









Thaba Nchu Sanitation

Legend

-  Cadastral
-  WWTW
-  Sewer Lines
-  Landfill Site
-  National Roads
-  Provincial Roads
-  Other Roads
-  Dams/Rivers

Source: Mangaung MM

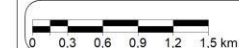
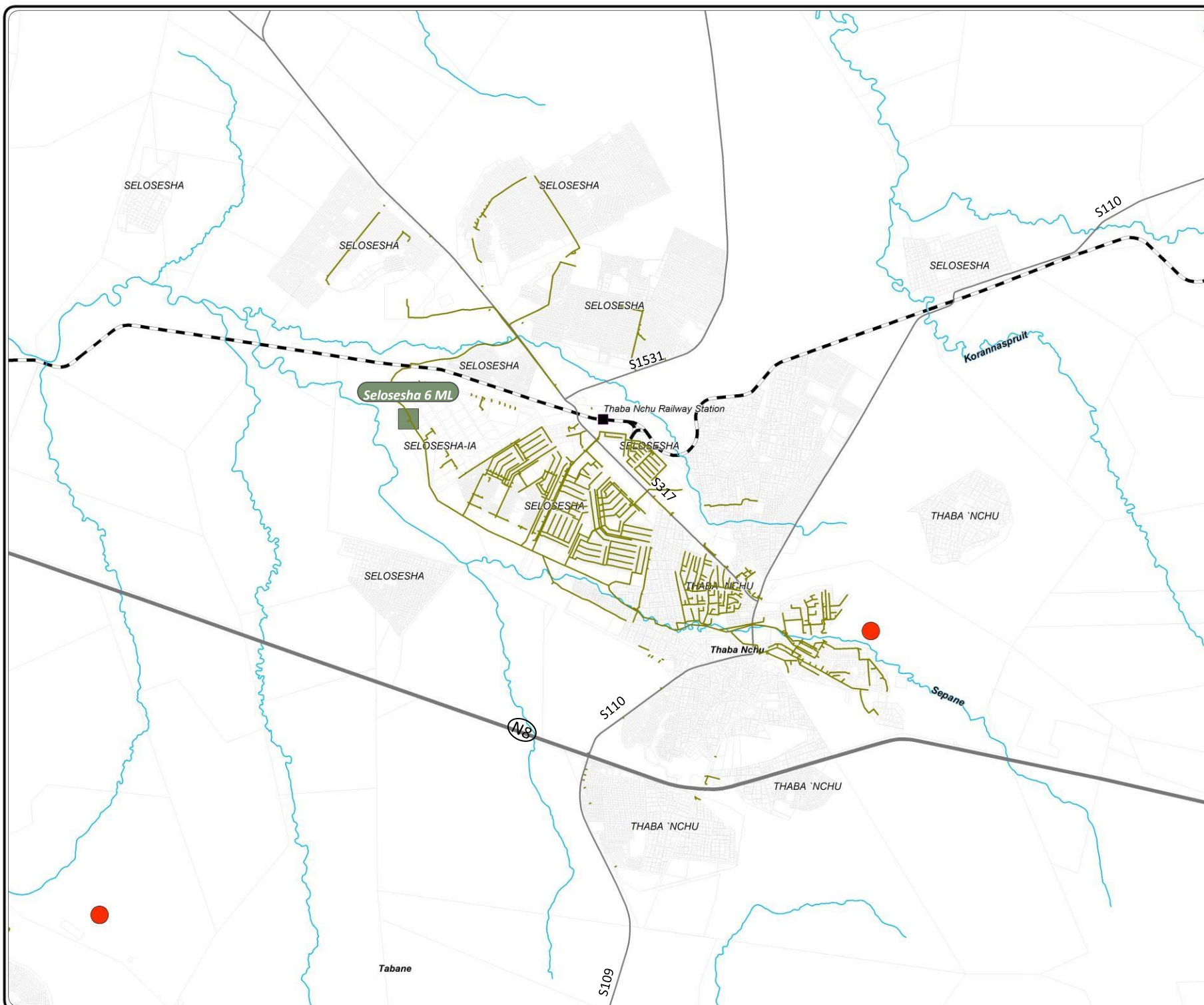


Figure 3:50



Soutpan / Ikgomotseng Land Use

- Business
- Municipal
- Community Facilities
- Church
- Educational
- Informal Settlement
- Residential
- Cemetery
- Sports and Recreation
- Vacant
- Open Space
- Salt Pans
- Police
- Clinic
- Library
- Oxidation Ponds
- Landfill Site
- Reservoir
- Provincial Roads
- Secondary Roads
- Dams/Rivers

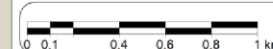
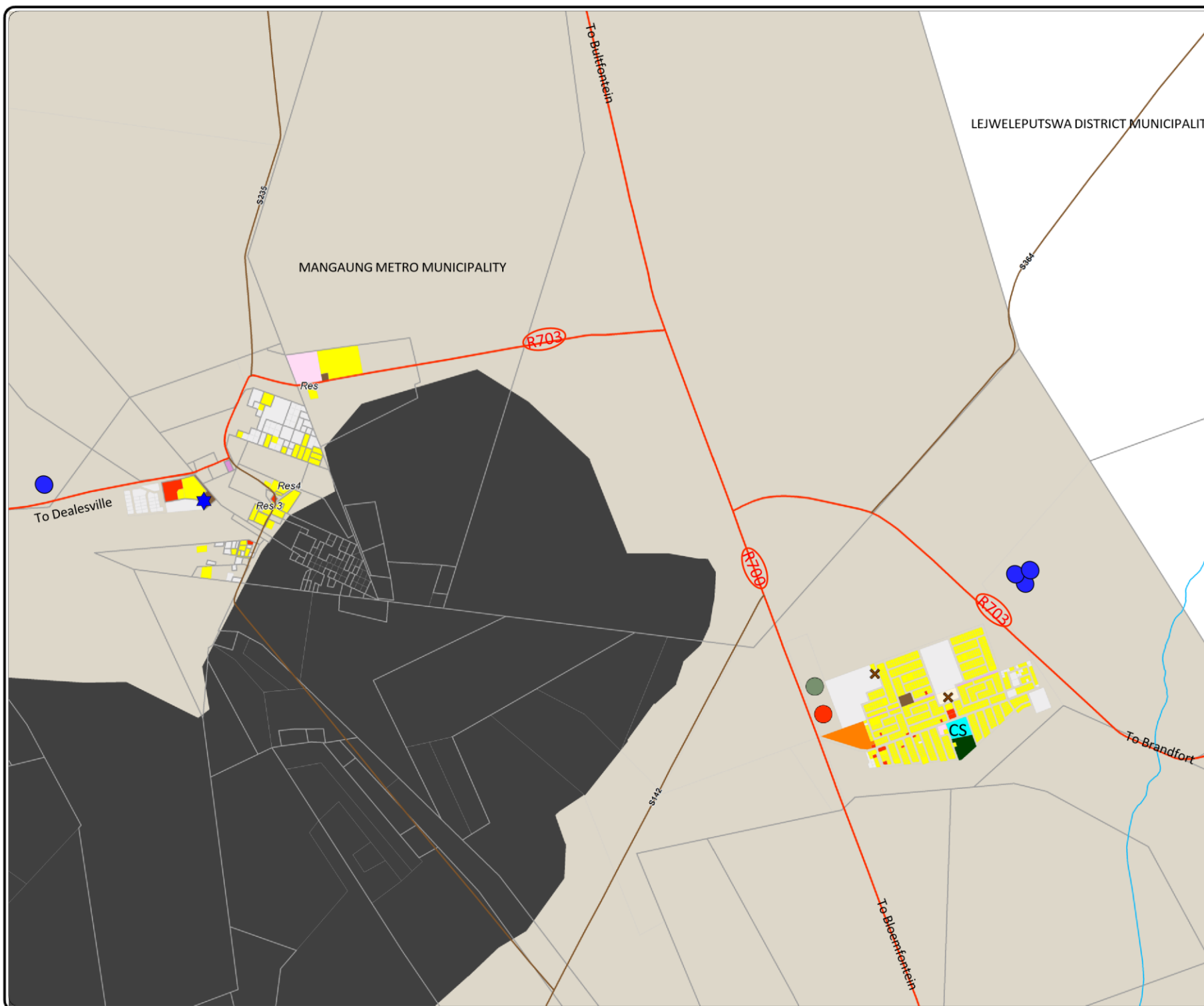


Figure 3:51



e) *Engineering Infrastructure*

- Water is sourced from boreholes in the surrounding areas from where it is stored in one reservoir to the west of Soutpan and two reservoirs to the north-east of Ikgomotseng.
- The wastewater treatment works is located to the northwest of Ikgomotseng with the refuse disposal site directly adjacent to the south thereof.

3.4.7.5. Dewetsdorp

a) *Salient Features*

- Dewetsdorp is located on the farm Kareefontein approximately 75 km to the south-east of Bloemfontein along route R702. (Refer to **Figure 3:52**).
- The western part of the town represents the former Dewetsdorp while Morojaneng is located to the east thereof on the opposite side of the Kareefontein Spruit which flows through the town from south to north.
- The population of the town is about 10,595 people, representing an estimated 3,071 households.

b) *Movement Network*

- Route R702 from Bloemfontein to Wepener passes the town to the north-east.
- Links to Dewetsdorp are provided via two access routes:
 - Voortrekker Street to the north and Church Street (which is the main link into town) to the north-east. The Voortrekker access route runs parallel to the golf course from where it links into Dewetsdorp. It runs through the town's CBD and extends into Morojaneng across the Kareefontein Spruit from where it continues as Tsuene Street.
 - The second link road (Church Street) runs parallel to the north of Morojaneng along the Kareefontein Spruit flood line up to where it links into the Dewetsdorp CBD. To the north of route R702 it extends north-eastwards as route S733 towards Hobhouse, and it provides access to the Dewetsdorp railway station and the town's airstrip and sewer treatment works.
- The railway line runs parallel to the north of Route R702 but is not operational anymore.
- Route R717 from Reddersburg enters the town from the west while a gravel route (S120) from Smithfield links into the town from the south (runs parallel to the Kareefontein Spruit).

c) *Layout*

- The western part of the town (Dewetsdorp) comprises a grid layout pattern with long streets perpendicular to the contours to facilitate leading water from reservoirs above the town.
- Morojaneng to the east comprises a layout along curvilinear grids shaped by the surrounding topography. Essentially, it comprises a central core area directly opposite to the east of Dewetsdorp with an extension to the north up to route R702; and an extension towards the south aligned to the topographic constraints.
- Morojaneng is linked to Dewetsdorp via Voortrekker – Tsuene Street to the south, along Leteane Street next to the fire brigade; and Sefothelo Street further to the north, close to route R702.

d) Economic Activity and Community Facilities

- The economic core (CBD) of the town is located in Dewetsdorp along Church Street and Voortrekker Street as illustrated on **Figure 3:52**.
- This business area also holds the municipal offices, police station, library, old age home, as well as the clinic.
- In the Morojaneng area business activities are scattered along Tsuene Street (the extension of Voortrekker Street); and Sefotlhelo Street further to the north (very limited).
- Morojaneng also has a clinic and library while licensing, public works and fire brigade services are located along Church Street at the Leteane Street intersection opposite to the east of the showgrounds.
- There are also two primary schools and one high school in Morojaneng while Dewetsdorp has a combined school located at the north-western end.

e) Services: Engineering Infrastructure

- There are four cemeteries in the town of which the one in Morojaneng next to route R702 is the largest.
- The landfill site is located about 2 kilometres to the south of the town (along route S661).
- Bulk water is stored in three reservoirs located on the hill bordering the town to the south. The bulk water feeder line runs parallel to the Kareefontein Spruit and the Smithfield Road from the south.
- Bulk electricity supply is provided from the north-east along the road reserves of the Hobhouse Road and route R702 to Wepener with the substation being next to the fire brigade.
- The bulk outfall sewer line runs parallel to the north of Church Street up to the sewer treatment works located next to the railway station. There are also two bulk sewer links into Morojaneng.

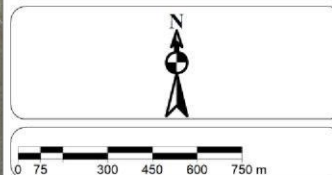
3.4.7.6. Wepener/Qibing

a) Salient Features

- Wepener is located about 120 kilometres south-east of Bloemfontein along route R26 to Zastron (see **Figure 3:53**).
- The Van Rooyens Gate Border Post to Lesotho is located about 8 kilometres to the east of the town along route P66/R702.
- The town was established along the banks of the Jammersberg Spruit which is a tributary of the Caledon River which passes about two kilometres to the west of the town.
- The Jammersberg Spruit flows in an east-west direction and bisects the town into a northern and southern section. The river is characterized by a wide floodplain with frequent incidents of flooding being recorded.

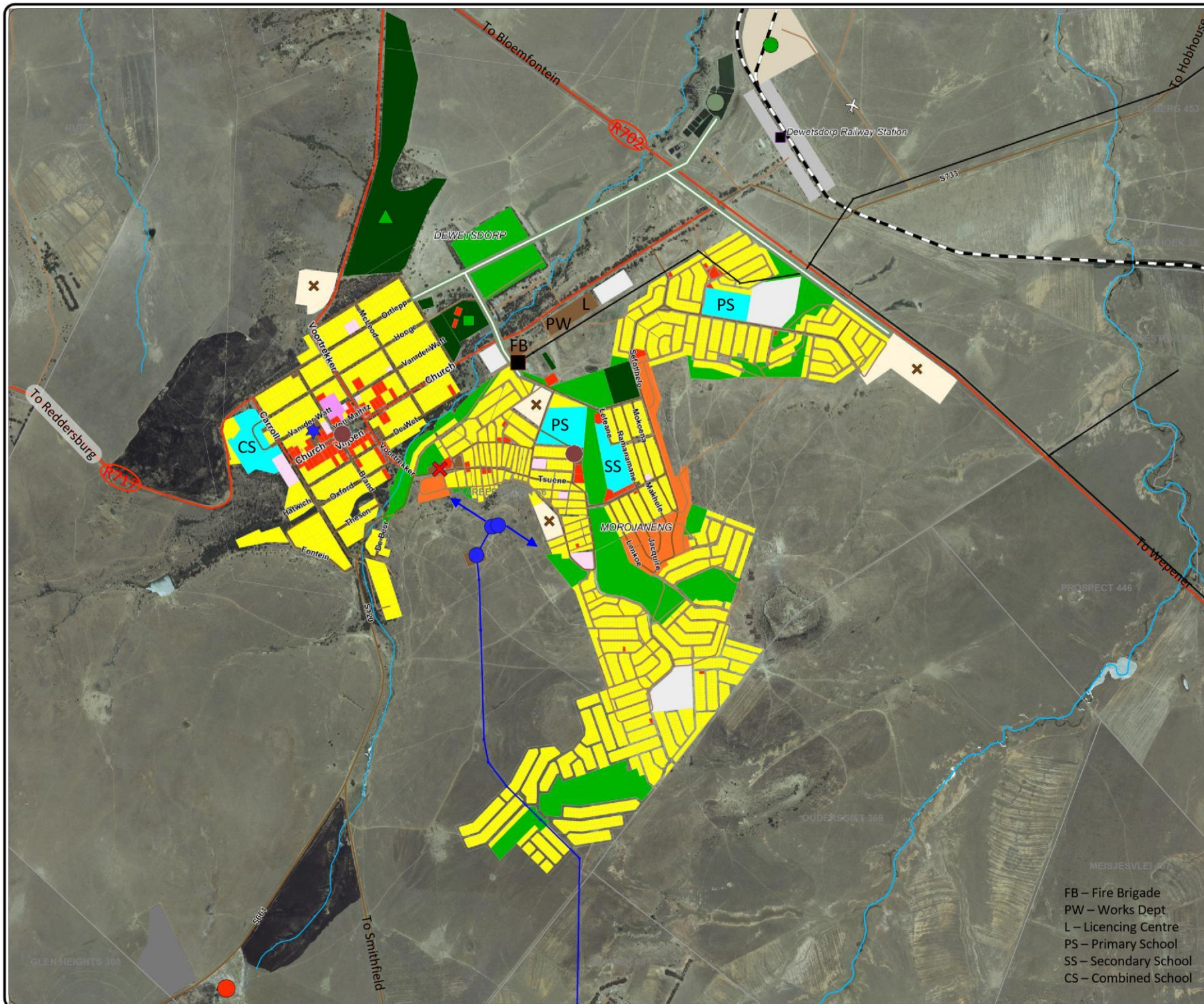
Dewetsdorp/ Morojaneng Land Use

- Business
- Municipal
- Community Facilities
- Church
- Educational
- Informal Settlement
- Residential
- ✕ Cemetery
- Industrial
- Sports and Recreation
- ▲ Golf Course
- Show Grounds
- Vacant
- Silos
- Open Space
- ★ Police
- ✕ Clinic
- Library
- Oxidation Ponds
- Landfill Site
- Reservoir
- Provincial Roads
- Secondary Roads
- Railway Line
- Railway Station
- Dams/Rivers
- ✈ Airfield
- Electrical Line / Sub Station
- Bulk Water
- Bulk Sewer Outfall



FB – Fire Brigade
PW – Works Dept
L – Licensing Centre
PS – Primary School
SS – Secondary School
CS – Combined School

Figure 3:52



Wepener / Qibing Land Use

- Business
- Municipal
- Church
- Educational
- Informal Settlement
- Residential
- Cemetery
- Sports and Recreation
- Vacant
- Parking
- Open Space
- Police
- Clinic
- Court
- Oxidation Ponds
- Landfill Site
- Reservoir
- Provincial Roads
- Secondary Roads
- Railway Line
- Railway Station
- Dams/Rivers
- Bulk Water Line
- Bulk Sewer Outfall

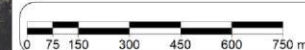
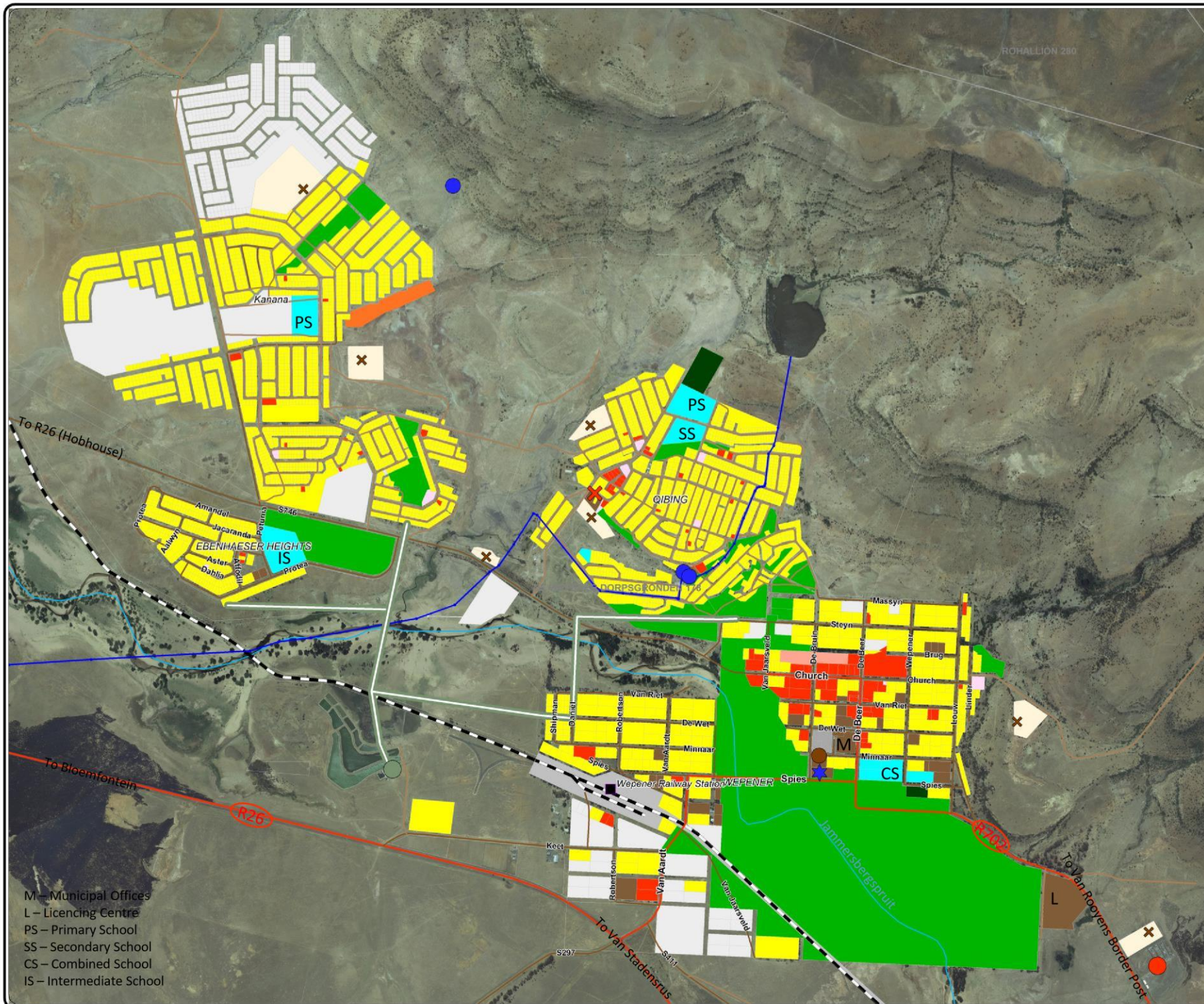


Figure 3:53



M – Municipal Offices
L – Licensing Centre
PS – Primary School
SS – Secondary School
CS – Combined School
IS – Intermediate School

- To the north and north-east, the town is bordered by the Jammersberg (comprising Dolerite formations) and which makes northward expansion of the town impossible.

b) Movement Network

- Route R26 is the main road serving the town linking to Bloemfontein to the west (via route R702), to Hobhouse to the north, and to Van Stadensrus and Zastron to the south.
- The R26 link to Hobhouse runs a few kilometres to the west of town parallel to the Caledon River from where route S746 provides a link across the Caledon River and into town – also serving Ebenhaezershoogte and Qibing. This route runs parallel to the north of the Jammersberg Spruit and is occasionally flooded – especially the section closest to Wepener Town.
- Route R26 also passes the town to the south from where it runs towards Van Stadensrus and Zastron. This section of route R26 provides access to the town via Van Aardt Street.
- Van Aardt Street crosses the railway line and then terminates in Spies Street which crosses the spruit to link into the Wepener town area north of the spruit. From here it extends eastwards as route P66 / R702 up to the Van Rooyens Gate Border Post with Lesotho.
- The railway line passing through Wepener is the Bloemfontein Zastron line which is not operational anymore.

c) Layout

- Wepener town represents the middle- and higher-income residential area and both the northern and southern portion comprise an open grid layout pattern.
- The southern part of Wepener was developed around the railway line with the (now defunct) Wepener railway station representing the central core of this precinct.
- Qibing is located directly adjacent to the north-west of Wepener (less than 1 kilometre away) and with the new extensions of Kanana being located about 1 kilometre further to the west. The northern extensions of Kanana are still vacant.
- Opposite to the south of Kanana is Ebenhaezershoogte (south of route S746).

d) Economic Activity and Community Facilities

- The CBD of Wepener is L-shaped along Church Street and De Beer Street which represent the two main streets from the west and south into the town.
- Some business activity also established in the southern section of Wepener and specifically along Van Aardt Street between the intersection onto route R26 and the railway line. This includes, amongst others, a filling station.
- In Qibing, economic activity is limited to a small node around the clinic along the western access road into the township, and a number of home industries/spazas scattered throughout the remaining parts of the township. The same applies to Kanana where a few small businesses/spazas are scattered throughout the area.
- The police station and magistrate's court are located at the intersection between Spies and De Bruin Streets in Wepener, and with the municipal offices and town hall adjacent to the east thereof along De Beer Street.

e) Engineering Infrastructure

- A bulk water feeder line enters the town along the Jammersberg Spruit from the west, and feeds into the two reservoirs located at the highest point in Qibing from where water is distributed throughout the town. This supply is augmented from the dam located to the north of Qibing.
- The bulk outfall sewer lines link up with Ebenhaesershoogte, Kanana, Qibing and Wepener respectively from where it converges at the sewer treatment works (5 ML capacity) located to the south-west of the town.
- Bulk electricity feeds into the town along the alignment of route R702/S746 from the west.
- The landfill site is located along route R702 to the south-east of town on the route to the border post.

3.4.7.7. Van Stadensrus

a) Salient Features

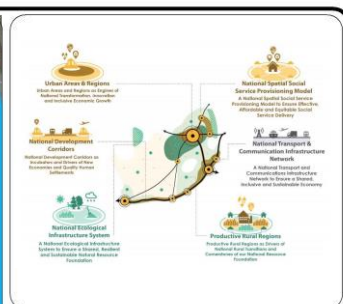
- The town was proclaimed in 1926 and is named after its founder M.H. Van Staden.
- It has a relatively small population of about 1,982 people with an estimated 651 families of which the majority (66%) fall in the low-income category.
- The town has no economic base apart from the surrounding farming activities.

b) Movement Network

- Van Stadensrus is located along route R26 in the far south-eastern extents of the municipality and is accessed via Marthinus Street which links onto route R26 (see **Figure 3:54**).
- The street network is an open grid system with Francina and Fountain Streets providing access to the Thapelang area to the north.
- Road S358 continues to the west of Van Stadensrus leading towards Gelukwaarts.
- There is no railway infrastructure nor an airfield serving the town.

c) Layout

- The Van Stadensrus Dam is located to the north-east of the town and is the main source of water to the town.
- This dam forms part of the Nuwejaarspruit River which flows to the north of the town.
- The average plot size in the south-eastern and central parts of Van Stadensrus is about 2,000 m²/plot while a few blocks to the west and north-west comprise smaller erven averaging about 450 m²/plot.
- In Thapelang to the north the erven are significantly smaller at about 300 m²/erf while some incidences of informal settlement occur along the southern and eastern fringe of the town.
- From **Figure 3:54** it is evident that a significant number of erven in Van Stadensrus are vacant.



Van Stadensrust/ Thapelang Land Use

- Business
- Municipal
- Community Facilities
- Church
- Educational
- Informal Settlement
- Residential
- Cemetery
- Sports and Recreation
- Vacant
- Open Space
- Police
- Clinic
- Library
- Oxidation Ponds
- Landfill Site
- Reservoir
- Secondary Roads
- Dams/Rivers
- Water Feeder Line
- Outfall Sewer

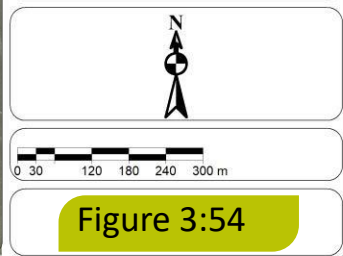


Figure 3:54

d) Economic Activity and Community Facilities

- As noted above there is no significant economic base in the town.
- Apart from about five small business activities (including an old closed down hotel) and small-scale agriculture on the individual plots, there are no signs of any economic activity. Two of these business uses are located in Thapelang.
- In terms of community facilities, there is a small police station, clinic, municipal office, library and secondary school in Van Stadensrus while a primary school is located in Thapelang.
- There are also a few churches in both areas and two cemeteries located to the south-west.
- A sports field complex is located between Van Stadensrus and Thapelang.

e) Engineering Infrastructure

- Water is sourced from the Van Stadensrus Dam from where it is pumped and stored in two reservoirs to the south-east thereof. From here water is distributed into the town via three feeder lines: the one running along the southern border of the town; the second running along route S358 through the central parts of town; and the third line serving Thapelang to the north.
- The wastewater treatment works is located to the west of town close to the Nuwejaarspruit with two outfall sewer lines feeding into it – one from Van Stadensrus and the other from Thapelang.
- The refuse disposal site of the town is located to the south-west between the two cemeteries.

3.5. KEY DEVELOPMENT ISSUES AND OPPORTUNITIES

a) National Context

- The MMM is strategically located in the central part of the country between the three metropolitan areas in the economic heartland in Gauteng, and three coastal metropolitan areas with export harbours (East London/Buffalo City, Port Elizabeth/Nelson Mandela Bay and Cape Town).
- It also serves an east-west movement desire line between Upington, Kimberley and Maseru – the capital city of Lesotho.
- In line with its central location, it is linked to the national/N1 subcontinental corridor (road and rail) between Musina and Cape Town; the east-west N8 corridor (road and rail) between Kimberley and Maseru; and the Bram Fischer International Airport.
- The MMM acts as central place to an extensive agricultural region comprising part of the national Central Agricultural Heartland; the Agri Enterprise and Small-Scale Farming Resource Region; and the Arid-Agri Innovation Region.
- Linked to the above, the metro is well-positioned towards the promotion of “Green” industries; Agro-Processing and Transport, Freight and Logistics as industrial sectors.

b) Provincial Context

- Mangaung is the capital city of Free State Province, and apart from performing the associated administrative and legislative functions, it also represents about 28% of the provincial population and contributes an estimated 40,5% of the provincial GVA and around 270,000 job opportunities.

- Spatially, the MMM performs a similar central place function in provincial context as it does in national context.
- The most important regional development corridors to promote are the N8 corridor between Maseru and Bloemfontein and the N6-R26 tourism corridor which is not optimally utilized at this stage.
- The Agri Park initiative to be established around Thaba Nchu as the Agri Hub and three surrounding Farmer Production Support Areas could make a significant contribution towards rural development in the north-eastern parts of the MMM.

c) Municipal Context

- Mangaung has a population of about 878,834 people representing around 285,385 households.
- Skills levels are relatively low and only about 10% of the population have any tertiary education/qualification. Linked to the lack of skills the MMM unemployment rate stands at 27,1%.
- An estimated 61% of the municipal households fall in the low-income bracket earning less than R 3,500 per month. This has serious implications in terms of people's ability to pay for services and also requires special measures to ensure that services are provided at an affordable level in order to enhance the financial viability of the municipality.
- There are extensive amounts of industrial land available along route N8 east at Bloemindustria, Botshabelo and Thaba Nchu (approximately 579 ha of land).
- A significant amount of land (\pm 185,000 ha) is owned by any of the three spheres of government and could be utilized to promote spatial transformation.
- Bloemfontein, Dewetsdorp and Wepener act as central service centres to surrounding agricultural communities.
- Botshabelo and Thaba Nchu perform the same functions as the three areas mentioned above, but they serve the same functional area due to their close proximity to one another (including about 27 rural villages).
- This leads to the costly duplication of services and facilities in the two areas.
- The 27 rural villages in the areas surrounding Thaba Nchu are very costly to service and are too small to achieve the "critical mass" required to stimulate economic activity.
- The population/ households in most of the towns are disproportional to the number of job opportunities offered in these, e.g.:
 - Mangaung/Bloemfontein: 1 Household per job opportunity
 - Botshabelo / Thaba Nchu: 2,8 Households per job opportunity
 - Small Towns (Dewetsdorp/Wepener): 2,2 Households per job opportunity.
- As a result of the above, the urban dependencies of Botshabelo and Thaba Nchu on Bloemfontein is a significant challenge, requiring 13,000 commuters to travel daily along the N8 corridor.

C1. Bloemfontein

- Although the N1 corridor stimulates economic development around the access interchanges as it passes through Bloemfontein, it distorts the spatial structure of the city and works against the spatial restructuring objectives to be achieved.

- The eastern parts of Bloemfontein are earmarked for large scale spatial transformation with specific focus on economic development and job creation.
- Although a few small business nodes have been established in this area over the past two decades, no significant changes have been recorded with regards to residential development. The landscape is still dominated by low-density, low-income housing with very limited progress in terms of GAP market and fully bonded higher income residential development.
- Higher income residential development, business and commercial development still favours the western parts of the city.

C2. Botshabelo

- The southern extensions of Botshabelo are very isolated with very limited economic activity and poor access to middle and higher order community facilities. Economic activity favours locations closer to the N8 freeway and the latest residential townships are also located to the north-west (closer to Bloemfontein).
- The key question is whether Botshabelo should expand to the north of route N8 and towards Thaba Nchu or not.

C3. Thaba Nchu

- In Thaba Nchu the key issue is to consolidate the fragmented urban structure and to enhance the economic viability of the existing industrial and business nodes in the area.
- Functional linkages (economic and social) to the surrounding rural villages also need to be enhanced and an economic base needs to be established in these areas (supplementary to the Agri Park initiative).

C4. Dewetsdorp

- The spatial consolidation and integration of the various parts of the town need to be implemented.
- The scale of residential development should be in line with the economic development and job creation potential of the node.
- Tourism should be promoted in and around the town.

C5. Wepener

- Access to the town (especially from route R26 west) needs to be enhanced and connectivity between the various townships needs to be improved.
- The scale of residential development should be aligned to the economic and job creation potential of the town.
- There is significant cultural-historic and environmental tourism potential in the town and surrounds which is not optimally utilized at present.

C6. Van Stadensrus/Soutpan/lkageng

- The development potential of these settlements is very limited, hence infrastructure investment should be limited accordingly. The focus should purely be on meeting the very basic social needs of the communities and providing in the constitutionally mandated minimum levels of service to such.

3.5.1. Population Projections (2019 – 2036)

- **Table 3:15** indicates that the projected population for Mangaung by 2025 is about 943,270 people and that it will increase to about 1,045,391 people by 2036.
- This represents an increment of about 64,436 people (comprising 38,139 new households) for the period 2019-2025, and an additional 102,122 people (representing 50,927 households) up to 2036. (See household information in **Table 3:16**). Hence, the total incremental population for the MMM from 2019 to 2036 is 166,558 people representing 89,066 households.
- In terms of economic activity (Refer to **Table 3:17**) it is estimated that approximately 37,435 new job opportunities could be created in the MMM area of jurisdiction by 2036. (This is based on an extensive Socio-Economic Forecast conducted by the BMR as part of the Mangaung IPTN during 2016).
- The projected incremental population, households and job opportunities provide the basis for the Land Use Budget for Mangaung which in essence is an estimate of the amount of land required up to 2036 to accommodate the additional people, households and economic activities.
- However, it should be kept in mind that the Land Use Budget should also make provision to accommodate the existing housing backlog within the MMM, and include the land required for addressing the housing backlog into the Land Use Budget.

Table 3: 15. MMM Population Projections 2019-2036

Population							Incremental Population		
Functional Area	2019	%	2025	%	2036	%	2019-2025	2025-2036	2019-2036
Mangaung / Bloemfontein	546 568	62%	605 205	64%	689 833	66%	58 637	84 628	143 265
Botshabelo /Thaba Nchu	290 055	33%	294 461	31%	308 797	30%	4 406	14 336	18 742
Rural	18 515	2%	19 239	2%	20 780	2%	725	1 541	2 265
Small Towns	23 696	3%	24 365	3%	25 980	2%	669	1 616	2 285
Total	878 834	100%	943 270	100%	1 045 391	100%	64 436	102 122	166 558

Source: Mangaung Integrated Public Transport Network, 2016

Table 3:16: MMM Household Projections 2019-2036

Households							Incremental Households		
Functional Area	2019	%	2025	%	2036	%	2019-2025	2025-2036	2019-2036
Mangaung / Bloemfontein	184 560	65%	215 456	67%	256 193	68%	30 896	40 737	71 634
Botshabelo /Thaba Nchu	87 334	31%	93 314	29%	101 784	27%	5 980	8 470	14 450
Rural	6 059	2%	6 671	2%	7 508	2%	612	837	1 449
Small Towns	7 432	3%	8 082	2%	8 965	2%	650	883	1 533
Total	285 385	100%	323 524	100%	374 451	100%	38 139	50 927	89 066

Source: Mangaung Integrated Public Transport Network, 2016

Table 3:17 MMM Job Opportunities Projections 2019-2036

Job Opportunities (Formal Workers)							Incremental Job Opportunities		
Functional Area	2019	%	2025	%	2036	%	2019-2025	2025-2036	2019-2036
Mangaung / Bloemfontein	179 000	79%	183 240	80%	212 535	81%	4 240	29 295	33 535
Botshabelo /Thaba Nchu	31 038	14%	31 203	14%	35 803	14%	166	4 600	4 766
Rural	12 121	5%	11 628	5%	11 110	4%	493	518	1 011
Small Towns	3 405	2%	3 415	1%	3 551	1%	10	136	146
Total	225 564	100%	229 487	100%	263 000	100%	3 923	33 513	37 435

Source: Mangaung Integrated Public Transport Network

3.5.2. Land Use Budget

- **Table 3:16** reflects the Land Use Budget for Mangaung Municipality for the period 2019 up to 2036.
- The total number of housing units to be catered for up to 2036 (including the existing backlog) is estimated at about 117,804 units, representing a population of around 251,040 people.
- These households comprise about 16,357 high income, 40,193 middle income, and 61,254 low-income families which would require an estimated 4,714 ha of land for housing purposes.
- Community facilities would require an additional 369 ha of land, industrial uses about 213 ha and business an estimated 122 ha. About 1,734 ha of land would be required for roads/street reserves. This brings the total additional land required for urbanisation purposes in Mangaung until 2036 to about 7,152 ha of land.
- An estimated 80% of this land (5,723 ha) is required in the Bloemfontein/Mangaung area; about 10% (711 ha) in Botshabelo; around 8% (568 ha) in Thaba Nchu, and about 2% (75 ha) in the remaining small towns.
- **Annexure A** in this document comprises the more detailed population, household and job opportunity projections (A.1), as well as the detailed land use budgets for the various urban areas (A.2) for reference purposes.

Table 3: 16. Summary of Incremental Land Use Budget 2019-2036 (including Backlog)

Facilities	Bloemfontein Nchu	Thaba Botshabelo	Small Towns	/Mangaung Thaba	Subtotal Urban	Rural	TOTAL
Inc. Population	203 462	18 720	24 306	2 285	248 772	2 265	251 037
Inc. Number of Units	92 491	9 572	12 758	1 533	116 354	1 449	117 803
High Income	15 200	457	350	114	16 119	238	16 357
Medium Income	33 064	2 913	2 834	694	39 505	688	40 193
Low Income	44 227	6 202	9 575	726	60 730	523	61 253
Incremental Land Needed (ha)							
Residential	3 754	380	480	50	4 664	50	4 714
High Income	1 216	30	23	6	1 274	24	1 298
Medium Income	1 653	146	142	24	1 965	17	1 982
Low Income	885	205	316	20	1 425	9	1 434
Business (Retail/Office)	106	7	7	1	121	1	122
Industrial	176	16	16	-	207	6	213
Community Facilities	300	27	35	3	366	3	369
Street	1 387	138	172	17	1 715	19	1 734
TOTAL	5 723	568	711	71	7 072	79	7 152

3.6. ALIGNMENT WITH NEIGHBOURING SDFS

The section seeks to address the alignment of the neighbouring SDF's with the SDF of the Mangaung Metropolitan Municipality. The Free State Province is situated between latitudes 26.6° S and 30.7° S and between longitudes 24.3° E and 29.8° E. It is South Africa's third-largest province with an area of around 129 825 km², 10.6% of the country's land area (FSP, 2005; Davis et al., 2006). The province is administratively divided into 4 municipal districts (Davis et al., 2006): Fezile Dabi, Lejweleputswa, Thabo Mofutsanyana and Xhariep. The alignment will be done with the following local municipalities and the Karoo SDF;

- Mantsopa Local Municipality to the east
- Tokologo Local Municipality to the Northwest
- Kopanong to the Southwest
- Masilonyana Local Municipality to the Northeast
- Mohokare Local Municipality to the south
- Letsemeng Local Municipality to the west and
- The Karoo Regional SDF

Refer to **Figure 4:3** in Chapter 4.

3.6.1. Urban – Rural Linkages

The linkages between the Mangaung municipality with the rural areas and smaller towns can be categorised into static and dynamic urban – rural linkages. The static urban – rural linkages refer to the infrastructure which link the various local municipalities and the rural settings through roads, rail, communication networks. The dynamic urban rural- linkages refer to the movement of goods, money, information, people between urban and rural settings and the smaller towns. The static urban-rural linkages make it possible to operationalize the dynamic urban- rural linkages.

a) Static Urban – Rural Linkages

The Region is serviced with a road network serviced by national roads authority (SANRAL), provincial roads and municipal roads. The region is mainly serviced with two main rail networks from the north to south linking the northern Provinces with the Western Cape and Eastern Cape (**Refer to Figure 3:10 and 3:11**). The other linkage is to link the Northern Cape with the Eastern Free State and Lesotho.

ROAD CLASSIFICATION	LINKAGES WITH NEIGHBOURING MUNICIPALITIES
N1	Mangaung, Masilonyana and Kopanong
N8	Mangaung, Mantsopa and Letsemeng
N6	Mangaung, Kopanong and Mohokare
R 64	Mangaung and Tokologo
R26	Mangaung and Mantsopa
R300	Mangaung and Masilonyana
RAIL NETWORK	PURPOSE AND FUNCTIONALITY
North – South Rail Network	Transportation of goods and people between Johannesburg and Cape Town and Eastern Cape
	Masilonyana, Mangaung, Kopanong Municipalities
	This is also a mainline to transport goods from industries in Gauteng with harbours at the coast.
West – East Rail Network	Mangaung , Masilonyana , and Kopanong with Sol Plaatje
	Transportation of goods and people between Sol Plaatje and Mangaung
	Transportation of goods between Mangaung, Eastern Free State and Lesotho

The other static urban – rural linkages are communication infrastructure like cell phone towers and electrical networks linking the urban and rural areas in the region and neighbouring municipalities. The Bram Fischer International airport serve as regional airport for the surrounding local municipalities (**Figure 3:11**). The MMM is in particular significant to the region based on the following services available in the metro;

- Financial Services
- Tertiary Educational Facilities like University of the Free State, Motheo College and Central University of Technology
- Skills training centres like Artisans Centres
- Medical Facilities like private hospitals, Academic University hospitals and Government Regional Hospitals
- Manufacturing hub in the sector of long-haul trailer manufacturing, motor and locomotive industries

3.6.2. The Karoo SDF.

Karoo SDF extends over three provinces to the west of the country (see **Figure 3:55**); the greater parts of the Northern, Western and Eastern Cape as well the western parts of the Free State. The whole of MMM forms part of the Karoo region.

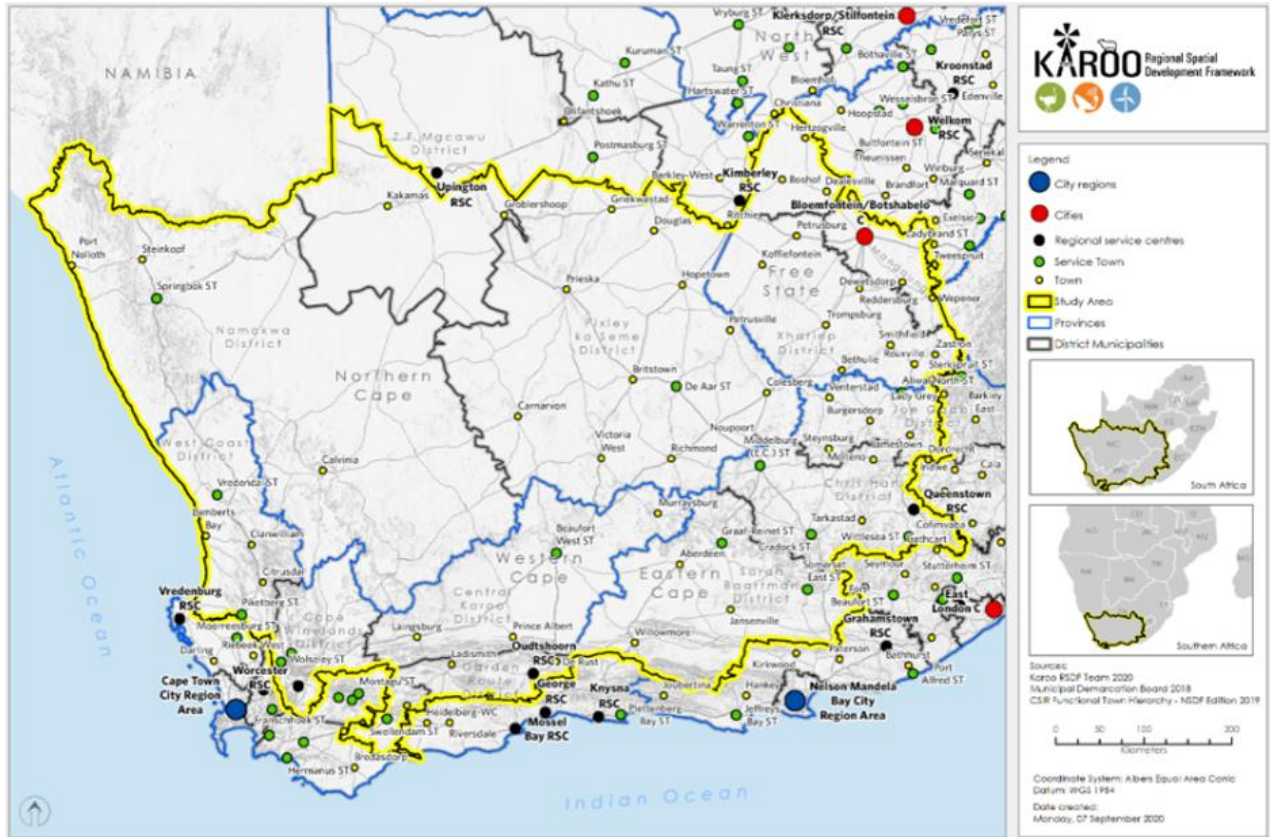


Figure 3: 55. Karoo Region in context of South Africa.

The purpose of the Karoo SDF is to provide a regional perspective on the linkages with neighbouring municipalities and the development potential in the region as defined in the Karoo SDF.

3.6.2.1. Agriculture

Agriculture is a significant and distinctive feature of the Karoo Region's economy, though it is not a strong sector in Mangaung. To ensure that this sector thrives, some regionally relevant aspects must be protected, managed, and maintained. Agriculture in the Karoo is based on the region's particular climate and vegetation. **Figure 3:56**, Agriculture Network shows the four essential geographic focal regions that must be managed and safeguarded to ensure the future of agriculture in the Karoo:

- The Karoo Region's unique vegetation areas support sheep farming and the Place of Origin product Karoo Lamb.
- There is a high-intensity crop farming area on the southwestern boundary, which includes a significant Rooibos farming area with international Place of Origin recognition.
- There is a high-intensity crop farming area on the eastern boundary, which contributes significantly to national agricultural production. The region's relevance will grow in the future, as the western

sections of the country will be increasingly affected by higher temperatures and lower rainfall owing to climate change;

- Irrigated agriculture regions contribute significantly to the regional agriculture market.

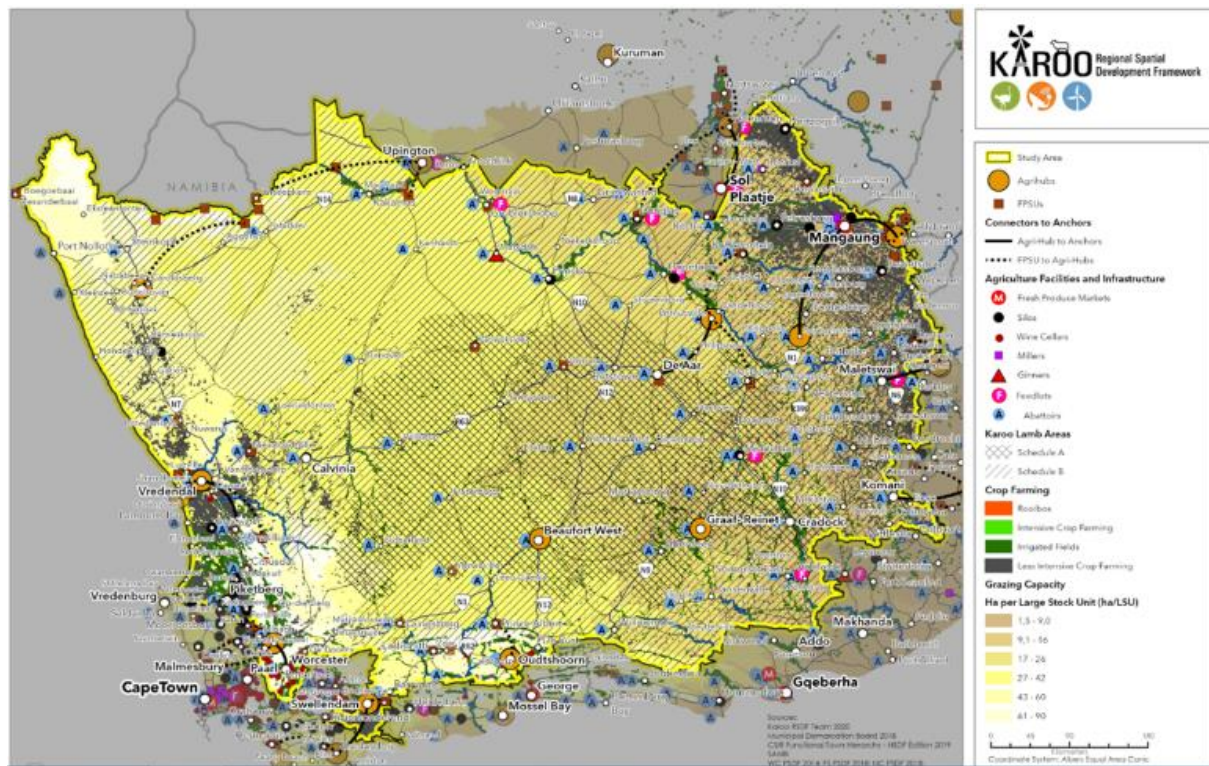


Figure 3: 56. Karoo Agriculture Network

The four focus areas are supported by a network of infrastructural elements and interconnected amenities. In addition to facility maintenance, roads/rail lines connecting these facilities to agricultural areas are vital;

- Markets:
- Abattoirs.
- Silos.
- Grai cellars.
- Ginners.
- Feedlots and
- Supportive facilities include Agri-Hubs and FPSUs.

In terms of cultivation, the onset-of-rains results clearly suggest that, for Thabo Mofutsanyane, eastern parts of Fezile Dabi, far eastern parts of Mangaung, and far eastern portions of Xhariep districts, planting can be done early, with onset occurring on or before the second decade of November in four of the five years. Rainfall in these areas ends relatively late. Rains do not begin as early in the western parts of Fezile Dabi, eastern parts of Xhariep, and the majority of Mangaung and Lejweleputswa as they do in the other regions.

3.6.3. Tourism

The following are specific issues emerging from the Free State PSDF:

- The **N1** route and the implications of this route on spatial development in the province;
- **The growth potential of towns** linked to their regional hinterlands.
- **Tourism links** with Eastern and Northern Free State, Lake Gariep tourism node and game farms/reserves. Tourism Routes: Active N8 Route, Battlefields Route, Bloemfontein, Botshabelo and Thaba 'Nchu Heritage Route, Diamond Route. Friendly N6 Route, Maluti Route, Mangaung
- Cultural Route, N5 Route, Riemland Wine Route;
- **Biodiversity** and protected areas;
- National and regional **energy transfers**, Northern Cape solar corridor extension, carbon credits, renewable energy. Xhariep Solar Region, Hydropower Corridor (this corridor corresponds with the border between the Free State and Northern Cape Province). Hydro Power Corridor (Vanderkloof and Gariep Dams)
- **Water scarcity/arid region**, irrigation schemes (e.g. Vaalharts), and the Upper Orange Water Management Area; and
- **Agricultural markets** (national and international).

Figure 3:57 below is a detailed Karoo tourism network that can be read together with the PSDF to enhance tourism sector in MMM.

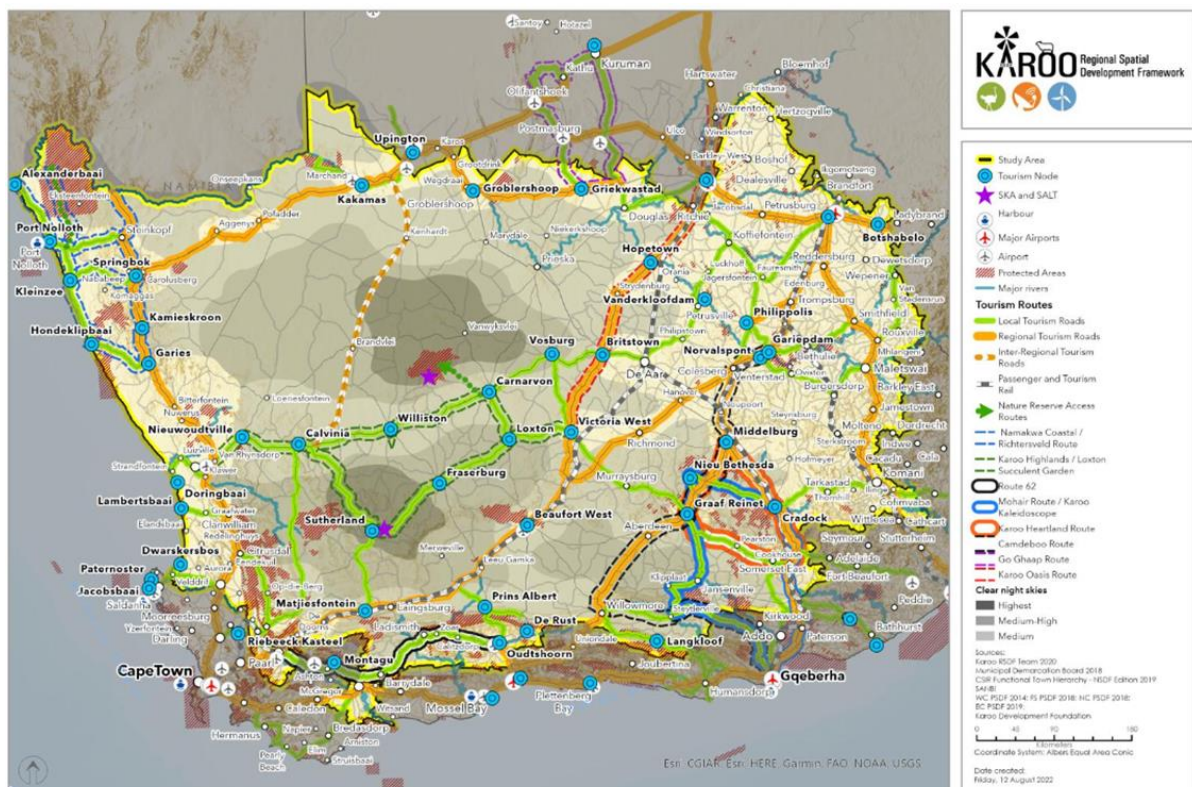


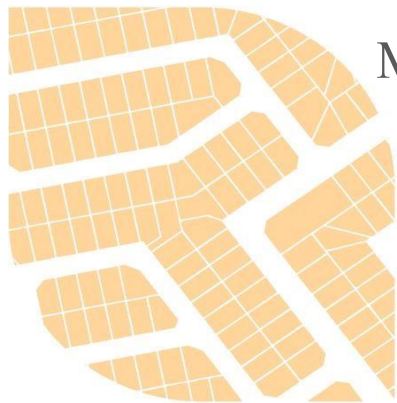
Figure 3: 57. Karoo tourism



MANGAUNG METROPOLITAN MUNICIPALITY

METROPOLITAN SPATIAL DEVELOPMENT FRAMEWORK

Chapter 4: Spatial Proposals and Strategies



DRAFT
REPORT

TABLE OF CONTENTS

4. SPATIAL PROPOSALS AND STRATEGIES	1
4.1. SPATIAL VISION	1
4.2. METHODOLOGY	1
4.2.1. Moving from Vision to reality	1
4.2.2. Strategic Budget Outcomes and Analysis.....	1
4.2.3. Spatial Development Reforms	3
4.3 SPATIAL PROPOSALS	4
4.4. SPATIAL CONCEPT	5
4.5. SPATIAL STRATEGIES	8
4.5.1. Environmental Management	8
4.5.2 Spatial Targeting	12
4.5.3. Movement Network	15
4.5.4. Sustainable Human Settlements.....	19
4.5.5. Infrastructure	38
6.5.6. Economic Development and Job Creation	41
4.6. COMPOSITE METROPOLITAN SDF	47
4.6.1. SETTLEMENT SPATIAL STRUCTURE AND DEVELOPMENT PROPOSALS.....	47
4.6.1.1. Bloemfontein	47
4.6.1.1.1. Environmental Core	48
4.6.1.1.2. Urban Development and Spatial Transformation	48
4.6.1.1.3. Economic Activity	50
4.6.1.1.4. Community Facilities.....	51
4.6.1.1.5. Priority Housing Development Areas	52
4.6.1.2. Botshabelo	60
4.6.1.2.1 Environmental Core	60
4.6.1.2.2. Urban Development and Spatial Restructuring	60
4.6.1.3. Thaba Nchu	62
4.6.1.3.1. Environmental Core	63
4.6.1.3.2. Urban Development and Spatial Restructuring	63

4.6.1.4. Soutpan/ Ikgomotseng	65
4.6.1.5. Dewetsdorp/ Morojaneng	66
4.6.1.5.1. Environmental Core Landscape	67
4.6.1.5.2. Urban Development and Restructuring	67
4.6.1.6. Wepener/ Qibing	69
4.6.1.6.1. Environmental Core	70
4.6.1.6.2. Urban Development and Restructuring	70
4.6.1.7. Vanstadensrus/Thapelang.....	72
4.6.1.7.1. Environmental Core	72
4.6.1.7.2. Urban Development and Restructuring	72
4.7. Mangaung Rural Development Plan	73
4.7.1. Functional Regions	73
4.7.2. Strategic Focus Areas	73
4.7.1.1. Strategic Focus Area 1: Land Reform:	74
4.7.1.2. Strategic Focus Area 2: Agricultural Development:.....	75
4.7.1.3. Strategic Focus Area 3: Peri-Urban Agriculture	78
4.7.1.4. Strategic Focus Area 4: Economic Development.....	79
4.7.1.5. SAFETY NETS	82

LIST OF FIGURES

Figure 4: 1. MMM Spatial vision/Concept	6
Figure 4: 2. MMM Biophysical Environment	12
Figure 4: 3. MMM Built Environment.....	14
Figure 4: 4. IPTN local Corridors.....	17
Figure 4: 5. Phase 1 Sub-Corridors for Implementation	17
Figure 4: 6. IPTN Phasing – Bloemfontein and Thaba Nchu and Botshabelo	17
Figure 4: 7. Bram Fischer Airport development upgrades.	17
Figure 4: 8. Integration of surrounding areas and light industrial areas (East End).	18
Figure 4: 9. Transwerk Heavy Industrial Node.	19
Figure 4: 10. Dilapidated houses before renewal programme.	22
Figure 4: 11. Houses and roads infrastructure after urban renewal.	23
Figure 4: 12. Moshoeshoe/Maphisa Road Activity Corridor, Home Affairs and Rocklands Nodes.	94
Figure 4: 13. Dark and Silver City Nodal Development.	24

Figure 4: 14. Botshabelo Activity Corridor.....	94
Figure 4: 15. Thaba Nchu Nodal Development.....	25
Figure 4: 16. Waterfront/Stadium Sports Precinct.....	26
Figure 4: 17. Second Avenue Precinct.....	27
Figure 4: 18. N8/Est Development Precinct.....	28
Figure 4: 19. Logistic companies along N8 West of MMM.....	29
Figure 4: 20. Images from Navil Hill Pricinct.	94
Figure 4: 21. Public Safety and Security Plans.	30
Figure 4: 22. Urban Development Zones in Mangaung.	31
Figure 4: 23. SMMEs Development Ideas.	33
Figure 4: 24. Context and components of an inclusive smart city.....	34
Figure 4: 25. Proposals for NMT along the Vereeniging Road.	35
Figure 4: 26. N1 Nodal Developments Proposals.....	36
Figure 4: 27. N8 Corridor	37
Figure 4: 28. Images of Flower market in Willows and Outdoor decorations in Fleurdal	45
Figure 4: 29. Industrial Revolution.	46
Figure 4: 31. MMM SDF Composite.....	48
Figure 4: 30. MMM SDF Composite.....	48
Figure 4: 32. Bloemfontein SDF Movement Network.....	51
Figure 4: 33. Bloemfontein SDF Economic Activities.....	52
Figure 4: 34. Bloemfontein SDF Community Facilities	53
Figure 4: 35. Bloemfontein SDF Priority Housing Developments	53
Figure 4: 36. Composite SDF for Bloemfontein/Mangaung	60
Figure 4: 37. MMM Water Infrastructure Bulk Availability	61
Figure 4: 38. Botshabelo/Thaba Nchu Composite SDF.	62
Figure 4: 39. Botshabelo/Thaba Nchu Priority Housing Developments.....	63
Figure 4: 40. Soutpan/Ikgomotseng Development Proposals	67
Figure 4: 41. Dewetsdorp/Morojaneng Development Proposals	69
Figure 4: 42. Wepener/Qibing Development Proposals.....	72
Figure 4: 43. Van Stadensrus/Thapelang Development Proposals	73
Figure 4: 44. Strategic Focus Areas.....	74
Figure 4: 45. Thaba Nchu Villages	82

LIST OF TABLES

Table 4: 1. MMM SDF Structure.....	4
Table 4: 2. Correlation of Spatial Planning Categories.	11
Table 4: 3. MMM Climate Change Adaptation and Mitigation Strategy.	11
Table 4: 4. Settlement Typology (CSIR/SACN, 2015).	13

Table 4: 5. Bloemfontein/Mangaung: Development Potential (mainly Residential)	53
Table 4: 6. Bloemfontein/Mangaung: Development Potential (mainly Residential)	57
Table 4: 7. Botshabelo: Development Potential (mainly Residential).	62
Table 4: 8. Thaba Nchu: Development Potential (mainly Residential).	64
Table 4: 9. Botshabelo/Thaba Nchu Development Potential.....	65
Table 4: 10. Detail Strategies in respect of Land Acquisition and Support.	74
Table 4: 11. Intensive Farming Strategy	75
Table 4: 12. Detail Strategies in respect of Value-Adding and Distribution	76
Table 4: 13. Preferred Commodity Types in Mangaung	77
Table 4: 14. Detail Strategies in respect of Sector Development.....	79

LIST OF DIAGRAMS

Diagram 4: 1. Strategic Outcomes Budget Analysis.	1
Diagram 4:2. The role of Capital Expenditure Framework (CEF) in relation to other internal processes.2	
Diagram 4: 3. Spatial Development Reforms.....	3
Diagram 4: 4. Spatial Strategies.	8
Diagram 4: 6. Municipality, private sector partnership diagram.	32

LIST OF AMENDMENTS

- 4.2. Methodology (new additions)
- 4.3. Spatial Proposals: Table 4:1 (Updated)
- 4.5. Spatial Strategies: Introduction (new additions)
 - Objective 3 (new additions)
 - Objective 4 (new additions)
 - Objective 5 (new additions)
 - Objective 6 (new additions)
- 4.6. Composite SDF (updated)
- 4.7. Mangaung RDP: 4.7.1.5. Safety nets (New addition)

4. SPATIAL PROPOSALS AND STRATEGIES

4.1. SPATIAL VISION

The overarching long term Spatial Development Vision for the Mangaung Metropolitan Area is:

“To Be a Globally Safe, Attractive and Well Governed Municipality Where Growth is Spatially Just, Economically Viable and Environmentally Sustainable”.

4.2. METHODOLOGY

4.2.1. Moving from Vision to reality

The Methodology suggest that inputs should be gathered from departments and master plans (as depicted in **Diagram 4:2** below) which should be in line with the Spatial Plans and Priorities of the city. The city should have project prioritisation strategy which should affect the effect the conceptualisation of the budget. The Spatial Vision should be operationalised to effect the Spatial Transformation Agenda of the City with clear targets.

4.2.2. Strategic Budget Outcomes and Analysis

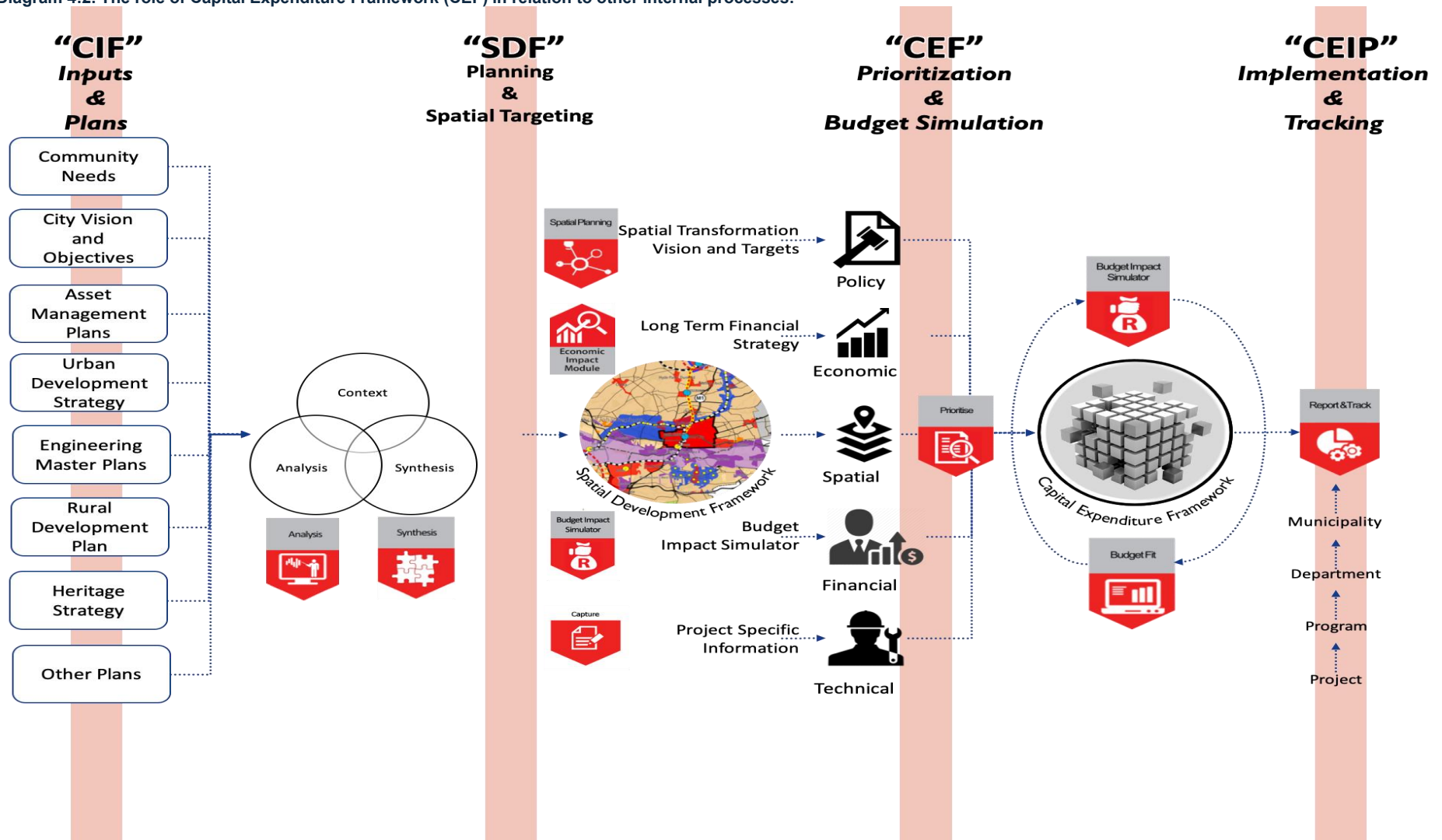
The Strategic Outcomes Budget Analysis suggest the alignment between the budgets of the three spheres of government and SOE's. This would in essence culminate into the District Model.

Diagram 4:1 shows the processes to follow when undertaking Strategic Outcomes Budget Analysis.

Diagram 4: 1. Strategic Outcomes Budget Analysis.



Diagram 4.2: The role of Capital Expenditure Framework (CEF) in relation to other internal processes.

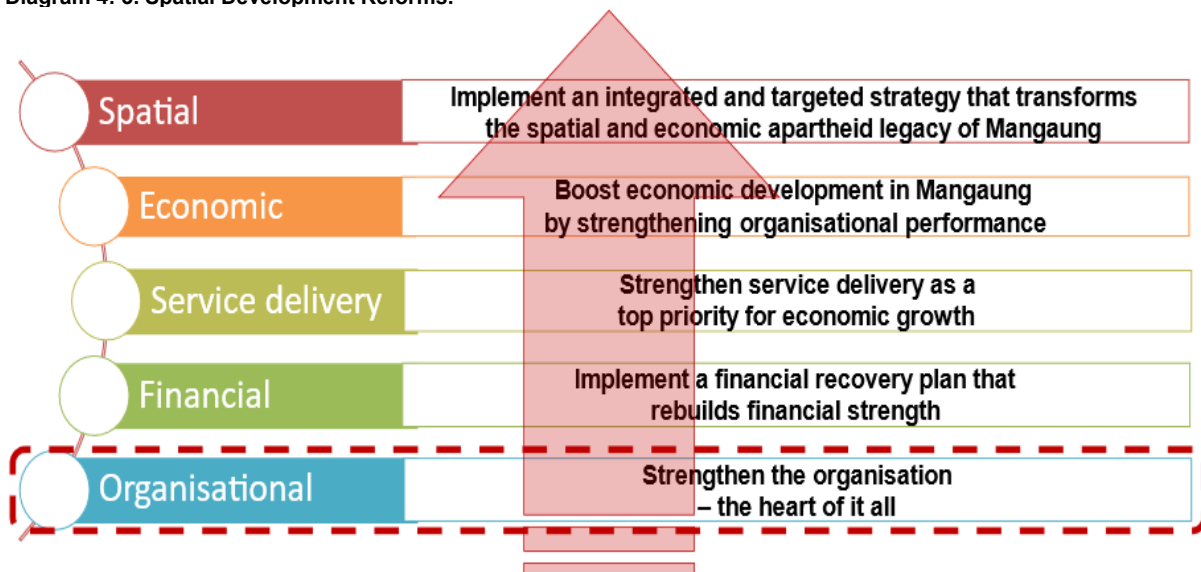


The Methodology to achieve the alignment of budgets should be developed by means of a process plan.

4.2.3. Spatial Development Reforms

The Spatial Development Reforms (see **Diagram 4:3**) suggest that the Mangaung Metropolitan City should focus on the strengthening of the organisation by addressing issues of efficiency in service delivery to comply with the SPLUMA principles. Further to that the organisation should strengthen the financial sustainability of the city to make the less grant dependant. Therefor there should be a plan to move the city from grant dependency.

Diagram 4: 3. Spatial Development Reforms.



The SDR suggest that the city prioritize service delivery which tie in with the SPLUMA principles to effect efficiency in service delivery. This can be achieved to put controls monitor turnaround times in the processing of land use applications and monitoring and evaluations systems. The key service delivery units should also have operational procedures and introduce stats controls units to monitor turnaround times.

The objective of strengthening service delivery should be viewed to boost the economy by enhancing turnaround times and facilitate development in the city. The policy regime of the city should support the objective to enhance development in the city. The SDR suggest that the Spatial Panning policy regime should facilitate an integrated and targeted approach to transform the spatial and economic apartheid legacy.

This would imply that there should be coordination and alignment with the other strategic plans of the city and ensure coordination and alignment within the three spheres of government.

4.3 SPATIAL PROPOSALS

Table 4:1: graphically illustrates the structure and sequence of the main components representing the Spatial Proposals of the Mangaung SDF. It is briefly summarised as follows:

- **Section 4.1** defines the Spatial Vision for the Mangaung Metropolitan area which is aligned to the five SPLUMA Principles and translated into a number of outcomes to be achieved through strategic planning.
- **Section 4.2** translates the Spatial Vision into a more detailed Spatial Concept which is based on six main Development Objectives that serve as points of departure towards future development in the municipal area.
- **Section 4.3** unpacks the Spatial Strategies towards the realisation of the Spatial Concept and the six Development Objectives. This is done by means of a number of Actions per each of the six Development Objectives.
- These Spatial Strategies are consolidated into the Composite Metropolitan SDF with a 20-year and 5-year development perspective in **section 4.4**.
- Following from this a number of more detailed development guidelines in terms of Core Areas, Urban Restructuring and Urban Development are formulated as Local Area Plans for each of the major settlement areas and the rural parts of the Mangaung Metropolitan area.
(**section 4.5**).

Detailed policies and guidelines relevant to either the Metropolitan SDF or the Local Area Plans are contained in a number of annexures.

- **The Implementation Framework will be discussed in Chapter 5 of the document.**

4.4. SPATIAL CONCEPT

The main objective of the Mangaung Metropolitan Municipality is to achieve a balance between development and the environment and to ensure that growth is spatially just, economically viable and environmentally sustainable. The proposed Spatial Development Concept to achieve the above is graphically illustrated on **Figure 4:1** and is based on the following six Objectives (also refer to **Table 4:2**):

Objective 1: Facilitate the protection and sustainable management of the natural environmental resources.

The natural environmental resources of The MMM are fundamental to future economic development in the area as two key economic sectors to the municipality (tourism and agriculture) are both resource based. Hence it would be important to protect and conserve all important terrestrial, aquatic and high biodiversity habitats in the MMM as conceptually illustrated on **Figure 4:1**. This would require the containment of urban sprawl and efficient management of rural development in accordance with a coherent set of development guidelines.

Objective 2: Direct and align investment and growth to capacity, resources and opportunity in relation to a nodal settlement hierarchy.

As illustrated on **Figure 4:1**, settlement development should be directed and consolidated (spatial targeting) in a number of functional nodes of which Bloemfontein is the highest order. Secondary nodes of significance include areas such as Botshabelo and Thaba Nchu while Soutpan, Dewetsdorp, Wepener and Van Stadensrus act as lower order central places serving surrounding rural areas with agriculture being the primary economic base.

Development in the rural settlements to the north and south of Thaba Nchu should be limited and rather be consolidated around one or two priority settlements earmarked for basic service delivery to the surrounding cluster of rural settlements within the nodes/settlements specific areas need to be identified to promote physical, social and economic integration by way of an intervention strategy which is based on a Theory of Change to be applied in the specific area.

Objective 3: Optimise regional connectivity and mobility as well as local access and accessibility via a comprehensive movement network.

Regional connectivity and mobility is provided by route N1, N8 and N6 which link the Metropolitan area to a number of important towns and cities in the South African context.

Route N1 acts as a link to the Gauteng City Region to the north and City of Cape Town to the south. Route N8 links the MMM to Kimberley to the west and Maseru (Lesotho) to the east (and indirectly to route N3 to Durban). Route N6 links Mangaung to three major harbour cities to the south-east: East London, Port Elizabeth and Mossel Bay.

The regional routes provide linkages to the following destinations in surrounding regions:

- Route R30 to Brandfort and Welkom;
- Route R700 to Bultfontein;
- Route R64 to Dealesville and Boshof further to the north-west;
- Route R706 to Jagersfontein to the south-west;
- Route R702 serves Dewetsdorp, Wepener and Vanstadensrus and from there southeastwards towards Zastron along route R26, and
- Route R701 towards Smithfield.

At local level access and connectivity should be enhanced in order to ensure optimal utilisation of economic opportunities and efficient service delivery in all parts of the municipality (urban and rural areas).

The Bram Fischer International Airport and the Mangaung Railway Precinct could also play a significant role towards future economic development (and spatial transformation) in the area – specifically in terms of logistics related industrial/ commercial development. An integrated public transport network should ensure that all communities have access to a wide range of economic activity areas and community facilities via various modes of transport.

Objective 4: Facilitate the establishment of sustainable human settlements in all identified nodes.
--

Settlement footprints should be contained at all cost in order to alleviate development pressure on the natural resources of the municipality and to optimise the efficient use of resources (e.g. land) and infrastructure (e.g. engineering services) within existing towns and settlements (Smart Growth Principles).

Hence, the MMM should generally promote higher density, compact, mixed land uses which will also enhance walkability within all settlements. Expansion of the urban footprint should be directed to strategically located priority development areas which should also contribute towards the overall consolidation of the currently fragmented urban footprint characterising the MMM. The development of a diverse range of housing typologies promoting integration of all income groups at low, medium and higher densities and offering a variety of tenure alternatives to all communities should also be a priority.

Linked to the principle of sustainable human settlement the MMM need to rationalise and cluster community facilities at strategically located and accessible points in all the identified settlement areas

within the municipal area. The clustering of such facilities should be aimed at providing one-stop services (especially to people dependent on public transport) and to add to the “critical mass” required to also stimulate local economic development around these areas.

Objective 5: Align metropolitan infrastructure maintenance and construction programmes with spatial development initiatives.

Engineering services (bulk and reticulation) maintenance and expansion programmes need to be aligned to land use development programmes focussing on new developments (greenfields) and upgrading/ maintaining services in existing areas (brownfields). The MMM should also incrementally promote the establishment of the Smart City Concept which focusses on utilising Information and Communication Technology (ICT) to advance economic development, safety and security, governance, environmental management, transport etc.

Objective 6: Identify and optimally utilise economic development opportunities in a sustainable manner.

From the situational analysis it was concluded that the most viable economic sectors within the MMM are; business; logistics based light industrial/service industries, tourism and agriculture/agri industries.

Tourism and agriculture are natural resource-based activities, hence it is important to align programmes towards the future development of these sectors with the spatial distribution of such resources (e.g. natural scenery, dams and areas of significant biodiversity). This should be done with due consideration to the environmental management programmes applicable to these areas via the relevant legislation as contained in the Mangaung EMF.

Business development should be promoted in appropriately located mixed use precincts in all settlements, with the existing Bloemfontein Central Business District being the primary business node in the metropolitan area. The MMM should also focus on the establishment of local service industries and logistics centres, agri industries and “green” industries (e.g. waste to energy) that are compatible with the agriculture, tourism and conservation focus of the municipality.

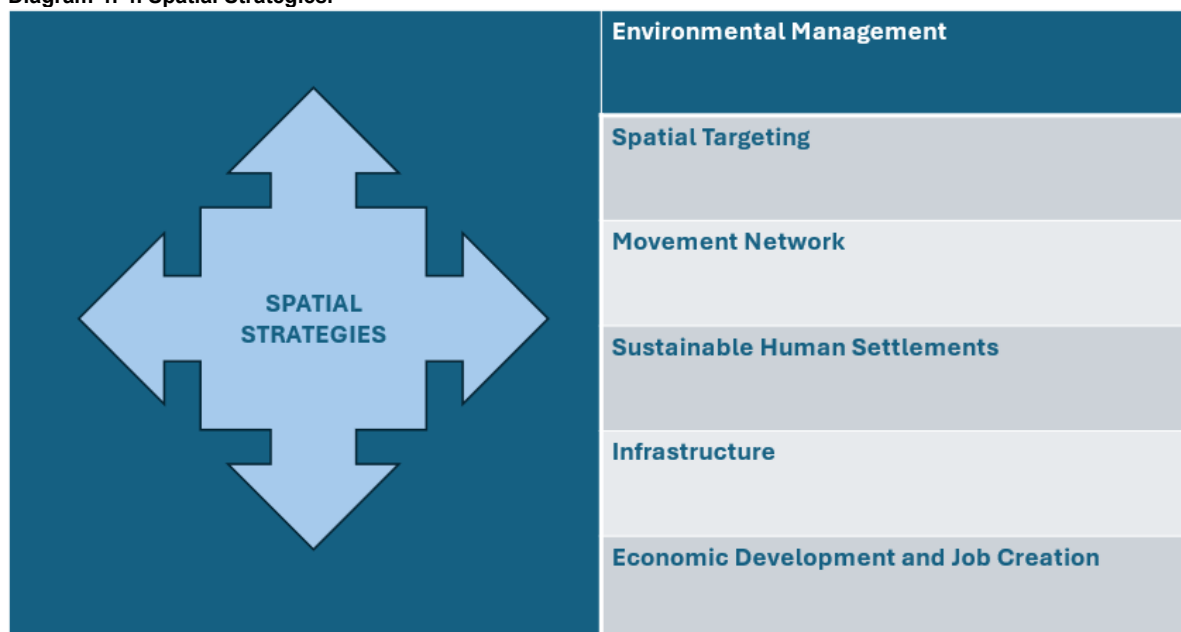
Special mechanisms are to be put in place to provide opportunity for emerging entrepreneurs to do “incremental economic up-scaling” to eventually become part of the mainstream economy of the municipality. Agrarian Transformation in the subsistence farming areas under traditional leadership around Thaba Nchu is very important in this regard. The establishment of the Mangaung Agri Park is an important initiative towards achieving agrarian transformation in this area.

Tertiary education and skills training should be aligned with the priority economic sectors within the MMM to optimally utilise local opportunities in these sectors.

4.5. SPATIAL STRATEGIES

This section unpacks the strategies towards achieving each of the six development objectives of the Mangaung Metropolitan Spatial Development Framework. This is done by way of a number of actions per development objective.

Diagram 4: 4. Spatial Strategies.



4.5.1. Environmental Management

Objective 1: To facilitate the protection and sustainable management of the natural environmental resources.

The Mangaung historical, cultural and ecological wealth is given recognition through the number of tourists that visit the area simply to experience its natural and cultural-historic beauty. The environmental and historical/cultural well-being of the MMM is therefore a key contributor towards its long-term economic sustainability.

Action 1.1: Contain urban development and manage rural areas through appropriate application of Spatial Planning Categories (SPCs)

The Free State Biodiversity Plan, 2015 has identified Critical Biodiversity Areas (CBAs), Ecological Support Areas (ESAs), Other Natural Areas (ONAs) and Degraded/Transformed Areas for the whole of the Mangaung area (also refer to Figure 12 in this report). These categories are intended to inform decision-making regarding developments, their location and context and to guide planning, environmental assessments, authorisations and resource management within the Metropolitan area via the Mangaung Environmental Management Framework (EMF). (Also refer to **Annexure B** in this report).

Supplementary to the above, the Free State Provincial Spatial Development Framework identified a number Spatial Planning Categories which collectively illustrate the desired matrix of land uses throughout the province. These SPCs are merely intended to clarify and facilitate standardized coherent decision-making throughout the province. A comprehensive set of sub-categories has been created to serve as a guide for more detailed land use planning at the municipal level, as depicted in **Table 4:2**, the said table also depicts the correlation/relationship between the Spatial Planning Categories (SPCs), of the FS PSDF; the Free State Biodiversity Plan Categories; and the Mangaung EMF Environmental Control Zones. These were used as basis for the Mangaung SDF.

Hence, the MMM adopts and recommends the application of the Free State SDF and the associated Spatial Planning Categories in the Metropolitan SDF. The following land uses are permitted per Spatial Planning Category as defined below (Also refer to **Annexure C** for a summary of the Free State PSDF Guidelines):

SPC A: Core/ Critical Biodiversity Areas 1: These include habitats classified as highly irreplaceable, critically endangered, or endangered terrestrial (land) and aquatic (rivers, wetlands & estuaries). It also includes essential biological corridors vital to sustain their functionality. These areas must be regarded as no-go for development and must be kept in a natural state, with a management plan focused on maintaining or improving the state of biodiversity. There should be no further loss of natural habitat and degraded areas should be rehabilitated.

SPC B: Buffer/ Critical Biodiversity Areas 2 and Ecological Support Areas 1 and 2: These areas are primarily in private ownership, hence a key challenge is to address the conflicts that often occur between biodiversity conservation and consumptive agricultural practices. These areas may be degraded but still play an important role in supporting the functioning of ecosystems. These areas should be restored and/or managed to minimise impact on ecological infrastructure functioning; especially soil and water related services.

SPC C: Agriculture/ Other Natural Areas: Comprises of existing and potential intensive agricultural footprint (i.e. homogeneous farming areas made up of cultivated land and production support areas). It includes areas in which significant or complete loss of natural habitat and ecological functioning has

taken place due to farming activities. Existing and potential agricultural landscapes should be consolidated and protected; sustainable agricultural development, land and agrarian reform, and food security should be facilitated and ecosystems must be stabilised and managed to restore their ecological functionality. **Figure 4:2** depicts the spatial distribution and extent of SPC A; B and C noted above as part of the Biophysical Environment of the MMM).

SPC D: Urban Areas/ Transformed: This category includes all existing cities, large and smaller towns and villages. Settlements are to be delineated by an urban edge and are the “engine rooms” that drive regional economic development and growth. The purpose is to develop and manage settlements on a sustainable basis (i.e. supportive of environmental integrity, human well-being and economic efficiency).

SPC E: Industrial/ Transformed: These represent the major areas identified for economic development and job creation. The objective is to provide the infrastructure and other requirements to enable the optimal development of such areas.

SPC F: Surface Infrastructure/ Transformed: An effective, competitive and responsive infrastructure network is imperative for ongoing economic development. Hence, sufficient provision should be made for the provision of such in line with the development objectives for the region.

Action 1.2: Establish ecological corridors to protect continuous biodiversity patterns and to adapt to environmental changes.

Informal conservation areas within the Mangaung boundaries include several Private Nature Reserves (PNR) and conservancies. Although not gazetted protected environments, it may be prudent to note conservancies/private nature reserves as areas that are voluntarily and cooperatively managed for their environmental integrity. Conservancies are also useful tools in the establishment and management of ecological corridors where willing landowners exist and where incentive schemes may be applied. Ecological corridors can create linkages between existing natural but fragmented landscapes, enabling the survival of plant and animal populations through the provision of safe migration routes between areas.

The principle of ecological corridors should also be incorporated into the urban setting to encourage a green space network that ties in with biodiversity corridors, promotes outdoor recreation, creates safe outdoor areas for tourists and locals to walk, and that creates riparian and wetland buffer zones in urban areas. As a general principle, large rivers should have a buffer zone of a minimum width of 150m, medium rivers a zone of 75m and smaller rivers a 32m buffer. No development should occur within 1:100 floodlines surrounding rivers. This will ensure that water quality and wildlife habitats are protected. In addition, it will aid in designating where settlements should be developed or expanded and will aid in preventing the dumping of waste and chemicals in rivers.

Table 4: 2. Correlation of Spatial Planning Categories.

Table 4.2: Correlation of Spatial Planning Categories							
FREE STATE PROVINCIAL SDF	FREE STATE BIODIVERSITY PLAN CATEGORIES						MMM ENVIRONMENTAL MANAGEMENT FRAMEWORK (EMF)
Spatial Planning Categories	CBA 1	CBA 2	ESA 1	ESA 2	DNA	Transformed	Environmental Control Zone
SPC A : CORE	A.a						E : Biodiversity
SPC B : BUFFER	B.b	B.a B.c	B.c	B.c			E : Biodiversity D : Agriculture
SPC C : AGRICULTURAL					C.a C.b		D : Agriculture C : General
SPC D : URBAN						C.b D.a - D.r	A : Urban
SPC E : INDUSTRIAL						E.a - E.e	A : Urban
SPC F : SURFACE INFRASTRUCTURE						F.a - F.l	B : Solar
DETAILED SPATIAL PLANNING SUB-CATEGORIES	A : CORE		D : URBAN RELATED		E : INDUSTRIAL AREAS		
	A.a Statutory Protected Areas		D.a Main Towns		E.a Agricultural Industry		
			D.b Local Towns		E.b Industrial Development Zone		
			D.c Rural Settlements		E.c Light Industry		
	B : BUFFER		D.d Tribal Authority Settlements		E.d Heavy Industry		
			D.e Communal Settlements		E.e Extractive Industry		
	B.a Non-Statutory Conservation Area B.b Ecological Corridors		D.f Institutional Areas D.g Authority Areas				
	B.c Urban Green Areas		D.h Residential Areas		F : SURFACE INFRASTRUCTURE & BUILDINGS		
			D.i Business Areas		F.a National Roads		
			D.j Service Related Business		F.b Main Roads		
	C : AGRICULTURAL AREAS		D.k Special Business		F.c Minor Roads		
			D.l SMME Incubators		F.d Public Streets		
	C.a Extensive Agricultural Areas C.b Intensive Agricultural Areas		D.m Mixed Use Development Areas		F.e Heavy Vehicle Overnight Facilities		
			D.n Cemeteries		F.f Railway Lines		
			D.o Sports Fields & Infrastructure		F.g Power Lines		
			D.p Airport and Infrastructure		F.h Telecommunication Infrastructure		
			D.q Resorts & Tourism Related Areas		F.i Renewable Energy Structures		
			D.r Farmsteads & Outbuildings		F.j Dams & Reservoirs		
					F.k Canals		
					F.l Sewerage Plants and Refuse Areas		

Action 1.3: Implement Climate Change adaptation and mitigation measures.

The MMM is prone to a myriad of extreme climate events of which the most important are the following: increased temperature (1-3° Celsius) with increased number of very hot days, heat wave days and high fire-danger days, and irregular and below average rainfall which will have a major impact on the MMM as 60% of surface water in the MMM is used for irrigation purposes. In view of the above, the MMM Climate Change Adaptation and Mitigation Strategy proposes the following mitigation intervention measures, as listed in **Table 4:3**.

Table 4: 3. MMM Climate Change Adaptation and Mitigation Strategy.

Sector	Proposed Mitigation Interventions/ Projects	Details of the Interventions
Energy	Renewable Energy	Build Solar parks that will feed electricity to the National Grid, use of Solar in residential areas and industry
	Energy Efficiency (EE)	Refurbish MMM buildings (Government buildings, hospitals, clinics and schools with EE equipment)
		Refurbish street lights with LED lights
		Encourage EE by industry processes
Human Settlements	Insulate RDP Houses	To reduce heating and air conditioning needs for human comfort
	Renewable Energy	Install Solar Water Heaters or heat pumps in Residential areas (existing and new houses and RDP houses)
	Energy Efficiency	Refurbish residential areas with LED lighting
Agriculture	Smart Agriculture	Agricultural practices that reduce methane emissions
		Encourage organic farming (Introduce vermiculture – organic manure)
Transport	Public Transport – Bus Rapid Transport (BRT) system	Introduce BRT bus system (similar to Gauteng Province's Gautrain, 'Reya Vaya' and 'A re yeng' bus services)
	Introduce bicycle lanes	Encourage bicycle use
Waste	Waste to Energy	Convert Landfill gas to electricity
Management	Recycling	Use waste to generate biodiesel for MMM bus fleet and Biogas (Biofuels)
		Reduction, Recycling, Reuse of waste material
		Separation at Source
		Introduce Manufacturing Plant industries using Recycled materials to create jobs
Biodiversity	Plant indigenous trees to act as carbon emissions sinks	Remove invasive alien plant species and plant indigenous
	Protect parks and open spaces to maintain their role as carbon sinks	e.g. Municipal Open Space Services (MOSS) study is currently underway at the municipality
Commercial and Industry	Energy Efficiency	Encourage and incentivise EE initiatives by industries

Flood Risks: Land uses must be managed to reduce the risk of flooding and to protect human life and property in the case of extreme flooding. Where critical infrastructure and areas are located within flood risk areas, the resilience of these settlements in the instance of extreme events will be compromised.

Flood risk mitigation strategies must be integrated into the land use management and infrastructure master planning systems of the municipality. Sustainable urban drainage systems and ecologically sound rural practices must be adopted when planning new development and approving changes to

existing land uses. The design of new infrastructure, in particular stormwater systems, should consider the higher frequency of flooding associated with extreme weather conditions. New development should not be allowed to occur on slopes steeper than 1:4 as this new construction and land cleared for development increases erosion and stream siltation. Overlay zones should be developed for the most critical features noted above and incorporated into municipal planning systems.

Fire Risk: The Mangaung SDF recognises that veld fire is a natural ecological process that occurs in many parts of the region. However, if this is not managed or settlement patterns exacerbate the risk of veld fire, it places great risk to life and property at significant economic and social cost. The Mangaung Disaster Risk Management Department must oversee the management of veldfire risk which must also be integrated into the Planning By-Laws and the urban edge management of the Mangaung area.

4.5.2 Spatial Targeting

Objective 2: Direct and align growth to capacity, resources and opportunity in relation to a regional socio-economic hierarchy of settlements.

Action 2.1: Prioritise development and investment in accordance with the Mangaung settlement hierarchy.

In order to minimise the impact on the natural environmental resources of Mangaung, it is essential that human settlement and economic activities be consolidated around a number of strategically located settlements/nodal points within the municipality as depicted on **Figure 4:3**. These settlements will become the focal points for social and economic investment (spatial targeting) by all spheres of government as well as the private sector. Each of these settlements should comprise a diverse range of urban land uses including housing, community facilities, economic activities (job opportunities), basic engineering services like water, sanitation and electricity, a comprehensive movement network and local open space system.

Consolidating and densifying the urban fabric around these settlements should result in high density mixed uses which not only enhance the viability of the public transport system, but also optimise the operational and financial efficiency of engineering and social infrastructure and services provided. Furthermore, it will significantly reduce travel costs/ distances within and between the various urban areas which is a major benefit to the poor. The size, function and associated range of land uses/ activities provided by the settlements would differ based on factors such as historic development, location, economic potential and environmental constraints as depicted on **Table 4:4**.

Mangaung is the first order node (Small Metro) which holds the largest population in the municipal area. Hence, it would also accommodate the higher order (national, provincial and metropolitan) public services and community facilities like the Civic Centre, Magistrates Court, Universities, Regional Police Services, Regional Hospital, Fire Brigade and Emergency Services, etc. It also comprises the most comprehensive range of economic activities including retail, office, industrial, commercial, tourism etc. serving not only the local market, but also the region and even the national economy.

Table 4: 4. Settlement Typology (CSIR/SACN, 2015).

	Town	Hierarchy	Population Order	Community Facilities	Economic Activity
1	Mangaung	Small Metro	> 500,000	Higher Order	Comprehensive Regional/ National
2	Botshabelo	Large Town	> 200,000	Higher Order	Comprehensive Regional/ Local
3	Thaba Nchu	Medium Town	> 100,000	Middle Order	Limited Regional/Local
4	Dewetsdorp	Small Town	> 10,000	Middle Order	Limited Regional/Local
5	Wepener	Small Town	> 10,000	Middle Order	Limited Regional/Local
6	Van Stadensrus	Village	> 2,000	Middle Order	Local
7	Soutpan	Village	> ,000	Basic/Mobile	Local
8	Rural Villages	Remote Villages		Basic/Mobile Selected Service Delivery Centre	Agriculture

Botshabelo is classified as a Large Town and due to its high population ($\pm 200,000$ residents), it also warrants the provision of higher order community facilities like a Magistrates Court, large Police Station, University Satellite campuses, etc. (which may be shared with Thaba Nchu).

Thaba Nchu holds a smaller population which warrants the provision of typical middle order community facilities (e.g. clinics, pre-schools, primary schools, high schools, community hall, library, municipal satellite office). It also has a limited range of economic activities predominantly serving the local needs (including the needs of the clusters of rural villages to the north and south thereof).

Dewetsdorp and Wepener are categorised as Small Towns qualifying for middle order community facilities and performing a limited range of economic functions mainly focused on the needs of the local population and surrounding farming communities.

The small towns of Van Stadensrus and Rural Villages have very small populations which would normally be served by way of periodic community services like a mobile clinic, library, post office or police station. Economic activity in these villages will mostly be focused on the basic natural resources available within the area, e.g. agriculture around Van Stadensrus and agriculture and small-scale salt mining around Soutpan. These nodal points should be carefully planned, maintained and managed as these represent the major areas of future population growth, service delivery and economic development within the MMM.

Mangaung SDF: Built Environment

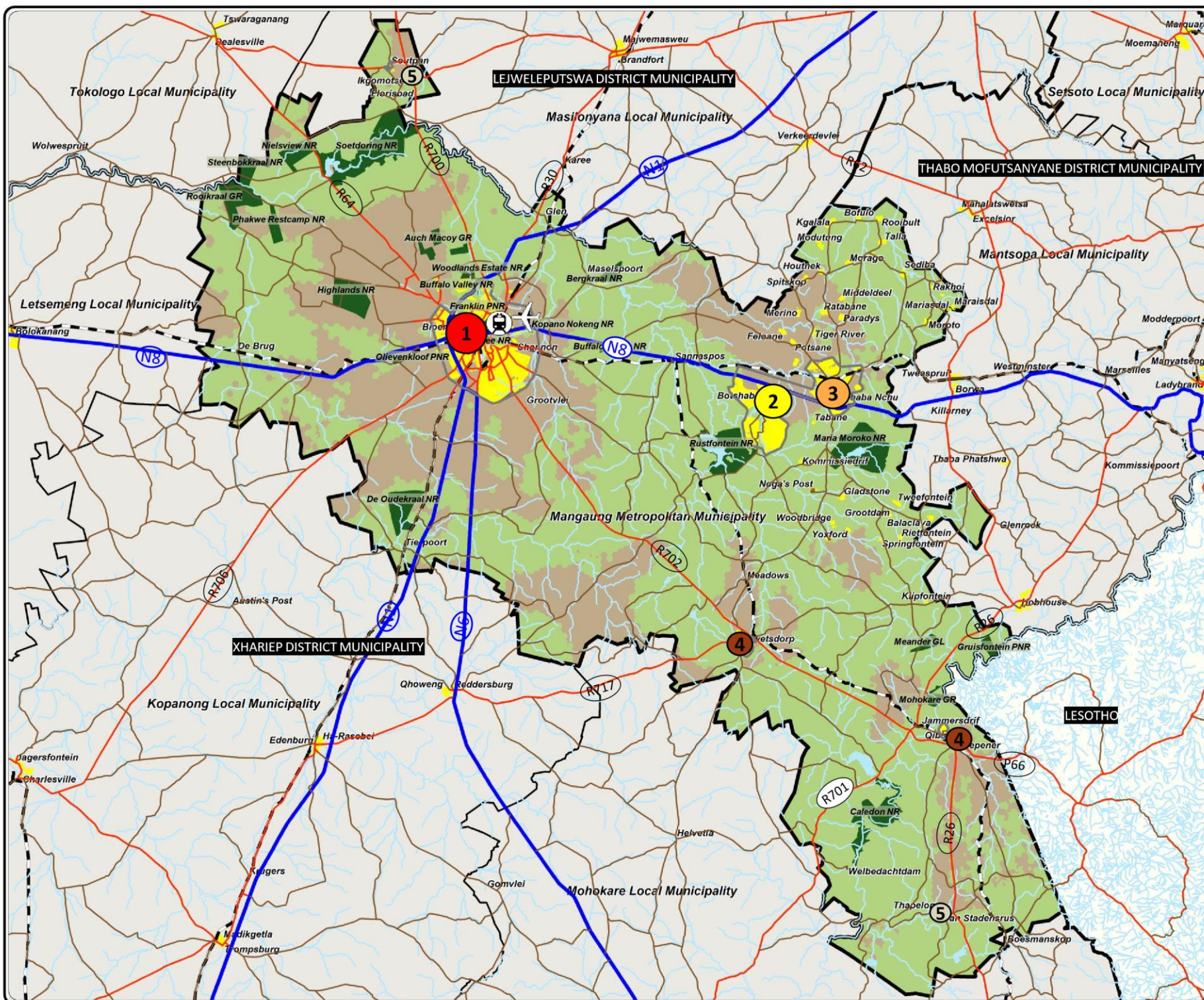
Legend

- Core (Protected Areas)
- Buffer (CBA 1,2 and ESA 1, 2)
- Agriculture (ONA)
- Settlement
- Other Municipalities
- Neighboring Countries
- National Roads
- Provincial Roads
- Secondary Roads
- Railways
- Railway Hub
- Airport
- Dams/Rivers
- Urban Edge
- 1 Small Metro
- 2 Large Town
- 3 Medium Town
- 4 Small Town
- 5 Village
- Rural Village

Sources: egis.environment.gov.za; bgis.sanbi.org;
FSDESTE



Figure 4:3



The rural villages north and south of Thaba Nchu are primarily served by Thaba Nchu but it may be feasible to identify one or two of these villages to serve as local Service Delivery Centre, providing some basic community facilities/services within convenient distance to the surrounding cluster of villages. In the Northern Rural Villages serve as higher order Rural Centres providing services like Clinics. Primary and High Schools. The Rest of the Rural Villages are services by mobile clinics. It is essential to compile/maintain detailed Local SDF's to guide and direct the location, type, extent and phasing of development in these areas. Local SDF's should determine the future spatial structure, function and associated land use composition of these areas – not only to ensure orderly, cost efficient and sustainable development, but also to harness private investor confidence and to attract investment to these areas.

Action 2.2: Identify Integration Zones and Catalytic Land Development Areas as part of a Growth Management/Intervention Strategy in major urban areas.

The Mangaung SDF promotes radical settlement transformation in support of accessible, walkable, inclusive and liveable environments that offer multiple opportunities for all sectors of society. This approach firstly requires the identification of priority intervention areas (i.e. Integration Zones and Catalytic Land Development Areas) in the major settlement areas. The spatial restructuring/transformation is achieved through the implementation of a comprehensive Growth Management/Intervention Strategy in the Integration Zone; utilising a range of Growth Management Instruments at the disposal of the MMM, e.g. urban edge, bulk service contributions, grant funding, etc.

Action 2.3: Manage development in rural and agricultural landscapes.

Development in the rural and agricultural landscapes of the Mangaung area should be managed in line with the guidelines provided in the Free State SDF as summarised in **Annexure C** and the Mangaung Environmental Management Plan summarised in **Annexure B** of this report. By implication these guidelines indicate the type of land uses that can be developed, as well as the conditions applicable in different rural Management Zones/ Spatial Planning Categories outside the urban edge.

4.5.3. Movement Network

Objective 3: Optimise metropolitan connectivity and mobility as well as local access and accessibility via a comprehensive movement network.

The aim is to establish a comprehensive, multi modal movement network serving the urban and rural parts of the municipality, linking all the identified nodal areas to one another, and functionally linking the metropolitan area to surrounding regions and major destinations as depicted on **Figure 4:3**.

Action 3.1: Capitalise on the economic opportunities posed by the national movement corridors traversing the metropolitan area.

Routes N1, N8 and N6 are the most important national routes traversing the Mangaung area.

Route N1 has played a significant role in the development of the western extents of Mangaung and more specifically the promotion of nodal development around each of the access interchanges onto N1 in the urban area. The most prominent in this regard is the N1-N8 node, followed by the N1-R706 and N1-N6 activity nodes (refer to **Figures 4:3** in this report). It will, however, also be important to promote development along route N8, and specifically the eastern section of N8 between Mangaung (Bloemfontein) and Botshabelo–Thaba Nchu which is the priority area in terms of spatial restructuring and economic upliftment in the MMM.

The Free State PSDF branded this as the N8 Transnational Development Corridor. A key matter to be addressed as part of this initiative is the construction of an eastern bypass route (N1 east) to intersect with route N8 (east) and which would significantly enhance the development potential of the areas surrounding this intersection, including the Bram Fisher International Airport and the Mangaung railway precinct. **The N8 and the N1 can be seen as priority development Corridors and Nodal Development can be promoted along these routes.**

Route N6 represents the link between Mangaung and the Eastern Cape, and more specifically the Nelson Mandela and Buffalo City metropolitan areas which also have international harbours.

Action 3.2: Upgrade and maintain the secondary road network to enhance access to all areas in the Mangaung

As illustrated on **Figure 4:3**, the following are the most important secondary routes in the Mangaung Metropolitan Area which provide linkages to prominent destinations in surrounding regions:

- Route R30 to Brandfort and Welkom;
- Route R700 to Bultfontein;
- Route R64 to Dealesville and Boshof further to the north-west;
- Route R706 to Jagersfontein to the south-west;
- Route R702 serving Dewetsdorp, Wepener and Vanstadensrus and southeastwards towards Zastron along route R26 and to Ladybrand eastwards and Lesotho (Maseru Border) and
- Route R701 towards Smithfield.

Action 3.3: Facilitate the establishment of a comprehensive public transport network which will serve as backbone to spatial restructuring and integration within the municipality.

The Mangaung Integrated Public Transport Network is intended to provide high quality, safe and affordable public transport services within the metropolitan area. This includes a comprehensive public transport network within the Mangaung-Bloemfontein complex and the Botshabelo - Thaba Nchu complex respectively, and to cater for the long-distance commuting between these two areas. To this end, the City has developed a citywide *Hauweng* implementation plan that details the implementation of the integrated public transport network and system in the metropolitan area within the next 20 years as illustrated on **Figure 4:4 to Figure 4:6**.

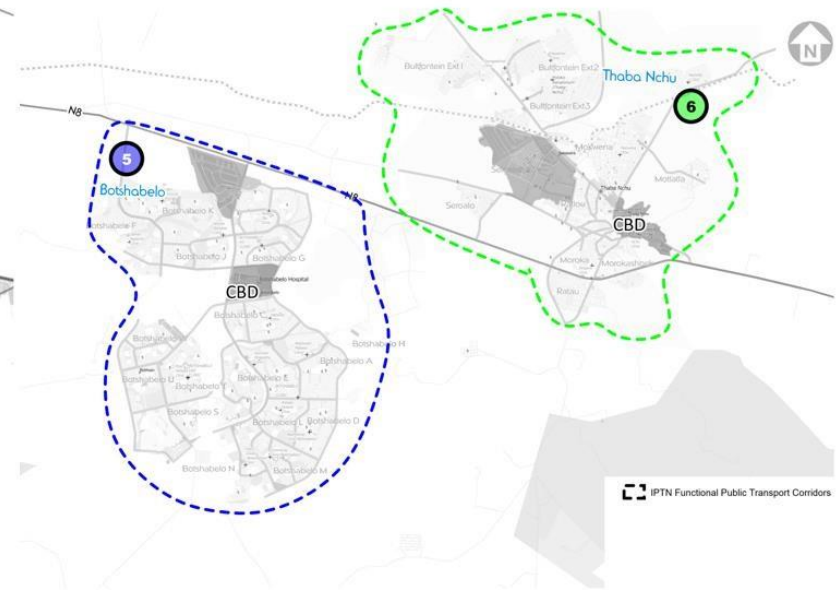
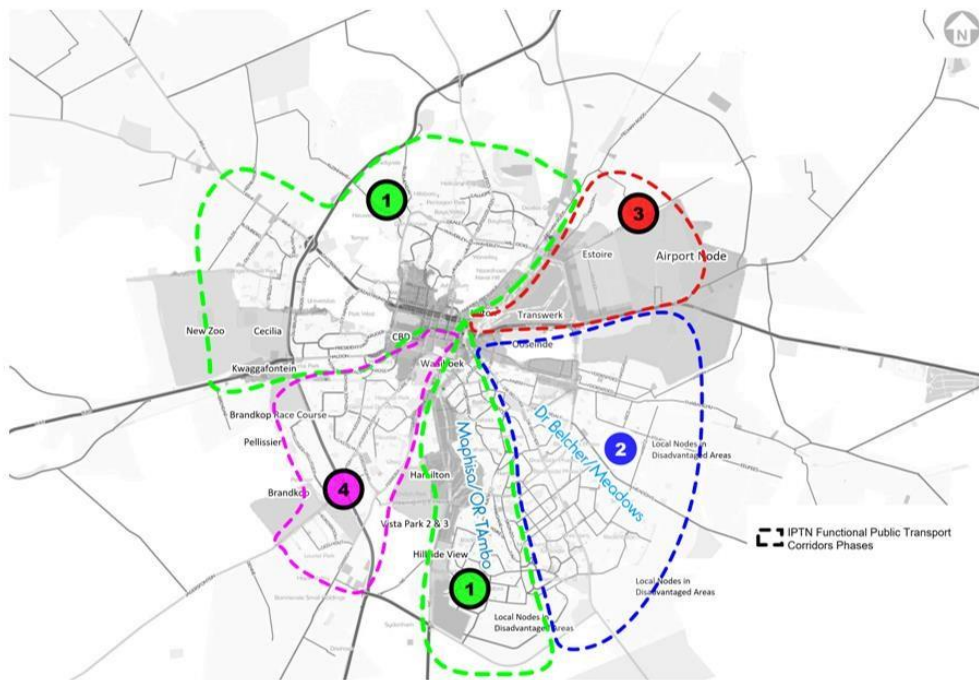


Figure 4:4 : IPTN Phasing - Bloemfontein and Thaba Nchu and Botshabelo



Figure 4:5 : IPTN Local Corridors

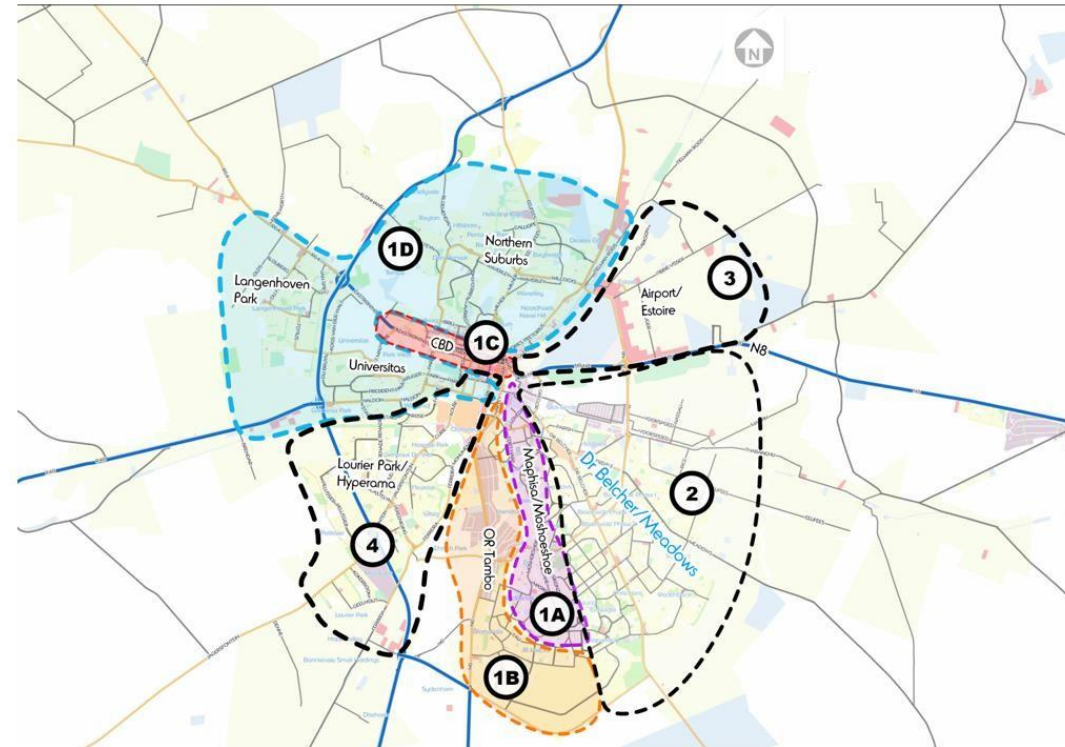


Figure 4:6 : Phase 1 Sub-Corridors for Implementation

The *Hauweng* implementation plan divided the metropolitan area into local services areas and rural services areas. The local service areas are within Bloemfontein, Botshabelo and Thaba Nchu given the urban character and population density in these areas. Within these services areas, six functional public transport corridors were defined representing the primary public transport movement in the metropolitan area. Movement occurs within and between these defined corridors. Bloemfontein local service area is divided into four of the six corridors whereas Botshabelo and Thaba Nchu is divided into one corridor each. The six main corridors were divided into sub corridors that align with existing public transport service providers operational areas to optimise and streamline existing service rationalisation.

Action 3.4: Upgrade the Bram Fischer International Airport as a means to stimulate local economic development.

The Bram Fischer International Airport will play an increasingly important role in the future development of Mangaung – not only in terms of serving tourist and business travellers, but also towards the development of the areas surrounding the airport, and more specifically the way in which these developments could contribute towards the spatial restructuring of the eastern parts of the metropolitan area. **Development of the Airport will be facilitated through the Airport Master Plan and coordinated and implemented by ACSA.**

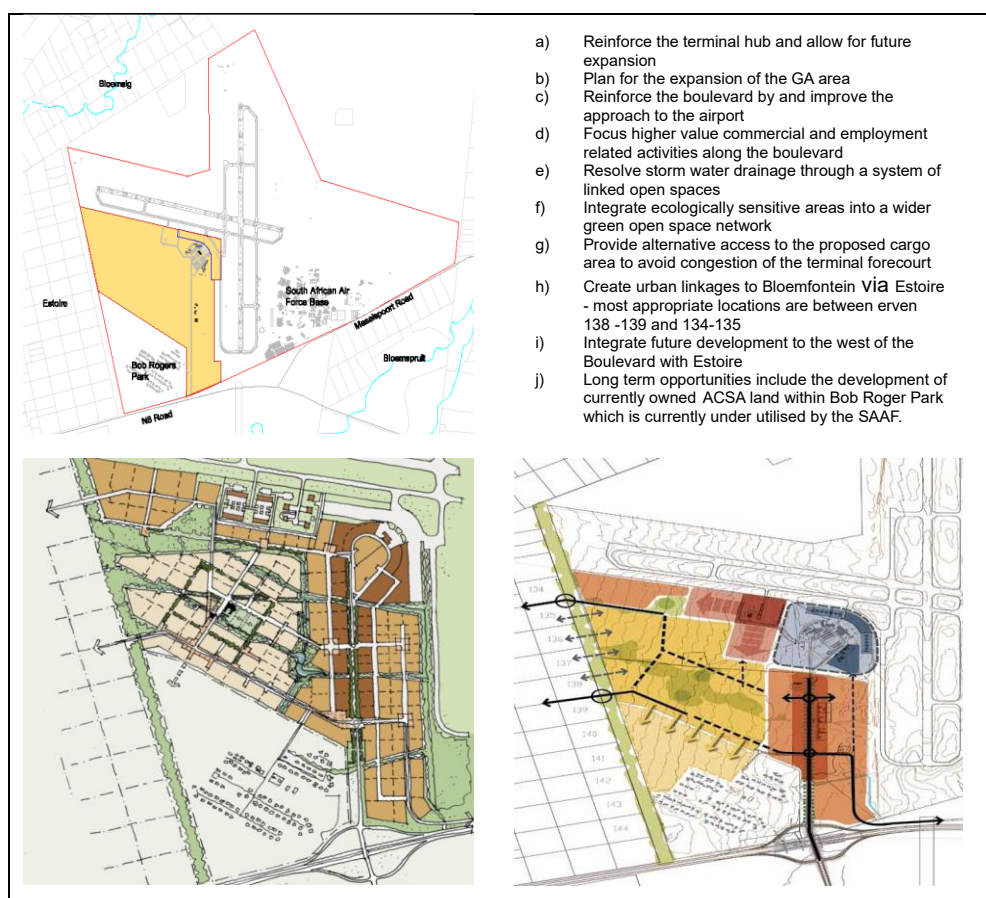


Figure 4: 7. Bram Fischer Airport development upgrades.

The Bloemfontein Airport node is located on the eastern quadrant of the City and to the north of the N8/Airport interchange. The Bloemfontein Airport Development Framework (2010) conceptually divides

the node into five precincts namely; (1) Terminal, (2) Boulevard, (3) General Aviation Expansion, (4) Airport Industria and (5) Grasslands (see **Figure 4:7**). The Boulevard Precinct will accommodate the immediate developments on the node, with land parcels fronting onto the Boulevard/Airport access road reserved for higher value commercial activities, offices and manufacturing uses. Lower value uses such as distribution, storage, warehousing, depots for car rental will be located further from the Boulevard. The Boulevard Precinct can accommodate approximately 400 000 of Gross Floor Area (GFA).

To ensure integration with surrounding areas as shown on **Figure 4:8**, the Development Framework proposes new road connections with Estoire to the west of the Airport. These linkages would ultimately connect with major roads such as the Rudolph Greyling Avenue and Raceway, Airport Development Node and Bloemspuit Areas. The land uses towards the west are ideal for hangering and airfreight warehousing which will interlink with the light industrial uses in Estoire.

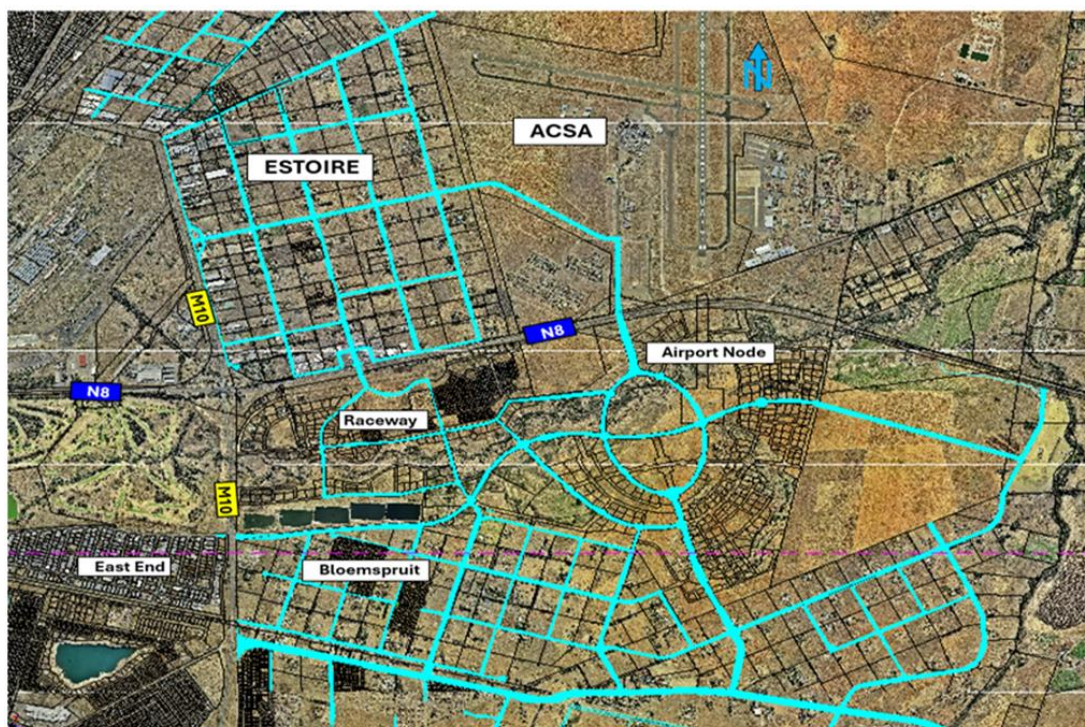


Figure 4: 8. Integration of surrounding areas and light industrial areas (East End).

Action 3.5: Enhance the functionality of the Spoornet Precinct as Industrial and rail logistics hub.

The areas around the Spoornet precinct have attracted significant freight/ logistics related development over the past two decades. This positive trend needs to be harnessed and expanded towards the airport node located to the east thereof as part of a coherent drive to stimulate extensive economic development and job creation in the eastern parts of Bloemfontein, and more specifically the areas surrounding the Mangaung township. The Node is known for Locomotive and rail engineering and refurbishment. The Transnet Industrial offer various skills and trade centres which is significant for skills development in the Mangaung Metropolitan Area. The Transnet Engineering offer skills development in wagon building to transport minerals, grain and other rail mass transportation infrastructure as shown on **Figure 4:9**.



Figure 4: 9. Transwerk Heavy Industrial Node.

Proposals

- National Government should allocate more contracts to the Transnet Rail Engineering facility in order to build more capacity and create more jobs.
- National Government should assist the entity to secure more contracts in the African Market and developing countries to stimulate growth of the Node.
- The Bloemfontein Transnet Rail Engineering facility can play an important role in igniting and revitalisation of the Rail Transport industry in the Country especially with programmes of transportation of minerals from Northern Cape to the main harbours of South Africa at the West and East Coast.
- Web information: <https://www.transnet.net/>
- Incentive Packages should be developed to give Mangaung a competitive edge above other cities.
- Tax Incentives like tax breaks (Look at Chinese Tax Incentives) for foreign investors

4.5.4. Sustainable Human Settlements

Objective 4: Facilitate the establishment of sustainable human settlements in all identified settlement areas.

Action 4.1: Actively promote development aligned to Smart Growth Principles in all settlements.

The focus areas for Human Settlements will be focussed on greenfield developments and brown field Developments.

GREENFIELD DEVELOPMENTS

- Private sector developments
- Catalytic project developments
- Social housing projects
- Informal settlements upgrading projects

BROWN FIELD DEVELOPMENTS

- Urban Renewal Projects
- Infill Planning Projects
- Township Revitalisation Projects
- CBD Renewal Projects

The following Smart Growth Principles should be applied in all settlements within the Mangaung Metropolitan Municipality:

- All human settlements should be based on integrated human settlements principles which provide for mix of different kinds of land uses, e.g. residential, retail, business, and recreational opportunities.
- Create well-designed, compact neighbourhoods where the different activities are in close proximity to each other.
- Provide a variety of transportation choices, including private, public and non-motorised transport opportunities that are safe.
- Create a variety of housing opportunities, i.e. in terms of function, form and affordability.
- Encourage growth in existing communities through infrastructure upgrade, urban renewal, new amenities and densification.
- Preserve open spaces, natural beauty, and environmentally sensitive areas.
- Protect and enhance agricultural lands and secure these as a productive land base for food security, employment, etc.
- Utilise smarter and cheaper infrastructure and green buildings and promote renewable and sustainable technologies.
- Foster a unique neighbourhood identity building on the unique and diverse characteristics of each community.
- Engage citizens to participate in community life and decision-making through land use planning Public Participation Processes.

Action 4.2: Identify strategically located land as priority housing development areas.

At present the estimated housing backlog (demand) in the Mangaung area stands at approximately 30,000 units. Furthermore, the projected incremental demand up to 2025 stands at 38,139 units and an additional 50,927 units by 2036. As a principle, the bulk of housing should be developed within the settlement areas identified in the municipality, and more specifically in Bloemfontein, Botshabelo, Thaba Nchu, Dewetsdorp and Wepener which represent the higher order nodes.

Rural housing based on the Rural Housing Subsidy Programme/ Peoples Housing Programme should be provided to the rural villages surrounding Thaba Nchu. Residents not qualifying/ contributing to the functionality of the Rural Nodes should preferably be accommodated in one of the higher order nodes where opportunities for sustainable livelihoods are significantly enhanced.

The non-qualifying families of informal settlements in urban areas should, in principle, be accommodated on pro-actively planned and serviced formal township stands. These stands can be made available by way of rental agreement, permission to occupy, or full ownership in the case of residents who would qualify for a subsidy but for which no subsidy is available at present.

The Priority Housing Development Areas earmarked to accommodate the bulk of future residential development within the municipality and discussed in greater detail in **section 4.5** of this document.

The following areas should form part of the priority housing development areas;

- All new informal settlements
- Informal settlements upgrading areas
- Catalytic Projects
- Social Housing Projects
- Township Revitalization Projects

It is important that these areas be functionally incorporated into the existing urban fabric in line with the Smart Growth Principles noted above.

Action 4.3 Promote the development of a diverse range of housing typologies offering multiple choices in terms of affordability, density and tenure options.

It is important to note that it is possible to do low, medium and high-density development for low income, middle income and high-income communities as graphically illustrated in **Annexure D1**. Unfortunately, low density typologies dominate the urban landscape in Mangaung (for all income groups) as is the case in most urban areas in South Africa. As a general principle, MMM should actively pursue strategies to promote medium and higher density residential development for all income groups in order to achieve an average density of not lower than 25 units/ha in new developments throughout the municipality (especially along the major public transport corridors).

In the case of low income, the subsidy scheme only makes provision for single residential full title BNG Units which normally result in densities around 20 units/ha. The only subsidised medium to higher density typologies is Community Residential Units (CRU) and Social Housing both of which only cater for the rental market. There are, however, several initiatives underway throughout South Africa to develop “RDP Flats” and/or medium density double storey row housing or semi-detached RDP units in order to increase density yields. The same principle would apply to middle- and high-income development where medium to high density typologies should be actively promoted especially around the business nodes and along major public transport routes in the metropolitan area.

Action 4.4: Rationalise and cluster community facilities in highly accessible Multi-Purpose Community Centres (Thusong Centres)

It is essential to continuously strive towards consolidating community facilities at strategic locations within the urban fabric in order to provide one-stop services. This follows from the nationally approved concept

of a multipurpose Thusong Centre. Preferably these community facility clusters should also be combined with local business areas in order to add to the “critical mass” required to maintain/enhance business activities in these areas. This concept is briefly described in **Annexure D2** and should be promoted in all mixed-use nodes within the various settlements in the MMM.

Action 4.5: Locate regional community facilities at higher order nodes and ensure that all nodes are provided with services and facilities appropriate to nodal function and size.

Community facilities should be provided to all human settlement areas in accordance with the CSIR Guidelines for the Provision of Social Facilities for small/ medium towns as stipulated in the **Table 1** in **Annexure D3**.

Action 4.6: Develop Township Revitalisation Plans which will address the Apartheid Planning disparities.

Central to Apartheid Planning are the prevalence of poor-quality housing and infrastructure of existing townships as shown on **Figure 4:10** below. The City must continue developing strategies to have township revitalisation which should be combined with urban renewal strategies. The strategy should focus on dilapidated houses and upgrading existing housing typologies. The strategy should also include upgrade of road infrastructure and stormwater channels examples in **Figure 4:11**.

This can be achieved through the USDG, HSDG, ISUPG and other financing instruments.



Figure 4: 10. Dilapidated houses before renewal programme.



Figure 4: 11. Houses and roads infrastructure after urban renewal.

Action 4.7: Develop Township Activity Corridors and Nodal Developments

Township activity corridors and nodal developments should be promoted along public transport routes and socio-economic amenities and facilities namely; Moshoeshoe/Maphisa road activity corridor and Dark and Silver city social housing in Mangaung, Botshabelo activity corridor and Thaba Nchu Nodal development.

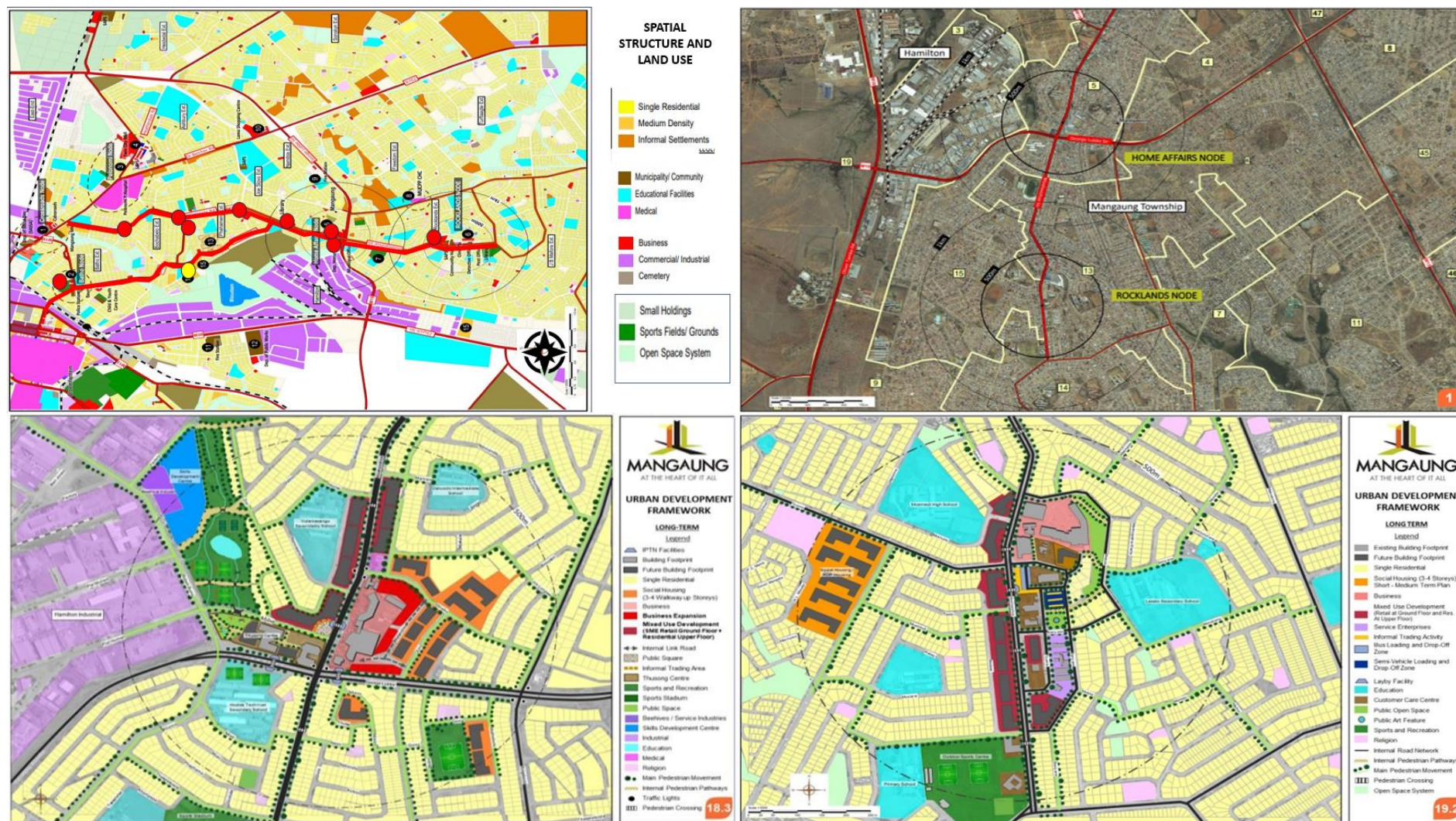
a) *Home Affairs and Rocklands Nodes along Moshoeshoe/Maphisa Road Activity Corridor together*

Moshoeshoe/Maphisa Road Activity Corridor depicted in **Figure 4:12 (top left)** extends from Maphisa road in Bochabela, past Silver city and joins Moshoeshoe street at Vula Masango primary school junction, past Ha-Sechaba, Filling station, Kenworth shopping centre, home affairs, Petrus Molemela stadium, Rocklands (Shoprite) shopping centre, Police Station, Community Hall, Office, Post Office in Rocklands Mangaung and ends at Outdoor sports centre junction.

Along the Corridor, two nodal points exists i.e. a). Home Affairs node and b). Rocklands node. **Figure 4:12 (top right)** shows location of the two nodes in proximity with one another.

A1. Home Affairs Node

Figure 4:12 (bottom left) depicts the Home Affairs node and existing land uses that are found within the node. The figure also illustrates the long-term developments that are envisaged and of which can also be broken down into short, medium and long term. The node is very vibrant and is located along public transport route, it includes public institutions such as; the home affairs, stats SA and municipal office. Within the node exists the Kenworth shopping centre which accommodates variety of businesses



From commercial banks, food outlets as well as retail stores. Petrus Molemela stadium is in close proximity as well as the Hamilton Industrial area.

A2. Rockland Node

Figure 4:12 (bottom right) illustrates developments that should happen in the long term on the Rocklands Node. The long-term developments, as mentioned above, are broken down into short and medium term as well as the long-term developments. The node offers social facilities such as the Police Station, community hall, the clinic, post office as well as the church. The shopping centre is composed of food outlets, commercial banks, retail outlets as well and the filling station. There is a lot of informal businesses found across the Rocklands shopping centre such as salons, street vendors, internet café, photocopy shop, etc. The node holds a huge potential for both the benefit of the informal and formal businesses within the node.

b) Dark and Silver City Nodal Development

Dark and Silver City (**Figure 4:13**) is a social housing development in Silver City township. The social housing is meant to assist the low-income group to get adequate housing that can be affordable.



Figure 4: 13. Dark and Silver City Nodal Development.

Development Proposals

- Public Transport Bus Stop along Maphisa Road
- Pedestrian Crossings
- Cycling Routes along Maphisa Road

c) Botshabelo Township Activity Corridor

The Botshabelo Activity Corridor consist of various nodes from the N8 Interchange and the Liberty Mall to the east and the Botshabelo Industrial Precinct to the west (see **Figure 4:14**).



The Free State Development Cooperation is the biggest land owner of Industrial and Business sites in the Area. The FDC is also the land owner for the shopping mall in central part of the activity corridor. The Development Proposal include various land owners and suggest the revitalisation of the FDC Shopping Centre.

d) Thaba Nchu Nodal Development

Figure 4:15 delineates Thaba Nchu Nodal Development demarcated in the Central Business District zone of the town.

Thaba Nchu Central Business District



Figure 4: 15. Thaba Nchu Nodal Development

Proposals

- The Thaba Nchu CBD require an incentive scheme to encourage property owners to renew their buildings.
- The Main Road from the Interchange through the CBD should be upgraded with pedestrian walkways.
- The Park to the north- east of the CBD should be upgraded for recreation purposes.
- The proposals of the Thaba Nchu Urban Revitalisation should be implemented.

Action 4.8 Development of Nodal and Precinct Plans

The City should develop various development Nodes and Urban Precincts which will complement the activity corridor and public transportation routes. The following Precinct Plans should be developed for the city.

a) Waterfront/Stadium Sports Precinct

The Waterfront and Stadium Precinct (see **Figure 4:16**) is of special significance for the city in that the stadium precinct provide infrastructure for major sports events in the city.



Figure 4: 16. Waterfront/Stadium Sports Precinct.

Waterfront Stadium Precinct

The Precinct is known for a variety of land uses amongst other;

- Shopping Malls
- Sports Stadium
- Zoo land
- Advocates Chambers
- Tourism Centre
- Swimming Pool
- Rugby Stadium
- Cricket Stadium

Proposals

- Upgrading of Parking Area at Swimming Pool to host National Events
- A Scatting Ring to be developed
- Safety and Security Plans
- Waste Management Plans
- Development of a Pedestrian Bridge Over 1 st Avenue to Waterfront Mall
- Pedestrian Crossings
- Re-opening of the Zoo
- Development of Ablution Facilities at Flower Market for SMME's
- Upgrading and Redevelopment of the Tourism Centre
- Safety and Security around Tourism Centre
- Development of a Scatting Ring
- Development of a Pedestrian Bridge across First Avenue

b) Second Avenue Precinct

Second Avenue Precinct became significant to the city for entertainment. **Figure 4:17** presents demarcation of the 2nd Avenue Precinct together with its development proposals.

Based on the proximity to the waterfront would be suggested that the precinct be integrated with the waterfront precinct.

Second Avenue Precinct



- Proposals for this precinct is ;
- Pedestrian Walk Ways
- Parking Zones
- CCV Cameras for Safety and Security
- Paving of Road at Strategic Intersections
- Development of Street Art

Figure 4: 17. Second Avenue Precinct

c) Hamilton Industrial Park Precinct



The Node is known for various heavy Industrial Engineering facilities. The Node hold one of the oldest industrial companies in South Africa within the sector of trailer manufacturing and skills development.

SA Truck Bodies is a Bloemfontein based company which expanded by having facilities in all major cities in South Africa amongst other Cape Town, Durban, Johannesburg,

Bothaville, East London. The company also have major facilities in numerous African Countries like Mozambique, Zimbabwe, Zambia, etc.

The Node play therefore a significant role in manufacturing and creating logistics infrastructure and components development in the country. Other industries in the Hamilton Node are;

Coca- Cola, South African Breweries, Paving Manufacturing, Motor Vehicle Manufacturing, Logistics Companies. Hestony Transport is one of the biggest logistics companies in the country. The company capitalise on the central location of Bloemfontein and the Agricultural Base of Mangaung and the province. The Node is ideally located because it is within walking distance from the Rocklands,

Phahameng townships and will in future also be in close proximity to Hillside, Vista Park 2 and 3 Catalytic Projects of the city.

Proposals

- That the Municipal Industrial Sites Hamilton the serviced and leased to the private sector
- That the Intersection at Vereeniging Extension and Oliver Tambo Road be upgraded.
- A Master Plan should be developed for the Node .

d) N8/West Development Precinct

The N8 west became significant based on its location where the N1 and N8 connect opening up for transport from the Northern Cape and the mining towns of Sishen and Kathu. This also provide opportunities for connecting traffic from Gauteng and the coastal cities.

CECELIA PARK STRATEGIC ROADS UPGRADES

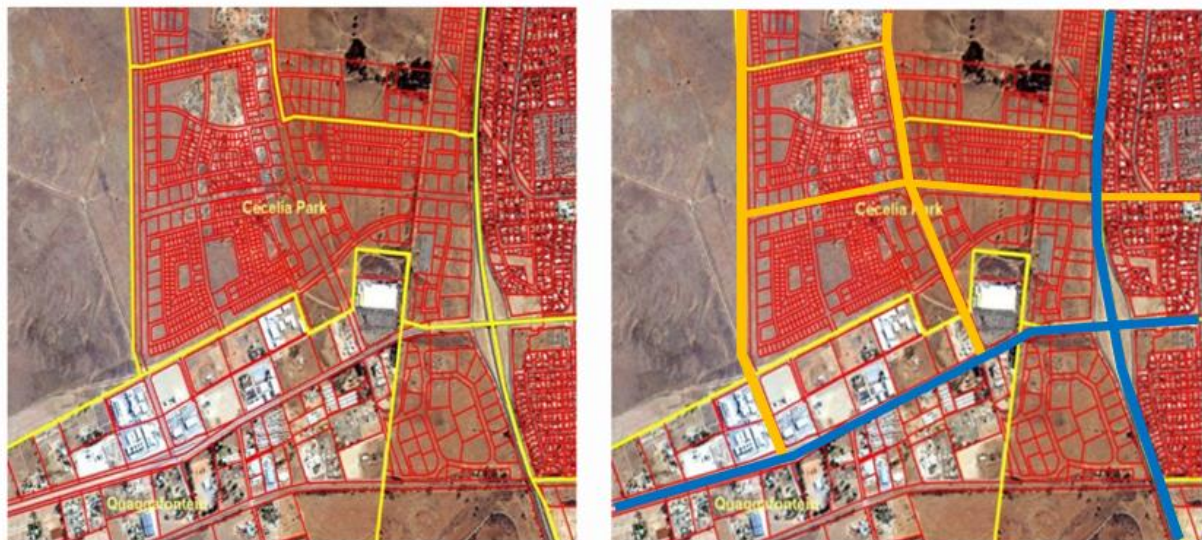


Figure 4: 18. N8/Est Development Precinct

The Development of Cecelia will be significant to effect the Spatial Transformation Agenda of the City, **Figure 4:18** above. Central to this will be significant to construct the connector Roads which link the N8 with Du Plessis Avenue and the connector road to link the N8 with Wynand Mouton Road. This will ignite the development of Cecelia Park development. The Industrial Node became significant as a Node on the N8 west and a node along the N1. The Node is specifically important for agro – processing, logistics and warehousing. There is also a strong footprint of courier companies which capitalise on the central location of the city by locating on the main national road arterials.



Further to this there is also a growing interest of logistics companies to locate along the N8 west as depicted below on **Figure 4:19**.



Figure 4: 19. Logistic companies along N8 West of MMM.

Proposals

- A Master Plan should be developed for development Kwaggafontein Industrial south of the N8.
- Collaboration on design criteria for Roads between the Provincial Government and SANRAL Should be established for design criteria for the Node
- Investigation should be made for Train Station at the Node that will link a passenger rail – network from the Bloemfontein CBD.
- A Public Transport Route should be developed to the Node from the Bloemfontein CBD.
- Construction of Roads at N8 and Du Plessis Avenue
- Construction of Roads connecting N8 west and Wynand Mouton Avenue.

e) Naval Hill Tourism Precinct

Naval Hill is a Nature Reserve within the Urban Settlement of the Urban Node Bloemfontein. This Precinct is a tourist attraction based on the elevation of the nature reserve in relation to the surrounding urban settlement (**Figure 4:20**). The nature reserve has viewing points to the south where you can view the city during the day and at night. The Nelson Mandela statue is located on the southern tip of the nature reserve and is very popular for visitors. The nature reserve also has a planetarium that is managed by the University of the Free State.

The nature reserve has several wild animals like giraffes, buck species that can be viewed by visitors. The nature reserve has walking trails and cycling routes which is popular for runners.



Development Proposals

- Naval Hill should keep its natural character and should be maintained.
- An Amphi – Theatre to be developed at the Restaurant

Alongside with the Nodal and Precinct plans should be developed.

- Land Use Maps and Zoning Maps
- Public Transport Plans
- Densification Plans
- Implementation Plans

Action 4.9 CBD Renewal Strategies

Due to the fact that the CBD 's play a significant role as the key economic centres of city which also form the main centres of employment and business. The city should have CBD urban renewal strategies which should be combined with an urban management plan. The CBD's of the City should have Urban Development Zones (UDZ) which form part of a Tax Incentive to renew Urban Centres. The City Should develop Urban Renewals Strategies which should include the following;

a) *Public Safety and Security Plans*



Figure 4: 21. Public Safety and Security Plans.

SMART City principles could be applied to manage security in the CBD like CCV Cameras and security patrols on the ground due to the day-to-day dynamics in the CBD. Security in the CBD requires coordination between Mangaung Security Officials, Traffic SAPS and Home Affairs as shown on **Figure 4:21**.

b) Urban Development Zones

The Urban Development Zones is an incentive package by the South African Revenue Service to enhance urban renewal in metropolitan cities. The incentive package became significant in urban renewal programmes of the cities.



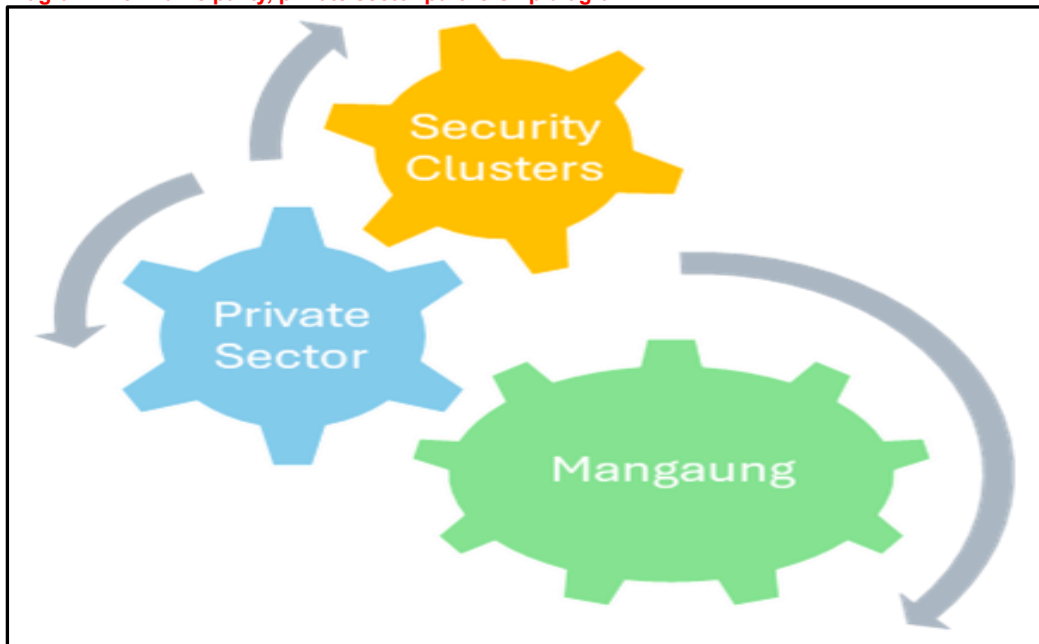
Figure 4: 22. Urban Development Zones in Mangaung.

The UDZ benefitted the Urban Renewal programmes of the city in that various private sector companies responded to this initiative as depicted on **Figure 4:22**. However, this incentive should be extended to Thaba Nchu CBD, Botshabelo and the rural towns of Wepener and Dewetsdorp.

c) Partnerships with Private Sector

Partnerships illustrated in **Diagram 4:6** below, are between the municipality and private sector is absolutely essential to manage Security, waste removal and sick buildings in the CBD. The Municipality should keep record of sick buildings in the CBD and engage owners by issuing notices to property owners.

Diagram 4: 5. Municipality, private sector partnership diagram.



d) Public Transport Plans

Public Transport Management is absolutely important in the CBD and areas for taxi stops should be demarcated with the said Transport Unions and Authorities. Hoffman Square plays an important role as open space and focal point for bus- stops in the City. A report should be developed how to make the Inter- modal facility functional or alternative use.

e) SMME Development Plans

The CBD Master Plan should demarcate zones in the CBD for informal trading. Permits for informal traders should be issued based on application received. The City should develop SMME Infrastructure and ensure effective policing and management plans. For example, Mobile Shops can be introduced with support from DESTEA, see **Figure 4:23** below.



Figure 4: 23. SMMEs Development Ideas.

f) SMART City Development Strategies

The City should implement SMART City principles according to the South African Smart City Framework (see **Figure 4:24**). For a smart South African city to be inclusive, it should adhere to six interdependent principles. These principles provide guidance when decisions have to be made regarding the identification, planning and implementation of smart initiatives and technologies. Each principle is expressed in the form of an objective that should be achieved to enhance the inclusiveness of a smart city initiative.

Decisions regarding the nature and purpose of a smart initiative or technology should be guided by the following principles:

- It should be smart for all.
- It should use technology as an enabler rather than a driver.
- It should be shaped by, and respond to, the local context.
- It should be informed by the real needs of the community.
- It should embrace innovation, partnerships and collaboration.
- It should be sustainable, resilient and safe.

The Fourth Industrial Revolution

The Fourth Industrial Revolution, 4IR and Industry 4.0 are labels developed to apply to the era of cyber-physical systems that go beyond mere automation, with industries and systems that are decentralised but integrated and transparent, self-optimising, selfconfiguring and self-diagnosing.

Technologies and concepts that are commonly associated with 4IR and smart cities include the Internet of Things, Human Enhancement Technologies, Virtual Reality and Augmented Reality, Near Field Communication, Advanced Materials and Smart Materials, Speedy connectivity (5G and Wi-Fi 6), 3D Printing and Additive Manufacturing, Big Data, Distributed Ledger Technologies and Blockchains, smart electrical grids, bots, drones, satellite enablement, facial recognition, and autonomous or driverless vehicles.

“A city is not smart because it uses technology. A city is smart because it uses technology to make its citizens’ lives better.”

Smart Cities Council, 201560



Figure 4: 24. Context and components of an inclusive smart city

Action 4.10. Non-Motorised Access

The City should make provision for non- motorised transport along Public Transportation Routes and Main arterials as illustrated in **Figure 4:25**.

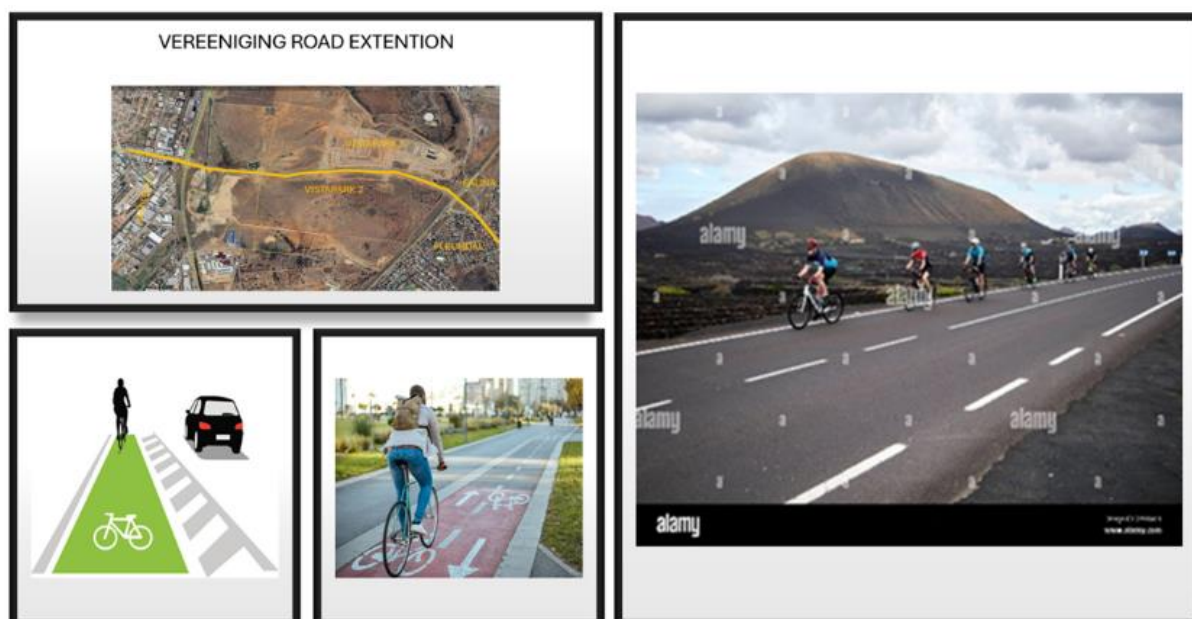


Figure 4: 25. Proposals for NMT along the Vereeniging Road.

Action 4.11 N1 Road Nodal Development

N1 runs west of Bloemfontein from Johannesburg to Cape Town as shown in **Figure 4:26**. The city is hence a bypass city located right at the centre of the country. Developments should thus be encouraged along the N1.

Pitt Stop Node	<ul style="list-style-type: none"> The Node is known for a Petro Filling Station and Truck Stop. Further development will be considered in terms of the land use scheme.
R64/ N1 Node	<ul style="list-style-type: none"> The Node is known for mixed land uses. Proposals for further developments will be considered in terms of the Land Use Scheme.
N8 / N1 Node	<ul style="list-style-type: none"> The Node is significant because it is linking the Mangaung Municipality Northern Cape and the mines areas of Kathu, Sishen etc. This node became very significant for trucking, courier services, retail and agricultural processing plants due to the centrality of Bloemfontein. The node holds potential to expand. The development of Cecelia Park will become significant in order to provide accommodation closer to the place of employment. Public Transport to the area will also become significant. The development of a Train Station from the Inner City should also be investigated due to the available infrastructure.

- The construction of a road connecting the R64 and N8 to enhance accessibility via Du Plessis Avenue in Langenhoven Park and Cecelia
- Casino Node
- The Node is known for entertainment. Further proposals will be considered

Below is the N1 Nodal Development image.



Figure 4: 26. N1 Nodal Developments Proposals.

Action 4.12. N8 Corridor Development

Corridor development has become popular in South Africa in the recent years as a means to integrate previously segregated communities. It requires thorough planning and large public investment in order to create an investor – friendly environment, but the potential benefits to the economic upliftment of the previously disadvantaged areas and the economic development of the entire area can be substantial. The challenge is to create an economic threshold that will ensure the success of the corridor.

The road between Bloemfontein, Botshabelo and Thaba-Nchu is arguably one of the busiest roads in the Free State after the N1 and N3. The question has always remained how the economic benefits of this road can be maximized. The Mangaung Metropolitan Municipality (MMM) has identified this road as a major asset for the municipality and has set the objective, namely: To facilitate the implementation of the corridor development along the N8. The N8 route links Kimberley in the Northern Cape Province with Bloemfontein and Maseru in Lesotho (See **Figure 4:27** below). The study area includes the area from the Bloemfontein Central Business District to the proposed Outer Ring Road. This area will be

indicated as phase 1 – Bloemfontein CBD to Fresh Produce Market and Phase 2 - Rudolph Greyling to Outer Ring Road.

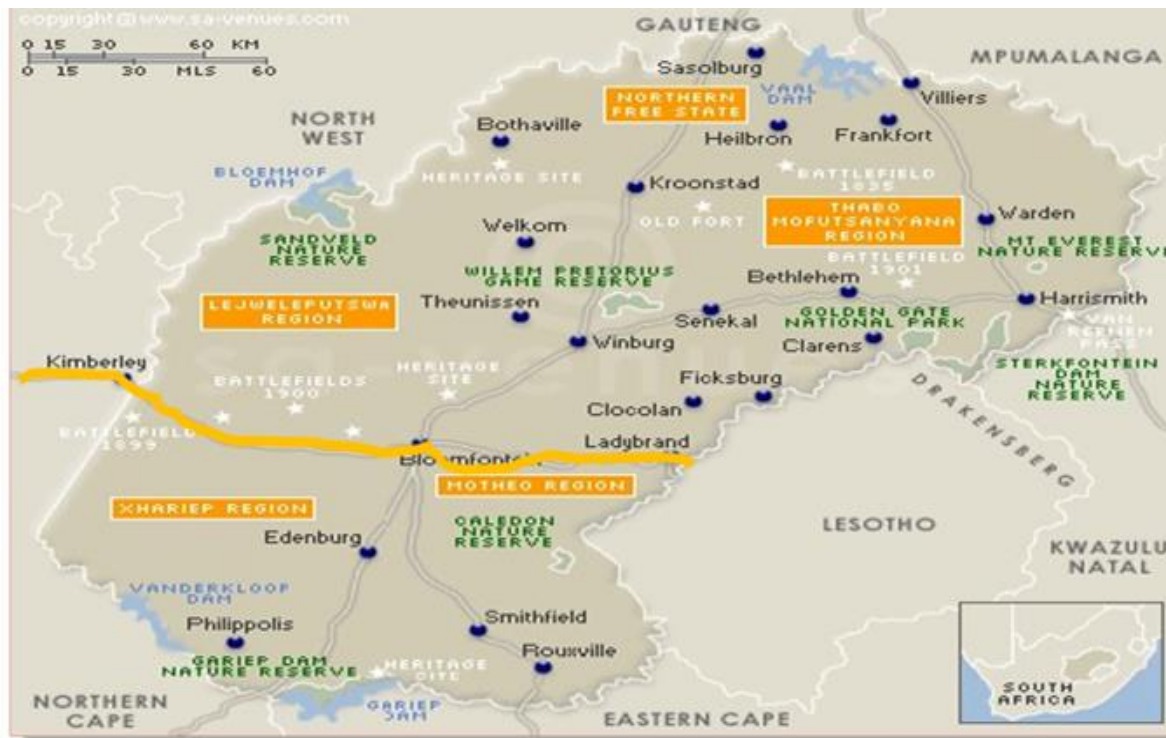


Figure 4: 27. N8 Corridor

Mangaung comprises of three urban centers and a surrounding rural area accommodating both commercial and communal mixed farming. The rural area of Thaba Nchu consists of 41 rural villages all with communal land. Major arterial routes traverse the area – N1, N6 and the N8.

The area is also serviced by an east/west and north/south railway line and an international and a municipal Airport. Another airstrip not currently in use is located in Thaba Nchu. The study area creates a linkage between the three urban nodes – Bloemfontein, Botshabelo and Thaba-Nchu.

Bloemfontein is the sixth largest city in South Africa and the capital of the Free State Province and represents the economic hub of the local economy. It is centrally located and serviced by the N1 which links Gauteng with the Western Cape. The N6 links Bloemfontein to the Eastern Cape and the N8 which links Lesotho in the east with the Northern Cape in the west. The north-south rail has induced an access barrier between the poor and employment opportunities. People travel from disadvantaged areas in the south-east of Bloemfontein, Botshabelo and rural areas of Thaba-Nchu to the CBD of Bloemfontein for employment opportunities.

A major relocation of services has taken place from the CBD to the suburbs, particularly to the west, which led to under- utilized office space in the CBD of Bloemfontein. The declining of manufacturing in the city is a matter of concern. The areas surrounding the CBD have developed as transgression areas with a mixed land use base. Several structure plans were developed to manage this problem (refer to Mangaung Spatial Development Framework).

For the purpose of this study several nodes have been identified along the Mangaung N8 Corridor, presenting the dominant focus areas. These are;

The CBD Bloemfontein, Botshabelo and Thaba-Nchu, Transwerk, Golf Course and Schoeman Park, Fresh produce Market and Abbatoir, Estoire, Bloemfontein International Airport, Racecourse and Farm Sunnyside, Airport Node, Mandela View, Bloemdustria, Rustfontein Dam, Botshabelo, Thaba Nchu, Maria Moroka/Protea Hotel Black Mountain, Kwaggafontein and N8 west.

Proposal

- A Detailed N8 Corridor Plan should be developed which should focus on Nodal Development along the N8.

Action 4.13. Regulatory and Institutional Reforms

- Transform all land use management policies to be more investor friendly.
- Transform the Traffic Engineering Department to keep up with trends in bigger metros in the country.
- Strengthen the capacity of Roads and Stormwater to fast-track comments and service level agreements.
- Develop monitoring systems on turnaround times in all sector departments involved in processing of land use applications.
- Create platforms of engagements to unlock major and priority projects that will enhance economic growth in the city.
- Strengthen the capacity of building inspectors in the city.
- Research on shortened land use processes in land use management.

Action 4.14. Strengthen the Strategic Planning function.

Strengthen the strategic planning function by appointing Urban Designers and Land Landscape Architects

4.5.5. Infrastructure**Objective 5: Manage regional infrastructure implementation and maintenance.****Action 5.1: Align infrastructure implementation and upgrading programmes with land use development programmes**

Engineering services are critical towards the establishment of sustainable human settlements and facilitating economic development and job creation. Hence, infrastructure investment within The MMM should be primarily directed towards serving the identified urban and rural nodes within the municipal area.

Urban Areas are defined as:

- Where existing township development exists within the Urban Edge;
- Extensions of existing urban development where development is contiguous (i.e. abutting) to existing municipal infrastructure services within the Urban Edge, and
- Resort and industrial developments outside of the Urban Edge where, by prior arrangement, service provision can be feasibly provided.

Developments in all other areas will be responsible for providing capital, operating and management costs, their own bulk (treatment plants), as well as link and individual services to the standards required by the Department of Water Affairs and the municipality.

Action 5.2: Promote the development of “green technology/energy” and incrementally implement the Smart City Concept

In line with the Smart City concept as illustrated in **Annexure D4**, The MMM should focus on the following important engineering services transitions over the short to medium term:

a) Water

- More stringent water conservation and demand-management initiatives;
- Increase water-use efficiency and equitable distribution through appropriate regional distribution schemes and incentives;
- Develop available groundwater resources;
- Adopt the re-use of wastewater effluent as standard practice, and
- Improve monitoring and reporting to ensure best practice and standards in water and wastewater management.
- Establish agreements into MOU with the University of the Free State on Underground Water Resource Management

b) Energy

- Promote and enable energy efficiency and demand side management;
- Promote the development of renewable energy plants;
- Enhance universal access to clean, renewable energy services.

c) Transport

- Invest in public transport and non-motorised transport (NMT), and
- Promote and enable low carbon transportation and shift transport patterns to reduce reliance on liquid fuels, and
- Shift freight traffic from road to rail along major routes.
- Facilitate Coordination between the spheres of government

d) Roads

- Develop a Roads Master Plan and Implementation Plan
- Align the Roads Master Plan with the SDF
- Incorporate the Projects in the Roads Master Plan with IDP and SDF Implementation Plans
- Facilitate coordination between the Municipal, Provincial and SANRAL Roads Authorities

e) Waste

- Reduce waste volumes and increase recycling and re-use;
- Introduce waste-to-energy initiatives in the longer term, and
- Invest in clean technology and value adding to waste.
- Develop partnerships with Private Sector regarding waste management and recycling
- Create opportunities for Private Waste Recycling Companies
- Establish partnerships and educations programmes with local communities for waste management and recycling
- Develop Waste Management Infrastructure in disadvantaged areas and illegal dumping hotspots.
- Investigate opportunities for waste to energy sources

f) Information and Communication Technology

- Establish a strong broadband and fibre infrastructure network to ensure efficient communications and internet services.

Action 5.3 Ageing Infrastructure

Property Plant and Equipment (PPE) are central to rendering services to the community. The quality of services rendered to the community can be directly linked to the age and condition of existing infrastructure. Aging infrastructure may result in frequent interruptions of service and/or result in lower quality of service, and demand higher expenditure on repairs and maintenance.

Action 5.4 Infrastructure Priority Investment Nodes

As part of the Bulk Infrastructure and Roads Master Plan the city should identify priority investment nodes alongside with the national and provincial departments and private sector to ignite the economy of the city.

Proposals

- Main Roads Arterials at Cecelia and N8 – west to open development of Cecelia
- Upgrading of Lucas Steyn to ignite development around Rooidam to expand the Tax Base
- Infrastructure Upgrading of Brandwag Area and properties along Paul Kruger Avenue to allow for densification along IPTN Routes
- Upgrade of Infrastructure in CBD to allow for densification.

- Redevelopment of M10 Roads from Moshoeshoe to N8 east
- Redevelopment of Dewetsdorp Road from Dr Belcher to Outer Ring Road
- Widening of Oliver Tambo Road
- Development of NMT along Vereeinging Extension, Maphisa and Moshoeshoe Roads

6.5.6. Economic Development and Job Creation

Objective 6: Identify and optimally utilise economic development opportunities in a sustainable manner.

Action 6.1: Implement programmes aimed at promoting economic upscaling of emerging entrepreneurs as part of the “Township Economy”.

There is a wide variety of economic activities that can be pursued in a “Township Economy” as listed in Annexure E1. The MMM should actively promote the establishment of as many as possible of these enterprises within the settlement areas in order to promote economic development and job creation.

There is also little support for the informal economy, while township economies are unable to retain local spending power. Many of the challenges are as a result of insufficient institutional capacity and lack of strong instruments for implementation.

(NDP)

Linked to the above, a variety of formalised informal trading structures should be encouraged at strategic locations within business areas and close to community facilities (Thusong Centres), public transport facilities and public open spaces within the MMM. Informal trading, skills training of informal traders, and proper management and regulation of designated informal trade areas should be dealt with as a consolidated programme in the MMM.

Annexure E2 provides more detail about informal trade empowerment and upgrading and illustrates various ‘levels’ of informal trade. These range from traders operating without formalised informal trading structures in ‘level 1’ and up to ‘level 4’ where traders are incorporated into the formal economy within the retail and manufacturing/ service industry sectors.

Following from the above, it is vital that provision be made – both physically and institutionally – for a variety of entrepreneurial activities at all nodes. Initiatives to encourage and support entrepreneurship may include, amongst others, a variety of trade stalls at strategic locations (such as along major pedestrian movement lines of public transport transfer facility) within nodes and at major tourism destinations. It could also involve the establishment of an “LED Warriors Forum” to make potential entrepreneurs aware of the different opportunities available and to guide them towards establishing

themselves in the municipal economy. The Mangaung private sector could also provide mentorship assistance to emerging entrepreneurs in such programmes.

Action 6.2: Align tertiary education and skills development programmes to priority economic sectors

The Free State University and Central University of Technology already provides courses, but there is significant scope to enhance skills in a range of programmes (also refer to the list of possible economic activities as part of a Township Economy as depicted in **Annexure E1**). Care should be taken that local skills development centres are established in each of the second order settlements.

Action 6.3: Promote business uses within strategically located mixed use nodes.

Business activity should be promoted within each of the settlement areas in the municipality. The primary business node in Mangaung is the Bloemfontein Central Business District which provides the most comprehensive range of retail and office related services and facilities.

Apart from this, a number of secondary and lower order business nodes (community nodes) are proposed in all the major settlement areas within the MMM. More detail in this regard is provided in **section 4.5** of this document.

Action 6.4: Facilitate light industrial and commercial development at designated strategic locations

There is scope for local industrial activity comprising light industries, service industries, and commercial activity. The existing industrial areas in Mangaung accommodate a range of these activities but it is almost fully developed.

Hence, it is proposed that Council commences with a process towards the expansion of industrial/commercial activity in the Estoire area between the Spoornet railway yard and the Bram Fischer International Airport. More details are included in section 4.5.1 of this report.

Provision is also made for increased light industrial activity and the establishment of agri-industries in Thaba Nchu as part of the Mangaung Agri Park Initiative. Action 6.5: Promote agriculture focusing on priority commodities in four functional areas

- There are four functional agricultural areas within the Mangaung area:
- The northwestern areas around Bloemfontein which also include the bulk of irrigated areas;
- The agricultural communities around Dewetsdorp in the central southern parts;
- The agricultural communities around Wepener/Van Stadensrus in the far-southern parts, and

- The subsistence farming communities around the rural villages in the areas under traditional authorities to the north and south of Thaba Nchu and which has been earmarked for Agrarian Transformation.

Agriculture related interventions should be aimed at optimising agricultural production and downstream beneficiation in line with the most suitable commodity value chains relevant to each of the areas noted above.

Action 6.5: Incrementally implement the Agri Park initiative in the Mangaung municipal area

The Mangaung Agri Park Business Plan identified potential for the establishment of an Agri Hub (agri-processing industries) at Thaba Nchu and three Farmer Production Support Units (FPSUs) in the surrounding areas. The priority FPSUs are to be established at Sediba and Feloane to the north and Botshabelo to the south of route N8.

The proposed Rural Urban Marketing Centre (RUMC) is to be located in Mangaung/Bloemfontein and could be consolidated with the existing Fresh Produce Market forming part of the Spoornet industrial area along Rudolph Greyling Avenue.

Agricultural training and skills development can be undertaken at the existing Glen Agricultural Research Centre to the north of Bloemfontein and at Lengau to the south where the University of Free State proposed the establishment of such facility.

Action 6.6: Utilise precision farming to minimise the impact of agriculture on natural resources

Against the backdrop of the limited water resources available in the region and in line with the “Smart Development” concept which aims to use ICT as a means to advance development, it is furthermore recommended that The MMM promotes the introduction of Controlled Environment Farming/ Precision Farming in the municipal area.

This approach optimises the use of resources such as water, energy, and space, and could provide a means of income to a number of emerging/ small farms in the municipality. It also poses the opportunity to promote agri tourism. (Refer to **Annexure E3** for more detail in this regard.)

Controlled Environment Agriculture is a technology-based approach toward food production including hydroponics, aquaculture, and aquaponics. The aim of CEA is to provide protection and maintain optimal growing conditions throughout the development of the crop which takes place within an enclosed growing structure such as a greenhouse or building. CEA optimises the use of resources such as water, energy, space, capital and labour.

It is important that emerging farmers be supported in the Mangaung area as a means to contribute towards poverty alleviation, enhancing food security, and establishing sustainable livelihoods. This can be achieved by way of implementing a number of measures as defined in the Emerging Farmer Upscaling Model illustrated in **Annexure E4**.

The Thaba Nchu area could serve as a pilot project in the Mangaung area to promote the establishment of successful emerging farmers.

Vertical Farming is the practice of producing food in vertically stacked layers, such as in a skyscraper, used warehouse, or shipping container. The modern ideas of vertical farming use indoor farming techniques and controlled-environment agriculture (CEA) technology, where all environmental factors can be controlled. These facilities utilise artificial control of light, environmental control (humidity, temperature, gases ...) and fertigation. Some vertical farms use techniques similar to greenhouses, where natural sunlight can be augmented with artificial lighting and metal reflectors.

"We believe strongly that vertical farming can be a driver for sustainability in cities, but it's a young emerging industry with a very green face, focused on growing local, pesticide-free food, using less water, and creating potentially green jobs". (Henry Gordon-Smith, vice chair of AVF).

Action 6.7: Support emerging farmers to become part of the mainstream economy

It is important that emerging farmers be supported in the Mangaung area as a means to contribute towards poverty alleviation, enhancing food security, and establishing sustainable livelihoods. This can be achieved by way of implementing a number of measures as defined in the Emerging Farmer Upscaling Model illustrated in **Annexure E4**.

The Thaba Nchu area could serve as a pilot project in the Mangaung area to promote the establishment of successful emerging farmers.

Action 6.8: Promote a comprehensive range of tourism activities based on the key characteristics of the identified functional tourism areas

A number of potential functional tourism routes and precincts have been identified for the Mangaung area as depicted on **Figure 4:**. These include the following:

- Bloemfontein and surrounds hold the largest concentration of tourism attractions and facilities in the form of cultural-historic sites and buildings, scenery, sports and recreation, and hotels, conference facilities and guesthouses. A large component of this market is overnight accommodation for travellers along the N1 corridor between Gauteng and the Western Cape;
- Route R702 with several natural and cultural historic features along the route, and more specifically around Dewetsdorp and Wepener and from there into Lesotho;
- Route R701/R26/R709 which runs parallel to the west of the Maluti escarpment and which offers natural scenery and cultural-historic features, and
- Route N8 which links eastwards into Maseru in Lesotho, and which provides access to a wide range of (largely untapped) cultural-historic, scenery and accommodation and recreational facilities in and around the Botshabelo-Thaba Nchu complex.

Through proper planning, branding and signage these four areas should be developed individually but also to contribute towards the collective tourism vision and strategy for the municipality. This strategy should aim to fully exploit opportunities related to agri-tourism, eco-tourism and adventure tourism (cycling, hiking, rock climbing, horse riding, etc.). The planning should be based on inputs from the local stakeholders (formal and informal) and should be aimed at optimising the tourism value chain (experiences/ activities) within each of the precincts based on the local resources available.

Action 6.9. Identify nodes for SMME's and supporting infrastructure

The city needs to identify nodes for SMME development and a management system to provide for emerging business people in the city. An example is the successful flower market which was established along Park Road and incorporated as part of the Park Road IPTN project.



Figure 4: 28. Images of Flower market in Willows and Outdoor decorations in Fleurdal

Proposals

- Strategic Informal Trade Nodes should be identified in conjunction with GIS to stimulate SMME development in the city.

Action 6.10. Innovation and Technology

South Africa faces high unemployment rates and the promise of the 5th Industrial Revolution (5IR). To tackle these challenges, the country needs innovative solutions that can boost economic growth, transform industries, revitalise skills, and create high-quality jobs in large numbers.

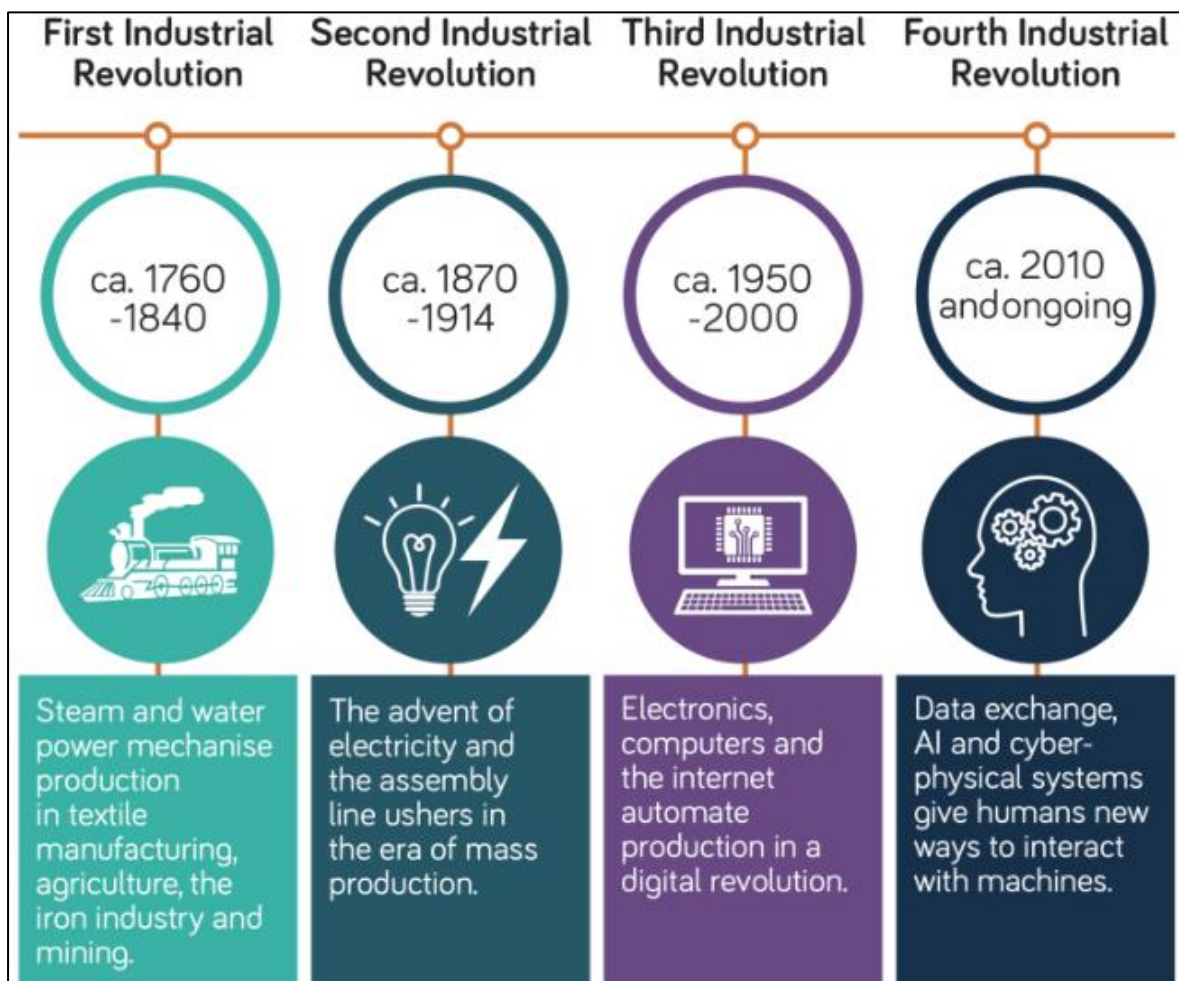


Figure 4: 29. Industrial Revolution.

To ensure the growth of digital industries, Mangaung must prioritise the building of a strong digital infrastructure that provides consistent and inexpensive access to high-speed internet throughout the country. It is also critical to rebuild the educational system to prioritise STEM disciplines (Science, Technology, Engineering, and Mathematics) from early childhood to higher school. Collaboration between educational institutions and the private sector can help curriculum meet the changing needs of the job market. Encouraging innovation hubs, incubators, and startup accelerators can also help to develop domestic talent.

4.6. COMPOSITE METROPOLITAN SDF

Figure 4:30 represents the Composite Metropolitan SDF for Mangaung emanating from the Spatial Vision, Spatial Concept and Spatial Strategies as defined in **sections 4.1, 4.2 and 4.3** above.

4.6.1. SETTLEMENT SPATIAL STRUCTURE AND DEVELOPMENT PROPOSALS

The following section provides some more details pertaining the proposed spatial structure and associated development proposals for each of the settlement areas in the Mangaung Metropolitan area.

4.6.1.1. Bloemfontein

Development Rationale
<p>Bloemfontein is centrally located in South African context and is the Capital City of the Free State Province. It comprises the widest range of economic activity (business, commercial, industrial, agriculture and tourism) in the province and represents the largest concentration of job opportunities.</p> <p>It also holds the biggest concentration of people, housing typologies and high, middle and lower order community facilities serving a functional community in excess of 2 million people in a radius of 300 kilometres around the city.</p> <p>The overall aim is to incrementally develop this urban complex into an integrated, efficient and sustainable metropolitan area.</p>

4.6.1.1.1. Environmental Core

Figure 4:31 represents the proposed Metropolitan Open Space System (MOSS) for Bloemfontein and surrounds. Essentially, this system includes a number of protected areas like Naval Hill, Signal Hill, Grant's Hill, the Free State National Botanical Gardens and a number of parks and open spaces within the urban fabric. These open space areas are connected by way of a network of rivers and streams acting as ecological corridors.

This Metropolitan Open Space System needs to be protected, maintained and managed in line with the MOSS guidelines adopted by Council.

4.6.1.1.2. Urban Development and Spatial Transformation

a) Movement Network

Figure 4:32 graphically illustrates the existing movement network for Bloemfontein, as well as proposals towards the expansion/ enhancement thereof. The following are the most notable in this regard:

It is recommended that the construction of the N1 eastern bypass route be prioritised in order to unlock the economic development potential of the eastern parts of Bloemfontein around Mangaung township. This road reserve needs to be demarcated and protected at all cost.

The Spoonet rail precinct and the Bram Fischer International Airport are strategically located in the eastern areas of Bloemfontein. with the Estoire smallholdings between these two precincts holding significant development potential National route N8 links these two precincts to one another and to the existing route N1 (the main north-south transport corridor in South Africa), and it links up with the proposed N1 eastern bypass.

As shown on **Figure 4:32** an additional bypass is also planned to the west of Bloemfontein, but it is a long-term prospect which will only be necessitated by the future expansion of the city in this direction (beyond the year 2036).

The radial road network leading into Bloemfontein was historically well-developed and serves the city well. The only exception is the north-eastern quadrant where it is recommended that a radial link be established along the existing Tibbie Visser Avenue from Rudolph Greyling Avenue up to the proposed future N1 eastern bypass.

This link road will open up the development potential of the northeastern parts of Estoire and the Bloemsig area to the north of the airport. (The possible future extension of the airport runway across this alignment as illustrated on **Figure 4:32** can be resolved by way of a subway underneath the

extended runway). The concentric movement network in the north-eastern quadrant also needs to be enhanced in order to open up this area for future development and to link to the existing radial routes in surrounding areas including route N8, M30 (Andries Pretorius Street) and Tielman Roos Road (S143). In the western parts of the city the development of a continuous road parallel to the west of existing route N1 from Lilyvale in the north up to Lourierpark in the south is key to the successful development of all the new townships planned for this part of the city (providing access to various strategic development areas).

The creation of lower order east-west links across route N1 to facilitate local movement and interaction between communities to the east and west of the N1 freeway is also essential. It will also alleviate pressure on the existing access interchanges along route N1 as it will separate regional traffic from local traffic.

- In the Mangaung township area the main focus was historically to cater for the radial movement of residents from the township area to the CBD and surrounds – hence the radial network was well established.
- However, the concentric movement network which extends from route M30 in the south-west (Hillside) up to route N8 to the north (Airport Development Node) needs to be significantly strengthened as only route M10 currently performs this function. Historically,
- In future the focus will be on economic development and job creation along route N8 in the Estoire area between the Spoornet railway precinct and the Bram Fischer International Airport, and (to a lesser extent) the areas around the N1-N6 intersection at the southern end of Bloemfontein. Hence, it is essential to put measures in place to cater for the movement of residents to these two areas.
- This is especially relevant along the outer perimeter of the township where the Upgrading of Informal Settlements Programme (UISP) was extensively rolled out during the past few years without a Roads Master Plan informing the main movement network to be reserved in support of the extensive informal settlements in this area.
- **Figure 4:32** illustrates how this concentric movement network could link up with route M30 to the west and with the airport node (across the railway line) to the north in the vicinity of route N8 – thereby improving access to these areas for residents from Mangaung township.
- The Bloemfontein Integrated Public Transport Network as depicted on Figure 56 in this report is a key component to the spatial restructuring of the urban environment and officially forms part of the Bloemfontein SDF. As a principle, residential densification and mixed-use development should be promoted and prioritised along this network and around the proposed transfer facilities.

Bloemfontein SDF: Open Space

-  Cadastral
-  Open Space (Protected, MOSS)
-  Rivers
-  Water Areas
-  Botanical Gardens

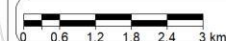
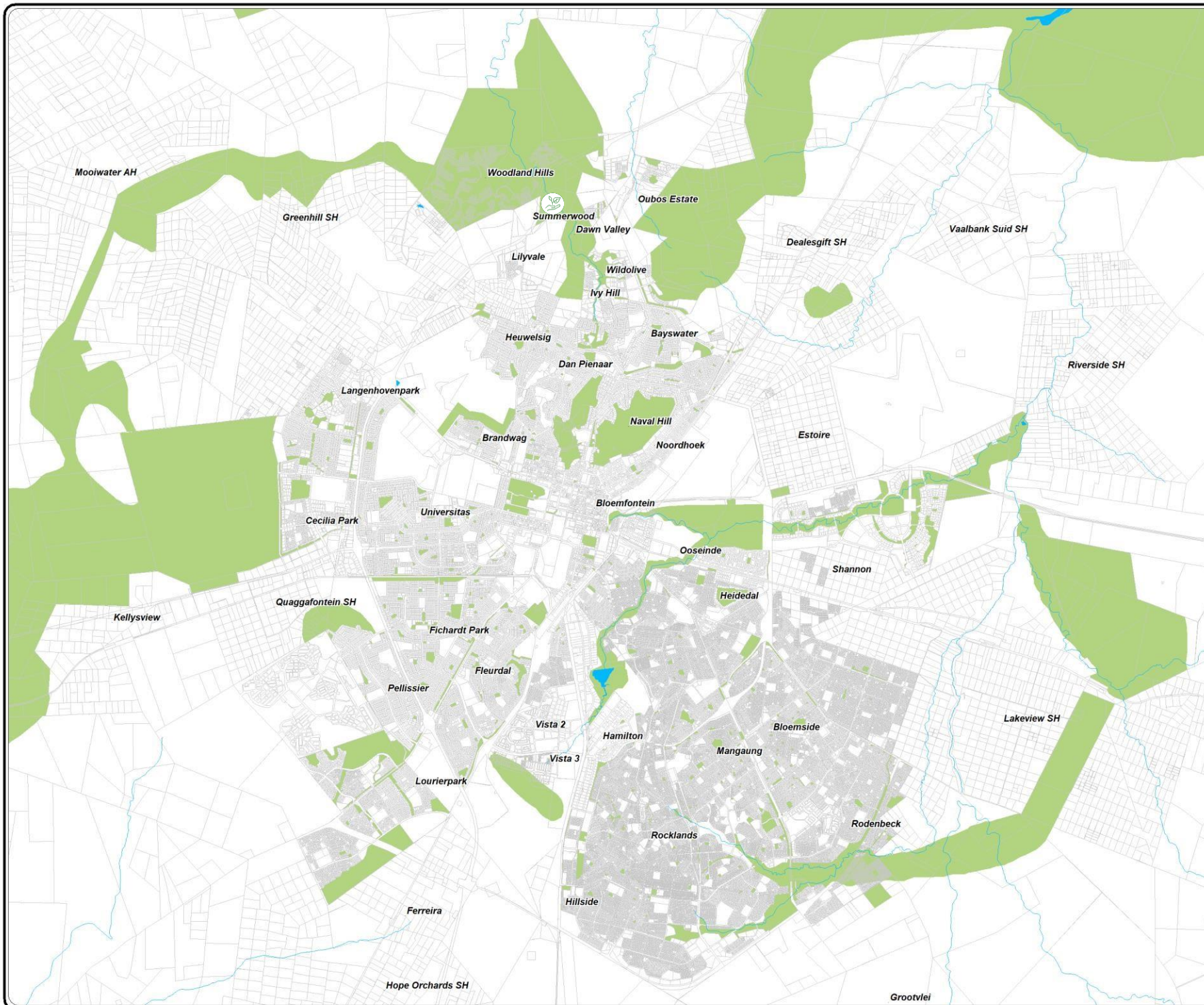
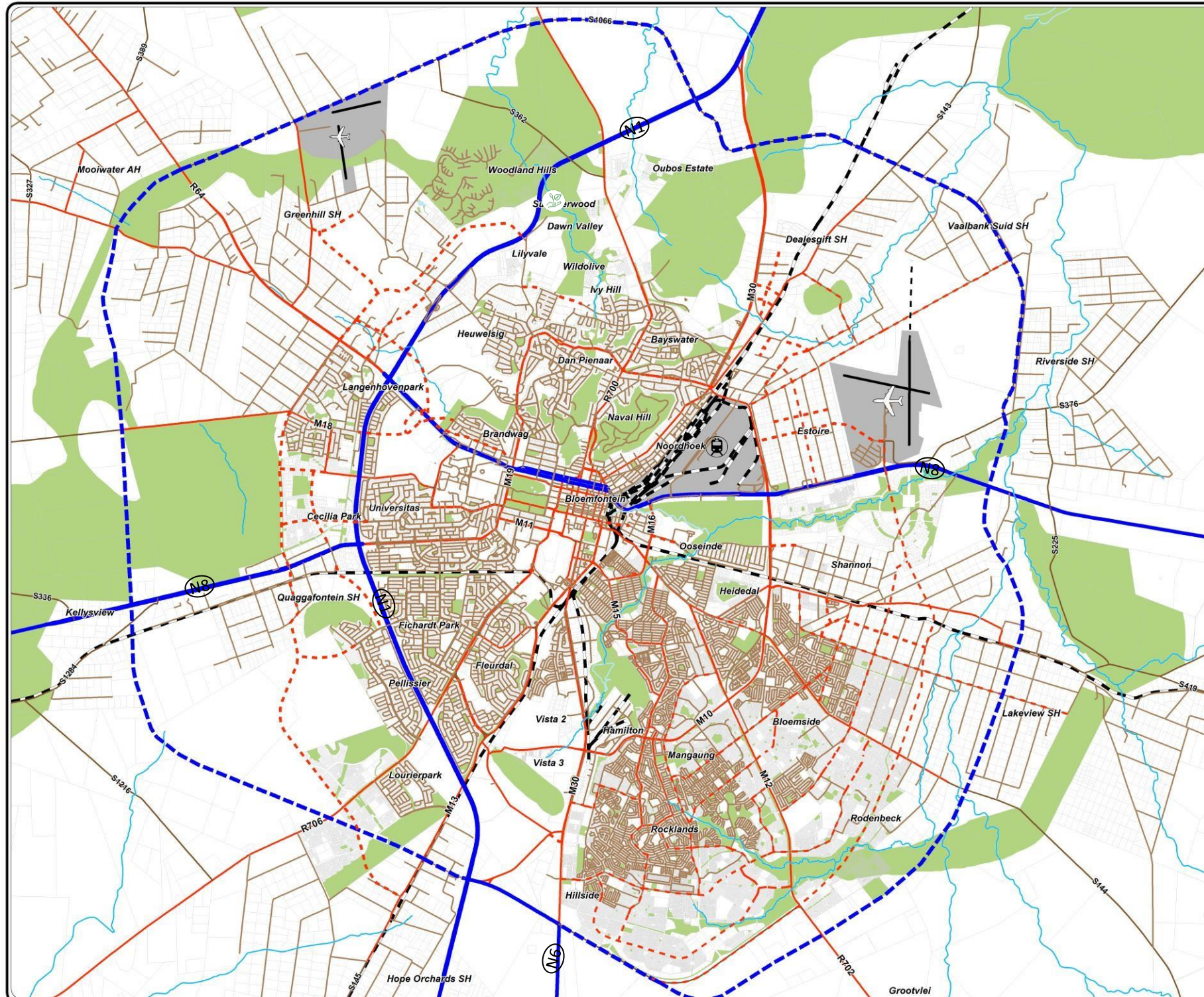
















Figure 4:31

Bloemfontein SDF: Movement Network



-  Cadastral
-  Open Space (Protected, MOSS)
-  River
-  Water Areas
-  Botanical Gardens
-  Airport
-  National Roads
-  New N8 Alignment
-  Provincial Roads
-  Future Roads
-  Secondary Roads
-  Other Roads
-  Railways
-  Railway Hub

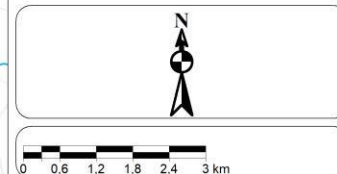


Figure 4:32

4.6.1.1.3. Economic Activity

Figure 4:33 graphically depicts the proposed hierarchy of higher order business nodes in Bloemfontein, as well as the existing and proposed future industrial/ commercial footprint. The following represents the most salient features in this regard:

- The Bloemfontein CBD is the first order business node^(B1) with the redevelopment of the Waaihoek precinct to the south thereof serving as a functional extension of the CBD. (Refer to **Annexure F1** which provides a summary of proposals towards the future development/ redevelopment of the CBD and Waaihoek areas respectively).
- The CBD serves the city as a whole, and even the communities Economic Development and Empowerment of these communities, from as far as Botshabelo and Thaba Nchu to the east and Dewetsdorp and Wepener to the south-east. number of existing and proposed future secondary business nodes^(B2) aimed at serving the needs of surrounding neighbourhoods to a radius of about 5 kilometres are also proposed.
- It is important to note that most of these secondary nodes are located at strategic intersections between the radial and concentric road network of the city. These include the Northridge Mall, Preller Square, Mimosa Square, Fleurdal, Vista (proposed), Home Affairs and Twin City nodes which are broadly located along the M10-M19 circular route.
- There are also two emerging secondary nodes at access interchanges along route N1 at the N1-R64 intersection at Langenhoven Park and the N1-N8 interchange in the vicinity of Cecilia Park.
- A secondary business node has also been provided for within the Phase 1 Airport Development Node to the south of route N8. As illustrated on **Figure 4:33** it is also proposed that provision be made for a number of third order business nodes^(B3) within the urban fabric in order to serve the basic retail needs of residents at convenient distance within neighbourhoods.
- Specific effort should be made to promote the development of such lower order nodes in the vicinity of the new southern and southeastern extensions of the Mangaung township area where very few business nodes exist.
- Apart from serving the retail needs of these communities, such nodes would also provide opportunities for Local especially if it is combined with modal transfer facilities at these points as part of the integrated public transport network.
- As far as industrial/ commercial development is concerned, it is recommended that the following areas be targeted: The N1-N8 node in the vicinity of Cecilia Park which attracted significant industrial and commercial development over the past few years;
- The N1-N6 interchange node to the south in the vicinity of Lourierpark (and which is also served by the national railway line between Gauteng and Cape Town);
- The existing Hamilton Industrial area along route M30 to the south of the CBD; the Ooseinde industrial area to the east of the CBD; The Hilton area bordering onto the Spoornet precinct to the north of Ooseinde;

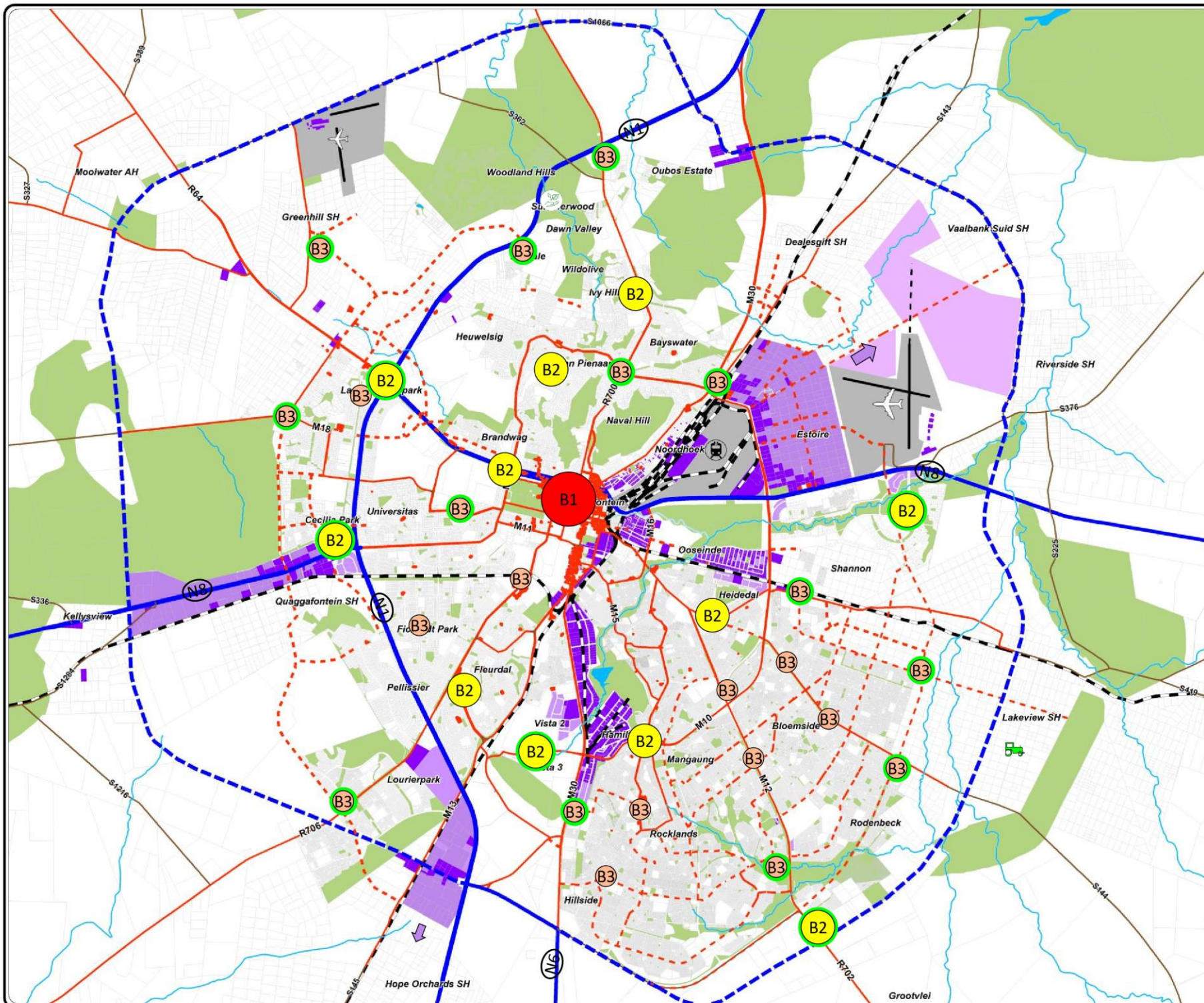
- The Estoire industrial/ commercial strip which developed along the northern section of Rudolph Greyling Road (M10) over the past number of years (and which is served with an access interchange onto route N8);
- It is furthermore recommended that the remainder part of Estoire up to the airport be earmarked for future commercial/ industrial development (with possible focus on freight logistics and agri industries (production and processing)) as this represents a very strategic location (served by national road, rail and air transport facilities).
- Kruger Avenue could serve as the central north-south spine along which the future development of this area can be sports and recreational facilities around Loch Logan next to the structured (parallel to the east of Rudolph Greyling Street).
- In the longer-term industrial uses may expand to the Vaalbank area to the north of the airport along Tibbie Visser Avenue towards the proposed N1 eastern bypass as illustrated on **Figure 4:32**.

4.6.1.1.4. Community Facilities

Figure 4:34 illustrates the distribution of existing and proposed major municipal and/or government uses which in many instances also represent community facilities. The following should be noted:

- The SANDF Tempe military base and landing strip located in the northwestern parts;
- The SAAF base to the east of the Bram Fischer International Airport;
- Grootvlei Prison to the south-east along route R702;
- Tertiary educational precincts which include the Free State University; Central University of Technology and Nurses College to the south thereof; Vista Campus of Free State University and Motheo TVET College to the south along route M30; and the Lengau Agricultural Research Farm and proposed Agricultural Training Facility further to the south along route N6;
- Several Wastewater Treatment Works, a number of cemeteries and two regional refuse disposal sites to the north and south of Bloemfontein respectively.
- The National Botanical Garden in the vicinity of Summerwood to the north and the National Zoological Garden to the west of the CBD; Zoological Gardens; the Schoemanpark Golf Course to the west along route N8; the Agricultural Showgrounds and Womans Memorial to the south of Oranjesig; and the Dr. Rantlai Petrus Molemela Stadium in Mangaung.

Bloemfontein SDF: Economic Activities



-  Cadastral
-  Open Space (Protected, MOSS)
-  River
-  Water Areas
-  Botanical Gardens
-  Business
-  Industrial / Commercial
-  Proposed Industrial
-  Long Term Industrial
-  Communal Farming
-  Airport
-  National Roads
-  New N8 Alignment
-  Provincial Roads
-  Future Roads
-  Secondary Roads
-  Railways
-  Railway Hub
-  1st Order
-  2nd Order
-  Future 2nd Order
-  3rd Order
-  Future 3rd Order

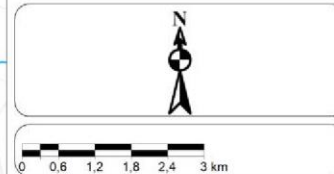


Figure 4:33

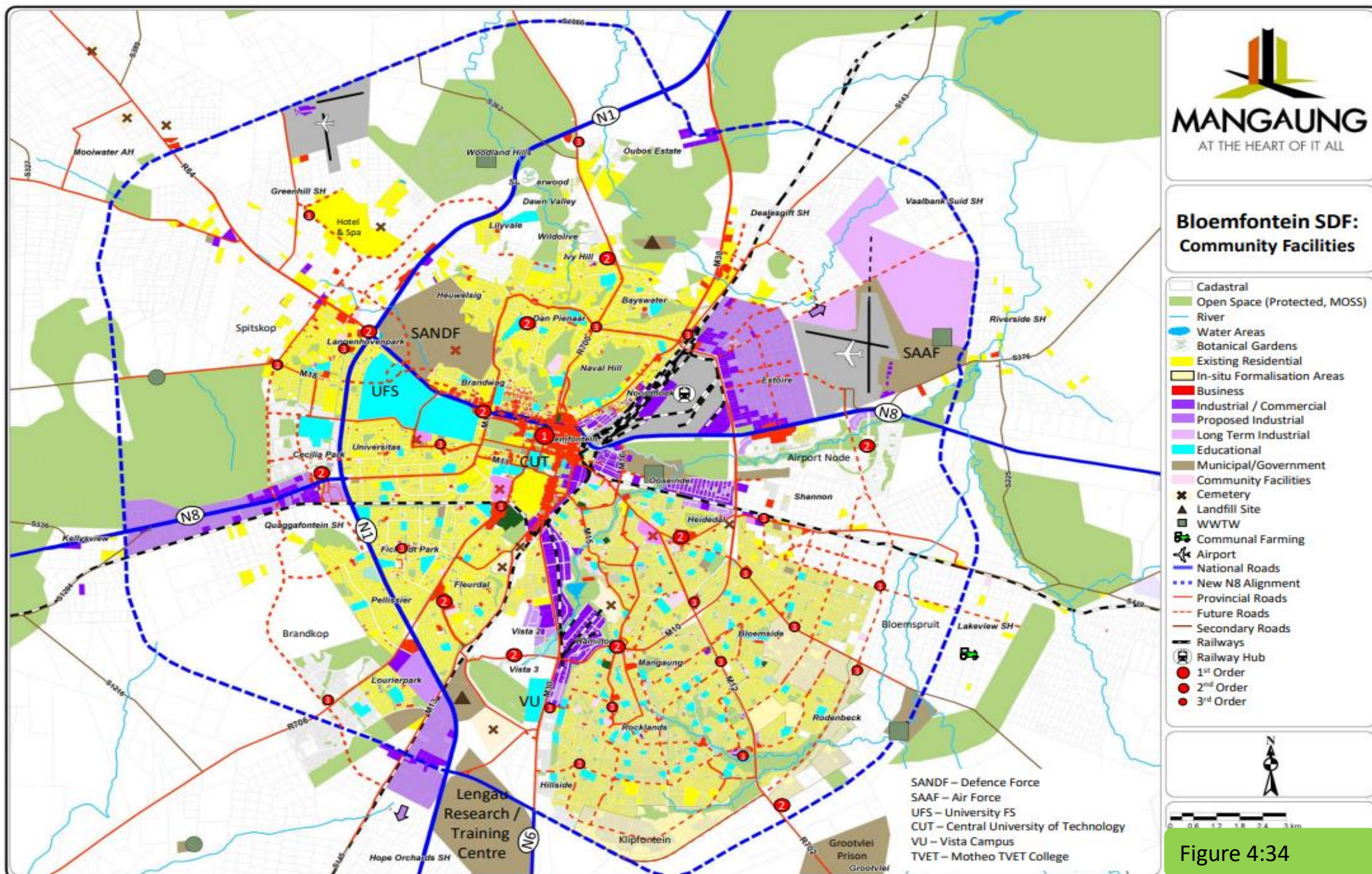


Figure 4:34

4.6.1.1.5. Priority Housing Development Areas

a) Land Supply and Demand

From **Table 4:** in **Annexure A** it is evident that up to the year 2036 an estimated 3,337 ha of land is required to accommodate the projected 71,634 additional households in Bloemfontein (excluding the existing backlogs/informal settlements).

Figure 4:35 and **Table 4:5** reflect the Priority Housing Development Areas identified in Bloemfontein to serve this need. The Priority Housing Development Areas are mainly located to the north; to the south-west; and to the south-east of the City. Each of these expansion areas comprise a number of smaller functional clusters as depicted on **Figure 4:35**. These are briefly summarised as follow:

NORTHERN EXTENSIONS:

- **Cluster 1** represents the land parcels south of route N1 and up to the existing urban fabric between Tempe, Heuwelsig and Heliconhoogte. It includes areas like Lilyvale and Rayton and several land parcels on both sides of route R700 up to the Shell filling station at the N1-R700 intersection. About 785 ha of land with potential to yield approximately 9,622 residential units form part of this cluster.
- To the east thereof and bordering Bayswater to the north is **Cluster 2** which comprises about 625 ha of land with potential to accommodate around 8,750 units on both sides of route M30.
- **Cluster 3** is located to the north-west (outside) of route N1 and represents several land parcels around Langenhovenpark and adjacent to the north of route R64 (Spitskop, Vredenhof, Groenvlei, etc.). This cluster totals about 1,207 ha of land with a potential yield of around 7,627 units.
- **Cluster 4** represents a number of land parcels to the north of Woodland Hills and route N1 which collectively comprise about 1,141 ha of land with an estimated residential yield of around 5,706 units.
- Collectively, the four clusters in the northern extensions area of Bloemfontein cover about 3,758 ha of land which can accommodate an estimated 31,705 residential units.

Figure 4:35

Table 4: 5. Bloemfontein/Mangaung: Development Potential (mainly Residential)

NORTHERN EXTENTIONS					
Cluster	#	Location	Area (ha)	Number of Units	Units per ha
N1	PEA1	NW - Inside Ring road	241	3 377	14
N2	EVT6	NW - Inside Ring road	23	322	14
N3	PEA2	NW - Inside Ring road	139	1 946	14
N4	EVT1	NW - Inside Ring road	110	1 540	14
N5	EVT2	NW - Inside Ring road	40	556	14
N6	PEA3	NW - Inside Ring road	113	1 582	14
N7	EVT3	NW - Inside Ring road	19	90	5
N8	EVT4	NW - Inside Ring road	27	80	3
N9	EVT5	NW - Inside Ring road	73	129	2
Northern Cluster 1			785	9 622	12
N10	PEA17	NE - Inside Ring road	625	8 750	14
Subtotal Northern Cluster 2			625	8 750	14
N11	PEA11	SW - Outside Ring road	145	2 030	14
N12	PEA9	NW - Outside Ring road	965	4 824	5
N13	PEA10	NW - Outside Ring road	65	325	5
N14	EVT7	NW - Outside Ring road	32	448	14
Subtotal Northern Cluster 3			1 207	7 627	6
N15	PEA5	NW - Outside Ring road	40	198	5
N16	PEA6	NW - Outside Ring road	52	258	5
N17	PEA7	NW - Outside Ring road	16	81	5
N18	PEA8	NW - Outside Ring road	443	2 215	5
N19	PEA4	NW - Outside Ring road	591	2 955	5
Subtotal Northern Cluster 4			1 141	5 706	5
Subtotal North			3 758	31 705	8
SOUTH - WESTERN EXTENTIONS					
Cluster	#	Location	Area (ha)	Number of Units	Units per ha
SW1	Vista 2	SW - Inside Ring road	146	3 500	24
SW2	Vista 3*	SW - Inside Ring road	127	5 123	40
SW3	Hillside x 34 (Rocklands 684)*	SE - Inside Ring road	40	2 000	50
SW4	Hillside x 35 (Rocklands 684)*	SE - Inside Ring road	40	2 100	53
Subtotal South Western Cluster 1			353	12 723	36
SW5	Lourier Park*	SW - Outside Ring road	365	2 789	8

SW6	Ptn 5 Brandkop 702	SW - Outside Ring road	258	1 851	7
SW7	Pelissier Infill*	SW - Outside Ring road	80	200	3
SW8	Brandkop Race Track (Bfn 654)	SW - Outside Ring road	136	100	8
SW9	Cecilia Park	SW - Outside Ring road	46	1 900	42
SW10	EVT8	SW - Outside Ring road	195	5 850	30
SW11	Brandkop 5 Villages	SW - Outside Ring road	608	5 435	9
Subtotal South Western Cluster 2			1 688	19 125	11
Subtotal Southwest			2 041	31 848	16
SOUTH - EASTERN EXTENTIONS					
SE1	Klipfontein	SE - Inside Ring road	247	3 458	14
SE2	Rodenbeck Extensions 1-6 (R/ Farm 2972)*	SE - Inside Ring road	51	968	19
SE3	Rodenbeck Extensions	SE - Inside Ring road	344	4 816	14
Subtotal South - Eastern Cluster 1			642	9 242	14
Cluster	#	Location	Area (ha)	Number of Units	Units per ha
SE4	Bloemspruit	SE - Inside Ring road	658	9 212	14
SE5	Bloemspruit Extensions	SE - Inside Ring road	375	5 250	14
Subtotal South - Eastern Cluster 2			1 033	14 462	14
SE6	Shannon	SE - Inside Ring road	1 131	15 834	14
SE7	Airport Development Node	SE - Inside Ring road	740	4 400	6
Subtotal South Eastern Cluster 3			1 871	20 234	11
Subtotal South East			3 546	43 938	12
TOTAL Bloemfontein/ Mangaung			9 344	107 490	12

*Short term

Note

EVT: Existing Vacant Township
PEA: Possible Expansion Areas

SOUTH- WESTERN EXTENTIONS

- The south-western extensions broadly represent the area from Cecilia Park up to Lourierpark, as well as Vista 1 and 2 and Hillside to the south.
- **Cluster 1** comprises Vista 1 and 2, as well as Hillside x34 and x35. This area can accommodate an estimated 12,723 residential units and covers an area of about 353 ha of land.
- **Cluster 2** includes all the land parcels identified for development which are located to the west of route N1 (outside). The estimated residential yield for this cluster is about 19,125 units and it includes areas like Lourierpark, Brandkop, Pellissier and Cecilia Park.
- The south-western extensions can accommodate a total of about 31,848 residential units on about 2,041 ha of land identified.

SOUTH - EASTERN EXTENTIONS

- The south-eastern extensions include all priority development areas located to the south and east of the Mangaung township area and up to the proposed future N1 eastern bypass road. It is divided into three clusters.
- **Cluster 1** represents the southern extensions which include Klipfontein and the Rodenbeck extensions and with potential to accommodate about 9,242 residential units (591 ha of land).
- **Cluster 2** includes the Bloemspuit extensions up to the railway line to the north and the proposed N1 eastern bypass alignment to the east. It covers an area of about 1,033 ha of land and the estimated residential yield is 14,462 units.
- **Cluster 3** represents the land area between the railway line and route N8. It includes the Shannon smallholdings and the southern Airport Development Node (ADN) with a total land area of 1,871 ha. The estimated residential yield on this land is about 20,234 units as depicted on **Table 4:5**.
- The total land identified in the south-eastern extensions amounts to about 3,495 ha which can be developed into an estimated 43,938 units.

CONCLUSIVE SUMMARY

The Priority Housing Development Areas identified on **Figure 4:35** can accommodate a total of approximately 107,500 residential units compared to the estimated demand of 71,634 units up to 2036. This implies a surplus supply of about 35,856 (about 33% of the land identified) which will only be required after the year 2036.

b) Proposed Phasing of Priority Housing Development Areas

- Phasing of developments of the various Priority Housing Development Areas identified in Bloemfontein indicates the priority areas for development in the short term (2020 – 2025); the medium-term priority areas (2025 – 2036); and the areas which will only be required in the long term (after 2036).
- **Table 4:5 and 4:10** indicates the estimated residential yields per phase in the various areas. Following is a brief summary of the most salient features in this regard.
- The phasing of development is based on availability of bulk infrastructure as illustrated on **Figure 4:37**.

Short Term Priority Housing Development Areas:

- To the north it is recommended that priority be given to the land parcels bordering onto the existing urban fabric and which is located to the south of route N1. The development of these areas represents incremental expansion of the urban footprint with the associated cost-efficient expansion of the existing engineering infrastructure network to the immediate surroundings (as opposed to costly leapfrog development).
- It also includes the Spitskop area⁽¹¹⁾ which forms part of the broader up to the proposed N1 eastern bypass, and part of Bloemspruit in Langenhoven Park development area and which already the north. Collectively these three areas can accommodate about experiences significant development pressure. 14,996 residential units which is sufficient to deal with the projected.
- This cluster can accommodate about 11,652 residential units which demand up to 2025. is sufficient to meet the estimated demand for this market up to the total residential yield for land parcels earmarked for 2025 (estimated at 6,585 units) development in the short term is 38,860 units compared to the To the west and south-west the short term priorities (up to 2025) projected demand of 30,896 units (surplus short term supply = include Vista 3, Hillside, Pellissier Infill and Lourierpark which 5,934 units). collectively hold potential for development of about 12,212 residential units.
- In the south-eastern extensions the priority housing development areas are Rodenbeck x1-6, the Rodenbeck Extensions more or less. Up to the proposed N1 eastern bypass, and part of Bloemspruit in the north. Collectively these three areas can accommodate about 14,996 residential units which is sufficient to deal with the projected demand up to 2025.

The total residential yield for land parcels earmarked for development in the short term is 38,860 units compared to the projected demand of 30,896 units (surplus short term supply = 5,934 units).

Table 4: 6. Bloemfontein/Mangaung: Development Potential (mainly Residential)

NORTHERN EXTENTIONS						
Cluster	#	Location	Area (ha)	Number of Units	%	Units per ha (gross)
N1	PEA1	NW - Inside Ring road	241	3 377		14
N2	EVT6	NW - Inside Ring road	23	322		14
N3	PEA2	NW - Inside Ring road	139	1 946		14
N4	EVT1	NW - Inside Ring road	110	1 540		14
N5	EVT2	NW - Inside Ring road	40	556		14
N6	PEA3	NW - Inside Ring road	113	1 582		14
N7	EVT3	NW - Inside Ring road	19	90		5
N8	EVT4	NW - Inside Ring road	27	80		3
N9	EVT5	NW - Inside Ring road	73	129		2
N11	PEA11	SW - Outside Ring road	145	2 030		14
Subtotal Short Term			930	11 652	37%	13
N12	PEA9	NW - Outside Ring road	965	4 824		5
N13	PEA10	NW - Outside Ring road	65	325		5
N14	EVT7	NW - Outside Ring road	32	448		14
Subtotal Medium Term			1 062	5 597	18%	5
N10	PEA17	NE - Inside Ring road	625	8 750		
N15	PEA5	NW - Outside Ring road	40	198		
N16	PEA6	NW - Outside Ring road	52	258		
N17	PEA7	NW - Outside Ring road	16	81		
N18	PEA8	NW - Outside Ring road	443	2 215		
N19	PEA4	NW - Outside Ring road	591	2 955		
Subtotal Long Term			1 766	14 456	46%	8
Subtotal North			3 758	31 705	100%	8
SOUTH - WESTERN EXTENTIONS						
SW2	Vista 3*	SW - Inside Ring road	127	5 123		40
SW3	Hillside x 34 (Rocklands 684)*	SW - Inside Ring road	40	2 000		50
SW4	Hillside x 35 (Rocklands 684)*	SE - Inside Ring road	40	2 100		53
SW7	Pelissier Infill*	SW - Outside Ring road	80	200		3
SW5	Lourier Park*	SW - Outside Ring road	365	2 789		8
Subtotal Short Term			652	12 212	39%	19
SW6	Ptn 5 Brandkop 702	SW - Outside Ring road	258	1 851		7
SW1	Vista 2	SW - Inside Ring road	146	3 500		24
SW9	Cecilia Park	SW - Outside Ring road	46	1 900		42
SW10	EVT8	SW - Outside Ring road	195	5 850		30
SW11	Brandkop 5 Villages	SW - Outside Ring road	608	5 435		9
Subtotal Medium Term			1 253	18 536	58%	15
SW8	Brandkop Race Track (Bfn 654)	SW - Outside Ring road	136	1 100		8
Subtotal Long Term			136	1 100	3%	8

Subtotal South West			2 041	31 848	100%	16
SOUTH - EASTERN EXTENTIONS						
SE2	Rodenbeck Extentions 1-6 (R/Farm 2972)*	SE - Inside Ring road	51	968		19
SE3	Rodenbeck Extentions	SE - Inside Ring road	344	4 816		14
SE4	Bloemspruit	SE - Inside Ring road	658	9 212		14
Subtotal Short Term			1 053	14 996	34%	14
SE1	Klipfontein	SE - Inside Ring road	247	3 458		14
SE5	Bloemspruit Extensions	SE - Inside Ring road	375	5 250		14
SE7	Airport Development Node	SE - Inside Ring road	740	4 400		6
Subtotal Medium Term			1 362	13 108	30%	10
SE6	Shannon	SE - Inside Ring road	1 131	15 834		14
Subtotal Long Term			1 131	15 834	36%	14
Subtotal South - East			3 546	43 938	100%	12
TOTAL Bloemfontein/Mangaung			9 344	107 490		12

TOTAL BLOEMFONTEIN/MANGAUNG					
Subtotal Short Term		2 634	38 860	36%	15
Subtotal Medium Term		3 677	37 241	35%	10
Subtotal Long Term		3 033	31 390	29%	10
TOTAL Bloemfontein/Mangaung		9 344	107 490		12

*Short term

Note EVT: Existing Vacant Township
PEA: Possible Expansion Areas

Medium Term Priority Housing Development Areas:

In the northern parts of the city the priority areas for development in the medium term (2025 – 2036) are the land parcels to the north of Langenhoven Park and route R64. It is estimated t these areas can result in the development of approximately 5,597 units compared with the demand estimate of 8,615 units (It should be kept in mind that there is also a significant surplus from the short term (± 5,000 units). In the south-western expansion areas the priority projects to be developed in the medium term (2025 – 2036) include Brandkop, Vista 2, Cecilia Park and existing vacant township, the land parcel between Cecilia Park and Langehoven Park. These five projects could yield an estimated 18,536 units during this period. In the south-eastern parts of the city the priority projects during this period (2025 – 2036) should be Klipfontein, Bloemspruit extensions up to the proposed eastern bypass and the Airport Development Node which could yield an estimated 13,108 units collectively.

The total yield to the south-west and south-east during this period is about 31,644 units compared to the estimated demand of around 32,122 units. In total, the medium-term project areas can yield about 37,241 residential units (estimated demand = 40,737).

Long Term Priority Housing Development Areas:

The areas earmarked for development in the long term mainly comprise the cluster to the north of the N1 freeway (7,627 units); the area to the north-east around route M30 (8,750 units); the Brandkop Race Track (1,100 units) and the Shannon area with potential for about 15,834 units (Total = 31,390 units). The development of the area around route N10 and the Shannon area could coincide with the development of the northern parts of Estoire and the areas north of the airport (second phase of proposed industrial/ commercial expansion along Tibbie Visser Avenue).

Bloemfontein Composite SDF 2025 and 2036

Figure 4:36 depicts the Composite SDF for Bloemfontein with the proposed urban edge and the Bulk Infrastructure Map (**Figure 4:37**) depicts the availability of Bulk Infrastructure in the short, medium and Long Term.

Bloemfontein SDF

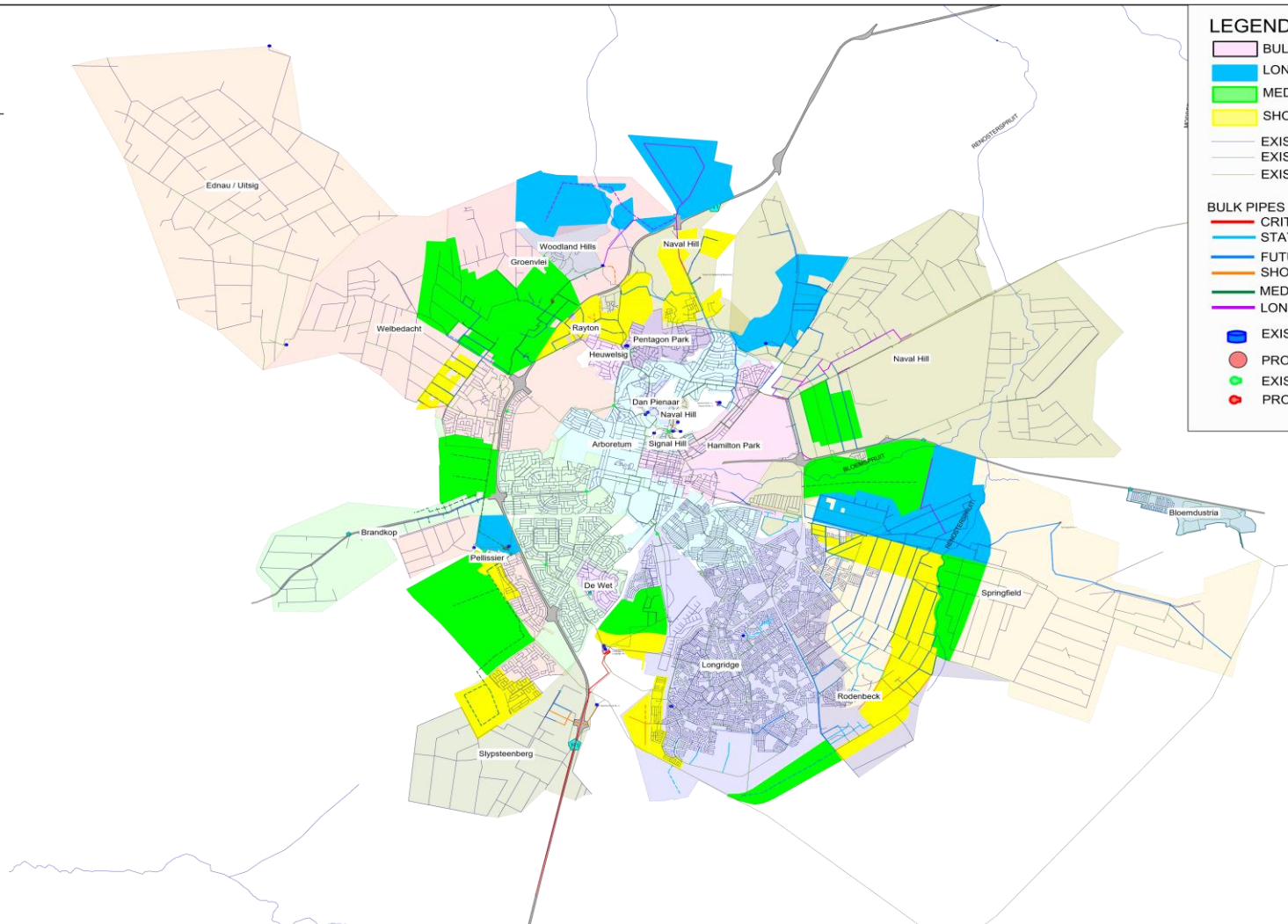
Legend

- Agricultural Business Node
- Mixed Use With Industry
- Mixed Use Without Industry
- HPHL Catchment
- ROADS**
- SEC
- MAJOR
- MAIN
- RAILWAYS
- MMH Future Road Network**
- Road
- Future Roads
- NB Ring Road
- MMH SDF Infrastructure**
- Refuse Site
- WWTW
- MMH SDF Urban Network Area
- Urban Edge
- Growth Management Boundary
- MMH Cemeteries
- MMH Communal Farming
- MMH Refuse Sites
- Dams
- Integration Zone Corridors
- Bloem Airport Runway Extension
- Bloem Airport Runway
- Rivers
- Secondary Airport Landing Strip
- Bloem Airport Area
- Future Residential
- MMH SDF In Situ SDA
- Railway Precinct
- Secondary Airport
- Moss (Refined)
- MMH Economic Proposals
- MMH Economic Proposals FUTURE
- SAPAD
- BFTA Noise Contours
- Tempe Safety Zone



0 0.5 1.0 1.5 2.0 Kilometers

Figure 4:36



LEGEND

- BULK RESERVOIR ZONE
- LONG TERM DEVELOPMENT
- MEDIUM TERM DEVELOPMENT
- SHORT TERM DEVELOPMENT
- EXISTING <150mm NETWORK
- EXISTING >200-500mm NETWORK
- EXISTING >500mm NETWORK

BULK PIPES

- CRITICAL
- STATUS QUO BACKLOGS
- FUTURE TERM UPGRADE
- SHORT TERM SUPPLY
- MEDIUM TERM SUPPLY
- LONG TERM SUPPLY

INTERNAL PIPES

- CRITICAL
- STATUS QUO BACKLOGS
- FUTURE TERM UPGRADE
- SHORT TERM SUPPLY
- MEDIUM TERM SUPPLY
- LONG TERM SUPPLY

- EXISTING RESERVOIR
- PROPOSED RESERVOIR
- EXISTING PUMPS
- PROPOSED PUMPS



bigen
Doing good while
doing business

www.bigengroup.com
2 Chris Botha Street
Bloemfontein
Phone: +27 (0) 51 430 1423
bloemfontein@bigengroup.com

VERSION			
No.	DATE	DESCRIPTION	AUTH.

PROJECT TITLE: BLOEMFONTEIN
INFRASTRUCTURE BULK WATER
MASTER PLAN
DRAWING TITLE: FUTURE INFRASTRUCTURE
RESERVOIR ZONE WITH
FUTURE SDF



ORIGINAL DRAWING SCALE N.T.S.

ORIGINAL DRAWING SHEET SIZE A3

SURVEYED	DESIGNED
DRAWN	CHECKED
COORDINATE SYSTEM	DATE
DRAWING No.	VERSION

3458.01.00.GZA.05.S002

4.6.1.2. Botshabelo

Development Rationale
<p>The long-term vision is for the Botshabelo area to be spatially and functionally consolidated into a single, sustainable urban cluster with Thaba Nchu to the east thereof.</p> <p>This urban cluster should provide a comprehensive range of low, middle and higher order community facilities to the local residents and residents from the surrounding rural villages.</p> <p>Job creation should be paramount with the main focus being on business, light industrial and commercial (including agri-industries), agriculture and tourism development orientated towards the N8 development corridor.</p>

4.6.1.2.1 Environmental Core

The major environmental features of the area include the ridge series running along the eastern edge of Botshabelo and then eastwards passing Thaba Nchu to the south; as well as the northbound drainage system of the Klein-Modder River passing through Botshabelo. (Refer to **Figure 4:38**).

Combined with the parks and open spaces provided for in the layout plans of individual townships, this open space system must be actively managed and maintained in line with guidelines provided in the Mangaung Environmental Management Framework.

Open spaces should be utilised as active and passive open space systems which will encourage the utilisation of these areas as recreational areas.

4.6.1.2.2. Urban Development and Spatial Restructuring

Business development should be consolidated in the existing Central Business District of Botshabelo. Based on current development trends (recently developed shopping centre),

It is recommended that the land to the east of Jazzman Mokgothu Street at the entrance to Botshabelo be earmarked to develop as a secondary business node. It is strategically located serving the bulk of traffic entering the township area and having visual exposure to traffic along route N8. The existing shopping centre in this area can be supplemented with a number of additional business and commercial facilities.

Further to the south a number of smaller, third order business nodes have been identified. Most of those nodes are located along the main road network of Botshabelo (see red network on **Figure 4:38**) which also serve as priority public transport routes (refer to **Figure 4:38**).

These third order business nodes should be prioritised for informal trade upscaling initiatives and economic empowerment as discussed in **Annexure E1 and E2** of this document.

Industrial and commercial activity should be consolidated within the existing Botshabelo Industrial Area which holds significant potential to be expanded to the east along route N8 in future (not before 0236 at least).

Several Priority Housing Development Areas have been identified within and around Botshabelo indicated on **Figure 4:39** and listed in **Table 4:7**

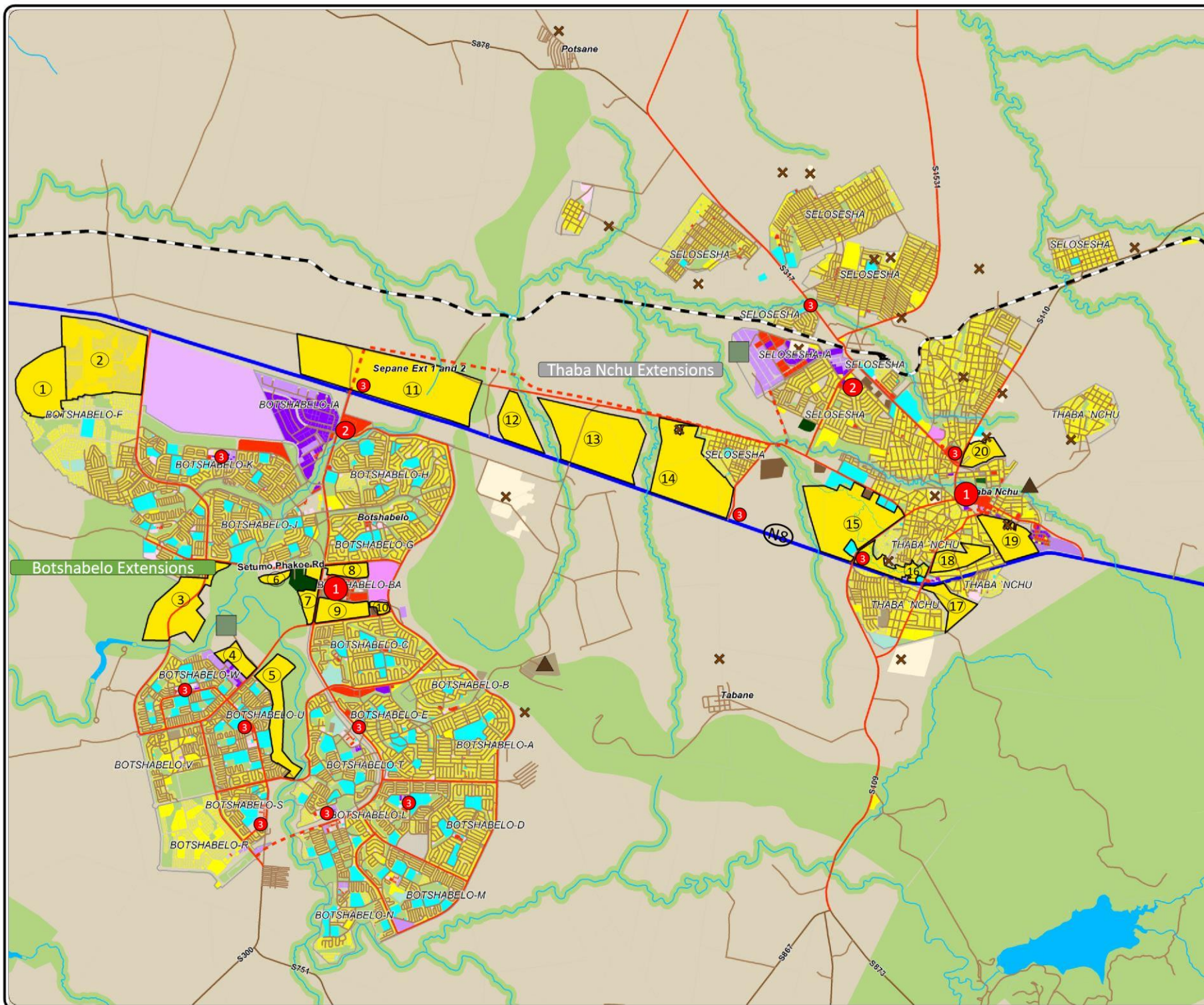
Collectively, these areas total about 678 ha of land which could yield an estimated 9,796 units compared to the estimated demand of 9,206 units up to 2036.

Figure 4:39 indicates that the priority areas for development in the short term include Area 2 (Remainder of Portion 826) with potential for 2,000 units, as well as Area 8 and 9 around the Botshabelo CBD which could be utilised for the development of about 1,830 medium density residential units (2 – 3 storey walk-ups) in support of the CBD. (Demand between 2019 – 2025 = 3,736 units).

In the medium term (2025 – 2036) the focus should be on infill development within the existing urban footprint of Botshabelo (Areas 3, 4, 5, 6, 7 and 10) which could yield about 4,384 units which is sufficient to deal with the projected demand of 4,123 units during this period.

Areas 1 holds potential for about 1,582 units to be developed after 2036 (long term).

Botshabelo and Thaba Nchu SDF: Composite



-  Cadastral
-  Open Space (Protected, MOSS)
-  River & Buffer
-  Water Areas
-  Botanical Gardens
-  Existing Residential
-  Priority Housing Development Areas
-  In-Situ Formalisation Areas
-  Business
-  Industrial / Commercial
-  Proposed Industrial
-  Long term Industrial
-  Educational
-  Municipal/Government
-  Community Facilities
-  Cemetery
-  Landfill Site
-  WWTW
-  National Roads
-  Provincial Roads
-  Future Roads
-  Secondary Roads
-  Railways
-  1st Order
-  2nd Order
-  3rd Order

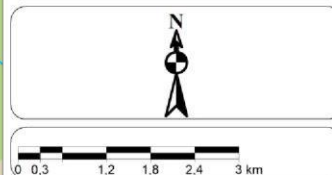


Figure 4:38

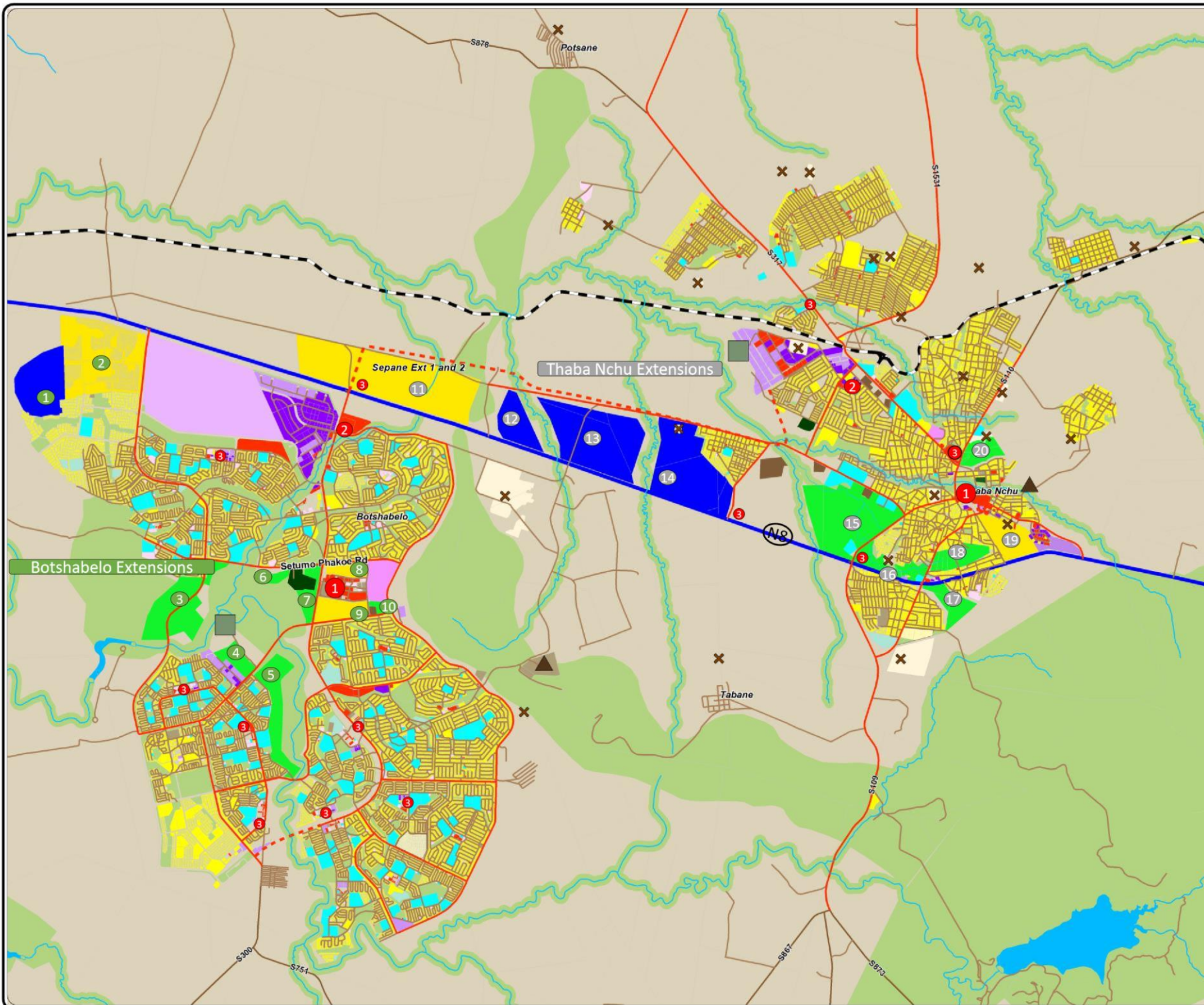
Table 4: 7. Botshabelo: Development Potential (mainly Residential).

BOTSHABELO				
Cluster	Location	Area (ha)	Number of Units	Units per ha
1	Botshabelo West	113	1582	14
2 (Rem 826)	Botshabelo West	237	2000	8
3	Botshabelo Infill	122	1708	14
4	Botshabelo Infill	26	364	14
5	Botshabelo Infill	79	1106	14
6	Botshabelo CBD	10	300	30
7	Botshabelo CBD	23	690	30
8	Botshabelo CBD	21	630	30
9	Botshabelo CBD	40	1200	30
10	Botshabelo CBD	7,2	216	30
Subtotal Botshabelo		678	9 796	14

4.6.1.3. Thaba Nchu

Development Rationale
<p>The long-term vision is for the Thaba Nchu area to be spatially and functionally consolidated into a single, sustainable urban cluster with Botshabelo to the west thereof.</p> <p>This urban cluster should provide a comprehensive range of low, middle and higher order community facilities to the local residents and residents from the surrounding rural villages.</p> <p>Job creation should be paramount with the main focus being on business, light industrial and commercial (including agri-industries), agriculture and tourism development orientated towards the N8 development corridor.</p>

**Botshabelo and
Thaba Nchu SDF:
Priority Housing Development
Areas
Time Frame**



- Cadastral
- Open Space (Protected, MOSS)
- River & Buffer
- Water Areas
- Botanical Gardens
- Existing Residential
- Business
- Industrial / Commercial
- Proposed Industrial
- Educational
- Municipal/Government
- Community Facilities
- Cemetery
- Landfill Site
- WWTW
- National Roads
- Provincial Roads
- Future Roads
- Secondary Roads
- Railways
- 1st Order
- 2nd Order
- 3rd Order

Time Frame:

- Short Term
- Medium Term
- Long Term

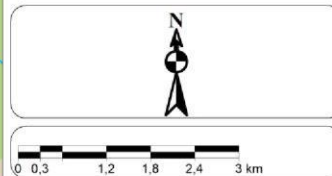


Figure 4:39

4.6.1.3.1. Environmental Core

The major environmental features of the area are the ridge series running along the eastern edge of Botshabelo and then eastwards passing Thaba Nchu to the south; as well as the northbound drainage system of the Koranna Spruit passing through the Thaba Nchu area. (Refer to **Figure 4:38**)

Combined with the parks and open spaces provided for in the layout plans of individual townships, this open space system must be actively managed and maintained in line with guidelines provided in the Mangaung Environmental Management Framework.

Open spaces should be utilised as active and passive open space systems which will encourage the utilisation of these areas as recreational areas.

4.6.1.3.2. Urban Development and Spatial Restructuring

The Thaba Nchu CBD should be consolidated and strengthened as it is the primary business node within Thaba Nchu. (See **Figure 4:38**).

The small concentration of business uses further to the north just to the south of the Selosesha industrial area should be consolidated to become a secondary business node to Thaba Nchu – specifically serving the needs of the broader Selosesha township areas (and the rural villages to the north thereof).

As illustrated on **Figure 4:38** a number of smaller third order business nodes can be established at strategic intersections throughout the area.

These third order business nodes should be prioritised for initiatives to promote informal trade upscaling and economic empowerment in line with the guidelines provided in **Annexure E1 and E2** in this document.

Industrial development should be consolidated in the existing Selosesha industrial area and the Thaba Nchu industrial area to the south (which has been earmarked to become the Agri-Hub in the Mangaung Agri Park initiative). The latter industrial area is also better located adjacent to the N8 development corridor.

Future residential development should be prioritised in a number of Priority Housing Development Areas as illustrated on **Figure 4:39**. The first objective is to consolidate the urban fabric around the Thaba Nchu CBD by way of infill development on Areas 15 to 20.

The second objective is to promote development along route N8 in order to achieve the long term goal of functionally linking Thaba Nchu and Botshabelo as one urban area. The development of Areas 12 to 18 will all contribute towards the achievement of this objective.

Table 4:8 below shows that areas 15 to 20 around Thaba Nchu hold potential to yield about 3,544 units while the four land parcels along route N8 (11 – 14) can accommodate an estimated 9,419 units.

The total estimated yield of these Priority Housing Development Areas is about 12,963 units which is almost double the estimated demand for Thaba Nchu up to 2036 which is about 6,592 units.

In the short term it is recommended that Area 11 (Sepane) and Area 19 (closest to the CBD and Thaba Nchu industrial area) be earmarked for development. (Total capacity = 3,609 units compared to the short-term demand of 2,244 units). It should, however, also be kept in mind that Sepane will also serve demand from Botshabelo.

In the medium term the focus should be on infill development and more specifically areas 15, 16, 17, 18 and 20 around Thaba Nchu CBD. (Total capacity = 2,690 units compared to estimated demand of 4,347 units).

The remaining parts of the strip could add approximately 6,664 units (Areas 12, 13 and 14) in future.

Table 4: 8. Thaba Nchu: Development Potential (mainly Residential).

THABA -NCHU				
Cluster	Location	Area (ha)	Number of Units	Units per ha
11 (Sepane x1,2)	Thaba - Nchu Strip	337	2 755	8
12	Thaba - Nchu Strip	60	840	14
13	Thaba - Nchu Strip	216	3024	14
14	Thaba - Nchu Strip	200	2800	14
15	Thaba - Nchu Infill	187	935	5
16	Thaba - Nchu Infill	43	215	5
17	Thaba - Nchu Infill	37	518	14
18	Thaba - Nchu Infill	41	574	14
19	Thaba - Nchu Infill	61	854	14
20	Thaba - Nchu Infill	32	448	14
Subtotal Thaba - Nchu		1 214	12 963	11
TOTAL BOTSHABELO/THABA -NCHU		1 892	22 759	12

Table 4:9 summarises the total development potential per phase for the Botshabelo- Thaba Nchu area as a whole.

Table 4:9 Botshabelo/Thaba Nchu: Development Potential (mainly Residential)

Table 4: 9. Botshabelo/Thaba Nchu Development Potential

BOTSHABELO/THABA -NCHU					
Cluster	Location	Area (ha)	Number of Units	%	Units per ha
2 (Rem 826)	Botshabelo West	237	2000		8
8	Botshabelo CBD	21	630		30
9	Botshabelo CBD	40	1200		30
11 (Sepane x1,2)	Thaba - Nchu Strip	337	2 755		8
19	Thaba - Nchu Infill	61	854		14
Subtotal Short Term		696	7 439	33%	11
3	Botshabelo Infill	122	1708		14
4	Botshabelo Infill	26	364		14
5	Botshabelo Infill	79	1106		14
6	Botshabelo CBD	10	300		30
7	Botshabelo CBD	23	690		30
10	Botshabelo CBD	7,2	216		30
15	Thaba - Nchu Infill	187	935		5
16	Thaba - Nchu Infill	43	215		5
17	Thaba - Nchu Infill	37	518		14
18	Thaba - Nchu Infill	41	574		14
20	Thaba - Nchu Infill	32	448		14
Subtotal Medium Term		607	7074	31%	12
1	Botshabelo West	113	1582		14
12	Thaba - Nchu Strip	60	840		14
13	Thaba - Nchu Strip	216	3024		14
14	Thaba - Nchu Strip	200	2800		14
Subtotal Long Term		589	8 246	36%	14
TOTAL BOTSHABELO/THABA -NCHU		1 892	22 759	100%	12
TOTAL BOTSHABELO/THABA -NCHU					
Subtotal Short Term		696	7 439	33%	11
Subtotal Medium Term		607	7 074	31%	12
Subtotal Long Term		589	8 246	36%	14
TOTAL BOTSHABELO/THABA -NCHU		1 892	22 759	100%	12

4.6.1.4. Soutpan/ Ikgomotseng

Development Rationale
Both settlements developed as a result of the existence of the salt mine in the vicinity.
Development potential is very low, hence infrastructure investment should be undertaken only to serve the constitutionally mandated basic needs of the community.

The economic anchor of the two settlements is the mining activity associated with the salt deposits in the area. The two settlements are almost four kilometres apart which makes it virtually impossible to

consolidate in future (see **Figure 4:40**). Here the proposed approach is to consolidate development around Soutpan and Ikgomotseng respectively.

In Soutpan the development of the existing vacant erven should be promoted and new township development outside the existing footprint should be limited as far as possible.

In Ikgomotseng the focus should be to accommodate new development on the two large vacant properties which form part of the existing settlement footprint before any expansion of the footprint is considered.

Economic activities should be consolidated along Martin Street which provides access to the village and which may provide visual exposure to traffic passing along route R700.

Apart from the salt mining activity, the potential for economic development mostly lies in agriculture/ agri-processing and, to a lesser extent, in tourism associated with the salt mining and proximity of the Florisbad Anthropological Centre.

4.6.1.5. Dewetsdorp/ Morojaneng

Development Rationale
<p>Dewetsdorp/ Morojaneng acts as a service centre to an extensive farming community in the south-eastern extents of the Mangaung Metropolitan Municipality. Its economic base is farming related services, business and tourism and route R702 is a key element to the economic sustainability of the town.</p> <p>Dewetsdorp and Morojaneng was historically developed as two separate towns with a large buffer strip along the Kareefonteinspruit representing the divide between the towns.</p> <p>The short to medium term vision is to physically consolidate these two towns and to enhance the economic sustainability of this area.</p>

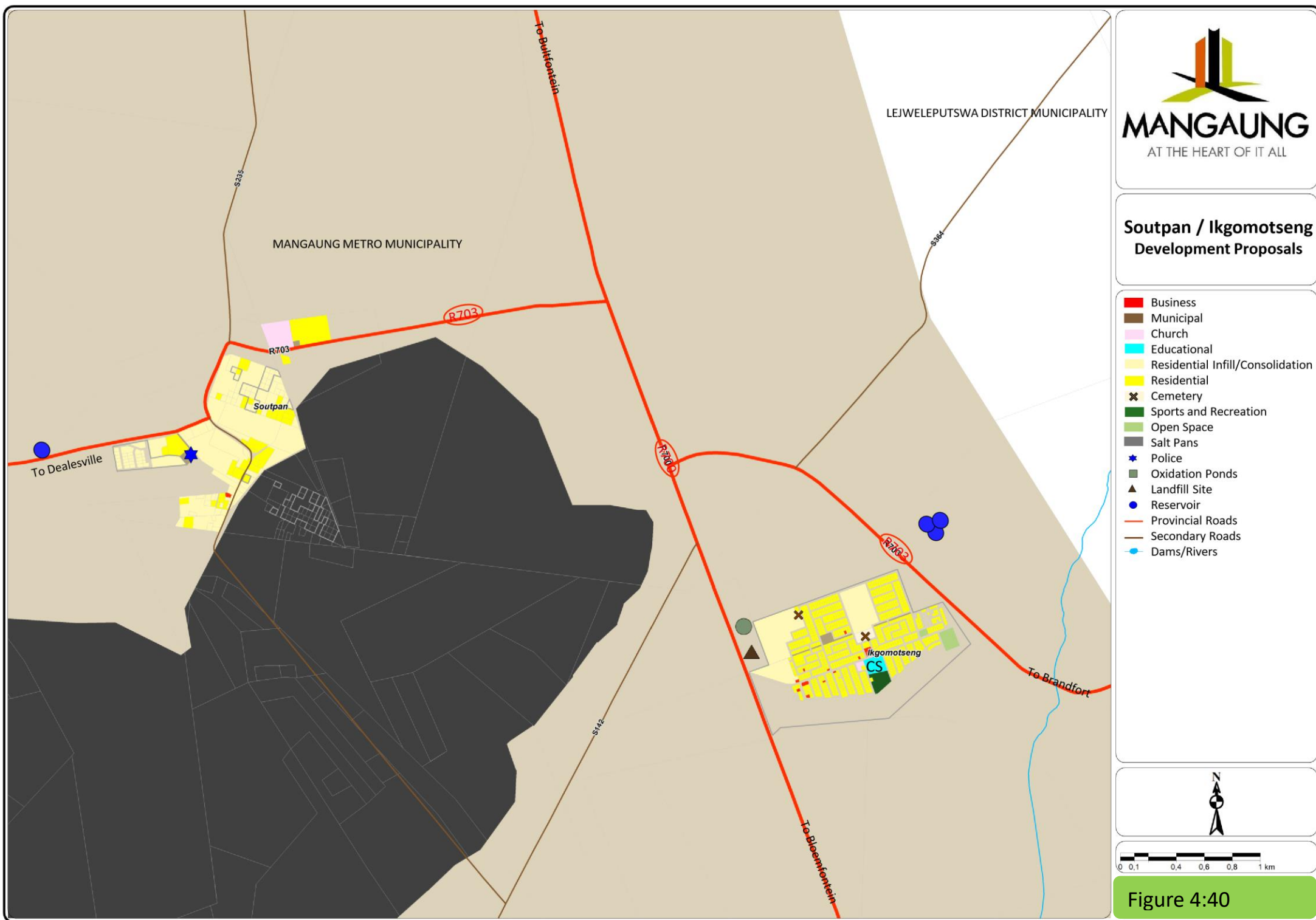


Figure 4:41 depicts the development concept and associated proposals for this town, summarised as follow:

4.6.1.5.1. Environmental Core Landscape

The Kareefonteinspruit running through the town should be protected as part of the open space network to a minimum of 32m on both sides of the spruit.

The allocated open spaces in the town should be maintained as sport and recreational areas for tourists (including the golf course).

Church Street, Voortrekker Street, Tsuene Street, Leteane Street and Sefotlhelo Street represent the master movement network in the town and should be lined with existing and newly planted trees in order to enhance the legibility of this formgiving element.

4.6.1.5.2. Urban Development and Restructuring

Church Street represents the central spine along the “Integration Zone” which should be the focus area for consolidating the two towns. It extends from the church to the west right up to route R702 (and could even extend up to the railway station if/when it is operational again).

All developable land parcels along this road (north and south) should be utilised for a mix of land uses including residential, business and public services.

Public services should as far as possible be consolidated in the area around the existing Fire Brigade, Licensing Department and Public Works.

The two link roads between Dewetsdorp and Morojaneng should be upgraded in order to enhance movement of people, goods and services between the two areas.

Business activity within the existing CBD should be maintained as this is the primary business node^(B1) within the town.

In Morojaneng there is potential to establish some business activity^(B2) in the vicinity where Leteane Street and Sefotlhelo Street link into Church Street.

As illustrated on **Figure 4:41** there are also several occurrences of business activity (including Spaza shops) within Morojaneng. This can be retained as it provides a means to sustainable livelihoods for many local residents, and it is within convenient walking distance.

Future residential development should be consolidated around the following areas, as reflected on **Figure 4:41**.

Area A which is an infill area between the existing residential areas of Morojaneng and the Public Works and Licensing Departments. It covers an area of approximately 61,71 ha of land;

Areas B, C and D represent functional precincts in the Integration Zone to the north and south of Church Street and right up to route R702. It holds approximately 28,3 ha of land and should be used for residential purposes (BNG Gap and

Dewetsdorp/Morojaneng Development Proposals

- Business
- Industrial
- Municipal
- Community Facilities
- Church
- Educational
- Residential
- Densification
- D Priority Housing Areas
- Open Space
- Extensive Agriculture
- Sports and Recreation
- ▲ Golf Course
- Show Grounds
- Silos
- ★ Police
- ✕ Clinic
- ✕ Cemetery
- Library
- Oxidation Ponds
- ▲ Landfill Site
- Reservoir
- Provincial Roads
- Secondary Roads
- Railway Line
- Railway Station
- Dams/Rivers
- ✕ Airfield
- Electrical Line / Sub Station
- Bulk Water
- Bulk Sewer Outfall

Strategic Development Areas	
Area	Size (ha)
A	6,71
B	5,40
C	5,59
D	17,30
E	5,00
F	12,23
G	2,37
Total	54,61

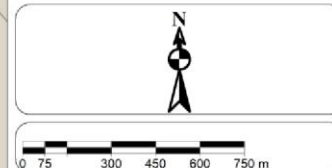
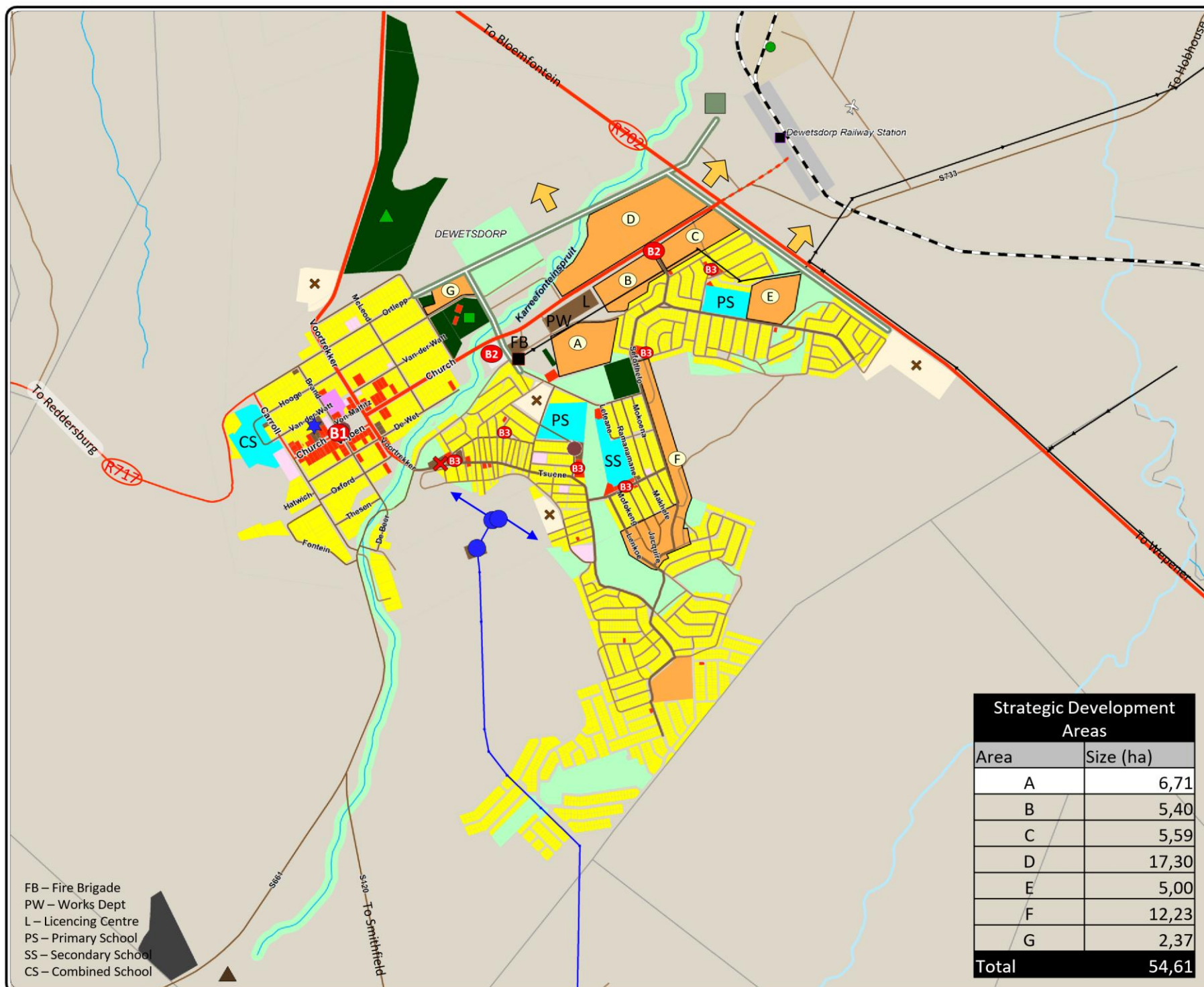


Figure 4:41



Social Housing) combined with small businesses and even small service industries (where such need/opportunity exists);

Area E next to the primary school in the eastern extents of Morojaneng (5 ha for possibly BNG Housing);

Area F which is an existing informal settlement area and which is proposed to be formalised in-site (12,2 ha), and

Area G in the northern extents of the town which could be developed for GAP market purposes (2,37 ha).

The seven areas noted above collectively represent about 54,61 ha of land which could accommodate an estimated 1,000 housing units which is sufficient to deal with the demand up to the year 2036.

Once these land parcels are fully developed, the future expansion of residential development to the north (towards the golf course and/or expansion to the east across route R702 towards the railway station and the airfield could be considered.

4.6.1.6. Wepener/ Qibing

Development Rationale
Wepener/Qibing functions as a service centre to surrounding farming communities in the far south-eastern extents of the Mangaung area of jurisdiction. It also represents one of only a few points of entry into Lesotho via the Van Rooyens Gate.
The economic base of the town is farming related services, business and cultural tourism because of a strong Sotho and Boer history.

Wepener, Qibing, Ebenhaesers Heights and Kanana represent a significantly fragmented settlement structure with the Jammersbergspuit and steep topography being significant formgiving elements.
The short to medium term objective is for the town to enhance its functionality as a rural service centre and to improve on the efficiency of its spatial structure.

Figure 4:42 illustrates the development concept and proposals for Wepener/ Qibing which is briefly summarised as follow:

4.6.1.6.1. Environmental Core

The Jammerspruit/ Sandspruit and tributary network running through the Wepener/Qibing areas represent the backbone of the open space system for the town and should be sufficiently protected and incorporated as part of the stormwater management system for the town.

No development to be permitted within 32 meters on both sides of the spruit.

Route S746/ Church Street, as well as De Beer and Spies Streets and up to Van Aardt Street represent the master movement network in the town and should be lined with existing and newly planted trees and equipped with appropriate signage in order to enhance the legibility of this very strong formgiving element.

The mountains and ridges to the north-east form an important backdrop to the town and need to be properly protected and maintained.

4.6.1.6.2. Urban Development and Restructuring

Church Street, De Beer Street, Spies Street and Van Aardt Street functionally links all the settlement areas to one another and to regional routes R26 to Hobhouse, R702 to Lesotho and R26 to Mangaung and Van Stadensrus. It also provides access to each of the individual settlements.

The primary business node^(B1) is the Wepener CBD which should be maintained and strengthened as far as possible.

There is potential to establish a secondary business node^(B2) at the R26Van Aardt intersection which is the most direct access into town. Service industries can also be incorporated into this node which already holds a filling station.

It is important to also facilitate the establishment of lower order business nodes^(B2) at convenient distance within the various residential townships. Such business activity could also include Spaza shops and informal track stalls to support economic empowerment initiatives of the MMM.

In Qibing a number of areas already function as lower order business nodes and, as illustrated on **Figure 4:42**. There is potential to establish similar activity in Ebenhaeser Heights and Kanana to the north.

Future residential development should be consolidated in the following areas, as illustrated on **Figure 4:42**

Area A to the north of Kanana which is an existing township which is vacant (38 ha);

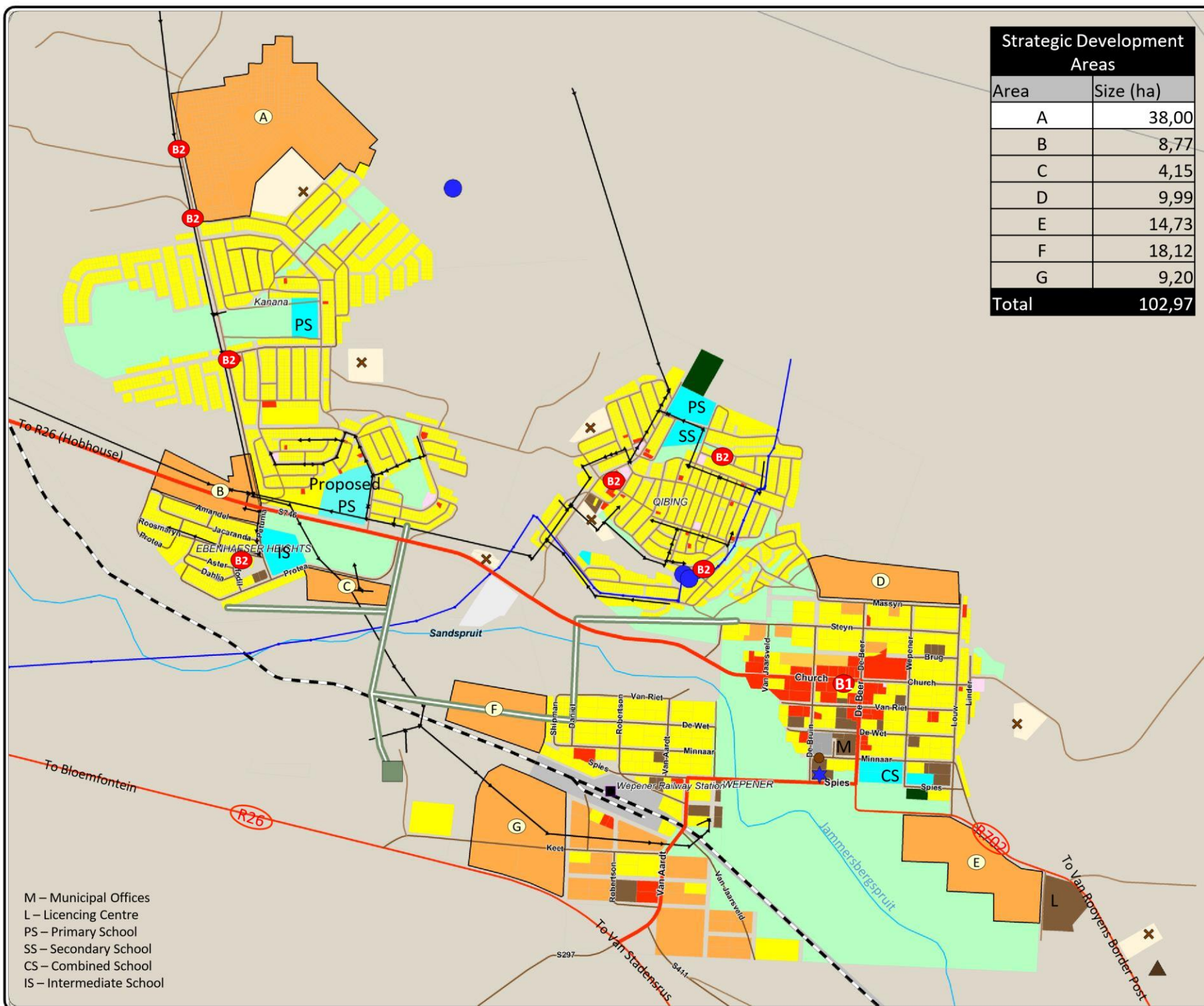
Areas B (8,77 ha) and **C** (4,15 ha) which represent small opportunities for infill development between Ebenhausers Heights and Kanana and in close proximity to Church Street extension.

Area D (9,99 ha) to the north of Wepener which functionally links Wepener to Qibing;

Area E (14,73 ha) to the south of the route R702 and Combined School in Wepener and up to the Licensing Centre, and

Areas F (18,12 ha) and **G** (9,20 ha) to the south and north of the railway line next to route R26 at the main entrance into town.

These seven areas collectively represent about 102,97 ha of land which is estimated to have capacity to accommodate around 2,000 units.



Strategic Development Areas	
Area	Size (ha)
A	38,00
B	8,77
C	4,15
D	9,99
E	14,73
F	18,12
G	9,20
Total	102,97



Wepener / Qibing Development Proposals

- Business
- Municipal
- Church
- Educational
- Residential
- Densification
- D Priority Housing Areas
- Open Space
- Sports and Recreation
- Parking
- ★ Police
- ✕ Clinic
- ✕ Cemetery
- Court
- Oxidation Ponds
- ▲ Landfill Site
- Reservoir
- Provincial Roads
- Secondary Roads
- Railway Line
- Railway Station
- Dams/Rivers
- Bulk Water Line
- Bulk Sewer Outfall

M – Municipal Offices
 L – Licencing Centre
 PS – Primary School
 SS – Secondary School
 CS – Combined School
 IS – Intermediate School

Figure 4:42

4.6.1.7. Vanstadensrus/Thapelang

Development Rationale
<p>This is a very small rural settlement with limited growth potential which is main centered around agriculture and tourism.</p> <p>The main focus should be to consolidate the spatial structure of the settlement and not to allow any further expansion of the settlement footprint until the existing footprint is fully developed.</p> <p>The settlement could offer potential as a model land reform or sustainable eco-village given the amount of food gardening and irrigation activity already occurring and this could be linked to a periodic market facility that accommodates mobile government services and is also designed to attract tourists from route R702.</p>

4.6.1.7.1. Environmental Core

Figure 4:43 illustrates the development concept and proposals for Van Stadensrus/Thapelang which is briefly summarised as follows:

There should be no ploughing or urban development within 32m of the banks of the Nuwejaarspruit to the north of Thapelang

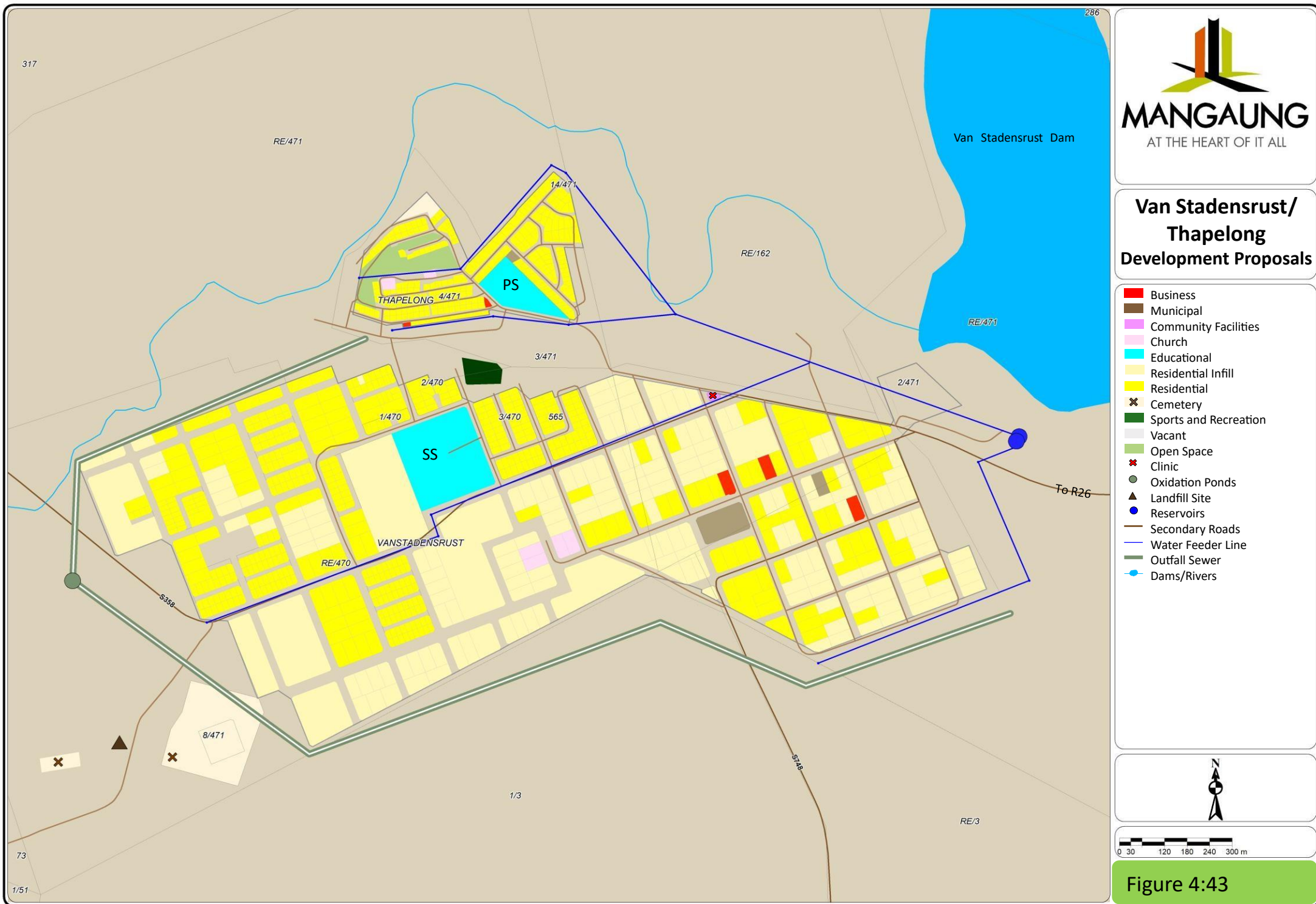
The cultivation of arable land should be promoted, and it should not be allowed to lie fallow unless as part of a crop rotation system or converted to urban development, and

The Van Standensrus Dam could be utilized as a source for irrigation and as a tourism attraction.

4.6.1.7.2. Urban Development and Restructuring

The current size of the settlement, its low population growth and limited economic prospects suggest that in terms of the NSDP and NDP that public investment should be limited to social development programs rather than investment in physical infrastructure, including housing;

- This would mean that the settlement would be largely left to develop its own resources relying on ad-hoc government funding to incrementally develop residential units, community and associated facilities.



**Van Stadensrust/
Thapelong
Development Proposals**

- Business
- Municipal
- Community Facilities
- Church
- Educational
- Residential Infill
- Residential
- Cemetery
- Sports and Recreation
- Vacant
- Open Space
- Clinic
- Oxidation Ponds
- Landfill Site
- Reservoirs
- Secondary Roads
- Water Feeder Line
- Outfall Sewer
- Dams/Rivers

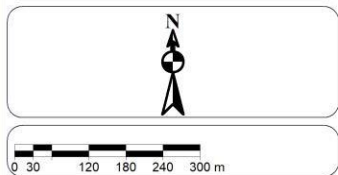


Figure 4:43

4.7. Mangaung Rural Development Plan

The following information comprises a brief summary of rural development proposals as defined in the Mangaung Rural Development Plan, 2020:

4.7.1. Functional Regions

The Mangaung Rural Development Framework is depicted on **Figure 4:44** and it identified the following functional regions.

Functional Region 1:

This region is classified as a Mining Region with the focus on potentially revitalizing the salt mining industry.

Functional Region 2:

This region is classified as an **Intensive Agriculture Region** with the focus on optimizing good soil for Commercial Farming Purposes.

Functional Region 3:

This region is classified as a Catalytic Intervention Region with the focus on several factors throughout the entire region. These include the designation of Thaba Nchu as an economic growth point, development of the Agri-Hub, strengthening of Farmer Production Support Units at Sediba and Woodbridge, tenure reform and the improvement of rural villages to serve as more effective service centres.

Functional Region 4:

This region is classified as a **Priority Land Reform Region** with the focus on the N8 development corridor as well as the cluster of projects and state-owned land in the vicinity unlocking investment potential.

Functional Region 5:

This region is classified as a **Tourism Region** with the focus especially on the Caledon Nature Reserve, however, other aspects in this region also contributes to the tourism industry, being the aesthetic views, historical monuments and border post.

4.7.2. Strategic Focus Areas

Four Strategic Focus Areas have been identified towards the implementation of the Rural Development Plan as summarised below.

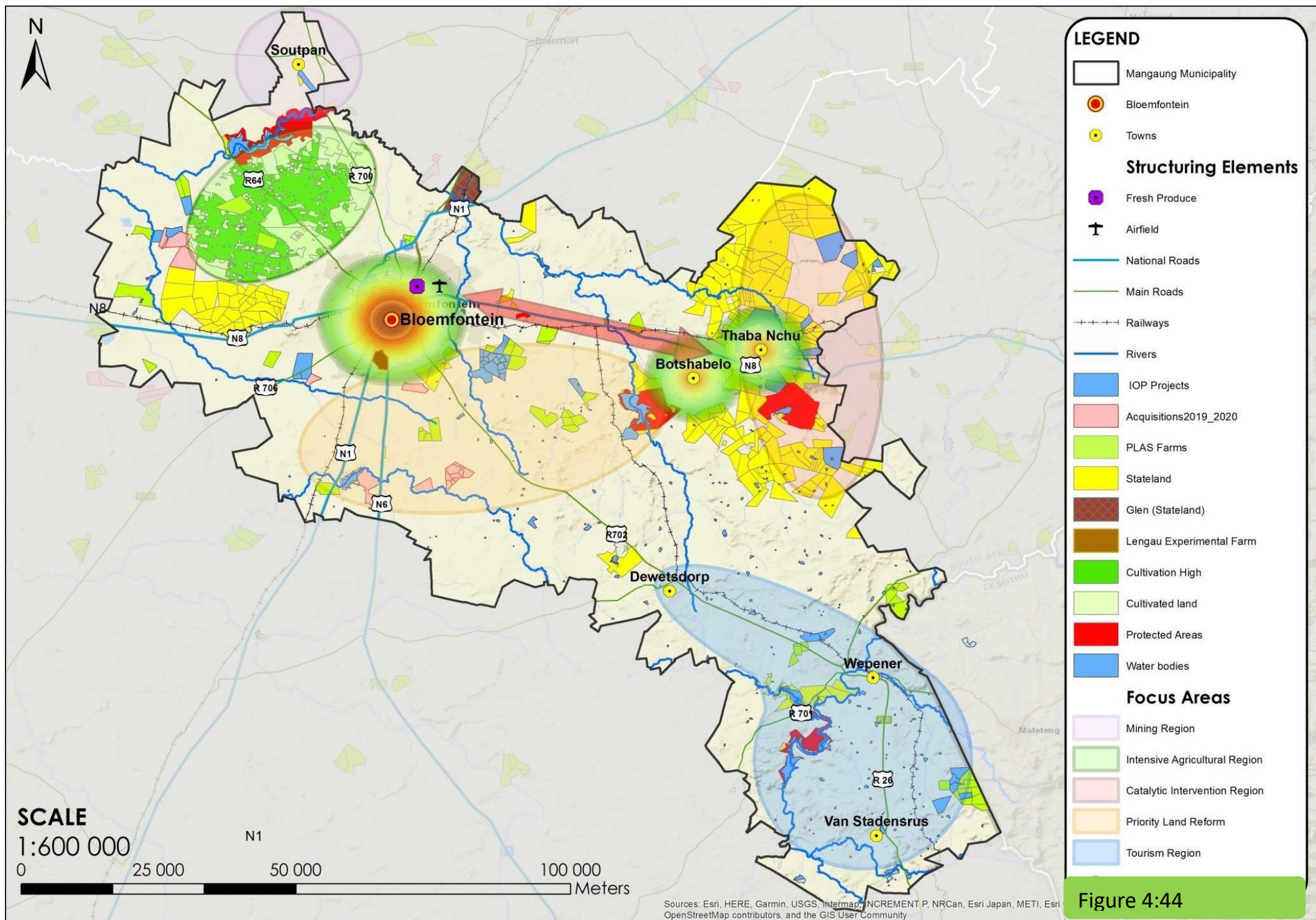


Figure 4:44

4.7.1.1. Strategic Focus Area 1: Land Reform:

The various strategic directives and related strategies associated with land acquisition and development support are indicated in the diagram below.

Two strategy directives relate to this focus area. (Table 4:10).

Table 4: 10. Detail Strategies in respect of Land Acquisition and Support.

Strategy Directives	
Rural Intervention Areas:	Firstly, the Thaba Nchu area possesses unique cultural historical tenure options that need to be corrected. These exist on two levels, namely on governing level (Traditional Council), and community level (individual ownership).
Priority Land Reform:	This strategy directive suggests that land reform takes place on three levels, namely: <ul style="list-style-type: none"> a) transfer of state owned land, b) tenure upgrading, c) the acquisition of land within the appropriate functional area.
Targeted Regions	Implementation Strategy
Functional Region 3:	<ul style="list-style-type: none"> • Facilitate the transfer of communal land in Thaba Nchu if and when appropriate legislative guidance is received from Government. • Assist with formalisation (surveying) of existing tribal villages in order to make tenure upgrading possible when supported by all role-players.
Strategy Directives	
Functional Region 4:	<ul style="list-style-type: none"> • Create a database of potential land within the functional region, including land with high agricultural potential. • Assist farmers who received grants under the Comprehensive Agricultural Support Programme (CASP) to obtain land ownership, especially farmers around the N8 Corridor. • Acquire high potential agricultural land with access to resources. • Assist qualifying beneficiaries with skills, infrastructure and other requirements.
General strategies	Implementation Strategy
All Functional Regions:	<ul style="list-style-type: none"> • Assist existing land reform beneficiary with support with post settlement support in order to make provision for both infrastructure and operational expenditure. • Provide training to all land reform beneficiaries in respect of business and farming skills. • Identify and assist with tenure upgrade in all supporting settlement areas.
Institutional arrangements:	<ul style="list-style-type: none"> • Compile a comprehensive database reflecting potential beneficiaries of land reform. • Inform beneficiary communities of the various land reform programs and assist potential participants with applications in accordance with the correct protocol.

	<ul style="list-style-type: none"> • Create a standardised and simplified business plan format to improve the evaluation of applications.
--	--

4.7.1.2. Strategic Focus Area 2: Agricultural Development:

Four main sub-focus areas have been identified with the collective aim of creating an enabling environment and markets for distribution of produce, including:

a) Intensive Farming and Mentoring:

Detail strategies in respect of Intensive Farming and Mentoring are summarised in **Table 4:11 below:**

Table 4: 11. Intensive Farming Strategy

Strategy Directives	
Intensive Farming:	Intensive farming in the Bainsvlei area should be used as a tool to improve production capacity and guarantee food security
Rural Intervention Areas:	Due to the diverse settlement patterns and communal farming practices in Thaba Nchu, this functional region must be transformed. to create positive economic growth.
Resource Protection:	Farming is dependent on water and soil resources. Farming practices and mechanisms should thus consider these resources and be implemented responsibly
Targeted Regions	Implementation Strategy
Functional Region 2:	<ul style="list-style-type: none"> • Assist commercial farmers to increase production volumes and capacities by implementing more intensive production. systems and streamlining inputs, including the use of fertilisers, specialised infrastructure and optimisation of resources. • Utilize appropriate research mechanisms to improve agricultural production. • Identify and develop niche markets such as organic farming, hydroponics, etc.
Functional Regions 3 & 4:	<ul style="list-style-type: none"> • Crop production must be encouraged parallel to livestock, as it is considered as a means of increasing job opportunities, spurring economic growth and increasing the competitive advantage of the functional region; • The production of high value crops must be considered rather than the crops traditionally produced within the region such as maize and wheat. Such high value crops include cotton, dry beans, soya beans, pomegranate, antephora, pubescens, garlic, panicum, squash and pumpkin.
General strategies	Implementation Strategy

All Functional Regions:	<ul style="list-style-type: none"> Supply resource-poor farmers and cooperatives with appropriate farmer support through existing land reform and agricultural related programmes.
Institutional arrangements:	<ul style="list-style-type: none"> Develop Mentorship guidelines and encourage the development of more detailed mentorship plans to be implemented; Establish an internal Municipal database where willing beneficiary groupings with specific needs can be matched with available expertise and knowledge, or where mentors can be identified and linked with needful recipients of mentorship assistance; Assist Mentors and outcome based programs financially through grants; Retain existing commercial farmer expertise through equity schemes and mentorship arrangements.

b) Value Adding and Distribution:

The establishment of more value-adding and distribution throughout the Municipal Area will play a positive role in assisting emerging farmers with the processing of their products. The establishment of such facilities should be made attractive through a process of incentivising potential investors.

The following detail strategies in **Table 4:12** are being proposed in relation to this sub-focus area:

Table 4: 12. Detail Strategies in respect of Value-Adding and Distribution

Strategy Directives	
Transport Corridor:	The Corridor links production and consumer markets and should be targeted to stimulating establishment of value chains and distribution functions.
Economic Development:	This strategy directive suggests that Botshabelo and Thaba Nchu have stagnant economies and depend greatly on Bloemfontein. In order to promote economic development and ensure self-sufficiency, agricultural related industries and businesses must be directed towards of these areas.
Rural Intervention Areas:	The Agri-Hub together with farmer production support units and other agricultural related projects will create economic upliftment of the area.
Targeted Regions	Implementation Strategy
Functional Regions 2, 3 and 4:	<ul style="list-style-type: none"> Create an enabling environment by pro-actively incentivising the establishment and expansion of value adding facilities and distribution centres within the functional regions, but especially along the N8 corridor. Use existing business plans to ring-fence commodities within the agricultural value chain to encourage local processing of raw material. Continuously promote further investment for expanding the Agri-Hub to facilitate development of the local agricultural processing industry.

	<ul style="list-style-type: none"> Integrate additional processing facilities with the Bloemfontein Fresh Produce Market to generate additional employment opportunities around the City.
General strategies	Implementation Strategy
All Functional Regions:	<ul style="list-style-type: none"> Identify and incentivise opportunities for the processing of raw materials and the establishment of value-adding and distribution facilities.
Institutional arrangements:	<ul style="list-style-type: none"> Continuously seek opportunities and ways to improve specific product lines through participatory processes and research. Compile a data-base of available land along the N8 corridor and other strategic locations.

c) Commodity Selection:

The specific commodity types that were identified are indicated in the following table (**Table 4:13**):

Table 4: 13. Preferred Commodity Types in Mangaung

Commodity Region	Commodity	Commodity Prioritisation Notes
Protein	Red meat	High potential for extensive (good grazing) and intensive (relative proximity to grain and other feedstock sources) beef and mutton sheep production. Most suitable cattle breeds include Angus, Bonsmara, and Taurus.
	Dairy	Proximity to feedstock and fairly favourable climate for dairy production makes the district competitive at local and possibly regional level, but not national level for large- scale dairy production. It is important to note that competition at the local level dairy market is already strong.
	Poultry	There is already a big footprint of poultry farms in Mangaung, but it remains a versatile and important product since it provides subsistence farmers and rural communities with a source of quality protein.
	Wool sheep	High production potential for wool sheep.
Fruit & Vegetables	Potatoes	High to very high suitability from an agronomic and food security perspective.
	Cabbage	High to very high suitability from an agronomic perspective.
	Onions	High suitability from an agronomic perspective.
	Asparagus	Suitable from an agronomic perspective, whilst it is rich in vitamins A, B6, C, E and K and also contains high levels of folate, calcium, iron and protein.
	Spinach	Extremely suitable from an agronomic perspective, which is considered a very healthy superfood, as it's loaded with nutrients and antioxidants in a low-calorie package.

		Beetroot High to very high suitability from an agronomic and food security perspective.
	Beetroot	High to very high suitability from an agronomic and food security perspective.
Cereals	Wheat	Parts of the district are very suitable for winter wheat production under irrigation (note that water for irrigation is very limited, with further limitation to the availability of water to areas best suited for wheat production), which will reduce risk of crop failure significantly and increase yields to profitable levels. Wheat quality from the district is amongst the best in the world; therefore, it presents opportunities for processing into speciality or luxury baked goods.
	Sorghum	Very versatile and suitable for intensive farming on small portions of land with an average production of 2 tons per hectare.
	Maize	Good potential for rain-fed maize production, especially towards the east where very high yields can be attained.
Fats and Oils	Soya Beans	Medium yield potential under dryland conditions.
	Groundnut	Medium yield potential under dryland conditions.
	Mung bean (Green gram)	Medium yield potential under dryland conditions. It is a niche market; however, a market can be developed for this excellent food security crop.
	Sunflower	Moderate to moderately high rain-fed production potential. Slightly more suitable than canola for farms in the district with a warmer microclimate. Note that the major buyers in the area demand a specific sunflower cultivar.
	Canola (Grapeseed)	Not yet well established in the area, however, moderate to moderately high rain-fed production potential may be possible for farms with a cooler microclimate.

Source: Urban Econ: Master Agri Hub Business Plan for Thaba Nchu, Final Report, April 2016

4.7.1.3. Strategic Focus Area 3: Peri-Urban Agriculture

Peri-Urban areas are usually small holdings located on the periphery of the urban edge.

Despite the fact that these areas are earmarked for agricultural use, they do not usually accommodate commercial farmers or yield great returns.

A strategy is therefore proposed that will assist in identifying certain areas for land reform to ensure optimal production. The identified area for Bloemfontein is the **Bloemspruit** and **Lakeview** Small Holdings to the east of the urban node.

The identified area is most suitable for Peri-urban Agriculture due to its proximity in relation to the following aspects:

- High density urban nodes including parts of Bloemside, Grasslands and Mangaung;
- The Fresh Produce Market and Airport;
- The Grootvlei prison as a potential offset market;
- The existing railway line and envisaged ring road for possible transport or distribution purposes, and
- The Renosterspruit for irrigation purposes.

The area earmarked for Peri-urban Agriculture will enable government to pro-actively identify and acquire land for agriculture specific project initiatives, such as 1 ha / 1 household, whilst it will also ensure that land with good soil and production potential be optimally utilised in close proximity of existing markets,. Emerging- and Small Scale Farmers could furthermore be accommodated on these small holdings for skills development and training purposes.

4.7.1.4. Strategic Focus Area 4: Economic Development

a) Sector Development:

Two different sectors have been identified as drivers of economic change, namely Tourism and Mining. The strategies relating thereto are discussed in **Table 4:14** below:

Table 4: 14. Detail Strategies in respect of Sector Development

Strategy Directives	
Economic Development:	Despite the valuable contribution that agriculture is making to economic development, the relevant strategy directive identifies two additional sectors that will impact positively on the rural economy. These include mining around Soutpan and tourism development in the southernmost parts of Mangaung
Resource Protection:	Since both mining and tourism involve the exploitation of resources, it is important that the same be protected at all costs.
Targeted Regions	Implementation Strategy
Functional Region 1:	<ul style="list-style-type: none"> • Assist existing miners in the Soutpan area with research, and if proofed viable, to assist miners with training and development initiatives to transform the mining of salt into a viable industry. • Assist miners with infrastructure (windmills) requirements. • Assist miners to obtain ownership of land, if required. • Ensure the optimal development of the Soetdoring and Florisbad areas as tourist destinations.

Functional Region 5:	<ul style="list-style-type: none"> • Ensure the identification, listing, marketing and optimal development of all tourist destinations in accordance with the Tourism Development Plan. • Ensure the protection and maintenance of all nature conservation and heritage areas.
General strategies	Implementation Strategy
All Functional Regions:	<ul style="list-style-type: none"> • Continuously identify opportunities and support local initiatives that could create employment and provide stimulus to the economy (i.e. recycling initiatives). • Provide entrepreneurial training through accredited institutions.
Strategy Directives	
Institutional Arrangements:	<p>Revise the Economic Development Plan for the Metro, so as to target specific areas and sectors with the view to creating employment opportunities and ensuring transformation of the economy.</p> <ul style="list-style-type: none"> • Compile and implement a Tourism Development Strategy for the Metro. • Compile and implement an Investment Promotion Strategy for the Metro. • Implement mechanisms to secure foreign investment specifically for mining and tourism, as well as for economic development in general.

b) The Agri- Hub

The Agri-Hub located at Thaba Nchu is regarded as one of the primary strategy directives that will spark a change in the agricultural sector and result in a progressive economy. The Agri-Hub is regarded as the main cluster of agro-processing and related activities. This will be the main focus of where the agricultural produce will go to and be further processed.

The Agri-Hub will be supported directly by at least three Farmer Production Support Units (FPSUs) located at Sediba, Woodbridge and Botshabelo.

c) Rural Villages:

It is important to single out certain villages by assigning specific roles and functions in order to improve the overall service delivery in the vast rural area.

These potential growth points as defined on **Figure 4:45** are all located centrally within a cluster of villages and should be developed to become service centres within the relevant clusters.

d) Short Term (5 Years):

The following development services and facilities should be considered for these Primary growth points (Paradys and Gladstone):

- Secondary School

- Day Hospital
- Police service
- Community Hall and Library
- Sport Facilities
- Retail, commercial and financial services
- Auction Facilities

The upgrading of roads leading to the respective growth points should typically also form part of stimulating development, as this will improve connectivity and overall service delivery.

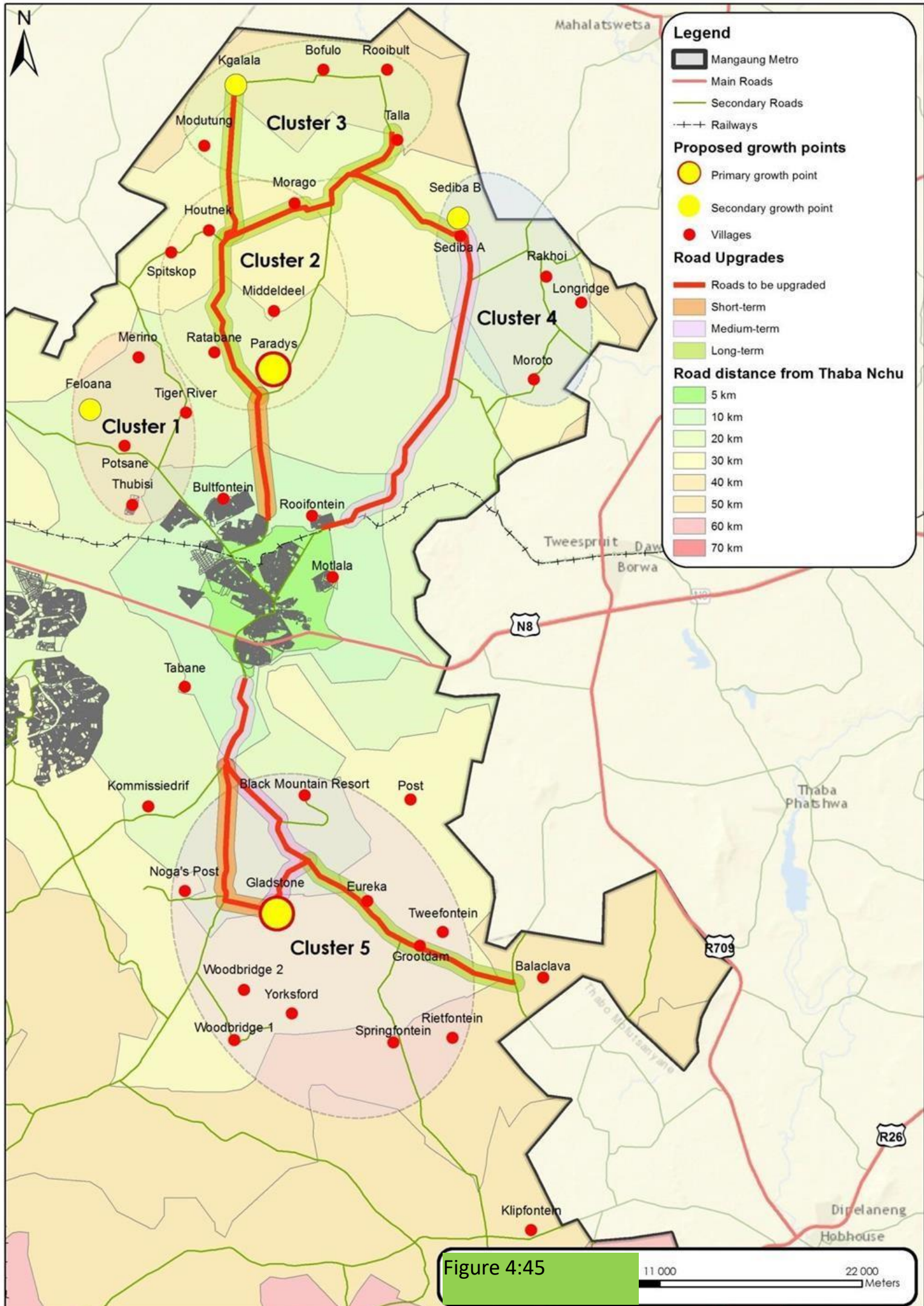
e) Medium Term (10 Years):

It is proposed that growth be stimulated further in Sediba, which forms part of Cluster 4, and that the road leading to this secondary growth point also be upgraded.

The following development services and facilities should be considered for these Primary growth points:

- Secondary School
- Strengthening of existing clinic
- Police service
- Community Hall and Library
- Sport Facilities
- Retail and commercial

Finally, it is proposed to stimulate growth in Kgalala (Cluster 3) and Feloana (Cluster 1) over the long term by developing similar facilities as indicated for Sediba, as well as to upgrade the necessary road infrastructure.



4.7.1.5. SAFETY NETS

A social safety net (SSN) is a system of non-contributory aid designed to enhance the lives of vulnerable families and people living in poverty and distress. SSNs include previously contributory social pensions, in-kind and food transfers, conditional and unconditional cash transfers, fee waivers, public works, and school meal programs. Initially, social safety nets were designed for three purposes: Institutional reform is required to make adjustment programs politically viable, and poverty reduction is the most crucial goal.

Social assistance/safety net programs are non-contributory cash or in-kind payments aimed primarily at the poor and disadvantaged. Some initiatives aim to improve chronic poverty or provide equal opportunity, while others prioritize shielding families from the shocks and long-term losses that the unprotected poor can suffer. These programs, often known as social safety net programs or social welfare, include cash transfers (conditional and unconditional), in-kind transfers like school meals and targeted food assistance, and non-monetary benefits like fee exemptions and food vouchers.