

# MEMORANDUM

29 October 2015

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## PROPOSED TOWNSHIPS:

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**MAXIM**  
planning solutions

Accredited Town and Regional Planners  
Reg no. 2002/017393/07  
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**MOTIVATION REPORT**  
**PROPOSED TOWNSHIP ESTABLISHMENT**  
**(KURUMAN TOWNSHIPS COMPRISING ERVEN 6755**  
**TO 7683, 7687 TO 8974, 8976 TO 9874, 9876 TO**  
**10748, 10752 TO 11480 AND 11484 TO 12427),**  
**REMOVAL OF RESTRICTIVE TITLE CONDITIONS,**  
**CONSOLIDATION AND SUBDIVISION IN TERMS OF**  
**THE SPATIAL PLANNING AND LAND USE**  
**MANAGEMENT BY-LAW OF THE GA-SEGONYANA**  
**LOCAL MUNICIPALITY (2015) READ WITH THE**  
**SPATIAL PLANNING AND LAND USE MANAGEMENT**  
**ACT, 2013 (ACT 16 OF 2013)**  
**ON**  
**A PORTION OF THE REMAINING EXTENT OF ERF 1,**  
**KURUMAN, A PORTION OF THE REMAINING EXTENT**  
**OF ERF 3, KURUMAN AND A PORTION OF THE**  
**REMAINING EXTENT OF PORTION 3 OF THE FARM**  
**KURUMAN RESERVE NO. 690, ADMINISTRATIVE**  
**DISTRICT KURUMAN, NORTHERN CAPE PROVINCE**

**CHAPTER 1: INTRODUCTION**

**1.1 INTRODUCTION**

Koot Raubenheimer (ID No. 700305 5192 089) of the company Maxim Planning Solutions (Pty) Ltd (2002/017393/07) was appointed by the Ga-Segonyana Local Municipality (NC452) to attend to the establishment of six (6) proposed Kuruman township areas comprising a total of 5662 erven as part of the project to formalize the current informal settlement area of Promise Land and to provide additional erven for settlement purposes to address the short term need for erven to avoid further uncoordinated informal occupation of the specific development area whilst similarly providing erven that can be utilized for higher density residential purposes. The project constitutes a collaboration between the Housing Development Agency, the Department of Co-operative Governance, Human Settlements

and Traditional Affairs (COGHSTA) and the Ga-Segonyana Local Municipality to upgrade the Promise Land informal settlement area by properly planning the development area as an integrated human settlement and formalizing same in a proper township establishment process to allow for the co-ordinated installation of services and the transfer of erven to the beneficiaries thereof.

As integral part of the establishment of the proposed six (6) Kuruman township areas, application is similarly made for the removal of certain restrictive title conditions contained in the title deed (Deed of Grant No. K F4/5) of the Remaining Extent of Erf 1, Kuruman, the subdivision of the Remaining Extent of Erf 1, Kuruman, the Remaining Extent of Erf 3 and the Remaining Extent of Portion 3 of the farm Kuruman Reserve No. 690, Administrative District Kuruman as well as the consolidation of some of the subdivided portions detailed above will constitute the small scale diagrams of the proposed six (6) Kuruman township areas.

The planning of the proposed new township areas at Kuruman was conducted in an integrated manner and focussed on the entire designated development area. This integrated planning yielded a township area comprising 5 473 residential erven (that can be utilized for a variety of different housing typologies) together with an additional 189 erven earmarked for non-residential support functions (inclusive of streets). As per the procedural requirements of the Surveyor-General (Bloemfontein), it was indicated that the office of the Surveyor-General (Bloemfontein) restricts the number of erven included on a General Plan to a maximum of approximately 1200 erven to expedite the examination of the survey records and General Plans. Due to the fore-mentioned requirement, it was necessary to divide the proposed integrated human settlement into six (6) separate township areas namely:

- The proposed township Kuruman comprising Erven 6755 to 7683;
- The proposed township Kuruman comprising Erven 7687 to 8974;
- The proposed township Kuruman comprising Erven 8976 to 9874;
- The proposed township Kuruman comprising Erven 9876 to 10748;
- The proposed township Kuruman comprising Erven 10752 to 11480; and
- The proposed township Kuruman comprising Erven 11484 to 12427.

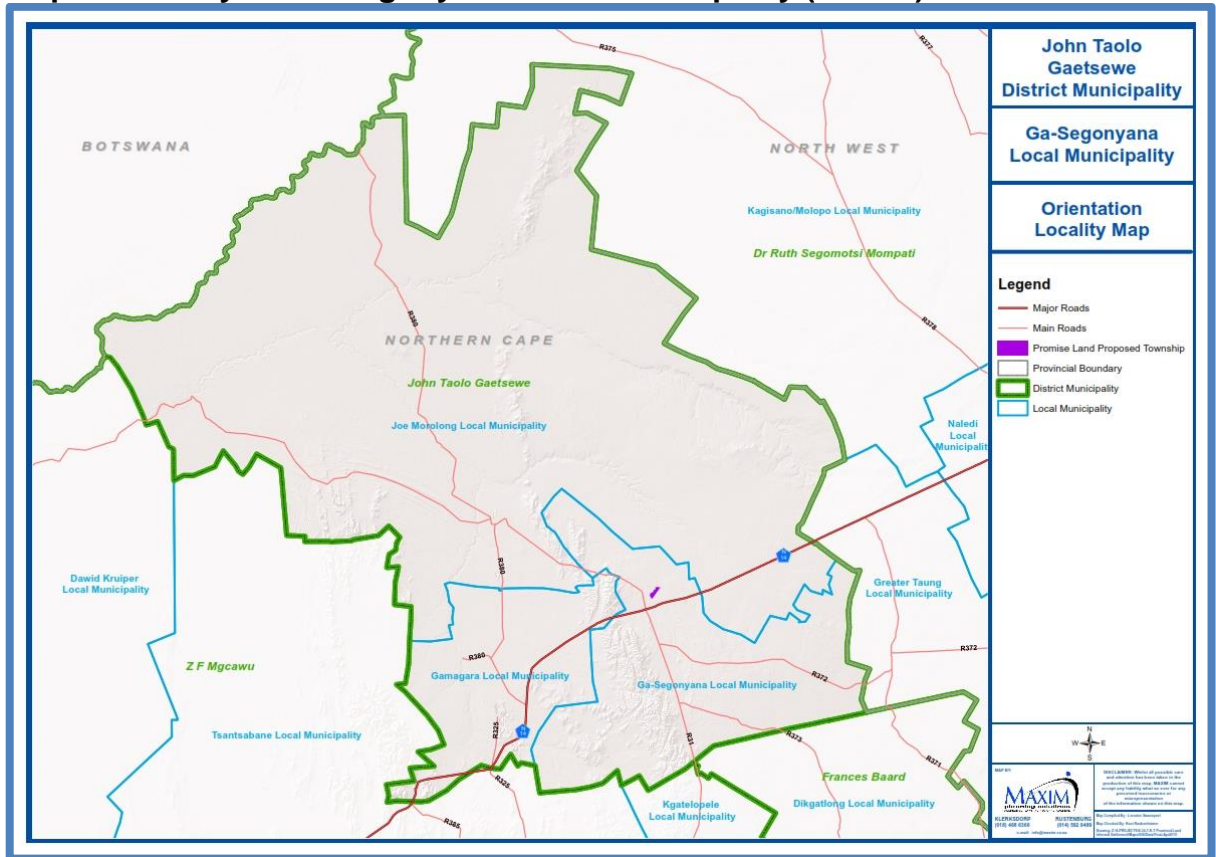
## **1.2 BACKGROUND OF GA-SEGONYANA LOCAL MUNICIPALITY**

### **1.2.1 REGIONAL LOCALITY**

Ga-Segonyana Local Municipality is an administrative area in the John Taolo Gaetsewe District of the Northern Cape in South Africa. John Taolo Gaetsewe (formerly Kgalagadi) is one of the five districts of the Northern Cape province of South Africa. The Municipality's economy is mainly based on the surrounding mining and agricultural activities. The municipal seat, Kuruman, is situated on the Namaquari

route, forming part of the main route between Gauteng, Namibia and Cape Town via Upington.

**Map 1: Locality of Ga-Segonyana Local Municipality (NC452) in district context**



Ga-Segonyana Local Municipality was a cross-border municipality, straddling between the Northern Cape and North West Provinces. Following the re-demarcation process both the Ga-Segonyana Local Municipality and the John Taolo Gaetsewe district are located within the Northern Cape Province.

Ga-Segonyana Local Municipality was established in 2000 through the amalgamation of Kuruman and Mothibistad Municipalities.

Ga-Segonyana Local Municipality comprises of 13 electoral wards, and is one of the three local municipalities that fall under John Taolo Gaetsewe District Municipality, with its head offices in Kuruman.

The municipality consists of 33 residential areas of which 20% is constituted of urban and peri-urban areas and 80% is rural areas. All rural residential areas are administered by the Traditional Authorities. These areas do not obtain title deeds because they are not formalised. There are two Paramount Chiefs representing the Batlharo Ba-ga Motlhwane and the Batlhaping Ba-ga Jantjie in the municipal council.



Mining activity is the most important economic sector. Although there is little or no mining activity in the Ga-Segonyana municipal area itself, manganese, iron ore, tiger’s eye and blue asbestos deposits are being mined in neighbouring municipal areas.

Ga-Segonyana is part of the Gamagara Corridor, which has the richest and most sought-after iron ore, manganese, diamond and lime resources in the world.

Mining and agriculture are the core economic activities in the municipal area.

The expansion of mining activities and influx of workers have increased the housing backlog in and around Kuruman

The municipal area has significant historical and natural tourist attractions which includes amongst other *‘The Eye’, Wonderwerk cave and rock paintings* as well as the *Robert Moffat Mission Station*. Kuruman is the most active business area in the municipality.

Kuruman is classified as a First Order Settlement in terms of the Settlement hierarchy within the John Taolo Gaetsewe District Municipality (refer **Table 1**). First order settlements constitute areas of significant size, with the greatest range of services and facilities in the JTGDM, and in principle, the most sustainable locations for major growth, e.g. Towns.

**Table 1: Settlement hierarchy within the John Taolo Gaetsewe District Municipality**

Municipality/Description	Ga-Segonyana LM	Gamagara LM	Joe Morolong
First Order Settlement	Kuruman	Kathu	Hotazel and Churchill
Second Order Settlement	Mothibistat, Wrenchville, Bankhara-Bodulong, Seoding, Magobe, Batlharos, etc.	Olifantshoek, Sishen and Dibeng, Dingleton	Vanzylsrus and McCarthysrus
Third Order Settlement	Maruping, Seven Miles, Magojaneng, Kagung, etc.	None	Heuningvlei, Laxey, Bothitong, Dithakong, etc
Fourth Order Settlement	Gamopedi, Gantatelang, Pietbos, Gasehubane, Thamoyanche, etc.	None	Perth, Mahukhubung, Padstow, Eiffel, Ditshelabeleng, etc

Ga-Segonyana means a small calabash with bubbling water i.e. *‘The Eye’*.

## 1.2.2 DEMOGRAPHICS

The demographic profile detailed below provides an economic overview of the Ga-Segonyana Local Municipality (NC452) in respect of the sectoral composition (GVA) and employment trends, the population and households as well as household income. The information contained in sections 1.2.2.1 to 1.2.2.4 is based the John Taolo Gaetsewe District Municipality Integrated Development Plan (2018-19 review), the Municipal Profile compiled by the Housing Development Agency (HDA) as well as a Pre-feasibility Report compiled by Gudlhuza Development Solutions (2016)

### 1.2.2.1 Economic Overview

In 2011, the John Taolo District had an unemployment rate of 30%. However, this figure does include the discouraged work-seekers which will increase the unemployment rate to 47% if it were to be added. With an unemployment rate of 18%, the Gamagara Local Municipality is the only Municipality which has a lower unemployment rate than the District. The Joe Morolong Municipality has the highest unemployment rate in the District of 40%.

**Table 2: Employment profile of the John Taolo Gaetsewe District Municipality**

Area	Employed	Unemployed	Discouraged Work-seeker	Other not economically active	Age less than 15 years	N/A	Total
Northern Cape	282791	106723	39913	306291	-	410143	1145861
DC45: John Taolo Gaetsewe	43825	18518	10967	64361	-	87127	224799
NC451: Joe Morolong	7828	4912	6200	29569	-	41022	89530
NC452: Ga-Segonyana	19940	10154	3895	25238	-	34426	93651
NC453: Gamagara	16058	3453	873	9553	-	11680	41617

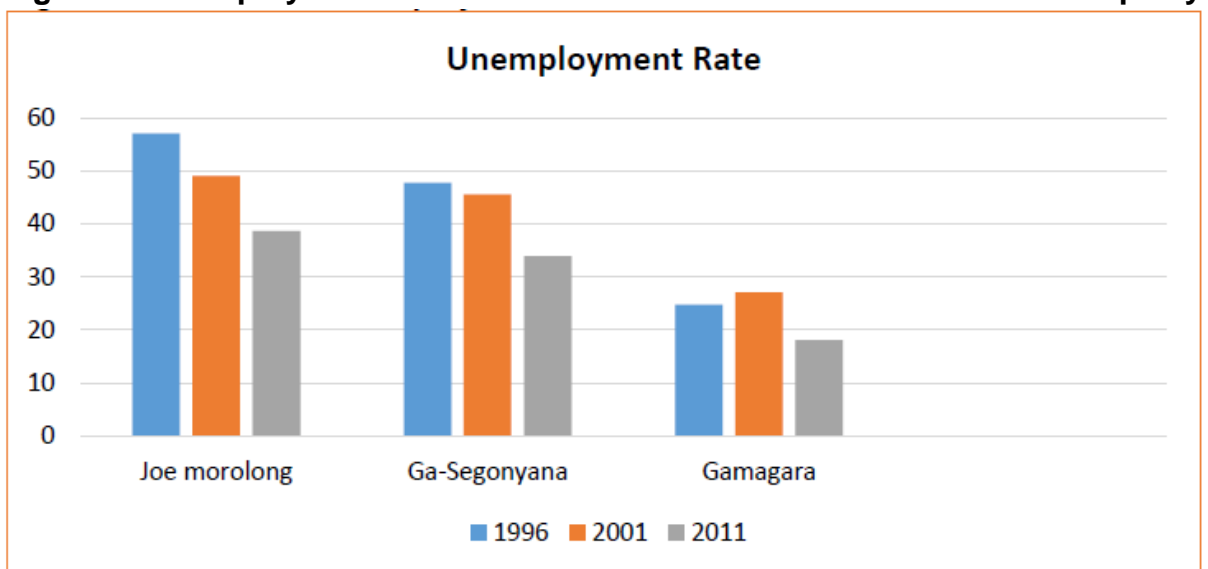
Almost 41% District population receives no monthly income, and around 24% earn less than R400 a month. These figures indicate the poor economic condition of the District. Of all the LMs, Gamagara is in better position. In this municipality, approximately 32% people receives no income as compared to 42% in Joe Morolong and 44% in Ga-Segonyana.

**Table 3: Income profile of the John Taolo Gaetsewe District Municipality**

Category	Northern Cape	DC45: John Taolo Gaetsewe	NC451: Joe Morolong	NC452: Ga-Segonyana	NC453: Gamagara
No income	446759	91618	37428	40856	13334
R 1 - R 400	211687	54726	30237	21626	2863
R 401 - R 800	39314	6435	2702	2557	1177
R 801 - R 1 600	181198	24659	11228	9561	3870
R 1 601 - R 3 200	61469	9429	1411	4345	3673
R 3 201 - R 6 400	44516	7624	1097	3873	2654
R 6 401 - R 12 800	40617	7395	1215	3612	2569
R 12 801 - R 25 600	24971	4438	772	1903	1763
R 25 601 - R 51 200	7085	1468	202	510	756
R 51 201 - R 102 400	1688	266	35	93	138
R 102 401 - R 204 800	984	135	23	52	60
R 204 801 or more	703	89	14	38	36
Unspecified	66693	13160	2540	3708	6912
Not applicable	18178	3356	625	917	1814
<b>Total</b>	<b>1145861</b>	<b>224799</b>	<b>89530</b>	<b>93651</b>	<b>41617</b>

Nearly one in every three persons between 15 and 65 years of age in the JTGDM (30.1%) were unemployed in 2011. This was the second highest figure out of the five DMs, 2% higher than the Northern Cape Provincial figure. Within the local municipalities, Joe Morolong LM has the highest unemployment rate at 38.7% in 2011.

**Figure 1: Unemployment Rate in the John Taolo Gaetsewe District Municipality**



The municipality's economy is mainly based on the surrounding mining and agricultural activities. It needs to be mentioned that 64,2% of households in the municipality have an average household income ranging between R0 and R38 000.

Based on a Social Facilitation Report compiled by Kayamandi Development Services (Pty) Ltd (2016), the following was stated in respect of source of income, level of income and employment status of the Promise Land settlement area.

The table below summarises the source of income received by the household as a whole and includes all salaries, wages, money sent to people in the household, income from businesses, grants, pensions and rent. This also gives an indication of the broad sector of employment and the subsequent income vulnerability of households.

**Table 4: Sources of Income – Promise Land**

Income Source	% distribution
Salaries and Wages	37%
Social Grants	23%
Piece Jobs	15%
Own Business	4%
Other	5%
None	17%

The table above show that only 23% of all households in Promised Land Informal Settlement depend on some type of social grant. Despite the fact that social grants are a stable source of income, it indicates high levels of economic vulnerability, unemployment and state dependency. More than 15% of households earn an income from piece jobs which is not a stable income and 17% of the residents earn no income at all. This indicates that majority of all households (55%) are economically vulnerable. More than one third of all households earn an income from salaries and wages (37%) which is a more stable form of income. The average monthly household income (R 2 796) in Promise Land Informal Settlement indicates relatively stable economic environment. Households are especially dependent on child grants, disability grants and old age pension.

The table below sets out the monthly household income levels in Promise Land Informal Settlement:

**Table 5: Monthly Household Income Levels – Promise Land**

Income Level	% distribution
None	18%
R1 – R500	9%
R501 – R1 500	20%
R1 501 – R3 500	26%
R3 501 – R7 500	17%
R7 500+	10%
<b>Total</b>	<b>100%</b>
<b>Average total monthly household income</b>	<b>R 2 796</b>



73% of all households earn below R3500 per month with an average of R2 796 per month – given the average household size that is an average of R1 412 per person per month. Income levels are however still low and contributes to the high level of vulnerability in the informal settlement.

The stability of income from month to month is also a very important factor to consider when assessing a community.

**Table 6: Stability of Household Income – Promise Land**

Income group	Stable income	Unstable income
None	12%	7%
R1 - R500	5%	4%
R501 - R1 500	11%	9%
R1 501 - R3 500	12%	12%
R3 501 - R7 500	9%	9%
R7 501+	5%	4%
<b>Total</b>	<b>54%</b>	<b>46%</b>

It is clear from the table above that most household’s income is stable. It is however important to note that 12% of households in Promised Land receive ‘No income’ on a regular basis. Nonetheless, a large portion of the households remains vulnerable due to income instability.

The table below shows the employment status of all people living in Promised Land Informal Settlement. The employment and unemployment rate is calculated in terms of the Economically Active Population (EAP) while the discouraged workers are calculated in terms of the Potentially Economically Active Population (PEAP). PEAP includes all people that falls within the working age 15-65 while EAP is also all people between the ages of 15-65 but excludes discouraged workers (people who have not looked for a job in the last 4 weeks) or not economically active people (scholars, disabled).

**Table 7: Employment Status – Promise Land**

Employment Status	% distribution
Employed	44% of EAP
Unemployed	33% of EAP
Discouraged/other/not economically active	29% of PEAP

The table above confirms that there is a high level of poverty through high unemployment rates and discouraged work seekers in Promise Land Informal Settlement. This might either be as a result of too little employment opportunities or

due to a misalignment of skills – these are explored in more detail below and later in the document.

The broad sector of employment for wage/salary earning people is illustrated in the table below.

**Table 8: Employment Sector – Promise Land**

Employment Sector	% distribution
Domestic work or gardening in a <b>private household</b> for a salary or wage	13%
Work for a <b>formal company</b> for a salary or a wage	79%
Work for an <b>informal company</b> for a salary or wage	9%

The table above illustrates that most wage/salary earning people work for a formal company and that the people working for a private household or in the informal sector is surprisingly small. Salary and wages in the formal sector (79%) are relatively stable and corresponds with information regarding the stability of income (54%) discussed above. It is clear that skills in the formal economy are in demand but it is important to understand which industries in the formal and private household sector are actively employing people and therefore the table below sets out the employment per industry in the formal economy:

**Table 9: Employment Industry – Promise Land**

Employment Sector	% distribution
Community, social and personal services	27.4%
Mining	26.8%
Construction	20.1%
Wholesale and retail trade	13.1%
Transport, storage and communication	3.8%
Finance and business services	3.3%
Manufacturing	2.5%
Agriculture, hunting and forestry	1.4%
Electricity, gas and water	0.9%
Other	0.8%

It is clear that the majority of employed people in the formal sector are employed in community, social and personal services (27.4%) as well as in the mining (26.8%) industry. The large number of persons employed in the community, social and personal services indicate that large portions of residents are government employed as well as domestic workers, hairdressers, teachers etc. Skills will therefore have to be aligned with the skills required in the mining sector and should also be influenced by the demand for certain skills in the area.

The Progress out of Poverty Index (PPI) indicates the likelihood of a household living below the poverty line. This is done through computing different characteristics about households, and is used by organisations and businesses to measure poverty.

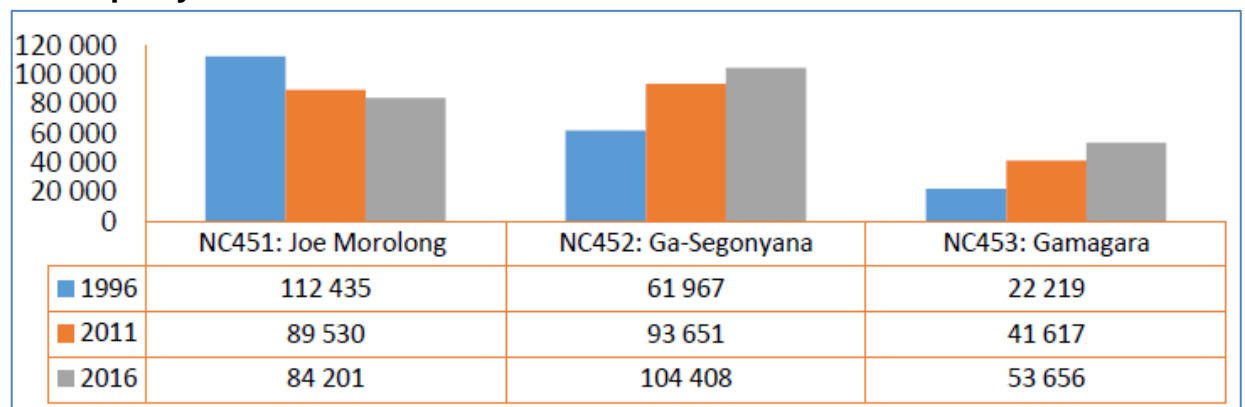
The integration of poverty data into assessments and strategic decision-making documents can assist the correct suggestion of projects and programmes to relieve poverty according to each area. These could include the eligibility standard for services in order to direct services to the households who need them the most.

The PPI score for the average household in Promise Land is 37, which puts it in the category of a PPI score between 35 and 39. This category indicates that the likelihood of households being below the National Poverty Line is 39.3% and that 15.5% are likely below the National Food Poverty Line. Having more than one third of the households in Promised Land being below the poverty line is a large concern and indicates that efforts should be focussed on improving the livelihoods of the residents in Promise Land.

### 1.2.2.2 Population Overview

The population of the John Taolo Gaetsewe District Municipality has had an increase of about 17 465; 224 799 in 2011 to 242 264 in 2016. The increase of the population in the District is evident in the local municipalities of Ga-Segonyana (11.49) and Gamagara (28.93). There has been a major decline of about 6.3% in the population of Joe Morolong Local Municipality; this is mainly due to the out-migration from the municipality to the Ga-Segonyana and Gamagara Local Municipalities.

**Figure 2: Population Composition in the John Taolo Gaetsewe District Municipality**

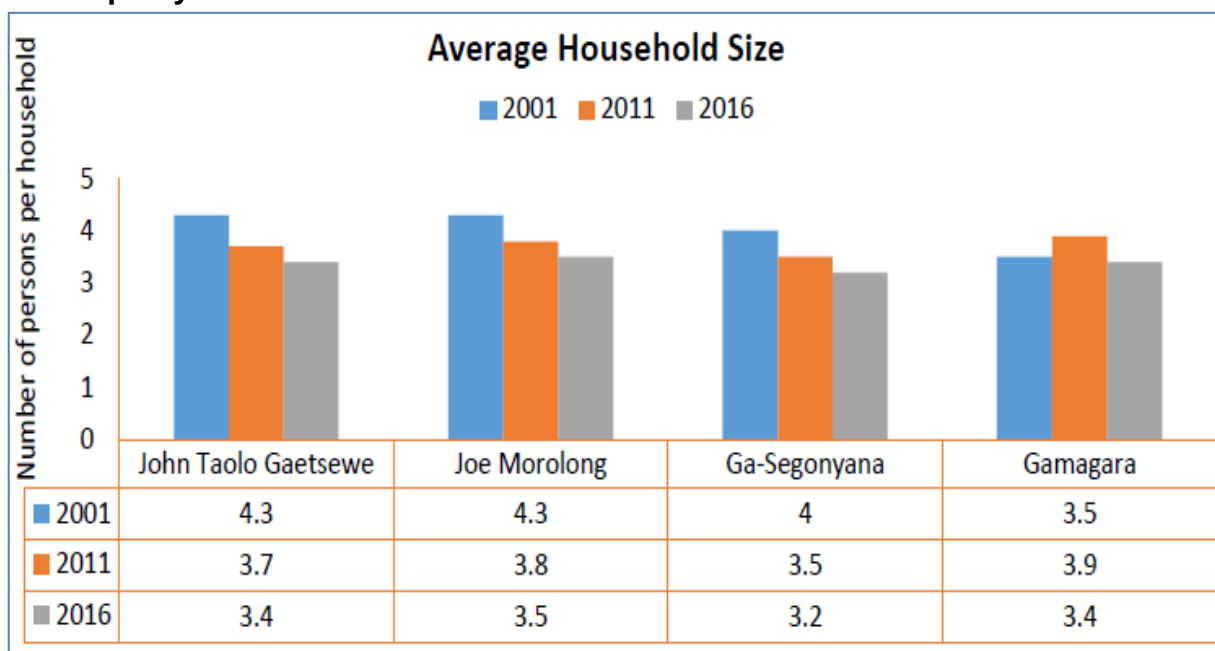


According to Census 2011, Ga-Segonyana Local Municipality had a total population of 93 651 with a growth rate (between 2001 and 2011) of 2,85%. According to the John Taolo Gaetsewe District Municipality Integrated Development Plan (2018-19), the total population of the Ga-Segonyana Local Municipality was estimated at 104 408 people in 2016.

The population density is 21 persons per km<sup>2</sup>. The municipality has 26 816 total number of households with an average household size of 3.5 (2011) which decreased to 3.2 in 2016. It needs to be mentioned that 42.7% of the households are female headed (Stats SA, 2011).

The household sizes decreased from 2011 to 2016 in all local municipalities within the district. A huge decrease is experienced in Gamagara LM from 3.9 in 2011 to 3.4 in 2016, this may be due to the high number of rental accommodation status which includes the in-migration (within the district) and out-migration (from outside the district) arising from work opportunities in Gamagara LM. The low decrease in Joe Morolong LM and Ga-Segonyana LM is as a result of increase in number of households and high dependency due to level of poverty within the areas, especially in Joe Morolong LM where high number of outmigration is experienced.

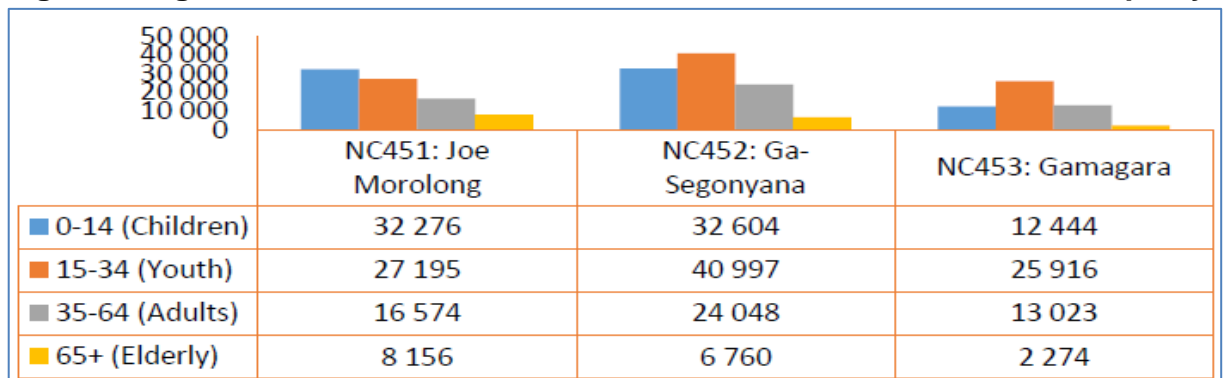
**Figure 3: Average Household Size in the John Taolo Gaetsewe District Municipality**



The age profile of the JTGDM is as follows: 0 - 14 years: 31.92%; 15 - 64 years: 63.32%; and older than 65: 4.76%. It is not that different from the national profile on Census 2011 (i.e. 0 - 14 years: 31.03%; 15 - 64 years: 63.59%; and older than 65: 5.39%). The figure below shows a generally youthful population between the age segment 15 – 36 of 100 973 people i.e. 41.68%.



**Figure 4: Age Distribution within the John Taolo Gaetsewe District Municipality**



The gender split in the JTGDM is 49.12% male and 50.88% female. There are generally more females than males in all municipalities with the exception of Gamagara; where there are more males than females, mainly because of the presence of job opportunities that attract men from other areas outside the district.

**Table 10: Age Distribution within the John Taolo Gaetsewe District Municipality**

	DC45: John Taolo Gaetsewe	NC451: Joe Morolong	NC452: Ga-Segonyana	NC453: Gamagara
Male	118 988	38 206	50 483	30 299
Female	123 276	45 995	53 925	23 356

Based on a Social Facilitation Report compiled by Kayamandi Development Services (Pty) Ltd (2016) the total population, total number of households and the average household size for Promise Land Informal Settlement are summarised in the table below.

**Table 11: Population and household summary – Promise Land**

Population Summary – Promised Land Informal Settlement	
Total population	3003
Total number of households	1511
Average household size	1.98 persons per household

Since 2016 during the compilation of the Social Facilitation Report the number of households in Promise Land increased from 1151 to 3173 households (as determined during the physical land use survey). This figure has since increased by more than 500 households due to continued influx to this area.

Based on the average persons per household, according to the Social Facilitation Report 2016, the total population of Promised Land is estimated at ± 8567 people (according to the 2016 report the average household size varies between 1,7 persons per household to 3,5 persons per household, with an average of 2,7 persons per household).

The following table shows the different family structures found within Promised Land Informal Settlement. It is evident that only 17% of households are nuclear families (mother, father and children) and 3% extended families (nuclear + mother/father/siblings/cousins etc.). These households have more stable social and economic conditions in general. The percentage single parent households are approximately 16%. Single parent households are characterised as extremely vulnerable due to potentially unstable social and economic conditions. The informal settlement has unusually large portion one person households, which consumes more than half of the household composition in Promised Land Informal Settlement. One person households are mainly due to young people moving out of their childhood home to a place of their own and might also indicate a large population of migrant workers in the area.

**Table 12: Household Composition and Gender Split – Promise Land**

Household Composition	% distribution
One person household	54%
Extended family	3%
Nuclear family	17%
Single parent family	16%
Couple no children family	10%
Head of Household Gender Split	% distribution
Male	65%
Female	35%

The following table gives insight into the age and gender distribution of household heads in Promise Land Informal Settlement.

**Table 13: Gender Distribution and Household Heads – Promise Land**

Age group	Male	Female	Total
<18 years old	5	8	13
19-24 years old	87	50	137
25-34 years old	433	236	670
35-44 years old	142	278	420
45-54 years old	117	76	193
55-64 years old	41	17	58
65+	14	6	20
<b>Total</b>	<b>975</b>	<b>535</b>	<b>1 511</b>

The table shows that the majority of household heads between the ages of 25-34 years of age followed by 35-44 years of age group. The 25-34 years of age group is still fairly

young age for household heads however still old enough to assume household stability and potentially mature decision-making in the households. The age distribution between male and female household heads is skewed towards a more male dominated household. Females younger than 18 years of age could be seen as the group which is the most vulnerable, as the settlement not properly lit at night which could leave them exposed to becoming victims of crime.

The following table compares the average household size with the age of household heads.

**Table 14: Average Household Size by Age of Household Head – Promise Land**

Age of Head of Household	Average size of household
<18	1.8 persons
19-24	2.5 persons
25-34	3.4 persons
35-44	3.5 persons
45-54	3.5 persons
55-64	2.5 persons
65+	1.7 persons

The household size compared to the age of the household head also gives an indication of household stability and maturity. The more household members and the younger the household head the more vulnerable and immature the households tend to be. The age groups of 24 years old and younger are naturally lower, whereas 25-54 tends to be naturally higher while 65+ are also lower.

The following table highlights the citizenship status of household heads in Promised Land Informal Settlement:

**Table 15: Average Household Size by Age of Household Head – Promise Land**

Citizenship status (Head of Household)	% distribution
Proof of SA citizenship	92%
No proof	8%

The housing delivery and upgrading process is often made difficult when foreigners are involved and/or when household heads do not have any form of South African identification. However, as can be seen in the table above, the vast majority of household heads (92%) in Promise Land Informal settlement are South African. It does however not mean that the remaining 8% are foreigners – it could be that they refused to show proof of citizenship or do not have any form of identification

### 1.2.2.3 Housing Profile

The Joe Morolong LM, the largest local municipality in the JTGDM area, covers about 73.9% of the geographical area of the district; but has the lowest density at 3.75 persons and 0.86 households per km<sup>2</sup>. The Ga-Segonyana LM is the direct opposite of that; covering only 16.5% with the highest density of people, i.e. 15.54 persons and 3.81 households per km<sup>2</sup>.

The areas of largest concentration in the district are: (1) Kuruman and surrounds, and (2) Mothibistad in the Ga-Segonyana LM. Smaller concentrations can be found in (1) Bathlaros and Morupeng in the Ga-Segonyana LM, and (2) Olifantshoek, Kathu and Dibeng in the Gamagara LM.

The majority of the households in the Ga-Segonyana LM and Joe Morolong LM own their properties. There are very high levels of renting in the Gamagara LM (at approximately 11 000 properties). The percentage distribution of households by tenure status and municipality is shown in **Table 16** below.

**Table 16: Tenure Status in the John Taolo Gaetsewe District Municipality**

	NC451: Joe Morolong	NC452: Ga-Segonyana	NC453: Gamagara
Rented from private individual	1 360	7 318	10 280
Rented from other (incl. municipality and social housing ins)	792	623	707
Owned; but not yet paid off	4 206	2 346	5 385
Owned and fully paid off	67 877	88 396	30 007
Occupied rent-free	5 583	3 971	484
Other	4 111	1 490	6 506
Do not know	146	43	287
Unspecified	126	221	-

With regards to housing in the district, 67.99% of the households in the JTGDM live in a “House or brick structure on a separate stand” as shown in **Table 17**. This figure is 8.74% above that for South Africa as a whole at 59.25%, but 7.28% below the figure for the Northern Cape Province at 75.27%. In comparison to the four other DMs in the province, the JTGDM has the second lowest percentage of households living in a “House or brick structure on a separate stand”. Amongst the three LMs in the district, the Ga-Segonyana LM has the highest percentage of households living in a “House or brick structure on a separate stand” (76.39%). Nearly half (45.6%) of all households in the DM living in such a dwelling are located in this LM.



**Table 17: Housing Types**

Type of main dwelling	Northern Cape	John Taolo Gaetsewe	Joe Morolong	Ga-Segonyana	Gamagara
Formal dwelling/house or brick/concrete block structure on a	920,702	184,071	60940.00	80,831	42,301
Traditional dwelling/hut/structure made of traditional mater	25,457	14,406	10083.00	4,322	-
Flat or apartment in a block of flats	7,754	743	45.00	337	361
Cluster house in complex	1,241	345	0	23	322
Townhouse (semi-detached house in a complex)	3,648	683	27.00	336	320
Semi-detached house	21,423	1,546	129.00	509	908
Formal dwelling/house/flat/room in backyard	58,229	15,567	7608.00	7,069	890
Informal dwelling/shack in backyard	45,013	7,177	2092.00	3,548	1,536
Informal dwelling/shack not in backyard (e.g. in an informal	92,146	11,870	2853.00	3,594	5,423
Room/flatlet on a property or larger dwelling/servants quart	2,875	700	-	655	45
Caravan/tent	862	238	39.00	17	183
Other	14,293	4,917	385.00	3,166	1,366
Unspecified	137	-	-	-	-
<b>Total</b>	<b>1,193,780</b>	<b>242,264</b>	<b>84,201</b>	<b>104,408</b>	<b>53,656</b>

With regards to the prevalence of informal dwellings in the DM, 8.47% of households live in an informal dwelling, which is significantly below the national figure of 14.43% and somewhat below the provincial figure of 10.49%. In terms of the spatial location of informal dwellings in the district, the bulk of the households living in (1) an “Informal dwelling/shack in a back yard” (82.63%) and (2) an “Informal dwelling/shack not in a back yard” (55.8%), are located in the Ga-Segonyana Local Municipality and to a lesser extent in the Gamagara Local Municipality. In the case of the latter, the percentage of households living in (1) an “Informal dwelling/shack in a back yard” is 16.58%; and (2) an “Informal dwelling/shack not in a back yard”, 30.2%. This significant concentration in these two LMs is most likely a result of rapid in-migration to the towns of Kuruman and Kathu from especially the Joe Morolong Local Municipality.

Promise Land Informal Settlement was established in 2009 and has been increasing rapidly in the hope of the government providing housing. The above-mentioned table shows that most residents moved to Promise Land within the last 2 to 3 years with the average household also residing in the informal settlement for at least 2 years. The informal settlement is therefore relatively new and continues increasing as more than a third of the current households has moved in since 2013.

### 1.3 INTEGRATED HUMAN SETTLEMENT PLANNING

As integral part of the township establishment process, the following studies were conducted as part of the pre-planning activities:

- Aerial survey of the development area conducted by Azur Aerial Work CC;
- Generation of contour based on aerial survey conducted by Azur Aerial Work CC;
- Feasibility Level Dolomite Stability Investigation conducted by the Council for Geoscience (July 2017);
- Social Facilitation Report compiled by Kayamandi Development Services (Pty) Ltd (2016)
- Phase 1 Heritage Impact Assessment conducted by A Pelsers Archaeological Consulting CC;
- Detail civil engineering services investigation conducted by Civilsense Consulting;
- Detail electrical engineering services investigation conducted by Motla Consulting Engineers;
- Environmental Impact Assessment conducted by AB Enviro-Consult;
- Ecological Fauna and Flora Habitat Survey conducted by Reinier F Terblanche; and
- Traffic Impact Study conducted by AC<sup>2</sup> (Pty) Ltd.

The results of the studies referred to above will be addressed in the respective sections of this Motivation Report.

During the Ministry of Human Settlements' Budget Vote in Parliament on 03 May 2016, the Minister of Human Settlements announced during her budget speech that MinMec has taken a decision to target the Northern Cape Province for the complete eradication of the housing backlog.

In terms of a presentation by the Department of Co-operative Governance, Human Settlements and Traditional Affairs (COGHSTA) on Sustainable Human Settlements presented on 22 August, the following main objectives were set in respect of Sustainable Human Settlements:

- Accelerate housing delivery
- Improve the quality of housing products and environments to ensure asset creation
- Ensure a single efficient formal housing market
- Restructure and reintegrate human settlements
- *Key shift: Housing is an economic driver for the country and an economic asset for beneficiaries*

In terms of current policy directives, the main development strategy for residential development should be based on the objectives of the Breaking New Ground Principles (BNG) for sustainable human settlements which can be summarised as follows:

- To ensure that sustainable housing development takes place.
- To integrate housing with other municipal services in order to establish sustainable human settlements, in support of spatial restructuring.
- To coordinate municipal departments in order to work together in planning and implementing.
- To promote middle and high income housing which will in turn generate resources to improve low income areas.
- To promote environmental and energy efficient housing.

The approach to ensuring that sustainable human settlements are achieved should include:

- Spatial transformation and economic integration
- Viable infrastructure provisioning and life-cycle management
- Functional, responsive and innovative design
- Easy and close access to range of services and amenities
- Affordable urban living
- Financial viability
- Effective urban management and municipal financial sustainability
- Environmental sustainability
- Local job creation and empowerment

## 1.4 APPLICATION

Koot Raubenheimer (Id No. 700305 5192 089) of the company Maxim Planning Solutions (Pty) Ltd (2002/017393/07), being the authorised agent of the Ga-Segonyana Local Municipality (NC452), is hereby applying on behalf of the Ga-Segonyana Local Municipality in terms of:

- Section 5(2)(a)(i) of the Spatial Planning and Land Use Management By-Law of the Ga-Segonyana Local Municipality (2015) read with Section 41(2)(a) of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) for the establishment of the following townships on the properties listed below:
  - The proposed township Kuruman comprising of Erven 6755 to 7683 and providing for 900 “Residential zone IV” erven, 3 “Business zone II” erven, 1 “Institutional zone I” erf, 2 “Institutional zone II” erven, 2 “Open Space zone I” erven and 21 “Transport zone II” erven on a portion of the Remaining Extent of Erf 3, Kuruman (to be known as Erf 6754, Kuruman following subdivision thereof);
  - The proposed township Kuruman comprising of Erven 7687 to 8974 and providing for 1246 “Residential zone IV” erven, 2 “Business zone II” erven, 1 “Institutional zone I” erf, 4 “Institutional zone II” erven, 2 “Open Space zone I” erven, 1 “Open space zone II” erf and 32 “Transport zone II” erven on a portion of the Remaining Extent of Erf 1, Kuruman (to be known as Erf 7684, Kuruman following subdivision thereof) and a portion of the Remaining Extent of Erf 3,

- Kuruman (to be known as Erf 7685, Kuruman following subdivision thereof) to be consolidated as Erf 7686, Kuruman;
- The proposed township Kuruman comprising of Erven 8976 to 9874 and providing for 870 “Residential zone IV” erven, 2 “Institutional zone II” erven, 8 “Open Space zone I” erven, 1 “Open Space zone II” erf and 18 “Transport zone II” erven on a portion of the Remaining Extent of Erf 3, Kuruman (to be known as Erf 8975, Kuruman following subdivision thereof);
  - The proposed township Kuruman comprising of Erven 9876 to 10748 and providing for 1 “Residential zone III” erf, 846 “Residential zone IV” erven, 1 “Business zone I (including Institution, Authority Use, Government, Flats, Residential Building)” erf, 1 “Business zone II” erf, 1 “Institutional zone I” erf, 2 “Institutional zone II” erven, 1 “Institutional zone III” erf, 2 “Open Space zone I” erven, 1 “Transport zone I” erf, 18 “Transport zone II” erven and 1 “Authority zone 1” erf on a portion of the Remaining Extent of Erf 3, Kuruman (to be known as Erf 9875, Kuruman following subdivision thereof);
  - The proposed township Kuruman comprising of Erven 10752 to 11480 and providing for 1 “Residential zone III” erf, 694 “Residential zone IV” erven, 3 “Business zone II” erven, 1 “Institutional zone I” erf, 1 “Institutional zone II” erf, 8 “Open Space zone I” erven, 17 “Transport zone II” erven and 4 “Authority zone I” erven on a portion of the Remaining Extent of Erf 3, Kuruman (to be known as Erf 10749, Kuruman following subdivision thereof) and a portion of the Remaining Extent of Portion 3 of the farm Kuruman Reserve No. 690, Administrative District Kuruman, Northern Cape Province (to be known as Erf 10750, Kuruman following subdivision thereof) to be consolidated as Erf 10751, Kuruman;
  - The proposed township Kuruman comprising of Erven 11484 to 12427 and providing for 913 “Residential zone IV” erven, 2 “Business zone II” erven, 1 “Institutional zone I” erf, 1 “Institutional zone II” erf, 6 “Open Space zone I” erven, 1 “Open Space zone II” erf and 20 “Transport zone II” erven on a portion of the Remaining Extent of Erf 3, Kuruman (to be known as Erf 11481, Kuruman following subdivision thereof) and a portion of the Remaining Extent of Portion 3 of the farm Kuruman Reserve No. 690, Administrative District Kuruman, Northern Cape Province (to be known as Erf 11482, Kuruman following subdivision thereof) to be consolidated as Erf 11483, Kuruman;
- Sections 5(2)(a)(iii), 5(3)(f) and 17(1) of the Spatial Planning and Land Use Management By-Law of the Ga-Segonyana Local Municipality (2015) read with Sections 41(2)(e) and 47(1) of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) for the removal of Conditions I and II as contained on page 2 of Deed of Grant K F4/5 in respect of the Remaining Extent of Erf 1, Kuruman relating to the right granted to the Government to resume the land for public purposes as well as the condition that all roads and thoroughfares on the land to remain free and uninterrupted, and for these title condition not to be transferred to the Certificate of Registered Title to be registered in respect of the proposed Erf 7684, Kuruman;



- Sections 5(2)(a)(v), 5(3)(d) and 10(1) of the Spatial Planning and Land Use Management By-Law of the Ga-Segonyana Local Municipality (2015) read with Section 41(2)(b) of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) for the subdivision of the Remaining Extent of Erf 1, Kuruman into one (1) portion (to be known as Erf 7684, Kuruman and leaving a remainder), the Remaining Extent of Erf 3 into six (6) portions (to be known as Erven 6754, 7685, 8975, 9875, 10749 and 11481, Kuruman and leaving a remainder) and the Remaining Extent of Portion 3 of the farm Kuruman Reserve No. 690, Administrative District Kuruman, Northern Cape Province into two (2) portions (to be known as Erven 10750 and 11482, Kuruman and leaving a remainder);
- Sections 5(2)(a)(v), 5(3)(e) and 15(1) of the Spatial Planning and Land Use Management By-Law of the Ga-Segonyana Local Municipality (2015) read with Section 41(2)(c) of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) for the consolidation of the proposed Erven 7684 and 7685, Kuruman (to be known as Erf 7686, Kuruman), Erven 10749 and 10750, Kuruman (to be known as Erf 10751, Kuruman) and Erven 11481 and 11482, Kuruman (to be known as Erf 11483, Kuruman).

## 1.5 PUBLIC PARTICIPATION

Public participation in respect of the land development application comprising the establishment of the six (6) proposed township areas of Kuruman, the removal of the restrictive title conditions as contained in Deed of Grant K F4/5 as well as the subdivision and consolidation of the Remaining Extent of Erven 1 and 3, Kuruman and the Remaining Extent of Portion 3 of the farm Kuruman Reserve No. 690, Administrative District Kuruman will include the following:

- Publishing notices of the application (as set out in **Annexure C4** of the comprehensive Land Development Application) in the Kalahari Bulletin as well as in the Northern Cape Provincial Gazette in Afrikaans & English for two consecutive weeks as contemplated in Section 27(2)(a) of the Spatial Planning and Land Use Management By-Law of the Ga-Segonyana Local Municipality (2015);
- Appending notices of the application (as set out in **Annexure C5** of the comprehensive Land Development Application) on the notice board situated at the library as contemplated in Section 27(2)(b) of the Spatial Planning and Land Use Management By-Law of the Ga-Segonyana Local Municipality (2015);
- Displaying a notice (as set out in **Annexure C6** of the Comprehensive Land Development Application) in a conspicuous place on the land to which the application applies as contemplated in Sections 27(2)(b) of the Spatial Planning and Land Use Management By-Law of the Ga-Segonyana Local Municipality (2015);
- Notices to the following external departments / organizations (as set out in **Annexure C7** of the comprehensive Land Development Application) as contemplated in Section

28(1)(c) of the Spatial Planning and Land Use Management By-Law of the Ga-Segonyana Local Municipality (2015):

- Department of Agriculture, Forestry and Fisheries (DAFF)
- Transnet
- South African Heritage Resources Agency (SAHRA)
- Eskom
- Department of Public Works and Roads
- Department Water and Sanitation
- Openserve (former Telkom SA Limited)
- SA Post Office Limited (SAPO)
- John Taolo Gaetsewe District Municipality
- South African National Roads Agency Limited (SANRAL)
- Department of Mineral Resources (DMR)
- Department of Education
- Department of Health
- Department of Co-operative Governance, Human Settlements and Traditional Affairs (COGHSTA)
- National Department of Arts, Sport & Culture
- National Department of Environmental Affairs
- Department Agriculture, Land Reform and Rural Development
- Notices to adjacent property owners (as set out in **Annexure C8** of the comprehensive Land Development Application).

The public will be afforded a period of 21 days to comment in this matter whereas the external organisations / departments that will be approached for comments will be afforded a period of 60 days to furnish us with their comments in respect of the application. Following receipt of the said comments we will forward same to your Municipality for your further attention and record purposes.

To ensure that the affected community is actively involved during the establishment of this integrated human settlement, a community meeting was convened for 21 October 2018 during which the community was briefed on all aspects relating to the planning of the concerned settlement. The attendance register of the community meeting, the presentation made at the community meeting and the minutes of the community meeting are attached as **Annexures C1, C2 and C3** respectively to the comprehensive Land Development Application.

**Plate 1: View of attendees at community meeting**

**Plate 2: Community meeting 21 October 2018**



## 1.6 STUDY AREA DELINEATION

The proposed development area comprises the following properties:

- Portion of the Remaining Extent of Erf 1, Kuruman;
- Portion of the Remaining Extent of Erf 3, Kuruman; and
- Portion of the Remaining Extent of Portion 3 of the farm Kuruman Reserve No. 690, Administrative District Kuruman, Northern Cape Province.

The locality of the parent properties is reflected on **Map 2** below whereas the specific portions of the parent properties to which the application applies are reflected on **Map 3** below.





## 1.7 REPORT OUTLINE

The remainder of the report is structured in terms of the following main headings:

- Chapter 2: Particulars of the development area
- Chapter 3: Physical aspects
- Chapter 4: Proposed development
- Chapter 5: Provision of Engineering Services
- Chapter 6: Motivation

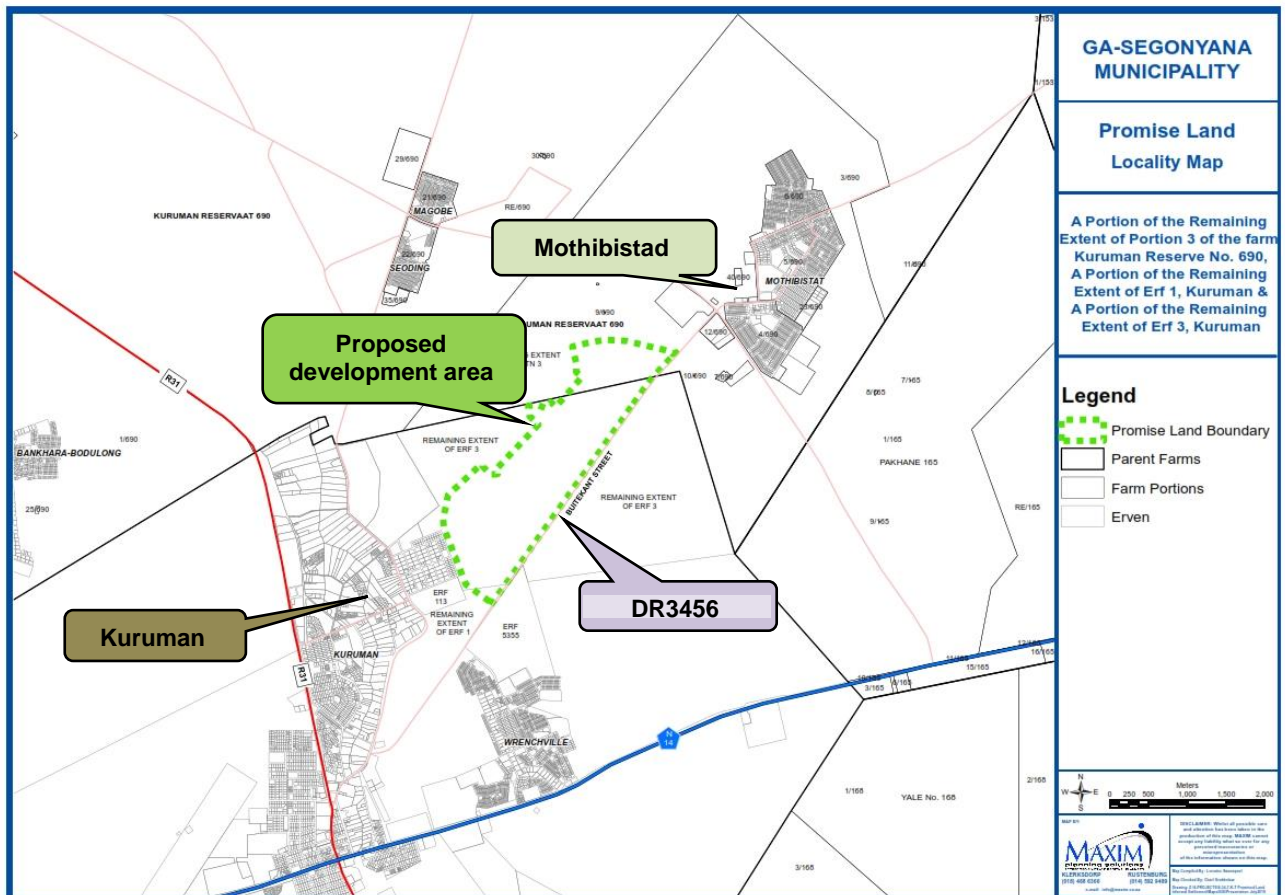


## CHAPTER 2: PARTICULARS OF THE DEVELOPMENT AREAS

### 2.1 LOCALITY

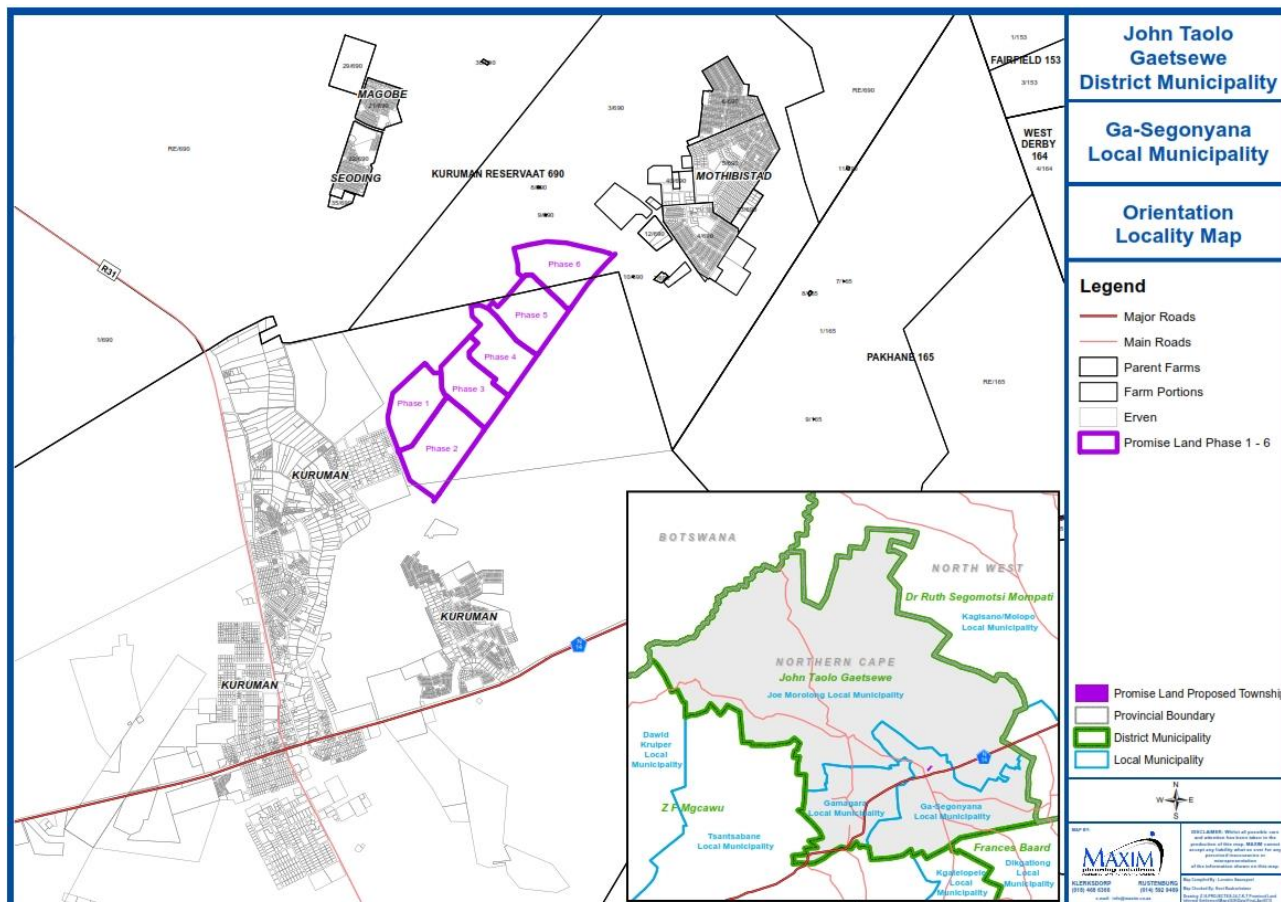
The proposed development/township areas are located directly adjacent and north-west of District Road DR3456 (Kuruman-Mothibistad road), north-east of the existing urban area of Kuruman and south-west of Mothibistad and is generally known as Promise Land. (as indicated on **Map 4** below).

**Map 4: Locality map of proposed development area**



As detailed in the preceding sections and also described in greater detail in the sections below, the proposed development area will comprise six (6) individual township areas, the location whereof is indicated on **Map 5** below.

**Map 5: Locality of six (6) township areas within the proposed development area**



The proposed six (6) development / township areas of Kuruman will be located on the respective properties listed in **Table 18** below:

**Table 18: Township areas property descriptions**

Proposed township area	Property description
Kuruman township comprising Erven 6755 to 7683	Portion of the Remaining Extent of Erf 3, Kuruman
Kuruman township comprising Erven 7687 to 8974	Portion of the Remaining Extent of Erf 1, Kuruman and a portion of the Remaining Extent of Erf 3, Kuruman
Kuruman township comprising Erven 8976 to 9874	Portion of the Remaining Extent of Erf 3, Kuruman
Kuruman township comprising Erven 9876 to 10748	Portion of the Remaining Extent of Erf 3, Kuruman
Kuruman township comprising Erven 10752 to 11480	Portion of the Remaining Extent of Erf 3, Kuruman and a portion of the Remaining Extent of Portion 3 of the farm Kuruman Reserve No. 690, Administrative District Kuruman, Northern Cape Province
Kuruman township comprising Erven 10752 to 11480	Portion of the Remaining Extent of Erf 3, Kuruman and a portion of the Remaining Extent of Portion 3 of the

	farm Kuruman Reserve No. 690, Administrative District Kuruman, Northern Cape Province
--	---

The proposed township areas detailed above are located within the area of jurisdiction of the Ga-Segonyana Local Municipality (NC452) which in turn falls within the area of jurisdiction of the John Taolo Gaetsewe District Municipality.

An orientation locality plan of the proposed township/development area is attached to the comprehensive land development application as **Annexure H**.

## 2.2 SG DIAGRAM

The Remaining Extent of Erf 1, Kuruman is reflected on diagram SG No. F39/1917 together with the deduction sheets attached thereto (attached as **Annexure F1** to the comprehensive land development application)

The Remaining Extent of Erf 3, Kuruman is reflected on diagram SG No. FA1666/1923 together with the deduction sheets attached thereto (attached as **Annexure F2** to the comprehensive Land Development Application).

The Remaining Extent of Portion 3 of the farm Kuruman Reserve No. 690, Administrative District Kuruman, Northern Cape Province is reflected on subdivision diagram SG No. C13442/1998 (attached as **Annexure F3** to the comprehensive Land Development Application).

## 2.3 OWNER

The Remaining Extent of Erven 1 and 3, Kuruman and the Remaining Extent of Portion 3 of the farm Kuruman Reserve No 690, Administrative District Kuruman, Northern Cape Province are currently registered as follows:

**Table 19: Ownership Details**

Property Description	Registered Owner	Deed of Transfer Number
Remaining Extent of Erf 1, Kuruman	Ga-Segonyana Local Municipality	Deed of Grant K F4/5
Remaining Extent of Erf 3, Kuruman	Ga-Segonyana Local Municipality	Certificate of Consolidated Title No. 94/1924
Remaining Extent of Portion 3 of the farm Kuruman Reserve No. 690, Administrative District Kuruman, Northern Cape Province	Ga-Segonyana Local Municipality	Deed of Transfer T1425/2012

(Refer **Annexures E1 to E3** of the comprehensive Land Development Application for copies of the Aktex Deed Office Enquiries conducted in respect of the various properties as well as **Annexures E4 to E6** for the relevant title deeds).

## 2.4 **BONDHOLDER**

None of the three properties to which this application apply are currently subject to any bond (refer **Annexures E1 to E3** of the comprehensive Land Development Application for Aktex Deed Office Enquiries that confirms the absence of any bonds).

## 2.5 **AREA**

The properties to which this land development application applies currently comprise the following areas:

**Table 20: Property Areas**

Property Description	Area
Remaining Extent of Erf 1, Kuruman	614,0653 Hectares
Remaining Extent of Erf 3, Kuruman	2376,6704 Hectares
Remaining Extent of Portion 3 of the farm Kuruman Reserve No. 690, Administrative District Kuruman, Northern Cape Province	1665,1828 Hectares
<b>TOTAL</b>	<b>4 655,9185 Hectares</b>

As detailed in the preceding sections, the proposed township areas will be restricted to only certain portions of the subject properties that will comprise the following areas:

**Table 21: Areas of properties to which the application applies**

Property Description	Area
Portion of the Remaining Extent of Erf 1, Kuruman	4,6618 Hectares
Portion of the Remaining Extent of Erf 3, Kuruman	295,7107 Hectares
Portion of the Remaining Extent of Portion 3 of the farm Kuruman Reserve No. 690, Administrative District Kuruman, Northern Cape Province	61,0446 Hectares
<b>TOTAL</b>	<b>361,4171 Hectares</b>

The proposed six (6) township areas of Kuruman will comprise a total area of 361,4171 hectares.

This land development application also seeks to obtain the necessary approval in respect of the subdivision of the subject properties in accordance with the outside figures of the six (6) individual township areas. Application is made for the subdivision of the following properties:



**Table 22: Proposed subdivision details**

Property Description	Proposed subdivided property description	Township area applicable	Area (Ha)
Remaining Extent of Erf 1, Kuruman	Erf 7684, Kuruman	Portion of Kuruman township comprising Erven 7687 to 8974	4,6618 Hectares
Remaining Extent of Erf 3, Kuruman	Erf 6754, Kuruman	Kuruman township comprising Erven 6755 to 7683	52,3816 Hectares
	Erf 7685, Kuruman	Portion of Kuruman Township comprising Erven 7687 to 8974	71,3625 Hectares
	Erf 8975, Kuruman	Kuruman township comprising Erven 8976 to 9874	53,9285 Hectares
	Erf 9875, Kuruman	Kuruman township comprising Erven 9876 to 10748	55,0669 Hectares
	Erf 10749, Kuruman	Portion of Kuruman township comprising Erven 10752 to 11480	51,9398 Hectares
	Erf 11482, Kuruman	Portion of Kuruman township comprising Erven 11484 to 12427	11,0314 Hectares
Remaining Extent of Portion 3 of the farm Kuruman Reserve No. 690, Administrative District Kuruman, Northern Cape Province	Erf 10750, Kuruman	Portion of Kuruman township comprising Erven 10752 to 11480	6,5237 Hectares
	Erf 11482, Kuruman	Portion of Kuruman township comprising Erven 11484 to 12427	54,5209 Hectares

(Refer subdivision maps attached as **Annexures M1 to M6** of the comprehensive Land Development Application).

The land development application also seeks to obtain approval in respect of the consolidation of some of the above-mentioned subdivided portions where the proposed township area is located on more than one portion. The consolidation entails the following:



**Table 23: Proposed consolidation details**

Proposed subdivided property descriptions	Proposed consolidated property descriptions	Township applicable	area	Consolidated Area (Ha)
Erf 7684, Kuruman Erf 7685, Kuruman	Erf 7686, Kuruman	Kuruman township	comprising Erven 7687 to 8974	76,0242 Hectares
Erf 10749, Kuruman Erf 10750, Kuruman	Erf 10751, Kuruman	Kuruman township	comprising Erven 10752 to 11480	58,4595 Hectares
Erf 11484, Kuruman	Erf 11483, Kuruman	Kuruman township	comprising Erven 11484 to 12427	65,5537 Hectares

(Refer consolidation maps attached as **Annexures N1 to N3** of the comprehensive Land Development Application).

## 2.6 EXISTING LAND USE AND ZONING

### 2.6.1 CURRENT LAND USES

A physical land use survey was conducted by Maxim Planning Solutions on the 19th and 20th of June 2018 at Promised Land Informal Settlement. Mr. Bertus Eiman (Councillor of Ga-Segonyane Local Municipality) assisted with the land use survey, and corresponded with the residents. The land use identified during the land use survey are reflected on the following table.

**Table 24: Current land uses in Promise Land informal settlement area**

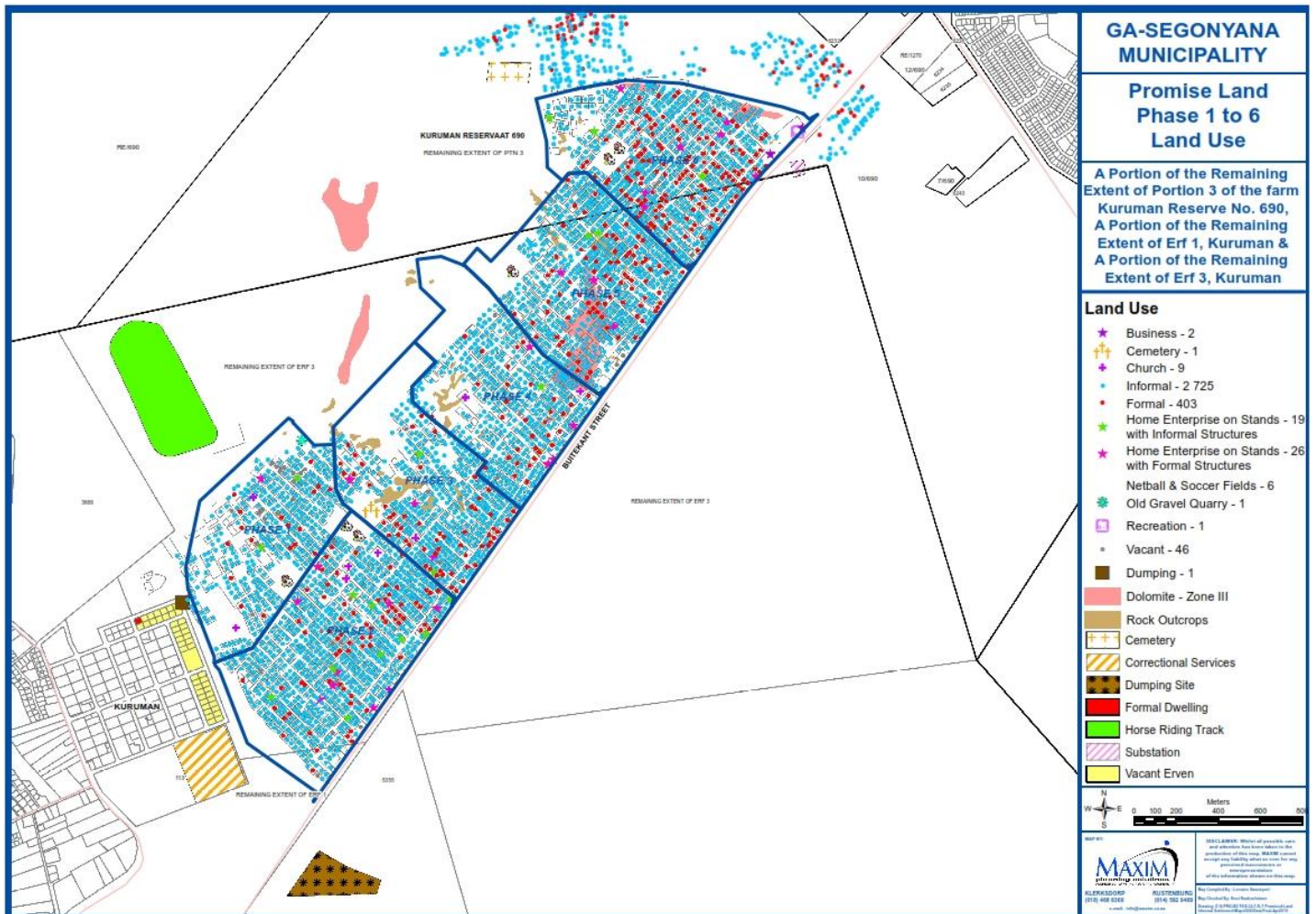
Land Use	Number
• Business	2
• Formal Houses	429
• Informal Houses	2744
• Rental rooms on stands with formal house	2
• Rental rooms on stands with informal structures	2
• Church	9
• Cemetery	1
• Informal Sports Field	6
• Recreation	1
• Home enterprise on stands with formal houses	24
• Home enterprise on stands with informal structures	17

**Plate 3: View of existing informal structure**



The and uses encountered on the combined development area are also reflected on the **Map 6** below.

**Map 6: Promise Land Current Land Uses**





- **Residential Development**

During the survey it was noticed that the settlement is still expanding as more people are erecting structures in the hopes of formalised houses and infrastructure.

**Plate 4: Formal Houses**



A total of 121 households are situated on Zone III dolomite arrears of which 15 are formal houses and 106 informal houses.

**Plate 5: Informal Structures**



The average plot sizes of the formal and informal houses are  $\pm 26\text{m}$  by  $\pm 26\text{m}$  ( $\pm 676\text{m}^2$ ).

**Plate 6: Rental Rooms**



Rental rooms are situated on two stands where formal houses are situated and two stands where informal structures are situated.

Since 2016 during the compilation of the Social Facilitation Report the number of households in Promised Land increased from 1151 to 3173 households currently

Based on the average persons per household, according to the Social Facilitation Report 2016, the total population of Promised Land is estimated at ± 8567 people (according to the 2016 report the average household size varies between 1,7 persons per household to 3,5 persons per household, with an average of 2,7 persons per household)

- **Business Development**

The following type of business developments (formal and informal) were identified in the village:

- **Formal Business**
  - Car wash
  - Selling of soil
  - Wedding Venue

**Plate 7: View of car wash**



- **Home enterprises on stands / plots with formal houses**

Formal + gas & electricity	1
Formal + Motor Workshop	3
Formal + Supermarket	1
Formal + Tuck Shop	19
<b>TOTAL</b>	<b>24</b>

**Plate 8: View of Home Enterprises**



○ **Home enterprises on stands / plots with informal residential structures**

Informal + Hair Salon	2
Informal + Motor Workshop	3
Informal + Recycling	1
Informal + Tuck Shop	6
Informal + Tavern	1
<b>TOTAL</b>	<b>13</b>

**Plate 9: View of home enterprises on stands / plots with informal residential structures**



● **COMMUNITY FACILITIES**

Churches	9
Cemetery	1
Informal Sports fields:	
Netball Field	2
Soccer Field	4
Informal crèches	

**Plate 10: View of community facilities (creche)**





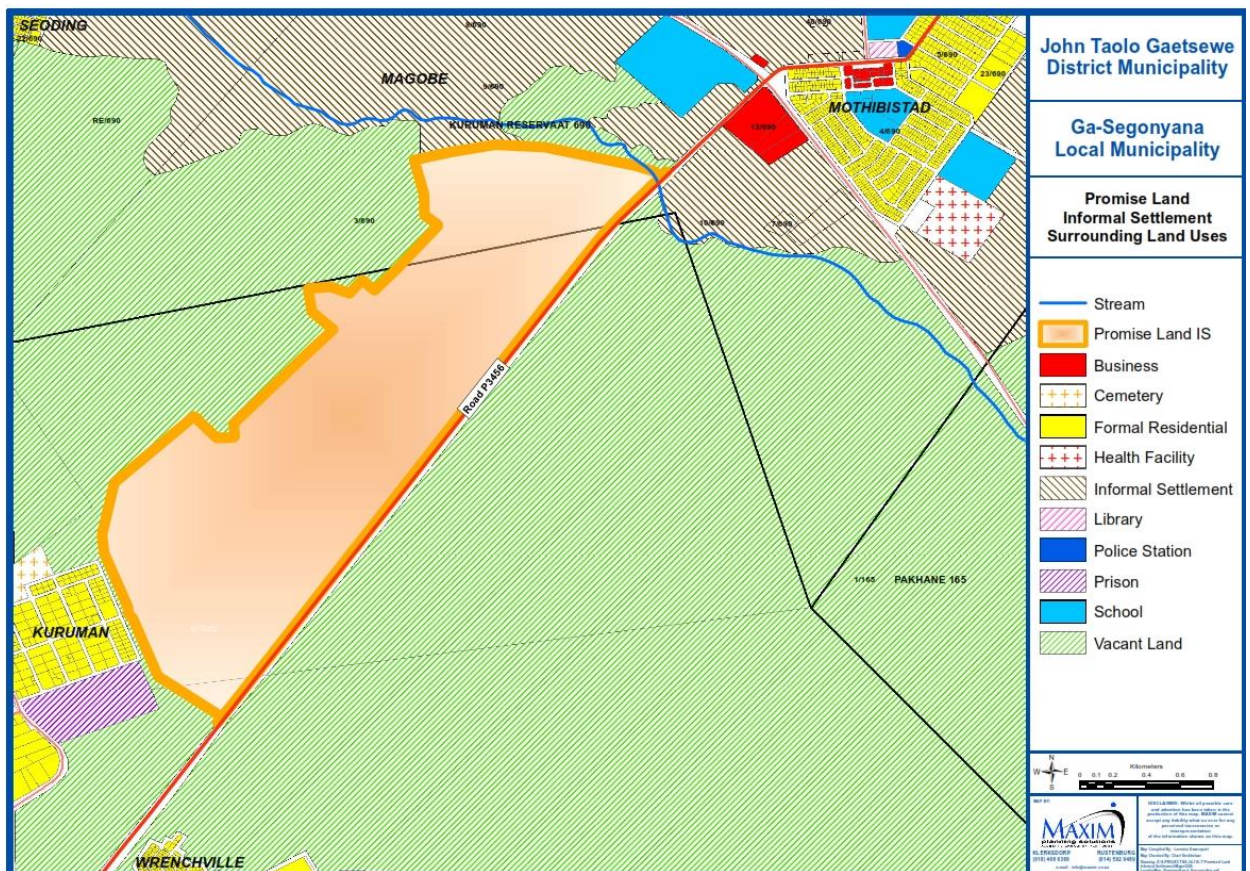
**Plate 11: View of community facility (church)**



## 2.6.2 SURROUNDING LAND USES

As indicated on **Map 7** below, the Promised Land Informal Settlement is surrounded by vacant land north-west and south-west of the settlement, Magobe and Mothibistad Informal Settlements to the north and the exiting urban area of Kuruman south-west.

**Map 7: Surrounding Land Uses**



### 2.6.3 CURRENT ZONING

The properties to which the land development application applies are currently all zoned “Undetermined” in terms of the Ga-Segonyana Local Municipality Land Use Management Scheme (2003) which determines that “No building or use may be extended or changed without the approval of the Council”. This township establishment process has at its core the intention to create Erven duly zoned for the purposes proposed in terms of the layout plans of the respective township areas. The township areas will be incorporated into the Ga-Segonyana Local Municipality Land Use Management Scheme (2003) simultaneously with the proclamation of the township areas.

## 2.7 MINERAL RIGHTS

According to Deed of Grant K F4/5 in respect of the Remaining Extent of Erf 1, Kuruman (refer **Annexure E4** to the Land Development Application), the rights to minerals, mineral products, mineral oils and precious stones, precious or base metals have been reserved in favour of the State as indicated in the following extract from Deed of Transfer T1989/2007:

***“III. That all rights to minerals, mineral products, mineral oils and precious stones, precious or base metals on or under the land hereby granted are expressly reserved to the Crown together with the right of access to any mines or works undertaken for mining or prospecting purposes by any person duly authorised in that behalf. The land is subject to such further rights as the public or the Government now may or may hereafter have or be entitled to obtain under or by virtue of any law relating to prospecting, digging, mining or exploitation of minerals, mineral products, mineral oils, precious stones, precious or base metals on or under the land hereby granted, which rights shall not be impaired or in any way affected by the Title Deed”***

In terms of Certificate of Consolidated Title No. 94/1924, the rights to minerals, mineral products, mineral oils and precious stones, precious or base metals have been reserved in favour of the State as indicated in the following extract from Certificate of Consolidated Title No. 94/1924 (refer **Annexure E5** to the Land Development Application).

***“A. THE PORTIONS LETTERED A, B, C, D, Z', L, M, and A', E, F, G, H, J, k, on the annexed diagram area subject to the following conditions mentioned in the said Deed of Grant:-***

***(1) “That all rights to minerals, mineral products, mineral oils and precious stones, precious or base metals on or under the land hereby granted (as lettered above) are expressly reserved to the Crown, together with the right of access to any mines or works undertaken for mining or prospecting purposes by any person duly authorised in that behalf. The land is subject***



***to such further rights as the Public or the Government now may or may hereafter have or be entitled to under or by virtue of any Law relating to the prospecting, digging, mining or exploitation of minerals, mineral products, mineral oils, precious stones, precious or base metals on or under the land hereby granted, which rights shall not be impaired or in any way affected by the Title Deed”***

In terms of Deed of Transfer T1425/2012, the rights to minerals in respect of the Remaining Extent of Portion 3 of the farm Kuruman Reserve No. 690, Administrative District Kuruman, Northern Cape Province have not been separated from the property rights (refer **Annexure E6** to the Land Development Application).

The reservation of rights to minerals is however subject to the provisions of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) that came into force on 01 May 2004. The land development application will subsequently also be referred to the Department of Mineral Resources for its consent in terms of Section 53 of the fore-mentioned Act in respect of the proposed development.

## **2.8 RESTRICTIVE TITLE CONDITIONS**

According to Deed of Grant K F4/5 (attached as **Annexure E4** to the comprehensive land development application), the Remaining Extent of Erf 1, Kuruman is subject to the following title conditions, which will be dealt with as indicated:

***“1. That the Government shall have the right at all times of resuming for public purposes such portion or portions of the land hereby granted as may not have been alienated by the Town Council. In the event of resumption as aforesaid no compensation shall be payable by the Government, except in respect of substantial improvements of a permanent nature erected or made on the land resumed whether by the Town Council or by any other person or body acting under the express authority of the said Council”.***

In terms of the Conveyancer Certificate compiled by Coetzer & Steyn Attorneys (attached as **Annexure K** to the comprehensive land development application), it was indicated that this condition is not reconcilable with the use of the land for township establishment purposes and application is hereby further made in terms of Sections 5(2)(a)(iii), 5(3)(f) and 17(1) of the Spatial Planning and Land Use Management By-Law of the Ga-Segonyana Local Municipality (2015) read with Sections 41(2)(e) and 47(1) of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) for the removal of Condition I as contained on page 2 of Deed of Grant K F4/5 in respect of the Remaining Extent of Erf 1, Kuruman. The reconcilable nature of this condition is highlighted against the fact that the erven in the proposed township areas will be transferred to the beneficiaries/purchasers thereof which renders the resuming and use of the property for public purposes as impossible as it will encroach on the right of the inhabitants to security of tenure.

**“II. That all roads and thoroughfares over the land whether or not described in the plan or diagram thereof, shall remain free and uninterrupted unless closed, diverted or altered by competent authority.**

This condition relates to the retaining of all roads and thoroughfares made over the land. In terms of the Conveyancer Certificate compiled by Coetzer & Steyn Attorneys it was indicated that the subject property will be included on a formal General Plan of the proposed township area which also indicates all the streets within the township area, this condition must from the relevant Deed of Grant and for same not to be transferred to the Certificates of Registered Title to be registered in respect of the proposed township areas.

Condition III relates to the reservation of rights to minerals and will be dealt with as indicated in Section 2.7 supra.

**“IV. That the land shall be subject to all rights and servitudes which now or at any time hereafter may be found to affect the title of the land hereby granted or which may be binding on the Government in respect of the said land.**

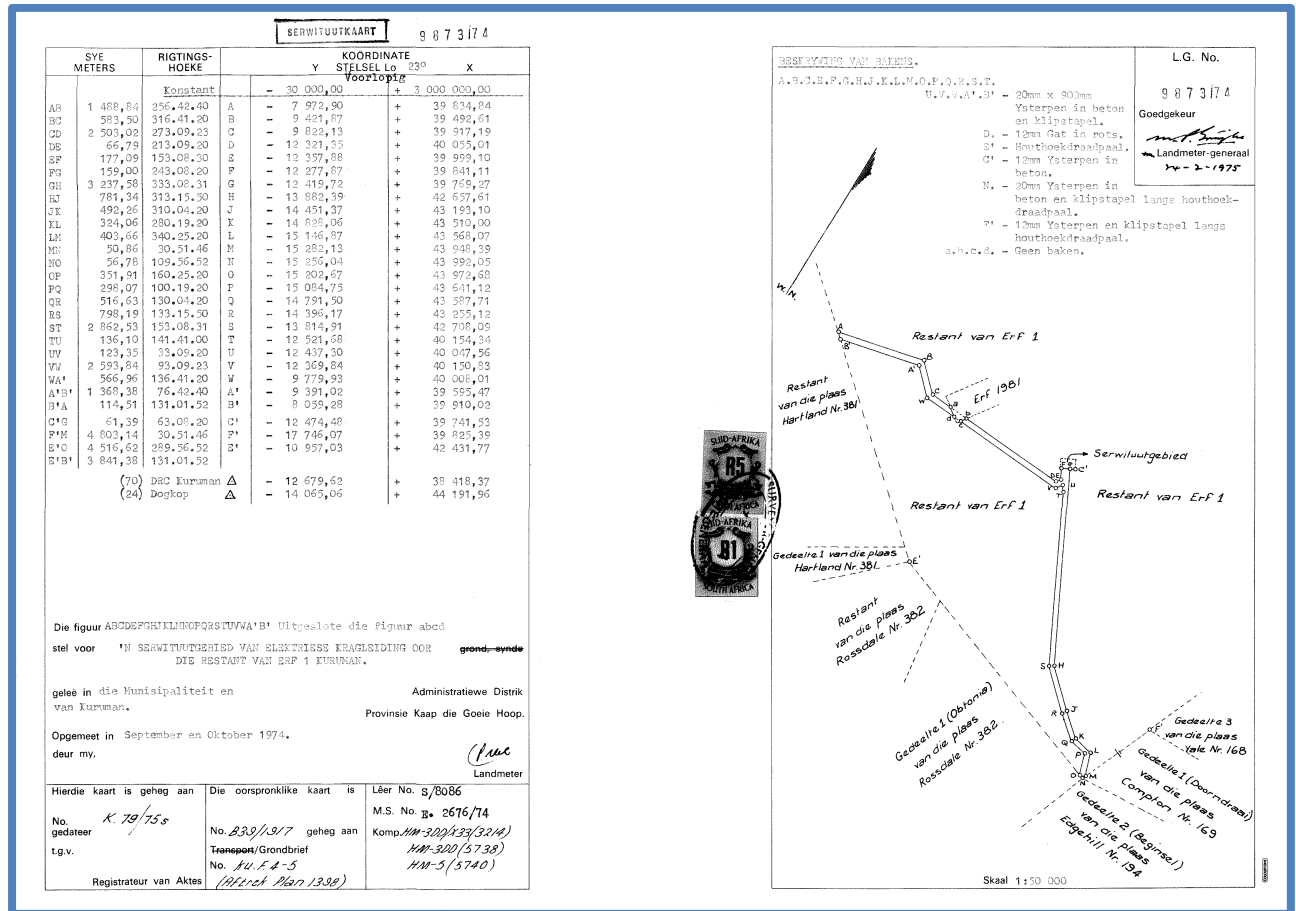
This condition relates to the existing servitudes and rights affecting the land and this condition will be transferred to all the erven in the proposed township area.

**“Kragtens Notariële Akte Nr. K79/1975 S gedateer 26 Mei 1975 en hede geregistreer, is die reg aan E.V.K.O.M verleen om elektrisiteit te lei oor die Restant van binnegemelde eiendom deur middel van drade en/of kables of ander toebehore, bo-oor of onderdeur soos meer volledig sal blyk uit die gemelde Notariële Akte tesame met bykomende regte”.**

The location of the Eskom powerline servitude referenced in the above-mentioned title condition is reflected on Servitude Diagram SG No. F9873/1974 (attached as **Annexure F5** to the comprehensive land development application) and it was ascertained from this diagram that the servitude does not affect the proposed development area due to the location thereof in relation to the proposed development area (refer also to **Figure 5** below).

Notwithstanding this fact, cognisance should be taken of the fact that this servitude also contains ancillary rights. In accordance with the prescriptions of Registrar’s Circular 3/2015 (refer paragraph 6.3.6.4 of Circular), application will be made to Eskom for consent in respect of the transfer of the erven in the proposed township area free of this servitude.

Figure 5: Servitude Diagram SG No. F9873/1974

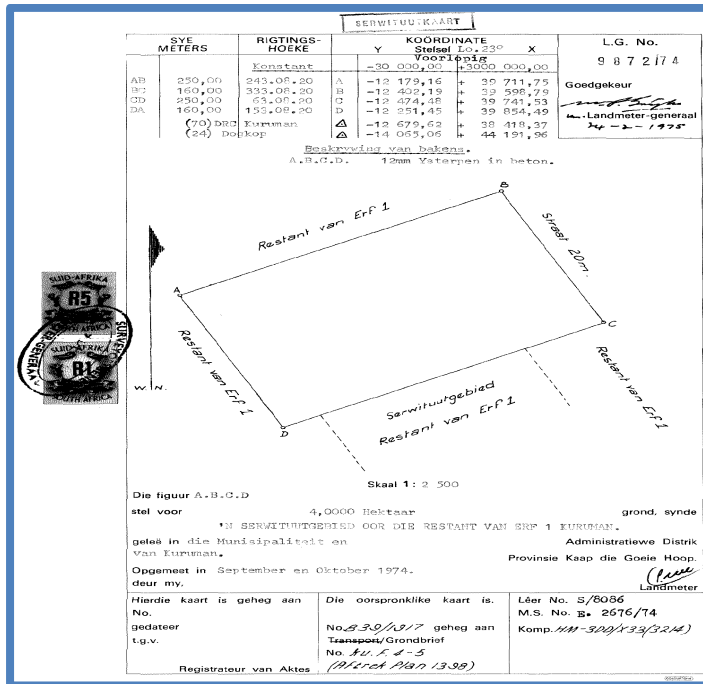


“By virtue of Notarial Deed No. K88/1975S dated 11h July 1975 and registered this day, the Municipality of Kuruman as the registered owner of the Remainder of Erf 1 Kuruman situate in the Municipality and Division of Kuruman measuring as per remainder as at date of registration of the abovementioned Notarial Deed, held hereunder, has given and granted to and on behalf of the Electricity Supply Commission the sole and exclusive right to occupy, possess and to utilize a certain piece of the abovementioned property measuring 4 hectares more fully described on the diagram thereof No. 9872/74 annexed to the said Notarial Deed, subject to certain conditions, as will more fully appear on reference to the said Notarial Deed”.

The location of the Eskom powerline servitude referenced in the above-mentioned title condition is reflected on Servitude Diagram SG No. F9872/1974 (attached as Annexure F4 to the comprehensive land development application) and it was ascertained from this diagram that the servitude does not affect the proposed development area due to the location thereof in relation to the proposed development area (refer also to Figure 6 below). This servitude does not contain ancillary rights and the erven in the proposed township area will be transferred free of this servitude.



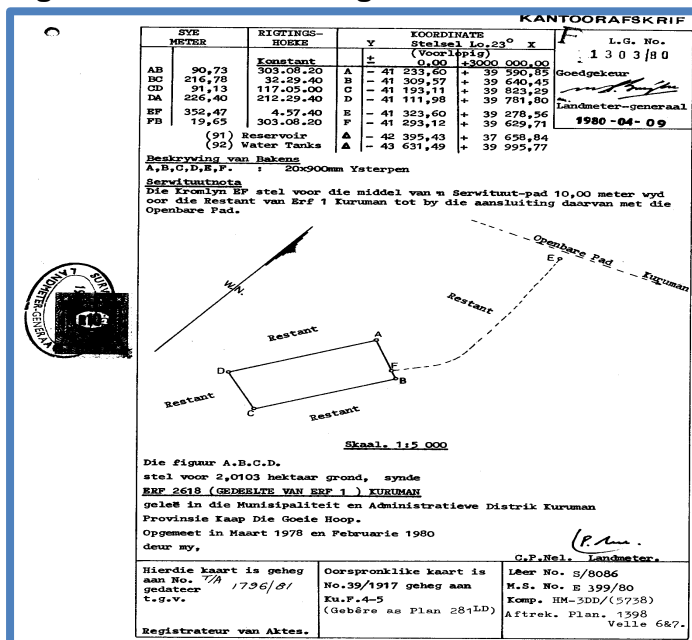
Figure 6: Servitude Diagram SG No. F9872/1974



“Die Restant is onderhewig aan servituut-pad 10m wyd die middellyn waarvan deur die kromlyn G.F. op Kaart LG No. 1303/80 aangetoon word geheg aan T1796/81”.

The road servitude mentioned in this title condition is reflected on subdivision diagram SG No. F1303/1980 (attached as Annexure F6 to the comprehensive land development application) and it was ascertained from this diagram that the servitude does not affect the proposed development area due to the location thereof in relation to the proposed development area (refer also to Figure 7 below).

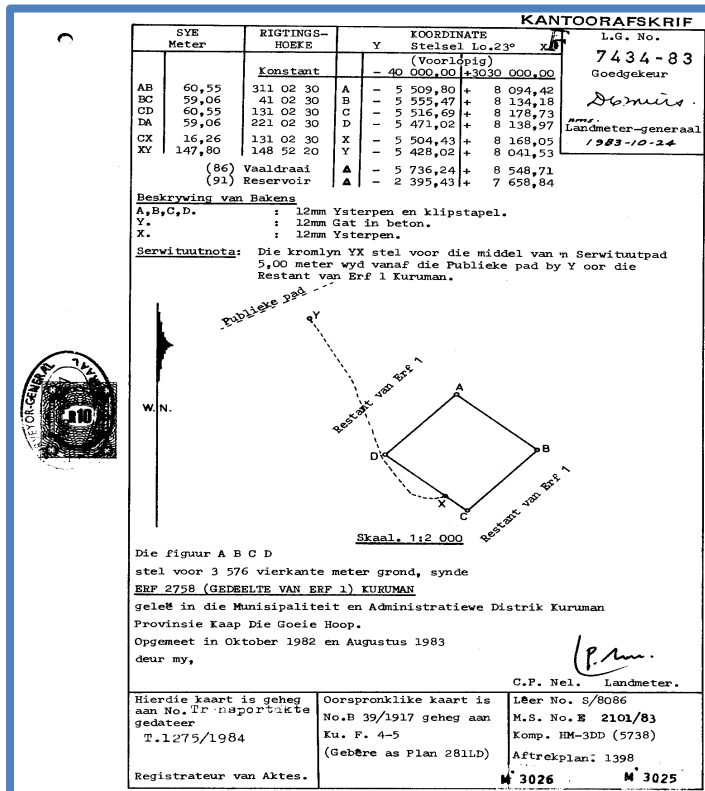
Figure 7: Servitude Diagram SG No. F1303/1980



“Die Restant van binnegemelde eiendom is onderhewig aan ‘n serwitutpad 5,00 meter wyd, die middel waarvan deur die kromlyn YX op kaart LG7434-83 voorgestel word geheg aan Transportakte 1275/84 hede geregistreer ten gunste van Erf 2758 (Gedeelte van Erf 1) Kuruman, gehou deur gesegde Transportakte”.

The road servitude mentioned in this title condition is reflected on subdivision diagram SG No. F7434/1983 (attached as **Annexure F7** to the comprehensive land development application) and it was ascertained from this diagram that the servitude does not affect the proposed development area due to the location thereof in relation to the proposed development area (refer also to **Figure 8** below).

**Figure 8: Servitude Diagram SG No. F7434/1983**



“Kragtens kennisgewing no 102 van 1985 in Staatskoerant no 9608 gedateer 1/3/1985 is die historiese Kuruman oogterrein geleë op ‘n gedeelte van binnegemelde eiendom voorlopig tot nasionale gedenkwaardigheid verklaar”.

This title condition does not affect the proposed township areas due to the location of the Kuruman Eye Site in relation to the proposed township areas (refer also to the title condition referenced in the following paragraph)

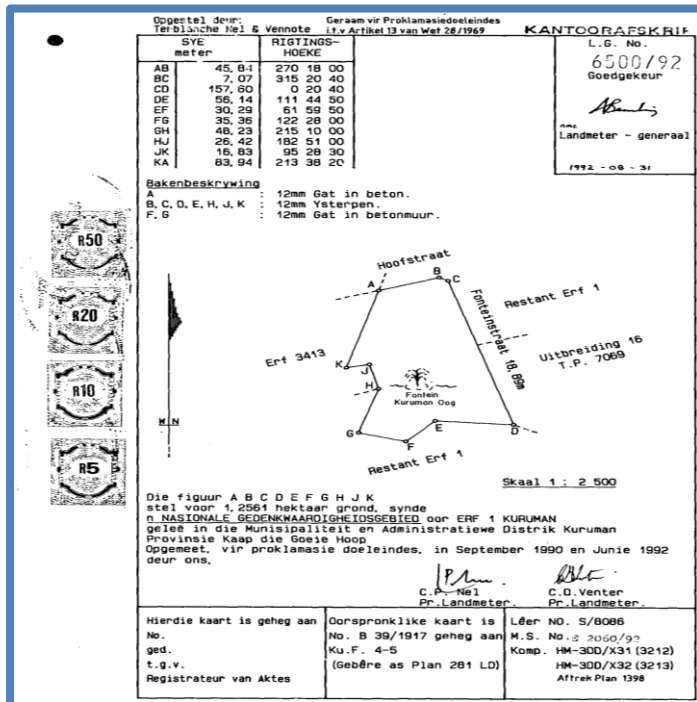
“ENDORSEMENT IN TERMS OF SECTION 13(3) OF THE NATIONAL MONUMENTS ACT 28/1969.

Portion of the within property indicated on Diagram SG A6500/92 filed herewith has been declared/included in a National Monument in terms of Section 13(2) of Act 28/1969.

Notice 2675 in Government Gazette 14290 dated 25/9/92 refers”.

The Kuruman Eye Site has been indicated on Proclamation Diagram SG No. F6500/1992 (attached as **Annexure F8** to the comprehensive Land Development Application) and it was ascertained from this diagram that the proclamation area does not affect the proposed development area due to the location thereof in relation to the proposed development area (refer also to **Figure 9** below).

**Figure 9: Proclamation Diagram SG No. F6500/1992**



According to Certificate of Consolidated Title No. 94/1924 (attached as **Annexure E5** to the comprehensive land development application), the Remaining Extent of Erf 3, Kuruman is subject to the following title conditions, which will be dealt with as indicated:

Condition A.(1) relates to the reservation of rights to minerals and will be dealt with as indicated in Section 2.7 supra.

**“A. THE PORTIONS LETTERED A, B, C, D, Z’, L, M , and A’, E, F, G, H, J, k, on the annexed diagram area subject to the following conditions mentioned in the said Deed of Grant:-**

**(2) That the land as lettered above shall be subject to all rights and servitudes which now affect, or at any time hereafter may be found to affect the title of the land hereby conveyed, or which may be binding upon the Government in respect of the said land as at the date hereof”**

In terms of the Conveyancer Certificate compiled by Coetzer & Steyn Attorneys this condition must be transferred to all the erven in the proposed township area.

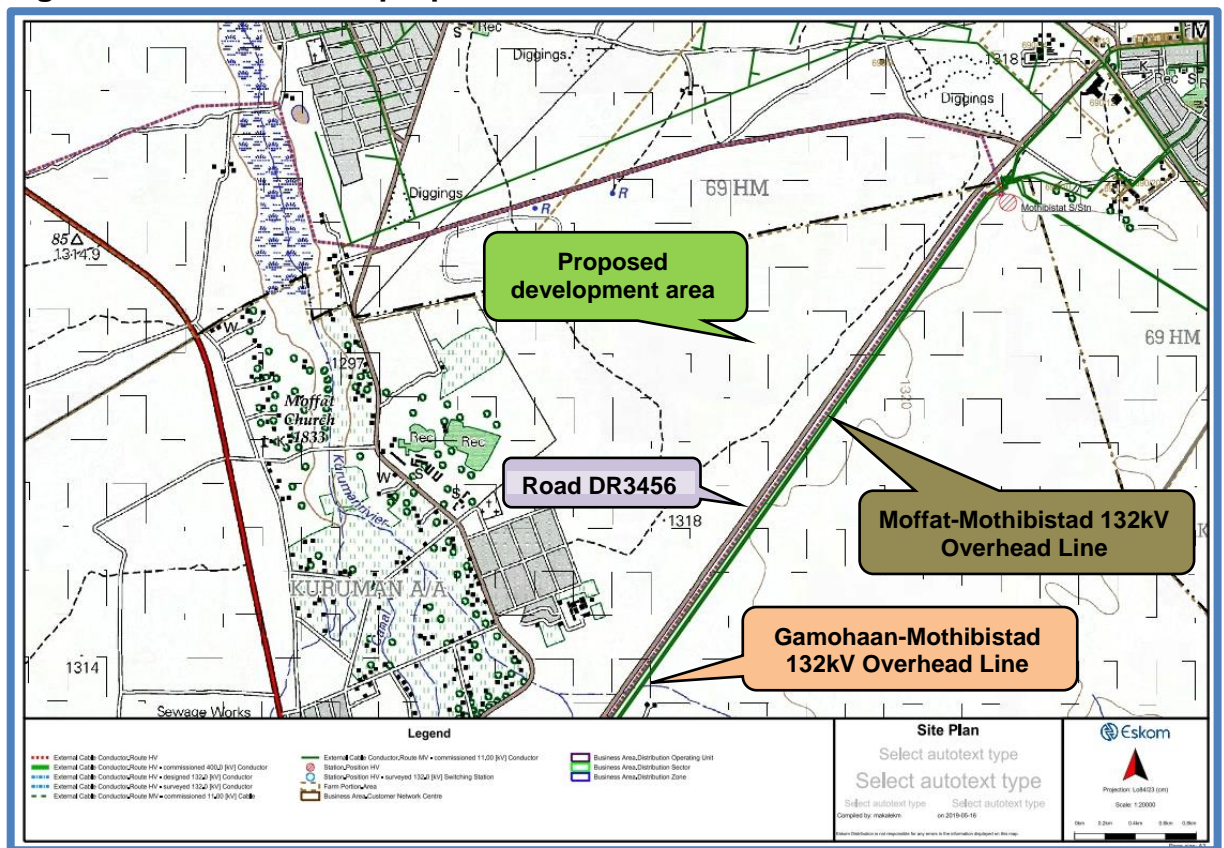
**“B. THE PORTION LETTERED A’, K, L, Z’, on the annexed diagram is SUBJECT (1) to the conditions referred to in the said Deed of Transfer No. 8547 dated the 15<sup>th</sup> February 1918, and”**

This title condition does not affect the proposed township area due to the location thereof in relation to the proposed township area and should therefore not be transferred to the erven in the proposed township areas.

**“By Notarial Deed No. K158/2017S dated 17/10/2017 the within-mentioned property is subject to the right in perpetuity to convey electricity and other related purposes in favour of ESKOM HOLDINGS SOC LTD as will more fully appear on reference to the said notarial deed”.**

This servitude in favour of Eskom has been registered in general terms and the exact route determination has not been fixed in terms of a servitude diagram registered with the Surveyor-General. On telephonic enquiry at Eskom, it was indicated that this servitude relates to the proposed Moffat-Mothibistad 132 kV overhead line which is still to be constructed. This line will be located south-east of District Road DR3456 and will not affect the proposed township area due to the location thereof in relation to the proposed township area. The route indicated by Eskom for this new proposed powerline is indicated on **Figure 10**.

**Figure 10: Route of proposed Moffat-Mothibistad 12 kV overhead line**





With regard to this servitude in favour of Eskom Holdings SOC Limited where ancillary rights apply, the consent of Eskom Holdings SOC Limited will be obtained in respect of the transfer of the erven in the proposed township areas free from this servitude.

According to Deed of Transfer T1425/2012 (attached as **Annexure E6** to the comprehensive land development application), the Remaining Extent of Portion 3 of the farm Kuruman Reserve No. 690, Administrative District Kuruman, Northern Cape Province is not subject to any title conditions or servitudes

## 2.9 SERVITUDES

In addition to the title conditions and servitudes detailed in Section 2.8 above, it was noted from the Aktex Deeds Office Enquiry that was conducted in respect of the Remaining Extent of Erf 1, Kuruman that the subject property is also subject to Notarial Deed of Servitude K28/20018S registered in favour of Eskom. On scrutiny of the fore-mentioned Notarial Deed of Servitude it was noted that this servitude has been registered in general terms and the exact route determination has not been fixed in terms of a servitude diagram registered with the Surveyor-General. On telephonic enquiry at Eskom, it was indicated that this servitude relates to the proposed Gamohaam-Mothibistad 132 kV overhead line which is still to be constructed. This line will be located south-east of District Road DR3456 and will not affect the proposed township area due to the location thereof in relation to the proposed township area. The route indicated by Eskom for this new proposed powerline is indicated on **Figure 10** above.

With regard to this servitude in favour of Eskom Holdings SOC Limited where ancillary rights apply, the consent of Eskom Holdings SOC Limited will be obtained in respect of the transfer of the erven in the proposed township areas free from this servitude.

## CHAPTER 3: PHYSICAL ASPECTS

### 3.1 TOPOGRAPHY

As part of the pre-planning studies that were conducted in respect of the development area, an aerial survey was conducted by Azur Aerial Work CC. This aerial survey included:

- High resolution aerial photography and the creation of digital aerial photo images (**Map 8 refers**) (refer also to **Annexure G1** of the comprehensive Land Development Application)
- Fieldwork and ground control points
- Line mapping (**Map 9 refers**):
  - Property boundaries – Line Mapping
  - Cadastral information
  - Contour mapping (0,5m contour intervals)  
(refer also to **Annexure G2** of the comprehensive Land Development Application).

The results of the aerial survey and the subsequent line mapping are also reflected on Plates 11 and 12 below.

**Plate 12: Close-up extract from aerial photograph**

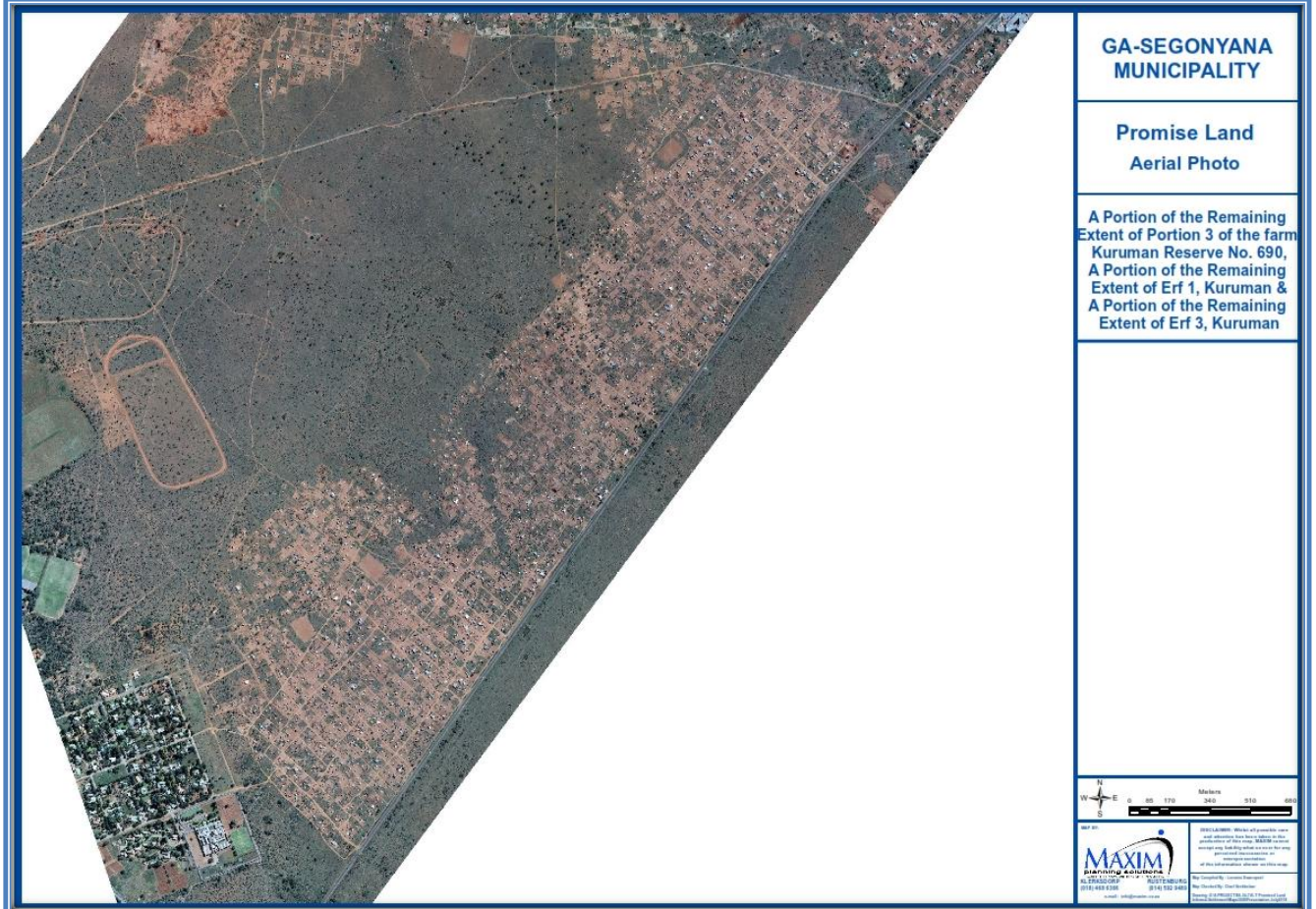




**Plate 13: Close-up extract from aerial photograph including line mapping**



**Map 8: Aerial photograph of development area**





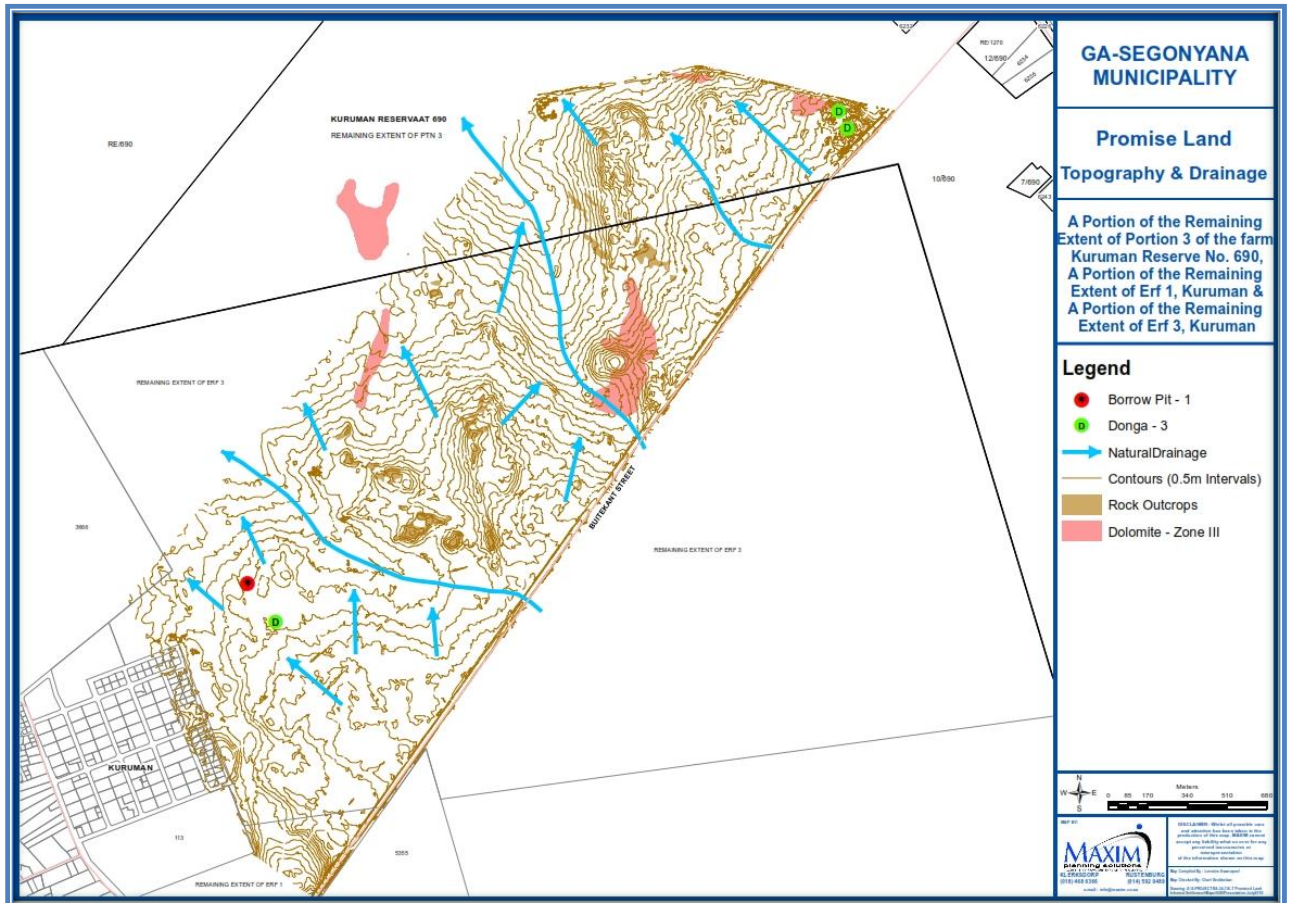


The Weinerts N value for this area is greater than 5, indicating that mechanical weathering takes place rather than chemical weathering.

### 3.3 FRESHWATER SYSTEM / DRAINAGE

The landscape can be described as gentle undulating topography and low relief. The natural drainage is the area is mainly in a northerly and north-westerly direction.

Map 10: Topography and Drainage



The study area is sparsely vegetated with grass in places and low thorny shrubs, with very few trees and rocky outcrops in the central and northern area.

Plate 14: View of vegetation on site



Plate flow is the dominant drainage pattern on site and the development area is not subject to the 1:100 year floodline of any river or stream.

### 3.4 WETLANDS AND PANS

As detailed in section 3.3 supra, the development area is not affected by the 1:100 year floodline of river or stream and no wetlands areas are present on site

### 3.5 FAUNA AND FLORA ASSESSMENT

To establish the possibility that threatened flora and fauna known to occur in Northern Cape Province are likely to occur within the proposed development site (and the immediate surrounding area) or not, an Ecological Fauna and Flora Habitat Survey was commissioned and said survey was conducted by Reinier F Terblanche (refer **Annexure O3** to the comprehensive Land Development Application). Assessment Species which are not threatened but of conservation concern, for example near threatened, data deficient or declining species also received attention in the survey. The Ecological Fauna and Flora Habitat Survey concluded as follows:

- Vegetation at much of the site is transformed or modified. Informal buildings, roads, numerous scraped areas and fences are found widespread at the site. Informal dumping occurs at site. Various alien invasive weeds are widespread at the site. Some fragmented and ecologically disturbed patches of indigenous vegetation remain at some parts. *Vachellia erioloba* (Camel Thorn) trees remain and some appear to be conserved even in areas that are otherwise cleared. A number of indigenous tree-, shrub-, herb- and grass species are present at the site; often widespread pioneer species well-adapted to disturbed areas.
- The vegetation type representing the Savanna Biome at the site is Kuruman Thornveld (SVk 9). Kuruman Thornveld is not listed as threatened according to the National List of Threatened Ecosystems (2011).
- Scope for the site to be part of a corridor of particular conservation concern is small.
- No Threatened or Near Threatened plant or animal species appear to be present at site.
- One plant species that are not threatened but listed as Declining occurs at the site; *Vachellia erioloba* (= *Acacia erioloba*) (Camel Thorn tree).
- Camel Thorn, *Vachellia erioloba* which is found at the site is also a Protected tree species. In terms of a part of section 15(1) of the National Forests Act No. 84 of 1998, no person may cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, except under a license granted by the Minister.
- Protected plant species according to Northern Cape Nature Conservation Act No. 9 of 2009 (Updated in Provincial Gazette No. 1566, December 2011 with date of commencement 1 January 2012) have not been found at the site.

- Ecological sensitivity at the site is medium-low at present.
- No Threatened or Near Threatened plant or animal species appear to be present at site.
- Informal developments had ecological impacts at the site. Loss of natural habitat with indigenous vegetation took place owing to informal developments. While it cannot be categorically stated that no threatened, near-threatened plant species were found at the site prior to the informal development, there are no distinct indicators that such species would have been at the site. Declining plant species such as *Boophone disticha* (Poison Bulb) could have been present at the site owing to suitable habitat. Some loss in numbers of the Protected tree species *Vachellia erioloba* (Camel Thorn), could also have taken place at the site. A number of these Camel Thorn trees remain at the site and it also appear to be specifically conserved at some of the informal settlement areas.
- Establishment of exotic weeds should be monitored and exotic weeds at the site should be eradicated. A declared invader such as the mesquite tree (*Prosopis* species), should not be planted or allowed to spread from adjacent areas to the proposed footprint.
- No bird's nests of particular conservation concern such as nests of large raptors or nests of sociable weavers, have been found at the site.
- The conservation of *Vachellia erioloba* (a Protected tree species that is also listed as Declining) should receive special attention. If further development is approved a special effort should be made (apart from applying for the necessary permits) to conserve and cultivate *Vachellia erioloba* (Camel Thorn) trees to enhance the conservation of these magnificent trees in the larger area.
- If further development is approved, the key would be to conserve and cultivate as many as practical locally indigenous tree species at the urban area so that an urban conservation corridor could be created for the larger Kuruman and Mothibistad area.

### 3.6 GROUNDWATER

According to the Feasibility Level Dolomite Stability Investigation Report compiled by the Council for Geoscience (July 2017) (attached as **Annexure R** to the comprehensive Land Development Application), the nature of dolomite bedrock is impervious with porosity of less than 0.3 %. However, due to the jointing, fractures and faulting; water is able to percolate and seeps through the rock (Brink, 1979). The dolomite of the study area is also considered as an aquifer, due to faulting, dolerite intrusions and fracturing.

The groundwater level is a key risk assessment factor in the engineering-geological characterisation of any dolomitic environments. According to the 1: 50 000 hydro-geological Map 2722 Kimberly, the principal groundwater occurrence system is a karst type.

According to the Department of Water Affairs Groundwater Assessment: Dolomite Aquifers Study conducted in December 2006, Kuruman is located on Kuruman Groundwater Compartment. The compartment is being dewatered. Kuruman and surrounding



communities are almost entirely dependent on groundwater.

During drilling, groundwater (both water strike and groundwater rest level) was recorded in 69 boreholes of the 118 boreholes drilled. Groundwater measurements were taken using a dip meter as per SANS 1936-1(2012) requirements. Sixty five (65) boreholes recorded groundwater to be occurring on the blanketing material while in 53 boreholes it is occurring within bedrock. The water rest levels recorded varied between 6.7 m (BH 34) and 57.8 m (PLA 46) with an average of 24.7 m. (1300 m AMSL).

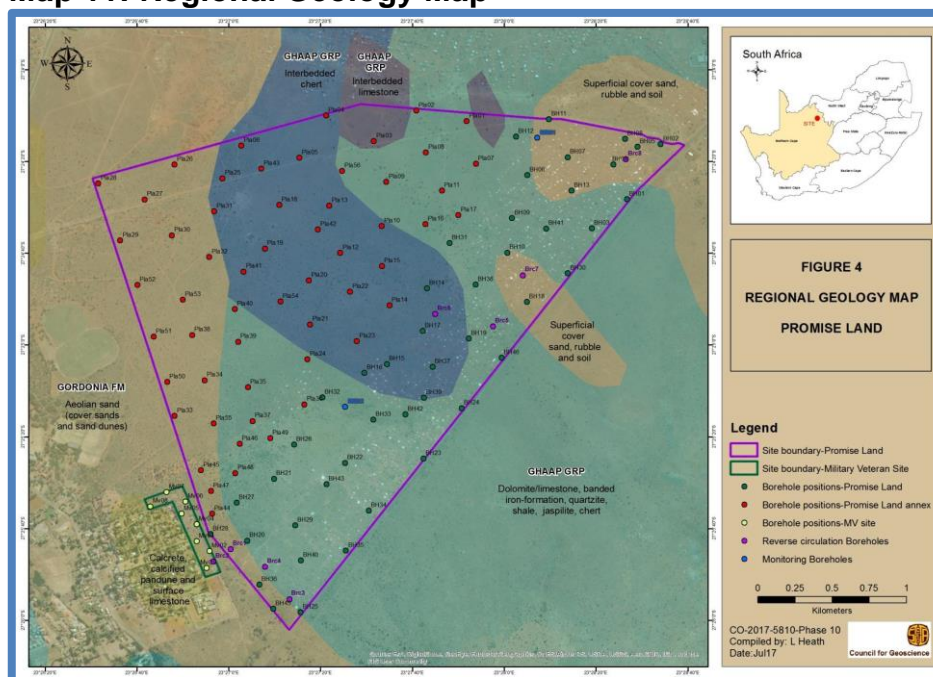
The results of the investigations show that the water table lies within the blanketing layer above bedrock in most cases. This indicates that fluctuations in the regional groundwater level could have an influence on the stability of the site. Significant lowering of the groundwater level could adversely affect the stability of the sites.

**3.7 GEOLOGY** (Extract from Feasibility Level Dolomite Stability Investigation Report compiled by the Council for Geoscience attached as **Annexure R** to the comprehensive land development application)

**3.7.1 REGIONAL GEOLOGY**

According to the 1: 250 000, sheet 2722 Kuruman geological map (refer **Map 9**), the sites are underlain by the Ghaap Group of the Transvaal Supergroup, which forms part of Griqualand West Sequence. The Group was deposited during the Vaalian Era. It is subdivided into four sub-groups of different depositional composition, namely; Schmidtdrif (siliclastic-carbonate), Campbell Rand (carbonate rocks), Asbestos Hill (chert and Banded Iron Formation) and Koegas (submarine fans) Subgroups (Kendal *et al*, 2012).

**Map 11: Regional Geology Map**





The sites fall within the Ghaap Plateau Sub-Basin of Campbell Rand Subgroup. The Subgroup consists of a number of formations, namely; Boomplaas, Clearwater, Monteville, Reivilo, Fairfield, Klipfontein-heuwel, Papkuil, Kogelbeen, Gamohaam and Tsineng. The rock composition of the Campbell Rand Subgroup consists of limestone, shale dolomite and chert.

The Kuruman Formation (Asbestos Hills Subgroup) is visible on the hills to the north and west of the site. Significant areas around the sites are covered by recent-age deposits of sandy soil, unconsolidated gravels/talus (Chert and Banded Ironstone), transported from the nearby hills, in places these deposits are very thick.

Quaternary sediments of the Gordonia Formation, Kalahari Group, (red unconsolidated Aeolian sand) are present in the area. Pedogenic material in some parts of the sites is clearly visible on the surface in the form of hardpan ferrecrete and calcrete.

As far as deformation is concerned, the Campbell Rand Subgroup is intruded by numerous North-South trending dolerite dykes and is said to be displaced by Northeast-Southeast trending faults. This tectonic movement in the subgroup is characterised by strike-slips, ductile deformation of the dolostone and numerous epigenetic unmineralised breccia.

Intrusive dykes also occur in the area dividing the aquifer into compartments. The most prominent dyke in the area is the Kuruman dyke which is located immediately north of N14 road trending east-west.

The site is covered by recent Aeolian red sand with calcrete covering the lava.

### **3.7.2 LOCAL GEOLOGY**

Locally, the overall lithology encountered in the drilled boreholes encompasses an overburden material; i.e. colluvium / alluvium / hillwash / Aeolian deposits, pedogenic material (calcrete and ferrecrete), chert rubble, dolomitic residuum which includes WAD in some places, weathered shale, overlying weathered dolomite/limestone and hard dolomite bedrock, of the Ghaap group (Transvaal Supergroup). Large parts of the sites are characterised by dolomite outcrops, scattered dolomite and chert boulders and minor calcrete and ferrecrete boulders.

### **3.7.3 DOLOMITE INHERENT HAZARD SUMMARY AND ZONATION**

The hazard zonation is based on geophysical surveys and drilling results from 118 boreholes drilled on Promise Land, Annexure and Military sites. This hazard zonation is only at feasibility level. An assessment of boreholes based on the method of scenario supposition, (Buttrick *et. al.*, 2001) favours the site being zoned into three Inherent

Hazard Zones as dictated by geological conditions revealed by the drilling results. The dolomite stability of the site is described in terms of the following zones:

- **Zone I**

Zone I is characterised by a medium inherent susceptibility of up to a medium size sinkhole and subsidence formation (2 m to 5 m in diameter) with respect to ingress and small size sinkhole (<2 m) with respect to groundwater level drawdown. Zone I occupies mainly the gravity high and gradient areas. This zone encompasses pockets of IHC5 due to the encounter of dolomite bedrock at 1 m and 4 m in BH43 and PLA23 respectively. The blanketing layer is characterised by colluvium, chert rubble, dolomite chert residuum (containing fines-Wad in some instances) underlain by weathered dolomite and dolomite bedrock. The depth to dolomite bedrock generally ranges between 6 m to 15 m. Groundwater rest level in this zone is mainly within bedrock. Zone I is shown in green colour in **Map 12** below.

This zone is characterised by relatively thin blanketing layer with very small occasional receptacles (cavities) in places and limited air/ sample loss, and is assessed as **D3**. Category D3 designation implies that precautionary measures in addition to those pertaining to the prevention of concentrated ingress of water into the ground, in accordance with the relevant requirements of SANS 1936-3, are required and must be adhered to.

The composite hazard classification for **Zone I** is **IHC 3(4)(5)/1(4)**.

- **Zone II**

This zone is characterised by a medium inherent susceptibility of up to a medium to large size sinkhole and subsidence formation (2 m to 5 m in diameter) with respect to both ingress and groundwater level drawdown. The blanketing layer is characterised by colluvium, chert residuum, dolomite chert residuum (containing fines-Wad) underlain by weathered dolomite and dolomite bedrock. The depth to dolomite bedrock is variable and groundwater rest level is mainly within the blanketing layer. Zone II is found mainly throughout the zonation map (**Map 12** refers) making it the most dominant zone.

Zone II is characterised by relatively thin (>20m) blanketing layer with very small occasional receptacles (cavities) in places and limited air/ sample loss, and is assessed as **D3**. Category D3 designation implies that precautionary measures in addition to those pertaining to the prevention of concentrated ingress of water into the ground, in accordance with the relevant requirements of SANS 1936-3, are required and must be adhered to. In **Map 12**, Zone II is shown in orange colour.

The composite hazard classification for **Zone II** is IHC 4//4(1)

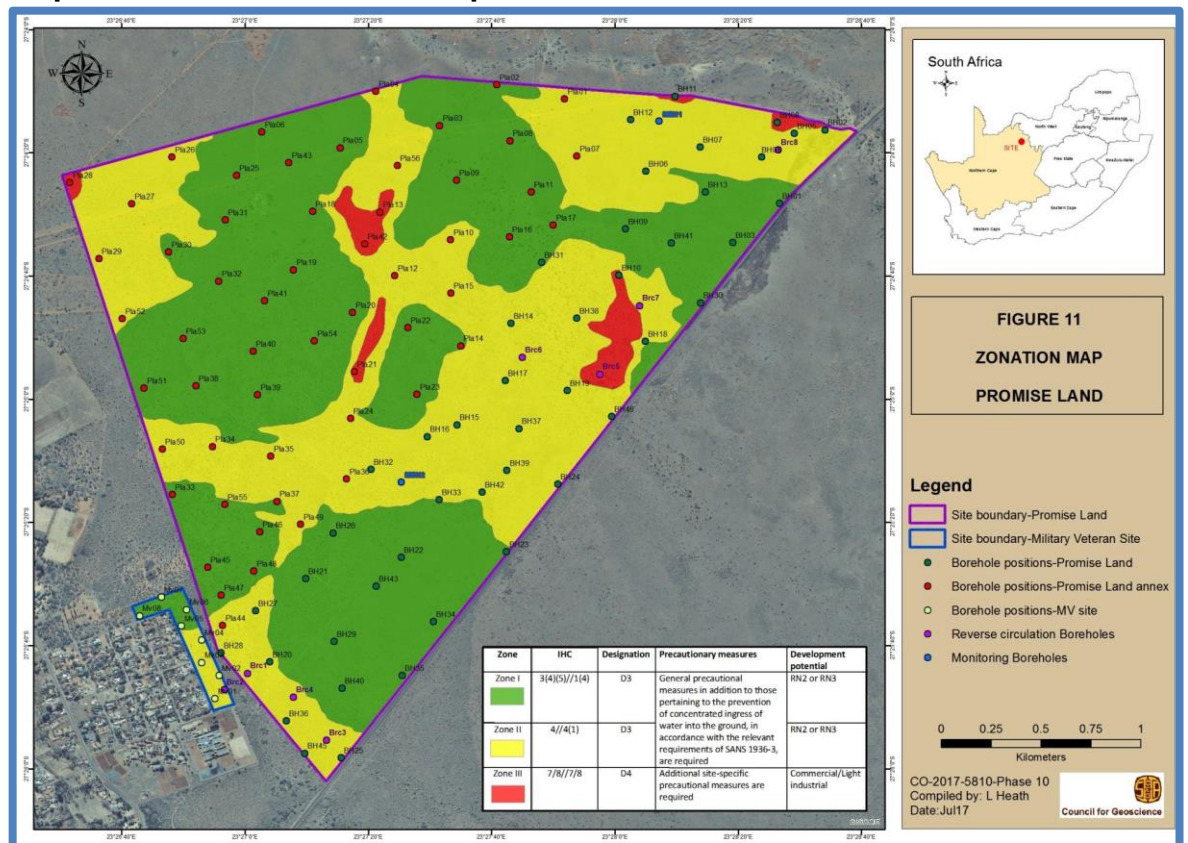
- Zone III**

This zone is characterised by a medium to high inherent susceptibility of up to a large to very large size sinkhole and subsidence formation (2 m to >15 m in diameter) with respect to both groundwater level drawdown and water ingress. The ground conditions in this zone are highly variable. Zone III occupies mainly the gravity lows mainly in the northern section of the map. The blanketing layer is considerable thick and is characterised by colluvium, chert residuum, dolomite chert residuum (fines-Wad) underlain by weathered dolomite. The depth to dolomite bedrock is generally deep (>20 m) and groundwater rest level is mainly within the blanketing layer or within the cavity.

This zone is characterised by thick (>20 m) blanketing layer with receptacles (cavities) up to >5 m and total air/ sample loss in most of the boreholes, and is assessed as D4 areas. Category **D4** designation implies that these areas are unlikely to result in a tolerable hazard and are not suitable for subsidy housing development in terms of SANS 1936-3. This zone is marked by a red colour on the zonation map in **Map 12**.

The composite hazard classification for this **Zone III** is IHC 7/8//7/8

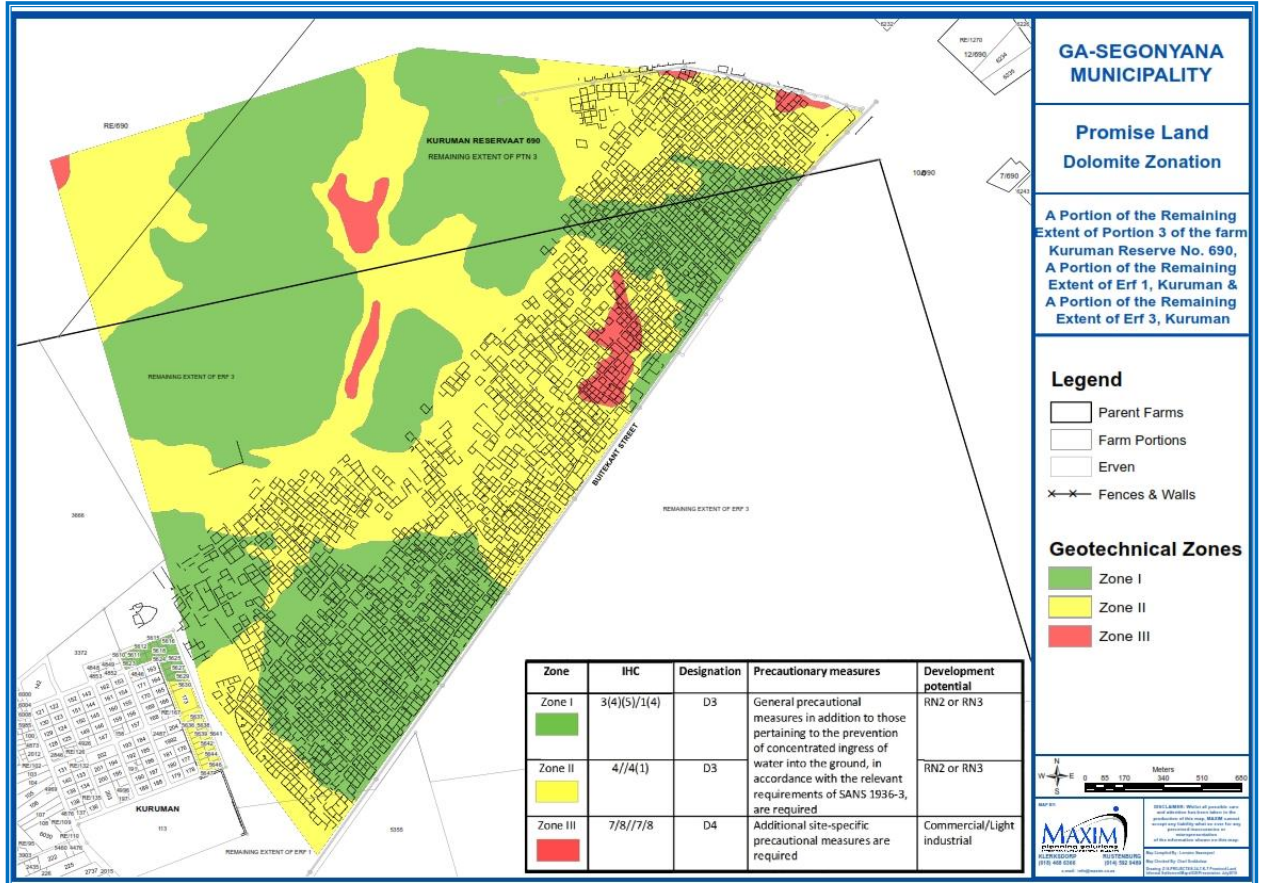
**Map 12: Dolomite zonation map**





As far as Promised Land is concerned, an area of ±7,8 ha in the central part of the village, as well as two smaller areas of 1,78 ha in the northern boundary, are affected by the Zone III dolomite area (refer Map 13 below).

**Map 13: Dolomite Zonation of Promise Land Settlement area**



A total of 121 households are situated on Zone III dolomite areas of which 15 are formal houses and 106 informal houses. These informal and formal houses as well as the other land uses located in Zone III are reflected on **Figures 11 and 12** below.



Figure 11: Land uses located within central Dolomite Zone III

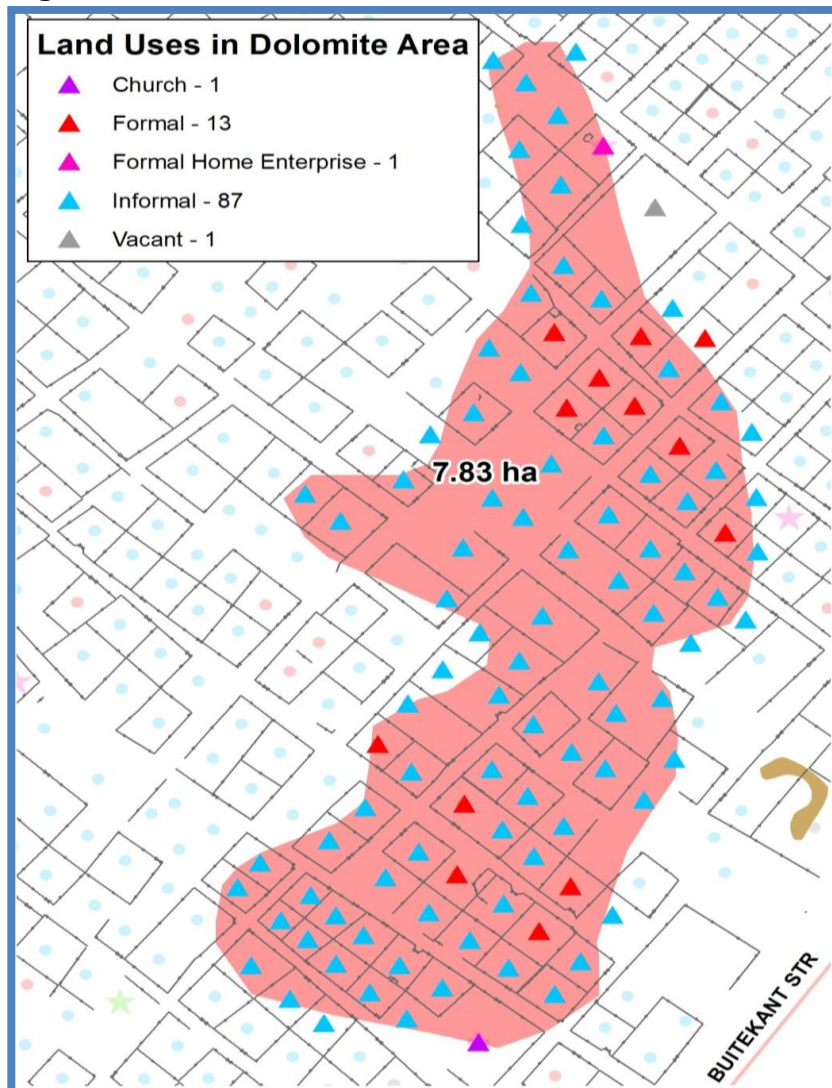
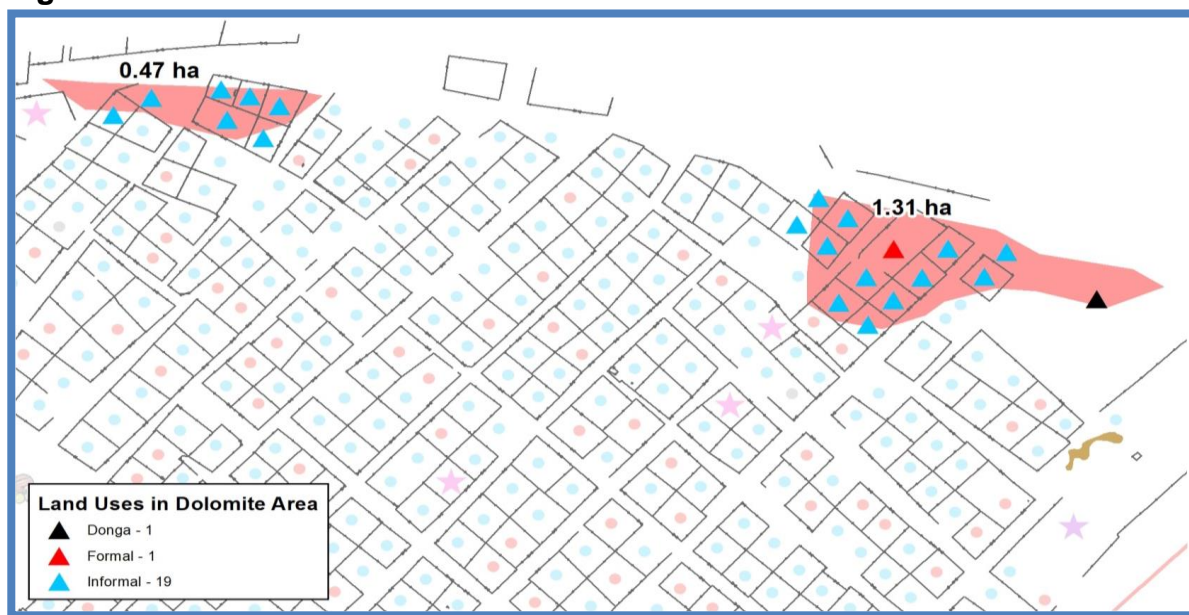


Figure 12: Land uses located within northern Dolomite Zone III



In terms of correspondence received from the Council for Geoscience (refer **Annexure R2** to the comprehensive Land Development application), it was indicated that the formal houses on Dolomite Zone III (D4) area need not be demolished, however, buildings should be managed by means of the following additional precautionary measures to be implemented in addition to the precautionary measures set out in SANS 1936-3:

- A site-specific Dolomite Risk Management Plan in accordance with SANS 1936-4:2012 must be compiled and implemented for houses or formal structures in D4 land. The owners/responsible persons must be made aware of the risks involved in building on dolomite, and be informed about how to be vigilant and act pro-actively by applying sound water management principles.
- General precautionary measures as set out in SANS 1936 Part 3: Design and construction of buildings, structures and infrastructure, must be studied and implemented.
- All stormwater from downpipes and gutters from buildings and structures shall discharge onto concrete-lined channels which, in turn, shall discharge the water at least 1,5 m away from structures onto areas permitting surface drainage away from buildings and structures. Joints between any open channel drains and buildings shall be suitably sealed.
- Where guttering is not provided, impervious paved areas or apron slabs shall be provided within 3 m (or greater if deemed appropriate by the competent person (engineer)) of buildings or structures, runoff from which shall drain into lined channels feeding into a designed stormwater system or shall be spread as sheet flow. The paved areas or apron slabs shall include areas located below the drip line or the periphery of the building or structure that is subject to draining rainwater.
- Wet engineering services should, wherever possible, not be placed parallel to buildings unless they are at least 5 m away (if stand size allows) from the structure. Should this be unavoidable, a rational design shall be performed by the competent person (engineer).
- Liquid-retaining structures shall be watertight (zero leakage), constructed without any joints, and shall not be placed closer than 5 m from a building. Alternatively, the design of such pools shall be integrated into the rational design of the foundation of the residential structure.
- The preferred pipe type for all wet engineering services, and the sleeve

systems for such services, on dolomite area designation D3 sites and D4 dolomite land for existing formal houses in Promise Land are polyethylene (PE) pipes and fittings that comply with the material manufacturing requirements of the relevant of parts 1, 2, 3 and 5 of SANS 4427.

- The water supply to a building shall be via a single water supply connection unless otherwise approved by the competent person (engineer). This also applies to other pressurized liquid bearing services.
- Wet engineering services, excluding stormwater systems, shall be capable of spanning the projected notional sinkhole diameter (5 m), which has a high likelihood of formation in accordance with the requirements of SANS 1936-2, without the service rupturing or any joint leaking or separating from the pipeline.
- Gardens within 15 m of buildings and structures shall not include (a) water features, such as fish ponds, except where an impermeable lining is provided in accordance with a design prepared by a competent person (engineer); or (b) water features with automatic replenishment systems. No automated irrigation systems shall be installed within a distance of 5 m from any structure or building on sites designated as D3 and D4 dolomite land for existing formal houses in this development.

The conditions set out above as well as those imposed by the NHBRC in respect of buildings and structures in Zones D2 and D3 were included in the draft Conditions of Establishment.

### **3.8 ENVIRONMENTAL IMPACT ASSESSMENT**

AB Enviro-Consult was appointed to conduct an Environmental Impact Assessment in terms of sections 24 and 24(D) of the National Environmental Management Act, 1998 (Act 107 of 1998). The activity is listed in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2014.

Due to the existence of structures of a formal and informal nature as well as certain infrastructure encountered on site, the Environmental Assessment Practitioner (EAP) convened a meeting with the with Ms. Tshepiso Lekwene from the Department Environment and Nature Conservation (DENC) who indicated that the EAP will have to apply for the rectification of unlawful commencement or continuation of a listed activity in terms of Section 24G of the National Environmental Management Act, 1998 (Act 107 of 1998) as amended.

An Environmental Screening Process was conducted by the EAP to ensure that all the relevant Environmental Legislation is taken into consideration. In addition to desktop studies and assessed alternatives and site inspections carried out to verify outcomes of the desktop studies, a full Public Participation Process was also followed to obtain inputs from interested and affected parties.

The Final Environmental Impact Assessment Report was submitted to the Department Environment and Nature Conservation (DENC) during May 2019 and is currently pending consideration by the Department (refer **Annexure O1** of the comprehensive Land Development Application).

### **3.9 CULTURAL HERITAGE AREAS**

A Pelsers Archaeological Consulting was commissioned to conduct a Cultural Heritage Resources Impact Assessment in respect of the proposed development area. The fore-mentioned assessment indicated that a number of known cultural heritage sites (archaeological and/or historical) exist in the larger geographical area within which the study area falls. There are no known sites on the specific land parcel and none was identified and recorded during the recent assessment. The area has been heavily impacted and disturbed in the recent past by current ongoing residential and related activities. If any did exist here in the past it would have been disturbed or destroyed as a result. It is clear from aerial views of the study area that recent large-scale human settlement has slowly encroached on the area since 2005. It is therefore highly unlikely that any significant and intact sites, features or material would be present here.

The Heritage Resources Impact Assessment concluded that although all efforts are made to locate, identify and record all possible cultural heritage sites and features (including archaeological remains) there is always a possibility that some might have been missed as a result of grass-cover and other factors. The subterranean nature of these resources (including low stone-packed or unmarked graves) should also be taken into consideration. Should any previously unknown or invisible sites, features or material be uncovered during any development actions then an expert should be contacted to investigate and provide recommendations on the way forward.

The Heritage Consultant concluded that *“from a cultural heritage point of view the development can therefore continue, taking cognizance of the above recommendations”*.



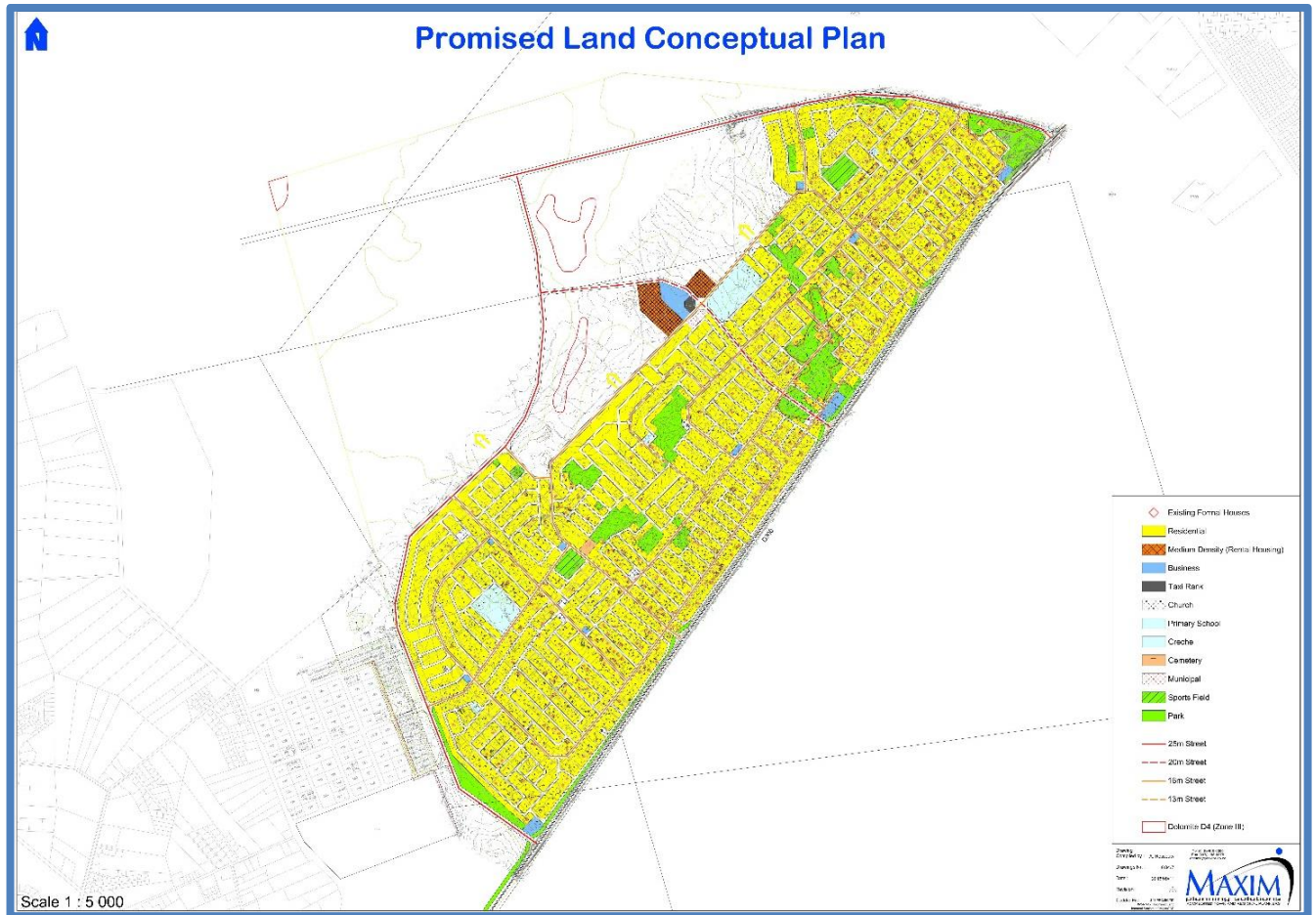
## CHAPTER 4: PROPOSED DEVELOPMENT

### 4.1 LAND USES

The intentions of the township applicant i.e. the Ga-Segonyana Local Municipality is to utilize the concerned properties for the formalization of the existing informal settlement known as Promise Land where in excess of 3 173 households already reside in informal and formal housing structures. The aim of this township establishment process is not only to address the short-term need for erven that can be utilized to accommodate the existing informal and formal housing structures but to also make provision for vacant erven to ensure organized future settlement takes place in this development area. The integrated layout plan compiled in respect of the proposed development area makes provision for a variety of erf sizes that can accommodate a variety of different housing typologies including inter alia GAP/FLISP housing, rental housing, social housing and bonded housing. In accordance with the policy guidelines contained in the Breaking New Ground (BNG) Principles it is indicated that new residential township areas should focus on the establishment of integrated human settlements focussing on the provision of erven not only for subsidized/low income households but also addressing the need for other housing typologies such as rental housing, social housing, bonded housing and FLISP projects. In terms of establishing a truly integrated human settlement, the layout plan compiled in respect of the development area also makes provision for the required non-residential-, social, educational, institutional and business facilities.

As alluded to in Section 1.1, the planning of the proposed integrated human settlement area, to formalize the Promise Land informal settlement area, was conducted in an integrated manner and focussed on the entire designated development area. This integrated planning yielded a township area comprising 5 471 residential erven (that can be utilized for a variety of different housing typologies) together with an additional 191 erven earmarked for non-residential support functions (inclusive of streets). The conceptual layout plan of the combined proposed township areas is reflected on **Map 14** below.











### Map 14: Promise Land Conceptual Layout Plan



The integrated layout plan compiled in respect of the six (6) proposed township areas makes provision for the following erven/land uses:

**Table 25: Integrated layout plan proposed land uses / erven**

<b>LEGEND</b>					
Proposed Zoning	Proposed Land use		Number of Erven	Area in Ha	% of Area
Residential zone III	Flats, Residential building		2	3.2142ha	0.89%
Residential zone IV	Residential house, low cost housing (Minimum 350m²)		5489	228.7591ha	63.30%
Business zone I	Business premises including, Institution, Authority use, Government, Flats, Residential building		1	1.1486ha	0.32%
Business zone II	Shop		11	2.1415ha	0.59%

Institutional zone I	Place of instruction (Primary School)		2	6.1037ha	1.69%
	Place of instruction (Creche)		3	0.3626ha	0.10%
Institutional zone II	Public place of worship (Church)		12	1.6673ha	0.46%
Institutional zone III	Institution (Thusong Centre/Community Hall)		1	0.4484ha	0.12%
Open space zone I	Public open space		28	20.5678ha	5.69%
Open space zone II	Private open space (Sportsfield)		2	2.4894ha	0.69%
	Private open space (Cemetery)		1	0.3359ha	0.09%
Transport zone I	Transport use (Taxi rank)		1	0.2664ha	0.07%
Transport zone II	Public street		124	86.9733ha	24.06%
Authority zone I	Authority use (Municipal)		5	6.9364ha	1.93%
<b>TOTAL</b>			<b>5662</b>	<b>361.4146ha</b>	<b>100%</b>

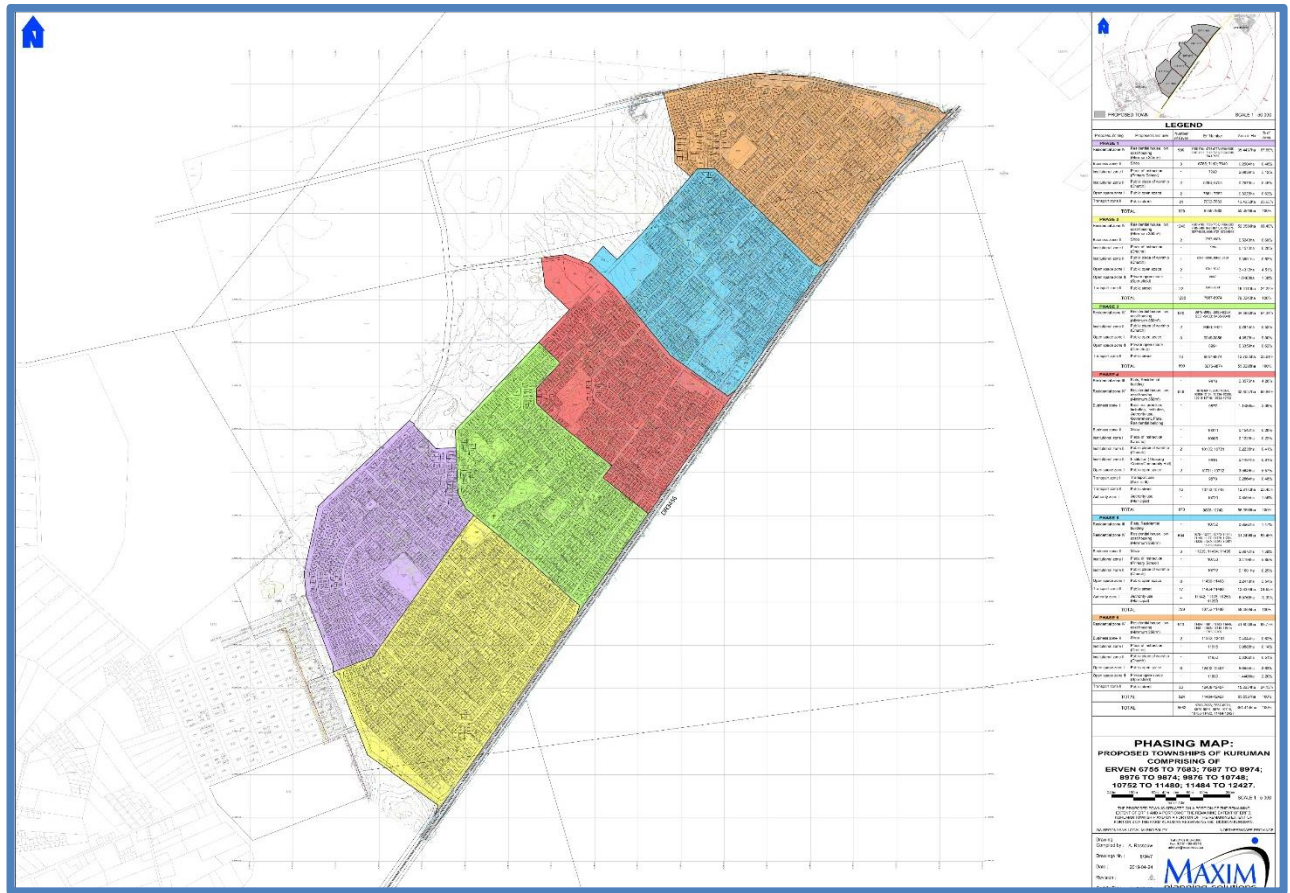
As per the procedural requirements of the Surveyor-General (Bloemfontein), it was indicated that the office of the Surveyor-General (Bloemfontein) restricts the number of erven included on a General Plan to a maximum of approximately 1200 erven to expedite the examination of the survey records and General Plans. Due to the fore-mentioned requirement, it was necessary to divide the proposed integrated human settlement into six (6) separate township areas.

The matter regarding the names of the proposed township areas was discussed at length with both the Registrar of Deeds (Vryburg) and the Surveyor-General (Bloemfontein). The Surveyor-General concurred that “*in the Northern Cape they are working with allotment areas and we do not attach an extension number to a specific township or extension*”. The Surveyor-General however required that the new township area should either be a continuation of the existing “Kuruman” township area or “Mothibistad” township area. The Ga-Segonyana Local Municipality resolved that the new township areas will be a continuation of the existing township areas of Kuruman.

The phasing of the initial integrated human settlement layout plan into six (6) phases is reflected on **Map 15**.



**Map 15: Phasing map of six (6) proposed Kuruman township areas**



The layout plans of the six (6) proposed townships areas respectively make provision for the following land uses as indicated in Tables 26, 27, 28, 29, 30 and 31.

**Table 26: Kuruman township (Phase 1) proposed land uses**

Proposed Zoning	Proposed Land use	Number of Erven	Erf Number	Area in Ha	% of Area
Residential zone IV	Residential house, low cost housing (Minimum 345m <sup>2</sup> )	900	6755-6784; 6786-6787; 6788-6955; 6957-7111; 7113-7241; 7243-7639; 7641-7660.	35.4437ha	67.66%
Business zone II	Shop	3	6765; 7112; 7640	0.2504ha	0.48%
Institutional zone I	Place of instruction (Primary School)	1	7242	2.6839ha	5.12%
Institutional zone II	Public place of worship (Church)	2	6788; 6756	0.2579ha	0.49%
Open space zone I	Public open space	2	7661; 7662	0.3225ha	0.62%
Transport zone II	Public street	21	7663-7683	13.4232ha	25.63%
<b>TOTAL</b>		<b>929</b>	<b>6755-7683</b>	<b>52.3816ha</b>	<b>100%</b>



**Table 27: Kuruman township (Phase 2) proposed land uses**

Proposed Zoning	Proposed Land use	Number of Erven	Erf Number	Area in Ha	% of Area
Residential zone IV	Residential house, low cost housing (Minimum 348m <sup>2</sup> )	1246	7687-7766; 7768-7784; 7786-8093; 8095-8488; 8490-8641; 8643-8675; 8677-8696; 8698-8727; 8729-8940	52.0586ha	68.48%
Business zone II	Shop	2	7767; 8676	0.5243ha	0.69%
Institutional zone I	Place of instruction (Creche)	1	7785	0.1510ha	0.20%
Institutional zone II	Public place of worship (Church)	4	8094; 8489; 8642; 8728	0.3991ha	0.52%
Open space zone I	Public open space	2	8841-8842	3.4312ha	4.51%
Open space zone II	Private open space (Sportsfield)	1	8697	1.0488ha	1.38%
Transport zone II	Public street	32	8943-8974	18.4113ha	24.22%
<b>TOTAL</b>		<b>1288</b>	<b>7687-8974</b>	<b>76.0242ha</b>	<b>100%</b>

**Table 28: Kuruman township (Phase 3) proposed land uses**

Proposed Zoning	Proposed Land use	Number of Erven	Erf Number	Area in Ha	% of Area
Residential zone IV	Residential house, low cost housing (Minimum 328m <sup>2</sup> )	870	8976-8993; 8995-9359; 9361-9433; 9435-9848	34.6983ha	64.34%
Institutional zone II	Public place of worship (Church)	2	9360; 9434	0.2815ha	0.52%
Open space zone I	Public open space	8	9849-9856	4.8523ha	9.00%
Open space zone II	Private open space (Cemetery)	1	8994	0.3359ha	0.62%
Transport zone II	Public street	18	9857-9874	13.7605ha	25.61%
<b>TOTAL</b>		<b>899</b>	<b>8976-9874</b>	<b>53.9285ha</b>	<b>100%</b>

**Table 29: Kuruman township (Phase 4) proposed land uses**

Proposed Zoning	Proposed Land use	Number of Erven	Erf Number	Area in Ha	% of Area
Residential zone III	Flats, Residential building	1	9876	2.3576ha	4.28%
Residential zone IV	Residential house, low cost housing (Minimum 335m <sup>2</sup> )	846	9879-9914; 9916-10084; 10086-10134; 10136-10309; 10311-10719; 10722-10730	33.5037ha	60.84%
Business zone I	Business premises including, Institution, Authority use, Government, Flats, Residential building	1	9877	1.1486ha	2.09%
Business zone II	Shop	1	10310	0.1547ha	0.28%
Institutional zone I	Place of instruction (Creche)	1	10085	0.1229ha	0.22%
Institutional zone II	Public place of worship (Church)	2	10135; 10721	0.2235ha	0.41%
Institutional zone III	Institution (Thusong Centre/Community Hall)	1	9915	0.4484ha	0.81%
Open space zone I	Public open space	2	10731; 10732	3.0646ha	5.57%
Transport zone I	Transport use (Taxi rank)	1	9878	0.2664ha	0.48%
Transport zone II	Public street	16	10733-10748	12.9170ha	23.46%
Authority zone I	Authority use (Municipal)	1	10720	0.8595ha	1.56%
<b>TOTAL</b>		<b>873</b>	<b>9876-10748</b>	<b>55.0669ha</b>	<b>100%</b>

**Table 30: Kuruman township (Phase 5) proposed land uses**

Proposed Zoning	Proposed Land use	Number of Erven	Erf Number	Area in Ha	% of Area
Residential zone III	Flats, Residential building	1	10752	0.8567ha	1.47%
Residential zone IV	Residential house, low cost housing (Minimum 332m <sup>2</sup> )	694	10754-10771; 10773-11141; 11143-11177; 11179-11234; 11236-11249; 11251-11257; 11259-11453	31.2498ha	53.46%
Business zone II	Shop	3	11235; 11454; 11455	0.8077ha	1.38%
Institutional zone I	Place of instruction (Primary School)	1	10753	3.4198ha	5.85%
Institutional zone II	Public place of worship (Church)	1	10772	0.1691ha	0.29%
Open space zone I	Public open space	8	11456-11463	3.2418ha	5.54%
Transport zone II	Public street	17	11464-11480	12.6378ha	21.62%
Authority zone I	Authority use (Municipal)	4	11142; 11178; 11250; 11258	6.0768ha	10.39%
<b>TOTAL</b>		<b>729</b>	<b>10752-11480</b>	<b>58.4595ha</b>	<b>100%</b>

**Table 31: Kuruman township (Phase 6) proposed land uses**

Proposed Zoning	Proposed Land use	Number of Erven	Erf Number	Area in Ha	% of Area
Residential zone IV	Residential house, low cost housing (Minimum 350m <sup>2</sup> )	913	11484-11561; 11563-11648; 11651-11608; 11810-11914; 11916-12400	41.8048ha	63.77%
Business zone II	Shop	2	11562; 12401	0.4044ha	0.62%
Institutional zone I	Place of instruction (Creche)	1	11915	0.0888ha	0.14%
Institutional zone II	Public place of worship (Church)	1	11650	0.3362ha	0.51%
Open space zone I	Public open space	6	12402-12407	5.6555ha	8.63%
Open space zone II	Private open space (Sportsfield)	1	11809	1.4406ha	2.20%
Transport zone II	Public street	20	12408-12427	15.8234ha	24.13%
<b>TOTAL</b>		<b>944</b>	<b>11484-12427</b>	<b>65.5537ha</b>	<b>100%</b>

The following should be noted in respect of the land uses mentioned above:

- **Residential Zone III**

The layout plans of the proposed township areas make provision for two (2) “Residential Zone III” erven with a total area of 3,2142 hectares that can be utilized for flats or residential buildings. These erven were specifically provided to allow opportunities for the development of residential rental stock in the form of social housing or community residential units (CRU).

A key model for the delivery of affordable housing is social housing, which provides medium density, affordable, rental housing to low and middle income households. Social Housing contributes to transforming urban spatial patterns as it promotes integration and densification in close proximity to economic and social amenities. Social Housing projects offer well-located rentals to households earning between R1500 to R15 000 per month. These rentals are subsidized by Government, making them much lower than market rates. For any given social housing project the recipients are divided into two groups: primary households with an income of R1500 to R5500 per month, and secondary households earning R5501 to R15000 per month. Primary households must make up at least 30% of the beneficiaries for the housing project to qualify for both the government grants that can be provided. Most of these households (those with R3500 to R12500 monthly income) fall into what is called the “gap” market; they earn too much to qualify for RDP Housing and they can’t afford to rent privately. So rent-based social housing is often their best option.

Government outsources the development and management of social housing projects to Social Housing Institutions (SHI’s). SHI’s are companies accredited by SHRA

(Social Housing Regulatory Authority). In general SHI's are not-for-profit companies that receive government subsidies for a specific housing project.

It is important to note that people can qualify to be accommodated in a social housing project even if that person has already benefitted from other housing projects in the past but does not currently own property.

In studying the locality of the erven designated for "Residential Zone III" purposes, it is evident that these erven will promote integration and densification and that they are positioned in close proximity to economic and social amenities.

The proposed "Residential Zone III" erven will be subject to the following development parameters imposed in terms of the Scheme Regulations for Ga-Segonyana Local Municipality, 2003:

**Table 32: "Residential Zone III" development parameters**

Development parameter	Development Parameter Detail
Primary Use	<ul style="list-style-type: none"> <li>▪ Flats</li> <li>▪ Residential Building</li> <li>▪ Guest House</li> </ul>
Consent Uses	<ul style="list-style-type: none"> <li>▪ Institution</li> <li>▪ Group Housing</li> <li>▪ Residential House</li> <li>▪ Public Place of Worship</li> </ul>
Coverage	50% (covered parking not included)
Height	At most 16m above natural ground level directly beneath any particular point or portion of the building
Building lines	<ul style="list-style-type: none"> <li>▪ Street building line of 4,5m</li> <li>▪ Rear and side boundaries building line shall be 4,5m or half the height of the building, whichever is the greatest</li> </ul>
Parking	<ul style="list-style-type: none"> <li>▪ One covered parking bay per residential unit (flat) or in the case of hotels, boarding-houses and other residential houses, one covered parking bay for every two bedrooms</li> <li>▪ One parking bay for every two residential units (flats)</li> <li>▪ One parking bay per two residential units (flats) or every four bedrooms in the case of hotels, boarding houses and other residential buildings for visitors</li> </ul>
Open space	<ul style="list-style-type: none"> <li>▪ In the case of a block of flats at least 15% of the site area should be reserved as an uninterrupted unit for gardening or recreation</li> </ul>



▪ **Residential Zone IV**

The layout plans of the six (6) proposed township areas make provision for the following number of erven to be zoned as “Residential Zone IV”:

**Table 33: Number of “Residential Zone IV” erven per township area**

Proposed township area	Number of “Residential Zone IV” erven
Kuruman Township comprising Erven 6755 to 7683	900
Kuruman Township comprising Erven 7687 to 8974	1246
Kuruman Township comprising Erven 8976 to 9874	870
Kuruman Township comprising Erven 9876 to 10748	846
Kuruman Township comprising Erven 10752 to 11480	694
Kuruman Township comprising Erven 11484 to 12427	913
<b>TOTAL</b>	<b>5 469</b>

In accordance with the policy guidelines contained in the Breaking New Ground (BNG) Principles it is indicated that new residential township areas should focus on the establishment of integrated human settlements focussing on the provision of erven not only for subsidized/low income households but also addressing the need for other housing typologies such as rental housing, bonded housing and FLISP projects.

A housing subsidy is a grant by government to qualifying beneficiaries for housing purposes. This is one of the Department of Human Settlement’s areas of responsibility in the delivery of human settlements to the bottom-most end of the market, where it provides housing subsidies to the poor. This is where the bulk of the housing backlog exists, affecting mainly those who earn below R3500 a month. The following subsidy programmes are available from the Department of Human Settlements:

❖ **Integrated Residential Development Programme**

The Integrated Residential Development Programme replaced the Project Linked Subsidy Programme. The programme provides for planning and development of integrated housing projects. Projects can be planned and developed in phases and provides for holistic development orientation:

- Phase 1: Land, Services and Township Proclamation
- Phase 2: Housing Construction (this also includes the sale of stands to non-qualifying beneficiaries and to commercial interests)

❖ **Individual Subsidy**

This programme provides access to state assistance where qualifying households wish to acquire an existing house or a vacant serviced residential stand, linked to a house construction contract through an approved mortgage loan. These properties are available in the normal secondary housing market or have been developed as part of a project not financed through one of the National Housing Programmes

❖ **Enhanced People’s Housing Process**

The Enhanced People’s Housing Process aims to support households who wish to enhance their housing subsidies by funding their own homes. The Enhanced People’s Housing process can be accessed through the Integrated Residential Development Programme, Project Linked Consolidation or Institutional Subsidies.

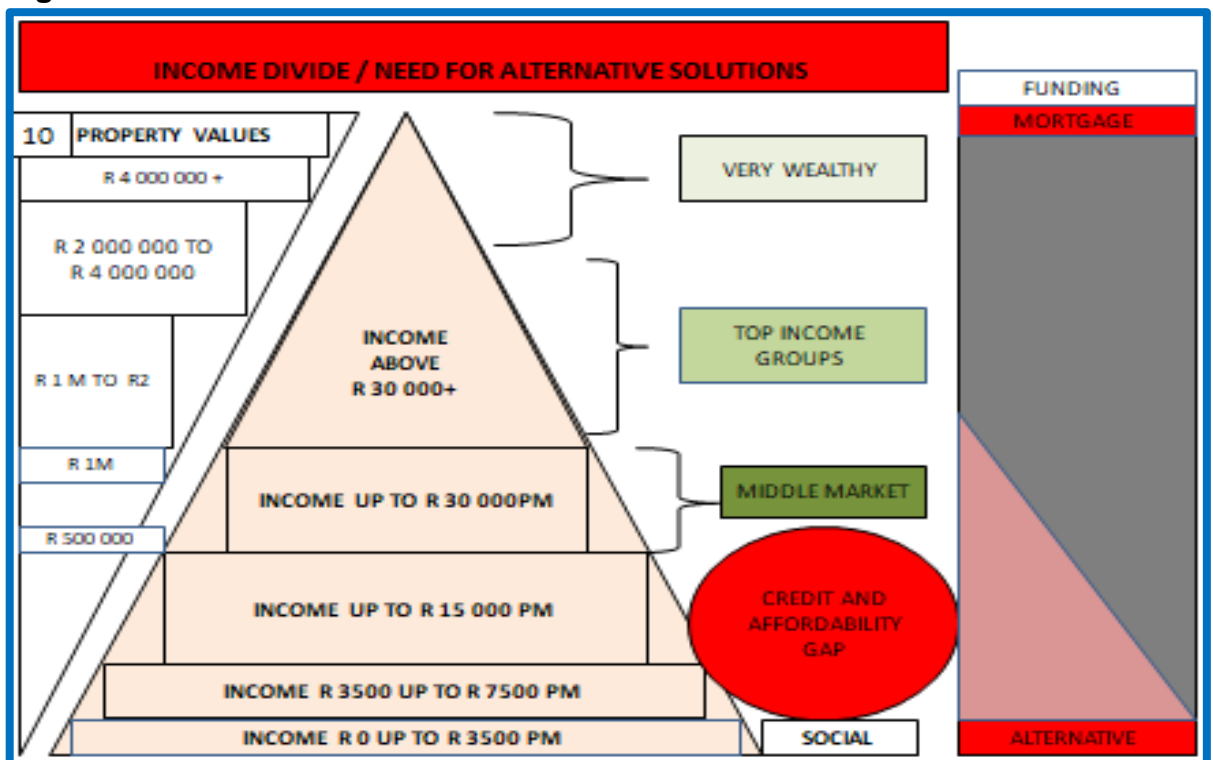
❖ **People’s Housing Process**

This subsidy is given to people who want to build or manage the building of their own homes. Unlike the Project Linked Subsidy where a contractor builds houses for a number of people, the People’s Housing Process allows people or beneficiaries to build or organize the building of their homes.

Housing the poor was an ingredient of the Department of Human Settlement’s three-part response to the State’s Vision 2030 Strategy. “Gap housing” is a term that describes the shortfall or gap in the market between units supplied by the State and houses delivered by the private sector. The gap housing market comprises people who typically earn between R3500 and R15000 per month, which is too little to enable them to participate in the private property market, yet too much for state assistance. Gap housing is a policy that addresses the housing aspirations of people such as nurses, fire-fighters, teachers, SAPS members and member of the armed forces who earn between R3500 and R15000 per month and therefore do not qualify for RDP houses and do not earn enough to obtain home loans.

The following figure illustrates the income divide / Need for alternative solutions.

**Figure 13: Income Divide / Need for alternative solutions**



One of the subsidy programmes further available from the Department of Human Settlements includes the Finance Linked Individual Subsidy Programme (FLISP).

FLISP was developed to enable first time home-ownership to households in the “affordable or gap” market, that is, people earning between R3501 and R15000 per month. Individuals in these salary bands generally find it hard to qualify for housing finance; their income is regarded as low for mortgage finance, but too high to qualify for the government subsidy scheme available to households earning less than R3500 per month. Depending on the applicant’s gross monthly income, their once-off FLISP subsidy qualifying amount may vary between R20 000 and R87 000, as defined in the FLISP Subsidy Quantum. Any residential property acquired with the FLISP subsidy may not exceed the R300 000 price margin. FLISP assists qualifying beneficiaries who wish to obtain mortgage finance from a lender to:

- Acquire ownership of an existing residential property
- Obtain vacant serviced residential stands which are linked to house building contracts with the home builders registered with the National Home Builders Registration Council (NHBRC); or
- Build a new house with the assistance of a home builder registered with the National Home Builders Registration Council (NHBRC) on serviced residential stand that is already owned by the beneficiary.

The objective of the programme is to reduce the initial mortgage loan amount to render the monthly loan repayment instalments affordable over the loan payment term.

It is therefore imperative to note that the proposed 3 886 erven provided for “Residential Zone IV” purposes are not provided to only accommodate subsidized housing but that the erven will also be available to potential owners who may not qualify for one of the government subsidies but who still wishes to acquire an erf from the Ga-Segonyana Local Municipality to build their own house.

The current settlement consisting of formal and informal structures are situated on informally demarcated plots with an average size of  $\pm 600\text{m}^2$  (25m X25m) that covers an area of  $\pm 357,96$  ha. Some of the demarcated plots of especially formal houses are larger than  $600\text{m}^2$ . This low density of  $\pm 9$  units per ha is not in line with Government norms and standards relating to stand sizes for especially subsidised houses. In order to comply with Government policy COGHSTA required the stand sizes to be  $350\text{m}^2$  average.

The Social Facilitation Report, 2016 also mentioned the low density as a challenge, and proposed the promotion of densification of the Promised Land Village.

The creation of more dense settlements without raising the cost of land and housing for the poor is one of the operational principles in the National Development Plan.

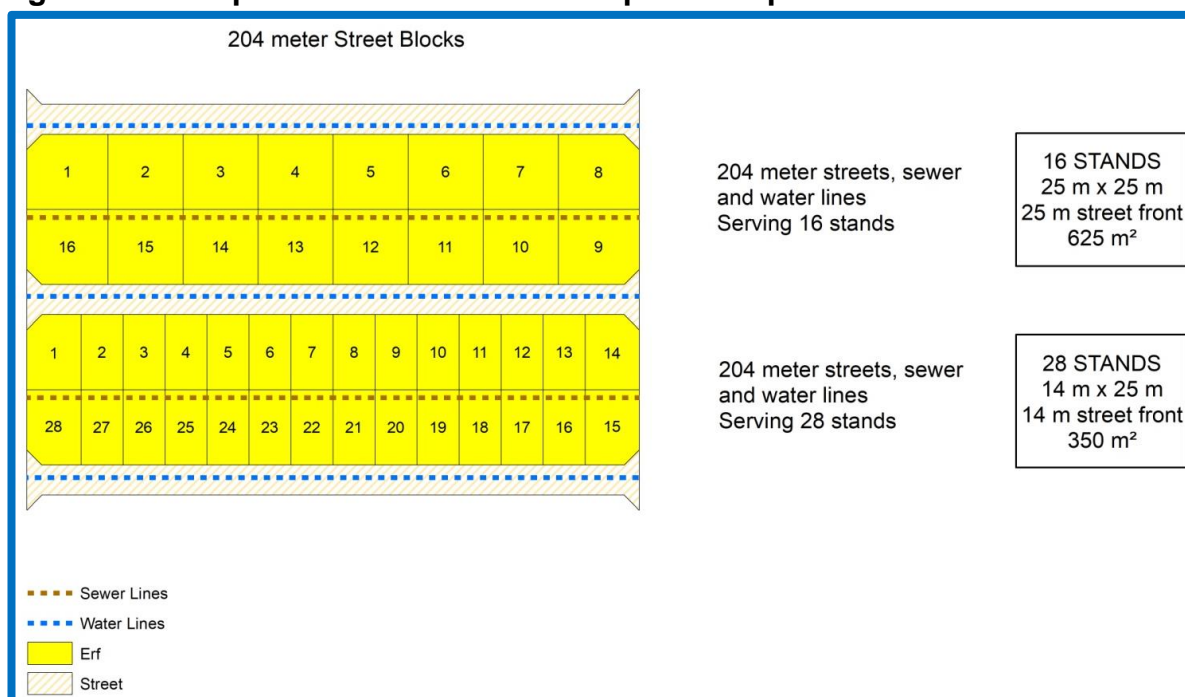
Urban studies in South Africa identified low density development as one of the critical factors inhibiting the creation of sustainable settlements. Low density settlements are problematic in that they generate:

- Inadequate population thresholds which are unable to support viable public transport and social facilities.
- High costs for municipalities who must deliver service.
- Infrastructural inefficiencies.

Apart from abovementioned the disadvantages of large stands in comparison with smaller stands can be summarised as follows:

- More cost-effective provision of services

**Figure 14: Comparative number of erven provided per fixed linear distance**



- Cost breakdown of municipal engineering services (water, sewer and roads – According to National Department of Human Settlements, April 2018)

**Table 34: Cost Breakdown of Municipal Engineering Services – Direct Costs**

COST BREAKDOWN OF MUNICIPAL ENGINEERING SERVICES - DIRECT COST								
IMPLEMENTATION DATE: 01 APRIL 2018								
A GRADE SERVICES: DIRECT COST								
Zoning	Size in m <sup>2</sup>	Street front	Cost of water	Cost of sewer	Cost of road	Cost of stormwater	Cost of high mast	Total cost per unit
Res1	243	9m	R4140.11	R7210.41	R23570.60	R4153.81	R0.00	<b>R 3904.94</b>
	294	10m	R4471.07	R7795.38	R26516.53	R5019.15	R0.00	<b>R 43802.13</b>
	122	5m	R2803.64	R4869.48	R11784.77	R2076.38	R0.00	<b>R 21534.27</b>
	236	10m	R4471.07	R7795.38	R26516.53	R4027.33	R0.00	<b>R 42810.32</b>



The cost comparison between large stands of 625m<sup>2</sup> (25m X 25m) and smaller stands of 350m<sup>2</sup> (14m X 25m) based on quantum amounts is set out in **Table 35** below.

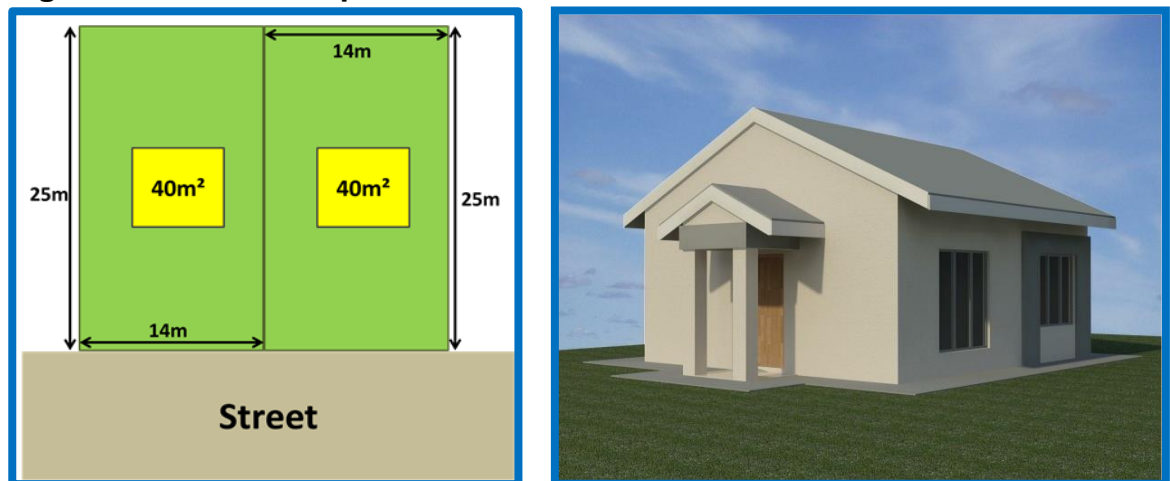
**Table 35: Cost comparison between larger and smaller stands**

Street Front	Water	Sewer	Roads	Total
25 metre	R 11 177-00	R 27 283-00	R 66 291-00	R 104 751-00
14 metre	R 6 259-00	R 10 913-00	R 37 123-00	R 54 295-00

- Other disadvantages of large residential stands:
  - Higher municipal service tariffs for residents
  - Maintenance costs of outdoor living areas (example: gardens) and fencing

A stand of 350m<sup>2</sup> with a subsidised house of 40m<sup>2</sup> provides more than sufficient outdoor space as well as potential for additions over time.

**Figure 15: Schematic presentation of 40m<sup>2</sup> subsidized house on 350m<sup>2</sup> erf**



Stands of 350m<sup>2</sup> also provides sufficient space for FLISP (GAP) as well as affordable bonded houses of between 53m<sup>2</sup>, 63m<sup>2</sup> and 72m<sup>2</sup>.

**Figure 16: Schematic presentation of affordable bonded housing**



**Table 36 “Residential Zone IV” development parameters**

Development parameter	Development Parameter Detail
Primary Use	<ul style="list-style-type: none"> <li>▪ Informal housing</li> <li>▪ Residential House</li> </ul>
Consent Uses	<ul style="list-style-type: none"> <li>▪ Place of Instruction</li> <li>▪ Tuck Shop</li> <li>▪ Guest House</li> <li>▪ Bird or animal cages</li> </ul>
Coverage	At most 80%
Height	At most 8m above natural ground level directly beneath any particular point or portion of the building
Building lines	<ul style="list-style-type: none"> <li>▪ No building or any part thereof, excluding a garage with a roll-up door, boundary walls or boundary fences shall be erected on a site nearer than 1m to any street boundary, in to the rear and one side boundary and no doors or windows shall be placed in any wall closed than 1,5m from any side or rear boundary.</li> </ul>

▪ **Business Zone I**

The layout plans of the proposed township area of Kuruman comprising Erven 9876 to 10748 makes provision for one (1) erf to be zoned as “Business Zone I” (including Institution, Authority use, Government use, Flats, Residential buildings):

This envisioned multi-purpose node that will make provision for a Thusong Centre (Community centre), taxi rank and a large business stand is proposed in the central northern area of the settlement (intersection of the 20m and 16m streets). In future this will form a centralised precinct for not only the current village but also for the vacant area north of the settlement that also forms part of the future development area in terms of the Spatial Development Framework.

It is envisaged that this erf will be utilized as the main commercial node offering the greatest variety of goods and services. It is envisaged that this node will function as mixed land use node also providing supporting social facilities such as clinics, municipal pay points, Thusong Centres, Post Office facilities, SASSA pay points etc. The land use rights applied for in respect of this erf also incorporates land use rights in respect of the use of the erven for Institutions, Authority Use, Government Use, Flats and Residential Buildings. Whereas the Institutional, Authority use and Government Use land use rights will be required to accommodate the social support facilities listed above, provision was also made for the use of the subject erven for the purposes of flats and/or residential buildings. This permutation will afford the Ga-Segonyana Local Municipality the greatest degree of flexibility in establishing a proper mixed land use zone where the “Business Zone I” erf can also be utilized for flats or social housing units (based on the market demand).

The proposed “Business Zone I” erven will be subject to the following development parameters imposed in terms of the Scheme Regulations for Ga-Segonyana Municipality, 2003:

**Table 37: “Business Zone I” development parameters**

Development parameter	Development Parameter Detail
Primary Use	<ul style="list-style-type: none"> <li>▪ Business premises</li> <li>▪ Institution (applied for as primary land use right in this application)</li> <li>▪ Authority use (applied for as primary land use right in this application)</li> <li>▪ Government use (applied for as primary land use right in this application)</li> <li>▪ Flats (applied for as primary land use right in this application)</li> <li>▪ Residential Building (applied for as primary land use right in this application)</li> </ul>
Consent Uses	<ul style="list-style-type: none"> <li>▪ Institution</li> <li>▪ Place of entertainment</li> <li>▪ Service station</li> <li>▪ Drive-in restaurant</li> <li>▪ Guest House</li> <li>▪ Service industry</li> <li>▪ Funeral parlour</li> <li>▪ Animal clinic</li> <li>▪ Animal hospital</li> </ul>
Coverage	100%
Height	At most 12m above natural ground level directly beneath any particular point or portion of the building
Building lines	<ul style="list-style-type: none"> <li>▪ Business buildings, flats and residential buildings on top of business buildings may be erected on the street boundary. All other buildings must maintain a building line of 4,5m from the street boundary</li> <li>▪ With regard to rear and side boundaries, buildings in this zone may be erected on such boundaries provided that no windows, doors or ventilation openings are let into any wall on such boundary</li> <li>▪ Notwithstanding these building line regulations for side and rear boundaries, in cases where these boundaries form the division between the business zone and any other zone, a building line on both sides of the communal boundary shall be applicable, which is equal to the relevant building line on the adjoining zone.</li> </ul>

Parking	<ul style="list-style-type: none"> <li>▪ At least one parking bay for every 25m<sup>2</sup> of the total floor area of the building (excluding any section of the building that is used for residential purposes).</li> <li>▪ One parking bay per two bedrooms in the case of hotels and residential buildings.</li> <li>▪ Parking for visitors shall be provided in the following cases:             <ul style="list-style-type: none"> <li><input type="checkbox"/> 1 parking bay for every four residential units</li> <li><input type="checkbox"/> 1 parking bay for every five bedrooms in the case of residential buildings</li> <li><input type="checkbox"/> 20 parking bays in the case of a licenced hotel</li> </ul> </li> </ul>
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▪ **Business Zone II**

The layout plans of the proposed township areas make provision for the following number of erven to be zoned as “Business Zone II”:

**Table 38: Number of “Business Zone II” erven per township area**

Proposed township area	Number of “Business Zone II” erven
Kuruman Township comprising Erven 6755 to 7683	3
Kuruman Township comprising Erven 7687 to 8974	2
Kuruman Township comprising Erven 8976 to 9874	0
Kuruman Township comprising Erven 9876 to 10748	1
Kuruman Township comprising Erven 10752 to 11480	3
Kuruman Township comprising Erven 11484 to 12427	2
<b>TOTAL</b>	<b>11</b>

To ensure that a proper integrated human settlement is established, it is imperative that adequate provision also be made for commercial activities that will address the daily needs of the concerned community whilst similarly providing opportunities for job creation. The township areas make provision for the establishment of 11 suburban business nodes that are primary located on the intersection of or adjacent to the 16m<sup>2</sup> collector roads that will serve as local business centres.

According to the Spatial Development Framework, Road D3456 is proposed as a development corridor between Kuruman and Mothibistad. For this reason provision is also made for business stands as the intersection of the western 25 metre road and the central 20 metre road with Road D3456.

The “Business Zone II” erven were positioned in such a way to limit walking distances whilst ensuring easy accessibility to these facilities. The large number of business erven provided aims at stimulating economic growth and providing opportunities for job creation.



The proposed “Business Zone II” erven will be subject to the following development parameters imposed in terms of the Scheme Regulations for Ga-Segonyana Municipality, 2003:

**Table 39: “Business Zone II” development parameters**

Development parameter	Development Parameter Detail
Primary Use	<ul style="list-style-type: none"> <li>▪ Shop</li> </ul>
Consent Uses	<ul style="list-style-type: none"> <li>▪ Residential House</li> <li>▪ Flats</li> </ul>
Coverage	At most 80 %
Height	At most 8m above natural ground level directly beneath any particular point or portion of the building
Building lines	<ul style="list-style-type: none"> <li>▪ Shops and flats on top of shop may be erected on the street boundary. All other buildings must maintain a building line of 4,5m from the street boundary</li> <li>▪ With regard to rear and side boundaries, buildings in this zone may be erected on such boundaries provided that no windows, doors or ventilation openings are let into any wall on such boundary</li> <li>▪ Notwithstanding these building line regulations for side and rear boundaries, in cases where these boundaries form the division between the business zone and any other zone, a building line on both sides of the communal boundary shall be applicable, which is equal to the relevant building line on the adjoining zone.</li> </ul>
Parking	<ul style="list-style-type: none"> <li>▪ At least one parking bay for every 25m<sup>2</sup> of the total floor area of the building (excluding any section of the building that is used for residential purposes.</li> <li>▪ One parking bay per two bedrooms in the case of hotels and residential buildings.</li> <li>▪ Parking for visitors shall be provided in the following cases:                             <ul style="list-style-type: none"> <li><input type="checkbox"/> 1 parking bay for every four residential units</li> <li><input type="checkbox"/> 1 parking bay for every five bedrooms in the case of residential buildings</li> <li><input type="checkbox"/> 20 parking bays in the case of a licenced hotel</li> </ul> </li> </ul>

▪ **Institutional Zone I**

The layout plans of the proposed township areas make provision for the following number of erven to be zoned as “Institutional Zone I”:

**Table 40: Number of “Institutional Zone I” erven per township area**

Proposed township area	Number of “Institutional Zone I” erven
Kuruman Township comprising Erven 6755 to 7683	1
Kuruman Township comprising Erven 7687 to 8974	1
Kuruman Township comprising Erven 8976 to 9874	0
Kuruman Township comprising Erven 9876 to 10748	1
Kuruman Township comprising Erven 10752 to 11480	1
Kuruman Township comprising Erven 11484 to 12427	1
<b>TOTAL</b>	<b>5</b>

For this development area to function as a proper integrated human settlement, it is of critical importance to also address the needs of the community for education facilities in the form of early learning centres / crèches, primary schools and secondary schools.

In terms of the CSIR Guidelines for the Provision of Social Facilities in South African Settlements, the following norm is proposed in respect of educational facilities:

**Table 41: CSIR Guideline for educational facilities**

Proposed facility	CSIR Guideline	Number of erven required	Number of erven provided
Small Crèche / Early childhood development centre	1 per 2400 – 3000 inhabitants	3	3
Primary School	1 per 7000 inhabitants	1	2
Secondary School	1 per 12 500 inhabitants	0	0

(Based on estimated 3 173 households, 2,7 average household size and total estimated inhabitants of 8 567)

The erven earmarked for the use as primary schools were positioned in such a manner to limit walking distance for learners whilst ensuring that the facilities are positioned in such a manner to ensure optimum accessibility.

The proposed “institutional Zone I” erven will be subject to the following development parameters imposed in terms of the Scheme Regulations for Ga-Segonyana Municipality, 2003:

**Table 42: “Institutional Zone I” development parameters**

Development parameter	Development Parameter Detail
Primary Use	Place of instruction
Consent Uses	None

Coverage	At most 50 %
Building lines	8m on all boundaries
Parking	As determined by Council

▪ **Institutional Zone II**

The layout plans of the proposed township areas make provision for the following number of erven to be zoned as “Institutional Zone II”:

**Table 43: Number of “Institutional Zone II” erven per township area**

Proposed township area	Number of “Institutional Zone II” erven
Kuruman Township comprising Erven 6755 to 7683	2
Kuruman Township comprising Erven 7687 to 8974	4
Kuruman Township comprising Erven 8976 to 9874	2
Kuruman Township comprising Erven 9876 to 10748	2
Kuruman Township comprising Erven 10752 to 11480	1
Kuruman Township comprising Erven 11484 to 12427	1
<b>TOTAL</b>	<b>12</b>

For this development area to function as a proper integrated human settlement, it is of critical importance to also address the needs of the community for religious facilities.

In terms of the CSIR Guidelines for the Provision of Social Facilities in South African Settlements, the following norm is proposed in respect of educational facilities:

**Table 44: CSIR Guideline for religious facilities**

Proposed facility	CSIR Guideline	Number of erven required	Number of erven provided
Church	1 per 3000 – 6000 inhabitants	2	12

(Based on estimated 3 173 households, 2,7 average household size and total estimated inhabitants of 8 567)

The erven earmarked for use as churches were positioned at the localities where current informal churches are located.

The proposed “Institutional Zone II” erven will be subject to the following development parameters imposed in terms of the Scheme Regulations for Ga-Segonyana Municipality, 2003:

**Table 45: “Institutional Zone II” development parameters**

Development parameter	Development Parameter Detail
Primary Use	Public place of worship

Consent Uses	None
Coverage	At most 60 %
Height	At most two storeys, provided that any storey shall not be limited to 4m and church towers shall not be considered as part of a storey in this case
Building lines	6m on all boundaries with regard to all buildings except a parsonage, which shall be subject to the same building lines as applicable to the “Residential Zone I”
Parking	On-site parking must be provided at a minimum requirement of one parking bay for every 20 seats provided in all buildings on the site, excluding the parsonage

▪ **Institutional Zone III**

The layout plans of the proposed township area of Kuruman comprising Erven 9876 to 10748 makes provision for an erf zoned as “Institutional Zone III” and is intended to make provision for a Thusong Centre (Community centre) / Community Hall and will be located directly opposite the proposed multi-purpose node.

In future this will form a centralised precinct for not only the current village but also for the vacant area north of the settlement that also forms part of the future development area in terms of the Spatial Development Framework.

The proposed “Institutional Zone III” erf will be subject to the following development parameters imposed in terms of the Scheme Regulations for Ga-Segonyana Municipality, 2003:

**Table 46: “Institutional Zone II” development parameters**

Development parameter	Development Parameter Detail
Primary Use	Institution
Consent Uses	None
Coverage	At most 60 %
Building lines	As determined by Council
Parking	As determined by Council

▪ **Open Space Zone I**

The layout plans of the proposed township areas make provision for the following number of erven to be zoned as “Open Space Zone I”:

**Table 47: Number of “Open Space Zone I” erven per township area**

Proposed township area	Number of “Open Space Zone I” erven
Kuruman Township comprising Erven 6755 to 7683	2



Kuruman Township comprising Erven 7687 to 8974	2
Kuruman Township comprising Erven 8976 to 9874	8
Kuruman Township comprising Erven 9876 to 10748	2
Kuruman Township comprising Erven 10752 to 11480	8
Kuruman Township comprising Erven 11484 to 12427	6
<b>TOTAL</b>	<b>28</b>

The areas designated for “Open Space Zone 1” purposes coincide with the areas not suitable for development due to dolomite (D4) as well as rock outcrops.

The proposed “Open Space Zone I” erven will be subject to the following development parameters imposed in terms of the Scheme Regulations for Ga-Segonyana Municipality, 2003:

**Table 48: “Open Space Zone I” development parameters**

Development parameter	Development Parameter Detail
Primary Use	Public open space
Consent Uses	None

▪ **Open Space Zone II**

The layout plans of the proposed township areas make provision for the following number of erven to be zoned as “Open Space Zone II”:

**Table 49: Number of “Open Space Zone II” erven per township area**

Proposed township area	Number of “Open Space Zone II” erven	Proposed land use
Kuruman Township comprising Erven 7687 to 8974	1	Private Open Space (Sports field)
Kuruman Township comprising Erven 8976 to 9874	1	Private Open Space (Cemetery)
Kuruman Township comprising Erven 11484 to 12427	1	Private Open Space (Sports field)
<b>TOTAL</b>	<b>3</b>	

Two (2) of the erven proposed for “Open Space Zone II” purposes will accommodate the current informal sports fields in the eastern and western parts of the village that can serve as formal sports fields in the future. The site earmarked for the purposes of a cemetery will accommodate an existing cemetery already present on the concerned erf.

The proposed “Open Space Zone II” erven will be subject to the following development parameters imposed in terms of the Scheme Regulations for Ga-Segonyana Municipality, 2003:

**Table 50: “Open Space Zone II” development parameters**

Development parameter	Development Parameter Detail
Primary Use	Private open space
Consent Uses	Racecourse

▪ **Transport Zone I**

The layout plan of the proposed township Kuruman comprising Erven 9876 to 10748 incorporates one (1) “Transport Zone I” erf that will be utilized for the purposes of a taxi rank. This site was specifically positioned along the Class 3 collector road and forms an integral part of the mixed land use node within the integrated human settlement area. The taxi rank will comprise a total area of 0,2664 hectares.

The proposed “Transport Zone I” erf will be subject to the following development parameters imposed in terms of the Scheme Regulations for Ga-Segonyana Municipality, 2003:

**Table 51: “Transport Zone I” development parameters**

Development parameter	Development Parameter Detail
Primary Use	Transport use
Consent Uses	None
Coverage	At most 80%
Height	At most 8m above natural ground level directly beneath any particular point or portion of the building
Building lines	No street building line is required, while side and rear building lines may also be zero, except when the transport zone abuts another zone, in which case the side and rear building lines of the other zone shall apply to both sides of the communal boundary

▪ **Transport Zone II**

The layout plans of the proposed township areas make provision for the following number of erven to be zoned as “Transport Zone II”:

**Table 52: Number of “Transport Zone II” erven per township area**

Proposed township area	Number of “Transport Zone II” erven	Proposed land use	Combined area
Kuruman Township comprising Erven 6755 to 7683	21	Public Street	13,4232 hectares
Kuruman Township comprising Erven 7687 to 8974	32	Public Street	18,4113 hectares

Kuruman Township comprising Erven 8976 to 9874	18	Public Street	13,7605 hectares
Kuruman Township comprising Erven 9876 to 10748	16	Public Street	12,9170 hectares
Kuruman Township comprising Erven 10752 to 11480	17	Public Street	12,6378 hectares
Kuruman Township comprising Erven 11484 to 12427	20	Public Street	15,8234 hectares
<b>TOTAL</b>	<b>124</b>		<b>86,9733 hectares</b>

As per the operational requirements of the Surveyor-General (Bloemfontein), the public streets in the proposed township areas will be reflected as “erven” on the General Plans of the fore-mentioned township areas.

The proposed “Transport Zone II” erven will be subject to the following development parameters imposed in terms of the Scheme Regulations for Ga-Segonyana Municipality, 2003:

**Table 53: “Transport Zone II” development parameters**

Development parameter	Development Parameter Detail
Primary Use	Public street
Consent Uses	none

▪ **Authority Zone I**

The layout plans of the proposed township areas make provision for the following number of erven to be zoned as “Authority Zone I”:

**Table 54: Number of “Authority Zone I” erven per township area**

Proposed township area	Number of “Transport Zone II” erven	Proposed land use	Combined area
Kuruman township comprising Erven 9876 to 10748	1	Authority use	0,8595 hectares
Kuruman township comprising Erven 9876 to 10748	4	Authority use	6,0768 hectares
<b>TOTAL</b>	<b>5</b>		<b>6,9363 hectares</b>

The layout plans incorporate 5 erven to be zoned for “Authority Zone I” purposes. These erven coincide with the dolomite stability zone D4 area and is intended for possible use in future for purposes that are classified as suitable within the D4 zone (should same be required). The erven were specifically not zoned for “Open Space Zone I” purposes as this will require future park closure procedures when these erven are to be developed in future.

The proposed “Authority Zone I” erven will be subject to the following development parameters imposed in terms of the Scheme Regulations for Ga-Segonyana Municipality, 2003:

**Table 55: “Authority Zone I” development parameters**

Development parameter	Development Parameter Detail
Primary Use	Authority use
Consent Uses	none

**Annexure V2** to the comprehensive land development application contains a list of the erven in the proposed township areas, the proposed zoning thereof, the proposed land use to be established on such erf, the estimated area of all erven and the proposed street address thereof.

## 4.2 **FACTORS INFLUENCING THE LAYOUT PLAN**

The layout plans of the proposed township areas were influenced by the following factors:

- ★ Cognisance had to be taken from the onset of the fact that the development area has already been occupied by 3 173 formal and informal residential structures as well as other non-residential support facilities;
- ★ In order to reduce large scale resettlement of households as far as possible, the demarcation of stands on the layout plan is to a large extent directed by the current settlement pattern, informal street layout as well as the 429 formal houses that are already located on large demarcated plots;
- ★ Provision was made for additional erven in excess of the required 3173 households as approximately 500 additional households had already settled within the area since the land use survey of June 2018;
- ★ The proposed layout plans were to a large extent based on the results of the Situation Analysis Report as well as the decisions of the Project Steering Committee;
- ★ Accommodating all formal houses on erven within the proposed township areas;
- ★ Limiting further development within the dolomite stability zone D4;
- ★ Increasing the density of the development though the reduction in the sizes of the erven to increase the economic development potential of the township area;
- ★ The average stand size will be ±350m<sup>2</sup> (25m x 14m) as per the requirement of the Department Cooperative Governance, Kuman Settlement and Traditional Affairs (GOGHSTA) and also approved by the relevant community;



- ✳ In order to align the street layout with the localities of the formal houses, some of the residential stands will be larger (between 400m<sup>2</sup> and 550m<sup>2</sup>)
- ✳ Providing erven to accommodate a variety of residential housing typologies ranging from subsidized housing, FLISP housing, GAP housing, Social Housing and bonded housing;
- ✳ A site is also proposed for future medium density development that can accommodate the development of rental housing (Social and CRU)
- ✳ Accommodating the topographical features (rock outcrop areas) present on site into the layout plan
- ✳ Accommodating the existing cemetery on an erf in the proposed township area;
- ✳ Providing access to possible future development to the north-west;
- ✳ Aligning the access to the proposed township area to the existing accesses from District Road DR3456;
- ✳ Providing a line of no access along the boundary of the erven bordering onto District Road DR3455 as well as along the main collector roads within the proposed township areas; and
- ✳ Providing for a 10m building restriction area adjacent to District Road DR3456 (this building line is less than the generally required 16m building line due to the presence of existing formal housing structures that only allows for a 10m building restriction area to be imposed.

### 4.3 **ACCESS**

The layout plan consists of a street layout that is to a large extent directed by the current settlement pattern (informal streets) as well as the formal residential houses. The main objective is to create a functional road network that can accommodate public / private transport as well as pedestrian movement. In order to achieve above-mentioned, it will therefore be necessary to re-settle some of the informal residential structures.

The proposed primary road network consists of 25 metre main access roads from District Road DR3456 along the western and north-eastern boundaries of the settlement as well as a 20 metre main road in the central part of the settlement, linking the 25 metre roads with Road D3456. (The 25 metre road on the north-eastern boundary follows the same alignment as that of an existing gravel road and water pipe line).

The main roads including District Road DR3456 provide access to a network of 16 metre primary collector roads as well as 13 metre secondary collector roads in certain areas. Provision is also made for two intersections of the 16 metre roads with District Road DR3456.

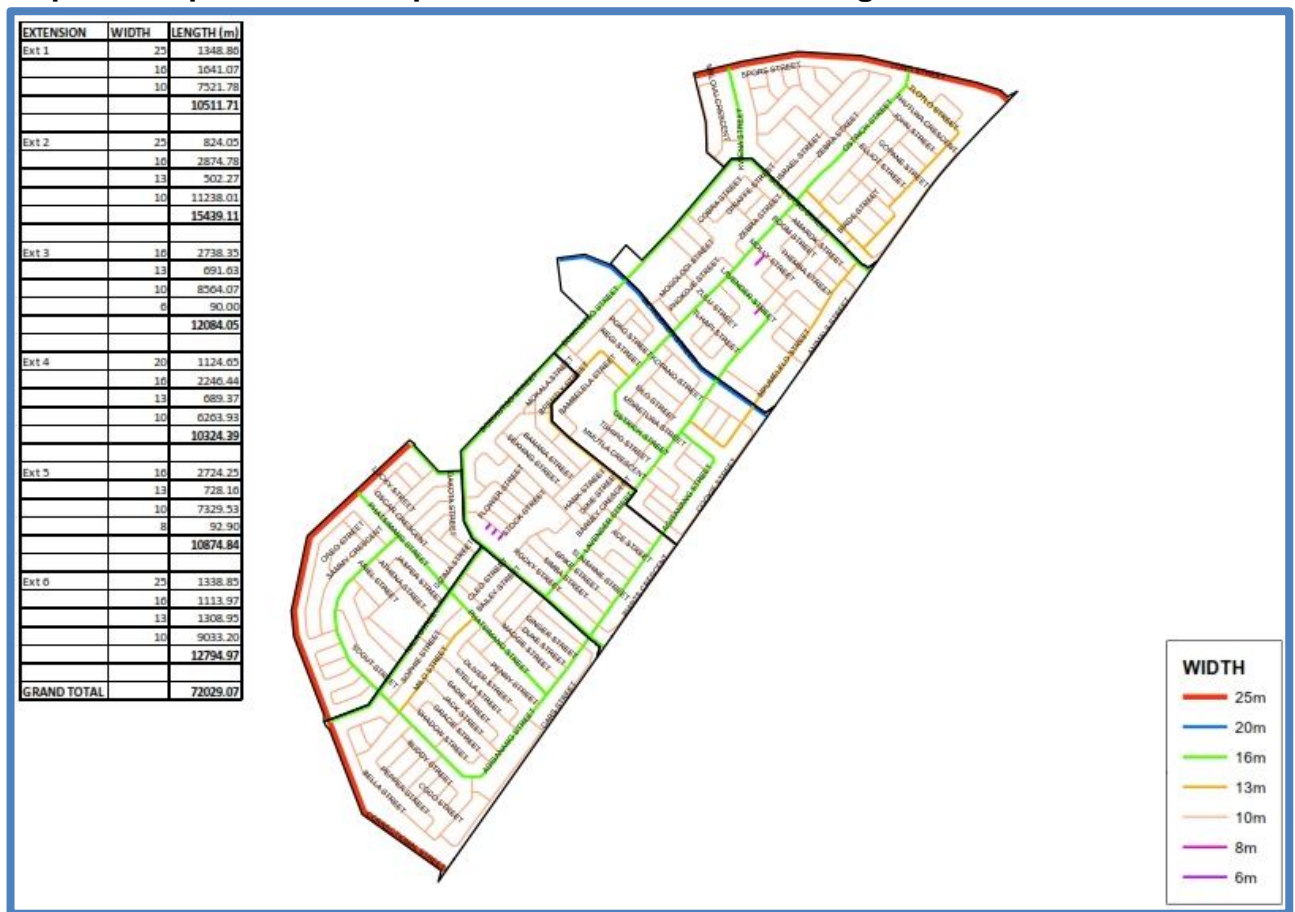
The proposed road network also makes provision for service roads to stands and especially formal houses in the areas adjacent to District Road DR3456. These service roads will replace the current informal roads in that area.

The internal roads consist of 10 metre road reserves that are more or less the same as the existing informal roads. In total, the proposed road network makes provision for 5 intersections with District Road DR3456 situated between 737m and 1166m from each other that will ensure sufficient access to the settlement as well as the vacant area north of the settlement.

A 10 metre building line adjacent to District Road DR3456 is also proposed as a public open space or to be accommodated within the proposed service road reserve widths.

The internal street network to be implemented in the proposed township areas comprises of the following roads:

**Map 16: Proposed township street widths and street lengths**



Access to the proposed township area will primarily be provided from the existing tar road (Kuruman-Mothibistad road) that borders onto the south-eastern boundary of the proposed township area.

In order to assess the impact of the proposed township area on the surrounding road network, AC<sup>2</sup> (Pty) Ltd was commissioned to conduct a Traffic Impact Assessment in respect of the proposed township areas.

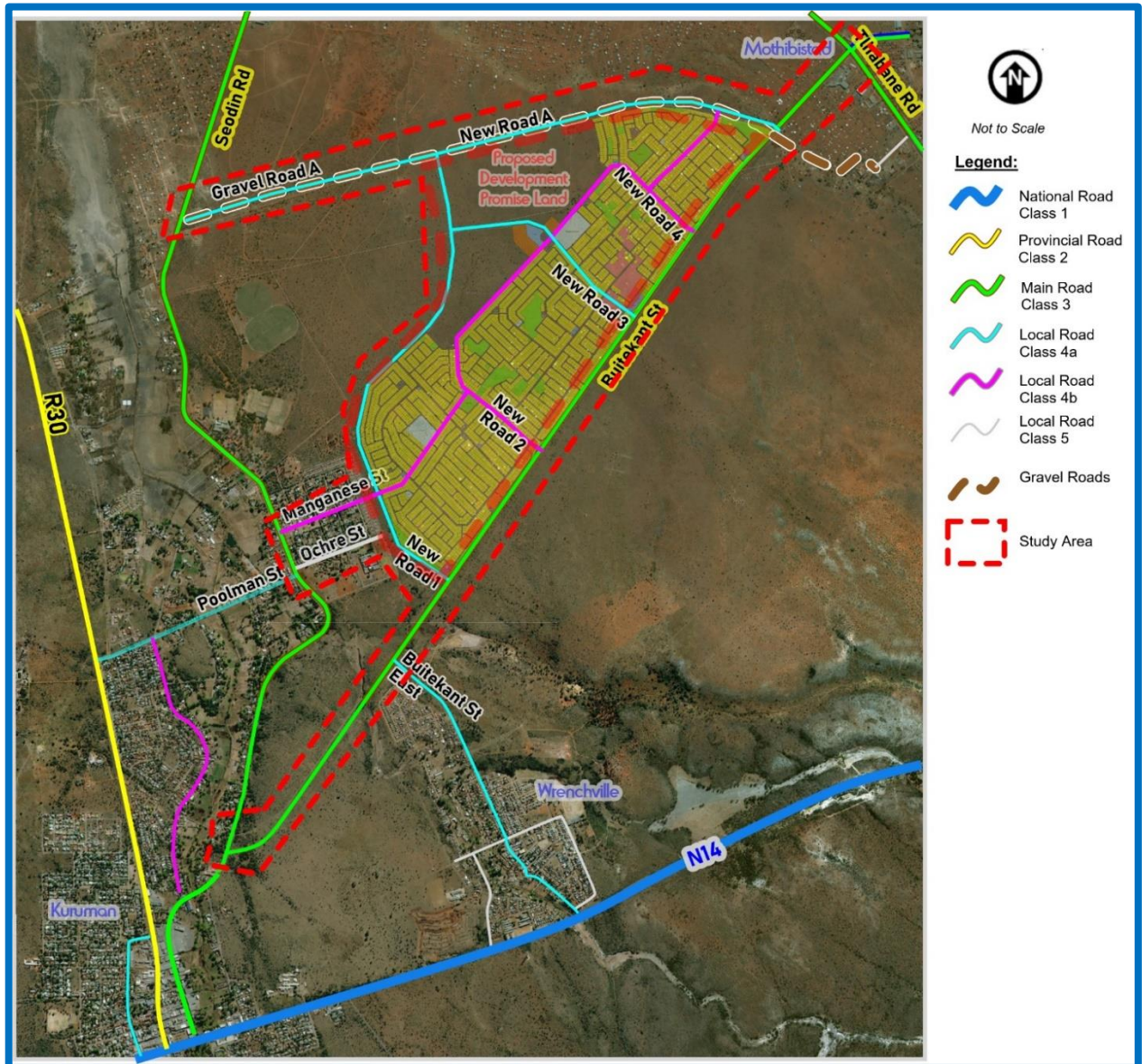
The results of the Traffic Impact Study can be summarized as follows:



### 4.3.1 STUDY AREA

The proposed development will gain access to the wider road network through District Road (DR3456), Manganese-, Ochre Street and Seodin Road. A road network of Class 4a, Class 4b and Class 5 roads within Promise Land Extensions, will link the proposed development with the roads mentioned, to facilitate movement to and from the proposed development.

Figure 17: Study Area



### 4.3.2 ROAD NETWORK PLANNING

#### 4.3.2.1 Municipal Planning

The only new road infrastructure project that could be found in the Ga-Segonyana Local Municipality Integrated Development Plan (IDP) for the 2018/19 period include

(although no funding seems to have been allocated to the project) entails the resealing of Seodin Road and maintenance of the Mothibistad intersection. The surfacing of the gravel road along the northern boundary of the proposed development is not listed in the IDP.

#### 4.3.2.2 Provincial Planning

DR3456 is classified as a district road and fall under the jurisdiction of the province. Kuruman reside in the northern region of the provincial road network. The road was resealed in recent years and during October 2018 maintenance was underway, curbing erosion of the road surface by constructing an in-situ concrete road edge beams which will prolong the lifespan of the road.

#### 4.3.2.3 National Planning

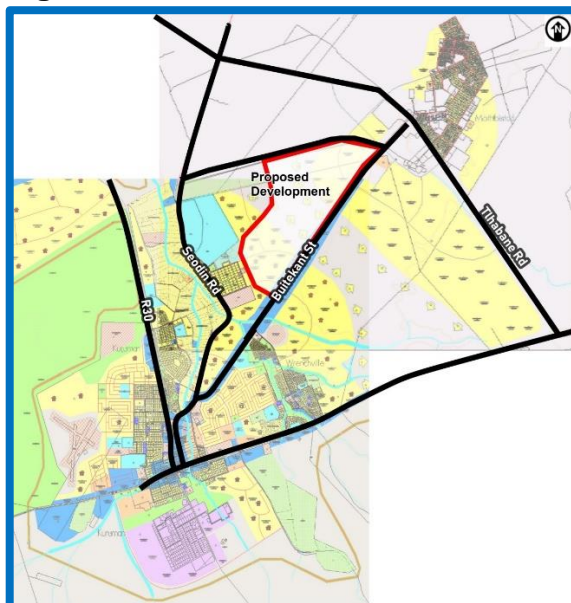
According to data available in public domain no road capacity improvement of the N14 in the vicinity of Kuruman in the next 5-years.

### 4.3.3 SPATIAL DEVELOPMENT FRAMEWORK

The Ga-Segonyana Spatial Development Framework (SDF), July 2008 for Kuruman and Mothibistad is shown in **Figure 18**. The proposed Promise Land development resides in a zone that allows residential and mixed land use development. The proposed development layout and land uses applied for align with the SDF.

The functional road hierarchy (discussed in the next section) considered the SDF in that it gives input in the type of traffic expected on roads due to the surrounding land use. Furthermore, the SDF was also considered with the determination of development trip distribution.

**Figure 18: Kuruman and Mothibistad Spatial Development Framework**



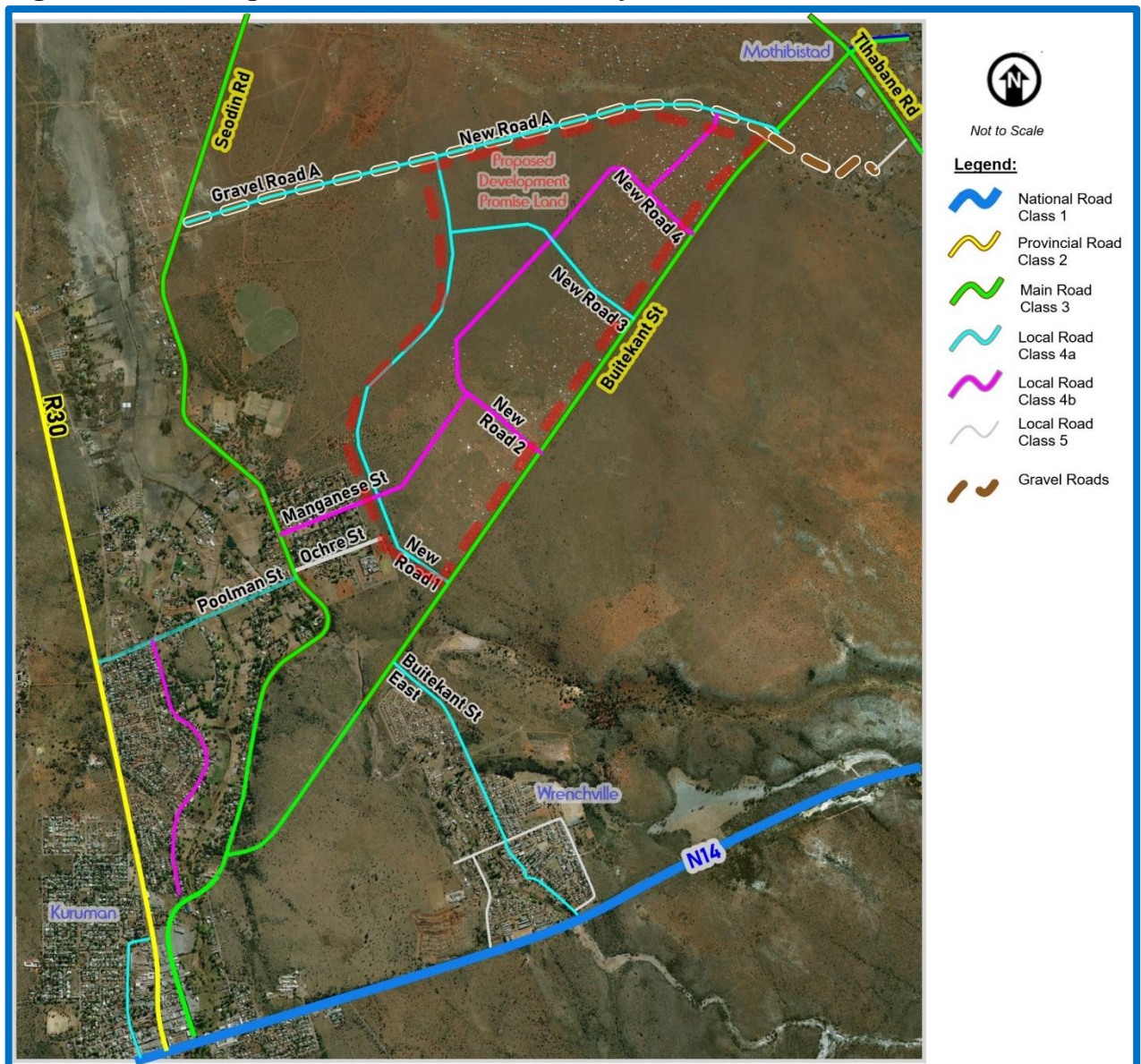


### 4.3.4 EXISTING ROAD NETWORK HIERARCHY

The functional road hierarchy of the existing road network is indicated in **Figure 19**. The main roads that will facilitate movement from the development to the wider network are:

- Class R3 – District Road DR3456 and Seodin Road;
- Class U5 – Manganese and Ochre Street;
- Class U4a - Gravel Road A will facilitate movement from District Road DR3456 to Seodin Road. The road is not currently constructed according to Class U4a standards but will in future fulfil the function to link the Class 3 network near the proposed development.

**Figure 19: Existing Functional Road Hierarchy**



### **4.3.5 FUTURE ROAD NETWORK HIERARCHY**

The future functional road hierarchy which includes the development is shown in Error! Reference source not found.. The road reserve widths of the development are also indicated. The functional road classification assumed that all gravel roads and road links that will link the proposed development to the existing road network will be constructed as formal paved roads and that these roads could fulfil their intended function in terms of the overall road network hierarchy.

*New Road A* will in future link District Road Dr3456 and Seodin Road and need be a surfaced before full development stage is reached. Full development stage is anticipated within the next 5-7 years. The main warrant for the road to be surfaced, is linked to the development of the business node at the intersection of New Road 3,4 and 2. Access to this business node will be via New Road A, New Road 3 and a portion of New Road 1.

Existing informal settlements are located in close proximity to District Road DR3456. Since the formalised township layout needs to accommodate the existing settlements, the best option was to provide access to these erven via a service road running parallel to District Road DR3456 (refer to **Figure 20**).

In order to protect the mobility function of District Road DR3456, the access function is separated by means of providing a service road. Access to District Road DR3456 is provided at a minimum spacing of 750m and align with the minimum standard for Class U3 road intersection spacing.

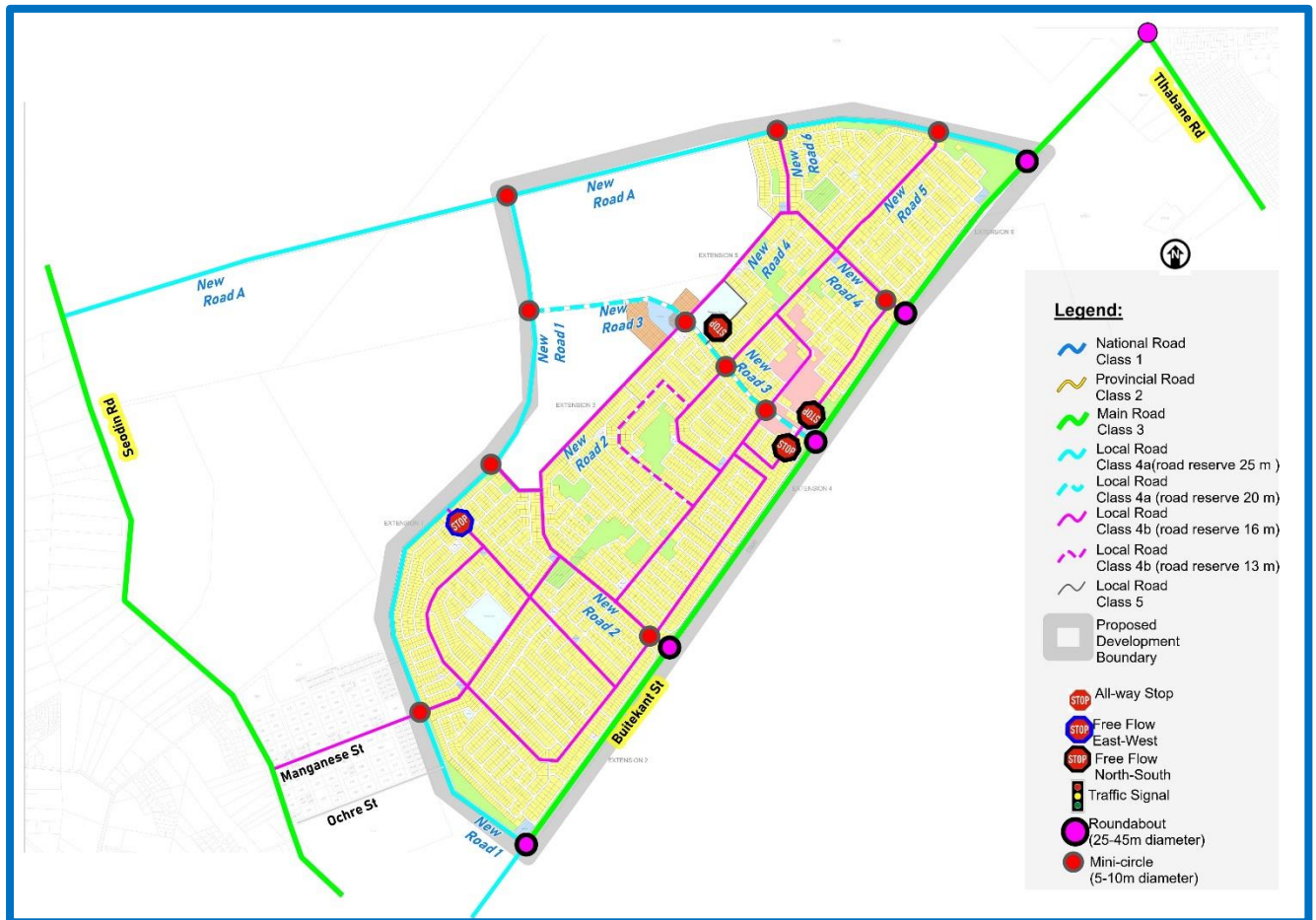
There is a different elevation between District Road Dr3456 and the proposed service road along the majority of District Road DR3456. The existing gravel roads along District Road DR3456 is between 0,5m and 1,5m lower than District Road DR3456. In some of the sections of the service road the geometric design of the road needs to ensure that the difference in elevation is retained to prohibit direct illegal access to District Road DR3456 as this will be detrimental to the safety of all road users. Where a grade separation cannot be achieved through design the implementation of guardrails will be required.





The intersection control along the Class U4a roads are recommended and presented in Error! Reference source not found..

**Figure 22: Recommended Development Intersection Control**

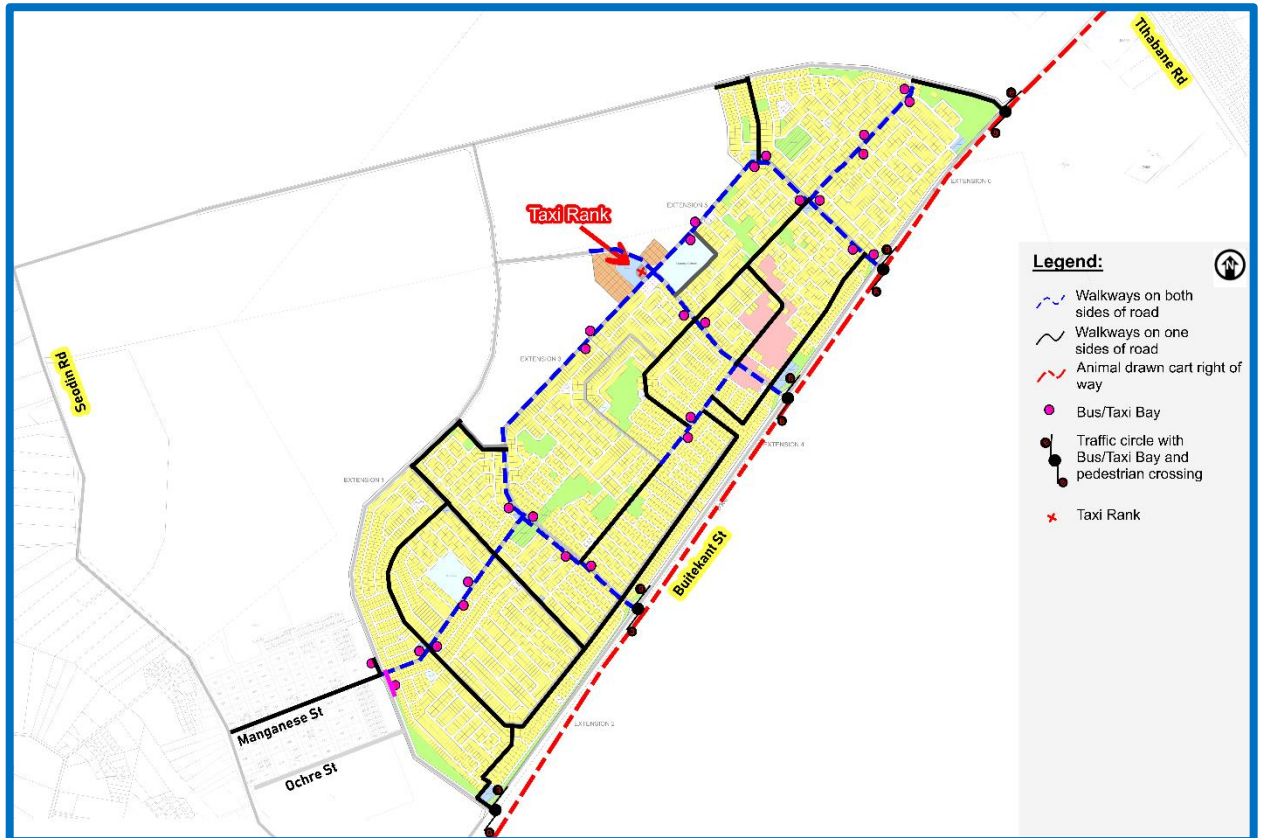


#### **4.3.7 PROVISION OF NMT FACILITIES FOR PROMISE LAND DEVELOPMENT**

The proposed NMT network is presented in Error! Reference source not found. indicating where facilities need to be provided along one- or both sides of the road and along District Road DR3456 to facilitate movement from proposed public transport bays to the nearest NMT facilities within the proposed development. Note that the proposed NMT and public transport facilities are based on the anticipated NMT movement which is linked to the development nodes and projected link volumes at full development stage. It is recommended that traffic calming measures be implemented in conjunction with the NMT facilities in areas with land-uses that attract vulnerable road users such as schools and community nodes.



**Figure 23: Proposed Public Transport and NMT Provision for Promise Land Development**



#### 4.3.8 CAPACITY ANALYSIS

For the purpose of the capacity analysis, the intersections presented in Error! Reference source not found. were assessed in terms of current and future traffic operations and capacity.

The intersections included in the intersection capacity analysis is presented in Error! Reference source not found. and include existing intersections:

- District Road DR3456 and Seodin Road,
- District Road DR3456 and District Road DR3456 East,
- Seodin Road and Ochre Street;
- Seodin Road and Manganese Street;
- District Road DR3456 and New Road A (existing gravel road),
- District Road DR3456 and Thabane Road.

The existing intersection control is presented in Error! Reference source not found. and the existing intersection configuration in Error! Reference source not found.. The proposed intersection configuration for the intersection along District Road DR3456 providing access to the proposed development is presented in Error! Reference source not found..

Figure 24: Intersections part of capacity analysis

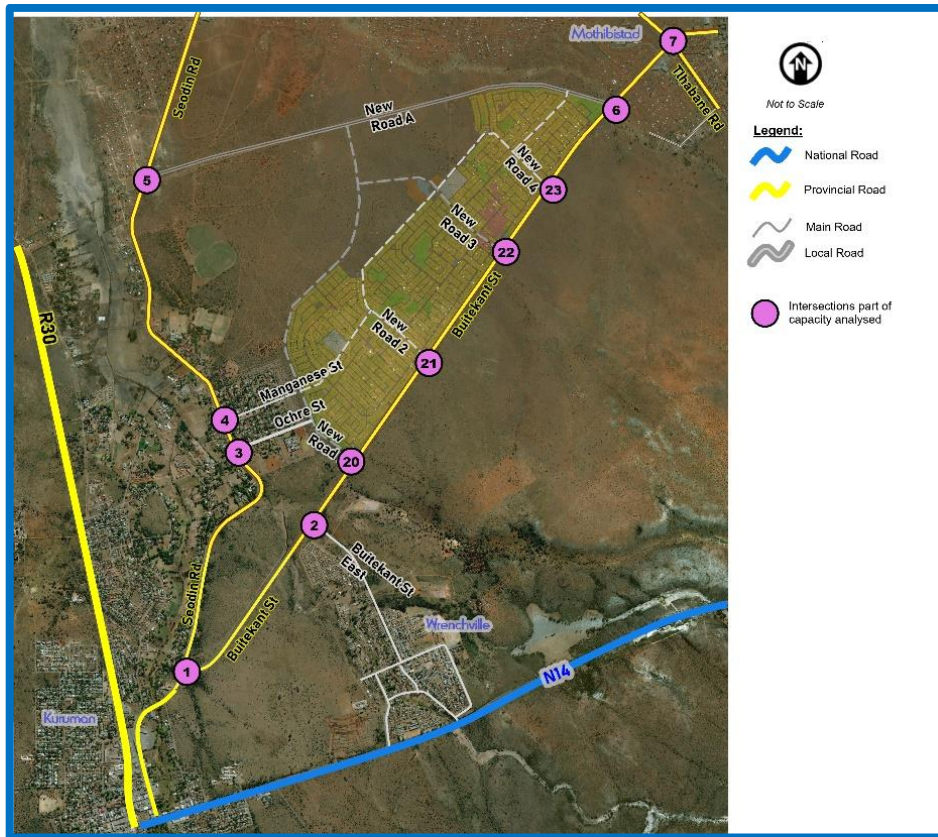
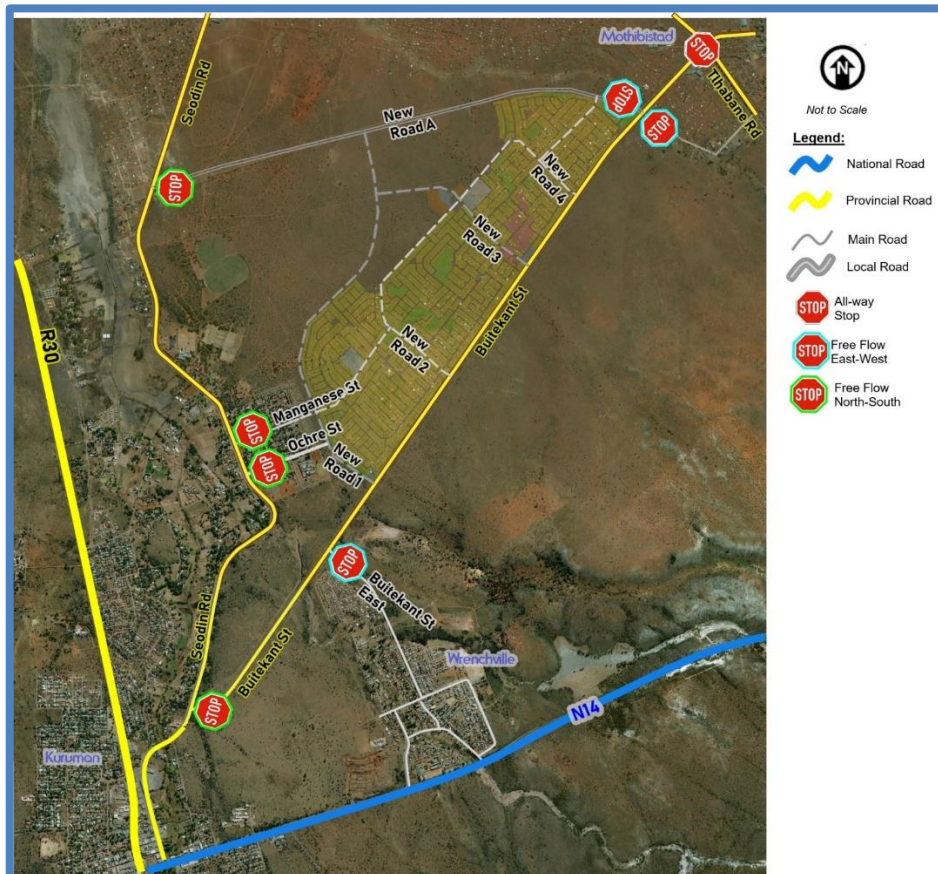
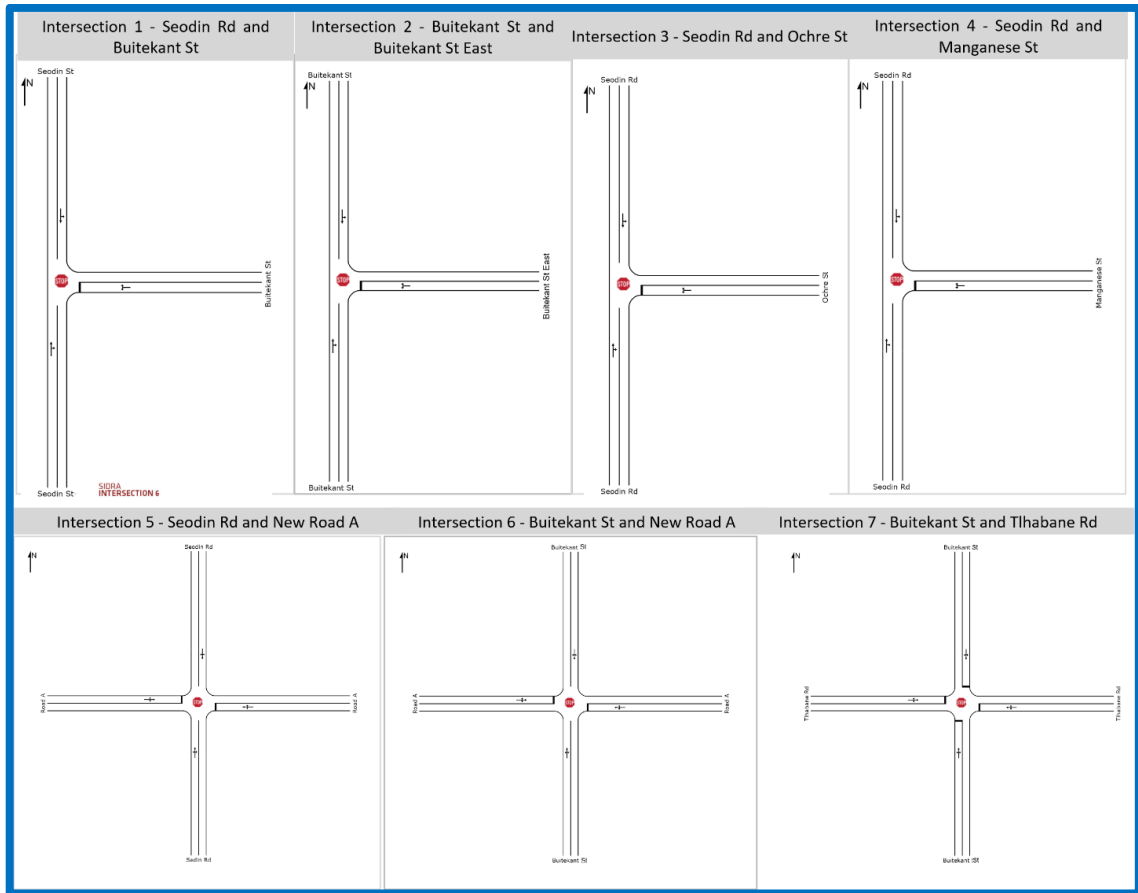


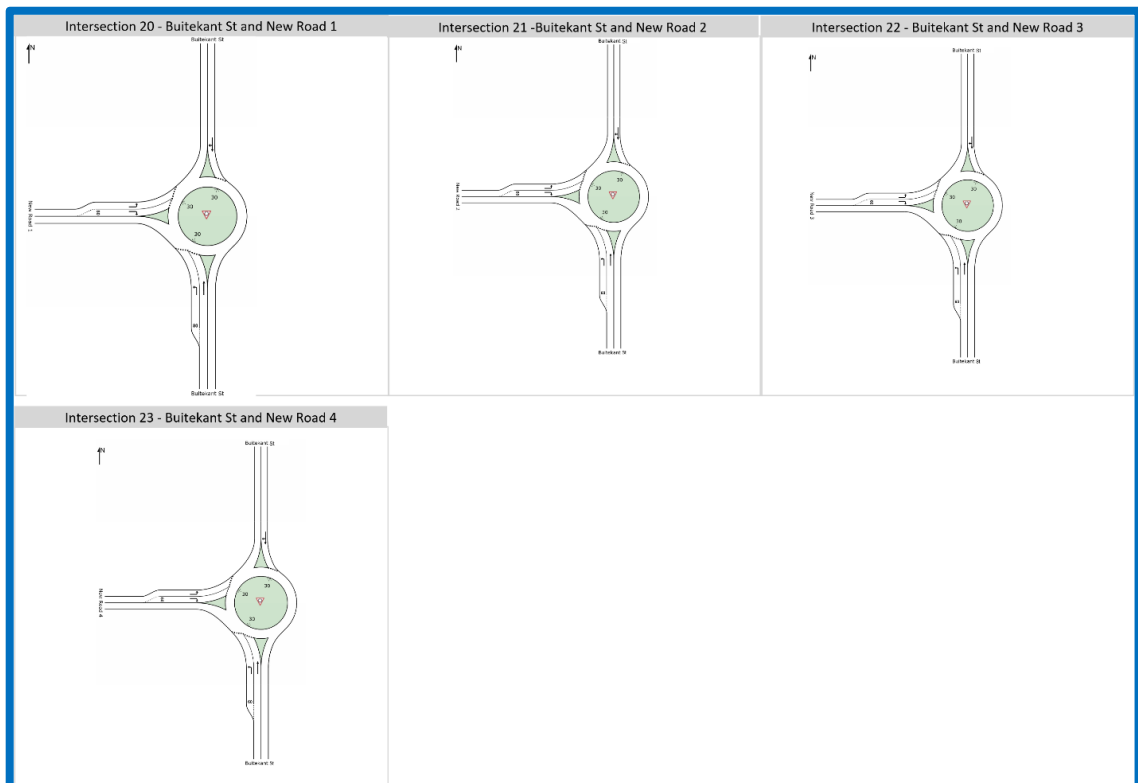
Figure 25: Existing intersection control



**Figure 26: Existing intersection configurations**



**Figure 27: Proposed Development Access Configuration along District Road DR3456**

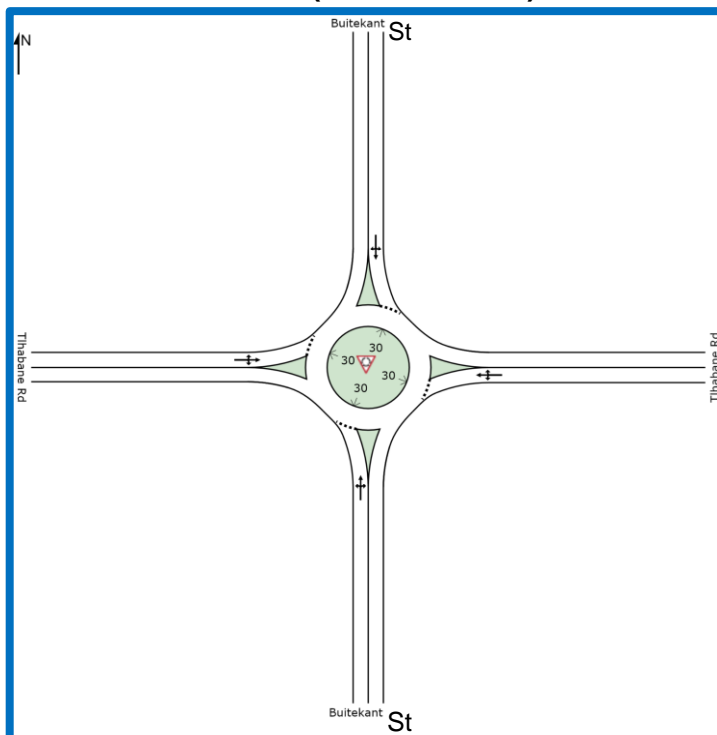




The Traffic Impact Assessment concluded as follows in respect of the capacity analysis:

- The intersection of District Road DR3456 and Tlhabane Road require capacity upgrade to accommodate base year 2018 traffic without development at acceptable LOS. The recommended intersection configuration is presented in
- **Figure .**
- The recommended intersection configuration and control of intersections providing access to the proposed development is presented in Error! Reference source not found., and comprise of roundabouts.
- It is recommended that the intersection of District Road DR3456 and District Road DR3456 East (access to Wrenchville) is reconfigured to a roundabout to manage driver expectation given that it is recommended that new intersections along District Road DR3456 is configured as round-about.

**Figure 28: Recommended - Roundabout Configuration, District Road DR3456 and Tlhabane Road (2018 Demand)**



#### **4.3.9 ROAD LINK CAPACITY ANALYSIS**

Enough road link capacity is provided along District Road DR3456 between Seodin Road and Tlhabane Road and Along Seodin Road between District Road DR3456 and New Road A to accommodate development trips.

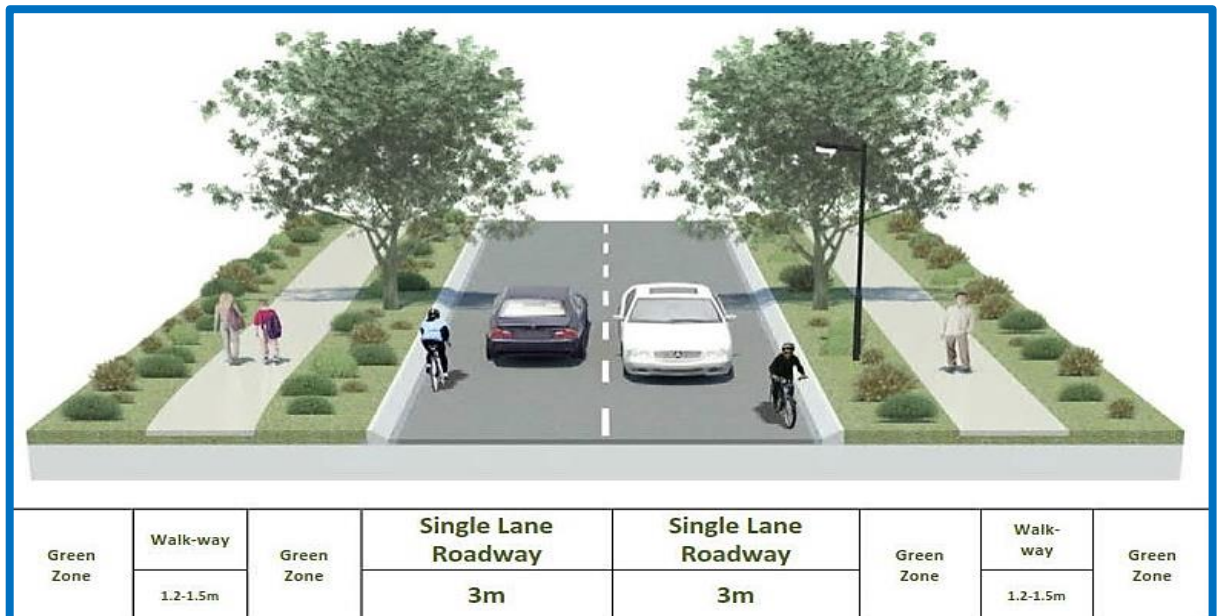
However, it needs to be noted that due to background traffic growth that the capacity along District Road DR3456 will be required to be increased within the next 7-20 years.



### 4.3.10 ROAD HIERARCHY

The required road reserves are allowed for in the proposed township layout. The recommended road cross section for Class 4 roads is provided in **Figure** and needs to be adhered to within margins provided to allow for pedestrian and public transport movement.

**Figure 29: Class 4 and 5b Cross Section Concept**



Source: City of Johannesburg Complete Streets Design Guideline

90% of the intersections within the development comply with required standards for intersection spacing according to road class. The recommended intersection control for intersections align Class 4 and Class 5b roads are presented Error! Reference source not found. above.

### 4.3.11 PUBLIC TRANSPORT FACILITIES

It is recommended that public transport bays allowing for bus and taxi vehicles are provided along District Road DR3456 and Class 4 roads within the proposed per the proposals presented in Error! Reference source not found..

### 4.3.12 CONCLUSION

In addition to the conclusions drawn in sections 4.3.7 to 4.3.9 above, the Traffic Impact Assessment concluded as follows:

***“It is thus recommended that the proposed development be supported from a traffic engineering point of view given the above recommendations are implemented”.***

## CHAPTER 5: PROVISION OF ENGINEERING SERVICES

### 5.1 INTRODUCTION

Civilsense Consulting was appointed to investigate and report on the provision of civil engineering services to the proposed township areas. Motla Consulting Engineers was appointed to investigate and report on the provision of electrical services to the proposed township areas

The provision of services to the proposed development areas will be addressed as follows:

- Section 5.2: Civil Engineering Services
- Section 5.3: Electrical Engineering Services

### 5.2 CIVIL ENGINEERING SERVICES

(Extract from the civil engineering services report compiled by Civilsense Consulting (attached as Annexure P1 to the comprehensive land development application)

#### 5.2.1 WATER – STATUS QUO

##### 5.2.1.1 Water Services in Study Area

Several JoJo tanks of varying sizes are present all over the settlement all within demarcated/enclosed erven seemingly privately owned.

Two communal stand pipes (taps) have been installed about 50 meters apart in the central southern part of the area. These stand pipes are fed from a water main nearby the correctional services building south of Promise Land. These two communal taps are the only source of water to the community as it was also reported that the Municipality stopped servicing JoJo tanks after the installation of these stand pipes. It can therefore be derived that the privately-owned JoJo tanks are also served from the two (2) stand pipes.

The minimum/basic level of service for provision of potable water is a communal stand pipe not further than 200 meters away from each end-user with a minimum yield of 10 litres per minute and a 98% reliability. Promised land is therefore currently below the minimum level of services regarding the provision of potable water

##### 5.2.1.2 Regional Bulk

The sole source of water supply is the dolomitic aquifers located in the Kuruman region. Two main sources namely the Kuruman subsurface wellfield and the Seoding subsurface wellfield currently supply the southern and northern regions of Ga-Segonyana Municipal area respectively. Both sources also possess sufficient

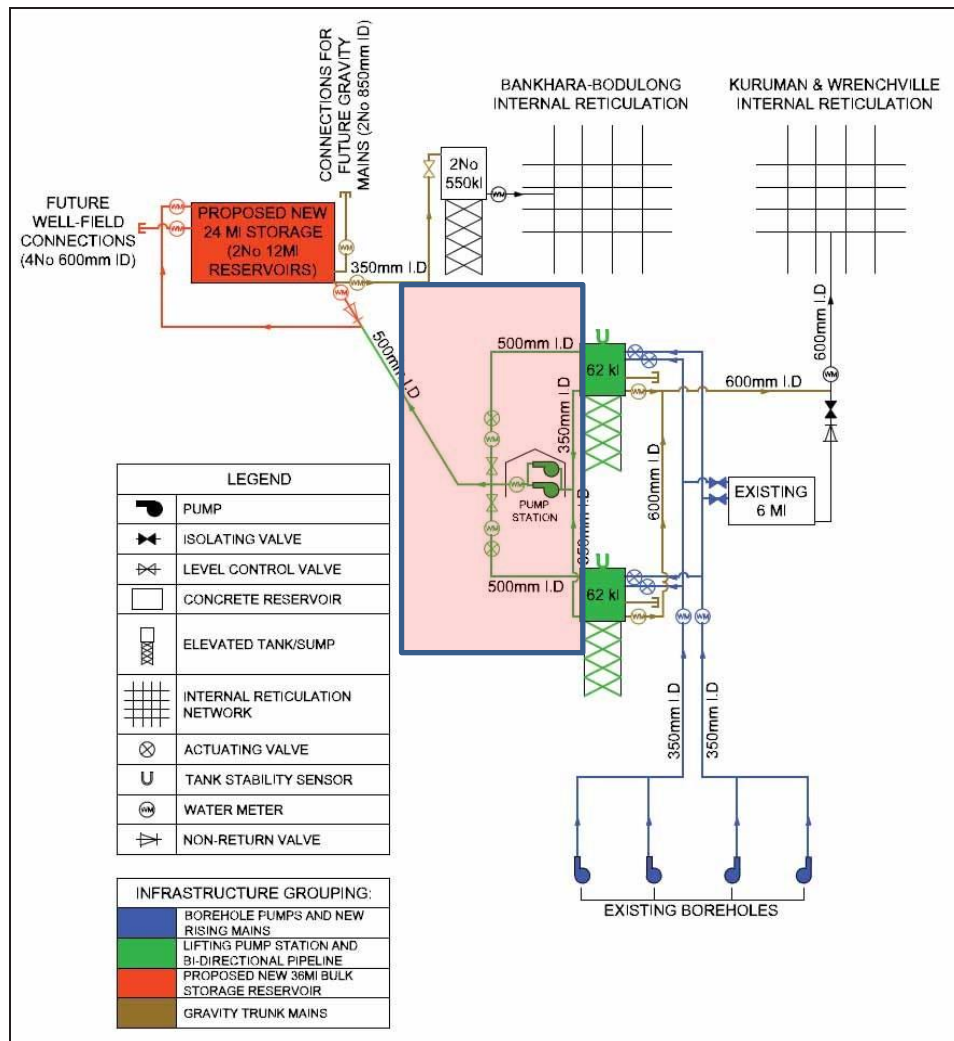
exploration potential up to at least 2035 considering the current Spatial Development Framework.

Water is pumped from the existing Kuruman boreholes into a 6ML concrete reservoir alongside the R31 just south of Kuruman. This reservoir can only be operated at 50% water level as severe leaks occur if filled up higher. The structural integrity of the reservoir was compromised as it is situated in an unstable dolomitic area. Water is also pumped to two elevated tanks (62KL tanks) both sides of the R31 in the south nearby the 6ML reservoir. The pipe configuration of the elevated tanks and the 6ML reservoir ensures easy by-passing of any of the reservoirs in case of structural failure or major maintenance activities. Water gravitates directly into the Kuruman internal reticulation (Kuruman town, industrial area and Wrenchville) from a 600mm diameter trunk main connected onto the elevated tanks and the 6ML concrete reservoir.

The Kuruman regional bulk water infrastructure components are as follows:

- Borehole pumps abstracting from the Kuruman wellfield with associated rising mains configuring into two 350mm diameter pump lines supplying Kuruman (existing)
- 6ML concrete low-level reservoir (existing)
- 600mm diameter gravity trunk main pipe line from 6ML reservoir to Kuruman internal network (existing)
- 2 x 62KL elevated steel tanks (existing)
- 600mm diameter gravity trunk main from elevated tanks to Kuruman internal network (existing)
- lifting pump station (pump house completed but not yet equipped)
- bi-directional pipeline from Kuruman to Bankhara-Bodulong (construction to commence soon and to be completed by middle 2020)
- 2 x 12 ML concrete Bulk Storage Reservoirs west of Bankhara-Bodulong (completed but not yet commissioned)

**Figure 30: Bulk Infrastructure configuration**



**Borehole Pumps and associated Rising mains**

The existing main boreholes are equipped with pumps, transferring water directly into elevated tanks/sumps (2x62 kl steel tanks). It also transfers water to the existing 6ML concrete reservoir. The table below illustrate the pumping scheduling.

**Table 56: Borehole pump scheduling**

Borehole Name	Yield (l/s)	Hours/day	Total Yield (m <sup>3</sup> /day)
Varkkamp (80335)	40	12	1,728.0
Sinkgat (B6)	79	12	3,412.8
<b>Total pump rate: Night</b>	<b>119</b>	<b>12</b>	<b>5,140.0</b>
Ou Reservoir (B1)	86	12	3,715.2
New Borehole	80	12	3,456.0
<b>Total pump rate: Day</b>	<b>166</b>	<b>12</b>	<b>7,171.2</b>



The larger pumps operate during the day, when the demands are higher and the smaller pumps operating during the night. The boreholes are pumping into the pump station's sump (2 x 62kl tanks), from which water gravitate directly into the Kuruman reticulation network.

### **Lifting pump station with elevated tanks/sumps**

A dry-well pump station has been built but still needs to be equipped with pumps and electrical switch gear. The anticipated mechanical and electrical equipping of the lifting pump station will be done in conjunction with the construction of the bi-directional pipe line which is scheduled to be completed by June 2020.

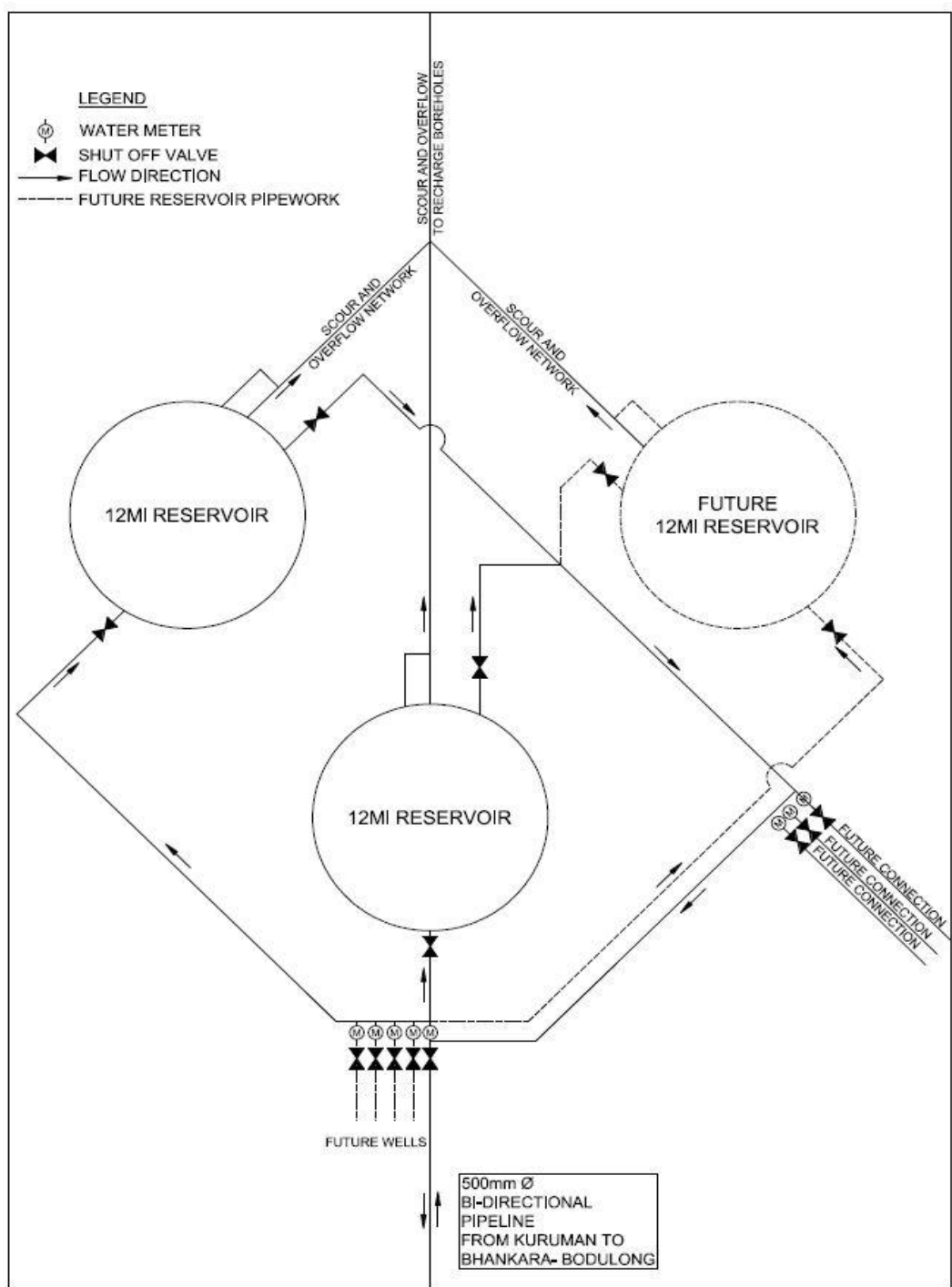
The elevated tanks will act as sumps for the lifting pump station and as break pressure tanks to mitigate excessive pressure fluctuation of the bulk water system.

### **24ML regional bulk storage reservoirs and Bi-directional Pipe line**

Two 12ML concrete reservoirs have recently been constructed west of Bankhara-Bodulong. An additional (third) 12ML reservoir can be constructed and interlinked at a later stage if need be. This will ensure sufficient capacity for all regional storage requirements for Kuruman and surrounding villages. All pipework is duplicated for each 12ML reservoir to accommodate the isolation of one reservoir, while ensuring water to the various settlements can still be supplied from the other. Extra connections on both the inflow and outflow portions of the reservoirs have been allowed, for any unforeseen future growth or developments currently not envisaged.

The construction of a bi-directional pipe line between the Kuruman lifting pump station and the Bankhara-Bodulong bulk storage reservoirs will commence soon. This pipe line will be completed by June 2020. The mechanical and electrical equipping of the lifting pump station will also be done as part of the bi-directional pipeline project. The bi-directional pipe line will act as a pump line (rising main) from Kuruman to Bankhara-Bodulong and as a gravity feed from Bankhara-Bodulong back to elevated tanks/sump in Kuruman.

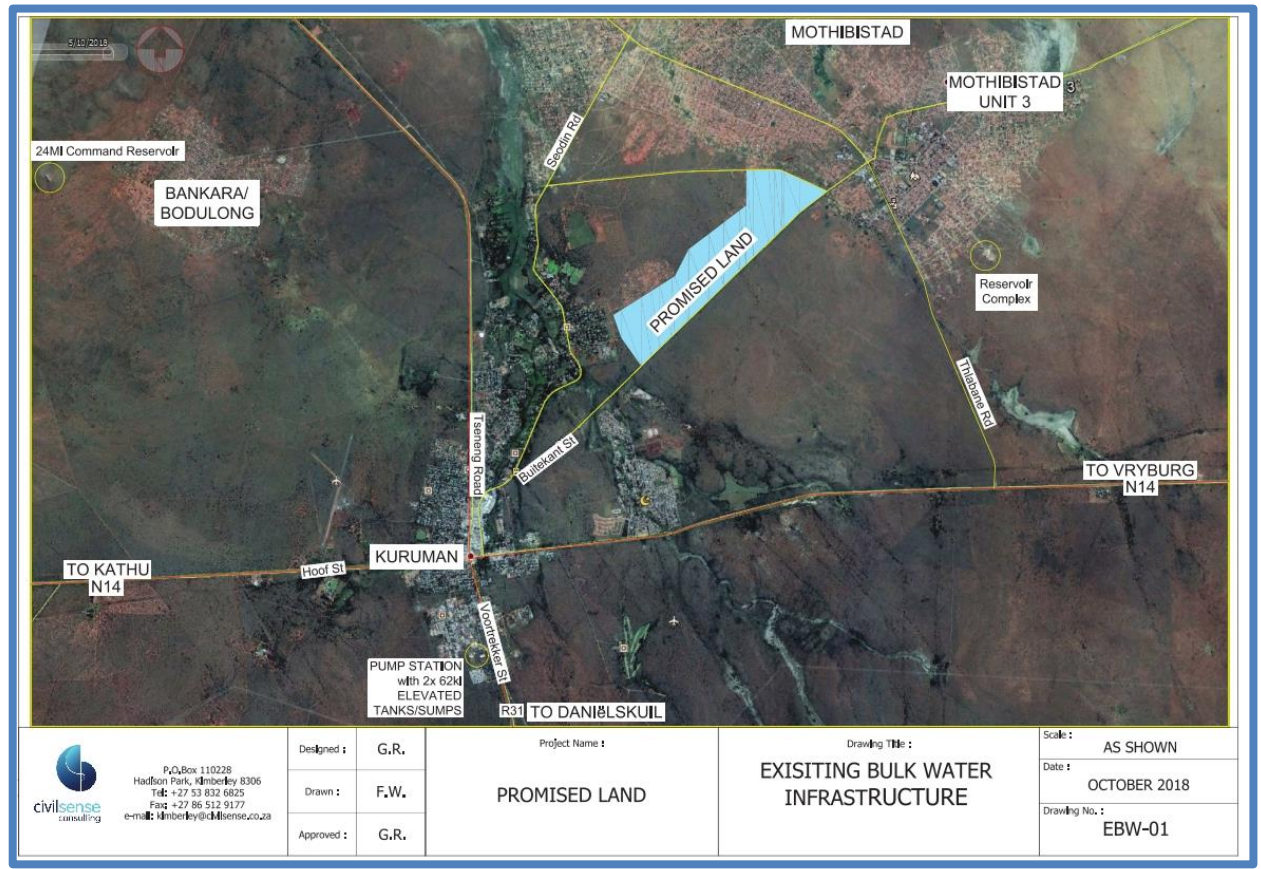
**Figure 31: Regional Bulk Storage Reservoir Complex west of Bankhara-Bodulong**



During high demand periods water will be supplied to Kuruman under gravity flow conditions via the bi-directional pipeline, and directly from the boreholes, of which all will discharge into the pump station’s sumps (62KL elevated tanks). The pump station’s sump will then act as a break pressure tank to prevent excessive pressure build up in the internal reticulation during off peak/low demand periods. During low demand periods water will be supplied to Kuruman via the boreholes, while the surplus water

from the boreholes will be pumped up through the bi-directional pipeline into the regional reservoir.

**Figure 32: Existing Bulk Water Infrastructure**



**5.2.2 WATER – DEMAND ANALYSIS**

According to the Ga-Segonyana water services masterplan done by Bigen Africa in November 2015 the Municipality resolved as a long-term objective to serve all households in the municipal jurisdiction with the same level of service for water supply. The overall objective is therefore, to supply bulk potable water to all towns and communities in the municipal area with house connections from a centralised sustainable bulk source of supply.

A preliminary water demand calculation as per land use analysis done by Maxim base on a house connection per erf is illustrated by the table below:

**Table 57: Promise Land Annual Average Daily Demand (AADD)**

PROMISE LAND – ANNUAL AVERAGE DAILY DEMAND (AADD)		DEMANDS			
		Number of Erven	Rate	ℓ/d	Kℓ/d
Residential Zone III	Flats, Residential Building	2	900	289 476	289.48
Residential Zone IV	Residential House (Minimum 350m <sup>2</sup> )	5 469	280	1 531 320	1 531.32
Business Zones I	Business Premises including, institution, Authority Uses, Flats, Residential Buildings	1	92 813	92 813	92.81
Business Zones II	Shop	11	37	172 704	172.70
Institutional Zones I	Place of Instruction (Primary School)	2	37 000	74 000	74.00
	Place of Instruction (Creche)	3	5 500	16 650	16.65
Institutional Zones II	Public place of worship (Church)	12	2 000	24 000	24.00
Institutional Zones III	Institution (Thusong Centre / Community Hall)	1	10 000	10 000	10.00
Open Spaces Zone I	Public open space	28	-	-	-
Open Spaces Zone II	Private open spaces (Sportsfield)	2	12 390	247 880	247.88
	Private open spaces (Cemetery)	1	33 737	33 737	33.74
Transport Zone I	Transport Use (Taxi Rank)	1	15 000	15 000	15.00
Authority Zone I	Authority Use (Municipal)	5	-	-	-
<b>AADD</b>		<b>5 538</b>		<b>2 507 580</b>	<b>2 507.58</b>

According to the above calculations Promise Land's Annual Average Daily Demand (AADD) is 2.508MI/day.

**The impact in terms of overall storage capacity (48 hours) needed based on the above:**

Average Annual Daily Demand (AADD) = 2 507 580 ℓ/day



Add 1.25 summer peak factor :  $2\,507\,580 \times 1.25 = 3\,134\,475 \text{ l/day}$

Add 10% water losses :  $3\,134\,475 \times 1.1 = 3\,447\,922 \text{ l/day}$

Add fire flow (6 hours @ 15l/s) :  $3\,447\,922 + 324\,000 = 3\,771\,922 \text{ l/day}$

Low-level storage (24 hour for system with decent backup) =  $3\,771\,922$  or 3.8 Ml

Low-level storage (48 hours for system without back up) =  $7\,543\,845 \text{ l}$  or 7.6 Ml

The impact in terms of the peak storage (4 or 2 hour @ peak flow) needed based on the above:

Average Annual Daily Demand (AADD) =  $2\,507\,580 \text{ l/day}$

Add 1.5 summer peak factor :  $2\,507\,580 \times 1.25 = 3\,134\,475 \text{ l/day}$

Add 1.25 daily peak factor :  $3\,134\,475 \times 1.25 = 3\,918\,094 \text{ l/day}$

Add 3.0 instantaneous peak factor :  $3\,918\,094 \times 3.0 = 11\,754\,281 \text{ l/day}$

Add 10% water losses :  $11\,754\,281 \times 1.1 = 12\,929\,709 \text{ l/day}$

Peak flow :  $12\,929\,709 \text{ l/day} = 149.65 \text{ l/s}$

The total peak storage (4 hours @ peak flow) is =  $2.586 \text{ Ml/day}$  without back up power

The total peak storage (2 hours @ peak flow) is =  $1.29 \text{ Ml/day}$  with back-up power

## **5.2.3 WATER – BULK INFRASTRUCTURE REQUIREMENTS**

### **5.2.3.1 Source**

As mentioned in 5.2.1.2 above the two main sources namely the Kuruman subsurface wellfield and the Seoding subsurface wellfield currently supply the southern and northern regions respectively.

#### **Northern region**

Mothibistad is the nearest relatively large bulk water infrastructure to the study area. The high- and low-level storage facilities are already at optimum capacity and there are no future plans to upgrade the system or expand the bulk water infrastructure in that direction.

**Southern region**

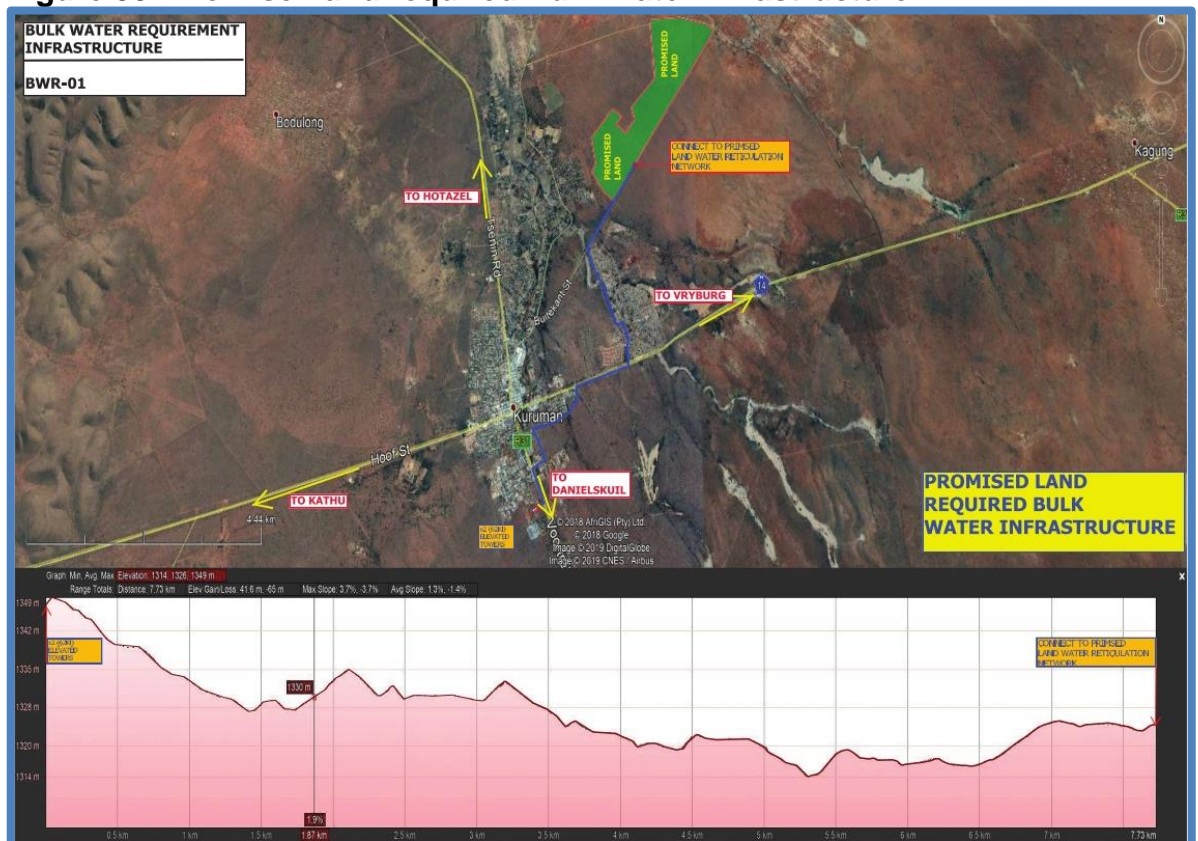
Bulk water infrastructure is currently being centralised between Kuruman-south and Bankhara-Bodulong Reservoir Complex with the bi-directional pipeline to link southern well fields to the Bankhara-Bodulong Reservoir complex.

**5.2.3.2 Requirements**

The study area is located ±7.5 km from the southern water source.

In accordance with the water demand calculations the study area will need on average 3.8 ML per day. In accordance with the Ga-Segonyana water master plan the municipality will not provide localised low-level storage and in future will have only one regional bulk water storage facility, which is the Bankhara-Bodulong reservoir complex. It is therefore recommended that a 500mm Ø pipeline be used to connect the study area to the southern bulk water system. The recommendation is also in line with current plans of the to provide a bulk ring feed from the Bankhara-Bodulong Reservoirs to all surrounding towns of Ga-Segonyana. The bulk pipeline which will be ±7.75km in length will therefore form part of this ring from Kuruman to Promised Land via Wrenchville. The bulk line will be connected to both elevated steel tanks in Kuruman (Masl 1349m) to fed directly into highest point in the study area’s future water reticulation network (Masl.1326m). It is predicted/calculated that a 500mm diameter pipe line will be able to transfer water from the elevated steel reservoirs to the highest point in Promise Land at 150 l/s with a static head of at least 27 meters or 2.7 bar (270 kpa).

**Figure 33: Promise Land required Bulk Water Infrastructure**



## **5.2.4 SANITATION – STATUS QUO**

### **5.2.4.1 Sanitation Services in Study Area**

Promise Land settlement currently has only dry sanitation for only about 25% of the settlement. A total of 380 ventilated improved pit latrines (VIP's) with pre-fabricated concrete top structures were constructed by COGHSTA. A further 326 VIPs are in the planning phase and construction may start soon. The VIPs are located within fenced-off erven (which means allocation to individual households), although some are used as communal toilets because of the backlog.

Toilets with corrugated iron top structures were also detected. It seems that these pit latrines were provided by individuals in the community for own use. The standard of the pit latrines in terms of depth and whether it is lined or not are unknown. Ground water contamination are therefore a huge risk.

The rest of the community has no sanitation services.

### **5.2.4.2 Regional Bulk**

Kuruman town, Kuruman industrial area, Wrenchville, Bankara-Bodulong and Mothibistad make use of full waterborne sanitation. The remainder of the settlements within the Ga-Segonyana Municipal area are served by:

- Pit latrines and/or
- Conservancy tanks and/or
- Septic tanks/soak-aways and/or
- Ventilated improved pit latrines (VIPs)

The waterborne bulk sewer infrastructure is split into two zones, Kuruman Waste Water Treatment Works (WWTW) and Mothibistad Oxidation Ponds.

### **Zone 1: Kuruman WWTW and related infrastructure**

A total of 10 pump stations, 1 in Wrenchville, 2 in Bankhara-Bodulong and 7 in Kuruman town/sub urban areas form an integral part of the bulk waterborne sewerage infrastructure. These pump stations with related infrastructure transfer sewage from its various locations either directly to the Kuruman Waste Water Treatment Works or to a pump station further downstream.

The **Kuruman Waste Water Treatment Works** with capacity of **4.0ML/day** is situated on the western side of Kuruman, at GPS Coordinates 27°26'23" S, 23°25'22.9" E at 1 323m above mean sea level. Despite its design capacity of 4.0Ml/d, the plant is in poor

condition and subsequently fails to operate at optimal capacity. The Kuruman WWTW is a conventional activated sludge treatment works consisting out of:

- **Inlet Works**

The inlet works consist out of a tanker discharger, mechanical screen and a de-gritting chamber. The tanker discharge point only allows for tankers to reverse onto the discharge platform before emptying the tank while the technology of the mechanical screen is outdated. The de-gritting chamber is not operated according to specifications and is filled with grit.

- **The Oxidation Ditch Reactors (2 off)**

The ditch reactors each have horizontal aerators, R.A.S and W.A.S pump stations. The horizontal aerators are still in decent condition and have 4x double brush aerators and 4x single brush aerators and all aerators have stabilizing baffles.

- **Reactor with floating Aerators (1 off)**

This component consists out of an aeration basin, pump station, sludge draw-off facilities and sludge drying beds. The pump station is not up to standard, the reactor is not operational as no mechanical equipment is present. The sludge drying beds seems to be operational, but the standard of sludge will be compromised as the result of the non-functional reactor.

- **Secondary Settlement (Clarifiers)**

The secondary settlement process consists of three clarifiers, one for each reactor. None of the clarifiers are fully operational.

- **The Disinfection Equipment**

Consist of a contact channel, dosing equipment and safety equipment. Some flow from the secondary settlement process do reach the contact channels but the process is unstable and not working properly. The chlorine dosing equipment is operational, but the chlorine safety equipment and signage does not comply with national health and safety regulations.

A WSIG application has been submitted to DWS to refurbish the treatment works to ensure optimal processing and delivery of high-quality effluent. This will not increase the design capacity of the plant but will ensure operation to its full capacity. The refurbishment entails:

- Replacement of screens and degritting equipment at inlet works.
- Refurbishment of ditch reactor's equipment
- Refurbishment of final clarifier equipment
- Refurbishment of all pumps and pipe works.

This project to includes the refurbishment of 9 out of the 10 pump stations which transfers sewage to the treatment works.



## **Zone 2: Mothibistad Oxidation Ponds**

The Mothibistad waterborne reticulation gravitates sewage to the Mothibistad oxidation ponds. Some surrounding villages make use of conservancy tanks which is serviced by suction tankers that also discharge sewage at the Mothibistad oxidation ponds.

The **Mothibistad Oxidation Ponds** have an effective footprint of approximately 11 900m<sup>2</sup> with a treatment capacity of 0.4Mℓ/day. It is situated in Mothibistad at GPS Coordinates 27°23'30.42" S, 23°28'26.47" E at 1 317m above mean sea level. The treatment process consists of:

- Inlet works
- Primary pond
- Secondary pond
- Three (3) tertiary ponds
- Maturation ponds
- Recycling facilities (pumps)

A WSIG application has been submitted to DWS to refurbish and upgrade the treatment works. According to the WSIG application the hydraulic loading for Mothibistad and surrounding area is as follows:

- 2011: 1,333Mℓ/d (5 544 households or 22 000 people)
- 2016: 1,366Mℓ/d (5 694 households or 22 778 people)
- 2021: 1,401Mℓ/d (5 838 households or 23 353 people)

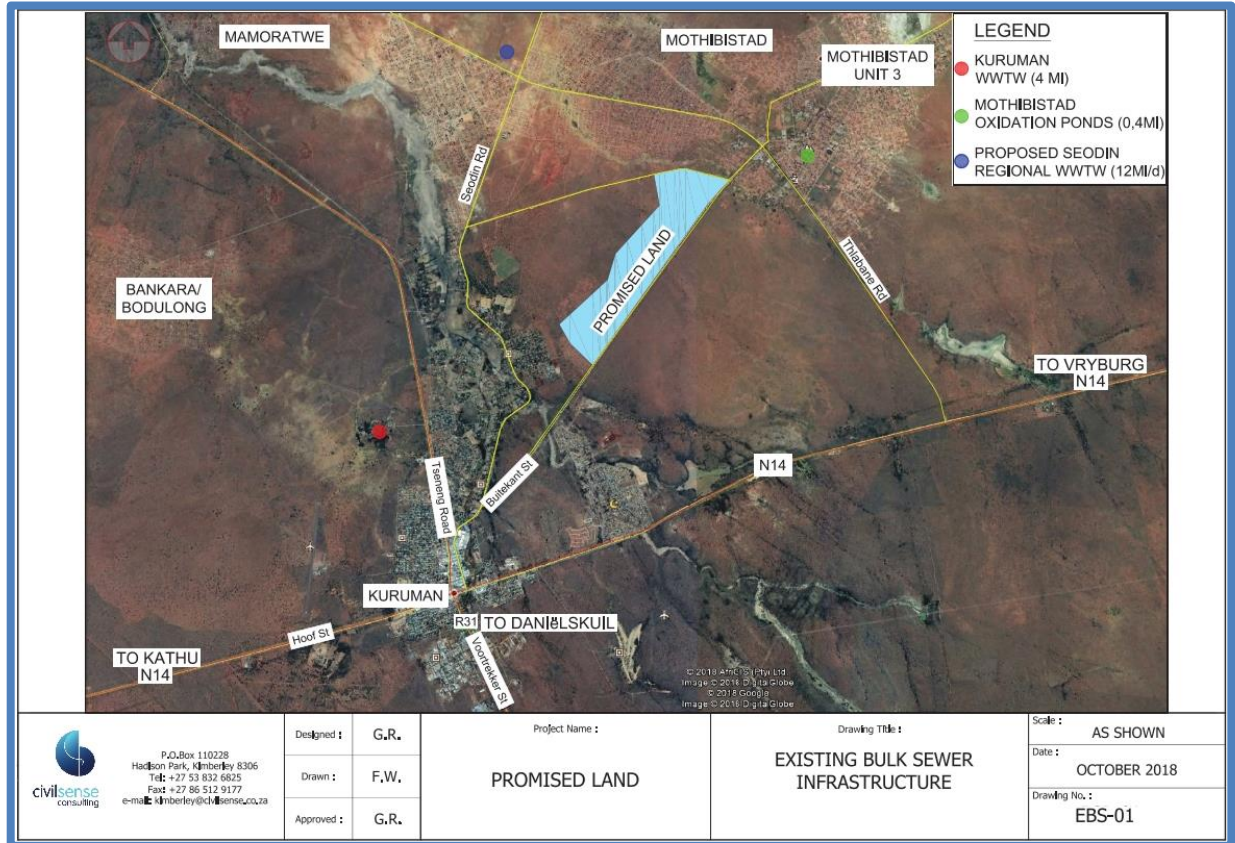
From the above it is evident that the Mothibistad oxidation ponds has been over loaded since 2011. The planned refurbishment with intension to increase its capacity to 1.4Mℓ/d (ADWF) is already approved by DWS and should commence soon. This refurbishment/upgrade are measures to address the immediate over loading of the treatment works including projected population growth for the same catchment area until 2021.

The refurbishments/upgrade of the Mothibistad Oxidation Ponds entails:

- Refurbishing of the inlet works to facilitate mechanical screening and de-gritting, solids handling equipment and inflow measurement;
- Modify existing oxidation ponds to facilitate a primary COD removal reactor, to reduce the required oxidation pond capacity/size;
- Refurbish the primary pond to facilitate sludge withdrawal;
- Refurbish the secondary pond to ensure maximum aeration capacity for expected organic load;
- Refurbish the internal re-cycle system to accommodate expected organic load;

- Refurbish tertiary ponds to facilitate sufficient retention time in the oxidation pond system;
- Refurbish the maturation facility to facilitate sludge stabilization and drying.

**Figure 34: Existing Bulk Sewer Infrastructure**



**5.2.5 SANITATION – DEMAND ANALYSIS**

The Ga-Segonyana Municipality resolved as a long-term objective to provide all households in the municipal area of jurisdiction with the same level of service for sanitation purposes i.e. waterborne sewers. A study was done in 2015 to identify the most cost-effective site/s for possible waste water treatment works to treat existing and future flows from all settlements as well as the most cost-effective modes of bulk sewage transmission from the sites where it is generated to the treatment works. The sewer outflows calculation as per land use analysis done by Maxim is illustrated by the table below:

**Table 58: Promised Sewer Demand**

PROMISED LAND - SEWER DEMAND AVERAGE DRY WEATHER FLOW (ADWF)		DEMANDS			
		Number of Erven	Rate	ℓ/d	Kℓ/d
Residential Zone III	Flats, Residential Building	2	720	231.581	231.58

Residential Zone IV	Residential House (Minimum 350m <sup>2</sup> )	5 469	200	1 093 800	1 093.80
Business Zones I	Business Premises including, institution, Authority Uses, Flats, Residential Buildings	1	600	69 610	69.61
Business Zones II	Shop	11	10 000	129.528	129.53
Institutional Zones I	Place of Instruction (Primary School)	2	1 500		37.00
	Place of Instruction (Creche)	3	5 000	11 100	11.10
Institutional Zones II	Public place of worship (Church)	12	-	-	-
Institutional Zones III	Institution (Thusong Centre / Community Hall)	1	-	-	-
Open Spaces Zone I	Public open space	28	-	-	-
Open Spaces Zone II	Private open spaces (Sportsfield)	2	-	-	-
	Private open spaces (Cemetery)	1	-	-	-
Transport Zone I	Transport Use (Taxi Rank)	1	13 500	13 500	13.50
Authority Zone I	Authority Use (Municipal)	5	-	-	-
<b>ADFW</b>		<b>5 538</b>		<b>1 585 519</b>	<b>1 585.52</b>

According to the above calculations Promise Land Average Dry Weather Flow (ADWF) is 1.586Mℓ/day.

From the above outflow the Peak Dry Weather Flow and Peak Wet Weather Flow can be determined as follows:

To determine the Peak Dry Weather Flow and Peak Wet Weather Flow:

Average Dry Weather Flow (ADWF) = 1 585 519 ℓ/day  
or = 1.586 Mℓ/day

Average Wet Weather Flow (AWWF) – 1 585 519 X 1.15 = 1 823 347 ℓ/day  
or = 1.82 Mℓ/day

Add 1.8 Peak Factor for Peak Dry Weather Flow (PDWF) = 1 585 519 x 1.8  
= 2 853 934 ℓ/day

Add 15% for Stormwater for Peak Wet Weather Flow (PWWF) = 2 853 934 x 1.15  
= 3 282 024.33 ℓ/day  
or = 38 ℓ/s

## **5.2.6 SANITATION – BULK INFRASTRUCTURE REQUIREMENTS**

The existing Kuruman and Mothibistad bulk sewer infrastructure cannot accommodate the calculated/estimated sewer inflows from the study area. The study area will therefore need dedicated main outfall sewer lines, a pump station and rising main (pump line) to a Waste water treatment works. The current planned upgrades for both the Kuruman WWTW and the Mothibistad Oxidation Ponds still result with both plants having no additional capacity to accommodate the study area's outflow sewage.

### **5.2.6.1 Main Outfall Pipelines**

It is envisaged that the internal sewer network will require main collector sewer lines ranging from 200mm Ø to 315mm Ø to handle the PWWF of 3 282 024.33 l/day or 37.986 l/s. The relatively flat terrain slopes to the north west and is expected that all outfall sewer lines to confluence at this lowest point, where a pumpstation will be required to transfer the sewage to either Kuruman WWTW or Mothibistad's Oxidation Ponds via a rising main.

The following outfall sewer pipe sizes and lengths have been identified for the Study Area:

1. 200mm Ø PVC-U 400KPa = 2 500m
2. 250mm Ø PVC-U 400KPa = 1 500m
3. 315mm Ø PVC-U 400KPa = 700m

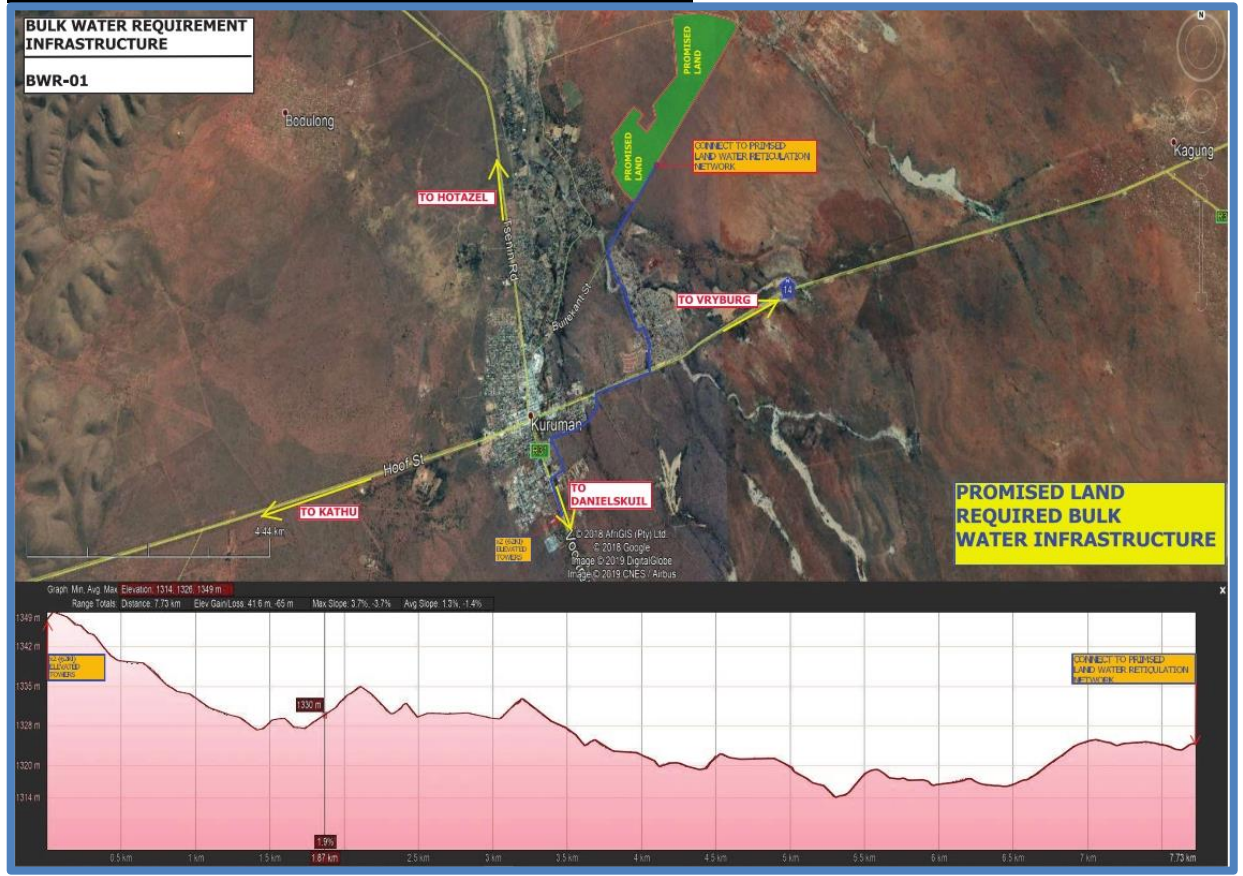
### **5.2.6.2 Pump Station and Rising Main**

In accordance with the analysis and calculations it can be deduced that a new pump station and rising main with a pumping flow rate of at least 38 l/s is needed. Good practice guidelines recommend that pump system delivery rate of a major pump station should be at least 20% more than the expected PWWF. A pump system delivery rate of 45.6 l/s will therefore be required to effectively transfer sewage from the study area to either WWTW.

Due to the Kuruman region having potential dolomitic strata conditions, the sewer rising main will have to comprise of continuous welded HDPE pipe lines in order to conform to the environmental and geotechnical requirements. The infrastructure options that have been identified for the Study Area are set out in Section 5.2.6.3 below.



**Figure 35: Existing Bulk Sewer Infrastructure**



### 5.2.6.3 Bulk Sewer Requirement Options

It is expected that the study area will have an addition loading of 1.82 Ml/day on a waste water treatment works.

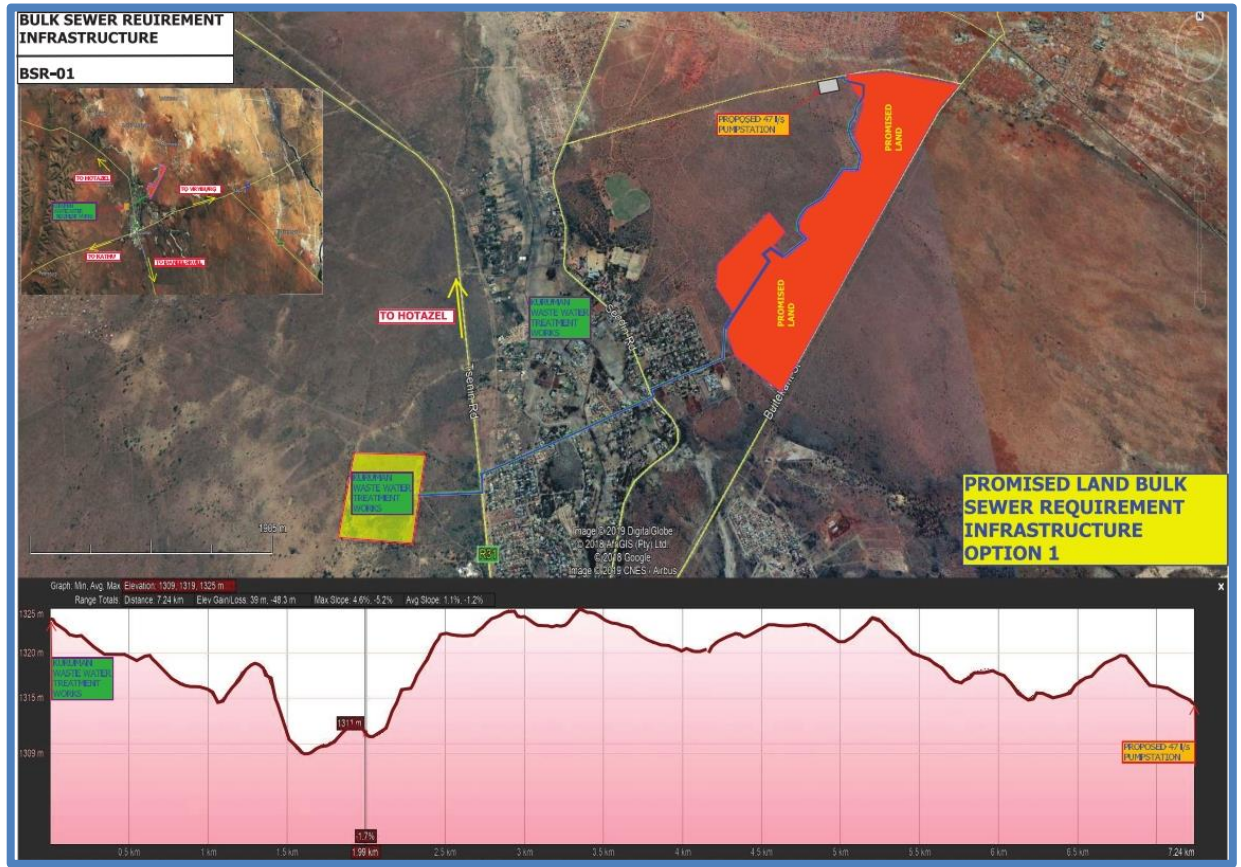
#### **Option 1 (transfer sewage to the Kuruman WWTW)**

The existing Kuruman WWTW has a capacity of 4.0Ml/day. The WWTW are currently not optimally functional but the planned refurbishment as per section 3.2.2 of this report will ensure that the works can operate to its design capacity once refurbished. The anticipated 1.82 Ml/day additional loading from Promise Land was not considered in the refurbishment. According to the Municipality’s master plan the effective volume of the three reactors (concrete structures) is approximately 5 200 m<sup>3</sup>. This means if duly equipped with effective aerators (mechanical optimization) the design capacity of the works can be increased to at least 4.8 Ml/day. Please note, some of the downstream processes such as secondary sedimentation (clarifiers), disinfection and sludge handling may also need to be upgraded accordingly. An additional 1.02 Ml/day upgrade on top of the refurbishment and mechanical optimization will still be required in order to ensure that the treatment plant is enabled to accommodate the full study area. In essence, the required upgrades should result in a treatment capacity of 5.82 Ml/day to accommodate Promise Land.

**Requirements:**

1. Dry well pump station capable of a delivering at least 45.6 l/s
2. 250mm Ø HDPE PE 100, 7 300 meters in length
3. Upgrade the Kuruman WWTW from a 4.0Ml/day to 5.82 Ml/day

**Figure 36: Promise Land Bulk Sewer Requirement Infrastructure – Option 1**



**Option 2: Transfer sewage to the Mothibistad Oxidation ponds**

Although the Mothibistad oxidation ponds is in line for an upgrade from a 0.4 Ml/day to 1.4 Ml/day treatment facility, this refurbishment/upgrade are measures to address the immediate current over loading of the treatment works including projected population growth for the same catchment area until 2021. It there cannot accommodate any inflow from the study area unless major further upgrades are considered. The 1.82 Ml/day sewage that will be generated by the study area will require an upgraded Mothibistad WWTW with a design capacity of at least 3.22 Ml/day. The current technology used in Mothibistad makes it uneconomical to expand to 3.22 Ml/day. A complete new conventional module of 3.22 Ml/day will have to be considered.

**Seodin Regional Waste Water Treatment Works:**

Ga-Segonyana Municipality confirmed that a regional waste water treatment works west of Seoding is also considered for the future. This regional treatment works will

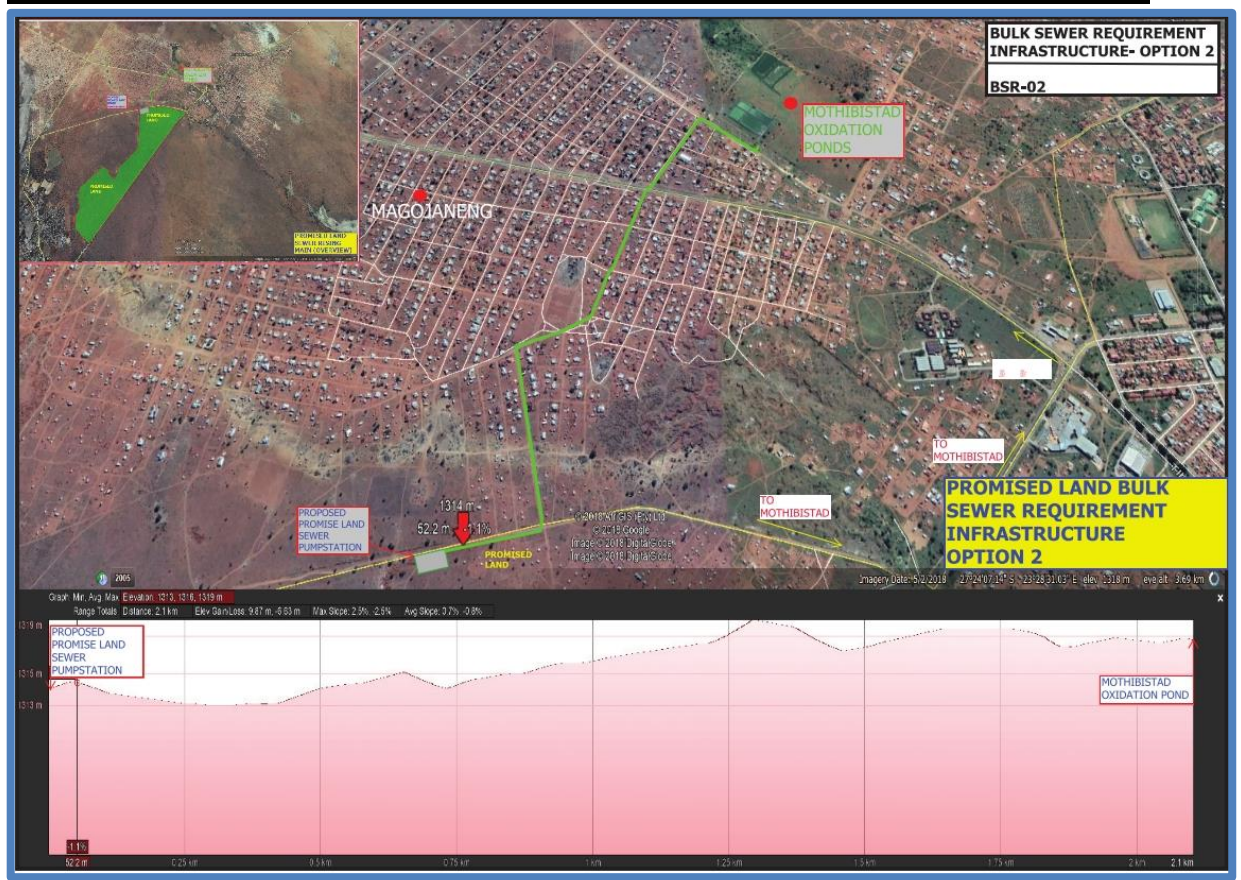


treat all existing and future sewage flows generated by all the settlements in the municipal area besides Kuruman, Wrenchville and Bankara-Bodulong. This regional works will therefore also replace the Mothibistad Oxidation Ponds as the oxidation ponds is situated in an unstable dolomitic area. The Mothibistad and Promised Land (if option 2 is selected) will then need to be rerouted/extended to be linked with the regional works.

**Requirements:**

1. Dry well pump station capable of a delivery rate at least 45.6 l/s
2. 250mm Ø HDPE PE 100, 2 250 meters in length
3. upgrading of Mothibistad oxidation ponds to conventional 3.22 Ml/day

**Figure 37: Promise Land Bulk Sewer Requirement Infrastructure – Option 2**



**5.2.7 STREETS & STORMWATER – STATUS QUO**

**5.2.7.1 Streets & stormwater in Study Area**

There are no formal streets nor any type of formal access road to the settlement. The settlement is currently access from various points along District Road DR3456 on the eastern side as well as from Kuruman (CBD) from the south.

The southern section of the area drains naturally to the west. The middle section drains north-west and directly west. The northern section also drains directly west.

### **5.2.7.2 Streets & stormwater in Study Area**

#### **Access roads and internal streets**

A traffic impact assessment was done to determine the best positioning of access roads to the study area. The outcome/recommendations of the traffic impact assessment are detailed in **Annexure Q** to the comprehensive Land Development Application. The urban planning will also influence the exact placing and routing of access roads. The final layout, street reserve widths and the level of services (level A or B) regarding internal streets will determine the horizontal alignment of all streets. The topography and stormwater management plan will influence the vertical alignment of all internal streets.

#### **Stormwater**

There is no formal stormwater management plan in place for the surrounding area. According to the Council for Geoscience pre and post construction storm water management plans need to be done for this settlement based on the dolomite stability investigation results. A storm water retention pond in north west of Promised Land might be needed.

### **5.2.8 BULK REQUIREMENTS SUMMARY**

The study area consists out of 5 838 erven of mixed development such as residential zones, recreational and educational zones, multi-purpose community facilities (post office, cemetery etc.) as well as public open spaces. This development will host a population of more than 20 000.

This development will surely have a major impact on the bulk water and sewer infrastructure of Kuruman.

An estimated flow of 150 l/s is needed to service the study area under optimum peak conditions if fully developed. The surrounding bulk water infrastructure of Mothibistad cannot cater for this impact in terms of source, storage and transmission. The recommended bulk water infrastructure requirements to enable development feasibility therefore is:

- A dedicated 7.3 km 500mm Ø pipe line from the two (2) 62KL elevated steel tanks south of Kuruman to the highest point in the east of Promised Land as gravity trunk main which should deliver at least 150 l/s at 270 kPa (2.7 bar) pressure directly into the future Promised Land internal water reticulation.



An estimated sewage peak flow of 37.986 l/s will be generated by the fully developed study area. The current bulk sewer infrastructure cannot cater for this impact. The recommended bulk sewer infrastructure requirements (option 1) to enable development feasibility are:

- 200mm Ø 250mm Ø and 315mm Ø main outfall sewer lines
- Pump station with delivering capabilities of at least 45.6 l/s
- 7.75km, 250mm Ø pump line (rising main) to Kuruman WWTW
- 1.82 ML/day upgrade to the Kuruman WWTW

### 5.2.9 SOLID WASTE

Solid waste removal is a function of the Ga-Segonyana Local Municipality.

## 5.3 ELECTRICAL ENGINEERING SERVICES

(Extract from the electrical engineering services report compiled by Motla Consulting Engineers (attached as Annexure P2 to the comprehensive Land Development Application))

### 5.3.1 DEMAND ESTIMATION

Based on the layout plan of the proposed township areas, the estimated demand was calculated as follows:

**Table 59: Demand Estimation**

Proposed Zoning	Proposed Land Use	Number of Erven	kVA per Erf	Area (Ha)	kVA/ Ha	Total Demand (kVA)
Residential Zone III	Flats, Residential Building	2		3,2	80	257
Residential Zone IV	Residential House, Low Cost Housing (Minimum 350m <sup>2</sup> )	5 409	3,5	220,8		18 932
Business Zone I	Business premises including, Institution, Authority use, Flats, Residential Building	1		1,1	100	115
Business Zone II	Shop	11		2,1	150	321
Institutional Zone I	Place of Instruction (Primary School)	2		6,1	30	183
	Place of Instruction (Creche)	3		0,4	30	11

Institutional Zone II	Public Place of Worship (Church)	12		1,7	30	50
Institutional Zone III	Institution (Thusong Centre/ Community Hall)	1		0,4	100	45
Open Space Zone I	Public Open Space	28		20,6	0	0
Open Space Zone II	Private Open Space (Sports field)	2		2,5	30	75
	Private Open Space (Cemetery)	1		0,3	5	2
Transport Zone I	Transport Use (Taxi Rank)	1		0,3	100	27
Transport Zone II	Public Street	124		95,0	1	95
Authority Zone I	Authority Use (Municipal)	5		6,9	100	694
<b>TOTAL</b>						
				361,4		20 805

### 5.3.2 BULK SUPPLY

#### 5.3.2.1 General

According to current information the new development is located in an area that is viewed as electrical “no-man’s” land. It is not covered by the existing Kuruman or Eskom networks. None of the residents have access to formal electricity. About 1% of the residents have access to electricity through either their own or a neighbour’s generator.

#### 5.3.2.2 Existing Network Analysis

The Kuruman town electrical network does not extend to this area. The towns’ bulk supply point is positioned on the opposite side to the development. Therefore, the infrastructure is inadequate to supply the new development from Kuruman town.

Eskom has 66 kV and 11 kV networks in areas nearby the location of the new development. However, none of these networks have any capacity available.

Construction is currently underway on a new 132 kV line that will feed a new 132/22 kV substation at Mothibistad. The construction of the new substation is expected to follow shortly.

**Figure 38: Services Location**



### **5.3.2.3 Bulk Supply Proposal**

It is proposed that the Local Municipality should apply to NERSA to include the new development in their electrical supply license area. This would put the responsibility for the infrastructure development with the Local Municipality.

The Local Municipality will have to apply with Eskom for a new bulk supply point at the Mothibistad 132/22 kV substation. A supply point of this magnitude will include a dedicated feeder bay and distribution line, which falls under the Eskom major projects division. Costs can only be confirmed after approval of a formal application. Typical timeline for such a project is 2-4 years depending on Eskom processes.

From the Eskom supply point power will be distributed by an overhead 22 kV line to pole mounted transformers. Each transformer will serve a dedicated zone with radial low voltage (LV) feeders.

## **5.3.3 PROPOSED ELECTRICAL SERVICES**

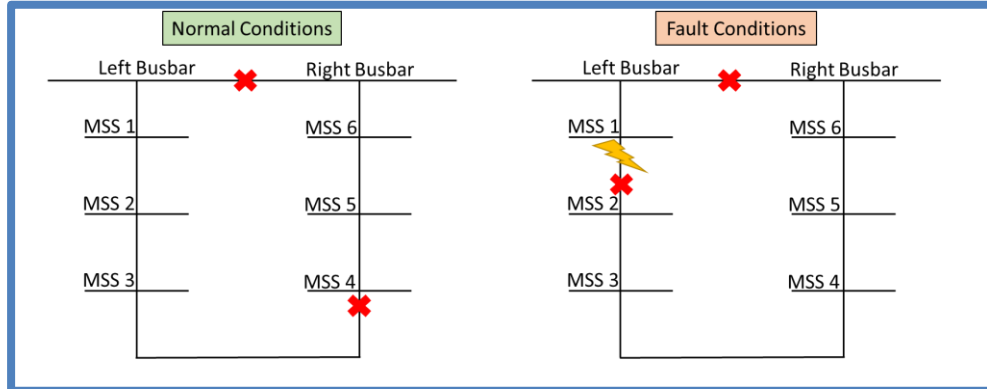
### **5.3.3.1 General**

The following electrical services are proposed:

- a) **Bulk Supply:** As per bulk supply proposal.

- b) **MV Distribution:** MV distribution will be done in accordance with the ring design philosophy as shown in the figure below. All MV distribution lines will be overhead with pole mounted transformers.

**Figure 39: Ring Design Philosophy**



- c) **LV Reticulation:** Electricity will be distributed throughout the development by way of an overhead LV radial network and associated pole top boxes.
- d) **LV Connections:** LV connections (10/16mm<sup>2</sup>, 3 Core, PVC/SWA/PVC/PVC) will be provided for each residential stand and specific sized LV feeders to each larger customer from the various pole top boxes.
- e) **Street & Area Lighting:** Residential roads and public areas will make use of LED type luminaires installed on wooden poles.
- f) The detail of the above will be determined during the detail design phase of the project, dependant on the final SDP and will be submitted for review and approval.



## CHAPTER 6: MOTIVATION

### 6.1 INTRODUCTION

This need and desirability in respect of the application for the establishment of the six (6) proposed township areas of Kuruman as well as the removal of the restrictive title conditions, consolidation and subdivision of a portion of the Remaining Extent of Erven 1 and 3, Kuruman and a portion of the Remaining Extent of Portion 3 of the farm Kuruman Reserve No. 690, Administrative District Kuruman, Northern Cape Province will, in addition to the motivational statements already discussed in Sections 1 to 5 above, be motivated based on the following criteria:

- National Development Plan: Vision for 2030
- Constitution of the Republic of South Africa (Act 108 of 1996)
- National Housing Code, 2006
- A Comprehensive Plan for the Development of Sustainable Human Settlement (BNG)
- Urban (UDF) and Rural Development (RDF) Frameworks, 1997
- White Paper on Local Government, 1998
- Municipal Demarcation Act, 1998 (Act 27 of 1998)
- Municipal Systems Act, 2000 (Act 32 of 2000)
- National Housing Act, 1997 (Act 107 of 1997)
- Rental Housing Act, 1999
- White Paper on Wise Land Use, 2001
- Millennium Development Goals (MDG)
- National Spatial Development Perspective, 2006
- Northern Cape Provincial Spatial Development Framework, 2012
- John Taolo Gaetsewe District Spatial Development Framework, 2017
- Ga-Segonyana Local Municipality Integrated Development Plan, 2016-2017
- Ga-Segonyana Spatial Development Framework, 2008
- Distressed Mining Towns
- Housing Market Overview – Human Settlements Mining Town Intervention 2008-2013
- Housing Needs
- Outcome 8 - 2014-2019 Medium Term Strategic Framework (MTSF)
- Spatial Planning and Land Use Management Act Development Principles
- General

In terms of section 9(1) of the National Housing Act (107 of 1997), every municipality must, as part of the municipality's process of integrated development planning (IDP) take all reasonable and necessary steps to ensure that the inhabitants within its area of jurisdiction have access to adequate housing on a progressive basis by setting housing delivery goals,

identifying suitable land for housing development and planning, facilitating, initiating and co-ordinating housing development in its area of jurisdiction.

Housing comprises a series of complex interrelationships between people, their needs and values and resources within a political and legal environment. This complexity requires a focused approach to efforts aimed at providing housing. National Government has started to respond by putting the necessary policy and legislative environment in place.

This framework outlines the roles and responsibilities of different spheres of government in relation to housing, as well as dealing with aspects relating to the design and content of housing policy and legislation. In the context of this framework the Ga-Segonyana Local Municipality is required to take all reasonable steps to ensure the provision of adequate housing to its residents.

The core legislation and policies guiding housing planning and development are set out in Sections 6.2 to 6.22 below.

## **6.2 NATIONAL DEVELOPMENT PLAN: VISION 2030**

The National Planning Commission (NPC) (2011) published the NDP: Vision for 2030. Its contents will impact directly and indirectly on the provision of housing within the national spatial system.

Its core focuses include:

- The active efforts and participation of all South Africans in their own development
- Redressing the injustices of the past effectively
- Faster economic growth and higher investment and employment
- Rising standards of education, a healthy population and effective social protection
- Strengthening the links between economic and social strategies
- An effective and capable government
- Collaboration between the private and public sectors
- Leadership from all sectors in society.

Where we live and work matters. Apartheid planning consigned the majority of South Africans to places far away from work, where services could not be sustained, and where it was difficult to access the benefits of society and participate in the economy.

The physical and social environment in which we are born and grow up is one of the most important determinants of every person's wellbeing and life chances.

This environment has a bearing on access to opportunities, good schools, useful social networks, public services and safe environments. Separation between social groups, long distances between jobs and housing, and poor public services exacerbate poverty and inequality. Location affects communities, local economies, labour markets and

infrastructure networks. Businesses are also affected by where they are situated. Access to markets and suppliers determines their survival and profitability. This is hugely significant for South Africa's society, economy and environment.

To fundamentally reshape human settlements by 2050 (with significant progress by 2030), South Africa needs:

- To address inequities in the land market that makes it difficult for the poor to access the benefits of life in towns and cities.
- Stronger measures to reconfigure towns and cities towards more efficient and equitable urban forms.
- Housing and land policies that accommodate diverse household types and circumstances.
- Municipalities that put economic development and jobs at the heart of what they do and how they function.

The establishment of the proposed six (6) Kuruman township areas specifically aims at redressing the injustices of the past by ensuring proper integrated planning in respect of the location of new residential developments in well-located places that are conducive to the health and wellbeing of the community. Due to the mixed land use nature of the proposed development, ample opportunities will be created for the development of partnerships between the private and public sector to develop this area. In addition to the residential facilities that will be provided in the respective township areas, ample provision has also been made for properties that will stimulate economic growth and broaden the economic base of the area whilst similarly addressing the need for accelerated job creation.

### **6.3 CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA (ACT 108 OF 1996)**

The Constitution of the Republic of South Africa (Act 108 of 1996) is the supreme law of the country. The sections/schedules of the Constitution that are relevant with respect of the delivery of housing are the following:

- Sections 26, 27 and 29 of Chapter 2 – Bill of Rights states that everyone has the right to access to adequate housing, health care services, social security and education.
- Schedules 4 and 5, states that the Province has legislative competence in regard to (inter alia): Environment; Urban and Rural Development; Welfare; Housing; Health Services; Regional planning and development; (concurrent competence with national) and Provincial Planning and Provincial Roads and Traffic (exclusive competence)

In terms of the provisions (Schedule 4) of the Constitution, housing is a functional area of concurrent national and provincial competence. This provision of legislative and

administrative powers necessitates alignment between all spheres of government in terms of the IDP process and especially the preparation of the SDF and thus the Housing Chapter. The formalization of the Promise Land informal settlement constitutes a collaboration between the Department of Co-Operative Governance, Human Settlements and Traditional Affairs (COGHSTA), the Housing Development Agency (HDA) and the Ga-Segonyana Local Municipality to provide access to adequate housing, health care services, social security and education for the inhabitants of this informal settlement area. It is further the objective of this project to provide opportunities for people to access proper housing either through one of Government's subsidized housing programmes, by accessing bond finance or through the utilization of own funding. The proposed township areas makes provision for a multitude of erven to allow for the provision of the full spectrum of social, educational and health facilities that may be required by the concerned community. As will be alluded to in further sections below, the main objectives of this project are specifically to address the immediate short-term need for proper housing to alleviate the plight of people currently residing in squalid conditions without basic services as enshrined in the Bill of Rights.

#### **6.4 NATIONAL HOUSING CODE (2006)**

The National Housing Code (2006) identified the primary role of the municipality as taking all reasonable and necessary steps, within the framework of national and provincial legislation and policy, to ensure that the inhabitants within its area of jurisdiction have access to adequate housing. This entails the following:

- Initiating, planning, facilitating and coordinating appropriate housing development.
- Promoting private sector development and playing the role of developer.
- Preparing a housing delivery strategy and setting up housing development goals.
- Setting aside, planning and managing land for housing.
- Creating a financially and socially viable environment for housing delivery.
- Facilitating the resolution of conflicts arising from housing delivery initiatives.
- Facilitating the provision of bulk services.
- Administrating national programmes.
- Exploring land for housing development.

The project under discussion specifically aims at providing access to housing for the inhabitants of the Ga-Segonyana Local Municipality. Through the provision of erven for a multitude of housing typologies, provision is not only made for the sector of the community who cannot access adequate housing due to financial circumstances coupled with the lack of serviced erven to accommodate said individuals but also for inhabitants requiring other forms of tenure e.g. rental flats or rental housing as well as those aspiring to building their own house. One of the objectives of the National housing Code is for national and provincial legislation and policy to initiate, plan, facilitate and coordinate appropriate housing development. The formalization of the Promise Land informal settlement area directly aims at addressing this objective.



The Ga-Segonyana Local Municipality will also promote private sector development as the proposed township areas make ample provision for residential erven that can be developed by the private sector or through partnerships between Government, financial institutions and private contractors in terms of the development of FLIPS housing. This proposed development area will also provide erven to households that wish to acquire a preferred stand from the Ga-Segonyana Local Municipality and erect their own home on the concerned site through a bond from one of the financial institutions. In this manner the Ga-Segonyana Local Municipality will also be promoting private sector development. Private sector development is however not only limited to housing but also incorporates private sector commercial and social facility development. With regard to the Promise Land development, it is imperative to also note that the project aims at providing a proper erf to accommodate the existing 429 formal houses already erected within the development area whilst also providing erven for the approximate 3246 informal structures currently devoid of services. This project will provide security of tenure for the inhabitants of this area.

## **6.5 A COMPREHESIVE PLAN FOR THE DEVELOPMENT OF SUSTAINABLE HUMAN SETTLEMENT (BNG STRATEGY)**

The new "Human Settlements Plan" promotes the achievement of a non-racial, integrated society through the development of sustainable human settlements and quality housing. Housing is to be utilized for the development of sustainable human settlements in support of spatial restructuring.

The aim is to move beyond the provision of basic shelter towards achieving the broader vision of sustainable human settlements and more efficient towns, cities and regions. The following factors will be taken into consideration in order to achieve this vision:

- **Progressive Informal Settlement Eradication:** These settlements must be integrated into the broader urban setup so as to overcome spatial, social and economic exclusion. The plan encourages the eradication of informal settlements through in-situ upgrading in desired locations coupled with the relocation of households where development is not possible or desirable.
- **Promoting Densification and Integration:** The aim is to integrate previously excluded groups into the city so as to enable them to enjoy the benefits it offers and to create more integrated, functional and environmentally sustainable human settlements, towns and cities.
- **Enhancing Spatial Planning:** Greater co-ordination and alignment of various planning instruments and economic policies lies at the heart of sustainable human settlements. This requires more than mere co-ordination between departments but there needs to be a single overarching planning authority and/or instrument to provide macro-level guidance to support the development of sustainable human settlements.

- **Enhancing the location of New Housing Projects:** The location of past housing projects was said to reinforce apartheid spatial settlement patterns. Spatial restructuring aims to achieve a more decisive intervention in land markets. The following interventions are envisaged viz. accessing well located state-owned and parastatal land: acquisition of well-located private land for housing development, funding for land acquisition and fiscal incentives.
- **Supporting Urban Renewal and Inner City Regeneration:** Urban renewal and inner city regeneration often result in the current inhabitants being excluded as a result of the construction of dwelling units they cannot afford. Some municipalities are trying to avoid this by promoting affordable inner city housing. The "Human Settlements Plan" will support this by encouraging social housing.
- **Developing Social and Economic Infrastructure:** The need to move away from a housing-only approach towards a more holistic development of human settlements which includes the provision of social and economic infrastructure is emphasized.
- **Enhancing the Housing Product:** The aim is to develop more appropriate settlement layouts and housing products and to ensure appropriate housing quality.

This project from the onset aimed at providing a proper integrated human settlement that ascribes to the BNG Principles set out above. This was achieved as follows:

- This project makes provision for a variety of erven that can be utilized for various housing typologies. The largest proportion of the township areas will however be aimed at both the subsidized housing sector through the implementation of one of Government's subsidized housing programmes as well as the need that exists for people that does not qualify for a Government subsidy, due to either already owning other property or earning in excess of the threshold household income prescribed in respect of the various housing subsidy programmes, but who still wishes to acquire an affordable stand where they can construct their own home. This project has as its direct purpose to alleviate the plight of the inhabitants of the Promise Land informal settlement area that reside in squalid conditions without proper basic services that live in informal settlement areas and in squalid conditions.
- The formalization of the Promise Land informal settlement has at its core the progressive eradication of informal settlement within this area by integrating this settlement into the broader urban setup of Kuruman and Mothibistad. The eradication of this informal settlement is believed to be within a desired location and also has at its core the relocation of inhabitants of this informal settlement currently residing within areas designated by the Dolomite stability investigation as not being suitable for this type of residential development due to the inherent risk of sinkhole formation. For this purpose the layout plan only provides residential erven in the designated Dolomite D4 zone where existing formal houses were previously constructed. The retainment of these formal housing structures within the D4 zone was approved by the Council for Geoscience and will be subject to additional precautionary measure applicable to these erven in the D4 zone.

- As detailed in previous sections, the formalization of the Promise Land informal settlement area also focusses on promoting densification of this development through the creation of smaller economical erven to optimise the provision of services to this area. Due to the locality of this development, integration between the Mothibistad and Kuruman urban areas are also achieved
- The layout plans of the proposed township areas not only address the issue of the densification in respect of the size of the erven provided, but also make provision for two (2) erven number of erven that can be developed at a higher density (in the form of flats and residential buildings). The location of the proposed township area directly adjacent to the existing urban areas of Kuruman and Mothibistad further enhances integration and will offer inhabitants the opportunity to access the multitude of business, social and educational facilities on offer especially in the existing Kuruman urban area.
- The development of the proposed six (6) Kuruman township areas is a definitive move away from providing housing-only township areas and towards the provision of a proper integrate human settlement that offers a magnitude of social, educational and commercial support facilities and infrastructure in close proximity to the inhabitants.

## **6.6 URBAN (UDF) AND RURAL DEVELOPMENT (RDF) FRAMEWORKS (1997)**

The UDF aims to promote a consistent urban development policy approach for effective urban reconstruction and development, to guide development policies, strategies and actions of all stakeholders in the urban development process and to steer them towards the achievement of a common vision. The UDF is engaged in four key programmes, namely integrating the city, improving housing and infrastructure, building habitable and safe communities and promoting urban economic development.

The RDF co-ordinates integration of government programmes in rural areas and is aimed at: poverty alleviation through institutional development; investment in basic infrastructure and social service; improving income and employment opportunities; restoration of basic economic rights to marginalized rural areas; and finally justice, equity and security.

## **6.7 WHITE PAPER ON LOCAL GOVERNMENT (1998)**

The White Paper on Local Government adopts development policy guidelines and principles and advocates the developmental role of local government.

The guidelines and principles can be summarized as follows:

- Orientation towards people's needs;
- Poverty alleviation with special consideration of marginalized and disadvantaged groups and gender equity;
- Environmentally sustainable development and a safe and healthy environment;

- Economic growth with creation of income and employment opportunities;
- Involvement of residents, communities and stakeholders;
- Sustainability of services, municipalities and settlements.

The development of the proposed integrated human settlement comprising the proposed six (6) Kuruman township areas addresses the majority of the guidelines and principles set forth in the White Paper on Local Government (1998) as:

- The proposed development is specifically aimed at addressing the needs of the people of Ga-Segonyana and specifically the most vulnerable of the community;
- Due to the non-availability of vacant serviced erven that can be made available to the community for housing purposes, large scale informal settlement of this specific piece of vacant municipal land has taken place and is still continuing with an additional 500 households occupying the development area from July 2018 to November 2018. As is evident from the Social Facilitation Report, many of these inhabitants will be able to qualify for participation in one of government's subsidized housing programmes which will uplift their living conditions and restore human dignity.
- In addition to addressing the safety concerns of the community through the provision of proper durable housing structures, this project will also ensure a sustainable healthy environment for the inhabitants through the provision and availability of proper engineering services offering safe drinking water, proper sanitary infrastructure and facilities and a safer environment to live in.
- This development will also give rise to economic growth through the creation of income and employment opportunities. This will not only be attained as a result of the provision of a large number of erven that can be utilized for commercial development purposes but also through the provision of erven that can be utilized for social- and educational purposes. These facilities also require staff to function properly and will lead to additional jobs being created.
- The development of the subject properties has been in the public domain since the compilation of the Ga-Segonyana Spatial Development Framework as far back as 2008 when the properties were already earmarked for future residential development purposes. To ensure that the community is involved in this project, a Community Participation meeting was held on 21 October 2018 where the community was extensively briefed on the details of the development and was afforded the opportunity to voice their opinions and concerns in respect of this development. The feedback received from the public meetings was duly addressed in the investigations and studies that were conducted. Cognisance should further be taken of the fact that the residents, community and stakeholders will have a further opportunity to participate in this process during the prescribed public participation process. This process will include the publication of notices in a local newspaper and the Northern Cape Provincial Gazette, the posting of site notices on the subject properties, the notification of all adjacent property owners of the development as well as the involvement of a number of external organizations and departments as integral part of the township establishment process.



## **6.8 MUNICIPAL DEMARCATION ACT, 1998 (ACT 27 OF 1998)**

Demarcation objectives: The Demarcation Board determines a Municipal boundary with the objective that it must be able to enable the municipality for that area to fulfil its constitutional obligations in line with the provision of a democratic and accountable government for communities within a specific geographic area inclusive of:

- The provision of services to the communities in an equitable and sustainable manner.
- The promotion of social and economic development.
- The promotion of a safe and healthy environment.
- Enable effective local governance.
- Enable integrated development.
- Have a tax base as inclusive as possible for the user of municipal services in the municipality.

## **6.9 MUNICIPAL SYSTEMS ACT, 2000 (ACT 32 OF 2000)**

Chapter 5 of the Local Government Municipal Systems Act, 2000 calls upon municipalities to undertake developmentally-orientated planning so as to ensure that it:

- Strives to achieve the objectives of local government set out in Section 152 of the Constitution;
- Gives effect to its development duties as required by section 153 of the Constitution; and
- Together with other organs of state contribute to the progressive realisation of the fundamental rights In respect of, among others, housing.

In the spirit of our democratic dispensation no development can take place without the effective participation of the communities it affects. Section 29(1) (b) of the local Government: Municipal Systems Act 32 of 2000 requires municipalities to follow certain procedures to consult with communities and procure their participation in the planning process. As these structures have to be in place, they will be available and should be used to involve the relevant communities in the process of upgrading of informal settlements.

## **6.10 NATIONAL HOUSING ACT, 1997 (ACT 107 OF 1997)**

The National Housing Act (NHA) sets out three general principles, namely: giving priority to the needs of the poor in respect of housing development; consultation with individuals and communities affected by housing development; and ensuring that housing development is economically, fiscally, socially and financially affordable and sustainable.

The NHA lays down general principles applicable to housing development in all spheres of government, defines the functions of national, provincial and local governments in respect

of housing development, and promotes the role of the state as a facilitator of housing development.

National government must establish and facilitate a sustainable national housing development process, provincial government must do everything in its power to promote and facilitate the provision of adequate housing in its province within the framework of national housing policy, while municipalities must take reasonable and necessary steps within the framework of national and provincial housing legislation and policy to ensure that the right of access to adequate housing is realised on a progressive basis.

This project will at its core aim at addressing the needs of the poor in respect of the provision of housing. The development of the proposed six (6) Kuruman township areas will however not be focussed solely on the needs of the poor but will also address the needs of people that do not qualify to participate in one of the government subsidy programmes or those that wish to construct their own home or wishes to explore other housing options such as rental housing or social housing. This will ensure that the right of access to adequate housing is realised on a progressive basis.

## **6.11 RENTAL HOUSING ACT, 1999**

The stated purpose of the RHA reveals that government regards rental housing as an available alternative to homeownership, especially for poor people and historically disadvantaged people.

The layout plans of the proposed township areas make provision for erven that are suitably located within identified urban nodes and in close proximity to transport, social and commercial facilities to be developed for social / rental housing.

## **6.12 WHITE PAPER ON WISE LAND USE (2001)**

This White Paper intends to show practical ways in which South Africa may move to this approach. The system should satisfy the following specific needs:

- The development of policies which will result in the best use and sustainable management of land.
- Improvement and strengthening planning, management, monitoring and evaluation.
- Strengthening institutions and coordinating mechanisms.
- Creation of mechanisms to facilitate satisfaction of the needs and objectives of communities and people at local level

Integrated planning for sustainable management of land resources should thus ensure:

- That development and developmental programmes are holistic and comprehensive so that all factors in relation to land resources and environmental conservation are addressed and included.
- In considering competing needs for land, and in selecting the "best" use for a given area of land, all possible land-use options must be considered.
- That all activities and inputs are integrated and coordinated with each other, combining the inputs of all disciplines and groups.
- That all actions are based on a clear understanding of the natural and legitimate objectives and needs of individual land users to obtain maximum consensus.
- That institutional structures are put in place to develop, debate and carry out proposals.

Of core importance in the planning and development of housing is the normative planning principles identified in the White Paper:

The basis of the system will be principles and norms aimed at achieving sustainability, equality, efficiency, fairness and good governance in spatial planning and land use management. The decisions of planning authorities, whether related to the formulation of plans such as IDPs or the consideration of land development applications such as rezoning, must all be consistent with these principles and norms. A failure by an authority to affect this enables the Minister to intervene in the decision, either to require that it is reconsidered or in extreme cases to take the decision him or herself.

### **6.13 MILLENNIUM DEVELOPMENT GOALS (MDG)**

The MDG include the following: The eradication of informal settlements by 2014 as one of the policy imperatives of government (Goal 7, Target 11) implies that government and the private sector would have to implement the Social Contract (Social Contract for Rapid Housing Delivery, 2005) commitments to aid the removal of slums in South Africa.

The targets included in the Social Contract consist of:

- The removal or improvement of all slums in South Africa as rapidly as possible, but not later than 2014.
- The fast tracking of the provision of formal housing within human settlements for the poorest of the poor and those who are able to afford rent and/or mortgages.
- The creation of rental stock for a rapidly growing, mobile (migrant) and urban population within inner city and other locations close to employment opportunities.
- To remove administrative blockages that prevent speedy developments and to strive to reduce the time to grant various permissions relating to the built environment to 50% of the current time;
- To ensure consumer education and understanding in all housing development projects.

This project has at its core the eradication of the Promise Land informal settlement area through the establishment of an integrated human settlement.

## **6.14 NATIONAL SPATIAL DEVELOPMENT PERSPECTIVE (2006)**

The NSDP consists of a set of five normative principles for development:

- Principle 1: Rapid economic growth that is sustained and inclusive is a pre-requisite for the achievement of other policy objectives, among which poverty alleviation is key.
- Principle 2: Government has a constitutional obligation to provide basic services to all citizens wherever they reside.
- Principle 3: Government spending on fixed investment should be focused on localities of economic growth and/or economic activities and to create long-term employment opportunities.
- Principle 4: Efforts to address past and current social inequalities should focus on people, not places. In localities where there are both high levels of poverty and demonstrated economic potential, this could include fixed capital investment beyond basic services to exploit the potential of those localities. In localities with low demonstrated economic potential, government should beyond the provision of basic services, concentrate primarily on human development.
- Principle 5: In order to overcome the spatial distortions of apartheid, future settlement and economic development opportunities should be channelled into activity corridors and nodes that are adjacent to or that link the main growth centres. Infrastructure investment should primarily support localities that will become major growth nodes in South Africa and the SADC region to create regional gateways to the global economy.

## **6.15 NORTHERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK, 2012**

The Northern Cape PGDS states that social and economic development is imperative in order to address the most significant challenge facing the Northern Cape, i.e. poverty, and that the only effective means by which poverty can be reduced is long-term sustainable economic growth and development.

Accordingly, the PSDF responds and gives practical effect to the overarching objective stipulated in the Northern Cape PGDS, i.e. to ensure integration of development processes and, in particular, to facilitate sustainable development throughout the province. Sustainable development is generally referred to as development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs. NEMA defines sustainable development as the integration of social, economic and environmental factors into planning, implementation and decision-making so as to ensure that development serves present and future generations.



The alleviation of poverty is one of the key challenges for economic development. Higher levels of economic growth are a key challenge for poverty eradication. Investment in people is pivotal to the eradication of poverty and inequality. Investment in people is also, to a large extent, about delivering social and economic infrastructure for education, welfare, health, housing, as well as transport and bulk infrastructure.

Housing is one of the basic human needs that has a profound impact on health, welfare, social attitudes and economic productivity of the individual. It is also one of the best indicators of a person's standard of living and place in society. In achieving the Millennium Development Goals, the South African government is to ensure that its citizens live in good housing conditions. In order to achieve this goal, the government aims to eliminate all informal dwellings, bucket type toilets, and ensure that all citizens have access to electricity for lighting, and access to clean, safe water within a reasonable distance.

The settlement system in the Northern Cape is characterised by small and often isolated urban and quasi-urban settlements scattered across the vast area of the province. Many of these settlements find it hard to provide basic services and sufficient income generating opportunities to their inhabitants.

Sustainable rural development is closely bound to a vibrant and functional urban settlement system. Villages, settlements and cities are the 'engine rooms' that drive regional development and economic growth. Unfortunately not all urban settlements have the same growth potential. Growth trends fluctuate over time due to many influencing factors. In a large province such as the Northern Cape such 'engine rooms' make a special contribution towards meeting the general needs in both the settlements and the surrounding rural hinterland. Such 'engine rooms' also affect global links, the national spatial economy and sustainable regional development in the province.

It is generally accepted that public funds should be applied for the improvement of a small town's structure and functioning (e.g. investment in market support, provision of water and electricity, development of housing and new industrial areas) only if the basic rural development conditions are suitable. The basic driving force behind a town's growth is provided by its specific economic activities, which generate job opportunities, capital, buildings and infrastructure.

In terms of facilitating development of urban areas, the Northern Cape Provincial Spatial Development Framework set forth the following objectives were set in respect of establishing sustainable settlements:

- Develop sustainable settlements that would promote the well-being of the people of the Northern Cape, i.e. where they can live with dignity and pride.
- End the apartheid structure of urban settlements.
  - Prohibit further outward expansion of urban settlements that entrenches the current spatial apartheid pattern and results in urban sprawl.

- Ensure that public funds are not spent in perpetuating segregated and unsustainable settlement patterns.
- Use socio-economic gradients based on walking distance to create a higher level of integration than currently exists while remaining sensitive to community social norms and levels of living.
- Use publicly-owned land and premises to spatially integrate urban areas and to give access for second economy operators into first economy spaces.
- Promote sustainable urban activities and public and non-motorised transport.
  - Use walking distance as the primary measure of accessibility.
  - Develop walking and cycling routes.
  - Densify urban settlements, especially along main transport routes, at nodal interchanges etc.
  - Identify areas of highest accessibility that can be designed to maximise safe social and economic activity, especially for participants in the second economy.
  - Restructure road networks to promote economic activity in appropriate locations.
  - Cluster community facilities together with commercial, transport, informal sector and other activities so as to maximise their convenience, safety and social economic potential.

The quality of subsidised settlements that could be achieved through innovative design and cross-subsidisation is visually represented in **Figure 40**.

**Figure 40: Quality of subsidised settlement that could be achieved through innovative design and cross-subsidisation.**



During the design of the integrated human settlement layout plan, specific attention was given to ensuring that the layout plan incorporates road reserves that will not only address vehicular access, but also allow for the creation of pedestrian walkways and bicycle routes.

## **6.16 JOHN TAOLO GAETSEWE DISTRICT SPATIAL DEVELOPMENT FRAMEWORK, 2017**

The Gamagara Development Corridor is part of the Strategic Integrated Projects (SIPs). The SIPs are a product of the National Infrastructure Projects (NIP). The NIP was initiated to provide a background on cabinet's decision to establish a body to integrate and coordinate the long-term infra-structure build known as the Presidential Infrastructure Coordinating Council (PICC). The PICC presents the spatial mapping of infrastructure gaps which analyses future population growth, projected economic growth and areas of the country which are not served with water, electricity, roads, sanitation and communication.

Based on this work, eighteen (18) Strategic Integrated Projects (SIPs) have been developed and approved to support economic development and address service delivery in the poorest provinces.

The Gamagara Development Corridor constitutes the SIP 3 (South-Eastern node & corridor development – Increase manganese rail capacity in the Northern Cape) and SIP 5 (Saldanha-Northern Cape development corridor - Expansion of iron ore mining production and beneficiation).

Settlement hierarchy is a way of arranging settlements in order, i.e. according to the population or settlement, or the number of services and functions the settlements has, or the area the settlement covers. The John Taolo Gaetsewe District Spatial Development Framework, 2017 set forth the following settlement hierarchy:

- First Order Settlement – Areas of significant size, with the greatest range of services and facilities in the JTGDM, and in principle, the most sustainable locations for major growth, e.g. Towns.
- Second Order Settlement – Areas of residential dominance with availability of services and facilities within settlements, where its resident directly rely on First Order Settlement and which consist of community facilities, healthcare and education provision indicators, e.g. Townships.
- Third Order Settlement - Large villages which act as key service centres for the surrounding rural area by virtue of the range of services and facilities they possess, and, in principle, suitable for growth.
- Fourth Order Settlement - Small villages with few, if any, services and facilities, suitable only for development of single dwellings or small groups.

In the case of Kuruman, the settlement hierarchy classified Kuruman as a First Order Settlement.



The District Municipality completed an Integrated Human Settlements Sector Plan during the 2014/15 Financial Year, providing for the period 2014-19 which aims to provide the strategic direction for transforming human settlements in the John Taolo Gaetsewe District aligned to the Provincial Department. This transformation relates to accelerating human settlement delivery on well-located land, that provide opportunities to beneficiaries to access the property market and have sufficient access to social amenities and economic opportunities and also will further support the integration of communities and the spatial restructuring of the towns and villages in the Municipal area.

Sections 24 and 26 (1) of the Constitution (Act 108 of 1996), advocates the right to an environment which is not harmful to people’s health or their well-being and access to adequate housing. The different dwelling types for households within the district are shown in the table below. To identify patterns and draw conclusions with regards to how the district is fairing in this regard, the provincial figures are also provided.

**Table 60: Households Dwelling Types within JTGD**

Type of Main Dwelling	Northern Cape	John Taolo Gaetsewe	Joe Morolong	Ga-Segonyana	Gamagara
Formal dwelling/ house or brick/ concrete block structure	920 702	184 071	60 940	80 831	42 301
Traditional dwelling/ hut/structure made of traditional mater	25 457	14 406	10 083	4 322	-
Flat or apartment in a block of flats	7 754	743	45	337	361
Cluster house in complex	1 241	345	0	23	322
Townhouse (semi-detached house in a complex)	3 648	683	27	336	320
Semi-detached house	21 423	1,546	129	509	908
Formal dwelling/ house/ flat/ room in backyard	58 229	15 567	7608	7 069	890
Informal dwelling/ shack in backyard	45 013	7 177	2092	3 548	1 536
Informal dwelling/ shack not in backyard (e.g. in an informal area)	92 146	11 870	2853	3 594	5 423
Room/ flatlet on a property or larger dwelling/ servants quart	2 875	700	-	655	45
Caravan/tent	862	238	39	17	183
Other	14 293	4 917	385	3 166	1 366
Unspecified	137	-	-	-	-
<b>Total</b>	<b>1 193 780</b>	<b>242 264</b>	<b>84 201</b>	<b>104 408</b>	<b>53 656</b>

Source: Census 2016

It is evident from the table above that at district level, a proportion of 76% of the population live in a brick structure as a main type of dwelling. This figure is slightly below than that of the provincial average of 77%.

Joe Morolong LM exhibits the lowest percentage of population that live in a house or brick structure at 72% in 2016. The local municipality of Joe Morolong accounts for a high percentage of 12% of the population living in traditional dwellings while the district’s average in this regard is 6%. This could be indicative of the rural character of the municipality as well as limitations for development interventions within the municipality. Dwellings of a high-density nature are seemingly not that popular within the Province as a whole. The statistics under this category (Room/flat let on a property or larger dwelling) are 0.24% for the Northern Cape and 0.29% for the District, with Ga-Segonyana LM having a somewhat high proportion (0.63%) relative to other two local municipalities within the District. Similarly, Gamagara indicates a high percentage of population living in townhouses (semi-detached

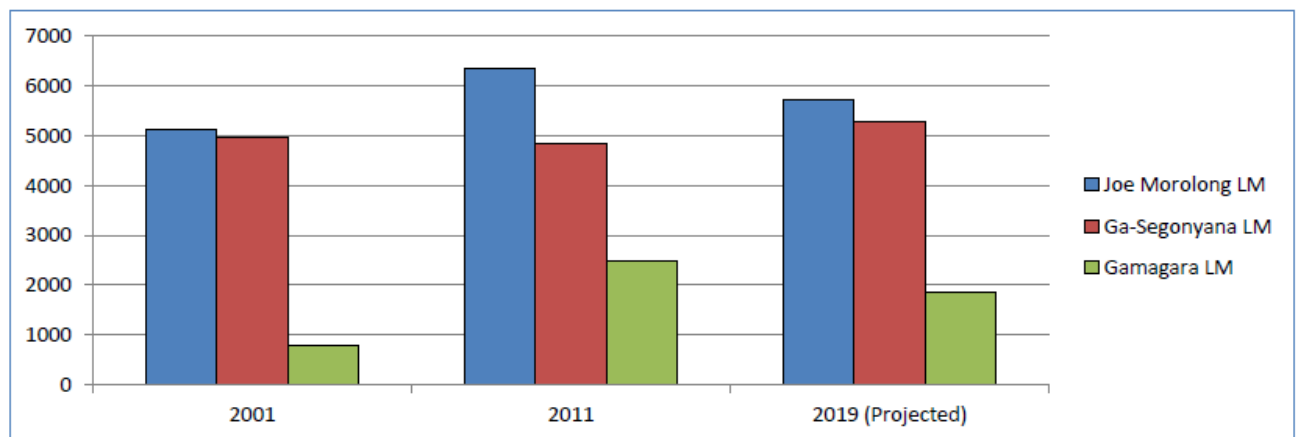


in a complex) at 0.6% which is significantly higher than both the provincial and district averages of 0.31% and 0.28%, respectively.

Informal dwellings are also a common feature of the District. 9.1% of the District's households live in an informal structure. This percentage aggregates the proportion of informal dwellings in a backyard and those in an informal settlement or farm. With regards to population living in informal dwellings (shacks) in a backyard, the District figure is 9%, which is slightly lower than the provincial figure of 12%. The spatial location of these informal settlements is prevalent in the local municipalities of Ga-Segonyana and Gamagara, respectively. This is attributed to the influx of migrants into these municipalities given their economic significance.

The housing backlog (inadequate) in Ga-Segonyana LM increased since 2001 with 122 units and was 4,838 in 2011. This represents an eradication of the backlog from 27.5% to 18.2% of the households.

**Figure 41: Housing Needs within the JTGDM**



The John Taolo Gaetsewe District Spatial Development Framework, 2017 identified the following key issues as part of the spatial development guidelines and rationale in respect of settlements:

- Capital Funding for infrastructure development and upgrading should be priority in the district to cater for population increases.
- Development of Community Residential Units (CRUs) should be encouraged more in Gamagara Local Municipality and Ga-Segonyana Local Municipality considering the high percentage of household size between 1 – 3 people per household and also considering the higher percentage of males migrating to both municipalities for job opportunities. This should be implemented as part of the Framework Agreement for Sustainable Mining Towns. The Community Residential Units programme (CRU) aims to facilitate the provision of secure, stable rental tenure for lower income persons. Bulk services should also be available to enable this.
- Identification and acquisition of strategically located land for human settlements purposes that will cater for various housing delivery programmes

- Spatial integration (Kathu-Sishen and Kuruman-Wrenchville) should be encouraged
- The legacy of apartheid planning and poverty should be addressed according to the principles as set out in the National Spatial Development Perspective. Human Development Hub model (objective 6 of the JTG SDF 2012) should be implemented in densely populated settlements along transportation routes for areas such as Dithakong, Bothitong, Kagung, Loopeng, Heuningvlei and Cassel.

The development of the proposed integrated human settlement will specifically also aim to provide suitable housing infrastructure (both single dwelling units, rental stock and social housing) that will address the inform settlement currently prevalent in Promise Land.

The following is stated in respect of the housing demand in the Johan Taolo Gaetsewe District:

- Residential influx and the mushrooming of informal settlements (Kathu, **Promise Land** and Thuli Madonsela) and sporadic expansion of rural areas (Magojaneng, Seoding Seven Miles, Mapoteng and Kagung) result in a demand for additional land for urban development,
- The reported increase in the percentage of informal settlements in the JTG district from 5.1% to 7.6% of the population is concerning, but the situation in Kathu has definitely worsened since Census 2011 data was collected. The housing backlog is also alarmingly high,
- To meet and address the housing demand, various housing delivery mechanisms should be implemented
- National Housing Agency should continue to identify the needs and delivery mechanism in this sector

Sustainable neighbourhoods and communities do not occur automatically but their development and growth need to be supported by appropriate planning and design measurements and standard. In order to create developments that contribute positively to the district development, the following ought to be taken into account:

- Preparation of an Environmental Impact Assessment (EIA)
- Preparation of an Environmental Management Plan (EMP)
- **Integration of spatial planning, environmental management and statutory planning**
- **Manage the growth of all nodes carefully**
- Land use and infrastructure coordination
- Agree on service level standards
- Update bulk services payment policies on a regular basis
- Follow a more compact development approach
- **New developments should be planned in an integrated manner**
- **Develop a phases approach for the long-term development of dense urban areas**

- Develop detailed property plans and release strategies for public owned land

## **6.17 GA-SEGONYANA LOCAL MUNICIPALITY INTEGRATED DEVELOPMENT PLAN 2016-2017**

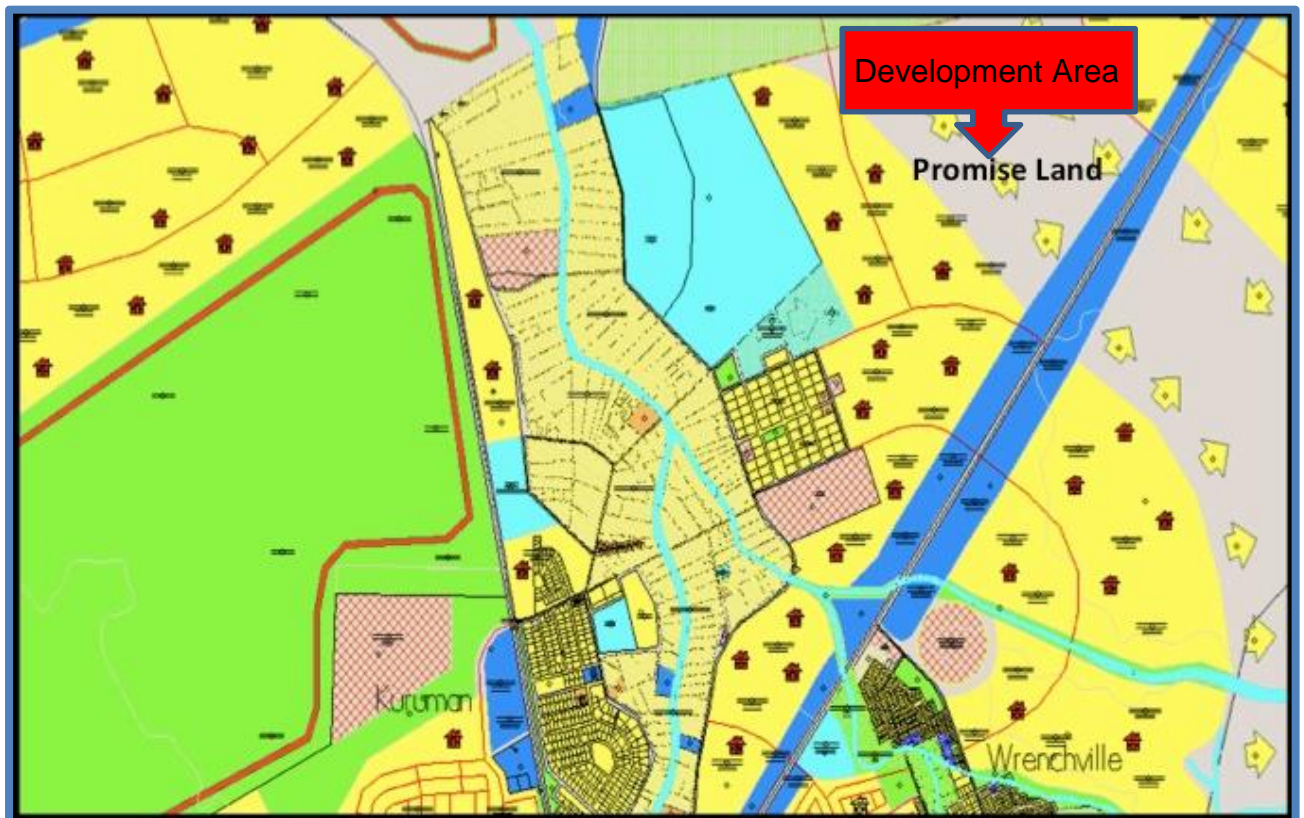
The following are current issues in the Ga-Segonyana Municipality's housing backlog:

- need for more formal houses and erven;
- a demand for self-help erven;
- need for town houses & flats in lower income areas;
- housing for farm workers needed;
- need to develop small holdings;
- improved professional planning policies for the future;
- need for church sites and business erven; and
- request for more RDP houses.

## **6.18 GA-SEGONYANA SPATIAL DEVELOPMENT FRAMEWORK, 2008**

In terms of the Spatial Development Framework of the Ga-Segonyana Local Municipality, the subject properties to which this development apply are located inside the demarcated Urban Edge. The subject properties were also earmarked for future residential development purposes, as reflected on **Map 17**.

**Map 17: Ga-Segonyana Spatial Development Framework**



## 6.19 DISTRESSED MINING TOWNS

Fifteen mining areas were initially identified for fast-tracked human settlements development, using housing projects to stimulate local economies and create job opportunities for local residents. The interventions were conceptualised in 2012, when the former President Jacob Zuma formed an Inter-ministerial Committee for the Revitalisation of Distressed Mining Communities. The Framework Agreement for a Sustainable Mining Industry was signed in 2013, committing government and the mining industry to accelerate efforts to upgrade human settlements in mining towns, and improve the living and working conditions of mineworkers. In line with this, the National Department of Human Settlements is driving the revitalisation of distressed mining towns through a number of projects.

At the core of the plan is a new approach to co-ordinating the work of local and provincial government, local business, mining companies and other economic interest groups, with the active participation of communities and mineworkers.

Proposed interventions include:

- Upgrading informal settlements (providing interim services, upgrading, relocation)
- Basic service backlog connections
- Home ownership through support provided to households to purchase a site and build, or buy on the secondary market
- The provision of rental accommodation for migrant miners

The downturn in the mining sector has seen the number of distressed mining areas proclaimed by government climb to 19 located in six provinces.

The towns on the list receive special cross departmental support, either through technical support or grant transfer that is meant to diversify the local economy by developing other economic opportunities during and beyond the life of mines.

The 19 prioritised mining towns in the programme are Fetakgomo, Tubatse, Elias Motsoaledi in Sekhukhune district and Lephalale in Waterberg district in Limpopo; Westonaria, Randfontein, Mogale City and Merafong in Gauteng's West Rand; Rustenburg, Moses Kotane, Madibeng in Bojanala district in North West, as well as Matlosana in the same province; Mpumalanga's Nkangala district's Emalahleni and Steve Tshwete municipalities; the Free State's Matjhabeng municipality; and **Ga-segonyana**, Gamagara, Kgatelopele and Tsantsabane municipalities in the Northern Cape.

The municipalities chosen and prioritised experience different forms of distress. The old gold mining municipalities are experiencing a continuous decline in economic activity as gold reserves are diminishing and so are employment opportunities. These municipalities are therefore experiencing a sharp economic decline. At the same time, the newly growing mining municipalities that are predominantly concerned with the extraction of platinum group metals, coal and other mineral commodities are experiencing an influx of migrant workers



searching for employment at the mines and other related industries. These municipalities are experiencing a different kind of distress, which is associated with the inadequate provision of decent housing and living conditions, bulk and reticulation infrastructure. The available amenities do not meet the demands of an ever-increasing population in these localities.

## **6.20 HOUSING MARKET OVERVIEW – HUMAN SETTLEMENTS MINING TOWN INTERVENTION 2008-2013**

In terms of the Ga-Segonyana Mining Town Housing Market Report compiled by the Housing Development Agency (2015), **“Ga-Segonyana is part of the Gamagara Corridor, which has the richest and most sought after iron ore, manganese, diamond and lime resources in the world produced by various mining companies, namely: Kumba Iron Ore, an Anglo American company, Assmanang, BHP Billiton”**.

The fore-mentioned report highlighted the following housing challenges and housing strategies:

- **Housing Challenges:**
  - Migration from the cross-border areas in the north adds significantly to the housing need and the development of water and sanitation infrastructure
  - The primary backlog in housing provision is due to unregulated settlement expansion
  - The municipality is not the executing authority and, thus the delivery of housing must be done in conjunction with the Provincial Department of Human Settlements
  - The land is in the hands of tribal authorities
  - Formalisation of a land is a problem
  - Request for more RDP houses
  - Bulk services are not available
- **Housing Strategies:**
  - Formalisation of existing township and existing backyards in-situ in order to cater to the high demand for backyard rental facilities and enhance the long-term sustainability of backyard dwellings
  - New projects outlined and prepared for further development. This will provide for a large scale mixed-mode development in Kuruman that addresses the future needs of mining companies and commercial backlogs
  - Influx control model via “transit camps”
  - Ensure there are integrated human settlements in line with the approved Spatial Development Framework
  - A total of R43 million allocated for housing rehabilitation/improvement
  - A total of R3 million funded out of a Cost Estimate of R24 million for land development

- Sustainable human settlements that are safe, vibrant and in balance with the environment
- Provide rental housing to middle income earners such as teachers, nurses and Government employees.

The report made the following key findings in respect of the Housing Market Overview:

- The Ga-Segonyana **housing market has grown faster than any other mining town in 2013. This is due to the mining industry growth in the surrounding towns**, due to continued growth and expansion of the mining sector and jobs along the Gamagara Corridor, and the increasing urbanisation of previously undeveloped or rural areas within the municipality. **The mining towns provide stable incomes, new housing investment and, in particular, a thriving housing market.** Recent growth has surged a bit, creating an opportunity for markets to be carefully assessed in order to best position the next wave of growth. Housing options are not currently diversely distributed across the municipality.
- Ga-Segonyana's **affordable housing gap of 6.7 is more than double the national average of 3.0, despite** the Northern Cape's lowest average household income of the six provinces included in the mining town profiles. Regardless of an above-average monthly income (R12 700), there remain large disparities among incomes and affordable housing access within the municipality. This may prioritise housing strategies and solutions, which propose creative financing tools and techniques to reduce financial barriers (such as down payments, interest rates and principal requirements) as well as unlocking equity, rather than simply trying to push costs down.
- The presence of older **RDP units within the municipality represent an important opportunity to leverage that investment** in affordable housing in the years ahead, as owners seek to sell and move up the housing continuum, if opportunities are positioned properly. Average equity in these areas increase purchasing power, putting moderately priced housing within reach of lower income families. This situation can be used to drive developers to build more gap housing, and financiers to finance RDP acquisition loans.
- The area has below-average diversity and integration of housing values and property types, despite growth in some areas, which suggests **a market which could be expanded to meet a wider range of needs and expectations.** Formal mixed-income housing options that offer much-needed internal cross subsidisation to keep prices affordable will likely do very well, and bodes well for a market less reliant on Government and mining intervention.
- **Ga-Segonyana has experienced a steady increase in non-traditional lenders**, which account for a notable amount of all new lending in the municipality in 2013. With the presence of hundreds of RDP units, it will be an important strategy to encourage traditional lenders to develop creative loan programmes targeting those homeowners in order to unlock the value of those homes, and allow owners to move up the housing continuum.

- The **opportunity for rental housing development within Ga-Segonyana is strong within specific areas**. Those areas with greater density, modest incomes, and affordability challenges are more likely to support quality, professionally managed and affordable rental housing. Rental housing also provides flexibility to employers and workers as mining markets expand and contract from time to time.

Ga-Segonyana **housing market has experienced one of the highest levels of growth 2013 of all mining towns**, which is likely due to continued growth and expansion of the mining sector and jobs along the Gamagara Corridor, and the increasing urbanisation of previously undeveloped or rural areas within the municipality.

Recent growth has surged a bit, creating an opportunity for markets to be carefully assessed in order to best position the next wave of growth. Housing options are not currently diversely distributed across the municipality.

With a market growing as quickly as Ga-Segonyana, **meeting housing demand** will be a crucial factor in stabilising the town through this period of growth. In slow-growth neighbourhoods, where most of the lower priced housing currently exists, housing will need to be built more affordably, but will need to be situated well to better integrate housing markets. Site development initiatives should include rental housing to meet the increased demand.

Segonyana's housing market is essentially three markets: Government-sponsored housing built as part of the National Housing Initiative over the past 20 years, privately traded and financed homes, and informal settlements. Markets are highly segregated between higher-priced, actively selling private growing markets near the city centre, and further flung lower income, non-bonded Government-sponsored developments and informal settlements (not on the deeds registry).

The implied demand for housing is high. The current estimated housing backlog represents about 17% of the town's current total formal residential properties. Demand creates opportunities for new housing supply to be positioned between the existing segregated markets to better integrate the town's spatial, income and housing markets.

Existing **Government investment in housing can be leveraged** to guide new development opportunities, if and when those homes can be sold to new buyers and the proceeds then used to purchase new housing further up the housing continuum. For example, **Government might prioritise new development between Government-dominated and private markets** for more integration mixed-income sites, and fills spatial gaps within the town. Government can use this existing investment to identify areas of future development and entice private sector participation.

**Encouraging the expansion of financing** to lower income families will allow for those homes to be sold, and the proceeds used to support housing development further up the housing continuum.

Rapidly changing housing demand driven by mining activities makes a strong case for prioritising quality rental housing. If rental housing is well-situated and convenient to transport and centrally located in dense areas, it can bring social and economic cohesion to housing markets over the longer term.

## **6.21 OUTCOME 8 – 2014-2019 MEDIUM TERM STRATEGIC FRAMEWORK (MTSF)**

Outcome 8 (sustainable human settlements and improved quality of household life) of government's 2014-2019 Medium Term Strategic Framework (MTSF) guides the Department of Human Settlement's work over the medium term towards ensuring that poor households have access to adequate housing in better living environments, and that institutional capacity and coordination is improved.

Outcome 8 determines that human settlements in future in South Africa must at least consist of:

- The development of suitable located and affordable housing (shelter) and decent human settlements;
- An understanding that human settlements are no longer about building houses;
- Transforming our cities and towns (moving towards efficiency, inclusion and sustainability); and
- Building cohesive, sustainable and caring communities with improved access to work and social amenities, including sports and recreation facilities.

In terms of Outcome 8, sustainable human settlements and improved quality of household life are defined by:

- Access to adequate accommodation that is suitable, relevant, appropriately located, affordable and fiscally sustainable;
- Access to basic services (water, sanitation, refuse removal and electricity);
- Security of tenure irrespective of ownership or rental, formal or informal structures; and
- Access to social services and economic opportunity within reasonable distance.

This outcome is of critical importance as it is a requirement of the Constitution and Bill of Rights. It is secondly core to human dignity and social stability and is a key enabler of health, education and social cohesion outcomes. With good planning it can also serve as a catalyst for economic development and job creation.



## 6.22 HOUSING NEEDS

According to the housing needs register provided by COGHSTA, the total housing need for Ga-Segonyana Local Municipality was estimated at 2 246 units. This information is outdated as the land use survey indicated an existing 2 763 informal structures located in Promised Land only. Since the land use survey conducted during July 2018, the number of households in informal residential structures increased by 500 (over a period of 4 months)

According to the 2016 Social Facilitation report, the monthly household income levels of Promised land was determined as follows:

**Table 61: Household Income Levels**

Income Level	% distribution
None	18%
R1 - R500	9%
R 501 - R 1 500	20%
R 1 501 - R 3 500	26%
R 3 501 - R 7 500	17%
R 7 500+	10%
<b>Total</b>	<b>100%</b>
<b>Average total monthly household income</b>	<b>R 2 796</b>

73% of all households earn below R 3 500 per month with an average of R 2 796 per month. According to the income levels it is clear that the most of the households (73%) are dependent on government subsidies for housing. Based on abovementioned the following table provides a broad guideline of the possible housing typologies and mix that can be provided for the settlement in future.

**Table 62: Possible Housing Typology Mix**

Housing Types	Percentage	Income Category
Subsidised housing	73%	R0 - R 3 500
FLISP / GAP (Affordable) housing	17%	R 3 501 - R 7500
Affordable / Bonded housing	10%	R 7 501 +

Subsidised housing can include houses or low-cost rental units (CRU)

## **6.23 SPATIAL PLANNING AND LAND USE MANAGEMENT ACT, 2013 (SPLUMA) DEVELOPMENT PRINCIPLES**

The act applies to spatial planning, land development and land use management. The following five (5) primary development principles referred to in the Spatial Planning and Land Use management Act, 2013 (Act 16 of 2013) (SPLUMA) and explained in SPLUMA: A Practical Guide compiled by Nic Laubscher, Lizette Hoffman, Ernst Drewes and Jan Nysschen, 2016, need to be taken into consideration:

**“7. (a) the principle of spatial justice, whereby-**  
**(i) past spatial and other development imbalances must be redressed through improved access to and use of land;**

The focus of the principle would be on integration or development of rural and/or traditional settlements and urban integration strategies. This development specifically aims at redressing past spatial imbalances in combatting the past planning principles of providing low income residential areas on the periphery of urban areas. As detailed in the preceding sections, the Ga-Segonyana area is characterized by large scale informal occupation of vacant municipal land (as is evident from the Promise Land informal settlement area). The inhabitants of these informal dwelling units reside in squalid conditions due to the non-availability of vacant and serviced residential erven and the lack of available housing for those households that qualify for subsidized housing or other forms of housing (e.g. rental housing / social housing). This development will provide residents access to land and the use of such land to better their living conditions whilst similarly providing the necessary security of tenure. This project aims at providing 5469 residential erven to not only accommodate the existing informal residential structures but to also provide proper residential erven to accommodate the existing 429 formal housing structures already erected within the development area.

As indicated previously there are in excess of 3263 informal residential units /households in the Promise Land area that are in need of proper housing. It is therefore imperative that the Ga-Segonyana Local Municipality act pro-actively in providing vacant erven for housing development purposes in an attempt to eradicate informal occupation of land where people reside in squalid conditions without basic services and proper shelter. This township establishment will afford the landless community residing in this area the opportunity to access a proper surveyed residential erf with the necessary services infrastructure a proper human shelter.

**(ii) spatial development frameworks and policies at all spheres of government must address the inclusion of persons and areas that were previously excluded, with an emphasis on informal settlements, former**

**homeland areas and areas characterised by widespread poverty and deprivation;**

In terms of the Ga-Segonyana Local Municipality Spatial Development Framework, the area to which this application applies was already earmarked for residential development purposes. This was specifically done to limit further urban sprawl and to enhance integration. The proposed development area is also within the demarcated urban edge as defined in terms of the SDF.

**(iii) spatial planning mechanisms, including land use scheme, must incorporate provisions that enable redress in access to land by disadvantage communities and persons;**

The local municipality identified portions of land within the local municipal area, through the Spatial Development Framework, that will redress access to land by previously disadvantaged people whilst also providing housing opportunities for people that wish to acquire land to build their own home or those that do not qualify to participate in the subsidized housing programmes of government but still require proper housing (e.g. rental housing / social housing). The proposed development will focus on a wide spectrum of housing typologies and providing a variety of erf sizes to accommodate the needs of the community. The proposed township areas will focus on subsidized-, bonded-, FLIPS-, rental-, social-, middle income and high income housing based on the requirements of the community.

**(iv) land use management systems must include all areas of a municipality and specifically include provisions that are flexible and appropriate for the management of disadvantaged areas, informal settlements and former homeland areas;**

Land uses within the Ga-Segonyana Local Municipality municipal area are governed by a functional land use management system. The proposed land uses in the proposed township areas will be regulated by the Ga-Segonyana Scheme Regulations, 2003. The opinion is held that the provisions of this scheme that will relate to this development will be totally appropriate for the management of the land uses to be provided within this development.

**(v) land development procedures must include provisions that accommodate access to secure tenure and the incremental upgrading of informal areas; and**

This project has at its core the eradication of the Promise Land informal settlement area through the provision of a proper integrated human settlement to upgrade the existing informal settlement. This township establishment process will afford inhabitants of this area the opportunity to obtain access to secure tenure (especially for the owners of the existing 429 formal houses already erected on the development area. The township

establishment process further aims to create additional residential erven that can, after proclamation of the township areas, be alienated to the beneficiaries thereof. This new township development will afford the community of Ga-Segonyana the opportunity to access land and secure tenure thereof.

- (vi) A Municipal Planning Tribunal considering an application before it, may not be impeded or restricted in the exercise of its discretion solely on ground that the value of land or property is affected by the outcome of the application;**

This project entails the development of land that has been occupied for a number of years in an informal manner. The upgrading of the Promise Land informal settlement area will positively affect not only the value of this property but also those of the surrounding areas.

- 7. (b) the principle of spatial sustainability, whereby spatial planning and land use management systems must –**

The principle of spatial sustainability should allow for flexibility in dealing with applications and proposals, which may not have been anticipated.

- (i) promote land development that is within the fiscal, institutional and administrative means of the Republic;**

In terms of the sub-principle, the opinion is held that the Ga-Segonyana Local Municipality has sufficient fiscal, institutional and administrative capacity and resources to administer the development. The Ga-Segonyana Local Municipality will ensure that the development complies with the requirements contained in the Ga-Segonyana Scheme Regulations, 2003 and the Ga-Segonyana Local Municipality Spatial Development Framework. In this regard it is pertinent to also note that the fiscal capacity of the Ga-Segonyana Local Municipality is also enhanced through the assistance of the Department of Co-Operative Government, Human Settlements and Traditional Affairs (COGHSTA) who is currently funding this project

- (ii) ensure that special consideration is given to the protection of prime and unique agricultural land;**

The area where the concerned properties are situated is not regarded as prime or unique agricultural land.

- (iii) uphold consistency of land use measures in accordance with environmental management instruments;**

Environmental sustainability refers to the relationship between the settlement and the natural landscape.



The development is planned with a full level of infrastructure elements including sewer, water, electricity, access and refuse removal services, thereby reducing the effect that the development will have on the natural surrounding area. For an area to be environmentally sustainable, it should protect the unique amenity and character of the surrounding environment and also prevent degradation. The development will not be situated in an ecological sensitive area or in places of hazard or high risk, such as within the flood plain. The proposed development further excludes noxious activities.

In considering the environmental management instruments applicable to the proposed development, it is pertinent to note that the activity does indeed constitute a listed activity in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2014.

Due to the fact that the development commenced (even though in an informal manner) prior to the obtaining of the necessary authorization in terms of NEMA, the Department Environment and Nature Conservation (DENC) requires that a Section 24G process be followed to rectify the unlawful commencement of this listed activity. The township applicant appointed a qualified independent Environmental Practitioner to conduct the necessary Environmental Impact Assessment and public participation process as prescribed in terms of the fore-mentioned Act and Regulations and the Section 24G application is currently pending consideration by the Department Environment and Nature Conservation,

The development of this township area as well as the activities conducted from the erven in the township area during the operational phase will be subject to the conditions imposed by the Department Environment and Nature Conservation and set out in the relevant Environmental Authorisation.

**(iv) promote and stimulate the effective and equitable functioning of land markets;**

The local municipality is in favour of on-going dialogue with private investors and relevant government departments, to promote integrated economic growth.

Principle 7 (b)(iv) recognizes the need for land development to be based on competition and the principle of a competitive economy. The development will contribute to the economic growth of the municipal area. The development represents a public sector initiative, planned and applied for in the context of open market competition. This development will further not be

in competition with any other private sector development within the concerned area.

**(v) consider all current and future costs to all parties for the provision of infrastructure and social services in land developments;**

The local municipality needs to comply with the guidelines for the provision of emergency-, social-, education- and engineering services, in terms of the provision of infrastructure and social services.

The provision of services to the proposed development has been addressed in detail in Section 5 supra and it was indicated that the development can be provided with the necessary services subject to the bulk infrastructure upgrades proposed.

**(vi) promote land development in locations that are sustainable and limit urban sprawl; and**

The proposed development will take place within the demarcated urban edge as set out in the Ga-Segonyana Spatial Development Framework. This development will be sustainable and will limit further urban sprawl.

This development intends to promote a more compact city and to prevent the expansive provision of social and engineering services. The Spatial Development Framework addresses the scale or urban growth through planned extensions, infill and redevelopment strategies. The local municipality is aware of the need to integrate urban settlements, with a view to reduce travel distances to the areas of employment opportunities.

The planning practices of the past have resulted in sprawling urban areas that are un-economical. Today, planning policies transformed to mainly focus on infill development on vacant land within an urban environment, in order to combat urban sprawl. The principle also calls for a balance in land development processes. The development is in line with the sub-principle and will combat urban sprawl. The development will also ensure maximum utilization of the concerned property and will lead to the integration of the urban areas of Kuruman and Mothibistad.

**(vii) result in communities that are viable;**

For any development to be sustainable and viable to the community, land development and planning should ensure that communities are located close to job opportunities, social facilities and basic services. This development aims specifically at providing residential development opportunities that are closer to the economic activities of Kuruman and the surrounding mining and industrial areas.

- (c) **the principle of efficiency, whereby -**  
(i) **land development optimizes the use of existing resources and infrastructure;**

The granting of development permissions should be coupled with the provision of adequate infrastructure. The efficient usage of existing resources can promote high density growth, alleviate urban sprawl and optimise the use of land.

The development will ensure the optimum utilization of one of the most valuable resources being land, if used to its full potential, and it was indicated in Section 5 that the development can be supplied with the full spectrum of infrastructure elements such as water, sewer, refuse removal, and access roads; thus reducing the effect of the development on the natural surrounding area.

- (ii) **decision-making procedures are designed to minimize negative financial, social, economic or environmental impacts; and**

The opinion is held that the development will not have a negative financial, social, economic or environmental impact on the surrounding properties, as this development will be of a formal and non-noxious nature fitting in with the land uses surrounding the proposed development area.

- (iii) **development application procedures are efficient and streamlined and timeframes are adhered to by all parties;**

This land development application in respect of the establishment of the proposed township areas, the removal of restrictive title conditions, the consolidation of the land and the re-subdivision thereof will be processed in accordance with the prescriptions of the Spatial Planning and Land Use Management By-Law of the Ga-Segonyana Local Municipality (2015). The processes prescribed in terms of this legislation make provision for the necessary community involvement through a public participation process.

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

Standards for the protection of natural resources, agricultural land, open spaces and ecosystems have been compiled on a national and regional level. The local municipality compiled a Spatial Development Framework to increase resilience for human settlements, focusing on vulnerable and informal areas. The Spatial Development Framework needs to be flexible to adapt to social, economic and technological trends. This development is specifically aimed at providing opportunities for people that are currently devoid of land for proper housing purposes. In addition to addressing the need for subsidized housing, provision is

also made for the provision of housing opportunities to bonded / FLISP / social and rental housing purposes. The provision of proper housing for the landless community of Ga-Segonyana will alleviate the plight of a community who is most vulnerable to suffer the impacts of environmental and economic shock.

**(e) principle of good administration, whereby-;**

**(i) all spheres of government ensure an integrated approach to land use and land development that is guided by the spatial planning and land use management systems as embodied in this Act;**

The Ga-Segonyana Local Municipality has both a land use management scheme and a Spatial Development Framework as part of their land use management system. In terms of the Spatial Development Framework the area to which this development applies was specifically earmarked for residential development which renders this proposed development in line with the Spatial Development Framework. The development will also be incorporated into the Ga-Segonyana Scheme Regulations, 2003 in terms of applicable legislation following the opening of the required township register. This land use management scheme will effectively regulate the land uses to be established within these township areas as well as the extent of development.

**(ii) all government departments must provide their sector inputs and comply with any other prescribed requirements during the preparation or amendment of spatial development frameworks;**

Integration between the different levels of government assists to create complimentary and mutually reinforcing policies, while integration between the different sectors will result in positive benefits. Government departments have been consulted during the compilation of the Spatial Development Framework of the local municipality. In addition to the fore-mentioned consultation, it should be noted that this application for township establishment will also be referred to the following government and non-government departments as integral part of the public participation process:

- Department of Agriculture, Forestry and Fisheries (DAFF)
- Transnet
- South African Heritage Resources Agency (SAHRA)
- Eskom
- Department of Public Works and Roads
- Department Water and Sanitation
- Openserve (former Telkom SA Limited)
- SA Post Office Limited (SAPO)
- John Taolo Gaetsewe District Municipality
- South African National Roads Agency Limited (SANRAL)
- Department of Mineral Resources (DMR)



- Department of Education
- Department of Health
- Department of Co-operative Governance, Human Settlements and Traditional Affairs (COGHSTA)
- National Department of Arts, Sport & Culture
- National Department of Environmental Affairs
- Department Agriculture, Land Reform and Rural Development
- Council for Geoscience

**(iii) the requirements of any law relating to land development and land use are met timeously;**

The Minister of Rural Development and Land Reform has prescribed timeframes to which land development applicants and decision makers must adhere to.

**(iv) the preparation and amendment of spatial plans, policies, land use schemes as well as procedures for development applications, include transparent processes of public participation that afford all parties the opportunity to provide inputs on matters affecting them; and;**

Effective procedures for public participation are in place, to afford the residents and other parties the opportunity to provide inputs on development applications and other matters affecting them.

The public participation process undertaken as part of this township establishment application includes the following:

- Publishing notices of the application in the Kalahari Bulletin as well as in the Northern Cape Provincial Gazette in Afrikaans & English for two consecutive weeks as contemplated in Section 27(2)(a) of the Spatial Planning and Land Use Management By-Law of the Ga-Segonyana Local Municipality (2015);
- Appending notices of the application on the notice board situated at the library as contemplated in Section 27(2)(b) of the Spatial Planning and Land Use Management By-Law of the Ga-Segonyana Local Municipality (2015);
- Displaying a notice in a conspicuous place on the land to which the application applies as contemplated in Sections 27(2)(b) of the Spatial Planning and Land Use Management By-Law of the Ga-Segonyana Local Municipality (2015);
- Giving notice to all adjacent property owners as contemplated in Section 28(1)(c) of the Spatial Planning and Land Use Management By-Law of the Ga-Segonyana Local Municipality (2015); and

- Giving notice to the following external organizations / departments as contemplated in Section 28(2)(a) read with Section 32(1) of the Gamagara Spatial Planning and Land Use Management By-Law, 2016:
  - ✘ Department of Public Works and Roads
  - ✘ Openserve (Telkom SA Limited)
  - ✘ Eskom
  - ✘ John Taolo Gaetsewe District Municipality
  - ✘ Department of Minerals Resources (DMR)
  - ✘ Department of Agriculture, Forestry & Fisheries (DAFF)
  - ✘ Department of Water and Sanitation
  - ✘ Department of Co-Operative Governance, Human Settlements and Traditional Affairs
  - ✘ Department of Education
  - ✘ Department of Health
  - ✘ South African Post Office (SAPO)
  - ✘ Transnet Freight Rail
  - ✘ South African Heritage Resources Agency (SAHRA)
  - ✘ South African National Roads Agency Limited (SANRAL)
  - ✘ Sedibeng Water
  - ✘ South African Civil Aviation Authority (SACAA)
  - ✘ Department Agriculture, Rural Development and Land Reform

The fore-mentioned organizations / departments will be afforded a period of sixty (60) days to comment in this matter. The adjacent property owners and the general public will be afforded a period of twenty one (21) days to lodge comments or objections in this matter.

In addition to the above-mentioned public participation, a community meeting was also held on 21 October 2018 whereby the community of Promise Land was afforded the opportunity to partake in the planning of their new township area and to provide inputs and comments that were taken into consideration during the planning process.

**(v) policies, legislation and procedures must be clearly set in order to inform and empower members of the public;**

The procedures set out in the Gamagara Spatial Planning and Land Use Management By-Law, 2016 afford members of the public the opportunity to not only participate in this process but also to scrutinize the documentation relating to the application. Members of the public will be afforded a period of 21 days to comment or object against this development.

## 6.24 GENERAL

From a land use and town planning point of view the proposed development area is ideally suited for residential purposes due to the following:

- The purpose of this land development application is to provide for the establishment of a proper integrated human settlement that will not only address the short-term need for residential erven to address the immediate housing backlog, but to also provide erven for the development over the short term in order to eradicate informal occupation of land. This project will also allow for the development of various housing typologies to accommodate the housing needs of the community of Ga-Segonyana.
- The proposed development area is located directly adjacent to existing township areas and constitutes the logic extension of the existing built-up urban area of Kuruman and constitutes infill development.
- The proposed township area is easily accessible due to its locality directly adjacent to District Road DR3456 linking the urban areas of Kuruman and Mothibistad.
- The proposed township areas will also be linked to the economic activities offered within the Kuruman urban area.
- The layout plans that was compiled in respect of the township areas comprehensively address the issues identified during the pre-planning studies relating inter alia to the following:
  - Accommodating the location of existing formal housing structures and providing an erf for each of these formal structures;
  - Preventing further settlement within the areas designated as Zone D4 in terms of the Dolomite Stability Investigation;
  - Providing adequate spacing and limiting the number of direct accesses to the proposed township area from District Road DR34566 and aligning the accesses to the existing accesses to the informal settlement are;
  - incorporating the road network with that of the adjacent township areas;
  - Engineering services can be provided to the proposed township area.
  - Traffic generated by the development can be accommodated within the existing road network subject to the necessary road and intersections upgrades proposed in terms of the Traffic Impact Study.

In view of the fore-mentioned, we trust that this application will be considered favorably.

**K. RAUBENHEIMER**  
**Pr. Pln A/924/1996**