

FRANCES BAARD DISTRICT MUNICIPALITY

IDP Housing Chapter 2022/23



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1. INTRODUCTION

This Housing Chapter is a summary of the review of the Frances Baard District Municipality (FMDM) Human Settlements Plan (HSP) of 2017-2022. It provides a brief overview of population and housing trends, housing demand, current status of engineering infrastructure and updated housing pipeline lists.

Due to Covid-19 epidemic France Baard District Municipality has experienced a considerable slowdown in the delivery of housing while at the same time the local population is experiencing increasingly more challenges due to job losses and the passing of household members that contributed to household income and grants.

As South Africa is slowly coming out of the lockdowns and covid restrictions, it is crucial that housing delivery be accelerated in order to support the Frances Baard population.

2. KEY POPULATION AND HOUSING TRENDS

2.1. Population

Frances Baard District (DM) has seen a slight increase in total population between 2011 and 2016, from 382 086 to 387 741 with a 1,5% increase in population over a five-year period. The annual increase is 0,2% and if this trend continues the population will increase to 389 295 by 2018 and to 393 208 by 2023. Sol Plaatjie Local Municipality (LM) is home to 65,8% of the Frances Baard population in 2016 and is also one of the only two municipalities that had seen an increase in population numbers between 2011 and 2016 together with Dikgatlong LM.

The growth in Sol Plaatjie and Dikgatlong LM's can be attributed to better jobs and infrastructure and service provision opportunities while the decline in the Phokwane and Magareng LM's could possibly be due to changes in the economy, responses to adverse climate conditions, lack of quality education facilities, a decline in the female population and improved birth control knowledge.

Table 1: Population Trends 2011, 2016 and 2022

| | 2011 | 2016 | Change | Increase/ Change per Annum | 2021 Projection | 2022 Projection | 2023 Projection | 2011 Share (%) | 2016 Share (%) |
|----------------------|---------------|---------------|--------------------|-------------------------------------|--------------------|--------------------|--------------------|----------------------|----------------------|
| Sol Plaatjie | 248041 | 255041 | 7000 (2,8%) | 0,56% | 262320 | 263801 | 265290 | 64,9% | 65,8% |
| Dikgatlong | 46841 | 48473 | 1633 (3,5%) | 0,70% | 50186 | 50535 | 50887 | 12,3% | 12,5% |
| Magareng | 24204 | 24059 | -145 (-0,6%) | -0,12% | 23915 | 23887 | 23858 | 6,3% | 6,2% |
| Phokwane | 63000 | 60168 | -2833 (-4,5%) | -0,89% | 57512 | 56994 | 56482 | 16,5% | 15,5% |
| Frances Baard | 382086 | 387741 | 5656 (1,5%) | 0,20% | 393514 | 394679 | 395847 | 100% | 100% |
| Northern Cape | 1145861 | 1193780 | 47920 (4,2%) | 0,84% | 1244545 | 1254954 | 1265450 | NA | NA |

Source: Calculations based on StatsSA: Census 2011 (2016 Municipal Demarcations), Community Survey 2016

2.2. Households

Table 2: Household Change between 2011 and 2016

| | 2011 Household | 2016 Households | Household Increase 2011 to 2016 | % Change | 2011 Household Size | 2016 Household Size | 2022 Projected Households ¹ |
|----------------------|----------------|-----------------|---------------------------------|------------|---------------------|---------------------|--|
| Sol Plaatjie | 62283 | 72012 | +9729 | 16% | 4,1 | 3,5 | 75372 |
| Dikgatlong | 12454 | 14751 | +2297 | 18% | 3,9 | 3,3 | 15314 |
| Magareng | 6206 | 6970 | +764 | 12% | 4,0 | 3,5 | 6825 |
| Phokwane | 17698 | 19597 | +1899 | 11% | 3,6 | 3,1 | 18385 |
| Frances Baard | 98640 | 113330 | +14690 | 15% | 4,0 | 3,4 | 116082 |
| Northern Cape | 313795 | 353709 | +39914 | 13% | 3,8 | 3,4 | 369104 |

Source: Calculations based on StatsSA: Census 2011 (2016 Municipal Demarcations), Community Survey 2016: Province at a Glance (2016); Frances Baard HSP Review 2019

Dikgatlong LM saw an 18% growth in households between 2011 and 2016 and a decline in household size from 3,9 to 3,3. The household growth is much higher than the population growth, this trend can be related to the decline in household size and the provision of subsidized and gap housing, making it easier for individuals to move out of the parental households, as well as the outmigration of individuals in search of work or education in another place.

2.3. Formal and Informal Dwellings

Table 3: Dwelling Types 2011 and 2016

| Demarcations | Formal | | Traditional ² | | Informal ³ | | Other | | Unspecified ⁴ | |
|----------------------|--------------|--------------|--------------------------|-------------|-----------------------|--------------|-------------|-------------|--------------------------|-------------|
| | 2011 | 2016 | 2011 | 2016 | 2011 | 2016 | 2011 | 2016 | 2011 | 2016 |
| Sol Plaatje | 49212 | 61867 | 184 | 129 | 10378 | 9829 | 523 | 188 | 1987 | 128 |
| | 79,0% | 85,9% | 0,3% | 0,2% | 16,7% | 13,6% | 0,8% | 0,3% | 3,2% | 0,2% |
| Dikgatlong | 9390 | 11182 | 169 | 117 | 2018 | 3204 | 391 | 248 | 486 | 117 |
| | 75,4% | 75,8% | 1,4% | 0,8% | 16,2% | 21,7% | 3,1% | 1,7% | 3,9% | 0,8% |
| Magareng | 5330 | 5734 | 36 | 15 | 742 | 1221 | 12 | 0 | 86 | 15 |
| | 85,9% | 82,3% | 0,6% | 0,2% | 12,0% | 17,5% | 0,2% | 0,0% | 1,4% | 0,2% |
| Phokwane | 14696 | 16086 | 211 | 33 | 2423 | 3406 | 214 | 72 | 153 | 33 |
| | 83,0% | 82,1% | 1,2% | 0,2% | 13,7% | 17,4% | 1,2% | 0,4% | 0,9% | 0,2% |
| Frances Baard | 78628 | 94869 | 599 | 294 | 15562 | 17660 | 1139 | 508 | 2712 | 293 |
| | 79,7% | 83,7% | 0,6% | 0,3% | 15,8% | 15,6% | 1,2% | 0,4% | 2,7% | 0,3% |
| Northern Cape | 248307 | 295318 | 9505 | 245 | 39604 | 45246 | 3984 | 4858 | 12395 | 8287 |
| | 79,1% | 83,5% | 3,0% | 0,1% | 12,6% | 12,8% | 1,3% | 1,4% | 4,0% | 2,3% |

Source: Calculated using the Community Survey 2016: Province at a Glance and Census 2011

¹ Calculated by dividing the 2022 predicted population by the 2016 household size. It is assumed that the household size will not continue to decline indefinitely, thus the 2016 household size is used

² Traditional Dwelling: A dwelling made primarily of clay, mud, reeds or other locally available natural materials. This is a general term that includes huts, rondavels, etc.

³ All other dwelling types not categorized under formal, informal and traditional

⁴ Dwelling type not captured in the survey

According to the Census 2011 and Community Survey 2016 statistics, all local municipalities except, Sol Plaatje, as well as the District as whole have seen an increase in informal dwellings between 2011 and 2016.

Although there had been an increase in the number of Formal Dwellings in Frances Baard DM, there had also been an increase in the number of Informal Dwellings from 15562 to 17660. Traditional Dwellings have also shown a decided decline from 599 to 294 in 2016, most probably due to the provision of Formal Housing.

During stakeholder consultation it was mentioned that a number of individuals whom attain RDP houses, move to informal settlements and rent out their RDP house, how much phenomenon is contributing to the informal settlement growth is unclear.

Figure 1: Dikgatlong Residential Development Footprint Change from 1990 to 2019

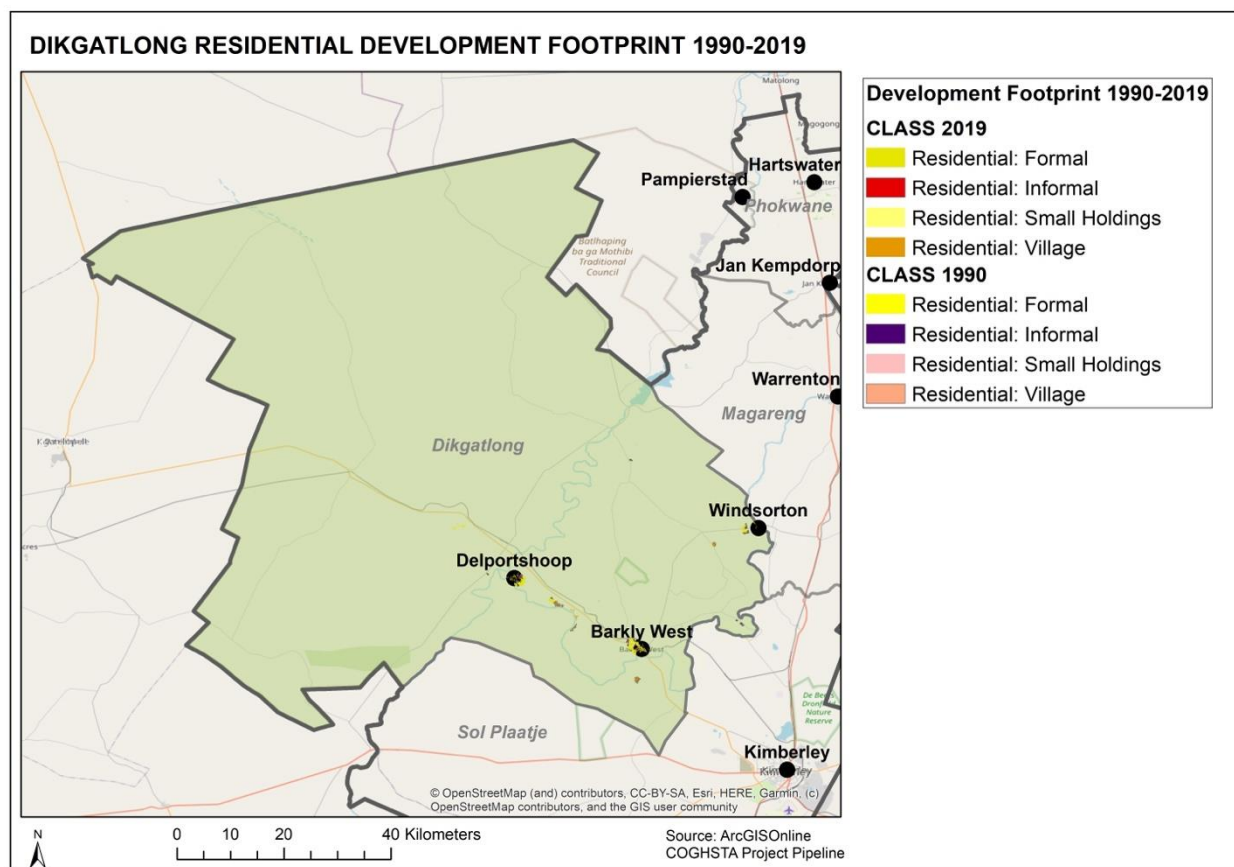


Figure 2: Phokwane Development Footprint Change from 1990 to 2019

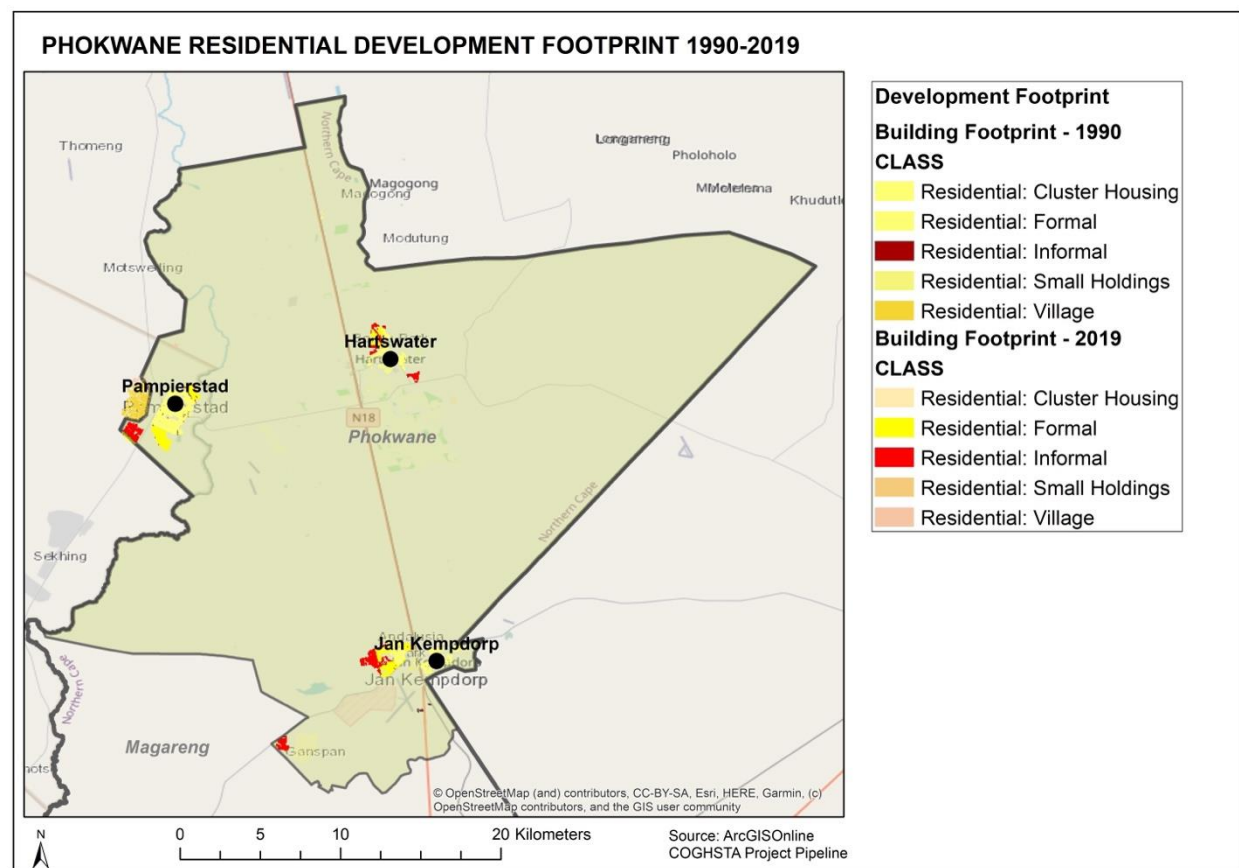
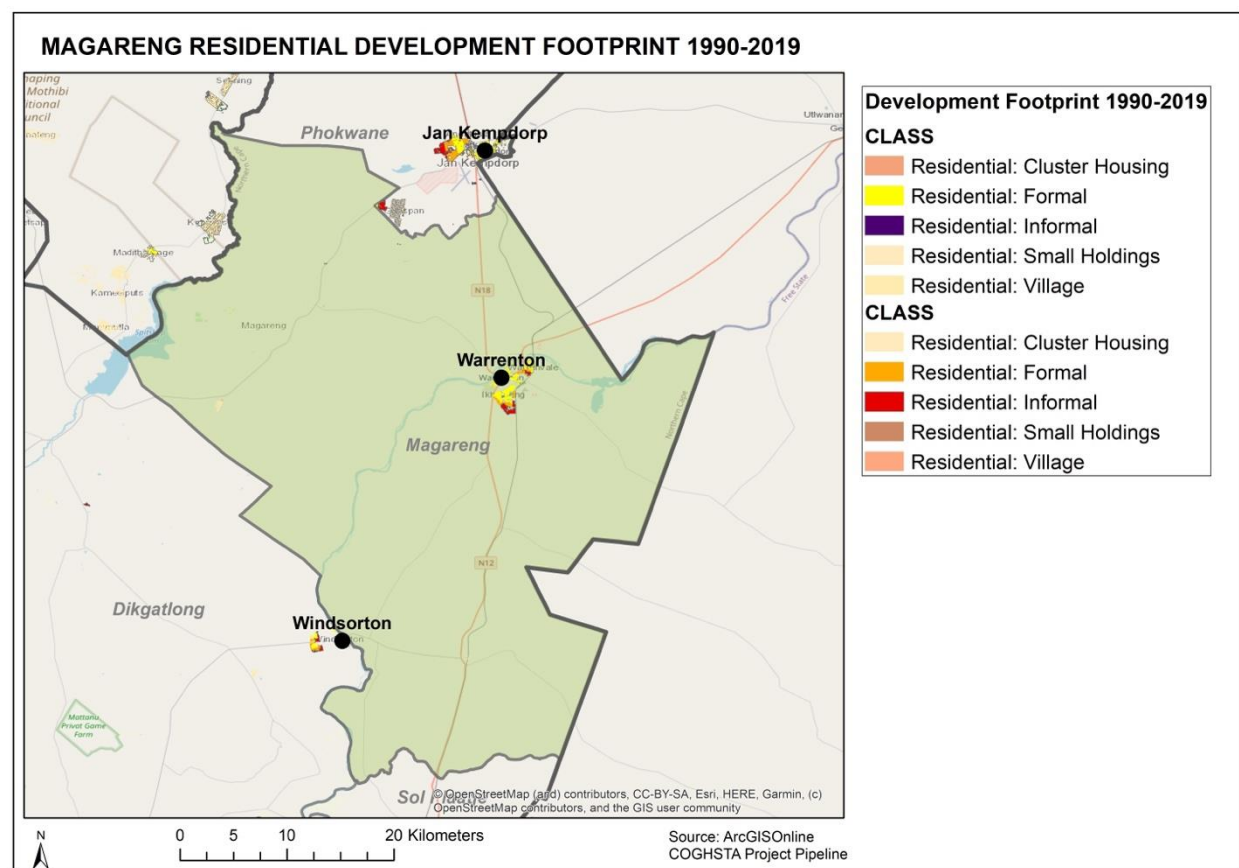


Figure 3: Magareng Residential Development Footprint Change from 1990 to 2019



2.4. RDP and Subsidised Dwellings

Within the Northern Cape 30.1% of households reside in government subsidised or RDP dwellings, which is higher than the national average of 23,3%.

39,1% of the Frances Baard households live in subsidised or RDP housing, and although Pixley Ka Seme has a higher percentage at 41,1%, Frances Baard has the largest total numbers of households living in subsidised or RDP housing (Community Survey, 2016).

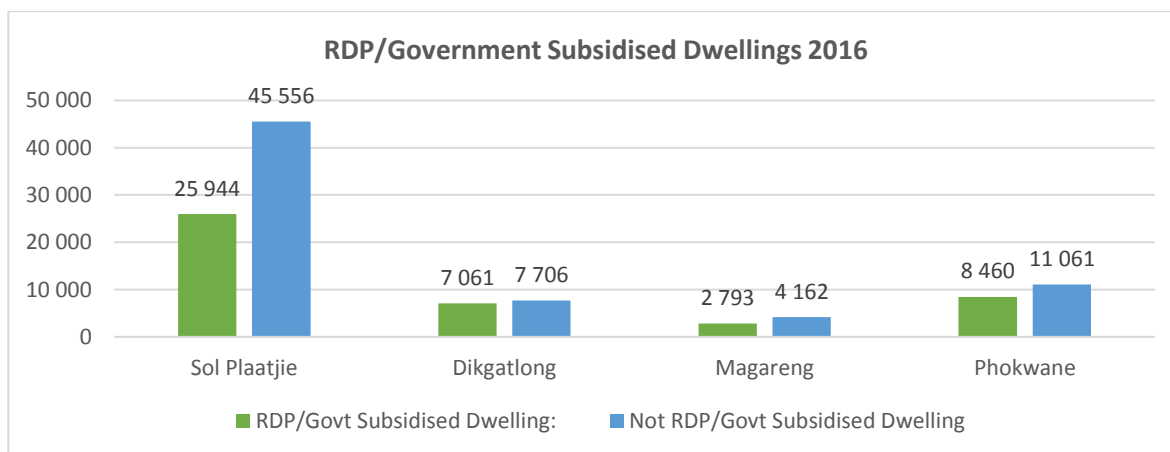
According to the table below, Dikgatlong has the largest percentage (47,8%) of households living in subsidised or RDP housing, followed by Phokwane (43,3%) and then Magareng (40,2%). However, in total numbers Sol Plaatje has the largest number of households living in subsidised or RDP housing.

Table 4: RDP/Government Subsidised Dwellings 2016

| Municipality | RDP/Govt Subsidised Dwelling: Number | RDP/Govt Subsidised Dwelling: Percentage | Not RDP/GovtSubsidised Dwelling: Number | Not RDP/Govt Subsidised Dwelling: Percentage |
|---------------|--------------------------------------|--|---|--|
| Sol Plaatjie | 25 944 | 36,3% | 45 556 | 63,7% |
| Dikgatlong | 7 061 | 47,8% | 7 706 | 52,2% |
| Magareng | 2 793 | 40,2% | 4 162 | 59,8% |
| Phokwane | 8 460 | 43,3% | 11 061 | 56,7% |
| Frances Baard | 44 258 | 39,1% | 68 484 | 60,7% |
| Northern Cape | 105 541 | 30,1% | 244 759 | 69,9% |

Source: Calculated using the Community Survey 2016: Province at a Glance

Figure 4: RDP/Government Subsidised Dwellings 2016



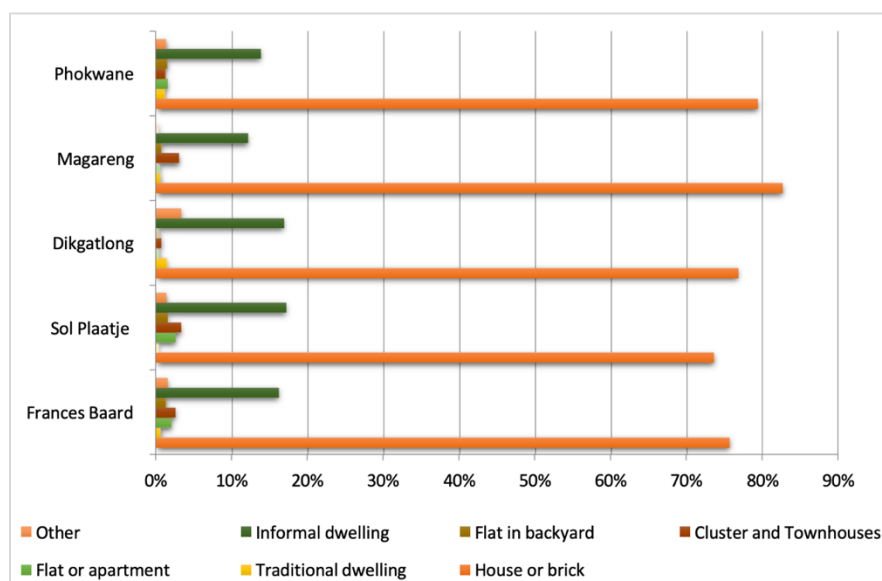
Source: Calculated using the Community Survey 2016: Province at a Glance

2.5. Formal Housing Typologies

Most households in the Frances Baard District (76%) reside in a formal brick structure. There is however a noticeable portion of the households in the District that currently occupy an informal dwelling (16%).

From the graph below it is clear that the main dwelling types are formal and informal housing, with Sol Plaatje and Magareng providing slightly more cluster or townhouses than Phokwane and Dikgatlong.

Figure 5: Formal Housing Typologies 2016



Source: Calculated using the Community Survey 2016

2.6. Asbestos Housing

The table below, indicates approximately 28% of existing structures observed within this District Municipality have asbestos material in one form or the other. The asbestos utilization as a building material ranges from being roofing sheeting to walls on superstructures, broadly representing:

- 69% as Housing with Asbestos Roof;
- 14% as Housing with Asbestos Superstructure;
- 13% as Outdoor Structures with Asbestos Roof; and
- 4% as Outdoor Asbestos Superstructures.

Table 5: Asbestos Housing

| Local Municipality | Name of Place | Population | Housing stock | Housing with Asbestos | |
|--------------------|-----------------------------|------------|---------------|-----------------------|-------|
| | | | Assessed | Roof | Walls |
| Sol Plaatje | Galeshewe | 10792 | 13751 | 1106 | 384 |
| | Kimberly | 96977 | 4518 | 540 | 406 |
| | Kimberly (Access Denied) | | 35425 | | |
| | Motswedimosa | 724 | 118 | 59 | |
| | Richie | 761 | 1141 | 290 | |
| | Roodepan | 20263 | 3239 | 923 | 3 |
| | Roodepan (Access Denied) | | 20 | 3 | |
| Phokwane | Hartswater | 10465 | 885 | 99 | |
| | Jan Kempdorp | 2422 | 225 | 193 | 4 |
| | JanKempdorp (Access Denied) | | 4815 | | |
| | Pampierstad | 21707 | 3459 | 1831 | 42 |
| | Pampierstad (Access Denied) | | 41 | 28 | |
| Dikgatlong | Barkly West | 8258 | 1505 | | |
| | Delporshoop | 4788 | 1073 | 247 | 1 |
| | Longlands | 2933 | 541 | | |

| Local Municipality | Name of Place | Population | Housing stock | Housing with Asbestos | |
|--------------------|---------------------------|------------|---------------|-----------------------|-------|
| | | | Assessed | Roof | Walls |
| | Mataleng | 11847 | 491 | 139 | 1 |
| | Windsorton | 2291 | 625 | 161 | 1 |
| Magareng | Ikutseng | 16683 | 2067 | 17 | |
| | Warrenton | 5905 | 674 | 432 | 16 |
| | Warrenton (Access Denied) | | 1519 | | |
| | Magareng NU | | 9 | | |
| Total | | 216816 | 76141 | 6068 | 858 |

Source: Frances Baard Human Settlement Sector Plan 2019/20

3. HOUSING DEMAND: STATISTICAL, GAP-HOUSING AND RENTAL

3.1. Overview

The table below indicates the reviewed 2021/22 demand for Frances Baard Human Settlements based on statistical and trend analysis calculations and the National Housing Needs Register as at February 2022.

Table 6: 2022 Reviewed Frances Baard Demand

| Municipality | Total Housing Demand | | Low Cost/Subsidised Housing | | Gap Housing | | Rental Housing | Unknown |
|--|---------------------------------|----------------|-----------------------------|-----------------------------|--------------------|-----------------------------|-----------------------------|---------|
| | Statistical Demand ⁵ | Needs Register | Statistical Demand | Needs Register ⁶ | Statistical Demand | Needs Register ⁷ | Needs Register ⁸ | |
| Dikgatlong HSP Revised 2022 ⁹ | 14519 | 9013 | 11792 ¹⁰ | 8216 | 2757 ¹¹ | 122 | 137 | 541 |
| Phokwane HSP Revised 2022 | 16914 | 18813 | 13421 ¹² | 17450 | 3493 ¹³ | 158 | 118 | 1091 |
| Magareng HSP Revised 2022 | 6484 | 3804 | 5187 ¹⁴ | 3542 | 1297 ¹⁵ | 30 | 16 | 217 |
| Sol Plaatje Municipality | 13 500 | | 4 050 | | 9 450 | | - | |

Sources: Phokwane, Magareng and Dikgatlong NHNR 2022 and HSPs 2021

⁵ Only includes the Low Cost housing and Gap housing statistics, rental demand cannot be calculated statistically

⁶ Based on the number of individuals on the housing registry that fall within the R0 – R3500 income category minus individuals that indicated they would prefer to rent

⁷ Based on the number of individuals that fall within the R3501 – R15000 income category minus individuals that indicated they would prefer to rent

⁸ Based on the number of individuals that indicated they wanted to rent in the area

⁹ NHNR February 2022

¹⁰ Statistical Demand Low Cost Housing Note: (77% households earning less than 3500 x predicted 2022 households 15314 = statistical demand)

¹¹ Statistical Demand Gap Housing Note: (18% households earning between 3500 and 15 000 x predicted 2022 households 15314 = statistical demand)

¹² Statistical Demand Low Cost Housing Note: (73% households earning less than 3500 x predicted 2022 households 18385 = statistical demand)

¹³ Statistical Demand Gap Housing Note: (19% households earning between 3500 and 15 000 x predicted 2022 households 18385 = statistical demand)

¹⁴ Statistical Demand Low Cost Housing Note: (76% households earning less than 3500 x predicted 2022 households 6825 = statistical demand)

¹⁵ Statistical Demand Gap Housing Note: (19% households earning between 3500 and 15 000 x predicted 2022 households 6825 = statistical demand)

3.2. Low Cost or Subsidised Housing

Subsidized Housing are specifically for people who qualify for the free basic house subsidy scheme:

- Need to be on the municipal housing demand database for a minimum of 10 years (proof required).
- Preference given to those 40 years old or those with special needs.
- Married or living with a long-term partner/single or divorced with others who are relying on the income.
- A South African citizen or a permanent resident's permit.
- Older than 18 years of age or if under 18, married or divorced with others relying on your income.
- A monthly household income before deductions less than R3,500.
- Never received a subsidy from the government and never owned property.

Table 7: Frances Baard DM Housing Needs Income Distribution

| Area | R0 - R3500 | R3500 – R15000 | R15000+ | Unknown | TOTAL |
|----------------------|---|----------------|---------|-----------|---------------|
| Dikgatlong LM | 8342 | 129 | 1 | 541 | 9013 |
| - rent preference | -126 = 8216 | -7 = 122 | NA | -4 = 537 | -137 = 8876 |
| Phokwane LM | 17562 | 158 | 1 | 1091 | 18 813 |
| - rent preference | -112 = 17450 | -1 = 157 | -1 = 0 | -4 = 1087 | - 118 = 18695 |
| Magareng | 3553 | 22 | 2 | 217 | 3804 |
| - rent preference | -11 = 3542 | -2 = 20 | -2 = 0 | -3 = 214 | - 16 = 3788 |
| Sol Plaatje | Data not available for the purpose of this review | | | | |

Source: 2022 NHNR for Dikgatlong, Phokwane and Magareng LMs

From the above it is clear that the majority of the individuals in the Housing Needs Registry in Frances Baard fall within the Low Cost/Subsidised Housing category, with the majority of the demand originating from Phokwane and Dikgatlong local municipalities. As the Housing Needs Registry data is the most up to date information, the data sourced from it would be the most appropriate source to identify housing need.

Table 8: Households Qualifying for Subsidised/Low Cost Housing

| Municipality | Total Housing Demand | | Low Cost/Subsidised Housing | | Unknown income individuals that might fall in this the low cost housing category |
|------------------------------------|----------------------------------|----------------|-----------------------------|---|--|
| | Statistical Demand ¹⁶ | Needs Register | Statistical Demand | Needs Register | |
| Dikgatlong HSP Revised 2022 | 14519 | 9013 | 11792 | 8342 qualify Minus 126 in this income group whom indicated that they would prefer to rent = 8216 | 537 |
| Phokwane HSP Revised 2022 | 16914 | 18813 | 13421 | 17562 qualify Minus 112 in this income group whom indicated that they would prefer to rent = 17450 | 1091 |
| Magareng HSP Revised 2022 | 6484 | 3804 | 5187 | 3553 Qualify | 6484 |

¹⁶ Only includes the Low Cost housing and Gap housing statistics, rental demand cannot be calculated statistically

| | | | | |
|---------------------------------------|---------------|--------------|--|--|
| | | | Minus 11 in this income group whom indicated that they would prefer to rent = 3542 | |
| Sol Plaatje Local Municipality | 13 500 | 4 050 | Data could not be found to confirm the exact needs register data. | |

3.3. Gap Housing

Gap Housing is specifically for households whose income is inadequate to qualify for a home loan but exceeds the maximum limit applicable to access the free basic house subsidy scheme. The Finance-linked Individual Subsidy Programme or Flip as it is known was developed to assist these households. These are households that fall within the income margins between R3 500 and R15 000 per month. The following table indicates the status for Dikgatlong LM, which shows a variance between the statistical analysis and actual needs register number of applicants.

Table 9: Households Qualifying for Gap Housing

| Municipality | Total Housing Demand | | Gap Housing | |
|---------------------------------------|----------------------|----------------|---|---|
| | Statistical Demand | Needs Register | Statistical Demand | Needs Register |
| Dikgatlong HSP Revised 2022 | 14519 | 9013 | 2757 | 129 qualify Minus 7 in this income group whom indicated that they would prefer to rent = 122 |
| Phokwane HSP Revised 2022 | 16914 | 18813 | 3493 | 158 qualify Minus 1 in this income group whom indicated that they would prefer to rent = 157 |
| Magareng HSP Revised 2022 | 6484 | 3804 | 1297 | 32 Qualify Minus 2 in this income group whom indicated that they would prefer to rent = 30 |
| Sol Plaatje Local Municipality | 13 500 | 9 450 | Data could not be found to confirm the exact needs register data. | |

Source: See Table 23 for explanations and calculations

Relatively low numbers of households on the Housing Needs Register fall within the Gap housing category, with the majority of the demand according to the Housing Needs Registry falling in Phokwane and Dikgatlong Local Municipalities

3.4. National Housing Needs Registry

3.4.1. Overview of Needs

According to the National Housing Register the categories of persons requiring special consideration are as follows.

Table 10: Persons Requiring Special Consideration

| Municipality | Persons with Special Needs | Women | Unemployed | Pensioners | Children |
|-------------------|----------------------------|-------|------------|------------|----------|
| Dikgatlong | 920 | 5358 | 8545 | 1750 | 10 |
| Phokwane | 1703 | 11108 | 17 660 | 4212 | 18 |

| | | | | | |
|---------------------|------|-------|-------|------|----|
| Magareng | 404 | 2361 | 3677 | 855 | 17 |
| Sol Plaatjie | 429 | 7786 | 9135 | 874 | 8 |
| Total | 3456 | 26613 | 39017 | 7691 | 53 |

Source: NHNR 2022

Table 11: Frances Baard DM Housing Needs per Settlement Type

| Municipalities | Informal Dwellings | Formal Dwellings | Temporary | Traditional | Flats | None | Unknown |
|----------------------|--------------------|------------------|-----------|-------------|-------|------|---------|
| Dikgatlong | 68,8% | 24,3% | 0,3% | 2,9% | 1,6% | 1,0% | 1,1% |
| Phokwane | 49,1% | 46,3% | 0,0% | 0,2% | 3,3% | 0,1% | 1,0% |
| Magareng | 61,0% | 27,7% | 0,7% | 1,1% | 1,1% | 3,8% | 4,7% |
| Sol Plaatjie | 48,1% | 47,4% | 0,3% | 0,0% | 2,1% | 0,7% | 1,3% |
| Frances Baard | 53,7% | 40,7% | 0,2% | 0,7% | 2,4% | 0,8% | 1,4% |

Source: NHNR 2022

3.4.2. Housing Needs vs Planned Housing Trends

The table below provides an overview of the location of housing demand in comparison to where the current housing projects are planned.

Table 12: Housing Demand vs Planned Housing

| Area | Housing Demand | Planned Housing | Shortfall |
|----------------------|----------------|-----------------|-----------|
| Dikgatlong LM | 9013 | 8082 | -931 |
| Phokwane LM | 18813 | 6953 | -11860 |
| Magareng LM | 3804 | 3823 | +19 |
| Sol Plaatje | 13 500 | 28 890 | + 15 390 |

Source: Municipal HSPs 2021 and 2022 Housing Needs Registry

3.4.3. Land Needs

Dikgatlong and Magareng Local Municipalities are not experiencing any challenges with regards to accessing land for housing, however Phokwane Local Municipality has put together an expression of interest for the acquisition of State and private land for human settlement. The following properties have been identified for acquisition:

Table 13: Land Acquisition properties

| Municipality | SG CODE | Title deed number | Farm /Erf | Portion | Town |
|--------------|------------------------|-------------------|-------------|---------|--------------|
| Phokwane LM | C0810007000006700000 | T332/1944 | 167 | | Hartswater |
| | C08100070000094900000 | | 949 | | Jan Kempdorp |
| | C08100070000014400000 | | 144 | | Jan Kempdorp |
| | C081000700000100600000 | | 1006 | | Jan Kempdorp |
| | C08100070000025900000 | | 259 | | Jan Kempdorp |
| | T0HN00000000003600085 | T4182/2004 | 36 | 85 | GULDENSKAT |
| | C007000000000031600000 | T550/1950 | Portion 316 | | Pampierstad |

3.5. Bulk Services and Infrastructure Assessment

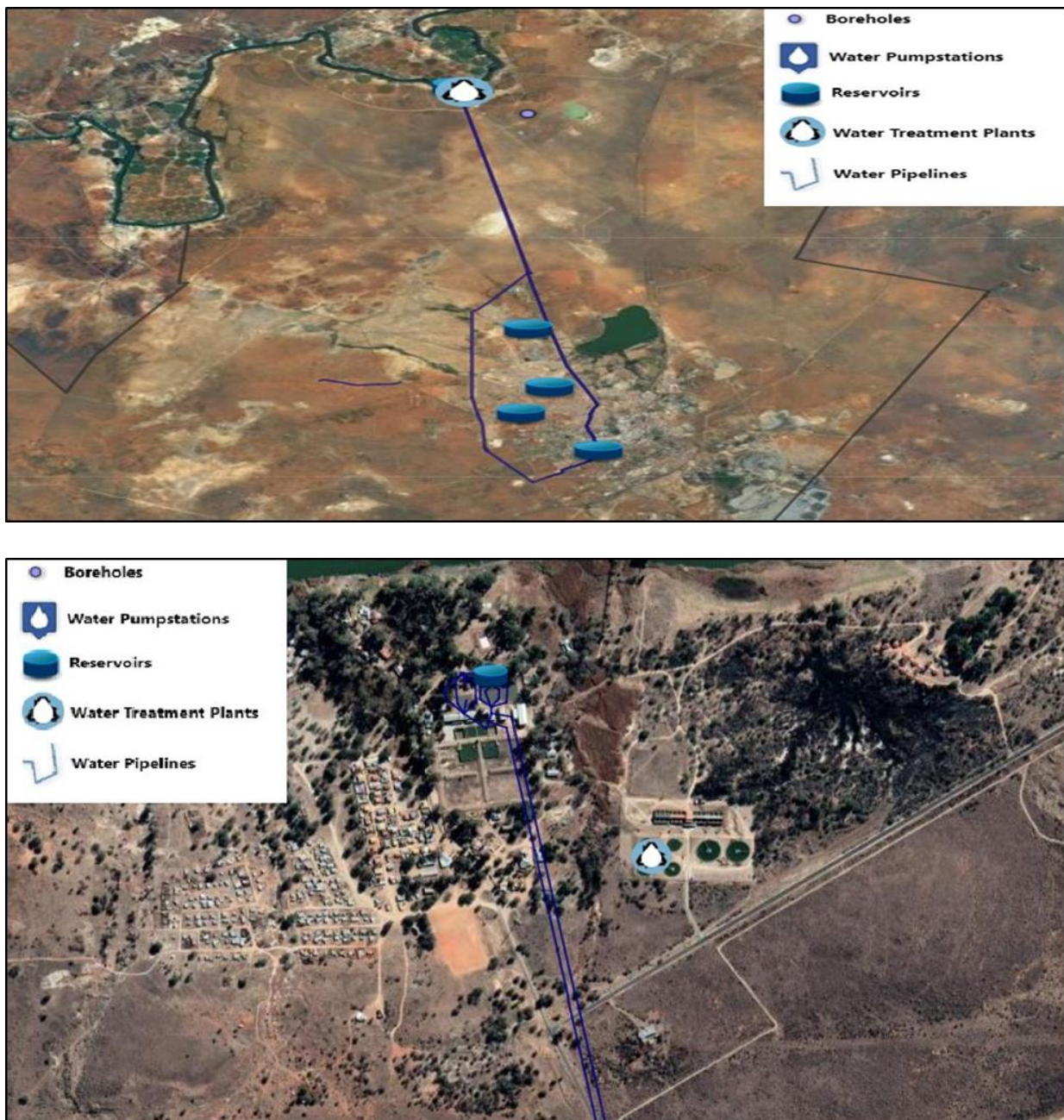
3.5.1. Sol Plaatje Local Municipality

3.5.1.1. Existing Bulk Water and Sanitation Infrastructure

3.5.1.1.1. Kimberley and Riverton Bulk Water Infrastructure

Kimberley is supplied with raw water from the Vaal River where the Municipality is the water services provider and authority. Therefore, the Municipality is responsible to abstract, purify and distribute water. An overview of the bulk water infrastructure in terms of storage reservoirs and Water Treatment Plants of Kimberley and Riverton are shown in the **below figures respectively**.

Figure 6: Bulk Water Infrastructure of Kimberley and Riverton



3.5.1.1.2. Kimberley and Riverton Bulk Sanitation Infrastructure

Kimberley is served by a waterborne sewer gravitational network of varying pipe diameters, draining effluent from different areas to a number of lifting pump stations throughout Kimberley. These lifting stations lift the effluent to the Homevale sewer pump station. The effluent is pumped to two wastewater treatment plants situated East and West from Kimberley. The existing wastewater treatment plant at Riverton with a capacity of 156 ML/day is currently operating at 60% due to maintenance and operational challenges. See **Figures** below displaying the bulk sanitation infrastructure of Kimberley and Riverton.

Figure 7: Bulk Sanitation Infrastructure of Kimberley and Riverton

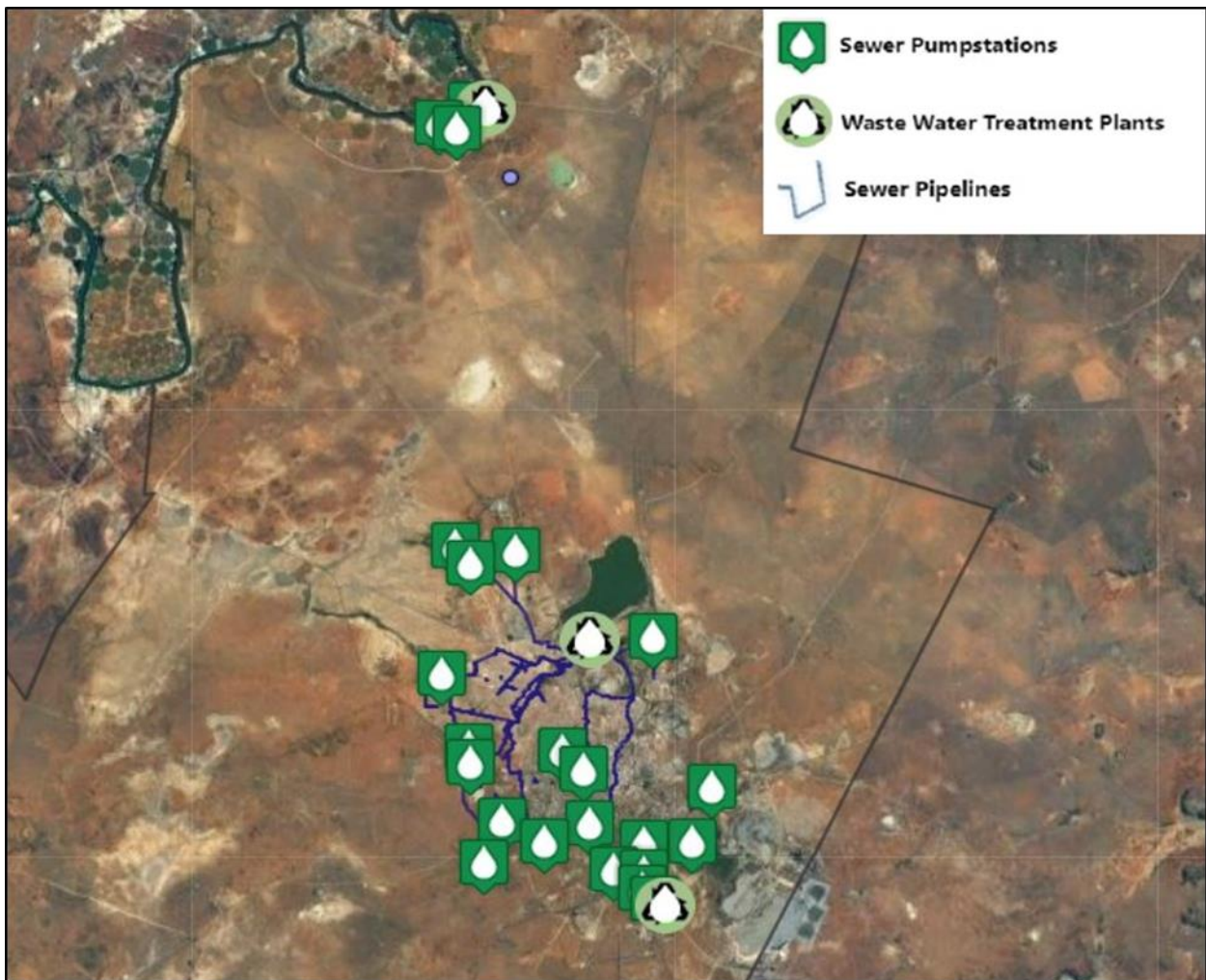
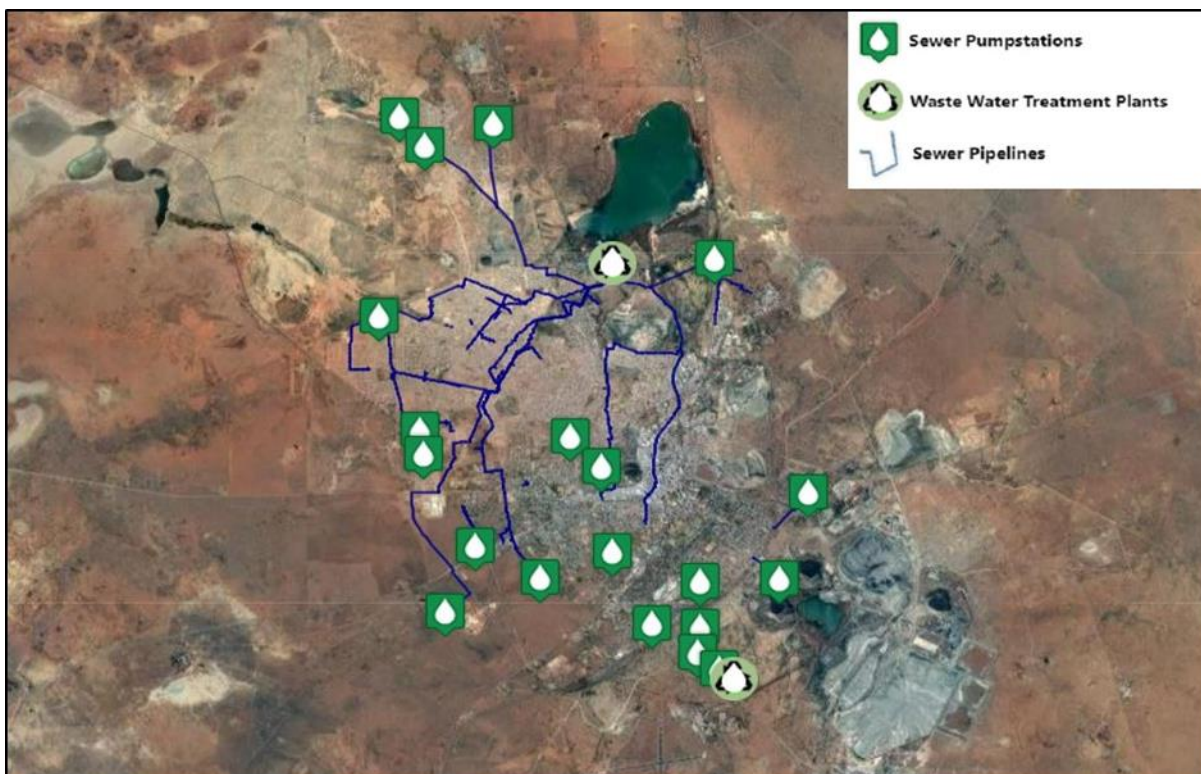


Figure 8: Bulk Sanitation Infrastructure of Riverton



Figure 9: Bulk Sanitation Infrastructure of Kimberley



3.5.1.1.3. Ritchie Bulk Water Infrastructure

Ritchie is supplied with treated potable water from Modder River where the Municipality is the water services provider and authority. Therefore, the Municipality is responsible to abstract, purify and distribute water. An overview of the bulk water infrastructure in terms of storage reservoirs and Water Treatment Plant of Ritchie are shown in the **Figures**.

Figure 10: Bulk Water Infrastructure of Ritchie



3.5.1.1.4. Ritchie Bulk Sanitation Infrastructure

Ritchie is served by a waterborne sewer gravitational network of varying pipe diameters, draining effluent from different areas to a number of lifting pump stations throughout the town. The effluent is pumped to one wastewater treatment plant situated north of Ritchie. The existing wastewater treatment plant at Ritchie with a capacity of 6 ML/day is currently operating at 70%. See **Figure** below displaying the bulk sanitation infrastructure of Ritchie.

Figure 11: Bulk Sanitation Infrastructure



3.5.1.1.5. Bulk Water and Sanitation Infrastructure Conclusion – Sol Plaatje Municipality

It is recommended that the Municipality have a masterplan study done, or if a masterplan study is available, that it is updated to reflect the latest status quo in order to determine the extent of upgrades required to accommodate the existing and proposed future developments.

3.5.1.2. Existing Bulk Electricity Infrastructure

Within the Sol Plaatje Municipality area, both the municipality and Eskom act as supplying authorities. The Kimberley, Galeshewe, Platfontein and Riverton are supplied by the Municipality, while Magersfontein and Ritchie are supplied by Eskom.

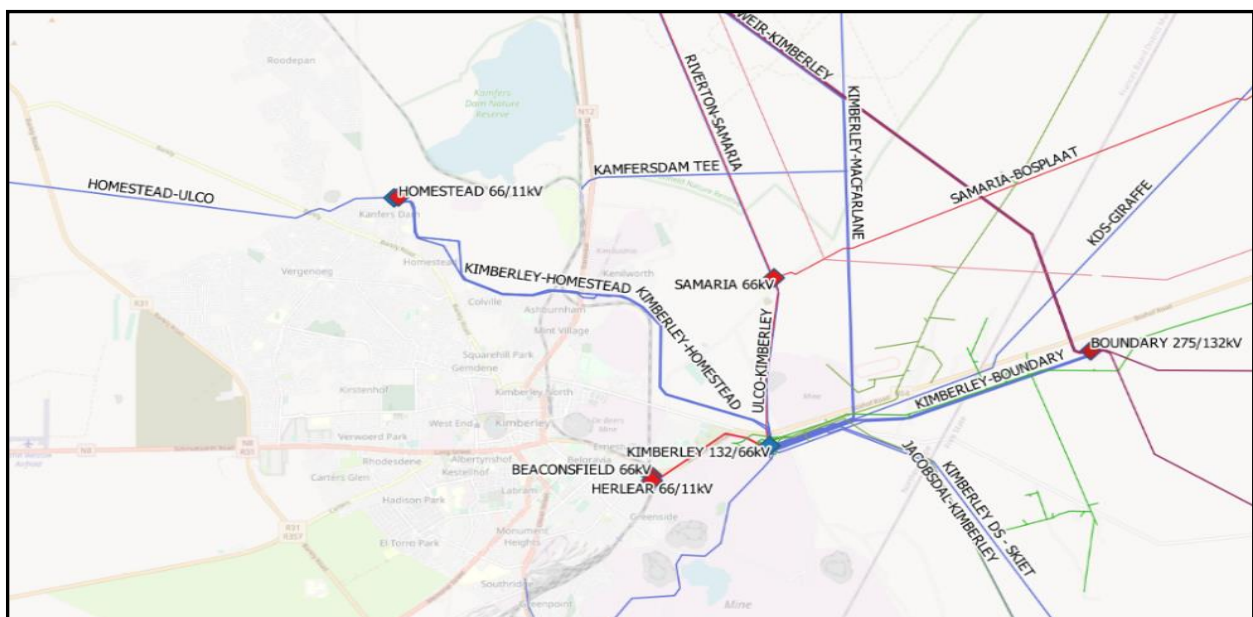
3.5.1.2.1. Kimberley Bulk Electricity Infrastructure

Existing bulk electricity infrastructure includes 275kV high voltage overhead lines feeding to the Boundary 275/132kV substation, operated by ESKOM Transmission. Existing bulk electricity infrastructure includes 132kV and 66kV high voltage overhead lines, operated by both ESKOM Distribution and the Sol Plaatje municipality.

The city of Kimberley (including Galeshewe) is currently supplied by Eskom at two Distribution Centres (Homestead and Herlear) at 66 kV. At Homestead, 2 x 80 MVA 132/66 kV transformers are present providing a firm 80 MVA supply to the city. Herlear also has 2 x 80 MVA 132/66 kV transformers providing a firm 80 MVA supply. With Herlear and Homestead combined, a firm 200 MVA supply onto the 66 kV network exist (taking into consideration the 20 MVA load supplied from Kimberley Distribution Station that falls outside the Municipality's supply area). The Municipality uses a 66kV ring feed system that the major 66kV substations are interconnected to and can feed from and into each other. During recent years, Sol Plaatje Municipality has embarked on bulk infrastructure upgrades at the 66/11kV Substations, with the last substation due for upgrade being the Hadison Park substation.

The Notified Maximum Demand from Eskom for the city is 112 MVA and the highest maximum demand registered was 103 MVA in July 2016 and a process is underway to increase this to 140 MVA (as per latest published IDP). The latest IDP version indicates that at the 132 kV to 66 kV level, Kimberley and Galeshewe have sufficient supply capacity from Eskom.

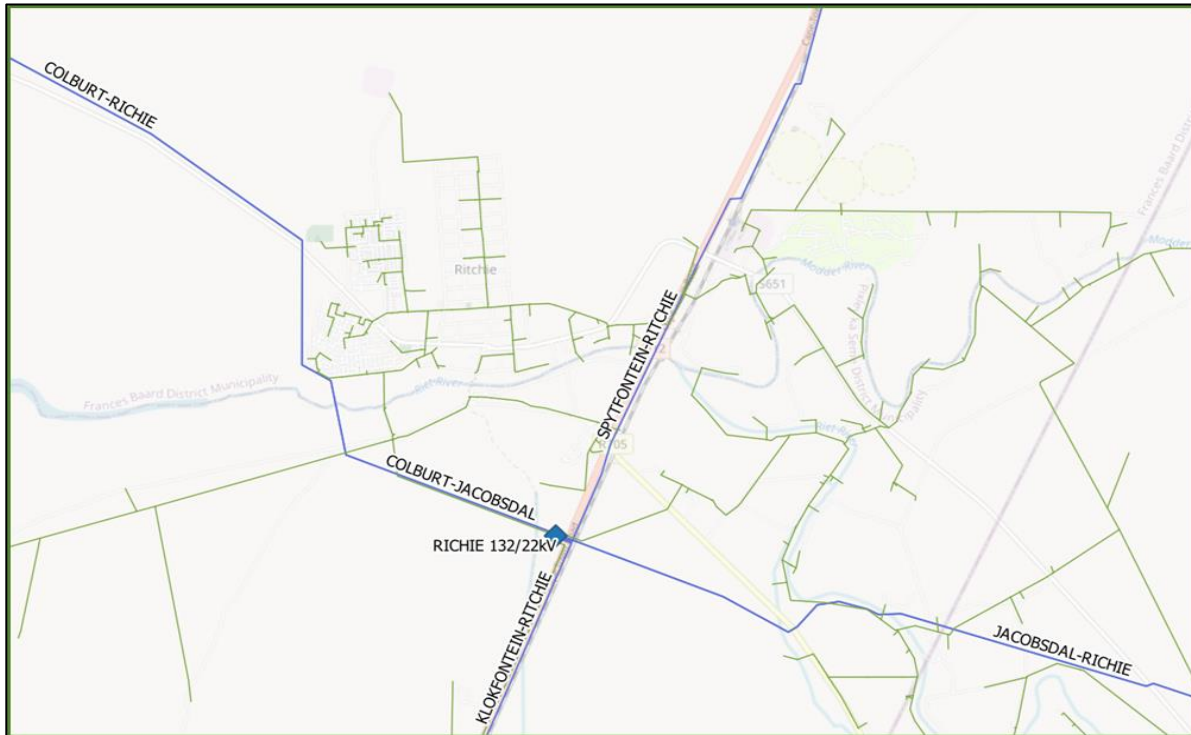
Figure 12: Bulk Electricity Infrastructure of Sol Plaatje Municipality



3.5.1.2.2. Ritchie Bulk Electricity Infrastructure

Existing bulk electricity infrastructure includes 132kV high voltage overhead lines feeding to the Ritchie 132/22kV substation, operated by ESKOM Distribution. This substation is used as intake substation to the town of Ritchie, which is serviced by ESKOM Distribution. The medium voltage networks are operated at 22kV voltage level.

Figure 13: Bulk Electricity Infrastructure of Ritchie



3.5.1.2.3. Bulk Electricity Infrastructure Conclusion – Sol Plaatje Municipality

It is recommended that a masterplan be done or if a master plan is available that it is updated to reflect the latest status quo in order to determine the extent of upgrades required to accommodate the existing and proposed future developments. This planning framework must include the areas serviced both by the Municipality and by ESKOM Distribution, with planning provided separately for each town.

3.5.1.3. Sol Plaatje Municipal Roads Infrastructure

The Sol Plaatje Municipality is the owner and custodian of their road infrastructure. This section details the extent of the road network in terms of how it is classified and the condition of the paved and unpaved network.

The road network is classified according to the RISFSA (Road Infrastructure Strategic Framework for South Africa). A summary of the RISFSA classification per road type of the Municipality is provided in the **Table** below.

Table 14: RISFSA Classes (Sourced from the Road Asset Management Plan (RAMP) for 2021/2022)

| Sol Plaatje Municipality | RISFSA: Road Length (km) | | | | | |
|--------------------------|--------------------------|---------|---------|---------|---------|--------------|
| | Class 1 | Class 2 | Class 3 | Class 4 | Class 5 | Total Length |
| Paved Road | 0.0 | 0.0 | 1.4 | 125.9 | 500.4 | 627.7 |
| Unpaved Road | 0.0 | 0.0 | 0.0 | 2.5 | 215.0 | 217.5 |
| Total | 0.0 | 0.0 | 1.4 | 128.4 | 715.4 | 845.2 |
| Percentage | 0.0% | 0.0% | 0.2% | 15.2% | 84.6% | 100.0% |

The general condition of the paved (flexible) and unpaved road network is described by the Visual Condition Index (VCI) and the Visual Gravel Index (VGI), obtained through visual assessment data, respectively. The indices consider the surfacing condition in terms of the structural and functional condition for roads through the degree and extent of occurrence of distress.

A detailed summary describing the categories of the VCI and VGI, which range from very poor to very good, can be seen below.

Table 15: Visual Condition Categories for Paved and Unpaved Roads (Sourced from the Road Asset Management Plan (RAMP) for 2021/2022)

| Condition Category | VGI Range | Category Description |
|--------------------|-----------|---|
| Very Poor | 0 - 30 | The road is in imminent danger of structural failure and requires substantial renewal or upgrading. |
| Poor | 30 - 50 | The road needs significant renewal or rehabilitation to improve its structural integrity. |
| Fair | 50 - 70 | Some clearly evident deterioration would benefit from preventative maintenance or requires renewal of isolated areas. |
| Good | 70 - 85 | The road is still in a condition that only requires routine maintenance to retain its condition. |
| Very Good | 85 - 100 | The road is still new, and no problems are experienced. |

The below **Table and Figures** depicts the different categories of the VCI and VGI for the condition of the paved and unpaved Municipal road network.

Table 16: Condition of Paved and Unpaved Roads (Sourced from the Road Asset management Plan (RAMP) for 2021/2022)

| Sol Plaatje Municipality | Road Length % | | | | | Total Length |
|--------------------------|---------------|------|------|------|-----------|--------------|
| | Very Poor | Poor | Fair | Good | Very Good | |
| Paved Road | 0% | 3% | 34% | 45% | 18% | 622.7 |
| Unpaved Road | 67% | 30% | 2% | 0% | 0% | 210.3 |
| Total | 67% | 33% | 36% | 45% | 18% | 833 |

Figure 14: Condition of Paved and Unpaved Road Lengths (%)

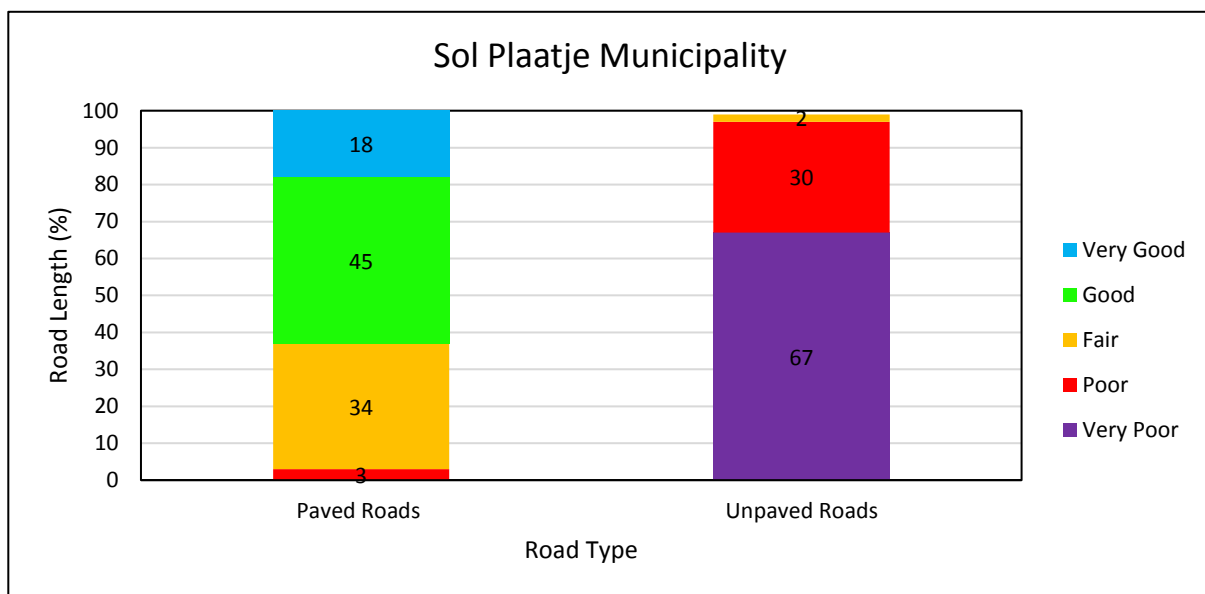
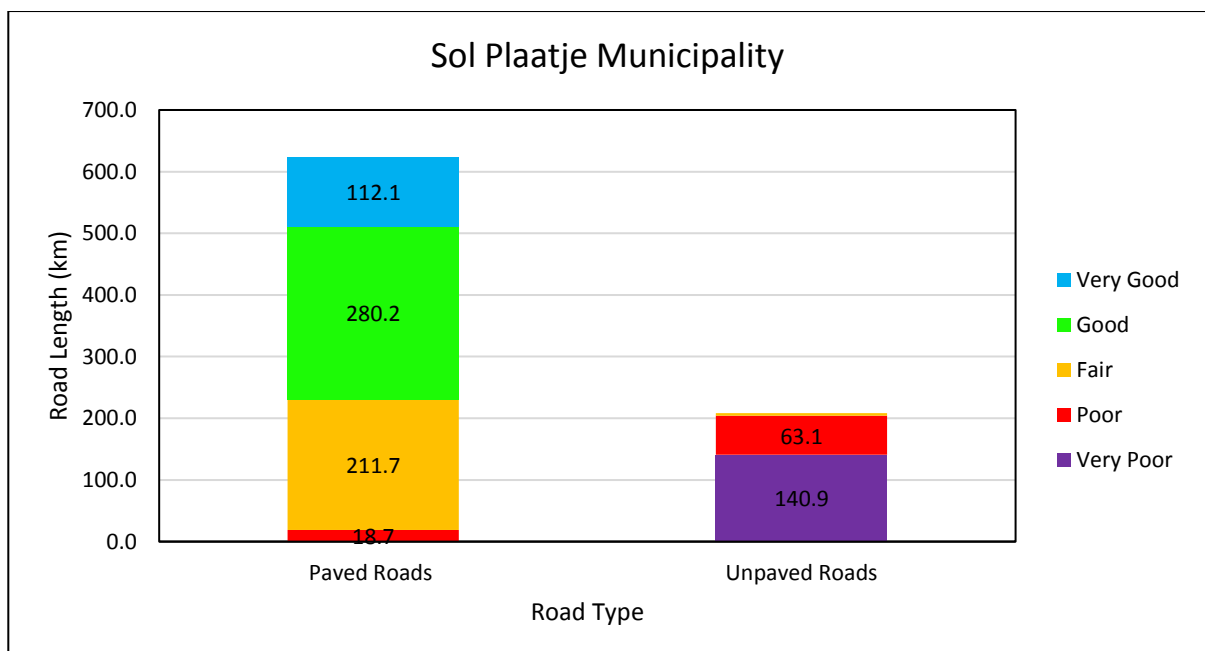


Figure 15: Condition of Paved and Unpaved Road Lengths (km)



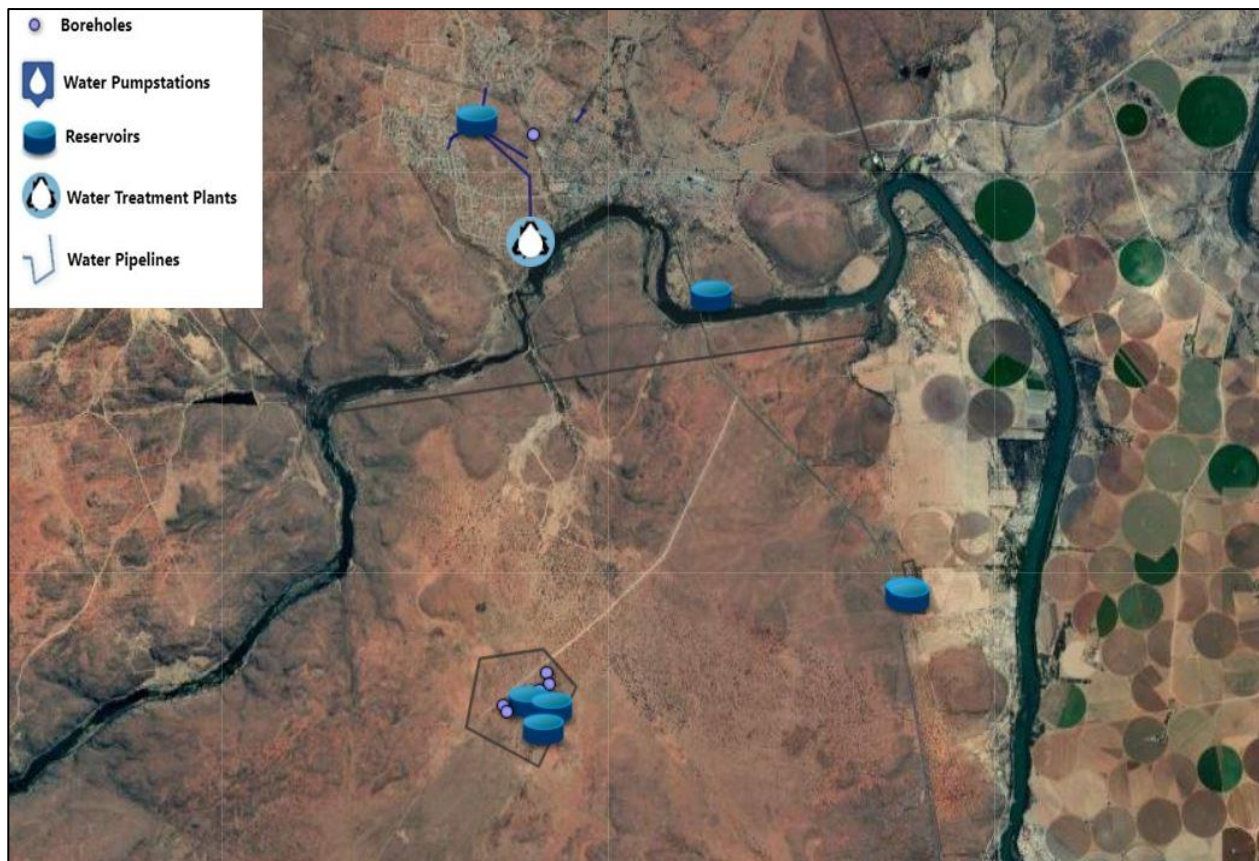
3.5.2. Dikgatlong Local Municipality

3.5.2.1. Existing Bulk Water and Sanitation Infrastructure

3.5.2.1.1. Barkly West Bulk Water Infrastructure

Barkly West is supplied with treated potable water by a water treatment plant situated on the bank of the Vaal River, via a 250 mm Ø trunk main which conveys the potable water to two concrete ground reservoirs of a combined total capacity of 7.15 Mℓ, situated on a hill located between Barkly West and Mataleng, approximately 300 m south of the R31. From here water is distributed via a 160 mm Ø and 90 mm Ø gravity fed water distribution mains to the lower elevation eastern and southern portions of the Barkly West and Mataleng townships. Furthermore, water is lifted into an 850 kℓ elevated segmental storage tank from the concrete reservoirs, via a 250 mm Ø steel pipe and pumping equipment, and subsequently a 315 mm Ø uPVC distribution main for the higher elevation northern portions of the township. See **Figure** below displaying the bulk water infrastructure of Barkly West.

Figure 16: Bulk Water Infrastructure of Barkly West



3.5.2.1.2. Barkly West Water Treatment Capacity

The design capacity of the Barkly West Water Treatment Works (WTW) is 8 Mℓ/day. A purified water pump station that forms part of the WTW comprises of three centrifugal pumps, two duty pumps and one standby pump, which are installed in parallel. Each pump can deliver a flow rate of 253m³/h at a head 68m.

3.5.2.1.3. *Barkly West Storage Reservoirs*

The information in the **Table** below is a summary on storage reservoirs in use as part of the integrated water distribution system in Barkly West.

Table 17: Summary of Storage Reservoirs

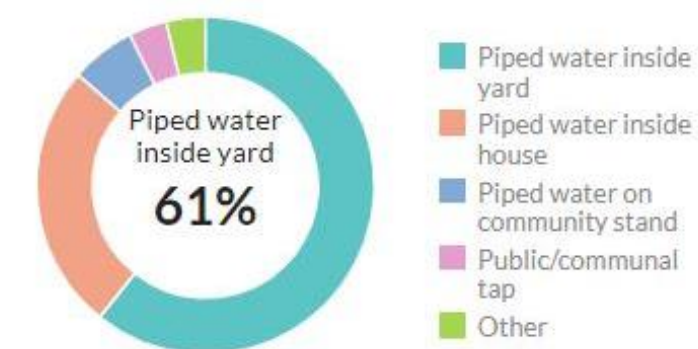
| Location | Capacity (Mℓ) | Service Area / Notes | Elevation / Type |
|---------------|---------------|------------------------------|---------------------------|
| Barkly West | 1.16 | Town area of Barkly West | Concrete ground reservoir |
| Mataleng | 6.0 | Part of the Mataleng area | Concrete ground reservoir |
| Debeershoogte | 0.880 | Debeershoogte | Elevated |
| Mataleng | 0.440 | High lying areas of Mataleng | High Ground |

Each of the elevated reservoirs has a lift pump station consisting of two centrifugal pumps, that is, one duty and one standby pump.

3.5.2.1.4. *Barkly West Internal Water Reticulation*

The water supply system has a reticulation network that covers most of the areas in Barkly West. See Figure below displaying results from a community survey of 2016 and shows that about 61% of the population of Barkly West are served with piped water to their homes. It is clear that the current reticulation network still needs to be extended.

Figure 17: Population by Water Source (Community Survey 2016 – wazimap.co.za)



Source: Community Survey 2016

Source: Community Survey 2016 – wazimap.co.za

3.5.2.1.5. *Barkly West Bulk Sanitation Infrastructure*

Barkly West is served by a waterborne sewer gravitational network of varying pipe diameters, draining effluent from parts of the existing township to a number of lifting pump stations throughout Barkly West and Mataleng. These lifting stations lift the effluent to the Mataleng sewer pump station. The effluent is pumped westward and gravitates via a 250 mm Ø bulk gravity sewer main to the existing wastewater treatment plant. The existing wastewater treatment plant with a capacity of 7.5ML/day is situated approximately 1.4 km south of the R31 and 1.3 km west of Mataleng. See **Figure** below displaying the bulk sanitation infrastructure of Barkly West.

Figure 18: Bulk Sanitation Infrastructure of Barkly West

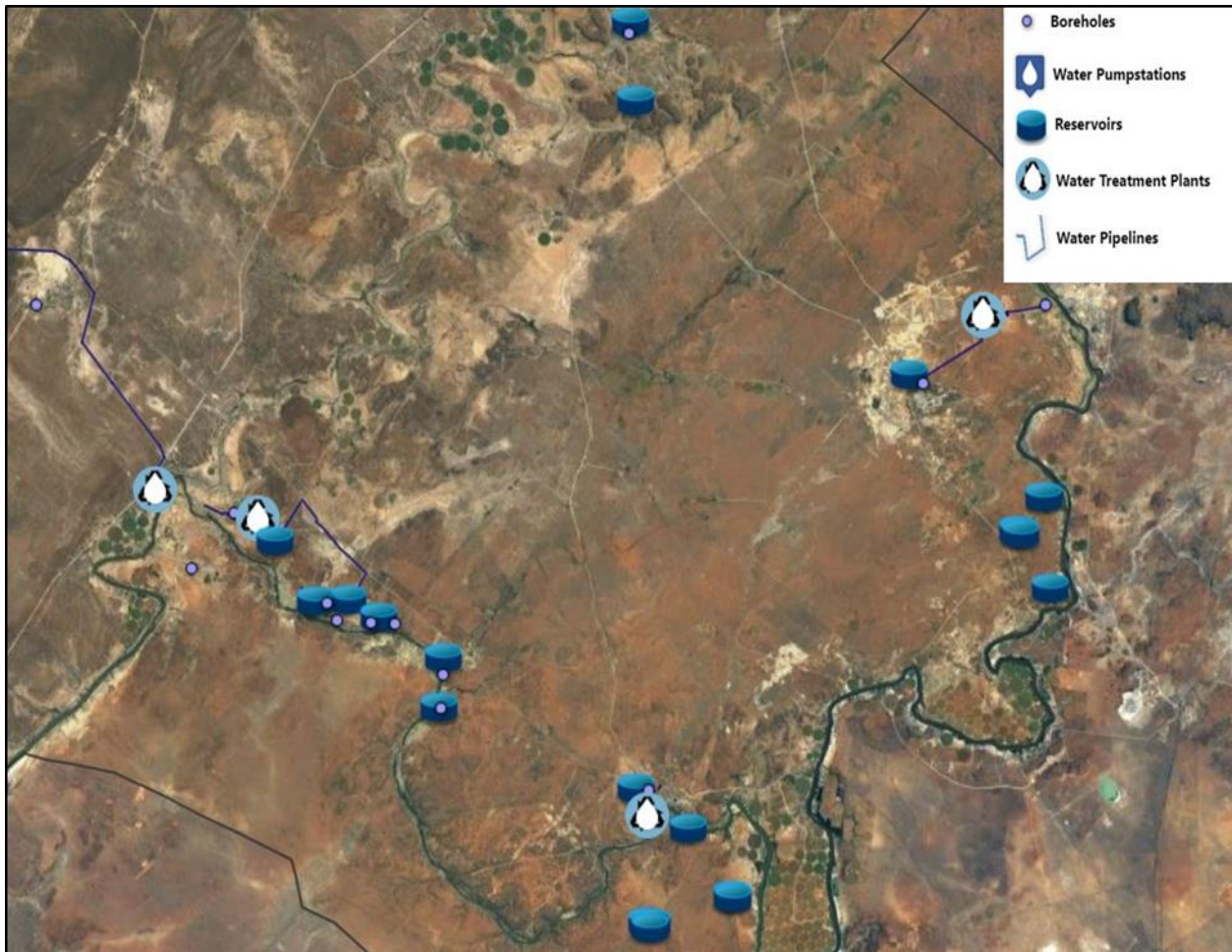


3.5.2.1.6. Delportshoop Bulk Water Infrastructure

Raw Water is abstracted from the Vaal River by Sedibeng Water near their Vaal Gamagara Water Treatment Works (WTW). The Sedibeng Water provides bulk purified water to Delportshoop from the Vaal Gamagara WTW.

See **Figure** below displaying an overview of the bulk water infrastructure of Delportshoop and where water is abstracted and purified.

Figure 19: Bulk Water Infrastructure of Delportshoop (Including Infrastructure of Barkly West)



Delportshoop is supplied with treated potable water by the Vaal Gamagara WTW through a 200mm diameter bulk pipeline which is 7 778m long.

Water is stored in three reservoirs in Delportshoop of which two are concrete ground level reservoirs with capacities of 2000kl and 1200kl respectively. The third reservoir is an elevated steel tank with a capacity of 144kl. The volume of the water storage reservoirs amounts to 3 344kl.

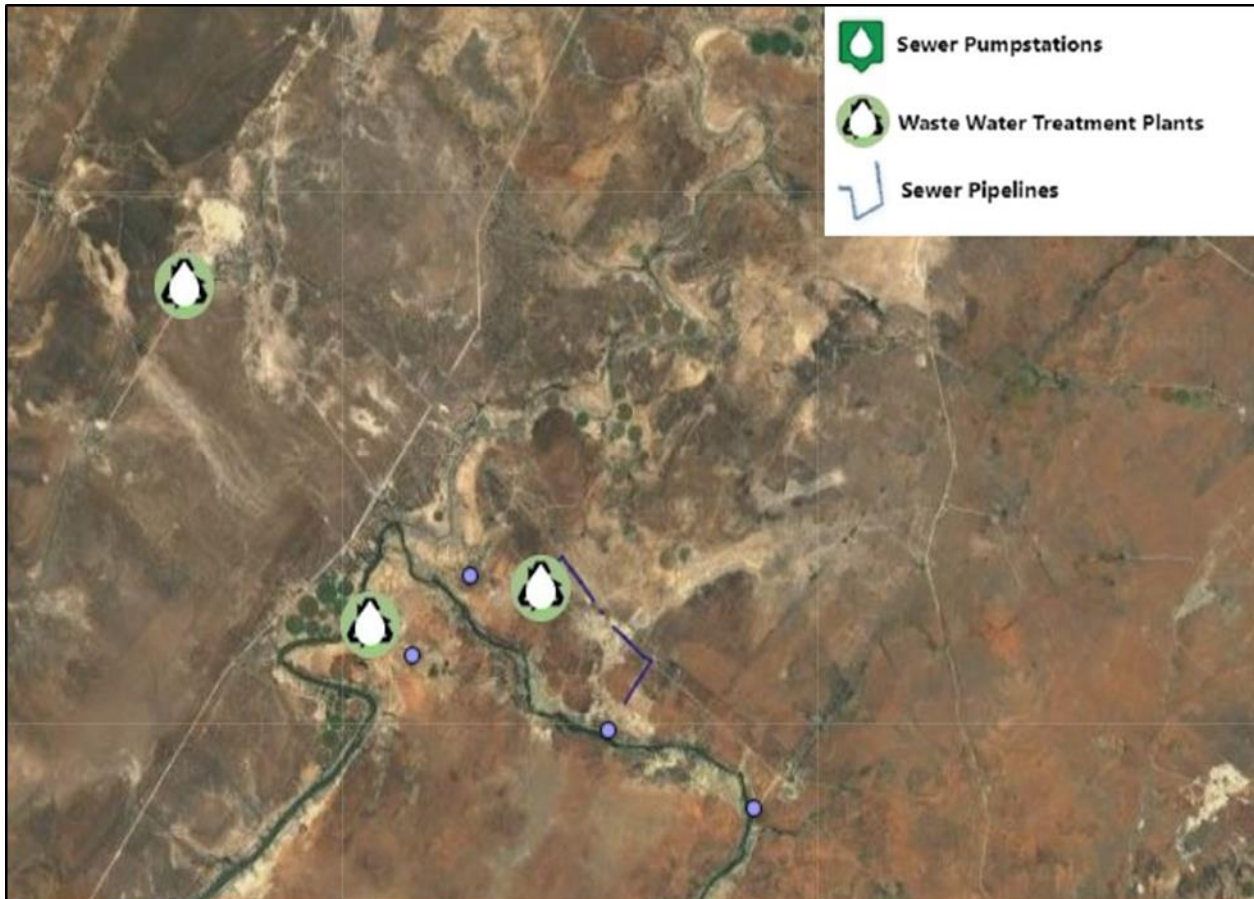
According to municipal records the pumping main reservoir site operates at 35ℓ/s.

The town area in Delportshoop utilizes boreholes to supply potable water to adjacent rural settlement, Longlands, through the 2.0Mℓ from Sedibeng Water.

3.5.2.1.7. *Delportshoop Bulk Sanitation Infrastructure*

Delportshoop is served by a waterborne sewer gravitational network of varying pipe diameters, where the effluent gravitates to two Waste Water Treatment Works (WWTW). The one WWTW situated west of the town is inoperable while the unlined oxidation ponds east of the town are in operation. The WWTW north west of town is working, however the capacity of the plant is unknown. See **Figures** below displaying the bulk sanitation infrastructure around Delportshoop.

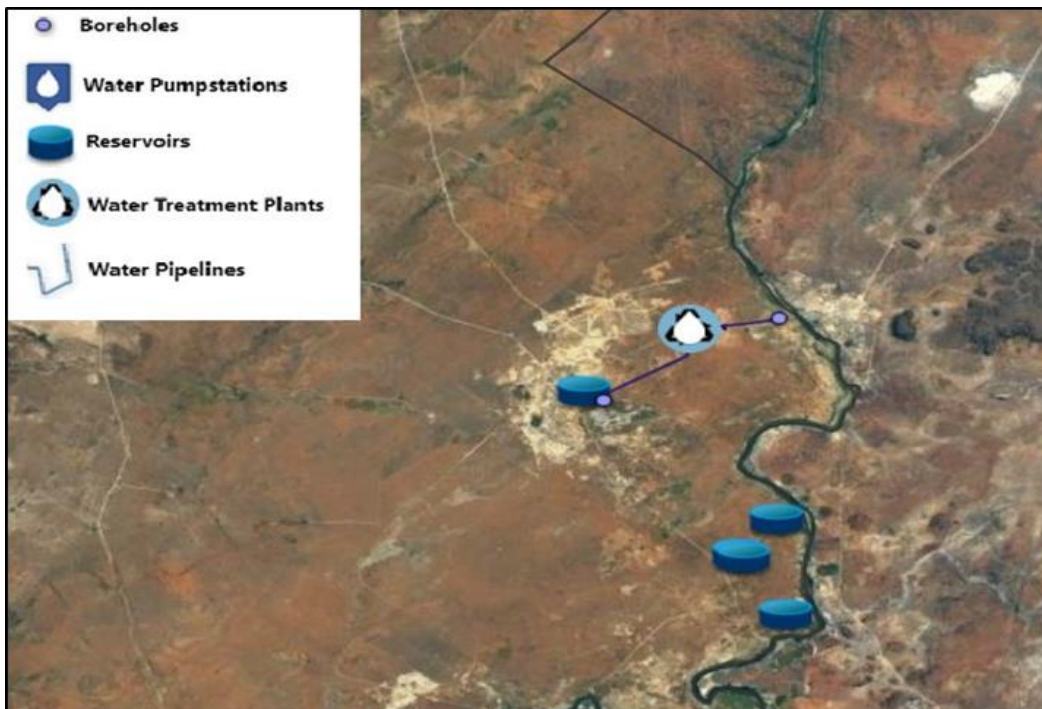
Figure 20: Bulk Sanitation Infrastructure



3.5.2.1.8. *Windsorton Bulk Water Infrastructure*

Raw Water is abstracted from the Vaalharts Irrigation Scheme Canal. Therefore, Windsorton is supplied with treated potable water by a water treatment plant which is situated west of Hebron Park, alongside the R374 road. The WTW has a design capacity of 1Mℓ/day. See **Figure** below displaying the bulk water infrastructure of Windsorton.

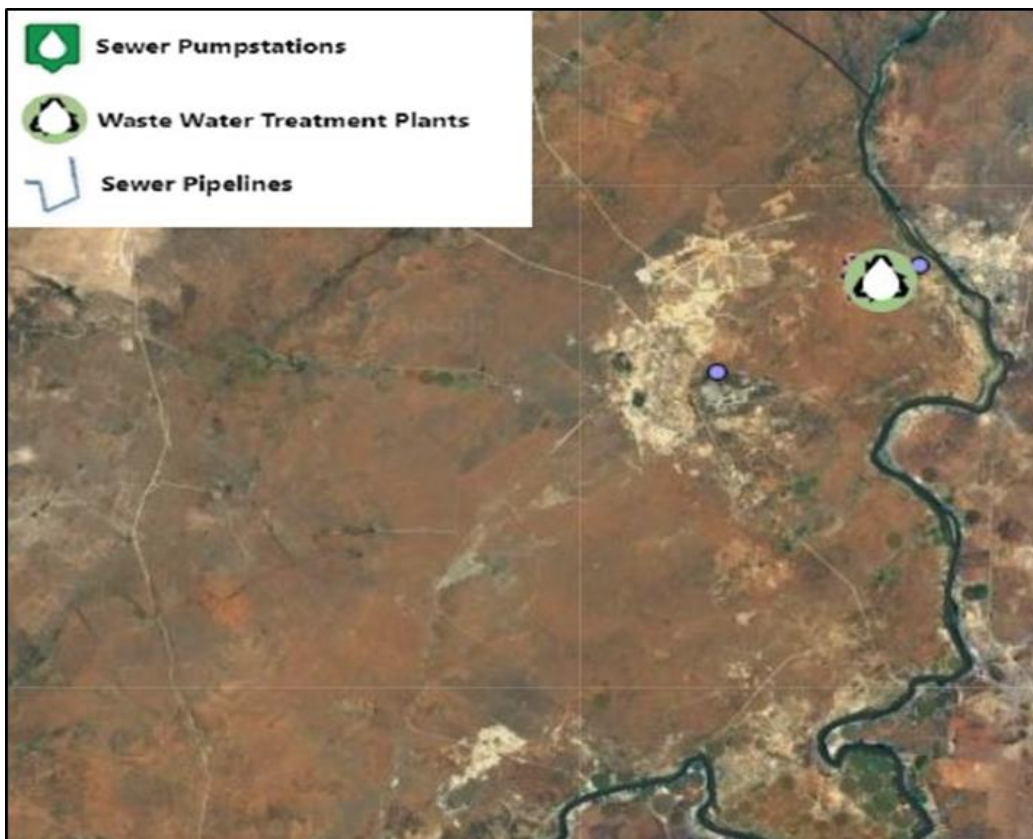
Figure 21: Bulk Water Infrastructure of Windsorton



3.5.2.1.9. *Windsorton Bulk Sanitation Infrastructure*

According to 2016 Municipal records waste water from Kutlwano and Hebron Park gravitates towards existing oxidation ponds with a design capacity to treat 0.5Mℓ/day. A total of 200 households in Windsorton and 600 households in Kutlwano and Hebron Park use an on-site sewer system. See **Figure** below displaying the bulk sanitation infrastructure of Windsorton.

Figure 22: Bulk Sanitation Infrastructure of Windsorton



3.5.2.1.10. Bulk Water and Sanitation Infrastructure Conclusion – Dikgatlong Municipality

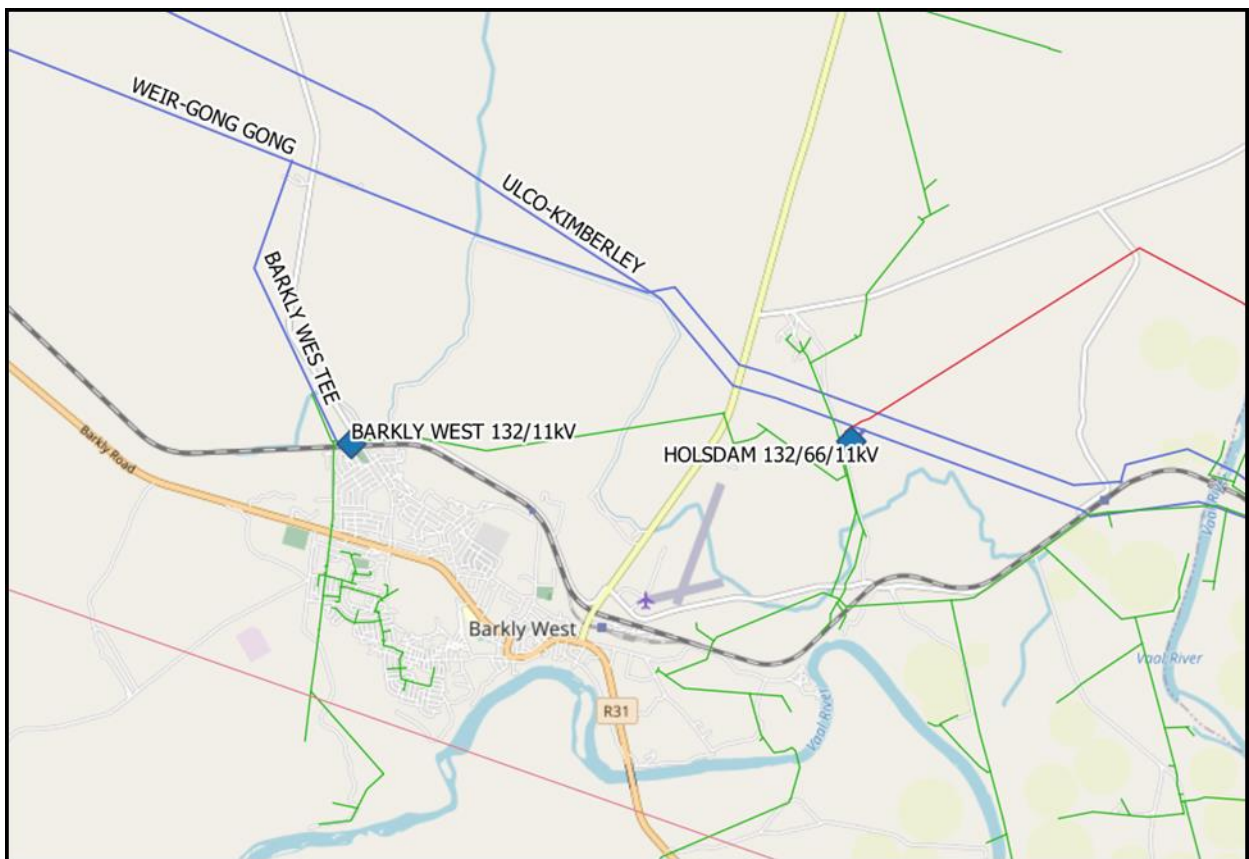
It is recommended that the Municipality have a masterplan study done, or if a masterplan study is available, that it is updated to reflect the latest status quo in order to determine the extent of upgrades required to accommodate the existing and proposed future developments.

3.5.2.2. Existing Bulk Electricity Infrastructure

3.5.2.2.1. Barkly West Bulk Electricity Infrastructure

Existing bulk electricity infrastructure includes 66kV and 132kV high voltage overhead lines feeding to the Holsdam 132/66/11kV substation and the Barkly West 132/11kV substation, operated by ESKOM Distribution. This Barkly West 132/11kV substation is used as intake substation to the town of Barkly West, which is serviced by the Municipality. ESKOM Distribution services the neighbourhood of Mataleng at 11kV voltage level. The medium voltage networks within the town are operated at 11kV voltage level.

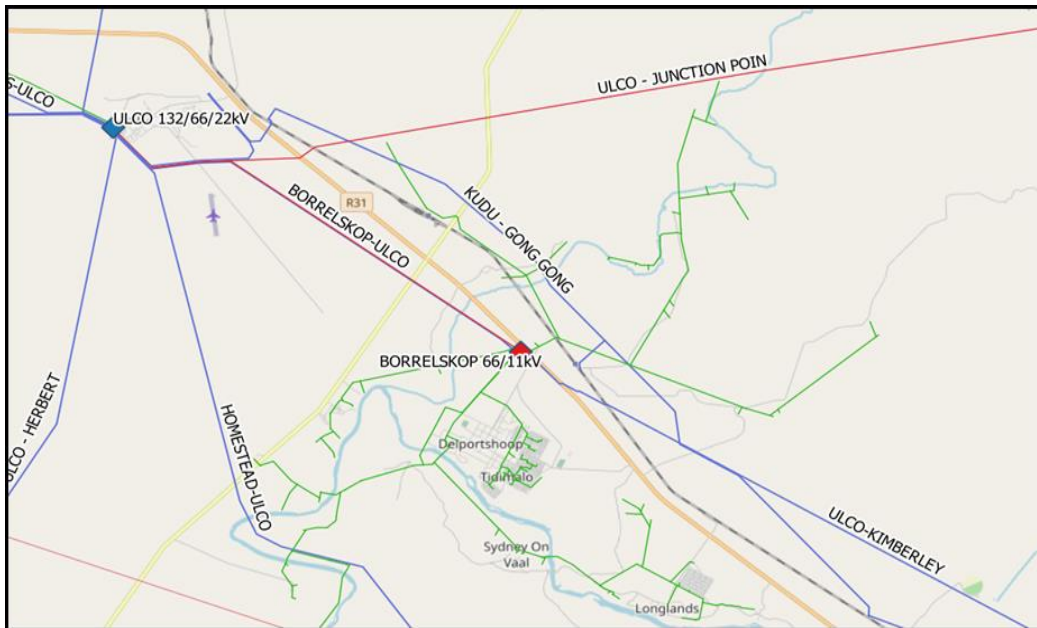
Figure 23: Bulk Electricity Infrastructure of Barkly West



3.5.2.2.2. Delportshoop Bulk Electricity Infrastructure

Existing bulk electricity infrastructure includes 66kV high voltage overhead lines feeding to the Borrelskop 66/11kV substation, operated by ESKOM Distribution. This substation is used as intake substation to the town of Delportshoop, which is serviced by ESKOM Distribution. The medium voltage networks within the town are operated at 11kV voltage level. There are 132kV high voltage overhead lines around the town emanating from Ulco 132/66/22kV substation, mainly servicing the railway traction substations and mine in the area.

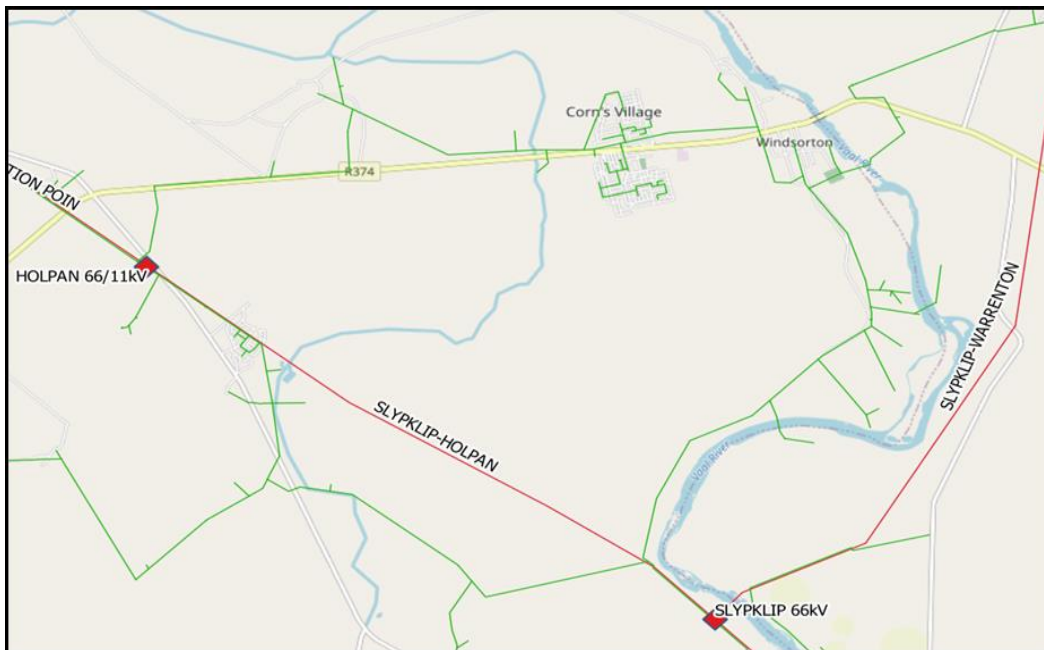
Figure 24: Bulk Electricity Infrastructure of Delportshoop



3.5.2.2.3. *Windsorton Bulk Electricity Infrastructure*

Existing bulk electricity infrastructure includes 66kV high voltage overhead lines feeding to the Holpan 66/11kV substation, operated by ESKOM Distribution. This substation is used as intake substation to the town of Windsorton, which is serviced by ESKOM Distribution. The medium voltage networks within the town are operated at 11kV voltage level.

Figure 25: Bulk Electricity Infrastructure of Windsorton



3.5.2.2.4. *Bulk Electricity Infrastructure Conclusion – Dikgatlong Municipality*

It is recommended that a masterplan be done or if a master plan is available that it is updated to reflect the latest status quo in order to determine the extent of upgrades required to accommodate the existing and proposed future developments. This planning framework must include the areas serviced both by the Municipality and by ESKOM Distribution, with planning provided separately for each town.

3.5.2.3. Dikgatlong Municipal Roads Infrastructure

The Dikgatlong Municipality is the owner and custodian of their road infrastructure. This section details the extent of the road network in terms of how it is classified and the condition of the paved and unpaved network.

The road network is classified according to the RISFSA (Road Infrastructure Strategic Framework for South Africa). A summary of the RISFSA classification per road type of the Municipality is provided in the **Table** below.

Table 18: RISFSA Classes (Sourced from the Road Asset Management Plan (RAMP) for 2021/2022)

| Dikgatlong Municipality | RISFSA: Road Length (km) | | | | | |
|-------------------------|--------------------------|---------|---------|---------|---------|--------------|
| | Class 1 | Class 2 | Class 3 | Class 4 | Class 5 | Total Length |
| Paved Road | 0.0 | 0.0 | 0.0 | 28.7 | 38.5 | 67.2 |
| Unpaved Road | 0.0 | 0.0 | 0.0 | 9.3 | 72.2 | 81.5 |
| Total | 0.0 | 0.0 | 0.0 | 38.0 | 110.7 | 148.7 |
| Percentage | 0.0% | 0.0% | 0.0% | 25.6% | 74.4% | 100.0% |

The general condition of the paved (flexible) and unpaved road network is described by the Visual Condition Index (VCI) and the Visual Gravel Index (VGI), obtained through visual assessment data, respectively. The indices consider the surfacing condition in terms of the structural and functional condition for roads through the degree and extent of occurrence of distress.

A detailed summary describing the categories of the VCI and VGI, which range from very poor to very good, can be seen below.

Table 19: Visual Condition Categories for Paved and Unpaved Roads (Sourced from the Road Asset Management Plan (RAMP) for 2021/2022)

| Condition Category | VGI Range | Category Description |
|--------------------|-----------|---|
| Very Poor | 0 - 30 | The road is in imminent danger of structural failure and requires substantial renewal or upgrading. |
| Poor | 30 - 50 | The road needs significant renewal or rehabilitation to improve its structural integrity. |
| Fair | 50 - 70 | Some clearly evident deterioration would benefit from preventative maintenance or requires renewal of isolated areas. |
| Good | 70 - 85 | The road is still in a condition that only requires routine maintenance to retain its condition. |
| Very Good | 85 - 100 | The road is still new, and no problems are experienced. |

The below **Table and Figures** depicts the different categories of the VCI and VGI for the condition of the paved and unpaved Municipal road network.

Table 20: The Condition of Paved and Unpaved Roads (Sourced from the Road Asset Management Plan (RAMP) for 2021/2022)

| Dikgatlong Municipality | Road Length % | | | | | Total Length |
|-------------------------|---------------|------|------|------|-----------|--------------|
| | Very Poor | Poor | Fair | Good | Very Good | |
| Paved Road | 2% | 16% | 53% | 24% | 5% | 65.1 |
| Unpaved Road | 82% | 16% | 3% | 0% | 0% | 79.6 |
| Total | 84% | 32% | 56% | 24% | 5% | 144.7 |

Figure 26: Condition of Paved and Unpaved Road Lengths (%)

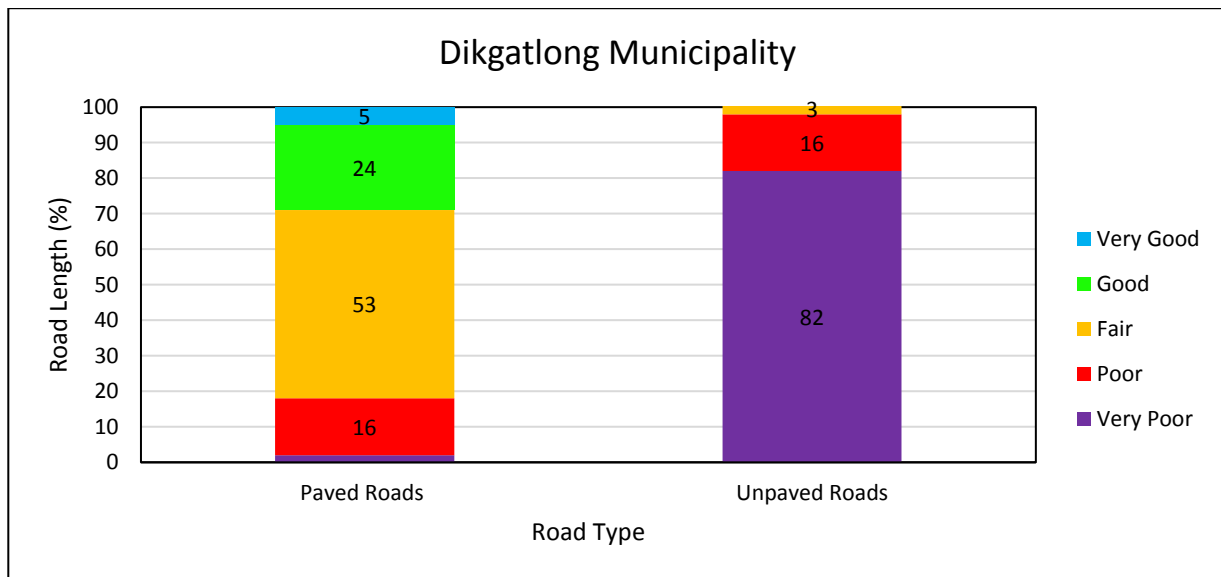
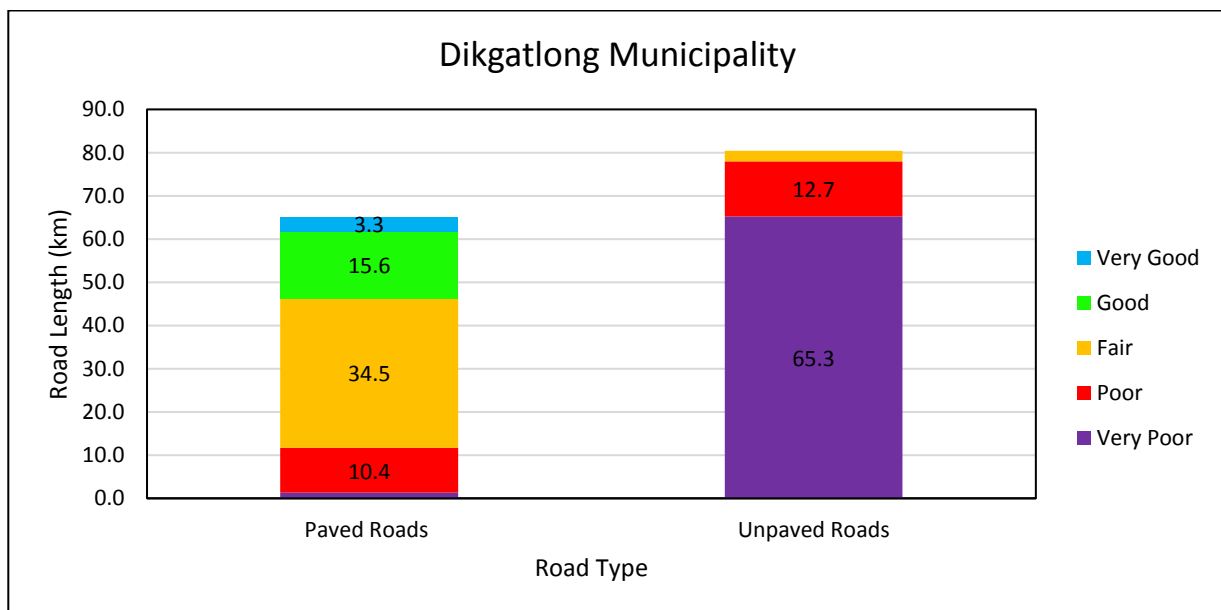


Figure 27: Condition of Paved and Unpaved Road Lengths (km)



3.5.3. Magareng Local Municipality

3.5.3.1. Existing Bulk Water and Sanitation Infrastructure

3.5.3.1.1. Warrenton Bulk Water Infrastructure

Raw water is abstracted from the Vaalharts Irrigation Scheme Canal which flows by gravity into a sump at the WTW. When the Vaalharts Canal is not in operation, raw water is abstracted directly from the Vaal River using electrical driven pumps.

Purified water from the WTW is stored in a 0.8 Mℓ capacity clear water reservoir, from where it gravitates through a 600 mm diameter by 1.3 km long siphon across the Vaal River to a sump at the main booster pump station. The main booster pump station is equipped with two sets of electrical driven pumps. One set of pumps supplies an elevated reservoir in the Warrenton Town Centre. The second set of pumps supplies three reservoirs, an elevated tank located near the Warrenton railway station, a 5.2 Mℓ capacity concrete reservoir which is located near Ikhutseng and a 4.5 Mℓ capacity concrete reservoir located near Warrenvale and the industrial area.

From the 4.5 Mℓ concrete reservoir, water is pumped to an elevated pressed steel tank which feeds the Warrenvale and the industrial area reticulation networks. Water from the 5.2 Mℓ concrete reservoir is pumped to two elevated pressed steel tanks which feed the Ikhutseng reticulation network.

3.5.3.1.2. Warrenton Water Treatment Capacity

The Warrenton Water Treatment Works (WTW) is currently in the process of being upgraded, funded through the Regional Bulk Infrastructure Grant (RBIG) programme of the Department of Water and Sanitation. The upgraded treatment work will be able to provide a capacity of 10 Mℓ/day to Warrenton, Warrenvale and Ikhutseng. The upgrade is scheduled to finish at the end of March 2021 and will be able to provide sufficient capacity for the foreseeable future as part of the design period.

3.5.3.1.3. Warrenton Storage Reservoirs

The information in the **Table** below is a summary on storage reservoirs in use as part of the integrated water distribution system in Warrenton.

Table 21: Summary of Storage Reservoirs

| Location | Capacity (Mℓ) | Service Area / Notes | Elevation / Type |
|------------|---------------|---------------------------------------|------------------|
| Ikhutseng | 5,2 | Ikhutseng | Ground level |
| Warrenvale | 4,5 | Warrenvale / Hospital / CBD | Ground level |
| Dorp | 2 x 0,25 | Warrenton Dorp | Elevated 16m |
| Station | 2 x 0,25 | Station / Old Indian residential area | Elevated 16m |
| Ikhutseng | 2 x 0,355 | Ikhutseng | Elevated 16m |
| Warrenvale | 0,261 | Warrenvale / Industrial area | Elevated 16m |

3.5.3.1.4. Warrenton Internal Water Reticulation

There are existing water reticulation systems in Warrenton, Warrenvale and Ikhutseng, residents are supplied by either household – or erf connections. See **Figures** below for an indication of the Level of Service (LoS) in the different areas as well as the bulk water infrastructure of Warrenton.

Figure 28: Warrenton Water Supply Level of Service Map

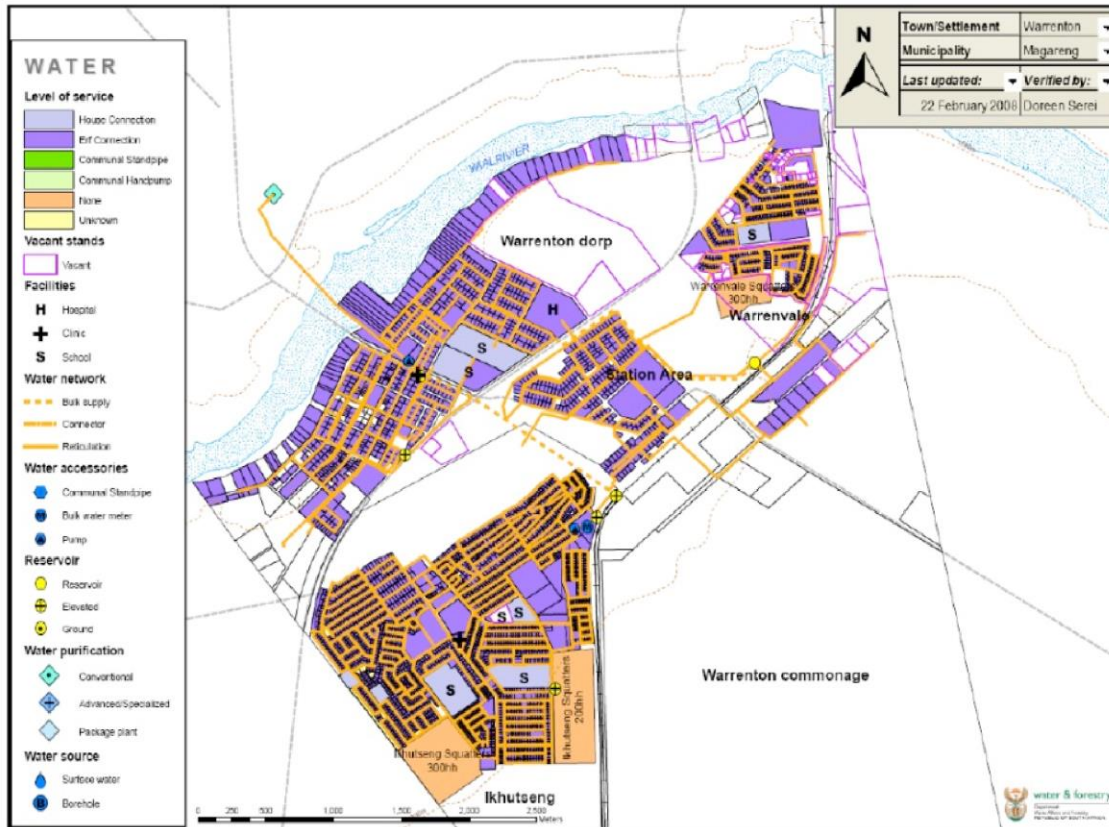
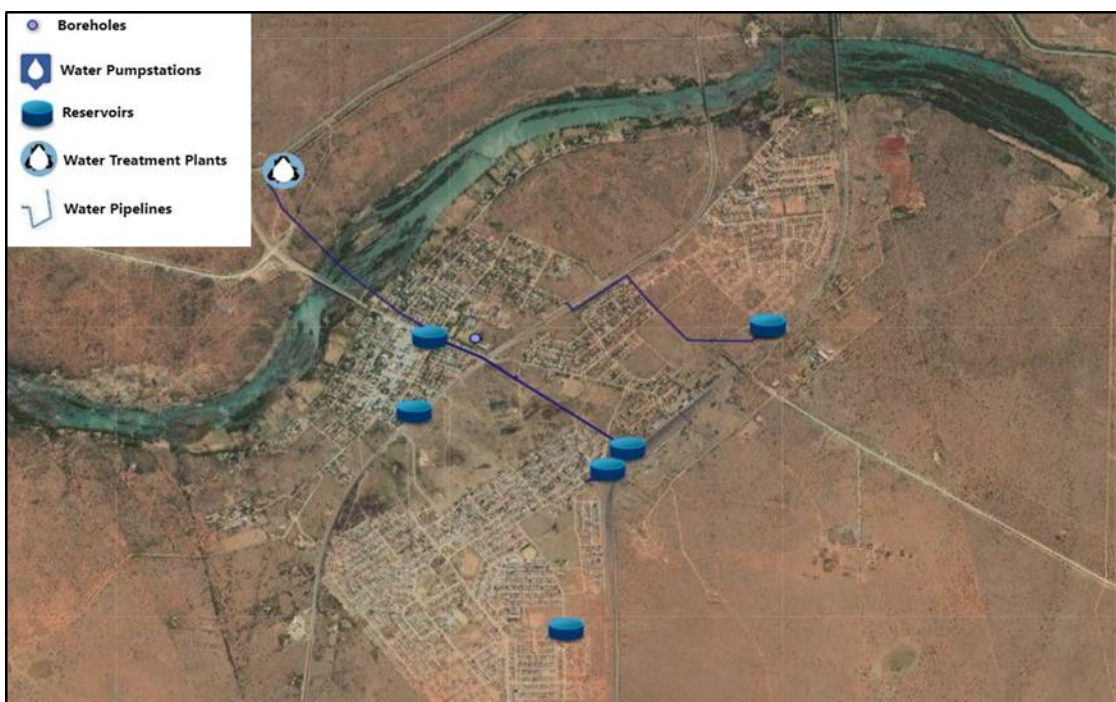


Figure 29: Bulk Water Infrastructure of Warrenton

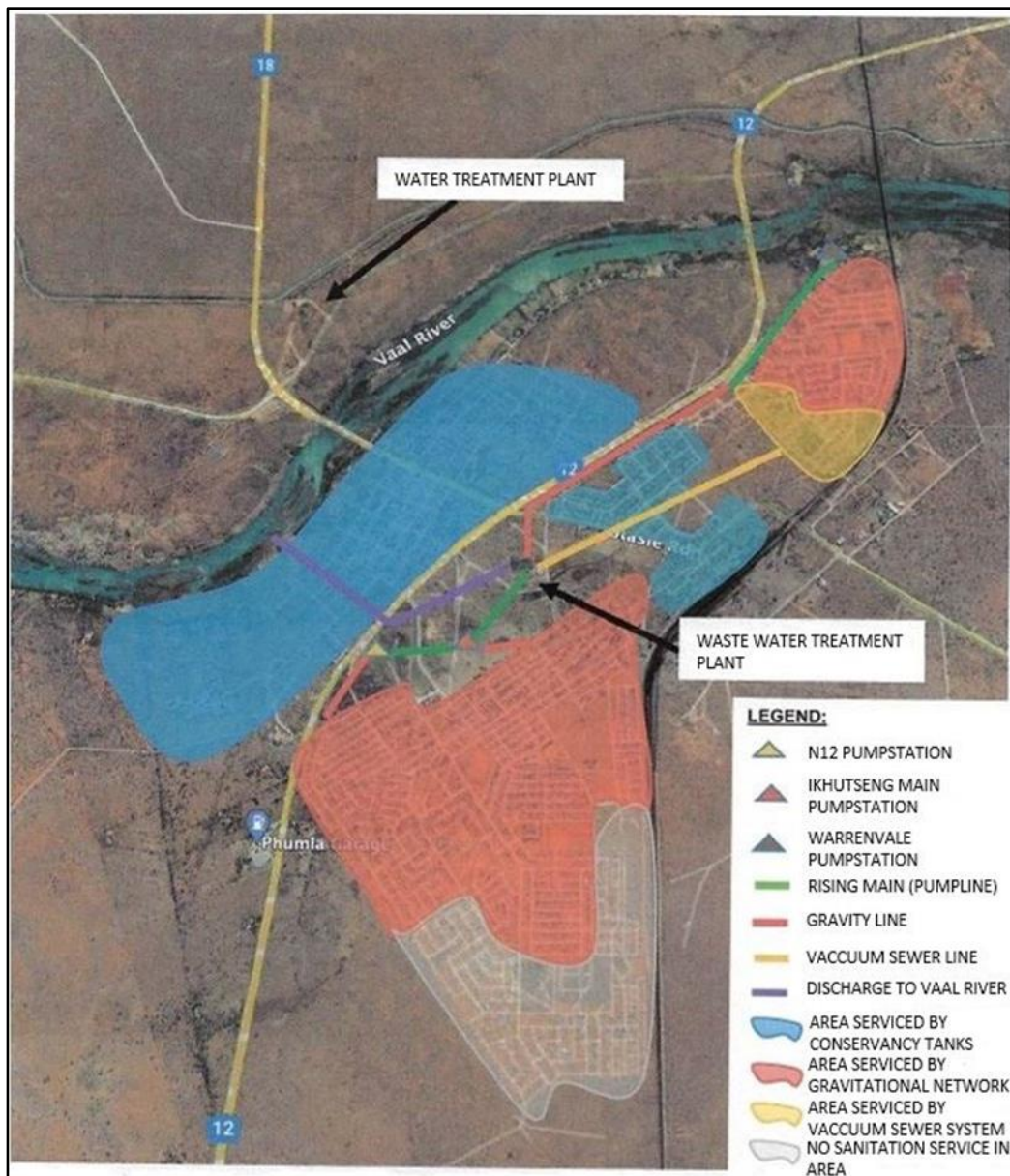


3.5.3.2. Warrenton Bulk Sanitation Infrastructure

3.5.3.2.1. Warrenton WWTW

The Warrenton bulk waste water distribution system is relatively diverse and complicated which consist of components such as conservancy tanks, vacuum sewers, pump stations, rising mainlines and a gravitational waterborne network. A schematic layout of the Warrenton bulk waste water is displayed in the below **Figure**.

Figure 30: Schematic Layout of the Warrenton Bulk Waste Water System (From 2021 Magareng Municipality Records)



The Warrenton WWTW is an extended aeration activated sludge process with an average design flow of 2 Mℓ/day and can be seen in the aerial photo in the below **Figure**.

Figure 31: Aeration Activated Sludge Process (From 2021 Magareng Municipal Records)



The above process in Figure 43 consists of the following infrastructure:

1. Inlet Works
2. Horizontal Aerator 1
3. Horizontal Aerator 2
4. Horizontal Aerator 3
5. Horizontal Aerator 4
6. Aeration Basin with Horizontal Flow Channels
7. Clarifier
8. Pumps to Anaerobic Process and to Sludge Drying Beds
9. Sludge Drying Beds (Concrete Surface)
10. Maturation Pond
11. Pumps for Excess Water to Anaerobic Process
12. Storeroom
13. Vacuum Sewer Pumps
14. Chlorination Contact Channel

3.5.3.2.2. Warrenton Surrounding Pump Stations

According to the 2021 Municipal Records, the details of the surrounding pump stations are summarised as seen in the **Table** below. Each pump station consists of two alternating pumps.

Table 22: Details of Surrounding Pump Stations in Warrenton (From 2021 Municipal Records)

| Pump Station | Model and Make | Impeller Diameter | Speed | Motor | Capacity/Duty Point |
|--------------|----------------|-------------------|---------|-----------|---------------------|
| Ikhutseng PS | LEO 2AC400H | 234mm | 2900rpm | 4kW, 380V | 4.25 l/s @45m |
| N12 PS | LEO 2AC400H | 234mm | 2900rpm | 4kW, 380V | 4.25 l/s @45m |
| Warrenvale | LEO 2AC400H | 234mm | 2900rpm | 4kW, 380V | 4.25 l/s @45m |

3.5.3.2.3. Bulk Water and Sanitation Infrastructure Conclusion – Magareng Municipality

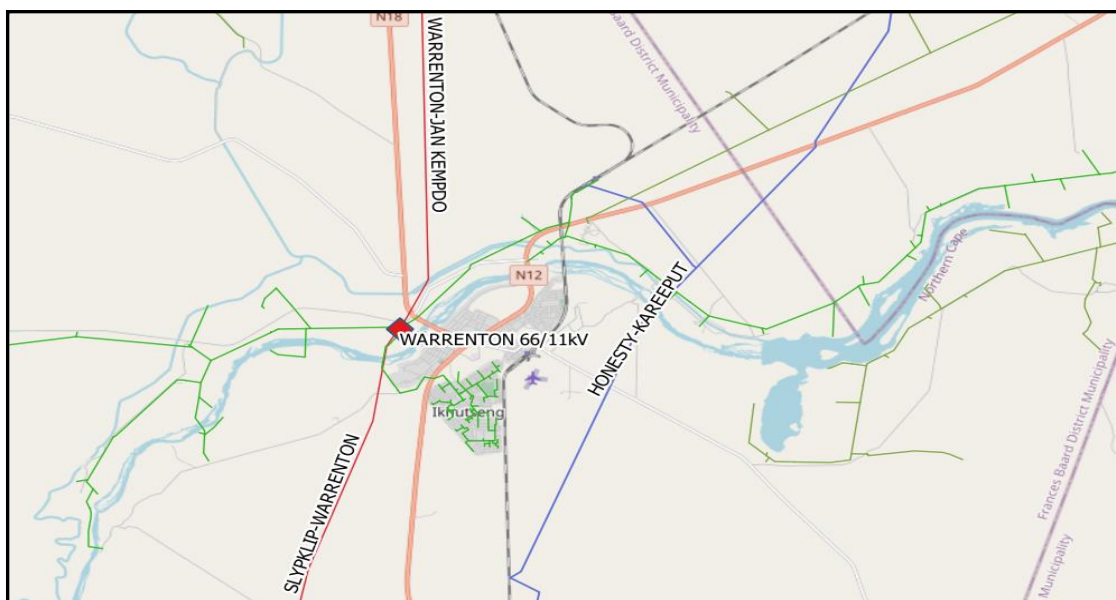
It is recommended that the Municipality have a masterplan study done, or if a masterplan study is available, that it is updated to reflect the latest status quo in order to determine the extent of upgrades required to accommodate the existing and proposed future developments.

3.5.3.3. Existing Bulk Electricity Infrastructure

3.5.3.3.1. Warrenton Bulk Electricity Infrastructure

Existing bulk electricity infrastructure includes 66kV and 132kV high voltage overhead lines feeding to the Warrenton 66/11kV substation, operated by ESKOM Distribution. This substation is used by as intake substation to the town of Warrenton, which is serviced by the Municipality. ESKOM Distribution services the neighbourhood of Ikhutseng at 11kV voltage level. The medium voltage networks within the town are operated at 11kV voltage level. There are 132kV high voltage overhead lines around the town of Warrenton, mainly servicing the railway traction substations in the area.

Figure 32: Bulk Electricity Infrastructure of Warrenton



3.5.3.3.2. Bulk Electricity Infrastructure Conclusion – Magareng Municipality

It is recommended that a masterplan be done or if a master plan is available that it is updated to reflect the latest status quo in order to determine the extent of upgrades required to accommodate the existing and proposed future developments. This planning framework must include the areas serviced both by the Municipality and by ESKOM Distribution, with planning provided separately for each town.

3.5.3.4. Magareng Municipal Roads Infrastructure

The Magareng Municipality is the owner and custodian of their road infrastructure. This section details the extent of the road network in terms of how it is classified and the condition of the paved and unpaved network.

The road network is classified according to the RISFSA (Road Infrastructure Strategic Framework for South Africa). A summary of the RISFSA classification per road type of the Municipality is provided in the **Table** below.

Table 23: RISFSA Classes (Sourced from the Road Asset Management Plan (RAMP) for 2021/2022)

| Magareng Municipality | RISFSA: Road Length (km) | | | | | |
|-----------------------|--------------------------|---------|---------|---------|---------|--------------|
| | Class 1 | Class 2 | Class 3 | Class 4 | Class 5 | Total Length |
| Paved Road | 0.0 | 0.0 | 0.0 | 14.8 | 33.6 | 48.4 |
| Unpaved Road | 0.0 | 0.0 | 0.0 | 3.2 | 55.3 | 58.5 |
| Total | 0.0 | 0.0 | 0.0 | 18.0 | 88.9 | 106.9 |
| Percentage | 0.0% | 0.0% | 0.0% | 16.8% | 83.2% | 100.0% |

The general condition of the paved (flexible) and unpaved road network is described by the Visual Condition Index (VCI) and the Visual Gravel Index (VGI), obtained through visual assessment data, respectively. The indices consider the surfacing condition in terms of the structural and functional condition for roads through the degree and extent of occurrence of distress.

A detailed summary describing the categories of the VCI and VGI, which range from very poor to very good, can be seen below.

Table 24: Visual Condition Categories for Paved and Unpaved Roads (Sourced from the Road Asset Management Plan (RAMP) for 2021/2022)

| Condition Category | VGI Range | Category Description |
|--------------------|-----------|---|
| Very Poor | 0 - 30 | The road is in imminent danger of structural failure and requires substantial renewal or upgrading. |
| Poor | 30 - 50 | The road needs significant renewal or rehabilitation to improve its structural integrity. |
| Fair | 50 - 70 | Some clearly evident deterioration would benefit from preventative maintenance or requires renewal of isolated areas. |
| Good | 70 - 85 | The road is still in a condition that only requires routine maintenance to retain its condition. |
| Very Good | 85 - 100 | The road is still new, and no problems are experienced. |

The below **Table and Figures** depicts the different categories of the VCI and VGI for the condition of the paved and unpaved Municipal road network.

Table 25: Condition of Paved and Unpaved Roads (Sourced from the Road Asset Management Plan (RAMP) for 2021/2022)

| Magareng Municipality | Road Length % | | | | | |
|-----------------------|---------------|------|------|------|-----------|--------------|
| | Very Poor | Poor | Fair | Good | Very Good | Total Length |
| Paved Road | 0% | 8% | 26% | 35% | 31% | 47.6 |
| Unpaved Road | 0% | 0% | 4% | 29% | 67% | 57.4 |
| Total | 0% | 8% | 30% | 64% | 98% | 105 |

Figure 33: Conditions of Paved and Unpaved Road Lengths (%)

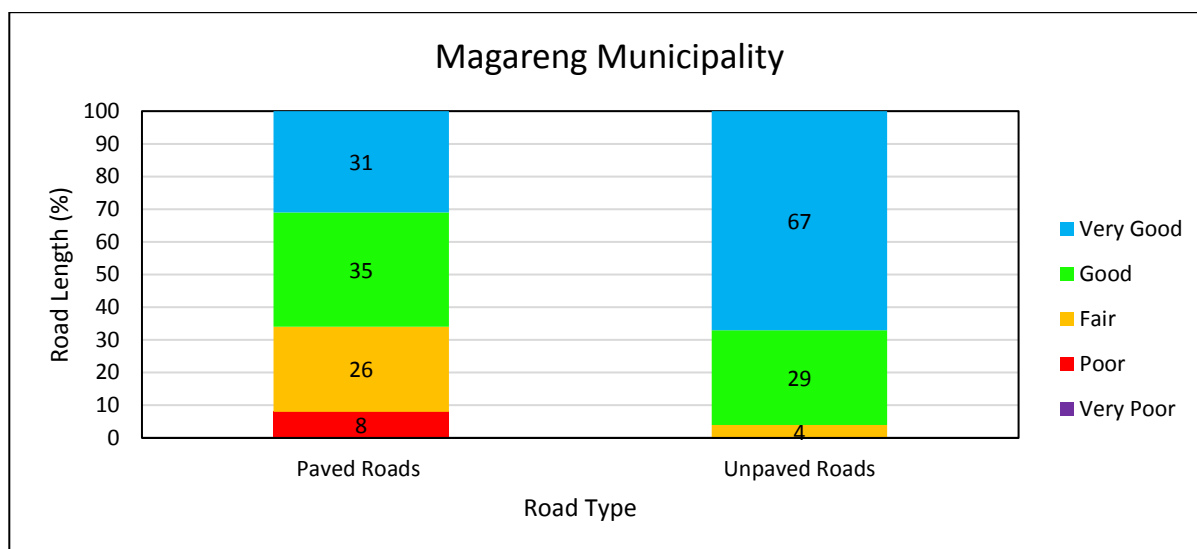
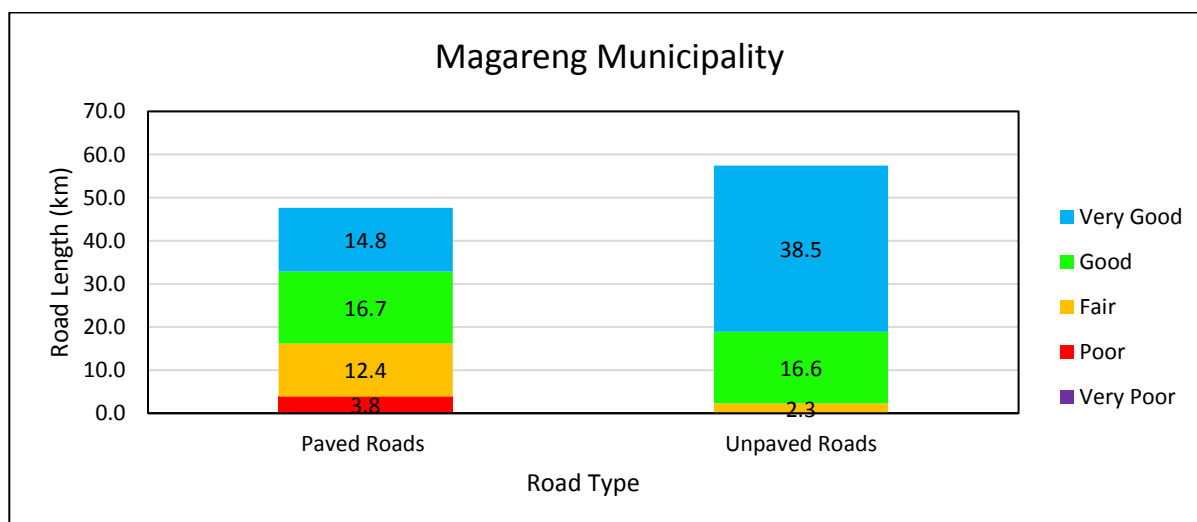


Figure 34: Condition of Paved and Unpaved Road Lengths (km)



3.5.4. Phokwane Local Municipality

3.5.4.1. Existing Bulk Water and Sanitation Infrastructure

3.5.4.1.1. Pampierstad Bulk Water Infrastructure

Raw water is abstracted from the Vaalharts Irrigation Scheme Canal and stored in a 24 Mℓ concrete lined dam (PPS Res-9) which belongs to Sedibeng Water.

3.5.4.1.2. Pampierstad Water Treatment Capacity

The raw water is pumped to the 9.6 Mℓ/day WTW where it is stored in two concrete lined storage dams of 28 Mℓ each (PPS Res-6 & PPS Res-7) and from there it is pumped to the inlet works.

Purified water from the WTW is collected in a 550 kℓ sump tank (PPS Res-8) from where it is pumped via two rising mains (230mm and 300mm diameter AC pipelines) to the main storage reservoir (PPS Res-1).

The Municipality is planning to upgrade the water supply pipeline with a 315mm diameter uPVC pipeline from the Pampierstad WTW (PPS Res-8) to the main reservoir.

3.5.4.1.3. Pampierstad Storage Reservoirs

The main reservoir site has one ground level concrete reservoir (PPS Res-1) and a concrete tower reservoir (PPS Res-2) with capacities of 6.5 Mℓ and 700 kℓ respectively. The latter is currently not operational due to electrical issues at the pumping station.

Water gravitates from the ground concrete reservoir into distribution networks of Pampierstad and its suburbs, except for the Sakhile area and the five Greater Taung villages. Water is pumped from the main reservoir site to a 2 Mℓ reservoir on the high lying areas near the Upper Majaekgoro village (PPS Res-3) via a 250mm diameter uPVC pipeline. Thereafter, the water flows by gravity via a 160mm diameter uPVC pipeline from PPS Res-3 to a smaller 500 kℓ reservoir (PPS Res-5) situated in close proximity to Mountain View village.

A 400mm diameter uPVC pipeline was recently constructed to supply water from the main storage reservoir (PPS Res-1) to the new 10 Mℓ storage reservoir situated on the high lying areas near the Upper Majaekgoro village (PPS Res-4).

The information in the **Table** below is a summary on storage reservoirs in use as part of the integrated bulk water distribution system in Pampierstad.

Table 26: Summary of Storage Reservoirs in Pampierstad

| Reservoir/Location | Capacity (Mℓ) | Waterlevel / Notes | Elevation/Type |
|------------------------------------|---------------|---|----------------|
| PPS Res-1 (Main Reservoir Site) | 6.5 | Top Waterlevel = 1089.27m Bottom Waterlevel = 1082.17m | Ground level |
| PPS Res 2 (Main Reservoir Site) | 0.7 | Top Waterlevel = 1106.9m Bottom Waterlevel = 1097.8m | Ground level |
| PPS Res 3 | 2 | Top Waterlevel = 1171.9m Bottom Waterlevel = 1166.0m | High Ground |

| | | | |
|----------------------------------|------|---|--------------------------------|
| PPS Res 4 | 10 | Recently Constructed | High Ground |
| PPS Res 5 | 0.5 | Top Waterlevel = 1169.25m Bottom Waterlevel = 1164.85m | Ground level |
| PPS 6 & 7 (Raw Water Storage) | 28 | Top Waterlevel = 1076.7m Bottom Waterlevel = 1074.26m | Concrete lined open dam |
| PPS 8 (WTW sump tank) | 0.55 | Top Waterlevel = 1076.7m Bottom Waterlevel = 1074.26m | Underground concrete reservoir |
| PPS 9 (Raw Water Storage) | 24 | Top Waterlevel = 1067.1m Bottom Waterlevel = 1064.4m | Concrete lined open dam |

3.5.4.1.4. Pampierstad Internal Water Reticulation

An overview of the Pampierstad's bulk water infrastructure is shown in the **figures below**. The figures clearly indicate the topography of the water distribution network and water supply zones which differ in colour with their respective pipe diameters.

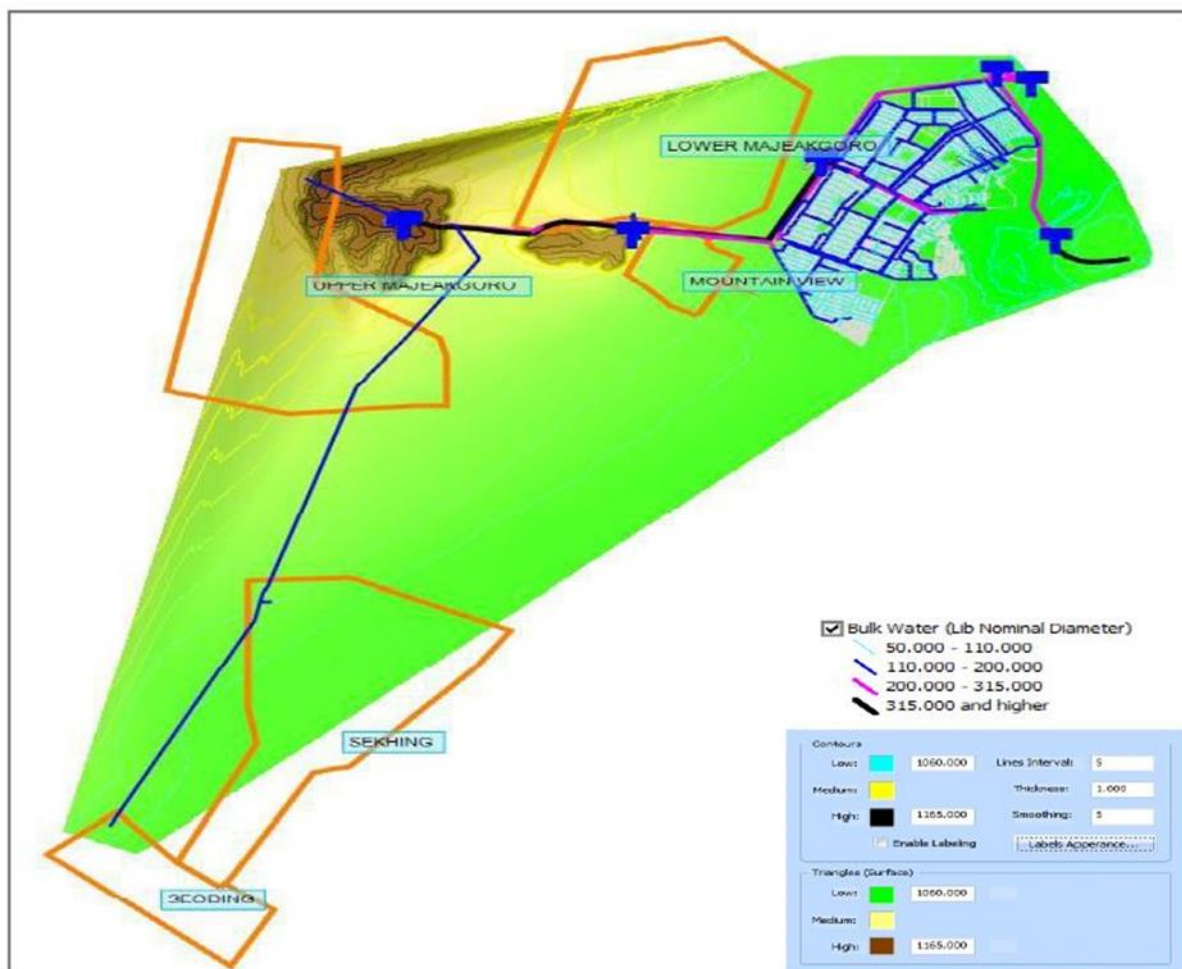
Figure 35: Bulk Water Infrastructure



Figure 36: Topography and Bulk Water Infrastructure Pampierstad (from 2021 Phokwane Municipal records)



Figure 37: Topography and Bulk Water Infrastructure of Pampierstad (From 2021 Phokwane Municipal Records)



According to the 2021 Municipal records, the details of the surrounding pump stations are summarised as seen in the below **Table**.

Table 27: Details of Pumping Stations in the Pampierstad Supply Area (From 2021 Municipal Records)

| Pump Station | Model and Make | Impeller Diameter | Speed | Motor | Configuration | Capacity/ Duty Point |
|-------------------|-----------------|-------------------|---------|-------|----------------------|-------------------------|
| WTW Potable PS | KSB ETA 125-400 | 404mm | 1460rpm | 45kW | 3 x pumps (parallel) | 200m ³ /h |
| | KSB ETA 125-400 | 234mm | 2900rpm | 45kW | 3 x pumps (parallel) | 200m ³ /h |
| | KSB ETA 125-400 | 234mm | 2900rpm | 45kW | 3 x pumps (parallel) | 200m ³ /h |
| Reservoir site PS | KSB WKLn 100/5 | 265mm | 1475RPM | 45kW | 2 x pumps (parallel) | 104m ³ /h |
| | KSB WKLn 100/5 | 265mm | 1475RPM | 45kW | 2 x pumps (parallel) | 104m ³ /h |

3.5.4.2. Pampierstad Bulk Sanitation Infrastructure

3.5.4.2.1. Pampierstad WWTW

The sewage is collected and flows in an eastward direction to the wastewater treatment plant which has a capacity of 4MI. There are four sewer pump stations in the system. The bulk reticulation network consists of fiber cement, clay, reinforced concrete and uPVC pipes ranging from 110mm to 675mm diameter. An overview of Pampierstad's bulk sanitation infrastructure is shown in the **Figures below**. The figures clearly indicate the four existing sewer pump stations, pipe materials as well as the pipe diameters used, which differ in colour with their respective pipe diameters.

Figure 38: Bulk Sanitation Infrastructure of Pampierstad



Figure 39: Bulk Sanitation Infrastructure of Pampierstad



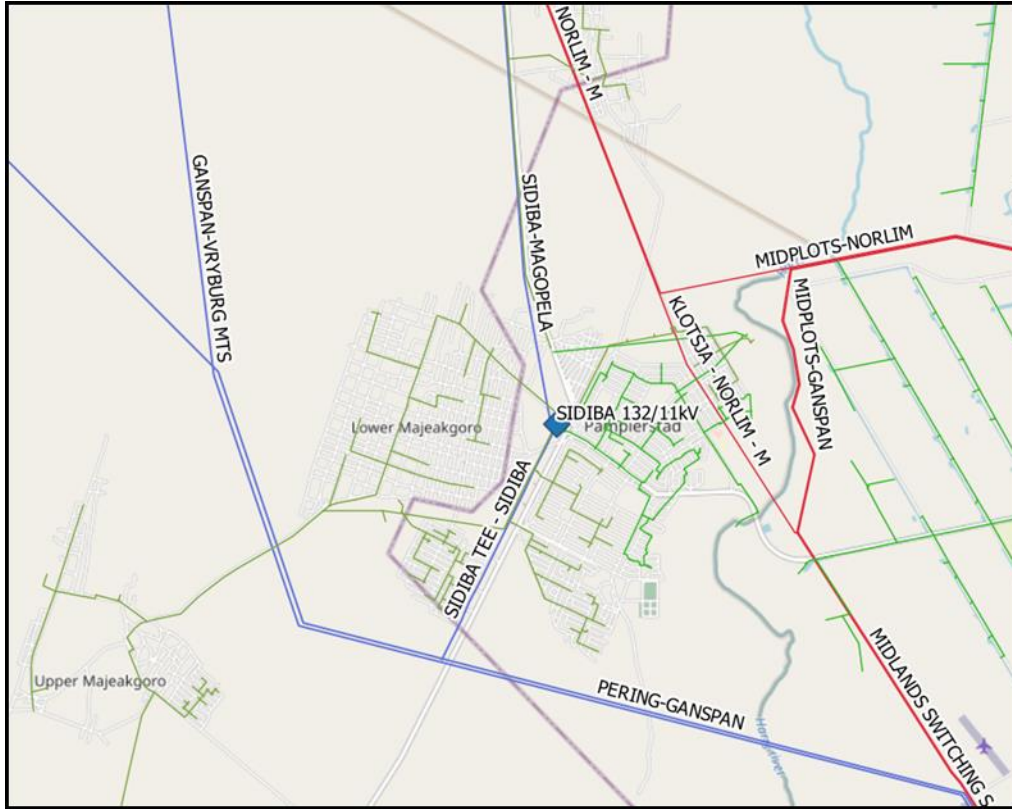
3.5.4.2.2. Bulk Water and Sanitation Infrastructure Conclusion – Pampierstad

It is recommended that the Municipality have a masterplan study done, or if a masterplan study is available, that is updated to reflect the latest status quo in order to determine the extent of upgrades required to accommodate the existing and proposed future developments.

3.5.4.3. Pampierstad Bulk Electricity Infrastructure

Existing bulk electricity infrastructure includes 132kV high voltage overhead lines feeding to the Sidiba 132/22kV substation, operated by ESKOM Distribution. This substation is used as intake substation to the town of Pampierstad, which is serviced by ESKOM Distribution. The medium voltage networks are operated at 22kV voltage level.

Figure 40: Bulk Electricity Infrastructure of Pampierstad



3.5.4.4. Existing Bulk Water and Sanitation Infrastructure

3.5.4.4.1. Jan Kempdorp Bulk Water Infrastructure

Raw water is abstracted from the Vaalharts Irrigation Scheme Canal and stored in 2 x 28 Mℓ concrete lined dams in Jan Kempdorp (JK-Raw: JK Res-1 & Res-2) (interchangeable with each other).

3.5.4.4.2. Jan Kempdorp Water Treatment Capacity

The raw water is pumped to the inlet works of the Jan Kempdorp WTW which has a capacity of 7.5 Mℓ/day. Purified water from the WTW is then collected in 3 x 784 kℓ elevated steel tanks (JK Res-4, JK Res-5 & JK Res-6) and a ground reservoir with a capacity of 8.7 Mℓ.

3.5.4.4.3. Jan Kempdorp Storage Reservoir

Water flows by gravity from the 3 x 784 kℓ elevated steel tanks to the distribution network of the town. The connector pipelines to Jan Kempdorp range in sizes from 200-450mm in diameter.

The information in the **Table** below is a summary on storage reservoirs in use as part of the integrated bulk water distribution system in Jan Kempdorp.

Table 28: Summary of Storage Reservoirs in Jan Kempdorp (From 2022 Municipal Feasibility Report)

| Reservoir/Location | Capacity (Mℓ) | Waterlevel / Notes | Elevation/Type |
|--|---------------|---|------------------------------------|
| JK Res-1 & 2 (Main Reservoir Site) | 28 | Top Waterlevel = 1162.35m Bottom Waterlevel = 1158.95m | Concrete lined open dam |
| JK Res 3 (Potable Water Storage Dam) | 8.7 | Top Waterlevel = 1166.4m Bottom Waterlevel = 1161.0m | Ground level concrete reservoir |
| JK Res 4, 5 & 6 (WTW Site) | 0.784 | Top Waterlevel = 1186.6m Bottom Waterlevel = 1183.4m | Elevated Steel Reservoirs |

3.5.4.4.4. Jan Kempdorp Internal Water Reticulation

The main town area of Jan Kempdorp is supplied from two reservoirs (JK Res-5 & JK Res-6). An overview of the Jan Kempdorp bulk water infrastructure is shown in **Figures below**. The figures clearly indicate the water distribution network, water supply zones which differ in colour with their respective pipe diameters.

Figure 41: Bulk Water Infrastructure of Jan Kempdorp



Figure 42: Topography and Bulk Water Infrastructure of Jan Kempdorp (From 2022 Municipal Feasibility Report)

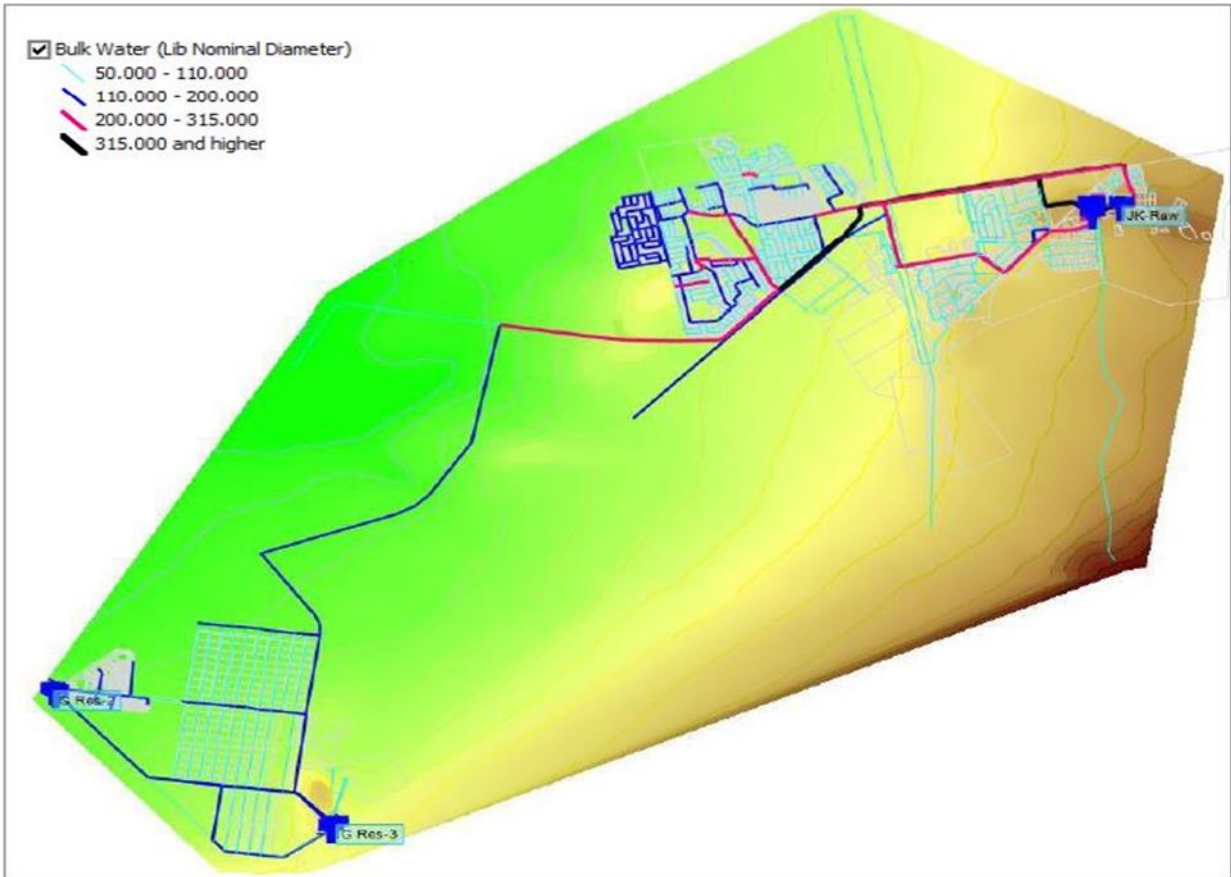


Figure 43: Bulk Water Infrastructure of Jan Kempdorp (From 2022 Municipal Feasibility Report)

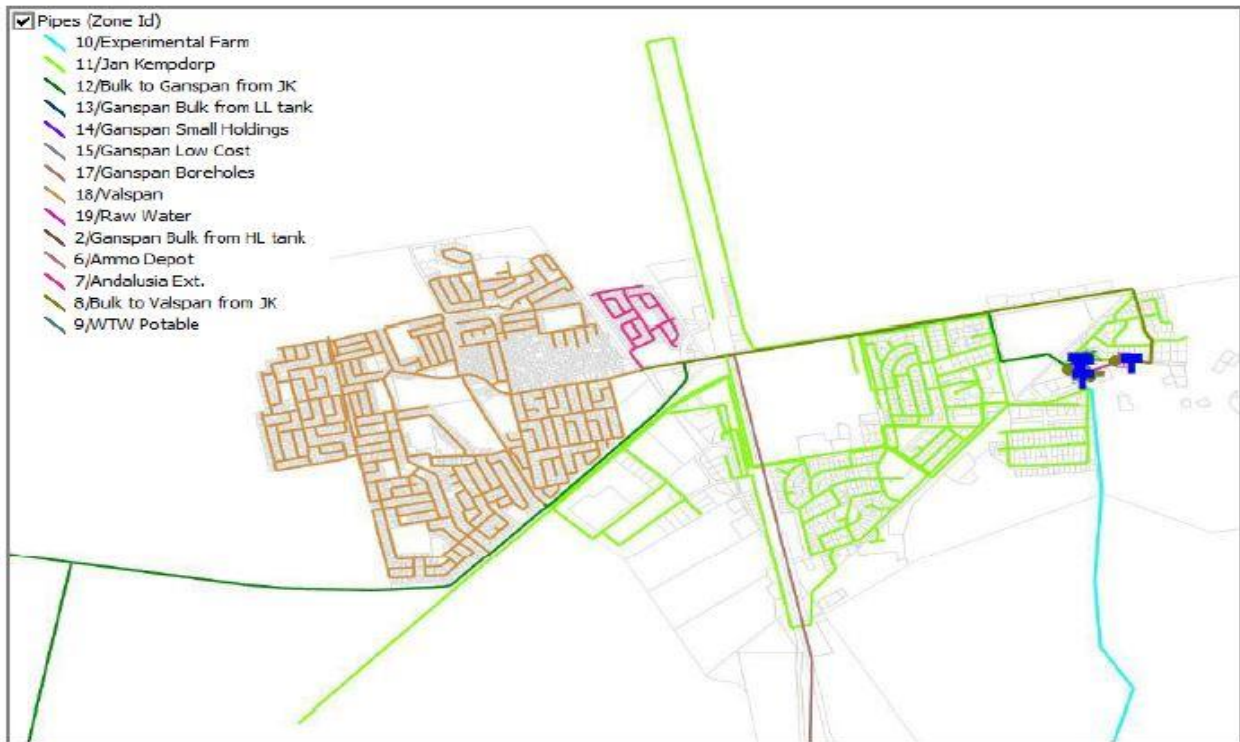
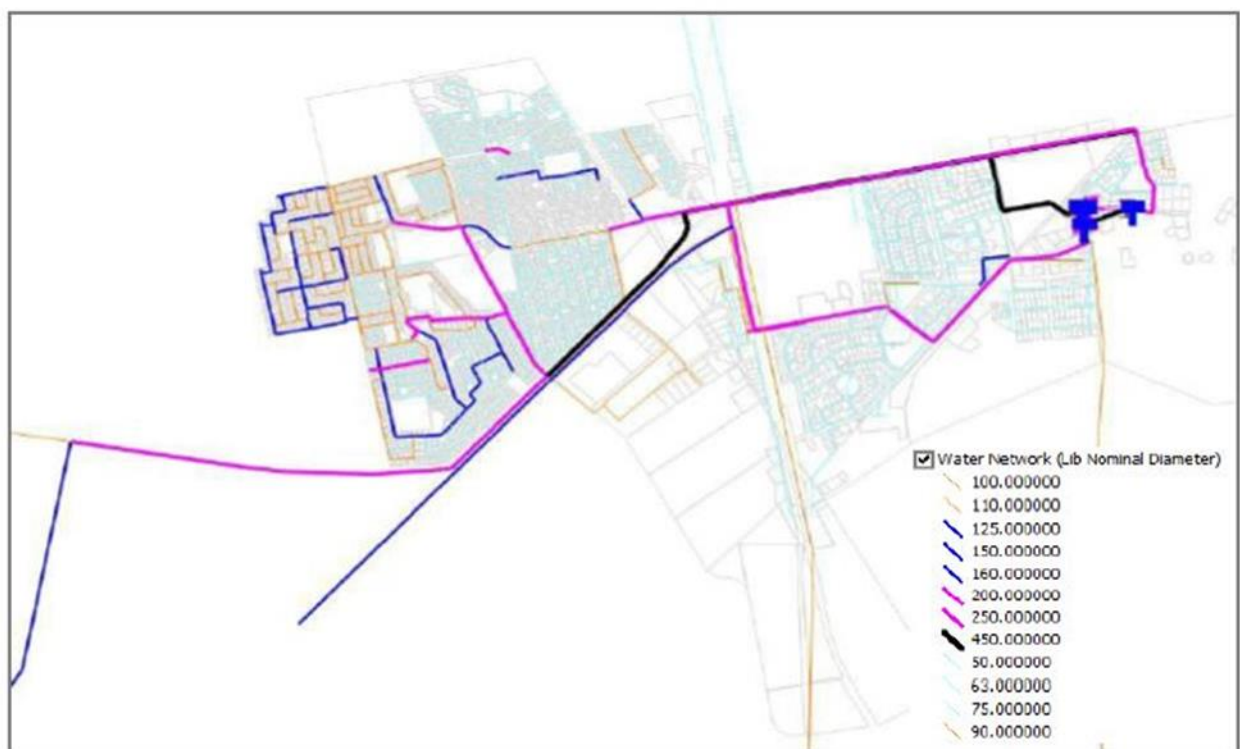


Figure 44: Bulk Water Infrastructure Jan Kempdorp (From 2022 Municipal Feasibility Report)



According to the 2022 Municipal Feasibility report on Jan Kempdorp the details of the surrounding pump stations are summarised as seen in the below **Table**.

Table 29: Summary of Storage Reservoirs in Jan Kempdorp (From 2022 Municipal Report)

| Pump Station | Model and Make | Impeller Diameter | Speed | Motor | Configuration | Capacity/Duty Point |
|--------------------------------------|---------------------------|-------------------|---------|-------|----------------------|---------------------|
| Jan Kempdorp WTW Potable Pumpstation | Rapid NT 200-315 | 333mm | 1475rpm | 75kW | 2 x pumps (parallel) | No info |
| | Rapid NT 200-315 SG/C1/MS | 333mm | 1475rpm | 75kW | 2 x pumps (parallel) | No info |

3.5.4.5. Jan Kempdorp Bulk Sanitation Infrastructure

3.5.4.5.1. Jan Kempdorp WWTW

Sewage is collected and flow in a westward direction to the wastewater treatment plant which has a capacity of 2.7ML/day situated in Valspan. There are four sewer pump stations in the system. The bulk reticulation network consists of fiber cement, clay and uPVC pipes ranging from 110mm to 400mm diameter. Refer to the figures below, which shows the schematic of the Jan Kempdorp bulk sanitation system:

Figure 45: Bulk Sanitation Infrastructure of Jan Kempdorp

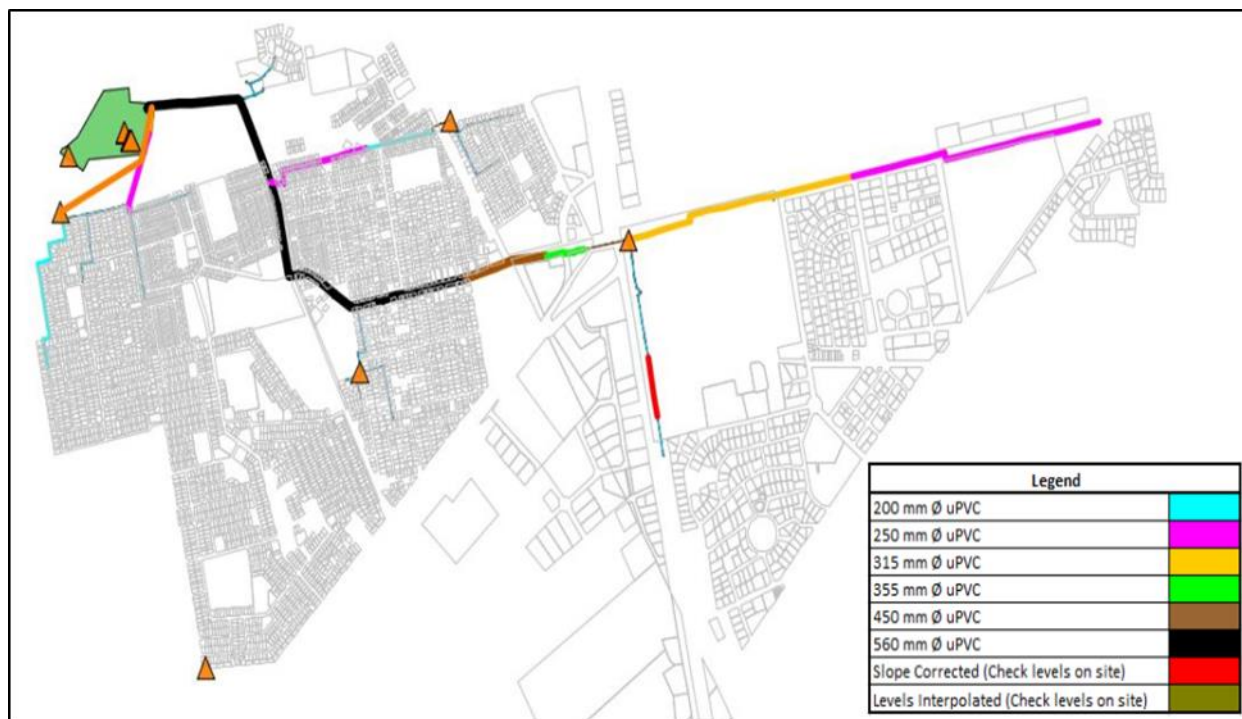
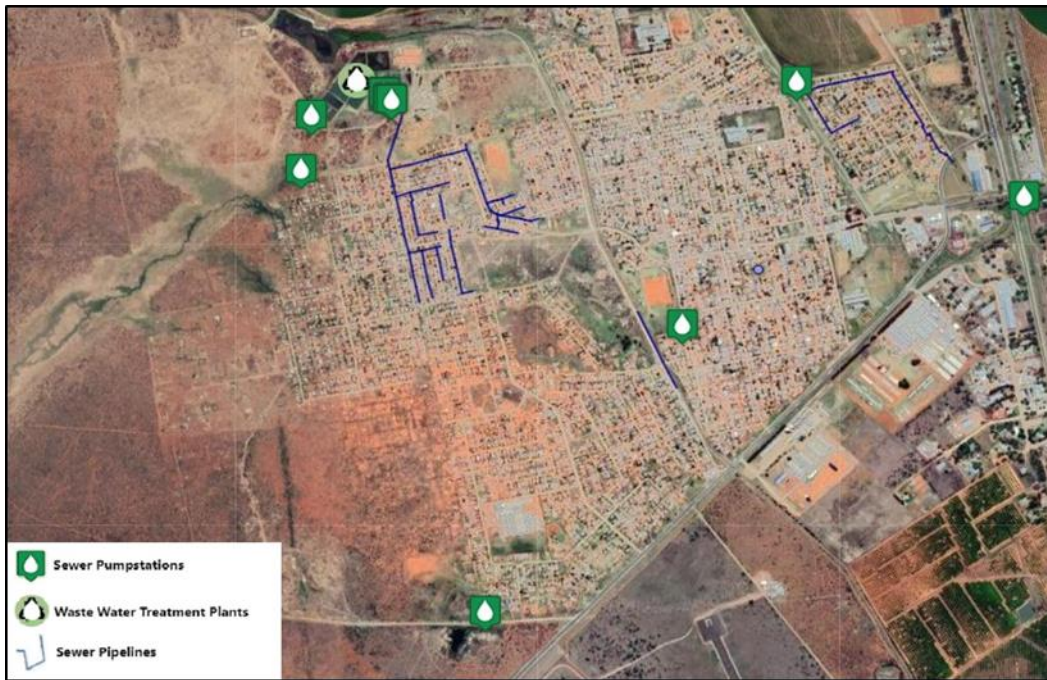


Figure 46: Bulk Sanitation Infrastructure of Jan Kempdorp



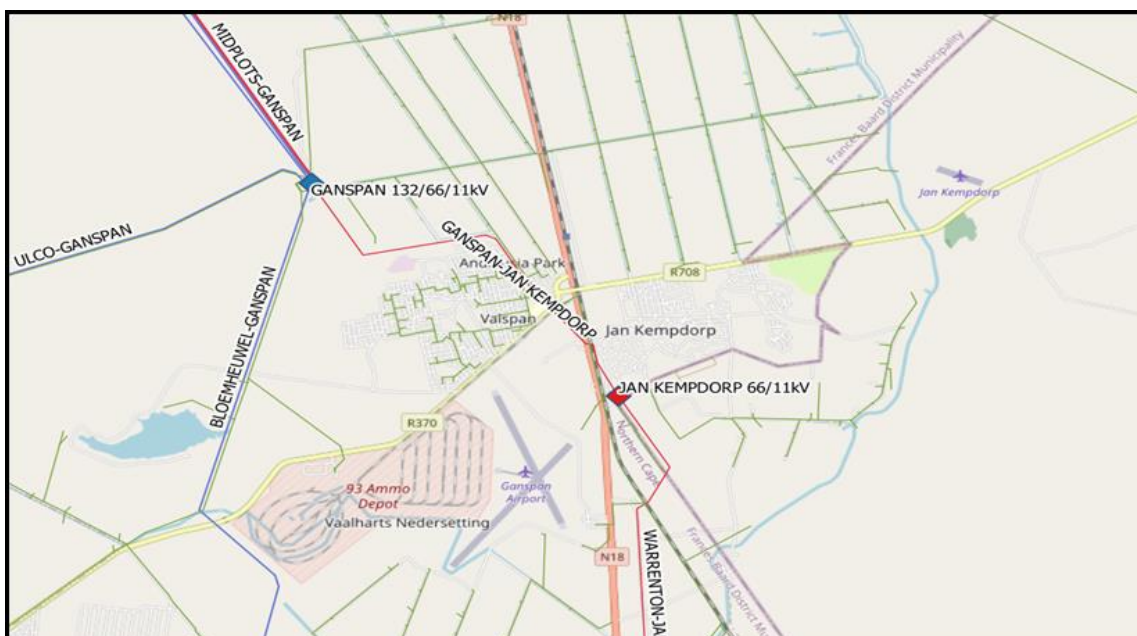
3.5.4.5.2. Bulk Water and Sanitation Infrastructure Conclusion – Jan Kempdorp

It is recommended that the Municipality have a masterplan study done, or if a masterplan study is available, that it is updated to reflect the latest status quo in order to determine the extent of upgrades required to accommodate the existing and proposed future developments.

3.5.4.6. Jan Kempdorp Bulk Electricity Infrastructure

Existing bulk electricity infrastructure includes 132kV and 66kV high voltage overhead lines feeding to the Ganspan 132/66/22kV substation, operated by ESKOM Distribution, and the Jan Kempdorp 66/11kV substation. The Jan Kempdorp substation is used as intake substation to the town of Jan Kempdorp, which is serviced by the Municipality. The medium voltage networks are operated at 11kV and 22kV voltage level.

Figure 47: Bulk Electricity Infrastructure of Jan Kempdorp



3.5.4.7. Existing Bulk Water and Sanitation Infrastructure

3.5.4.7.1. Ganspan Bulk Water Infrastructure

Raw water is abstracted from the Vaalharts Irrigation Scheme Canal and stored in 2 x 28 Mℓ concrete lined dams in Jan Kempdorp (JK-Raw: JK Res-1 & Res-2) (interchangeable with each other).

3.5.4.7.2. Ganspan Water Treatment Capacity

The raw water is pumped to the inlet works of the Jan Kempdorp WTW which has a capacity of 7.5 Mℓ/day. Purified water from the WTW is then collected in 3 x 784 kℓ elevated steel tanks (JK Res-4, JK Res-5 & JK Res-6) and a ground reservoir with a capacity of 8.7 Mℓ.

3.5.4.7.3. Ganspan Storage Reservoir

Once the raw water is treated at the Jan Kempdorp WTW the potable water is transported to two below-ground concrete reservoirs (G Res-4 & G Res-5) in Ganspan, through a 400mm diameter uPVC gravity pipeline that reduces to a 150mm diameter AC pipeline for the last section. The two reservoirs are interchangeable with each other and each has a capacity of 268kl.

Water is pumped from the ground reservoirs to an elevated steel tank (G Res-3) with a capacity of 196kl, from where it gravitates to two elevated steel tanks (G Res-1 & G Res-2) having a combined capacity of 552kl (465kl + 87kl). Water then flows by gravity from the elevated steel tanks into the Ganspan Old Development network.

The information in the **Table** below is a summary on storage reservoirs in use as part of the integrated bulk water distribution system in Ganspan.

Table 30: Summary of Storage Reservoirs in Jan Kempdorp (From 2022 Municipal Feasibility Report)

| Reservoir/Location | Capacity (Mℓ) | Waterlevel / Notes | Elevation/Type |
|----------------------------------|---------------|---|---------------------------------|
| G Res-1 (Main Reservoir Site) | 0.465 | Top Waterlevel = 1141.88m Bottom Waterlevel = 1137.58m | Elevated Steel Tanks |
| G Res 2 (Main Reservoir Site) | 0.087 | Top Waterlevel = 1140.68m Bottom Waterlevel = 1137.58m | Elevated Steel Tanks |
| G Res 4 &5 | 0.268 | Top Waterlevel = 1186.6m Bottom Waterlevel = 1183.4m | Underground Concrete Reservoirs |

3.5.4.7.4. Ganspan Internal Water Reticulation

The Ganspan Settlement area is supplied by water from the 150mm diameter AC gravity bulk pipeline that is linked to the two below-ground reservoirs. The Settlement reticulation on the northern side of Ganspan is also supplied by the 150mm diameter AC gravity bulk pipeline that changes to a 150mm steel pipeline towards the two below-ground reservoirs. A separate 150mm steel pipeline supplies water from the below-ground reservoirs to the Settlement reticulation on the southern side.

An overview of the Ganspan bulk water infrastructure is shown in the **Figures below**. The figures clearly indicate the water distribution network and water supply zones which differ in colour with their respective pipe diameters.

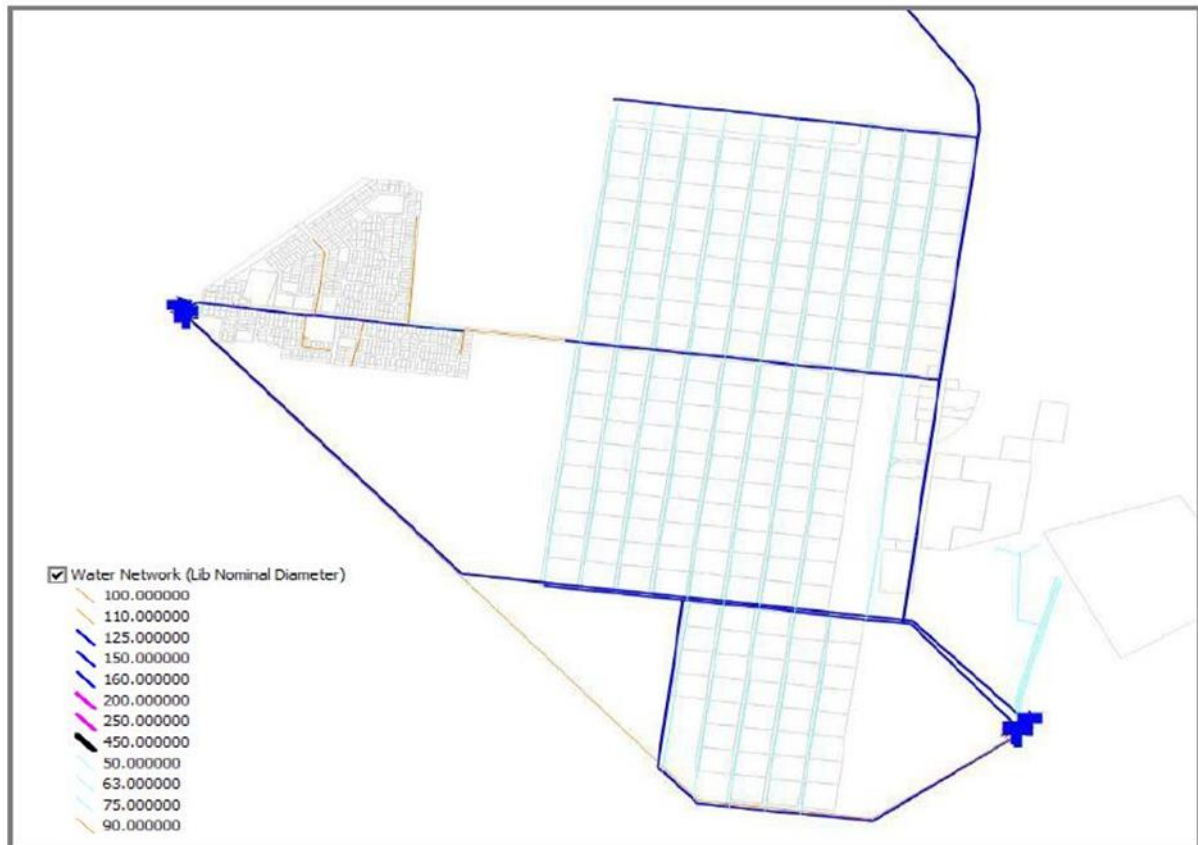
Figure 48: Ganspan Bulk Water Infrastructure (Including Jan Kempdorp in the Top Right Corner)



Figure 49: Ganspan Bulk Water Infrastructure (From 2022 Municipal Feasibility Report)



Figure 50: Ganspan Bulk Water Infrastructure (From 2022 Municipal Feasibility Report)



Unfortunately, no information could be obtained of the surrounding pump stations barring its configuration as seen in the below **Table**.

Table 31: Summary of Storage Reservoirs in Jan Kempdorp (From 2022 Municipal Feasibility Report)

| Pump Station | Model and Make | Impeller Diameter | Speed | Motor | Configuration | Capacity/Duty Point |
|--------------|----------------|-------------------|---------|---------|----------------------|---------------------|
| Ganspan | No info | No info | No info | No info | 2 x pumps (parallel) | No info |

3.5.4.8. Ganspan Bulk Sanitation Infrastructure

3.5.4.8.1. Ganspan WWTW

There is currently no waterborne sewer gravitational networks in Ganspan. Households in Ganspan use on-site sewer systems. Therefore, the Municipality plan to implement the following sanitation projects in Ganspan as indicated in the **below Table**.

Table 32: Land Development Project Descriptions (From 2022 Municipal Feasibility Report)

| Project No. | Town | Project Description | Income Group | No. of Erven |
|-------------|---------|--|--------------|--------------|
| 4 | Ganspan | Household sewer connections -531 stands | Low | 531 |
| 23 | Ganspan | Installation of water connection for 50 sites (R/h side of 93 plots) (VIP toilets/French drains) | Low | 50 |
| 24 | Ganspan | Water and Sanitation for 144 stands | Low | 144 |
| 60 | Ganspan | Formalization of informal settlement – Water and Sanitation for 150 stands – Phase 2 | Low | 150 |
| 63 | Ganspan | Subdivision of erf 1388 – Water and Sanitation for 8 stands | Low | 8 |

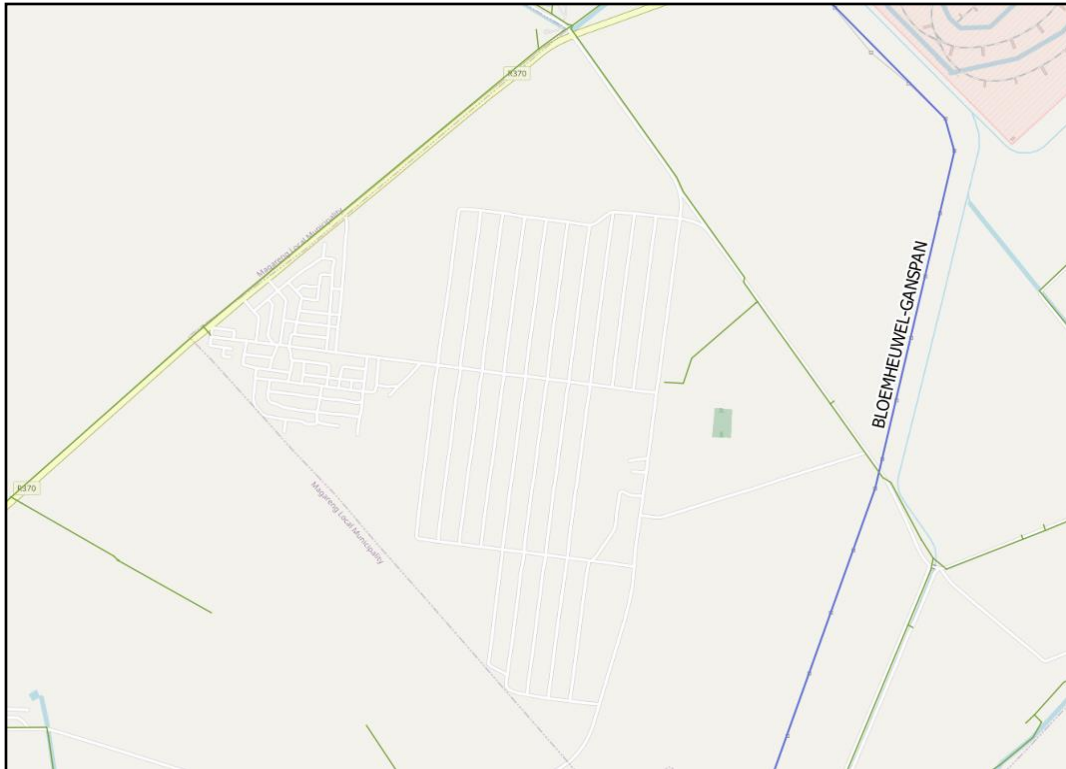
3.5.4.8.2. Bulk Water and Sanitation Infrastructure Conclusion – Ganspan

It is recommended that the Municipality have a masterplan study done, or if a masterplan study is available, that it is updated to reflect the latest status quo in order to determine the extent of upgrades required to accommodate the existing and proposed future developments.

3.5.4.9. Ganspan Bulk Electricity Infrastructure

Existing bulk electricity infrastructure includes 132kV high voltage overhead lines feeding to the Ganspan 132/66/11kV substation, operated by ESKOM Distribution. The medium voltage networks within the town are operated by the municipality at 11kV voltage level.

Figure 51: Bulk Electricity Infrastructure of Jan Kempdorp



3.5.4.10. Magagong Bulk Water and Sanitation Infrastructure

The Magagong Station area falls outside the boundaries of Phokwane Municipality where it consists of a few houses at the old station and are currently supplied with water from a nearby borehole and tank. The Municipality plan to design and construct a water and sanitation system for the Magagong Station area. These recommendations should be included in a masterplan report, should the Municipality decide to have a masterplan study done. Therefore, the evaluation of the water supply and sanitation system infrastructure does not form part of the scope of this report.

3.5.4.11. Magagong Bulk Electricity Infrastructure

The Magagong area is serviced by 22kV medium voltage networks operated by ESKOM Distribution, under their Free State operating unit; thus, evaluation of the bulk electricity infrastructure does not form part of the scope of this report.

3.5.4.12. Existing Bulk Water and Sanitation Infrastructure

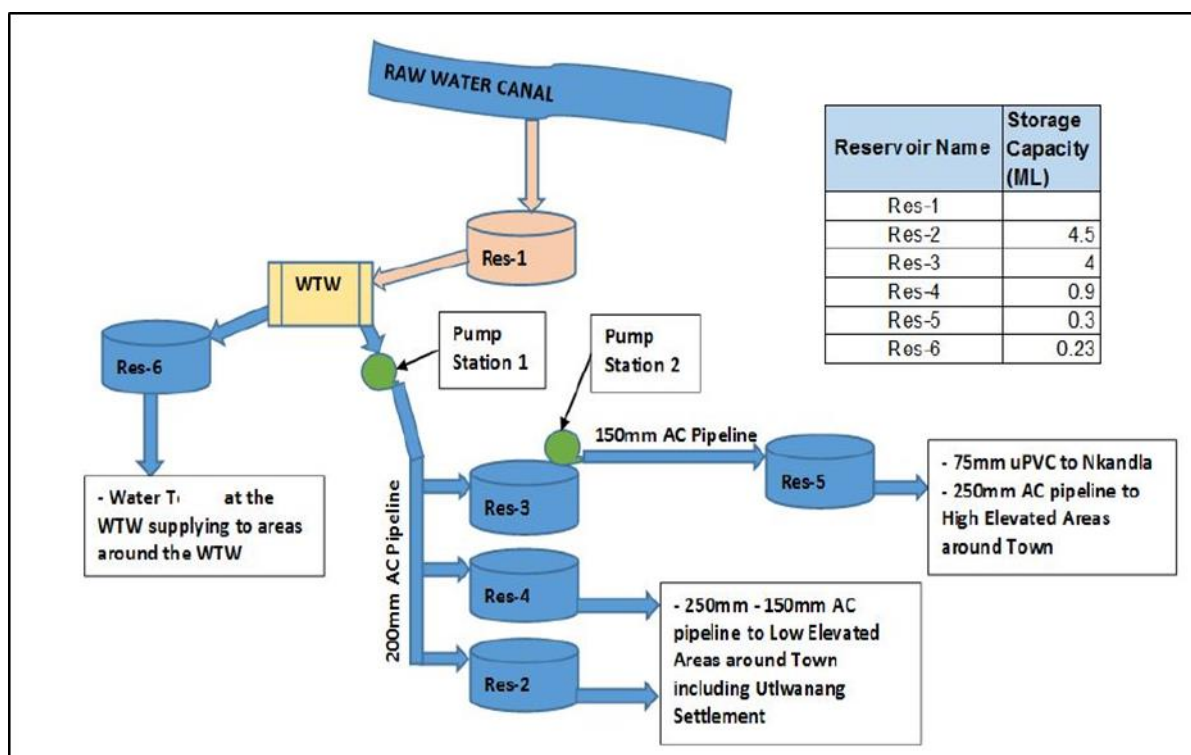
3.5.4.12.1. Hartswater Bulk Water Infrastructure

Hartswater is supplied with raw water abstracted from the Vaalhaarts Irrigation Scheme Canal which belongs to Sedibeng Water.

3.5.4.12.2. Hartswater Water Treatment Capacity and Storage Reservoirs

The Hartswater bulk water supply system consists of a raw water reservoir, water treatment plant, two main pumping stations and five potable water reservoirs. Refer to the **Figure** below, which shows the schematic of the Hartswater bulk water supply system.

Figure 52: Schematic of the Hartswater Bulk Supply System (From 2019 Phokwane Municipal Records)



3.5.4.12.3. Hartswater Internal Water Reticulation

The Hartswater water supply system is currently divided into three water supply zones as mentioned above. Both the high and low elevated areas are situated east of town including the Utlwanang settlement. However, the main town and industrial areas are located south and west of the town respectively.

The connector pipeline supplying the high elevated area starts off as a 250mm diameter Asbestos Cement (AC) line at the Langeberg reservoir which gradually reduces to 200mm diameter AC line in Korhaan Street and then further reduces to a 150mm diameter AC line for supply to the Langeberg factory to the east of Hartswater.

The main town area is supplied with water through separate 200mm & 300mm diameter AC gravity connector lines from Res-2 and Res-4 respectively. A separate 200mm diameter AC gravity connector line from Res-3 also feeds into the distribution network with ranging pipe sizes from 75mm to 150mm in diameter. Most of the Bulk pipelines of the distribution network are Asbestos Cement pipelines

Figure 53: Bulk Water Infrastructure of Hartwater



3.5.4.13. Hartwater Bulk Sanitation Infrastructure

3.5.4.13.1. Hartwater WWTW

Sewage is collected and flow under gravity to the existing wastewater treatment works which has a capacity of 1.2ML. The bulk reticulation network consists of fiber cement and clay pipes ranging from 200mm to 400mm diameter. Refer to the **Figures** below, which shows the schematic and an aerial view of the Hartwater bulk sanitation system:

Figure 54: Bulk Sanitation Infrastructure of Hartwater



Figure 55: Bulk Sanitation Infrastructure of Hartswater



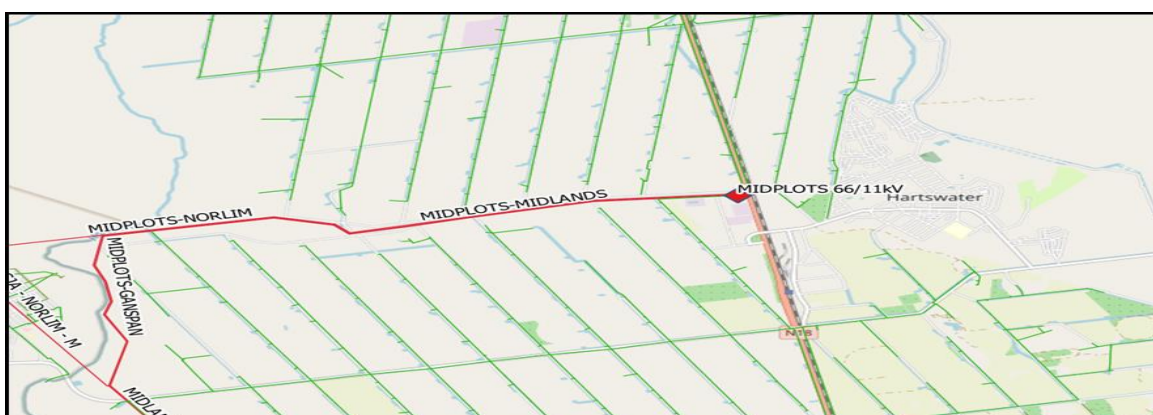
3.5.4.13.2. Bulk Water and Sanitation Infrastructure Conclusion – Hartswater

It is recommended that the Municipality have a masterplan study done, or if a masterplan study is available, that it is updated to reflect the latest status quo in order to determine the extent of upgrades required to accommodate the existing and proposed future developments.

3.5.4.14. Hartswater Bulk Electricity Infrastructure

Existing bulk electricity infrastructure includes 66kV high voltage overhead lines feeding to the Midplots 66/11kV substation, operated by ESKOM Distribution. This substation is used as intake substation to the town of Hartswater, which is serviced by the Municipality. The remainder of the area around Hartswater is serviced by ESKOM Distribution. The medium voltage networks are operated at 11kV and 22kV voltage level.

Figure 56: Bulk Electricity Infrastructure of Hartswater



3.5.4.15. Bulk Electricity Infrastructure Conclusion – Phokwane Municipality

It is recommended that a masterplan be done or if a master plan is available that it is updated to reflect the latest status quo in order to determine the extent of upgrades required to accommodate the existing and proposed future developments. This planning framework must include the areas serviced both by the Municipality and by ESKOM Distribution, with planning provided separately for each town.

3.5.4.16. Phokwane Municipal Roads Infrastructure

The Phokwane Municipality is the owner and custodian of their road infrastructure. This section details the extent of the road network in terms of how it is classified and the condition of the paved and unpaved network.

The road network is classified according to the RISFSA (Road Infrastructure Strategic Framework for South Africa). A summary of the RISFSA classification per road type of the Municipality is provided in the **Table** below.

Table 33: RISFA Classes (Sourced from the Road Asset Management Plan (RAMP) for 2021/2022)

| Phokwane Municipality | RISFSA: Road Length (km) | | | | | |
|-----------------------|--------------------------|---------|---------|---------|---------|--------------|
| | Class 1 | Class 2 | Class 3 | Class 4 | Class 5 | Total Length |
| Paved Road | 0.0 | 0.0 | 0.0 | 14.8 | 33.6 | 48.4 |
| Unpaved Road | 0.0 | 0.0 | 0.0 | 3.2 | 55.3 | 58.5 |
| Total | 0.0 | 0.0 | 0.0 | 18.0 | 88.9 | 106.9 |
| Percentage | 0.0% | 0.0% | 0.0% | 16.8% | 83.2% | 100.0% |

The general condition of the paved (flexible) and unpaved road network is described by the Visual Condition Index (VCI) and the Visual Gravel Index (VGI), obtained through visual assessment data, respectively. The indices consider the surfacing condition in terms of the structural and functional condition for roads through the degree and extent of occurrence of distress.

A detailed summary describing the categories of the VCI and VGI, which range from very poor to very good, can be seen below.

Table 34: Visual Condition Categories for Paved and Unpaved Roads (Sourced from the Road Asset Management Plan (RAMP) for 2021/2022)

| Condition Category | VGI Range | Category Description |
|--------------------|-----------|---|
| Very Poor | 0 - 30 | The road is in imminent danger of structural failure and requires substantial renewal or upgrading. |
| Poor | 30 - 50 | The road needs significant renewal or rehabilitation to improve its structural integrity. |
| Fair | 50 - 70 | Some clearly evident deterioration would benefit from preventative maintenance or requires renewal of isolated areas. |

| | | |
|-----------|----------|--|
| Good | 70 - 85 | The road is still in a condition that only requires routine maintenance to retain its condition. |
| Very Good | 85 - 100 | The road is still new, and no problems are experienced. |

The below **Table and Figures** depicts the different categories of the VCI and VGI for the condition of the paved and unpaved Municipal road network.

Table 35: Condition of Paved and Unpaved Roads (Sourced from the Road Asset Management Plan (RAMP) for 2021/2022)

| Phokwane Municipality | Road Length % | | | | | Total Length |
|-----------------------|---------------|------|------|------|-----------|--------------|
| | Very Poor | Poor | Fair | Good | Very Good | |
| Paved Road | 0% | 1% | 43% | 45% | 11% | 95.5 |
| Unpaved Road | 68% | 28% | 3% | 1% | 0% | 171 |
| Total | 68% | 29% | 43% | 46% | 11% | 266.5 |

Figure 57: Condition of Paved and Unpaved Road Lengths (%)

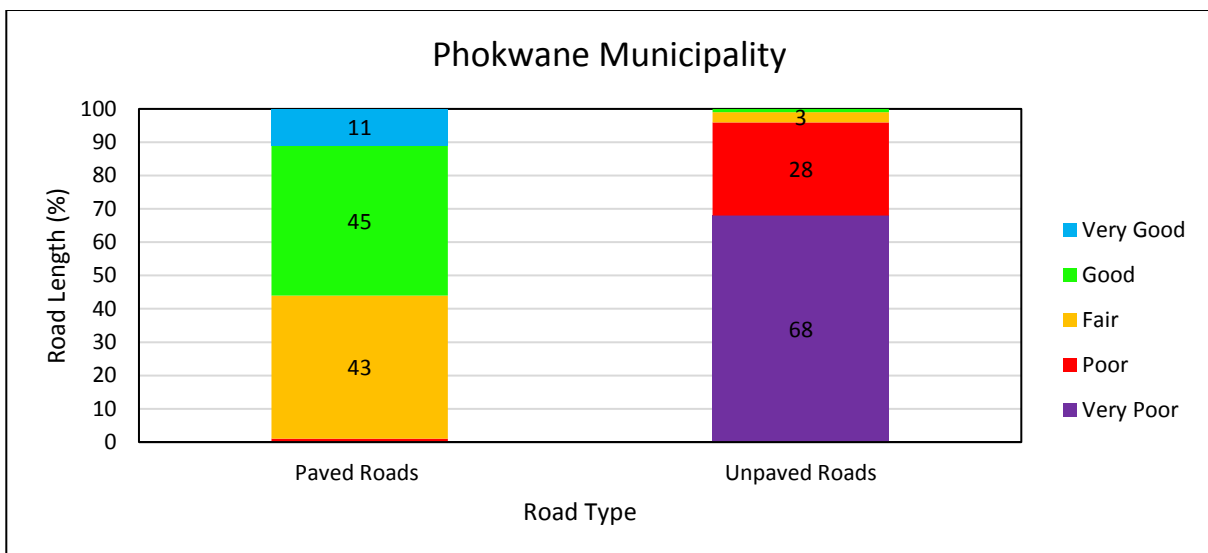
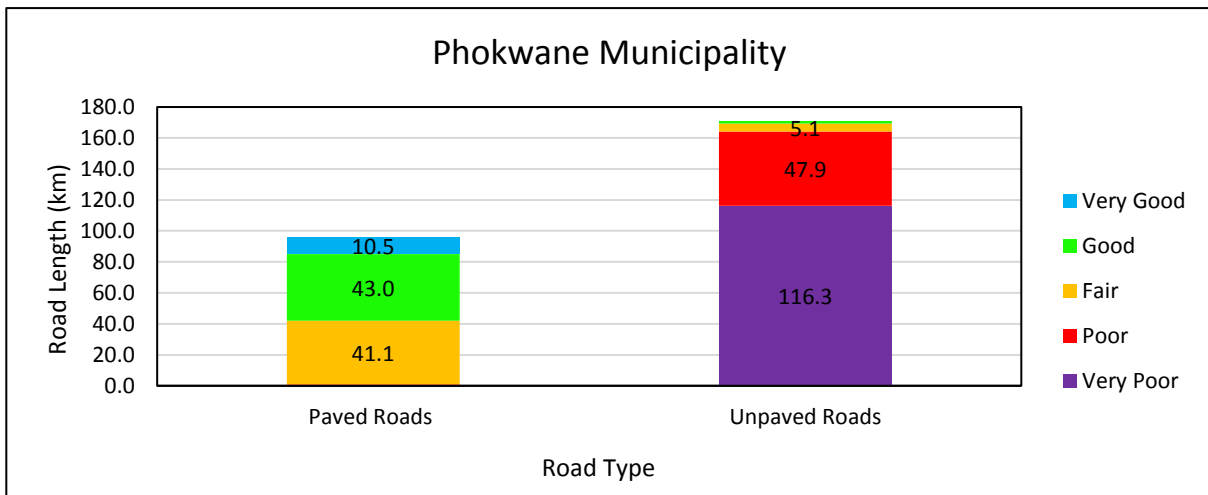


Figure 58: Condition of Paved and Unpaved Road Lengths (km)



4. PROJECTS

The tables below sets out the housing projects as listed on the COGHSTA Housing Pipelines as well as projects not yet included on the pipeline but being planned by the Local Municipalities. The status of these projects have been updated and performance indicators identified.

4.1.1. Dikgatlong LM

The below table sets out the planned housing projects for 2022/23.

Table 36: Dikgatlong LM COGHSTA Housing Pipeline 2022/23

| Project | Project Type & Funding Sources | No. Units | Location | COGHSTA 2022 PIPELINE STATUS | Planned 2022/23 Key Performance Indicator Output |
|--|--------------------------------|--------------------------|-------------|---|--|
| Barkley West, 1200 | IRDP Town Est. FBDM Funded. | 1200 Erven 1045 Units | Barkly West | No Business Plan No Bulk Services No Planning (township establishment, environment and geo-tech) No Internal Services No beneficiary List | Submit Business Plan Finalised Bulk Services Finalised Town Planning |
| Barkley West, Sonderwater, 3500 | IRDP | 3500 | Barkly West | Not aligned with SDF & IDP No Business Plan No Bulk Services No Planning (township establishment, environment and geo-tech) No Internal Services No beneficiary List | Submit Business Plan Finalised Bulk Services Finalised Town Planning |
| Barkley West, Mataleng , 70 | IRDP | 70 | Barkly West | No Business Plan No Bulk Services No Planning (township establishment, environment and geo-tech) No Internal Services No beneficiary List | Submit Business Plan Finalised Bulk Services Finalised Town Planning |

| Project | Project Type & Funding Sources | No. Units | Location | COGHSTA 2022 PIPELINE STATUS | Planned 2022/23 Key Performance Indicator Output |
|---|--------------------------------|-----------|--------------|--|--|
| Proteahof, Delportshoop, 217 | IRDP | 217 | Delportshoop | Complete except for Beneficiary list | Project Finalisation |
| Rooikoppies, Delportshoop, 200 | Housing Project | 200 | Delportshoop | No Business Plan Bulk Services Complete Planning Complete except for Environmental Study and Geo-tech Internal Services Complete No Beneficiary List | Submit Business Plan Completed Environmental and Geo-tech studies |
| Proteahof, Delportshoop, 365 | IRDP | 365 | Delportshoop | No Business Plan Bulk Services Complete Planning Complete except for Environmental Study and Geo-tech Internal Services Complete No Beneficiary List | Submit Business Plan Completed Environmental and Geo-tech studies |
| Delportshoop, 125 | Infills | 125 | Delportshoop | No Business Plan Bulk Services Complete Planning Complete Internal Services Complete No Beneficiary List | Submit Business Plan Project Finalisation |
| Windsorton, Kutlwano/Hebron, 550 | IRDP | 550 | Windsorton | No Business Plan Bulk Services Complete Planning Complete except for Environmental Study and Geo-tech Internal Services Complete No Beneficiary List | Submit Business Plan Complete Environmental Study and Geo-tech |

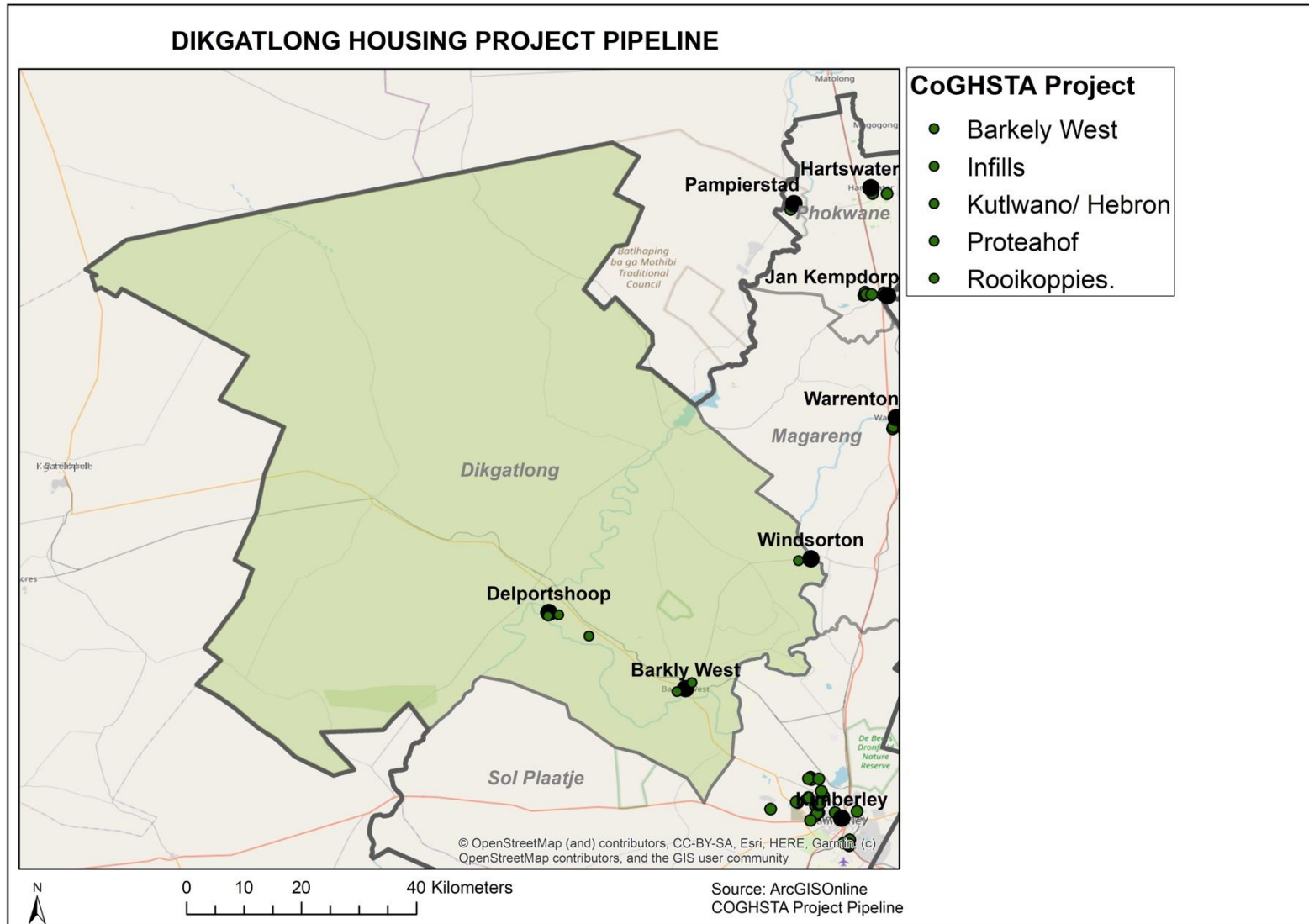
Table 37: Dikgatlong LM Housing Projects Pipeline 2022

(Dikgatlong LM Housing Projects not on the COGHSTA Housing Pipeline 2022)

| Project | Project Type & Funding Sources | No. Units | Location | Status 2021/22 (according to DLM) | Planned 2022/23 Key Performance Indicator Output |
|---|---------------------------------|-----------|--------------|--|--|
| Barkley West, 160 (Buffer zone) | IRDP | 160 | Barkley West | No updated information provided | Require clarity on status of project |
| Barkley West, Pniel, 500 (inclusive of Pniel and Pniel Estate) | Town Est. COGHSTA | 500 Erven | Barkly West | Bulk Services Required Internal Services Required | Completed Bulk and Internal Services |
| Barkley West, Sandton, 140 | Town Est. COGHSTA | 140 | Barkly West | Bulk Services Required Internal Services Required | Completed Bulk and Internal Services |
| Barkley West, Zone 7, 140 | Housing Project: Formalise Area | 130 | Barkley West | Geotech Accepted | |
| Barkley, Haak en Steek Settlement, 350 | Informal Settling | 350 | Barkley West | Feasibility study and assessment (if possible) is required for the potential township establishment. The area is very rocky and is danger of flooding. | Completes Feasibility Study |
| Barkley West, Colour Block, 60 | Informal Settling | 60 | Barkley West | Feasibility Study Required (Rocky Terrain) | Completed Feasibility Study |
| Longlands, 600 | Town Est. COGHSTA | 600 | Longlands | Business Plan submitted to COGHSTA in 2020 Bulk Services Required Internal Services after TE | Completed Bulk and Internal Services |
| Barkley West, Seele Block, 70 | Informal Settling | 70 | Barkly West | Business Plan Feasibility Study Required (Rocky terrain) | Completed Feasibility Study |

| Project | Project Type & Funding Sources | No. Units | Location | Status 2021/22 (according to DLM) | Planned 2022/23 Key Performance Indicator Output |
|------------------------|--------------------------------|-----------|----------|--|--|
| Stillwater, 145 | Information not available | NA | NA | <p>Not included in the housing pipeline projects. Two GEOTECH reports prepared by the NHBRC and cracks in the soil during construction.</p> <p>This project is under investigation. COGHSTA commissioned their investigation team to furnish the municipality with a report. The municipality has not received the report yet.</p> | NA |

Figure 59: Housing Projects in Dikgatlong LM



4.1.2. Phokwane LM

Table 38: Phokwane LM COGHSTA Housing Pipeline 2022/23

| Project | Project Type & Funding Sources | No. Units | Location | COGHSTA 2022 PIPELINE STATUS | Planned 2022/23 Key Performance Indicator Output |
|---|---|-----------|------------------------|--|--|
| Portion of Erf 477, Vaalharts, Settlement B, 310 | IRDP Informal Settlements Upgrading Programme Phokwane LM Internal Funding | 310 | Valspan/Ganspan | No Business Plan Bulk Services complete, except for Sanitation which is underway Planning Complete (township establishment, environment and geo-tech) Internal Services: water complete, sanitation and electricity not undertaken, roads in progress) Beneficiary List in place | Completed Business Plan Completion internal services and roads |
| Portion of Erf 259, Hartswater, Utlwanang, 235 | IRDP Informal Settlements Upgrading Programme Phokwane LM Internal Funding | 235 | Hartswater (Utlwanang) | No Business Plan Bulk Services: Water in progress, sanitation not undertaken, electricity complete Planning: Township establishment and general plan underway, environmental and geo-tech completed Internal Services completed except sanitation which is in progress Beneficiary List in place | Completed Business Plan Completion of bulk and internal services Finalisation of town planning |
| Kingston extension, Jan Kempdorp, 338 | Integrated Residential Development Programme | 338 | Jan Kempdorp (Valspan) | No Business Plan Bulk services and planning completed Internal services completed except for roads Beneficiary List in place | Completed Business Plan SG Registration Top structure |
| Masakeng, Jan Kempdorp, Valspan, 500 | IRDP | 500 | Jan Kempdorp (Valspan) | No Business Plan Bulk Services completed | Completed Business Plan Complete planning: environmental and geo-tech studies |

| Project | Project Type & Funding Sources | No. Units | Location | COGHSTA 2022 PIPELINE STATUS | Planned 2022/23 Key Performance Indicator Output |
|--------------------------------------|--------------------------------|-----------|--------------|--|---|
| | | | | Planning completed except for the environment and geo-tech studies Internal Services completed Beneficiary List in place | |
| Jan Kempdorp, Guldenskat, 608 | IRDP | 608 | Jan Kempdorp | No Business Plan No Bulk Services except electricity Planning completed (township establishment, environment and geo-tech) No Internal Services except for water which is completed and roads which are underway Beneficiary List in place | Completed Business Plan Completed bulk and internal services |
| Ganspan, Guldenskat, 531 | IRDP | 531 | Ganspan | Business Plan in place Bulk Services completed except for sanitation which is underway Planning completed (township establishment, environment and geo-tech) Internal Services completed except for sanitation which is underway Beneficiary List in place | Completed bulk and internal services |
| Hartswater, Nkandla 2, 491 | IRDP | 491 | Hartswater | No Business Plan Bulk Services: Water and electricity in progress, sanitation not in place Planning: Environmental and geo-tech studies completed, Township Establishment not in place and Land Preparation and Planning underway | Completed Business Plan Completed planning, bulk and internal services |

| Project | Project Type & Funding Sources | No. Units | Location | COGHSTA 2022 PIPELINE STATUS | Planned 2022/23 Key Performance Indicator Output |
|--|---|-----------------------|------------------------|--|---|
| | | | | Internal Services: Water completed, no sanitation and roads, with electricity underway Beneficiary List in place | |
| Hartswater, Bonita Park, 127 | IRDP | 127 | Hartswater Bonita Park | No Business Plan Bulk Services completed Planning completed, except for the environmental and geo-tech studies which are underway Internal Services completed, except for sanitation which is not in place Beneficiary List in place | Completed Business Plan Completed planning: environmental and geo-tech studies Landfill Rehabilitation in progress |
| Thagadiepelajang, Hartswater, 310 | IRDP Informal Settlement Upgrading Programme Phokwane LM internal funding | 310 GOGHSTA 60 PLM | Hartswater | No Business Plan Bulk Services: Water underway, but sanitation and electricity is not in place Planning: Land Preparation and Planning completed, Township Establishment and General Plan/Township registration underway, and Environmental and Geo-tech studies not in place No Internal Services except for water which is completed and sanitation which is in progress Beneficiary List in place | Completed Business Plan Completed planning: township establishment, environmental and geo-tech studies Completed bulk services |
| Magogong, 32 | IRDP | 32 | Magogong | No Business Plan Bulk Services completed except Sanitation which is not in place Planning complete except Environment and Geo-tech studies and General Plan/Township Registration No Internal Services Beneficiary List in place | Completed Business Plan Completed planning: Environmental and Geo-tech studies, SG Registration Completed bulk services Internal Services underway |

| Project | Project Type & Funding Sources | No. Units | Location | COGHSTA 2022 PIPELINE STATUS | Planned 2022/23 Key Performance Indicator Output |
|---|---|----------------------|--------------|---|---|
| Pampierstad, 600 | Infill (COGHSTA) Integrated Residential Development Programme (PLM) | 600 | Pampierstad | No Business Plan Bulk Services complete Planning complete except the Environment and Geo-tech studies Internal Services completed Beneficiary List in place | Completed Business Plan (which incorporates Asbestos removal) Environment and Geo-tech study completed |
| Andalusia Park Extension, Jan Kempdorp, 20 | IRDP | 20 GOGHSTA 25 PLM | Jan Kempdorp | No Business Plan Bulk Services complete Planning complete except the Environment and Geo-tech studies Internal Services completed Beneficiary List in place | Completed Business Plan SG Registration Top structure |
| Andalusia Park, Jan Kempdorp, 25 | IRDP | 25 GOGHSTA 20 PLM | Jan Kempdorp | No Business Plan Bulk Services complete Planning complete except the Environment and Geo-tech studies Internal Services completed Beneficiary List in place | Completed Business Plan SG Registration Top structure |

Table 39: Phokwane LM Housing Projects Pipeline 2022/23

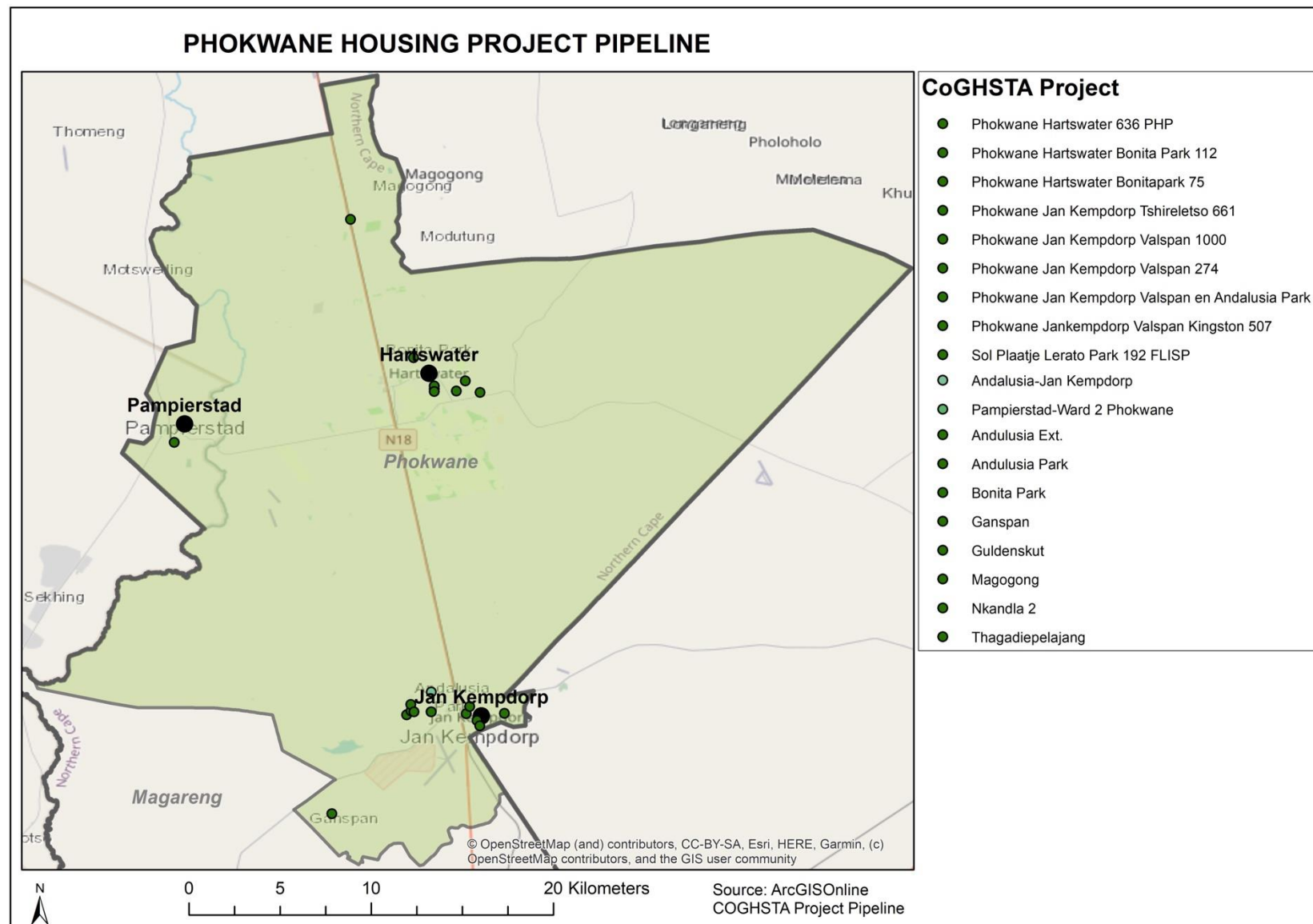
(Phokwane LM Housing Projects not on the COGHSTA Housing Pipeline 2022)

| Project | Project Type & Funding Sources | No. Units | Location | Status 2021/22 (according to PLM) | Planned 2022/23 Key Performance Indicator Output |
|--|---|-----------|------------------------|--|--|
| Portion of Erf 775, Vaalharts (Ganspan), Settlement B | Informal Settlements Upgrading Programme Phokwane LM Internal Funding | 150 | Ganspan (Turfloop) | Bulk sanitation & roads in progress No electricity Informal settlement to be formalised Relocation to be done due to environmental problems Still under planning | Planning completed Relocation of settlement |
| Pampierstad, 300 | Social housing/ Basic Subsidy Phokwane LM Internal funding | 300 | Pampierstad | Still under planning | Planning completed |
| Erf 259, Hartswater, Nkandla Phase II, 300 | Social housing/ Basic Subsidy Phokwane LM Internal funding | 300 | Hartswater | Still under planning | Planning completed |
| Guldenskat, Ganspan, 22 | Phokwane LM internal funding | 22 | Guldenskat and Ganspan | Still under planning | Planning completed |
| Erf 5128, Valspan, 40 | Phokwane LM internal funding | 40 | Valspan | EIA in progress Town Planning has not begun Under progress | Planning completed |
| Jan Kempdorp, Sonderwater, 150 | Informal Settlements Upgrading Programme Phokwane LM Internal Funding | 150 | Jan Kempdorp (Valspan) | Informal settlement which is to be relocated because it is located next to a sewer plant | Settlement relocated |

| Project | Project Type & Funding Sources | No. Units | Location | Status 2021/22 (according to PLM) | Planned 2022/23 Key Performance Indicator Output |
|---------------------------------------|---|-----------|------------------------|---|---|
| Angela King, Jan Kempdorp, 310 | Informal Settlements Upgrading Programme Phokwane LM Internal Funding | 310 | Jan Kempdorp (Valspan) | Town planning completed Bulk and internal Services required | Bulk and internal services completed |
| Ganspan, Turfloop, 150 | IRDP | 150 | Ganspan | Relocation underway | Relocation complete |
| Ganspan, D Block, 144 | IRDP | 144 | Ganspan | Bulk completed Internal services needed | Internal services completed |
| Ganspan, Donkerhoek, 150 | IRDP | 150 | Ganspan | Internal services to be completed | Internal services completed |
| Hartswater, Utlwanang, 235 | IRDP | 235 | Hartswater | No bulk services Electricity provided Internal services needed SG Registration not in place | Electricity and Internal services completed |
| Hartswater, Thagas Hill, 310 | IRDP Informal Settlement Upgrading Programme Phokwane LM internal funding | 310 | Hartswater | Surveying and pegging completed Awaiting SG registration No bulk, just communal standpipes | SG Registration completed and bulk and internal services completed |
| Hartswater, Riemvasmaak, 200 | Informal Settlement Upgrading Programme | 200 | Hartswater | Informal settlement No planning at this point Requested assistance from HDA Settled next to the canal which is a health risk | Requested assistance from HAD with the procurement of land Solution identified |

| Project | Project Type & Funding Sources | No. Units | Location | Status 2021/22 (according to PLM) | Planned 2022/23 Key Performance Indicator Output |
|------------------------------------|---|-----------|-------------|--|--|
| | Phokwane LM internal funding | | | | |
| Pampierstad, Searelela, 250 | Informal Settlement Upgrading Programme Phokwane LM internal funding | 250 | Pampierstad | Still under planning Informal Settlement with Tribal land issues as the boundaries are unclear. Electricity has been supplied but not bulk services. | SG Registration completed & bulk and internal services completed |
| Pampierstad (Library), 10 | Informal Settlement Upgrading Programme Phokwane LM internal funding | 10 | Pampierstad | To be included in Searelela 250 project (above) Graves have been identified on the site. Geological study and Grave Site clearance is required. | Geo-tech study completed Grave clearance completed |

Figure 60: Housing Projects in Phokwane LM



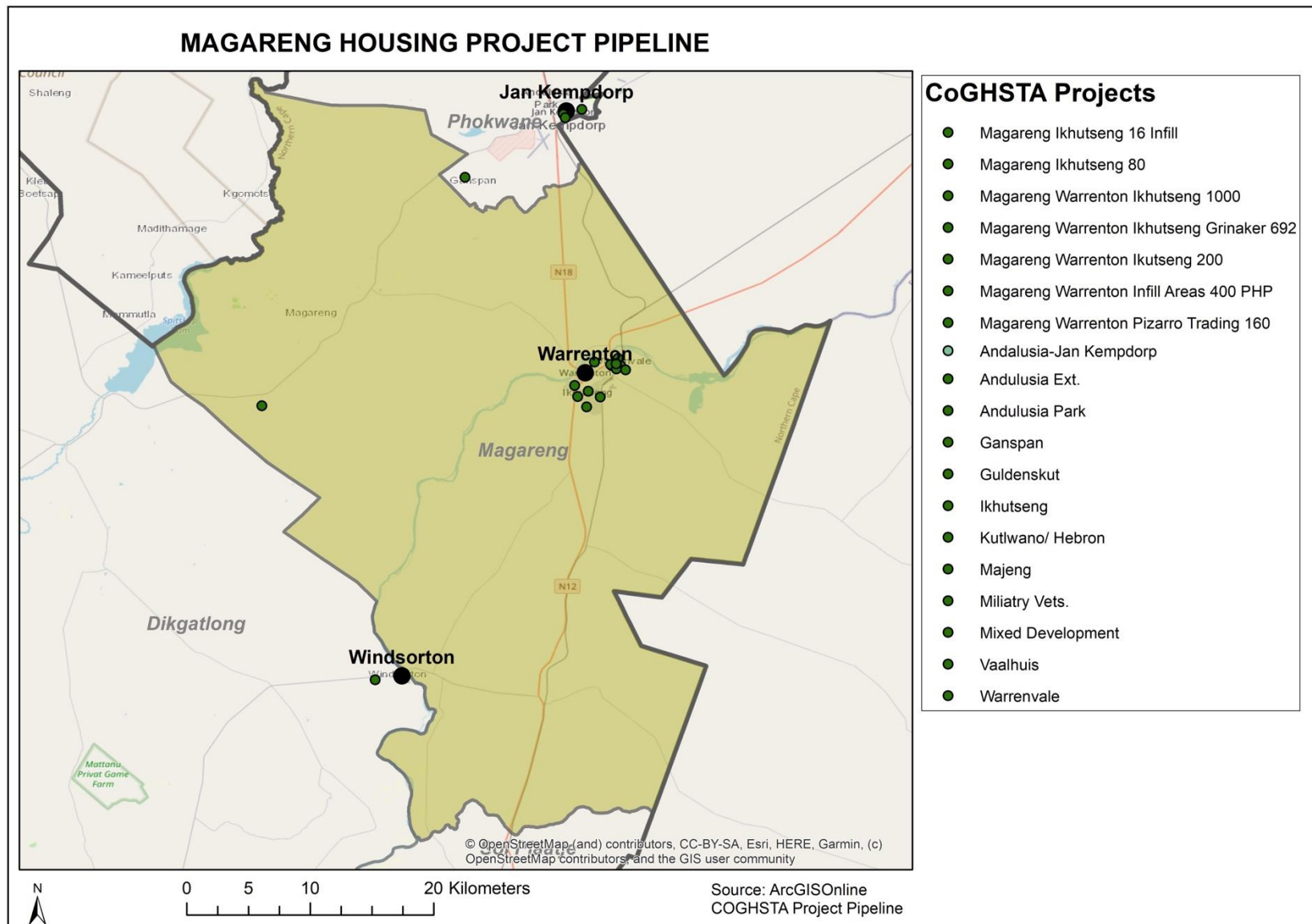
4.1.3. Magareng LM

Table 40: Magareng LM COGHSTA Housing Pipeline 2022/23

| Project | Project Type & Funding Sources | No. Units | Location | COGHSTA 2022 PIPELINE STATUS | Planned 2022/23 Key Performance Indicator Output |
|---|--------------------------------|-----------|-----------|--|---|
| Warrenton, Ikhutseng, 1000 | Infill RDP Housing | 1000 | Warrenton | Business Plan in place Bulk Services completed Planning completed (township establishment, environment and geo-tech) Internal Services completed No beneficiary List | Completed beneficiary list Top structures |
| Warrenton, Military Veterans, 110 | RDP | 110 | Warrenton | No Business Plan Insufficient Bulk Services No Planning (township establishment, environment and geo-tech) No Internal Services No beneficiary List | Upgraded Bulk Services Planning underway |
| Warrenton, Warrenvale, 558 | IRDP | 558 | Warrenton | Bulk Services in place except water Planning completed (township establishment, environment and geo-tech) Internal Services completed No beneficiary List | Bulk services completed Complete beneficiary list Top structures |
| Warrenton, 800 (N12 Hospital Development/ Mixed) | IRDP FLSP | 800 | Warrenton | Business Plan in progress Bulk Services completed No Planning (township establishment, environment and geo-tech) | Business Plan completed Planning completed Internal services underway |

| Project | Project Type & Funding Sources | No. Units | Location | COGHSTA 2022 PIPELINE STATUS | Planned 2022/23 Key Performance Indicator Output |
|-----------------------------------|--------------------------------|-----------|-----------|---|---|
| | | | | No Internal Services No beneficiary List | |
| Warrenton, Ikhutseng, 1298 | IRDP | 1298 | Warrenton | Bulk Services insufficient Planning completed (township establishment, environment and geo-tech) Internal Services completed Beneficiary List om place | Upgraded Bulk Services Top structures |
| Warrenton, Vaalhuis, 57 | IRDP | 57 | Warrenton | Business Plan in progress Bulk Services completed Planning: township establishment and land preparation and planning completed, but environment and geo-tech studies and township registration not in place Internal Services completed No beneficiary List | Completed planning (environment and geo-tech studies) |

Figure 61: Housing Projects in Magareng LM



4.1.4. Sol Plaatje LM

Table 41: Sol Plaatje LM COGHSTA Housing Pipeline 2022/23

| Project | Project Type & Funding Sources | No. Units | Location | COGHSTA 2022 PIPELINE STATUS |
|---------------------------|--------------------------------|-----------|---------------|--|
| Colville, 130 | ISUP | 130 | Colville | Business Plan in Progress Bulk Services in Progress Planning completed (Awaiting submission of GPS to the SG office) No Internal Services Beneficiary List in Place |
| Lerato Park, 2000 | ISUP | 2000 | Lerato Park | Business Plan in Progress Bulk Services Completed Planning Completed Internal Services partially services (except for roads and electricity) Beneficiary List in Place |
| Jacksonville, 72 | IRDP | 72 | Jacksonville | Business Plan in Progress Bulk Services in Progress Planning Completed Internal Services in Progress (except for roads and electricity) Beneficiary List |
| Jacksonville, 267 | IRDP | 267 | Jacksonville | Business Plan in Progress Bulk Services in Progress Planning Completed (Awaiting registration) Internal Services not in place Beneficiary List in Place |
| Promised Land, 792 | ISUP | 792 | Promised Land | Business Plan in Progress Bulk Services Planning Completed (Awaiting registration) Internal Services Beneficiary List in place |
| Snake Park, 1700 | ISUP | 1700 | Snake Park | Business Plan in Progress |

| Project | Project Type & Funding Sources | No. Units | Location | COGHSTA 2022 PIPELINE STATUS |
|-----------------------------------|--------------------------------|-----------|------------------------|---|
| | | | | Bulk Services Planning Completed (awaiting registration) Internal Services completed except roads Beneficiary List in place |
| Dingaan Hostels, 203 | CRU | 203 | Dingaan Hostels | Business Plan in Progress Bulk Services Planning Completed Internal Services Completed Beneficiary List in Place |
| Lerato Park FLISP, 192 | FLISP | 192 | Lerato Park FLISP | Business Plan in Progress Bulk Services Planning Completed Internal Services Completed Beneficiary List in Place |
| FLISP Secondary Market, 35 | FLISP | 35 | FLISP Secondary Market | Business Plan in Progress Bulk Services Planning Completed Internal Services Completed Beneficiary List in Place |
| Tswelelang, 440 | IRDP | 440 | Tswelelang | Business Plan in Progress Bulk Services Planning Completed Internal Services Completed Beneficiary List in Place |
| Motswedimosa, 656 | IRDP | 656 | Motswedimosa | Business Plan in Progress Bulk Services Planning Completed Internal Services Completed (except roads) Beneficiary List in Place |

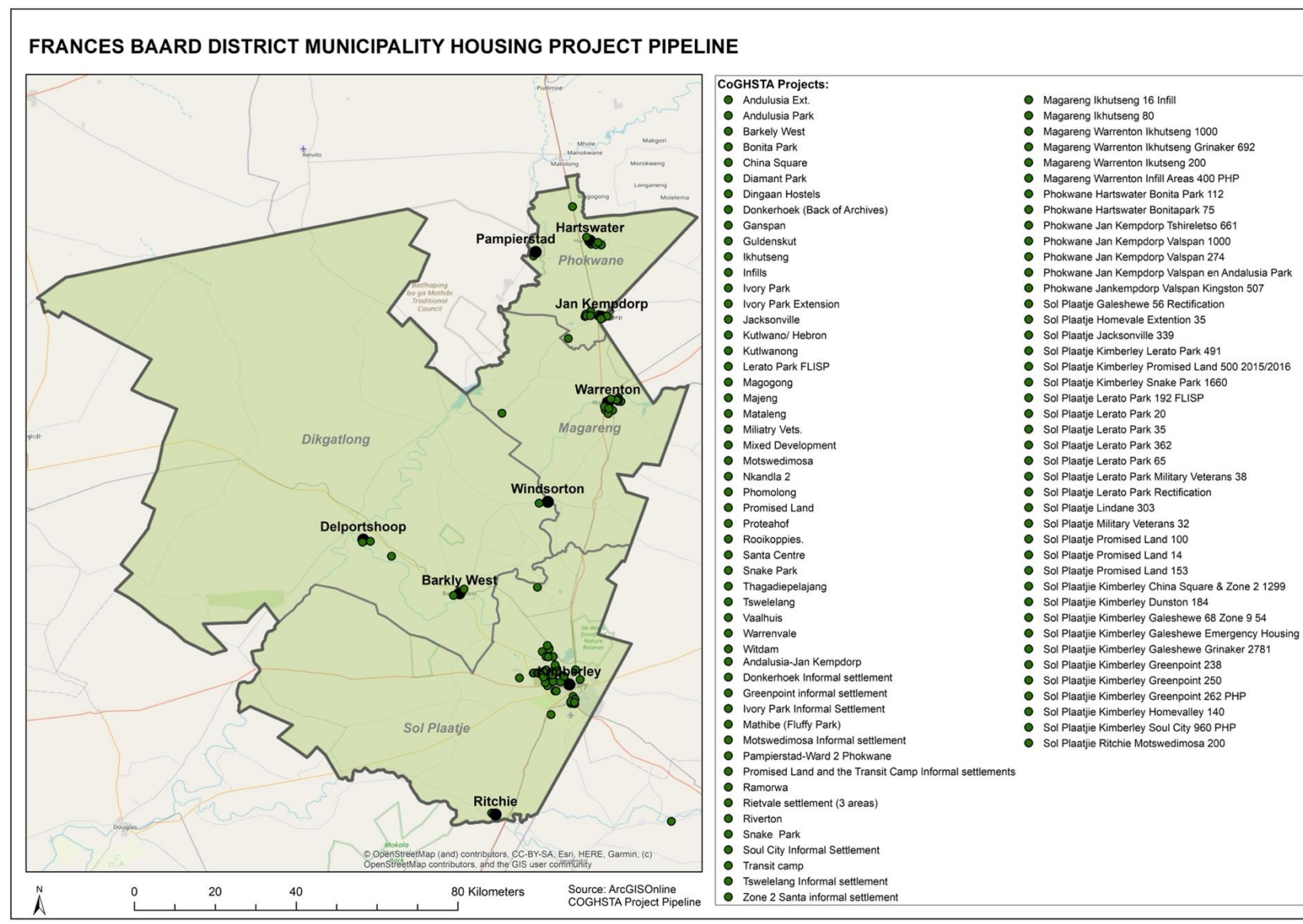
| Project | Project Type & Funding Sources | No. Units | Location | COGHSTA 2022 PIPELINE STATUS |
|---|--------------------------------|-----------|-------------------------------|--|
| Donkerhoek (Back of Archives), 111 | IRDP | 111 | Donkerhoek (Back of Archives) | Business Plan in Progress Bulk Services Completed except Electricity Planning Completed (awaiting registration) Internal Services not in place Beneficiary List in Place |
| Ivory Park, 1175 | ISUP | 1175 | Ivory Park | Business Plan in Progress Bulk Services not in place except water Planning Completed (awaiting registration) Internal Services not in place Beneficiary List in Place |
| Santa Centre, 139 | ISUP | 139 | Santa Centre | Business Plan in Progress Bulk Services not in place except water Planning Completed (awaiting registration) Internal Services not in place Beneficiary List in Place |
| Kutlwanong, 49 | ISUP | 49 | Kutlwanong | Business Plan in Progress Bulk Services not in place except water Planning Completed Internal Services not in place Beneficiary List in Place |
| Phomolong, 285 | ISUP | 285 | Phomolong | Business Plan in Progress Bulk Services in Place except Sanitation Planning Completed (awaiting registration) Internal Services not in place Beneficiary List in Place |
| Phomolong FLSP, 163 | FLISP | 163 | Phomolong FLSP | Business Plan in Progress Bulk Services no in place Planning Completed Internal Services not in place except water |

| Project | Project Type & Funding Sources | No. Units | Location | COGHSTA 2022 PIPELINE STATUS |
|-----------------------------------|--------------------------------|-----------|-----------------------|---|
| | | | | Beneficiary List in Place |
| Nobengula / Soul City, 101 | FLISP | 101 | Nobengula / Soul City | Business Plan in Progress Bulk Services in Place except Electricity Planning Completed Internal Services not in place Beneficiary List not in place |
| Riverton, 174 | ISUP | 174 | Riverton | Business Plan in Progress Bulk Services not in Place except Water Planning not Completed Internal Services not in place (except water) Beneficiary List in Place |
| Golf Course, 1100 | IRDP | 1100 | Golf Course | Business Plan in Progress Bulk Services not in Place except Water Planning not Completed Internal Services not in place (except water) Beneficiary List not in place |
| Ramorwa, 106 | ISUP | 106 | Ramorwa | Business Plan in Progress Bulk Services not in Place except Water Planning not Completed Internal Services not in place (except water) Beneficiary List not in place |
| Diamant Park, 892 | ISUP | 892 | Diamant Park | Business Plan in Progress Bulk Services in Place except Electricity Planning Completed (except for registration) Internal Services not in place Beneficiary List not in place |
| Dunstin/Ubuntu, 184 | IRDP | 184 | Dunstin/ Ubuntu | Business Plan in Progress Bulk Services Completed except Electricity Planning Completed |

| Project | Project Type & Funding Sources | No. Units | Location | COGHSTA 2022 PIPELINE STATUS |
|--------------------------------------|--------------------------------|-----------|--------------------------|--|
| | | | | Internal Services not in place Beneficiary List in Place |
| China Square, 68 | IRDP | 68 | China Square | Business Plan in Progress Bulk Services Completed except Electricity Planning Completed (except Land Preparation) Internal Services not in place Beneficiary List in Place |
| Soul City (King Senare), 64 | ISUP | 64 | Soul City (King Senare) | Business Plan in Progress Bulk Services Completed except Electricity Planning Completed Internal Services not in place Beneficiary List in Place |
| Lindelani (transit Camp), 303 | ISUP | 303 | Lindelani (transit Camp) | Business Plan in Progress Bulk Services Completed except Electricity Planning Completed Internal Services not in place Beneficiary List in Place |
| Mathibe "Fluffy Park", 49 | IRDP | 49 | Mathibe "Fluffy Park" | Business Plan in Progress Bulk Services no Completed (except water) Planning not Completed Internal Services no Completed Beneficiary List in Place |
| Ivory Park Extension, 2000 | ISUP | 2000 | Ivory Park Extension | Business Plan not Completed Bulk Services not Completed Planning not Completed Internal Services not Completed Beneficiary List not Completed |
| Ramorwa, 98 | ISUP | 98 | Ramorwa | Business Plan not Completed Bulk Services not Completed |

| Project | Project Type & Funding Sources | No. Units | Location | COGHSTA 2022 PIPELINE STATUS |
|---------|--------------------------------|-----------|----------|---|
| | | | | Planning not Completed Internal Services not Completed Beneficiary List not Completed |

Figure 62: Housing Projects in Frances Baard DM (with coordinates)



5. CONCLUSION

Due to Covid-19 epidemic Frances Baard District Municipality has experienced a considerable slowdown in the delivery of housing while at the same time the local population is experiencing increasingly more challenges due to job losses and the passing of household members that contributed to household income and grants. As South Africa is slowly coming out of the lockdowns and covid restrictions, it is crucial that housing delivery be accelerated in order to support the Frances Baard population.