"> a. Apply assessment criteria for decision making in terms of density proposals across GTM b. Establish an Aesthetics Committee(s) for assessment/review of building design and urban design principles
5. To ensure balanced growth	<ul style="list-style-type: none"> a. Locate residents in close proximity to economic and employment opportunities

6. To ensure economically sustainable settlements	a. Support high density development in areas where there is high intensity of economic activities
7. To ensure that the scale and character (in terms of bulk, height, and architectural styling if necessary) of the higher density areas is appropriate to the immediate context	a. Implement policies and guidelines for a balanced, pleasant and integrated development.

3.2 Purpose of Densification

The project brief stipulated that Densification Policy for GTM be prepared as part of the Spatial Development Framework 2017–2022 which should be versatile enough to inform spatial planning in GTM. Once developed, the policy will be used in tandem with the Land Use Management Scheme and other relevant policies to be developed over time.

In response to the unsustainable nature of South African human settlements, the National Development Plan 2030 and Spatial Planning and Land Use Management Act (SPLUMA), 2013 (Act 16 of 2013) prescribe principles to be used in developing and managing sustainable human settlements. Of these, the spatial sustainability and spatial efficiency principles are the most relevant. The principle of spatial sustainability requires that land development be spatially compact, affordable, protect prime and unique agricultural land, limit urban sprawl and create viable communities. The principle of efficiency on the other hand requires optimisation of resources, infrastructure, reduction of negative financial, economic, social and environmental impacts. Existing and new settlements to be established should be compatible with the aforementioned principles to result in denser and sustainable settlements.

For this to occur, strategic interventions are developed to ensure that the environment continues to be sustainable against growing population that will increasingly consume more natural resources. The policy is therefore guiding in nature by providing guidelines on densification for effective use to achieve human settlements which are in line with the vision of the municipality which is **“A Green, Prosperous and United Municipality that Provides Quality Services to All”**. This will be achieved through strategic development initiatives and interventions to be adopted throughout GTM.

The overall purpose of the Densification Policy is therefore to provide continuous guidance to the officials of the municipality as well as to the users of the land. The policy shall be used primarily by the officials of the municipality in assessing land use applications as well as by the developers and communities at large.

4. CONTEXT, ROLE AND ISSUES

4.1 Brief History on the Development of Human Settlements

Establishment of human settlements can be traced back to the ancient periods. Evidence suggests that human settlements developed in areas that were endowed with resource base such as fertile soils, permanent water sources, good environment, mineral resources, topography and others. This was due to the fact that resources were used to support human livelihood, be it for agricultural production, extraction of mineral resources, water and others. The presence of the resources attracted populations to settle in those locations endowed with such to exploit the resources either for own consumption or profit.

Presence of fertile soils was initially used for subsistence agriculture and later for commercial agriculture when people started storing the produce which was not immediately consumed. The storage of unconsumed produce led to battering of what had not been used for what they did not have and required. This practice encouraged the exchange of goods between people and regions. The advent of exchange instruments (money) accelerated the need for bigger storage and commerce/trade. The economic use of fertile/productive land led to the protection of such land as it became a valued resource. Productive land became increasingly used for cultivation and production of agricultural goods which were later processed and changed form. The changing of form/beneficiation resulted in the need for manufacturing and storage facilities.

The following diagrams demonstrate attraction of human settlements to resource base areas (areas with high agricultural potential, water, minerals and topography).

The Hausa settlement was dominated by crop storage facilities (rondavel looking structures), square buildings were used for residential purposes.

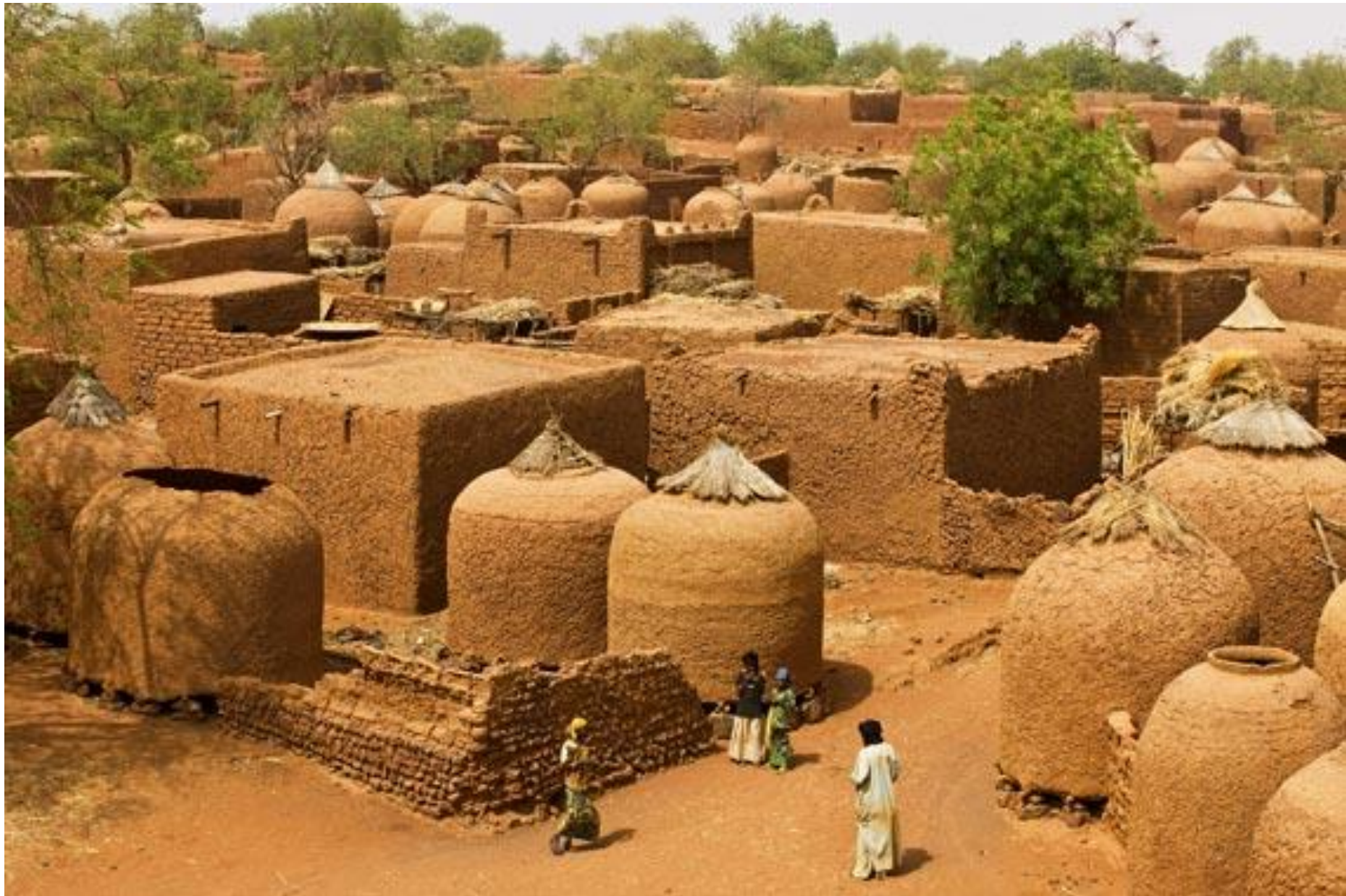


Figure 1: Hausa City-State – Nigeria (Agricultural Potential)(Source: Google Images)



Figure 2: Letsitele, 2016 (Agricultural Potential) (Source: Google Maps)

Letsitele has contained settlement with a small footprint in order to protect productive agricultural land.

Water was and still mainly used for fishing, transport, consumption either for domestic or commercial purposes. The sea is used for transport or for ocean economy. Harbours were developed for refuelling and/or restocking of ships. Human settlements developed around harbours, fresh permanent inland water bodies such as lakes and perennial rivers. Travellers would rest their animal spans at water points for refreshment purposes. This resulted in the development of early inns (today's hotels) with the ocean used to harvest proteins and for medicinal purposes. Some of these areas have developed into tourism sites.



Figure 3: Cape Town (Water) (Source: Google Images)



Figure 4: St. Lucia (Tourism) (Source: Google Images)

Areas with good natural environment produced commodities such as timber, flowers, fruits, vegetables and honey, among others. Such commodities were found mainly in mountainous areas which had high mist presence. These areas were ordinarily distant from early settlements as the belief was that they were unsafe and had mysteries with them which were part of the ancient folk stories. With the passage of time, communities moved closer to such areas but did not settle in the forests instead they protected them as a resource.



Figure 5: Magoebaskloof (Source: Google Images)



Figure 6: George's Valley (Source: Google Images)

Areas with mineral resources attracted the development of human settlements as they provided wealth to the explorers. These resources could be coal, iron, precious metals and others. Mines were later developed in such areas, usually resulting in the establishment of big towns and cities as the resources provided an economic base for further development.



Figure 7: Kimberly (Mineral Resources: Diamonds) (Source: Google Images)

Certain topographical features such as high mountains and deep gorges provided some advantages to communities. Some settlements were developed in areas that were considered safe from enemy attacks, such settlements occurred on elevated areas like on the side of a hill and/or mountain or on mountain tops. Settlements were also developed on low lying valleys for protection from enemies as enemies could be spotted at a distance which allowed the community to prepare itself against a threat of attack.



Figure 8: Thaba-Bosiu – Lesotho (Safety) (Source: Google Images)

Tzaneen owes much of its development to the discovery of minerals to its east, Phalaborwa and Pietersburg (now Polokwane) to its west. This needed connection through the development of the rail line and stations. It is reported that one of the first establishments in the area was built in Agatha Street, the forerunner of The Coach House Hotel, as a staging post by Heinrich Schulte Altenroxel and Conrad Plange in 1892. It is further reported that the Zeederberg Coach Company used it for resting and changing their teams of mules and oxen before tackling the final step along the tortuous road leading to Thabina, Leydsdorp and the Lowveld. At the time, Pietersburg was the starting point of many coach routes: one going to Bulawayo via Rhodes Drift and the Tuli block; another via Haenertsburg and the Kloof to the early farming settlement of Krabbefontein (now Merensky School); or via Munnik to Westfalia and other early settler areas. One route led to Leydsdorp via Haenertsburg and Agatha. Parts of this old coach road are still in existence, with many stretches of the present road on New Agatha following the old route.

(Source: capeinfo.com/destinations/limpopo/mopani/tzaneen)

Haenertsburg is known as the Capital of the Land of the Silver Mists due to its presence of mist, especially at night and early mornings. It lies between Tzaneen and Polokwane and named after Carl Ferdinand Haenert hence its name Haenertsburg. The area has not grown but on the main resembles its Germanic history and used for tourism purposes.

Letsitele, the place, is located at the junction where the Letsitele River flows into the Letaba. The area is known for agricultural production which equals that of Tzaneen if not better. It produces significant quantities of fruit and vegetables such as bananas, mangoes, citrus, avocados, litchis, tomatoes, and macadamia nuts. Citrus farming is the main form of employment in the Letsitele Valley on about 60 farms.

Nkowankowa was established as part of the erstwhile Bantustans and industrialisation strategy. It was proclaimed as the primary town of the Gazankulu Trust. The town is developed with social facilities such as schools, clinics, police station, industrial facilities, housing etc. The town was mainly used as a dormitory for labour to serve Tzaneen town and surrounding farms.

Lenyenye was established as part of the Lebowa homeland government by the Lebowa Trust. Like Nkowankowa it is a dormitory with scant industry.

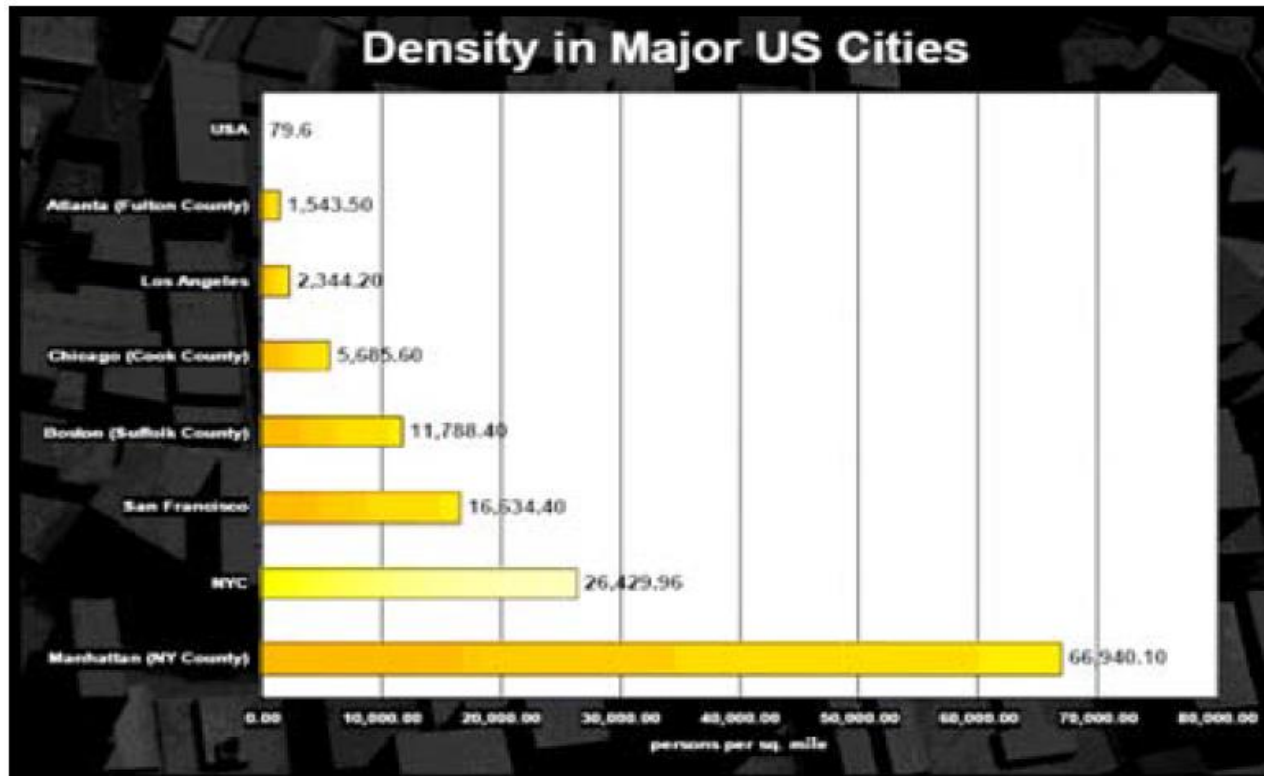
Traditional rural settlements in the area partly reflect the traditional way of developing settlements and also as a result of the erstwhile policy of forced removals of black people from the “so called white areas” in order to create white South Africa. Removed people were located in areas devoid of facilities of life and job opportunities. These areas also fall under the jurisdiction of traditional authorities and partly apply traditional customs and practices.

4.2 Approaches to Densification

This section reviews the application of densification throughout the world and identifies experiences and lessons learned which could be applied in Greater Tzaneen Municipality.

4.2.1 America

The graph below shows some of the densities in US as well as the accelerated growth of urban sprawl. Growth of urban sprawl is ascribed to the citizens' affluence who located at urban fringes and peripheral areas of towns and cities. Lindsay Gow in 2000 (Ministry for Environment – New Zealand) states that land areas in America's large metropolitan communities were increasing at almost twice the population growth rate. This results in increase of servicing costs and encroachment into environmentally sensitive and valuable land.



(Source: *Density in Major US Cities* (Ginsberg & Strauss, 2003, Presentation at Density Conference))

He further indicates that social and lifestyle issues, traveling times, pollution and the disparity in distance between work and home locations, should be considered in weighing up the costs between sprawl and densification. One of the factors which led to the easy sprawl is the low cost of fuel prices and high levels of affluence. However, the United States developed and still advocates the idea of Smart Growth and New Urbanism to attempt densification and better use of land within and around cities. These principles are primarily based on the concept of work-live-play and mixed-use developments. Even though this has been advocated and attempted, its success rate has not been proven. General reading regarding the United States planning paradigm has shown that concepts are developed but not widely practiced within cities.

	AREA (in ha)	POPULATION	POPULATION DENSITY (people/ha)
New York City	83 347	7 322 564	88
Manhattan	6 139	1 487 536	242
Bronx	11 398	1 203 789	106
Brooklyn	21 177	2 300 664	109
Queens	29 049	1 951 598	67
Staten Island	15 583	378 977	24

Population Density of some of the American Cities

The above table indicates varying densities of some of the cities. In certain areas of Manhattan, population densities have reached levels of 411 people per hectare. If one were to assume households consisting of four people, this would roughly translate to 110 residential units per hectare in the densest areas of Manhattan. The average population density of 242 people per hectare translates to approximately 60 units per hectare.

The United States of America only really achieves high-density residential areas close to major economic areas and within the major economic cities of the country, such as New York. The idea of suburbia is still prevalent in the American mindset, led by the ‘American Dream’. What is clear from the above graph is that, relative to New York, other cities have relatively low densities (measured in people per square mile). Even though attempts at ‘Smart Growth’ and ‘New Urbanism’ have been attempted, this has not proven to be successful or widely implemented. The study has shown that it is people’s mindsets that determine the spatial outcomes of cities within the US. US’s experience is the complete opposite of what is experienced in Tzaneen where the

majority of the people live far from places of work due to the previous policy of apartheid. At a small scale, similar experience is experienced in the development of low density areas for the rich in Tzaneen town.

4.2.2 South Africa

As illustrated in section 3 above, the National Development Plan (NDP) Vision 2030 has provided a policy position on unsustainable human settlements and Spatial Planning and Land Use Management Act (SPLUMA), 2013 (Act 16 of 2013), Section 7 provides development principles for planning sustainable human settlements. Various provinces and municipalities are encouraged to develop densification strategies relevant to their situations.

KwaZulu Natal on their Desktop Study on Rural Densification, 2012 notes that densification is not just limited to towns and cities but to rural areas as well. In the study, it is noted that migration and/or population movement is a major contributor to rural poverty in South Africa. In KwaZulu-Natal (KZN) job search is no longer the single dominant reason given for migration, instead infrastructure is the first followed by land issues. The study also notes that as much as two thirds of the province's disadvantaged families have broken away from their communities of origin and moved at least once in their lifetimes. Rural to rural migration is another trend highlighted in recent studies. This is due to people moving to advantaged rural areas around small towns and secondary cities.

Studies undertaken on densification identify the following as the intended objectives:

- *Ensuring optimal and efficient use of infrastructure, services, facilities and land.*
- *Supporting the development of a viable public transport system and improve levels of access, especially by the poor, to the City's resources and amenities.*
- *Providing a framework and guidelines for the assessment of development proposals that promote densification.*
- *Providing homeowners and property investors with certainty regarding the areas that will be targeted for various types of densification.*
- *Protecting, managing and enhancing the natural and built environment and significant cultural landscapes.*

- *Ensuring that the scale and character (in terms of bulk, height, and architectural styling if necessary) of the higher density areas is appropriate to the immediate context.*
- *Supporting the development of mixed land uses providing for vitality, opportunities and integrated living environments.*
- *Contributing to place-making and the development of attractive and safe urban environments.*

Densification is defined to assume the following forms:

a) Demolition and redevelopment

This form of development includes town houses, flats and security villages. It is most appropriate for fronting onto existing or future public routes. A project in this regard has been implemented in the Western Cape (Claremont). The project entailed the demolition of five (5) double storey commercial buildings on the Main Road that was replaced by a development which introduced more than 300 apartments to a business node, with retail outlets wrapped around the edges at the ground level so as to ensure vibrancy and surveillance along the Main Road and some of the side streets.

b) Infill and Brownfield development

Infill and Brownfield development is promoted on strategic sites identified as part of the audit of vacant and underutilized land and areas promoted for densification in the Spatial Development Framework (SDF). The adoption of this option was used to motivate a Brownfield development undertaken in Newtown, Johannesburg. The Brickfield site in Newtown was used as a shanty town, mostly accommodating immigrants coming to work on the mines. The site has been recently developed through a joint venture between the private sector and government and provides 650 apartments catering for a range of income groups.

c) Subdivision, additional/ second dwelling, sectional title development

This form of densification is suitable in areas where erven are large and densification can be achieved by subdividing into two or smaller plots, permitting a second dwelling on undivided erf or creating a sectional title for a large residential building.

d) Greenfields development

Greenfields sites must be identified through land audits and be given careful consideration. They may not be appropriate where they are on edges of settlements of high densities because of potential impacts on the character of the surrounding area.

4.2.4 Benefits for densification

The following benefits are derived from densification:

a. Reduction of the consumption of valuable/non-renewable resources

By encouraging development upwards rather than outwards, densification helps reduce the consumption of valuable resources such as agricultural land, areas of mineral potential, aquifer recharge areas and valuable biodiversity areas. It can also reduce the consumption of non-renewable fuels by lessening car dependency. The smaller gardens and fewer swimming pools associated with higher-density areas will reduce water consumption.

b. Supports the development of a viable public transport system

Higher densities, accompanied by increased population thresholds and mixed use development, support the efficient functioning and viable provision of public transport services, especially on major line-haul routes for mass and rapid transit.

c. Makes the City and Town more equitable

Higher densities in appropriate locations, especially those close to urban opportunities (services, facilities and jobs) and public transport help rationalise the housing pattern in town and improve access to the town's amenities and facilities. They help reduce travel distances and times and the costs associated therewith.

d. Facilitates economic opportunities and supports service provision

Higher densities, accompanied by increased population thresholds, create sufficient consumers to generate the development of economic opportunities, social facilities and services, and enable the cost-effective provision and optimal use of infrastructure. This is particularly the case where there is excess service capacity or where increased thresholds are required to provide services and infrastructure.

e. Improves housing patterns and choice of housing type

A mix of residential densities ensures diversification and choice of housing types and tenure options.

f. Contributes to urban place-making and improves safety

Appropriately designed and located higher densities (in terms of form, scale, height and orientation) can provide an opportunity for place-making and the making of attractive and safe urban environments, particularly those in proximity of public spaces (both natural and built).

The City of Johannesburg has however also noticed that its highest population and residential densities are occurring in informal settlements across the City. Such areas include Soweto (which has seen a tremendous growth in the property market due to investment), Diepsloot, Alexandra, Orange Farm and Ivory Park. Densities in these areas have been measured between 40 to 60 unit units per hectare. Settlement areas, which have remained informal, such as Diepsloot, have seen densities of approximately 170 households per hectare.

4.3 Nature Of Human Settlements In GTM

GTM Spatial Development Framework Status Quo Analysis 2017–2022 indicates that four settlement types are found in the area namely, proclaimed towns, rural residential settlements, commercial farm settlements and tourism related settlements.

4.3.1 Urban areas

Tzaneen, Nkowankowa, Letsitele, Lenyenye and Haenertsburg are proclaimed towns (*see the map 1*).

Tzaneen Town

Tzaneen town is the major economic hub which provides varied economic activities such as commercial, retail, transport, administrative, manufacturing, distribution and other services. Though Tzaneen town is the economic and political capital of the Municipality it has a small population base of approximately 16 000 people according to Stats SA census 2011, on 22 km² of land translating into a density of 727.27 p/km² against the municipal density of 120.3 p/km². Such density is considered to be low for a town of similar size. Tzaneen town is well linked to other centres especially the east west linkages connecting it to Polokwane in the west and Kruger Park in the east. This enhances its tourism potential in the region.

The town is experiencing a steady population growth which is well under its potential for growth which limits its internal growth capacity and has to rely on either passing clientele or on surrounding areas such as Nkowankowa, Lenyenye, Letsitele and others. Furthermore, the location of the town within a steep terrain as well as high potential agricultural land constrains its outward expansion. If the town were to grow it would have to increase its internal density to more than 1200 p/km² in the short to medium term in order to

satisfy its target of becoming a city by 2030. Currently the town lacks social housing and/or affordable housing to accommodate low income residents. The planned development will assist to increase its density. **(See diagram 1 Tzaneen Town)**

Haenertsburg

Haenertsburg lies between Tzaneen and Polokwane to its west which was established to cater for management staff of the plantations and the saw mills of Magoebaskloof and George's Valley. It has very limited urban functions and operates mainly as a tourist attraction for passing traffic. It has preserved historical buildings and lifestyles. Beyond providing these services it is almost a hamlet with a recorded population of 282 people (Census, 2011) and 147 households and a density of 229 p/km² on an area size of 191,48Ha and functions as a service centre for the timber plantations. It also does not provide affordable housing although there is a plan to develop such housing. **(See diagram 2 Haenertsburg)**

Nkowankowa

Nkowankowa and Lenyenye are fairly new settlements established for administrative and political needs of the erstwhile Gazankulu and Lebowa administrations respectively. They were established in terms of The Group Areas Act and had to be located at least 15km away from Tzaneen town to create a buffer between white residents of the town and those of Nkowankowa and Lenyenye. The towns served as dormitories and labour reservoirs for the town of Tzaneen and adjacent farms. As such, they are predominantly residential with scant services and recreational facilities. Few industrial buildings were developed, fully funded by the erstwhile homeland development corporations under the industrial decentralization programmes meant to create parallel services and movement for "white and black areas". As a result apartheid human settlements and structures were established and entrenched. Various data sources provide different information i.e. The Draft Status Quo of Nkowankowa Local Area Plan indicates that the area has 66 165 people with 13 233 households at 5 people per household. On the other hand the City Population, using Stats SA data indicates a population of 42 859 people on an area of 25 757Ha with a density of 1 663,9 p/km². Stats SA indicates that, in 2011 the area had a population of 22 484 people with 5 967 households resulting in a density of 1 385p/km². The discrepancy could be ascribed to the usage of different boundaries and parallel creation of new township extensions i.e. the Draft Status Quo Report of Nkowankowa Local Area Plan includes Dan Village in its area while City Population excludes it.

Nkowankowa is regarded as the secondary node within Tzaneen GTM, Tzaneen on the other hand is considered to be a primary node. The industry in Nkowankowa manufactures canned food, dried fruit, atchaar, vegetable processing, processing of raw timber, bricks, beauty and cosmetic products, trailer bodies and citrus juice among others. The Unit A business node attracts considerable informal sector component, businesses and office functions while residential sites in proximity of vacant businesses are used as

business premises. The industrial township provides for both small and large enterprises although high vacancy rates are experienced. Programmes for the resuscitation of the industrial area have been embarked upon by the National Department of Trade and Industry in collaboration with the Limpopo Economic Development Agency. Nkowankowa township tours is one of the five tourism initiatives aimed at promoting tourism in the area.

Nkowankowa's density is considered to be medium within the South African town density standards. **(See diagram 3 Nkowankowa)**

Dan Village

Dan Village is situated adjacent to Nkowankowa along the R36 road being a large residential area with limited business operations. Functionally Dan Village is seen as part of Nkowankowa district growth point and therefore interdependent on each other. Dan Village occupies an area of 952,55Ha with a population of 20 375 people (Census, 2011) and 5 456 households translating into a population density of 2139p/km². Dan Village primarily functions as a dormitory dependent on Tzaneen and Nkowankowa for its economic survival. **(See diagram 4 Dan Village)**

Lenyenye

Lenyenye is located off the R36 road south of Nkowankowa and Dan Village at a distance of 27km from Tzaneen and 23km from Nkowankowa respectively. Like Nkowankowa, Lenyenye is mainly a dormitory town with a population of 12 099 (Census, 2011) on an area of 881,2Ha with 3 145 households translating into a density of 1 373 p/km². Lenyenye is provided with civic services and facilities such as magistrate court, post office, police station, clinic, community hall, schools, sports facilities and a partly functional industrial township and surrounded by rural and informal settlements. **(See diagram 5 Lenyenye)**

Letsitele

Letsitele is located on the R529 road which links R71 to R36. It has a population of 406 people (Census, 2011) with 129 households located on the 136,24Ha area resulting in population density of 298p/km². It is a hamlet which is well serviced with banks, schools, postal services, religious services, a cooperative that services surrounding productive farms. It also services passing trade between Tzaneen in the west and Phalaborwa to the east. **(See diagram 6 Letsitele)**

4.3.2 Rural Settlements

125 rural villages are concentrated mainly in the south-east and north-east under the areas of the chieftainship of Modjadji Royal Nation, Nyavane Traditional Authority, Valoyi Traditional Authority, Maake Traditional Authority, Mamabolo (Ga-Molepo) Traditional Authority and Mogoboya of Bathlabine Traditional Authority. In excess of 290 000 people are found in these settlements representing

approximately 74% of the population of GTM on less than one third of the land area. Most of these villages are not planned, some with residential sites measuring on average 2 000m² each. The presence of the big plots results in very low densities and sprawls into good agricultural land and/or environmentally sensitive areas. Services in some areas are rudimentary to non-existent in others. Traditional land allocation system does not consider suitability of use and/or availability of services. Furthermore, some of the villages are very big covering many kilometres as a result some of the residents have no immediate access to services. These settlements on the main operate as dormitories and residents have to travel long distances to places of work, be it in the farms or towns.

North/ East Settlements

Rural settlements in the north-east are smaller in size, scattered and more difficult to service and further away from Tzaneen town. These have also experienced population decline between the periods 2001–2011 (StatsSA). Lack of job opportunities is cited as a reason of the experienced decline. **(See Diagram 7: Settlements on the north-east (Xihoko, Ga-Wally, Ga-Mokgwathi, Babanana, Mamitwa, Nwajaheni)**

South/East Settlements

On the other hand rural settlements located in the south are bigger in size, more consolidated, easier to service and experienced population increase between the periods 2001-2011(StatsSA). The population increase has brought about pressure for the provision of more services. These settlements are located closer to Nkowankowa, Tzaneen and Letaba Estates which provide job opportunities.

Mokgolobotho, Nkowankowa and Mariveni encroach on land with high agricultural potential in both the south and south-west. Outward expansion of these developments to the south and south-west should be curtailed; instead internal densification should be promoted as well as the protection of areas with high agricultural potential. **(See diagram 8: Nkowankowa Settlements on the North/West), (See diagram 9: Sangoma), (See diagram 10: Maake), (See Diagram 11: Tours)**

External expansion of Tours Village be curtailed instead tourism related activities should be promoted.

Sangoma

Expansion of the settlements beyond their external footprint is discouraged as this may have an effect on quality service delivery.

Isolated villages (Lefaro and Sangoma)

Development of isolated villages should be discouraged as they are not linked either to social or economic services. **(See diagram 12 Isolated villages(Lefaro and Sangoma)**

Settlements encroaching on environmentally sensitive land (Maake, Mogapeng and Shiluvane)
Discourage development of sprawl into environmentally sensitive land.

PART B

5. AREAS FOR DENSIFICATION

Nodes, urban, rural settlements located in strategic areas and transport orientated and activity spine development are suitable for densification as they comply with strategic densification principle.

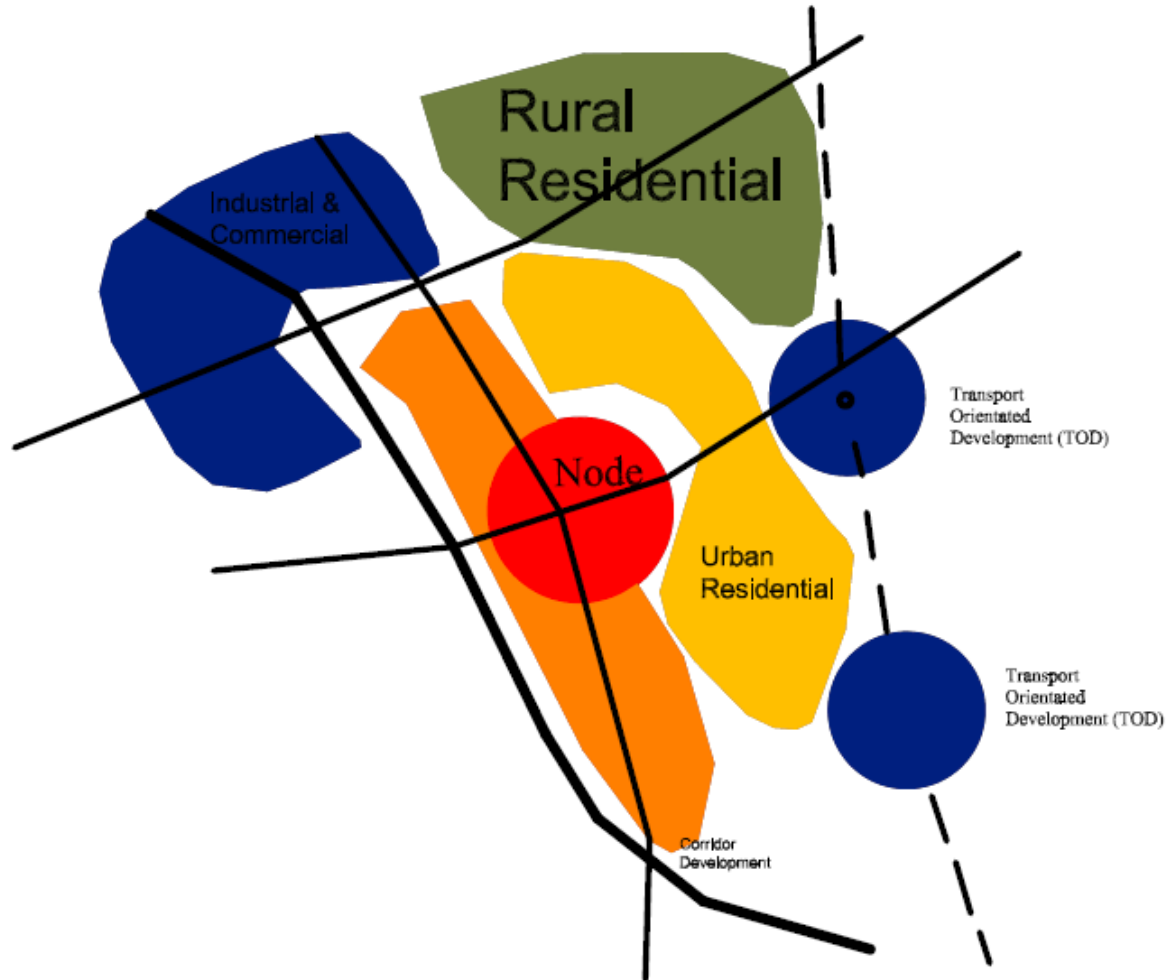


Figure 9: Areas for densification

5.1 Nodes

Nodes are some of the major structuring elements of the space economy as they represent economic investment and growth and population densities, together with movement networks and corridors. The strength of a node has a major effect on the surrounding area. Nodes represent the interaction of both the private and public sector at a given space as anchors of development. Nodes are often associated with higher residential densities and also the intensity of all other relevant land uses.

Nodes can be of a single use type, such as industrial, commercial, residential or even conservation, or they can be of mixed use. In all cases, viable nodes need to promote:

- ❖ Clustering of activities and higher intensity of investment and use, to achieve economic and infrastructure efficiency.
- ❖ Multi-modal transportation and pedestrian accessibility.
- ❖ A sense of place within a defined area.

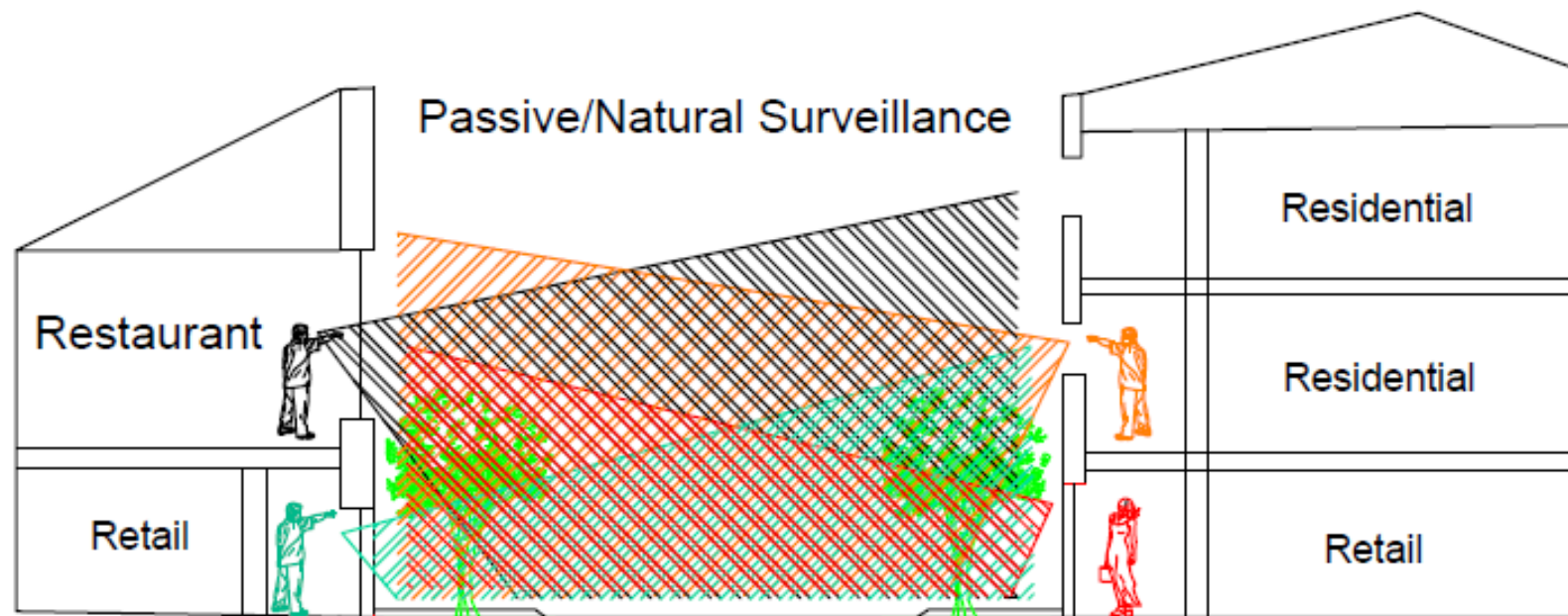


Figure 10: Example of densification through mixed use

Nodal types and characteristics

NODAL TYPE	DEFINITION	CHARACTERISTICS	EXAMPLE OF BUSINESS CENTRES
PRIMARY	<p>It is an urban centre with very high existing economic activities and potential for growth. It has complex economy whose importance is not limited to the local economy. It plays an important role at all levels (national, provincial and local). It also provides among others regional health and social facilities, complex industries, high density residential developments and shopping centres of +25 000m².</p>	<ul style="list-style-type: none"> • This area is the most accessible within a Municipality. • A multiple of functions, services and goods are found within such a centre ranging from primary to tertiary services. • This area has the most public transport facilities, high density residential uses, best infrastructure services. 	<p>All major retail, commercial and business facilities</p>

NODAL TYPE	DEFINITION	CHARACTERISTICS	EXAMPLE OF BUSINESS
SECONDARY	On the other hand a secondary node is an urban centre with simple to complex economy and the potential for growth. It services the regional economy, provides health and social, justice services at a regional scale with shopping centres ranging between 20 000m ² – 25 000m ² .	Industry, taxi ranks, shopping centre, social facilities such as hospitals, police stations, magistrate courts, fire services and other functions.	Regional retail, commercial and business facilities. Shopping centres.
TERTIARY	This is a centre which provides services and the economy at community level. Services such as local clinics with satellite social facilities, policing services, a shopping centre ranging between 10 000m ² - 15 000m ² .	<ul style="list-style-type: none"> • Convenience stores and related activities daily needs, strong pedestrian presence • Should not be allowed to be of an intensity that would “cannibalise” CBD of a primary node. • Schools, clinics, library, postal agency and other facilities 	Filling station, stores, small free-standing centres, neighbourhood centres and community centres.
SATELLITE	This is a centre that operates at neighbourhood level for immediate needs and services. It also services local economy and more importantly rural development activities as an anchor for rural economy.	Satellite clinics, schools, library and other facilities corners shops.	• Small sized shops (mainly individual owned).

5.2 Residential Areas

Residential areas are developed in urban and rural areas where urban areas are mostly developed with high density high rise buildings which may be developed as residential buildings or with multiple uses such as businesses or retail services on the ground floor with either offices or residential on the second floor and the rest of the building with residential units. These are mostly located along activity spines, within the CBD and in close proximity to places of work such as industrial, commercial and/or business parks. Medium densities are mostly located on the outskirts of CBDs with low densities often located on the periphery of the urban areas. In rural traditional areas Traditional leaders are authorities that allocate sites that result in low density settlements. Some of these

settlements sprawl into land that must be protected and preserved for agriculture and conservation. Commercial farm settlements are used for residential purposes of the farm workers and constitute very small settlements.

5.3 Transport Orientated Development and Activity Spines

Movement systems within areas create an economic opportunity for the area. The design and movement patterns determine its levels of convenience for users both local residents of visitors from other areas. What also makes a movement system and its infrastructure viable, are the levels at which it is used in an efficient and convenient manner.

Successful implementation of development corridors is underpinned by reliable and organized public transport system. Residents and workers within a transport orientated development rely on public transport for their movement. This movement enhances higher densities and in turn increase economic activities in an area. Currently Greater Tzaneen Municipality's transportation network is not very strong but limited only to local and long distance taxis and buses. The passenger rail system is not being utilised.

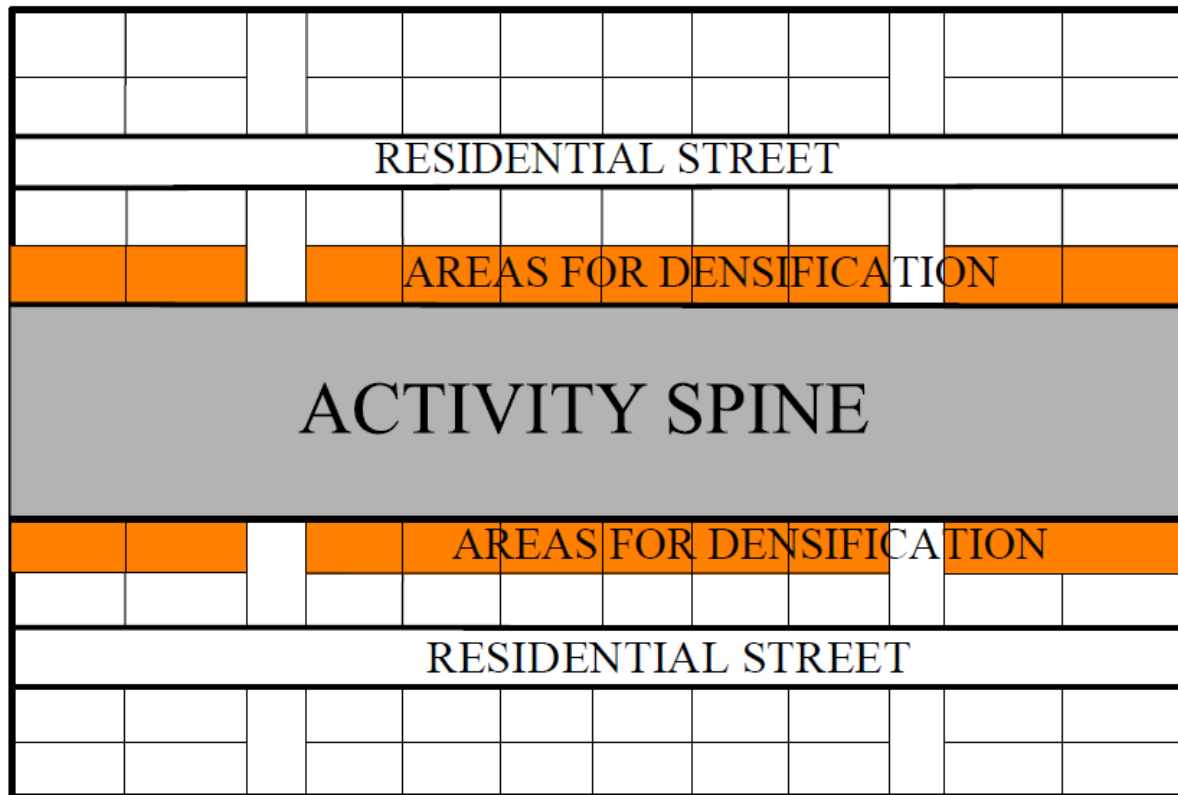


Figure 11: Densification along activity spines

Activity spines have a potential for higher density due to their mixed use nature either on a single stand or along parts or on the entirety of the spine. Residential uses are ordinarily provided in multi storey buildings whilst the ground levels are used for businesses. Greater Tzaneen Municipality has potential to densify along activity spines.

6. PROPOSED DENSITIES

6.1 Primary and Secondary Nodes

The following densities are proposed for urban areas with the potential to increase as per the intensity and development growth of the urban areas:

	2017	2021
Residential 1	10 - 50 du/ha	10 - 50 du/ha
Residential 2	20 – 35 du/ha	25 – 40 du/ha
Residential 3	40 – 50 du/ha	45 – 55 du/ha
Residential 4	40 – 50 du/ha	45 – 55 du/ha

The above densities will be supported by infrastructural capacity on well-located land.

Densification of these areas should not only be limited to development of smaller erven but mixed development could be in the form of duplexes, flatlets and high rise buildings including businesses, recreation, parking and other uses in suitable areas. Mix use should also include affordable housing.

6.2 Rural settlements

The GTMs Review IDP Housing Chapter has confirmed that the characteristic of the current residential development is low density with an average density of 5 stands per ha which is conducive to sprawl. This translates to 2000m² stand. These residential properties are mostly developed with a single residential building while the rest of the property remains unused. The continuation of such allocation of properties results in massive sprawls leading to the encroachment on either areas of high agricultural potential or environmentally sensitive. The following densities are proposed to curb sprawls:

	2017
Rural residential	16 - 20 du/ha
Undetermined	12 du/ha

These densities must be supported by availability of infrastructure and services on appropriate land.

6.3 Commercial farm and tourism related settlements

The density for commercial farm (Agri-villages) and tourism related settlements is 20 du/ha.

These densities will be enforceable through the Comprehensive Land Use Management Scheme upon its promulgation.

7. DENSITY GUIDELINES AND CONTROLS

The table below illustrates density guidelines and controls for proposed areas of densification, proposed density and land uses.

AREAS FOR DENSIFICATION	PROPOSED DENSITY PER HA		LAND USE CONTROLS	
	Zoning	Density per hectare	Coverage (%)	Height (storeys)
Primary Node	Residential 1	10 - 50 du/ha	50	2
	Residential 2	20 – 35 du/ha	50	2
	Residential 3	40 – 50 du/ha	60	2
	Residential 4	40 – 50 du/ha	60	3
Secondary Node	Residential 1	10 - 50 du/ha	50	2
	Residential 2	20 – 35 du/ha	50	2
	Residential 3	40 – 50 du/ha	60	2
	Residential 4	40 – 50 du/ha	60	3
Tertiary Node	Rural residential	16 - 20 du/ha	60	2
	Undetermined	12 du/ha	60	2
Central Business District	Mixed land uses	40 – 50 du/ha	60	3
Activity Spines	Mixed land uses	40 – 50 du/ha	60	3

8. DENSIFICATION MANAGEMENT

The administrative context for the management of residential density in GTM is based on statutory powers, as well as on enforceable administrative measures. The administrative measures can include a range of incentives and disincentives to encourage densification in a spatially desirable manner.

8.1 Incentives and Disincentives

It is imperative that higher densities be sought throughout GTM in strategic locations to ensure a more sustainable urban structure, but also to ensure that GTM can accommodate future population growth rates within the municipal area. To this end, residents and developers should be encouraged to develop at higher densities within GTM. The following incentives and disincentives can be considered:

a. Incentives

- ❖ Bulk service contribution reductions can be provided for development applications that aim to densify a property in a suitable area and comply with the densification criteria.
- ❖ Special provisions can be made by GTM for the fast-tracking of land-use applications that aim to densify a property in a suitable area and comply with the densification criteria.
- ❖ Special municipal rates or property taxes can be used to stimulate the development of properties in suitable areas and comply with the densification criteria.

b. Disincentives

- ❖ No approvals for high density should be granted on land unsuitable for such.
- ❖ Parking control can be used to encourage the use of public transport and the development of higher densities near public transportation routes.
- ❖ Suspending infrastructure provision in peripheral areas can be used as an urban containment measure that functions in a similar manner to that of a functional urban boundary.

8.2 Direct Public Investment

In order to achieve an urban environment that is conducive to densification, GTM will have to invest in aspects such as:

- ❖ the provision of community facilities and open space in areas earmarked for higher densities
- ❖ the provision of an efficient, high-quality public transport network over the long run to coincide with the urbanization of GTM.
- ❖ the provision of municipal services infrastructure to support higher densities.

Investment by GTM as set out above is essential to provide the appropriate environment for private investment in higher-density development. The practical way of doing this is through the IDP, which aligns the municipal budget to encourage higher density developments in appropriate areas of GTM.

8.3 Partnerships

GTM may identify suitable development partners, especially for affordable housing that may develop on GTM owned land where the land cost is not passed to the developer who provides services and building construction.

GTM may also partner with traditional leaders by contributing a percentage of levies to a traditional authority where their land is to be used for extension of urban boundaries.

8.4 Targets and Framework

Densification in GTM is not a short-term initiative, but will only be achieved over the longer term. It is therefore important to structure the process of densification in such a way that certain targets can be met within certain shorter-term timeframes, which allows each smaller target achieved to contribute to the ultimate, long-term goal of densification.