

# MEMORANDUM

24 January 2018

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## PROPOSED TOWNSHIP:

- **Glaudina Extension 2 on a portion of the Remaining Extent of Portion 10 of the farm Vleeschkraal 145, Registration Division H.O., Province North West**

- Spatial Planning
- Development Management
- Economic Development
- Admin & Finance

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# MEMORANDUM PROPOSED TOWNSHIP ESTABLISHMENT: GLAUDINA EXTENSION 2

ON  
A PORTION OF THE REMAINING EXTENT OF PORTION  
10 OF THE FARM VLEESCHKRAAL 145, REGISTRATION  
DIVISION H.O., NORTH WEST PROVINCE

## CHAPTER 1: INTRODUCTION

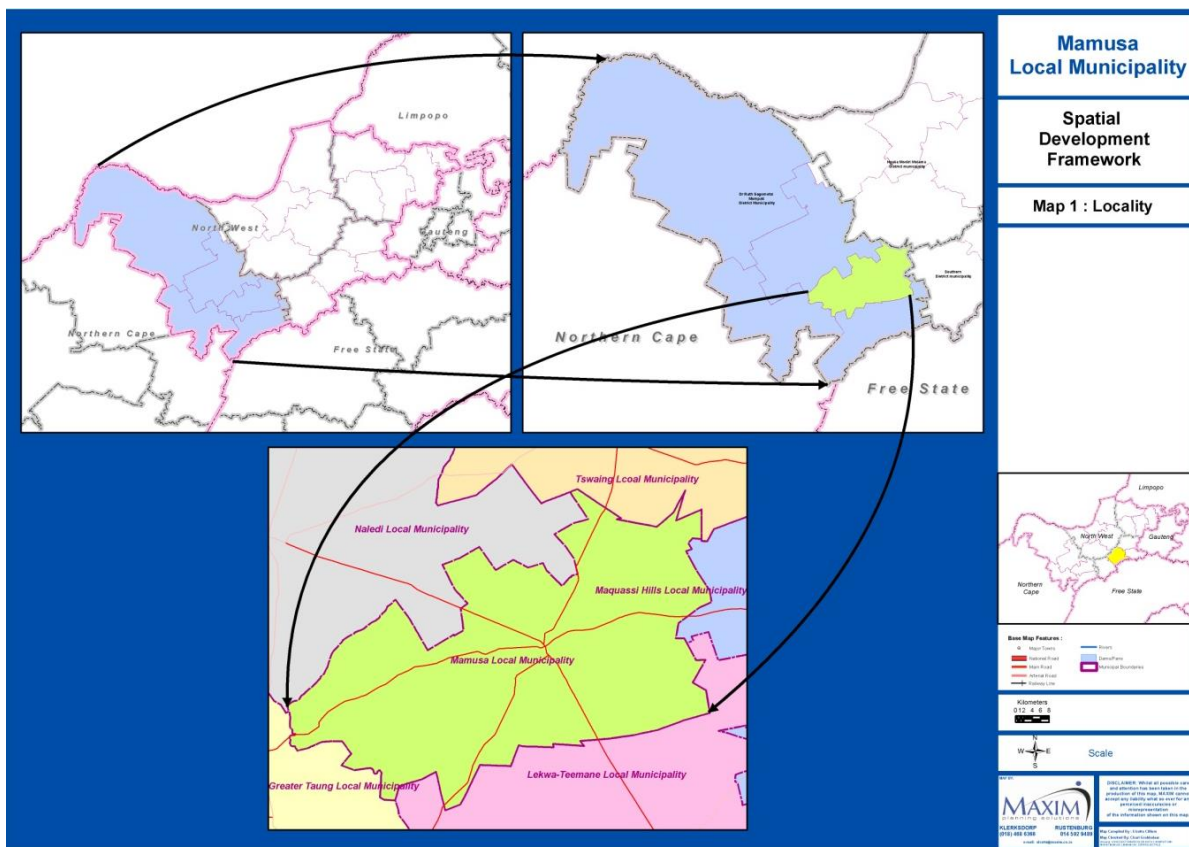
### 1.1 INTRODUCTION

Maxim Planning Solutions (Pty) Ltd (2002/017393/07), herein represented by Koot Raubenheimer (ID No. 700305 5192 08 9), was appointed by the Mamusa Local Municipality on 26 January 2017 to attend to the establishment of the proposed township area of Gladina Extension 2 comprising a total of 414 erven to address the urgent short term need for low income residential erven experienced in the Gladina urban complex to alleviate the plight of landless people currently residing on the site to which this application relates. Due to the non-availability of vacant residential erven for settlement purposes in the existing township area of Gladina Extension 1, people started settling informally on a portion of the vacant land located west and south of the existing township area of Gladina Extension 1.

### 1.2 BACKGROUND OF MAMUSA LOCAL MUNICIPALITY

#### 1.2.1 REGIONAL LOCALITY

Mamusa municipal area comprises of a total area of 3615 km<sup>2</sup>, located in the south-western part of the North West Province and south-eastern part of the District. The municipality consist of a vast rural/commercial farming area as well as the urban areas of Schweizer Reneke, Amalia, Gladina and Migdol. The municipal area covers the central eastern part of the Dr. Ruth Segomotsi Mompati District Municipality and is bordered by Mamusa, Maquassi Hills, Greater Taung, Naledi and Tswaing Local municipalities (refer **Map 1** for locality plan).



**Map 1: Locality of Mamusa Local Municipality in regional context**

Mamusa has the status of a Local Municipality (NW393) in terms of the Municipal Demarcation Act of 1998, and is located in the Dr. Ruth Segomotsi Mompati District Municipality (DC39) of the North West Province.

### 1.2.2 DEMOGRAPHICS

The demographic profile illustrates the trends in population and household growth as well as average income and the level of employment on a sub-place level within the local municipal area.

#### 1.2.2.1 Population & Household

**Table 1** below depicts the population size and population growth projections within the Mamusa Local Municipality, as extracted from the Mamusa Housing Sector Plan (2013).

**Table 1: Population size and long term forecast for Mamusa Local Municipality**

Mamusa Local Municipality: Population											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Amalia SH	229	223	216	210	203	197	192	186	180	229	170
Gladina SP	2 398	2 327	2 258	2 192	2 127	2 064	2 003	1 944	1 887	2 398	1 777
Mamusa [Schweizer-Reneke]	7 850	7 619	7 394	7 175	6 964	6 758	6 558	6 365	6 177	7 850	5 818

NU											
Migdol SP	3 571	3 465	3 363	3 264	3 168	3 074	2 983	2 895	2 810	3 571	2 646
Molatswanene SP	5 322	5 165	5 012	4 864	4 721	4 581	4 446	4 315	4 187	5 322	3 944
Ipelegeng	9 733	9 446	9 167	8 896	8 634	8 379	8 131	7 891	7 658	9 733	7 213
Ipelegeng Ext 1	5 071	4 921	4 776	4 635	4 498	4 365	4 236	4 111	3 990	5 070	3 758
Ipelegeng Ext 2	6 470	6 279	6 094	5 914	5 739	5 570	5 405	5 246	5 091	6 470	4 795
Ipelegeng Ext 3	8 076	7 838	7 607	7 382	7 164	6 953	6 747	6 548	6 355	8 076	5 985
Ipelegeng Ext 4	6 593	6 398	6 209	6 026	5 848	5 675	5 508	5 345	5 187	6 593	4 886
Mamusa [Schweizer-Reneke]	2 406	2 335	2 266	2 199	2 134	2 071	2 010	1 950	1 893	2 406	1 783
Nivard SH	201	195	190	184	179	173	168	163	158	201	149
Sharon	3 197	3 103	3 011	2 922	2 836	2 752	2 671	2 592	2 516	3 197	2 369
<b>TOTAL Population</b>	<b>61 117</b>	<b>59 312</b>	<b>57 561</b>	<b>55 862</b>	<b>54 213</b>	<b>52 612</b>	<b>51 059</b>	<b>49 552</b>	<b>48 089</b>	<b>61 117</b>	<b>45 291</b>

**Table 2: Household Total and Forecast for Mamusa Local Municipality**

Mamusa Local Municipality: Households											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Amalia SH	75	76	77	78	78	79	80	81	82	83	84
Glaudina SP	648	655	662	669	676	683	691	698	705	713	720
Mamusa [Schweizer-Reneke] NU	2 076	2 098	2 121	2 143	2 166	2 189	2 212	2 236	2 259	2 283	2 308
Migdol SP	822	831	840	848	857	867	876	885	894	904	914
Molatswanene SP	1 258	1 271	1 285	1 298	1 312	1 326	1 340	1 354	1 369	1 383	1 398
Ipelegeng	2 555	2 582	2 609	2 637	2 665	2 693	2 722	2 751	2 780	2 810	2 839
Ipelegeng Ext 1	1 127	1 139	1 151	1 163	1 175	1 188	1 200	1 213	1 226	1 239	1 252
Ipelegeng Ext 2	1 533	1 549	1 565	1 582	1 599	1 616	1 633	1 650	1 668	1 685	1 703
Ipelegeng Ext 3	1 718	1 736	1 754	1 773	1 792	1 811	1 830	1 850	1 869	1 889	1 909
Ipelegeng Ext 4	1 425	1 440	1 456	1 471	1 487	1 502	1 518	1 535	1 551	1 567	1 584
Mamusa [Schweizer-Reneke]	758	766	774	783	791	799	808	816	825	834	843
Nivard SH	66	67	67	68	69	69	70	71	72	72	73
Sharon	820	829	837	846	855	864	873	883	892	902	911
<b>TOTAL Households</b>	<b>14 061</b>	<b>14 210</b>	<b>14 361</b>	<b>14 513</b>	<b>14 667</b>	<b>14 823</b>	<b>14 980</b>	<b>15 139</b>	<b>15 300</b>	<b>15 463</b>	<b>15 627</b>

Based on data contained in **Table 1** above, extracted from the Mamusa Housing Sector Plan (2013), the population was estimated to actually decrease from 2258 in 2013 to 1944 in 2018 entailing a population decrease of 240 over the 5 year period. In considering the data contained in Table 2 above, it is evident that the growth in the number of households in the Glaudina urban area did not follow the anticipated growth pattern as determined in terms of the Mamusa Housing Sector Plan (2013), as the township area of Glaudina Extension 1 already comprises in excess of 450 residential erven with an additional  $\pm 400$  informal dwelling units already occupying the land west and south of Glaudina Extension 1. From the fore-mentioned it stands to reason that the population size within the urban complex of Glaudina actually increased as opposed to the anticipated population decrease.

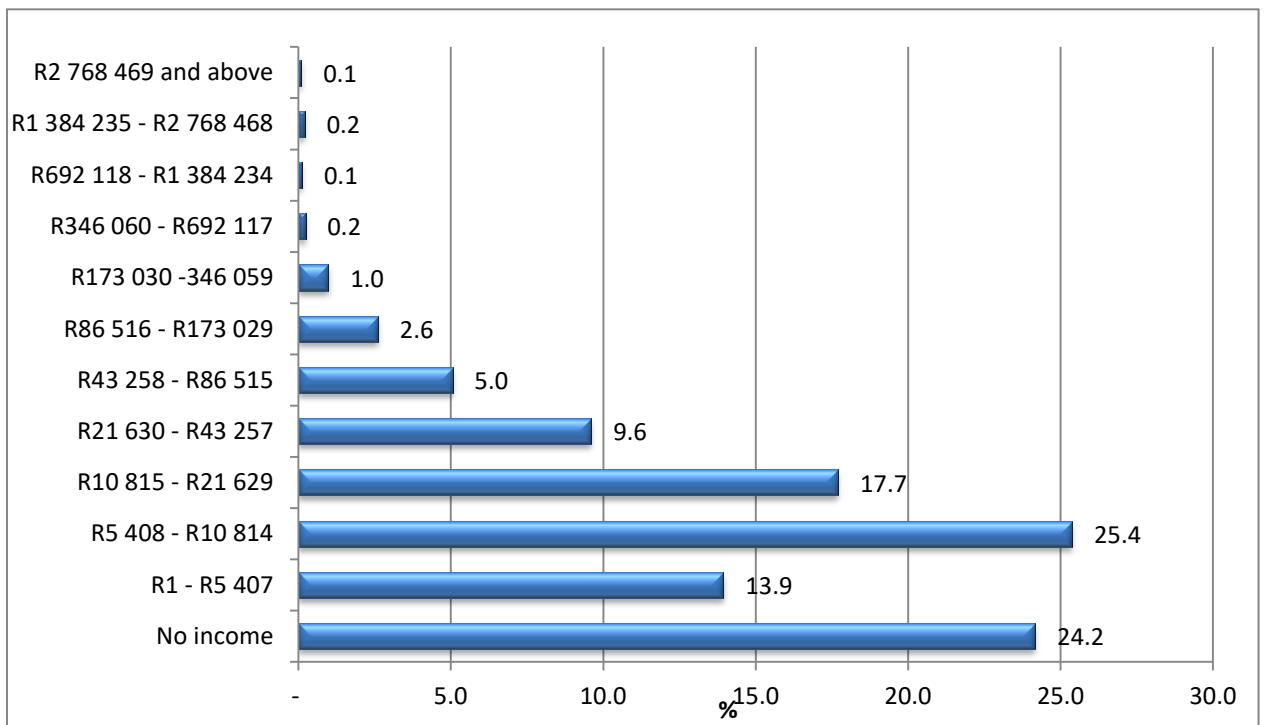
### 1.2.2.2 Level of Employment

Based on the Mamusa Housing Sector Plan (2013), the unemployment rate in the Mamusa Local Municipality was estimated at 44,4%. It was also estimated that 35.6% of the economically active population is employed in the agriculture, hunting, forestry and fishing sector followed by 22.1% occupied in the community, social and personal services sector. The majority of economically active population is employed in elementary occupations (42.7%) and only 17.9% are employed in professional and related occupations.

### 1.2.2.3 Household Income

**Figure 1** below reflects that the vast majority of the population of Mamusa falls within the lowest monthly income category and may qualify for subsidized housing. Average household income is a direct indicator of consumer demand for a broad spectrum of economic goods and services – such as housing and the quantity of additional floor space that could be sustained by a given consumer market. Average household income, to an extent, also reflects the living standard of a household, and influences aspects such as asset ownership. Figure 2 below reflects the Living Standards Measurement Indicator as extracted from the Mamusa Housing Sector Plan (2013).

**Figure 1: Household Income for Mamusa Local Municipality (annual)**





**Figure 2: Living Standards Measurement Indicator**

Income category (R/month)	LSM Status	Primary Area (% of households)
Super A income	LSM 10+	1.0
A Income	LSM 10	0.6
B Income	LSM 9	1.8
C Income high	LSM 8	0.8
C Income low	LSM 7	4.5
D Income	LSM 6	6.3
D lower top	LSM 4 to 5	10.9
D lower end	LSM < 3	74.1

e

The household income and living standards measurement for the Mamusa Local Municipality indicates the following:

- 24.2% of households in the market area have no household income and the majority of all households have a low household income.
- The LSM profile reflects the same tendency with 74.1% of households falling within the lower LSM 1 – 3 category with 25.9% within the LSM 4 – 10+.
- The income profiles for all households reflect an average annual income of R56 347 translating to R4 696 per month. The LSM category 4 – 10+ reflects an average annual income of R192 902 and an average monthly income of R16 075.
- Households in the Mamusa local municipality are predominantly low-income households.

### **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:

- Contour survey;
- Detail survey of all informal housing structures and fences;
- Engineering Geological investigation of the development area conducted by Geoset CC;
- 1:100 year floodline determination conducted by CWT Water Technology;
- Phase 1 Heritage Resources Impact Assessment compiled by A Pelsler Archaeological Consulting;
- Detail civil engineering services investigation conducted by NEP Consulting Engineers; and
- Environmental Impact Assessment.

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

In terms of the North West Provincial Spatial Development Framework (2017), one of the development guidelines set for the Mamusa Local Municipality is to “focus on **backlog eradication** in the smaller nodes, whilst creating **new affordable housing opportunities** in Schweizer-Reneke”.

## 1.4 APPLICATION

Maxim Planning Solutions (Pty) Ltd (2002/017393/07), herein represented by Koot Raubenheimer (ID No. 700305 5192 08 9), is hereby applying on behalf of the Mamusa Local Municipality for the establishment of the proposed township Glaudina Extension 2 on a portion of the Remaining Extent of Portion 10 of the farm Vleeschkraal 145, Registration Division H.O., North West Province in terms of the provisions of Section 59(1) of the Mamusa By-Law on Spatial Planning and Land Use Management and Section 107(1) of the Town Planning and Townships Ordinance, 1986 (Ordinance 15 of 1986) read together with Sections 41(1) and 42(1)(a) and paragraph (g) of Schedule 1 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013).

## 1.5 PUBLIC PARTICIPATION

The application in respect of the establishment of the proposed township Glaudina Extension 2 will be advertised in accordance with Section 98(1)(a) of the Mamusa By-Law on Spatial Planning and Land Use Management and Section 108(1)(a), Regulation 26(1) and Schedule 16 of the Town Planning and Townships Ordinance, 1986 (Ordinance 15 of 1986) in the Stellalander on 24 and 31 January 2018 as well as in the North West Provincial Gazette on 23 and 30 January 2018. Objectors will be afforded a period of 30 days from 24 January 2018 to submit objections or comments in respect of the proposed township area to the Municipal Manager and the authorised agent.

The application will also, in accordance with the prescriptions of Section 97(3)(b) of the Mamusa By-Law on Spatial Planning and Land Use Management read with Section 108(1)(b) of the Town Planning and Townships Ordinance, 1986 (Ordinance 15 of 1986) be referred to the following external organizations / departments for comments or objections:

- ✘ Department of Public Works and Roads
- ✘ Openserve (Telkom SA Limited)
- ✘ Eskom
- ✘ Dr. Ruth Segomotsi Mompati District Municipality
- ✘ Department of Minerals Resources (DMR)
- ✘ Department of Agriculture, Forestry & Fisheries (DAFF)
- ✘ Department of Water and Sanitation
- ✘ Department of Local Government and Human Settlements
- ✘ Department of Education
- ✘ Department of Health
- ✘ South African Post Office
- ✘ Transnet Freight Rail

- ✧ South African Heritage Resources Agency (SAHRA)
- ✧ South African National Roads Agency Limited (SANRAL)

The fore-mentioned organizations / departments will be afforded a period of 60 days to comment in this matter in accordance with the prescriptions of Section 108 (1) of the Town Planning and Townships Ordinance, 1986 (Ordinance 15 of 1986) read with paragraph (l) of Schedule 1 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013).

In addition to the fore-mentioned notices, notices will also be served on all adjacent property owners in accordance with the prescriptions of Section 99(1)(c) of the Mamusa By-law on Spatial Planning and Land Use Management.

To ensure the greatest extent of public participation, notices will also be posted on the subject property in accordance with the prescriptions of Section 101(1)(a) of the Mamusa By-law on Spatial Planning and Land Use Management read with Regulation 17 of the Town Planning and Townships Ordinance, 1986 (Ordinance 15 of 1986).

## **1.6 STUDY AREA DELINEATION**

The proposed development area comprises a portion of the Remaining Extent of Portion 10 of the farm Vleeschkraal 145, Registration Division H.O., North West Province as described in detail in section 2.1.

## **1.7 REPORT OUTLINE**

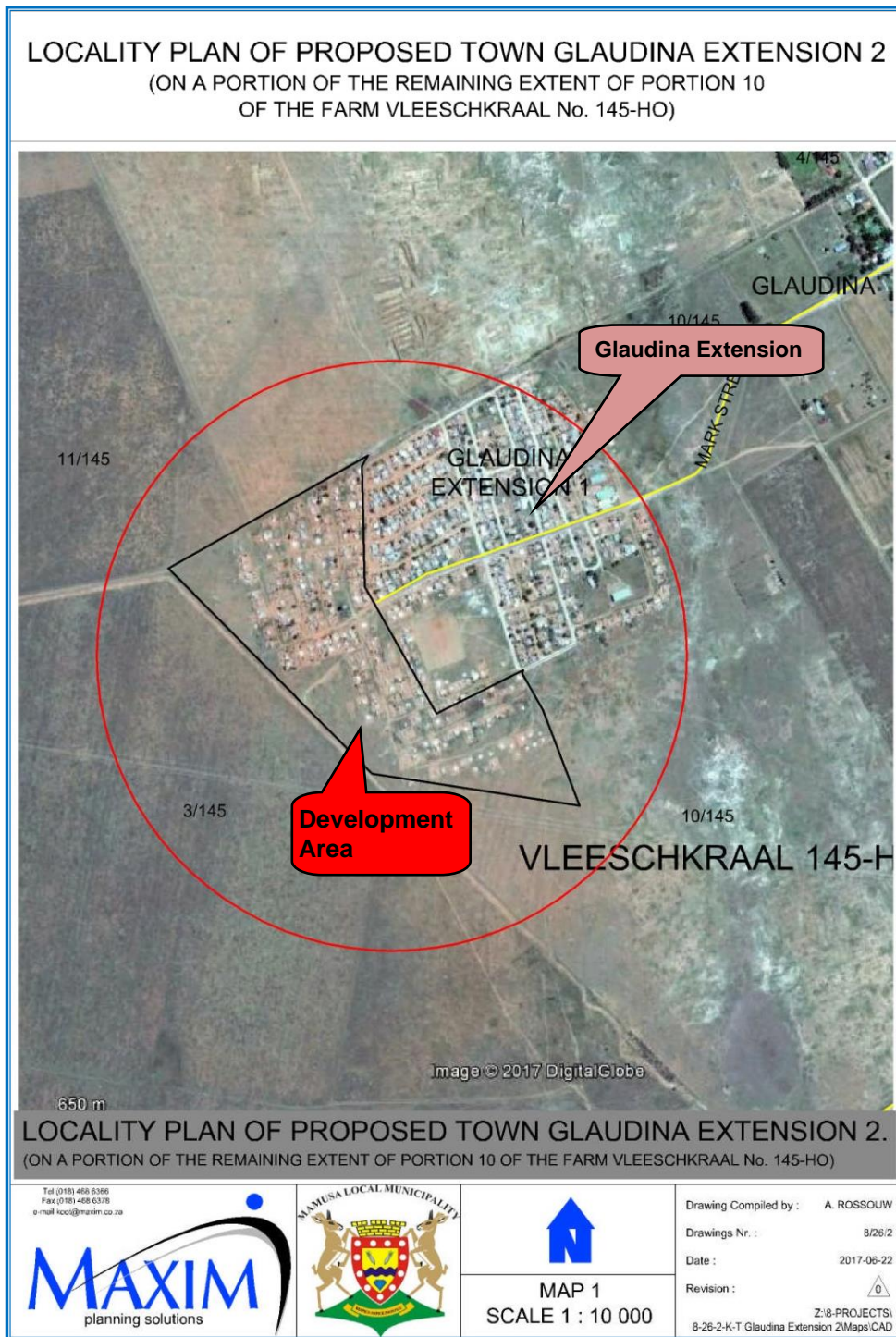
The remainder of the report is structured in terms of the following main headings:

- 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 township is located to west and south of the existing township area of Glaudina Extension 1 and is bordered to the north and west respectively by Portions 11 and 12 and portion 3 of the farm Vleeschkraal 145, Registration Division H.O., North West Province



**Map 2: Locality of proposed development area**

The proposed township Gaudina Extension 2 is located on a portion of the Remaining Extent of Portion 10 of the farm Vleeschkraal 145, Registration Division H.O., North West Province.

The proposed township area detailed above is located within the area of jurisdiction of the Mamusa Local Municipality which in turn falls within the area of jurisdiction of the Dr. Ruth Segomotsi Mompati District Municipality.

A locality plan of the proposed township area is attached to the application for township establishment as **Annexure E**.

## 2.2 SG DIAGRAM

The Remaining Extent of Portion 10 of the farm Vleeschkraal 145, Registration Division H.O., North West Province is reflected on SG Diagram No. A5788/1936 (attached as **Annexure F** to the application for township establishment).

## 2.3 OWNER

The Remaining Extent of Portion 10 of the farm Vleeschkraal 145, Registration Division H.O., North West Province is currently registered in the name of the Southern District Municipality (now Dr. Kenneth Kaunda District Municipality) by virtue of Grant No. 108/1972 (refer **Annexure F** to the application for township establishment for an Aktex Deeds Office Enquiry and **Annexure G** for a copy of Grant No. 108/1972). Following receipt of instructions from the Mamusa Local Municipality to attend to the establishment of the proposed township Gaudina Extension 1, we ascertained that the land on which the proposed township is to be established was never transferred to the Mamusa Local Municipality following the re-demarcation of municipal boundaries which resulted in the Mamusa Local Municipality no longer being included in the area of jurisdiction of the Dr. Kenneth Kaunda District Municipality. This state of affairs was brought to the attention of the Dr. Kenneth Kaunda District Municipality which resulted in a resolution being passed by the fore-mentioned municipality during September 2017 by virtue of Item A.384/09/2017 to the effect that:

*“2 That Council approve the transfer of all property or erven registered in the name of the Southern District Municipality to Mamusa Local Municipality” (refer **Annexure I**)*

In order to comply with the prescriptions of Section 90(2)(a) of the Mamusa By-law on Spatial Planning and Land Use Management, the Dr. Kenneth Kaunda District Municipality was provided with a Special Power of Attorney to authorise the township establishment process, as current land owner, on the Remaining Extent of Portion 10 of the farm Vleeschkraal 145, Registration Division H.O., North West Province. In this regard the Dr. Kenneth Kaunda District Municipality resolved as follows:

“3 That Council approve the signing of the Special Power of Attorney, by the Acting Municipal Manager for purposes of the township establishment in Mamusa pending the transfer of the said properties or erven” (refer **Annexure I**)

The Special Powers of Attorney signed by the Mamusa Local Municipality and the Dr. Kenneth Kaunda District Municipality authorising Maxim Planning Solutions (Pty) Ltd (2002/017393/07) to apply for the establishment of the proposed township Glaudina Extension 2 is attached to the application for township establishment as **Annexure B**.

## 2.4 AREA

The Remaining Extent of Portion 10 of the farm Vleeschkraal 145, Registration Division H.O., North West Province comprises a total area of 142,5334 hectares. The proposed township area of Glaudina Extension 2 will comprise a total area of ±20,9160 hectares.

## 2.5 EXISTING LAND USE AND ZONING

The proposed development area is currently occupied by approximately 300-350 informal residential structures (refer **Plates 1 and 2**).

**Plate 1: View of informal housing structures**



**Plate 2: View of informal housing structures**



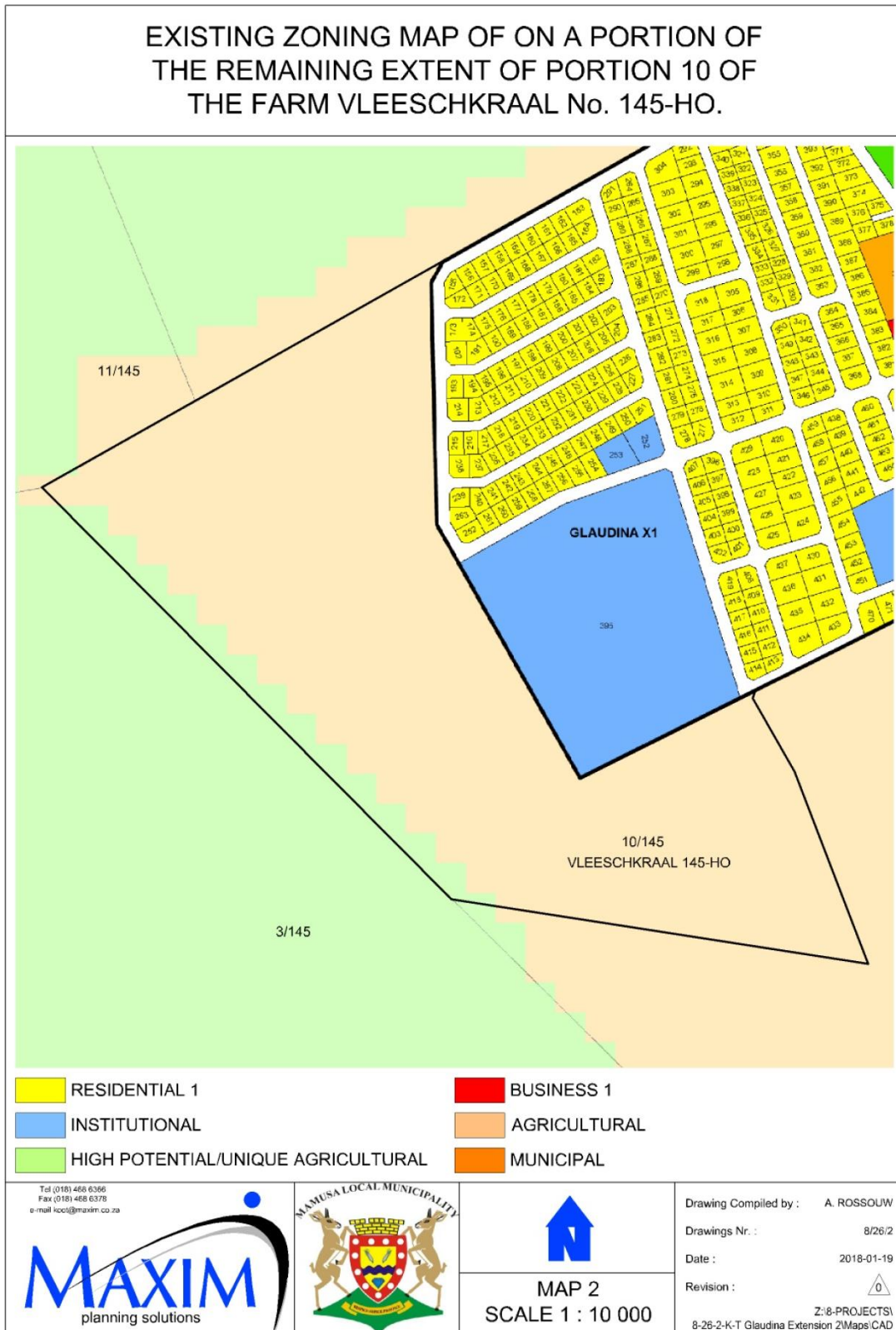
The surrounding area is predominantly utilized for the following purposes:

The area directly north and east of the proposed township area comprises the existing residential township area of Glaudina Extension 1 whereas the area to the north, west and south of the development area is currently predominately vacant and utilized for agricultural purposes.

In terms of the Schweizer Reneke Town Planning Scheme, 2000 the subject property is currently zoned as follows:

- Portion of the Remaining Extent of Portion 10 of the farm Vleeschkraal 145, Registration Division H.O., Province North West: "Agricultural"

(as depicted on the following zoning map extracted from the Schweizer Reneke Town Planning Scheme, 2000).



**Map 3: Extract from the Schweizer Reneke Town Planning Scheme, 2000**

Cognisance should be taken of the fact that the Mamusa Local Municipality is currently in the process of promulgating a new Land Use Scheme i.e. the Mamusa Land Use Scheme, 2018 and this township will be incorporated into the Mamusa Land Use Scheme, 2018 simultaneously with the proclamation of the township as an approved township.

## 2.6 MINERAL RIGHTS

According to Grant No. 108/1972, the rights to minerals and precious stones in respect of the Remaining Extent of Portion 10 of the farm Vleeschkraal 145, Registration Division H.O., North West Province have been reserved in favour of Pieter Gideon van Zyl (junior) by virtue of Certificate of Mineral Rights No. 256/1939-S registered on 25 March 1939 (refer **Annexure H** to the application for township establishment).

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 application for township establishment will subsequently also be referred to the Department of Mineral Resources to establish whether these old order rights were converted within the timeframe prescribed as well as for its consent in respect of the proposed township.

## 2.7 RESTRICTIVE TITLE CONDITIONS

According to Grant No. 108/1972, the Remaining Extent of Portion 10 of the farm Vleeschkraal 145, Registration Division H.O., North West Province is subject to the following title conditions, which will be dealt with as indicated:

**“B. DIE voormalige Resterende Gedeelte van die plaas ‘VLEESCHKRAAL No. 145, groot as sulks 1513,5048 hektaar (waarvan die Gedeelte hiermee getranspoteer ‘n deel uitmaak), is VERDER ONDERWORPE aan die volgende voorwaarde: -.”**

**“HET Staat of zyn Opvolgers in Titel zal het volle, vrye en onbezwarde recht van weg en toegang hebben van en naar gedeelte ‘D’ van genoemde plaas ‘Vleeschkraal’ No. 145, groot 1,7131 hektaar en getranspoteerd onder Acte van Transport No. 2612/1913, over het vroeger Resteerend Gedeelte der gemelde plaats groot als sulks 1513,5048 hektaar gehouden onder Acte van Transport No. 4175/1908 naar en van de naaste of gemakkelykste bereikbare publieke weg en zodanig recht van weg naar en van het naaste of gemakkelykste bereikbare water op het gezegd Resterend Gedeelte en het recht om dat water te gebruiken”.**

This condition grants the State the right to access and water in favour of the former Portion D (now Portion 4) of the farm Vleeschkraal 145, Registration Division H.O., North West Province. In studying the physical location of the Remaining Extent of Portion 10 of the farm Vleeschkraal 145, Registration Division H.O., North West Province it is evident that this property is located divorced from Portion D (now Portion 4) due to the existence



of the township areas of Glaudina and Glaudina Extension 1. Portion D (now portion 4) is therefore accessed off the public street system of Glaudina Township and not across the Remaining Extent of Portion 10. This condition therefore does not affect the proposed township area due to the location thereof in relation to the proposed township area.

**“A. DIE voormalige Resterende Gedeelte van die plaas ‘VLEESCHKRAAL’ No. 145, groot as sulks 1515,2179 hektaar (waarvan Gedeelte “G” hiermee getranspoteer ‘n deel uitmaak), is ONDERWORPE aan die volgende voorwaarde: -**

***“THAT the present and future owners of the afore-said former Remaining Extent (whereof Portion G hereby transferred forms a portion) shall be ENTITLED to fetch firewood for their own use from portions A, B and C of the farm ‘Doornhoek’ No. 165, district Schweizer Reneke, measuring respectively 1537,0852 hectares, 1537,0638 hectares and 770,8802 hectares and the Remaining Extent of certain Portion of the said farm ‘Doornhoek’ measuring as such 1537,0424 hectares, transferred by Deeds of Transfer Nos. 4176/1908, 4177/1908, 4172/1908 and 4178/1908”.***

This condition details the right granted to the Remaining Extent of Portion 10 of the farm Vleeschkraal 145, Registration Division H.O., North West Province to fetch firewood from Portions A, B and C of the farm Doornhoek 165, Registration Division H.O., North West Province. This right will not be transferred to the erven in the township area.

Condition C in Gant No. 108/1972 details the reservation of right to mineral and precious stones and will be addressed as detailed in paragraph 2.6 supra.

## **2.8 SERVITUDES**

As alluded to in Section 2.7 supra, the Remaining Extent of Portion 10 of the farm Vleeschkraal 145, Registration Division H.O., North West Province is subject to a right of access and water servitude in favour of the State and in favour of Portion 4 of the farm Vleeschkraal 145, Registration Division H.O., North West Province. Due to the divorced location of Portion 4 in relation to the Remaining Extent of Portion 10, this condition does not affect the proposed township area as the nearest and most convenient public road that can be utilized to access Portion 4 is located in the township area of Glaudina.

## **2.9 LAND CLAIMS**

In order to ascertain whether a land claim has been registered in respect of the Remaining Extent of Portion 10 of the farm Vleeschkraal 145, Registration Division H.O., North West Province, a request was submitted to the Commission on Restitution of Land Rights on 06 July 2017. In a response received from the Office of the Regional Land Claims Commissioner: North West dated 20 July 2017 (refer **Annexure J**), it was indicated as follows in respect of the Remaining Extent of Portion 10 of the farm Vleeschkraal 145, Registration Division H.O., Province North West:

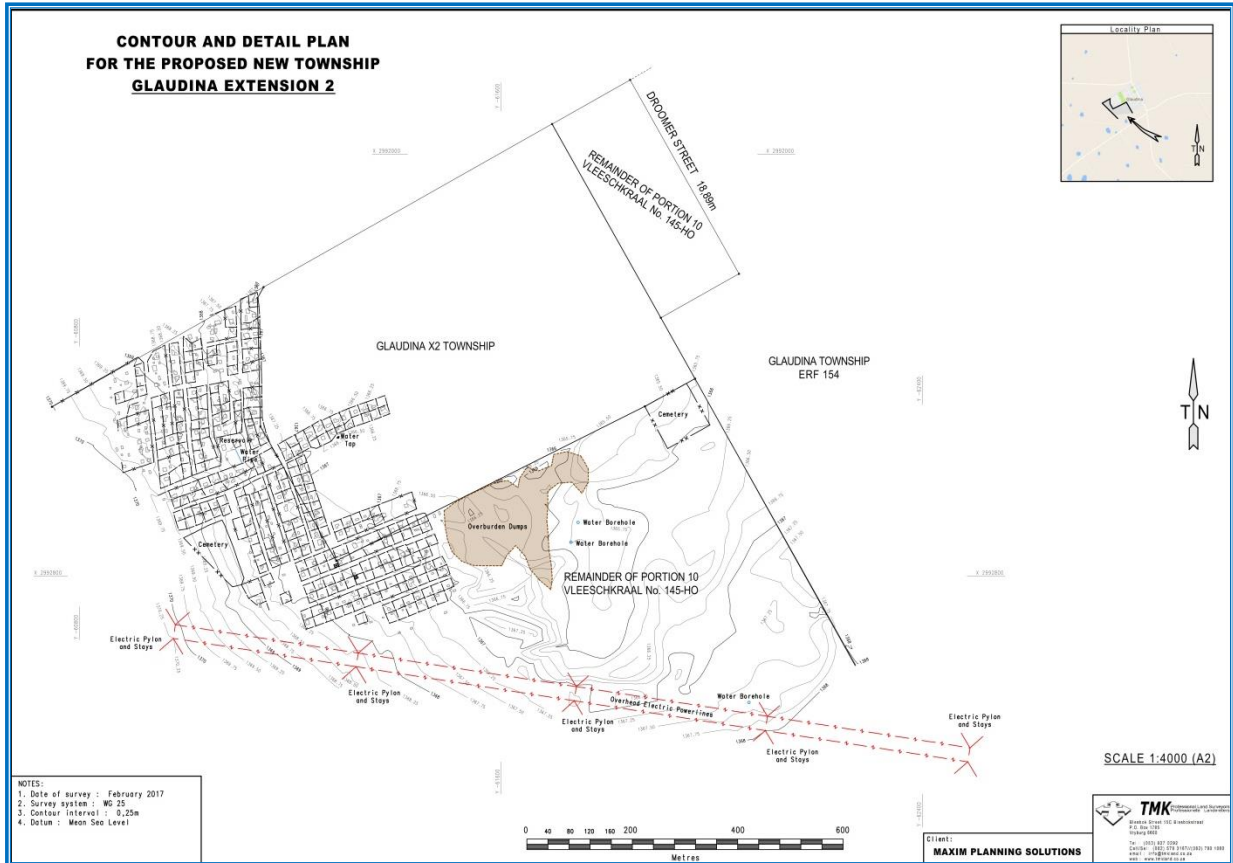
***“We confirm that there is an existing land claim against the property. The claim was lodged by one (1) claimant under Mamusa Local Municipality within Dr. Ruth Segomotsi Mompati District. This reflects the database that was lodged between 1 July 2014 and 27 July 2016 in terms of the Restitution of Land Rights Amendment Act, 2014”.***

In terms of the provisions of Section 11(7)(aA) of the Restitution of Land Rights Act, 1994 (Act 22 of 1994) notice was given to the Regional land Claims Commissioner: North West on 10 October 2017 of the intention of the Mamusa Local Municipality to utilize a portion of the Remaining Extent of Portion 10 of the farm Vleeschkraal 145, Registration Division H.O., North West Province for the purposes of the establishment of the proposed township Gaudina Extension 2 (refer **Annexure J**).

# CHAPTER 3: PHYSICAL ASPECTS

## 3.1 TOPOGRAPHY

As part of the pre-planning studies that were conducted in respect of the development area, a contour survey of the study area was conducted (refer **Map 4**).



**Map 4: Results of contour survey of development area**

The proposed development area is located on a shallow slope towards the east and is located at between 1370 and 1367 mamsl.

## 3.2 CLIMATE

The region is characterized by summer rainfall with thunderstorms, with annual low rainfall figures of 583mm (Ottosdal) to 602 mm (Lichtenburg) recorded at the closest weather stations to the site. Winters are dry with frost common. The warmest months are normally December and January and the coldest months are June and July.

An analysis of the data confirms a Weinert's N-Value in the order of 7 for Glaudina. The mechanical disintegration of rocks will therefore be dominant over chemical decomposition, and shallow soil horizons will be expected in areas of poor drainage, underlain by igneous rocks.

Storm water drainage and road pavement design must incorporate the climatic extremes above.

### **3.3 FRESHWATER SYSTEM / DRAINAGE**

Plate flow is the dominant drainage pattern on site, and a perennial drainage channel was identified to the east of the development site. Drainage occurs in an easterly direction towards this drainage feature, and then southwards towards the Harts River.

Seepage and the presence of perennial fluctuations of ground water were encountered on site, proving that a seasonal perched water table may exist. A ferruginised profile indicates that some perennial water level fluctuations occur.

Ground water in the form of seepage was not intersected in any test pits during the investigation, but some problems are foreseen and normal water tightening techniques such as damp course on foundation levels are required.

The expected high permeability of the silty sand may lead to leachate from sanitation systems to reach the ground water, and a closed water borne sewage system is recommended.

Special care must be taken to ensure adequate surface drainage to prevent the accumulation of water next to structures.

Storm water diversion measures such as ponding pools are recommended to control peak flows during thunderstorms. All embankments must be adequately compacted and planted with grass to stop any excessive erosion and scouring of the.

In order to establish the extent of the drainage feature that traverses the area between Glaudina and Glaudina Extension 1, CWT Water Technology was commissioned to calculate the 1:100 year floodline of this drainage feature (refer **Annexure M**). The extent of the 1:100 year floodline determination was employed to establish the limit of development along the eastern boundary of the proposed township area. The 1:100 year floodline only impacts on two (2) erven in the proposed township area is development of these two erven will be subject to the positioning of all buildings and structures outside the area that is subject to the 1:100 year floodline.

### **3.4 WETLANDS AND PANS**

As detailed in section 3.3 supra, the development area is only partially affected by the 1:100 year floodline of the drainage feature located east of the proposed development area and no wetlands or pans are present on site.

### 3.5 VEGETATION

The area is typically characterized by Pure Grassveld veld with Dry Cymbopogon – Themeda *veld type* (Acocks, 1988). The site itself is covered by sparse grasslands of which some was used as agriculture land, and some indigenous trees (such as Soetdoring: Acacia Karroo) are present on site. Due to the presence of informal housing structures on site, the natural vegetation of the area has largely been disturbed.

### 3.6 GROUNDWATER

Seepage and the presence of perennial fluctuations of ground water were encountered on site, proving that a seasonal perched water table may exist. A ferruginised profile indicates that some perennial water level fluctuations occur.

Ground water in the form of seepage was not intersected in any test pits during the investigation, but some problems are foreseen and normal water tightening techniques such as damp course on foundation levels are required.

### 3.7 GEOLOGY (Extract from Geotechnical Report compiled by Geoset CC attached as **Annexure N** to the application for township establishment)

The site is underlain by basaltic amygdaloidal lava, agglomerate and tuff of the Allanridge Formation, Ventersdorp Supergroup. Locally the lithology is covered by alluvial sand and ferricrete or calcrete gravel.

No dolomite occurs in the area and no stability investigation is required.

#### 3.7.1 SITE EVALUATION

Development should be concentrated outside the drainage feature within the centre portion of the site. These areas are also where spoil heaps exist where sub surface localized mining took place.

Seepage and the presence of perennial fluctuations of ground water were encountered on site, proving that a seasonal perched water table may exist.

Special care must be taken to ensure adequate surface drainage to prevent the accumulation of water next to structures.

The site contains highly collapsible and medium expansive soil, and foundations will need special treatment to withstand movement associated with the variable moisture content of the soil.

Some problems regarding excavatability to 1,5m can be expected on the site.

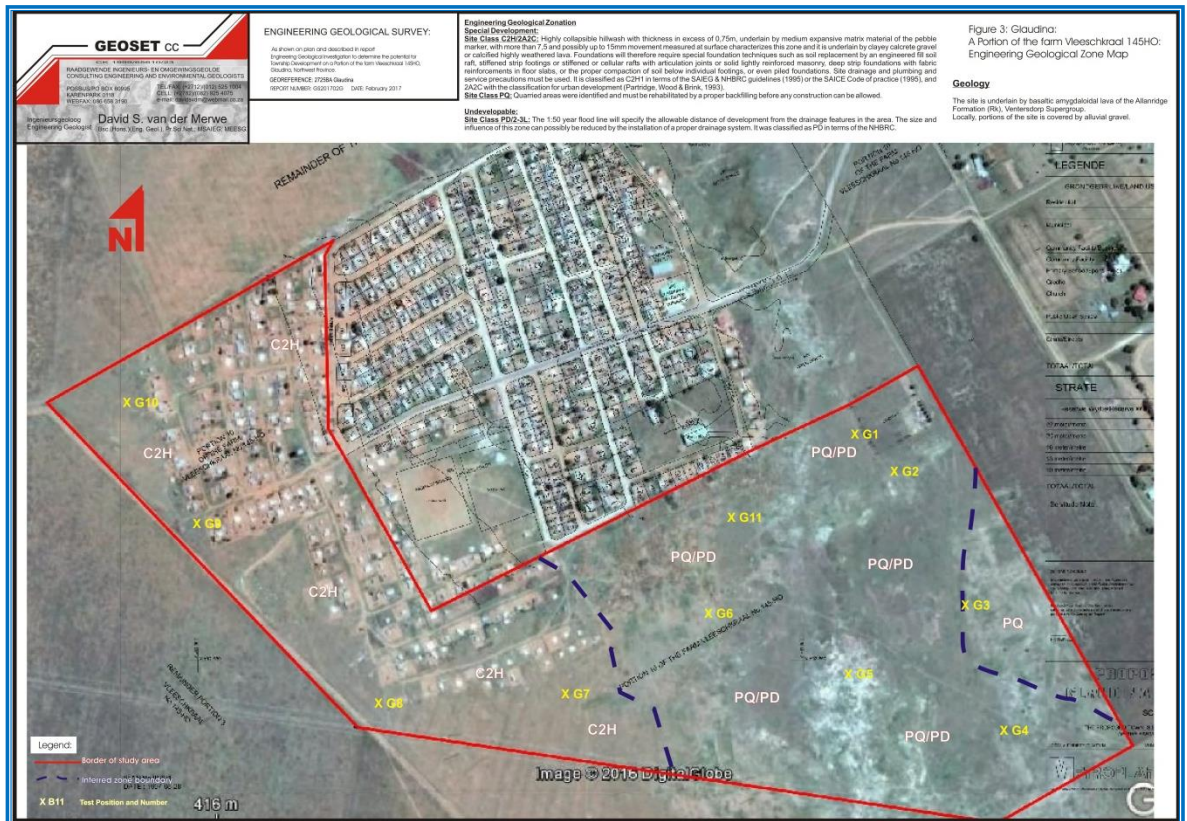
Retaining walls as well as slope stabilization measures are recommended on all constructed embankments exceeding 1,5m.

Storm water diversion measures such as ponding pools are recommended to control peak flows during thunderstorms.

All embankments must be adequately compacted and planted with grass to stop any excessive erosion and scouring of the landscape.

### 3.7.2 SITE ZONATION

In terms of the results of the geotechnical investigation, the development area was divided into the following two (2) geotechnical zones which are described in detail in this section and also reflected on **Map 5**:



**Map 5: Geotechnical Site Zonation**

**Special Development:**  
**Site Class C2H/2A2C:**

Highly collapsible hillwash with thickness in excess of 0,75m, underlain by medium expansive matrix material of the pebble marker, with more than 7,5 and possibly up to 15mm movement measured at surface characterizes this zone and it is underlain by clayey calcrete gravel or calcified highly weathered lava. Foundations

will therefore require special foundation techniques such as soil replacement by an engineered fill soil raft, stiffened strip footings or stiffened or cellular rafts with articulation joints or solid lightly reinforced masonry, deep strip foundations with fabric reinforcements in floor slabs, or the proper compaction of soil below individual footings, or even piled foundations. Site drainage and plumbing and service precautions must be used. It is classified as C2H1 in terms of the SAIEG & NHBRC guidelines (1995) or the SAICE Code of practice (1995), and 2A2C with the classification for urban development (Partridge, Wood & Brink, 1993).

**Site Class PQ:**

Quarried areas were identified and must be rehabilitated by a proper backfilling before any construction can be allowed.

**Undevelopable:**

**Site Class PD/2-3L:**

The 1:50 year flood line will specify the allowable distance of development from the drainage features in the area. The size and influence of this zone can possibly be reduced by the installation of a proper drainage system. It was classified as PD in terms of the NHBRC.

The geotechnical problems encountered will require special foundation techniques and construction, such as proper standard compaction techniques and reinforced steel in strip footing foundations or soil replacement with soil rafts, and even stiffened or cellular rafts.

The comprehensive Geotechnical Report is attached as **Annexure N** to the application for township establishment.

### **3.7.3 FOUNDATION RECOMMENDATIONS AND SOLUTIONS**

#### **3.7.3.1 CONSOLIDATION OR COLLAPSE SETTLEMENT**

**Site Class C (Estimated total Settlement of less than 5mm):**

**Normal Construction:**

Minor collapse settlement requires normal construction (strip footing and slab on the ground) with compaction in foundation trenches and good site drainage.

**Site Class C1 (Estimated total Settlement of between 5 and 10mm):**

**Modified normal construction:**

Reinforced strip footing and slab on the ground.

Articulation joints at some internal and all external doors and openings.

Light reinforcement in masonry.

Site drainage and service/plumbing precautions recommended.

Foundation pressure not to exceed 50 kPa (single storey buildings).

**Compaction of in situ soils below individual footings:**

Remove in situ material below foundations to a depth and width of 1,5 times the foundation width or to a competent horizon and replace with material compacted to 93% MOD AASHTO density at -1% to +2% of optimum moisture content.

Normal construction with light reinforcement in strip foundation and masonry.

**Deep strip foundations**

Normal construction with drainage precaution.

Founding on a competent horizon below problem horizon.

**Soil Raft**

Remove in situ material to 1,0m beyond perimeter of building to a depth and width of 1,5 times the widest foundation or to a competent horizon and replace with material compacted to 93% MOD AASHTO density at -1% to +2% of optimum moisture content.

Normal construction with lightly reinforced strip footings and masonry.

**Site Class C2 (Estimated total Settlement of more than 10mm):****Stiffened strip footings, stiffened or cellular raft**

Stiffened strip footings or stiffened or cellular raft with articulation joints or solid lightly reinforced masonry

Bearing pressure not to exceed 50 kPa.

Fabric pressure not to exceed 50 kPa.

Site drainage and service/plumbing precautions.

**Deep strip foundations**

See C1

**Compaction of in situ soils below individual footings**

See C1

**Piled or pier foundations**

Reinforced concrete ground beams or solid slabs on piled or pier foundations.

Ground slabs with fabric reinforcement.

Good site drainage.

**Soil Raft**

See C1

**3.7.3.2 EXPANSIVE SOIL****Site Class H (Estimated total heave of less than 7.5mm):**



**Soil tested as medium expansive with a clay layer thickness of up to 0,3m from surface**

**Normal construction:**

Minor heave requires normal construction (strip footing and slab on the ground) with site drainage and service/plumbing precautions recommended.

**Site Class H1 (Estimated total heave of between 7.5 and 15mm):**

**Tested as medium expansive with a clay layer thickness of between 0,45 to 0,85m from surface,**

**or a highly expansive clay layer of between 0,3 and 0,4m in thickness from surface**

**or a clay layer with a very high expansive potential of up to 0.3m.**

**Modified normal:**

Lightly reinforced strip footings.

Articulation joints at all internal/external doors and openings

Light reinforcement in masonry.

Site drainage and plumbing/service precautions.

**Or soil raft:**

Remove all or part of expansive horizon to 1,0m beyond the perimeter of the construction and replace with inert backfill compacted to 93% MOD AASHTO density at -1% to 2% of optimum moisture content.

Normal construction with lightly reinforced strip footings and masonry.

Site drainage and plumbing/service precautions.

**Site Class H2 (Estimated total heave of between 15 and 30mm):**

**Tested as medium expansive with a clay layer thickness of between 0,85 to 2,0m,**

**or highly expansive of between 0,4 and 0,85m in thickness measured from surface,**

**or a clay layer with a very high expansive potential of between 0.3 and 0.4m.**

**Soil raft:**

See H1.

**Stiffened or cellular raft:**

Articulation joints or solid lightly reinforced masonry.

Site drainage and plumbing/service precautions.

**Piled construction:**

Piled foundation with suspended floor slabs with or without ground beams.

Site drainage and plumbing/service precautions.

**Split construction:**

Combination of reinforced brickwork/blockwork and full movement joints.  
Suspended floors or fabric reinforced ground slabs.  
Site drainage and plumbing/service precautions.

### **3.7.4 EXCAVATION CLASSIFICATION WITH RESPECT TO SERVICES**

The excavation characteristics of the different soil horizons encountered have been evaluated according to the South African Bureau of Standards standardised excavation classification for earthworks (SABS – 1200D) and earthworks (small works – SABS 1200DA). In terms of this classification and the in-situ soil/rock consistencies as profiled, the relationships given below are generally applicable.

1. “soft excavation” - very loose/very soft through to dense or stiff.
2. “intermediate excavation” - very dense/very stiff through to very soft rock.
3. “hard excavation” - soft rock or better

No problems regarding excavations of the upper hillwash is expected as it is easily excavated by hand, and it was classified as soft in restricted and non-restricted excavation (SANS 1200 D).

Some problems regarding excavatability can be expected for excavations deeper than 1,5m on the pebble marker with ferricrete or calcrete or possibly calcified highly weathered lava on the site, and a competent TLB or excavator will be needed to reach installation depths for services in some places in these relative flat areas, especially during the dry season. It was classified as soft becoming medium hard rock in restricted and non-restricted excavation (SANS 1200 D).

To ensure the stability of excavations, it will need standard sidewall protection in excavations exceeding 1,5m.

### **3.7.5 CONCLUSION**

- The site is underlain by basaltic amygdaloidal lava, agglomerate and tuff of the Allanridge Formation, Ventersdorp Supergroup. Locally the lithology is covered by hillwash and ferricrete or calcrete and pebble marker gravel.
- Some problems are foreseen regarding the excavatability to 1,5m depth on site.
- Zoning of the site revealed three zones with constraints regarding the **compressibility, collapse potential** as well as the **expansive potential** of the soil, as well as some **drainage** features.
- **Special construction** techniques must be used to enable proper development. This includes the use of **compaction techniques with steel reinforcement** or **soil rafts** as described.

- This investigation was done to reveal the geotechnical properties on site with the techniques as described to form our opinion. Although every possible factor during the investigation was dealt with, it is possible to encounter variable local conditions. This will require the inspection of foundations by a competent person to verify expected problems.

### 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.

The activity that forms the subject of this application 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. The proposed development triggers the following regulations:

**Table 3: Listing details in terms of the National Environmental Management Act, 1998**

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant notice) :	Describe each listed activity as per project description <sup>1</sup> :
GN.R. 327, 7 April 2017	27	The clearance of 20,9160 hectares of indigenous vegetation, in order to establish a township on a Portion of the Remaining Extent of Portion 10 of the farm Vleeschkraal No. 145-HO (To be known as Glaudina Extension 2), North West Province.
GN.R. 327, 7 April 2017	28	Residential, mixed, retail, commercial and institutional developments where such land was used for agriculture on and after 01 April 1998 and where such development: (i) will occur inside the urban area of Glaudina, where the total land to be developed is 20,9160 hectares.
GN.R. 325, 7 April 2017	15	The clearance of 20,9160 hectares of indigenous vegetation, in order to establish a township on a Portion of the Remaining Extent of Portion 10 of the farm Vleeschkraal No. 145-HO (To be known as Glaudina Extension 2), North West Province.
GN.R. 324, 7 April 2017	12 (h) (iv)	Clearance of 51 666 square meters of indigenous vegetation within a critical biodiversity area (CBA 1) as identified in the NW 2009 Biodiversity Conservation Assessment (BCA). Clearance is proposed in order to establish a township on a Portion of the Remaining Extent of Portion 10 of the farm Vleeschkraal No. 145-HO (To be known as Glaudina Extension 2), North West Province.

The project was registered with the Department of Rural and Economic Development on 01 November 2017 by virtue of NWP/EIA/55/2017 and the Environmental Impact Assessment Report is currently in process of finalisation following the finalisation of the public participation process and the Environmental Impact Assessment will in due course be submitted to the Department Rural, Environment and Agricultural Development (READ) for consideration.

### **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 contained the following results:

As part of the assessment of the area, a desktop study was undertaken to put the farm and the general geographical area in a historical and archaeological context.

There are no known Iron Age sites close to the study area (Bergh 1999: 6-7), although this might just point to a lack of archaeological research in the region. No sites were found during the assessment as well. Based on Huffman's research the possibility of the presence of Iron Age sites in the larger geographical area cannot be excluded. His research, based on pottery, shows that the Olifantspoort facies of the Urewe Iron Age Tradition and dating to between AD 1500 & AD1700 and the Thabeng facies of the same tradition (AD1700-AD1840) could occur in the larger area (Huffman 2007: 191; 195).

The historical age started with the first recorded oral histories in the area. It includes the moving into the area of people that were able to read and write. The earliest Europeans to travel through the larger area were the groups of Campbell in 1813; Broadbent & Hodgson in 1823, Hodgson & Archbell in 1826 and later that of Krebs in 1838 (Bergh 1999:12-13). They were closely followed by the Voortrekkers (p.14).

A foundation stone/plaque located at NG Church in Glaudina indicates that the foundation stone of the original church was laid in 1936 shortly after the establishment of the town in 1935. The only site of historical significance found in the area of development is the local municipal cemetery which is discussed below.

During the Heritage Resources Impact Assessment, a fairly large communal cemetery of recent historical age was identified. It should however be noted that this cemetery site is located outside the proposed township area of Glaudina Extension 2 following the reduction of the footprint area of the proposed township area as a result of the impact of the 1:100 year floodline on the area available for development.



**Fig.3: Aerial view of study area showing Site 1 Cemetery location & Track Paths followed during the assessment (Google Earth 2016).**

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, although one (a recent historical cemetery) was identified in the vicinity of the development area during the physical assessment undertaken (located outside the proposed township area).

It should be noted that although all efforts were made to cover the total area and therefore to identify all possible sites or features of cultural (archaeological and/or historical) heritage origin and significance, that there is always the possibility of something being missed. The fairly dense grass cover also made visibility in some sections difficult. This aspect should be kept in mind when development work commences and if any sites (incl. graves) are identified then an expert should be called in to investigate and recommend on the best way forward.

The Heritage Resources Impact Assessment concluded as follows:

- ***“From a cultural heritage point of view the development can therefore continue, taking cognizance of the above recommendations”***

(Refer **Annexure O** for comprehensive Archaeological Impact Assessment)

## CHAPTER 4: PROPOSED DEVELOPMENT

### 4.1 LAND USES

The intention of the township applicant i.e. the Mamusa Local Municipality is to utilize the concerned property for the establishment of the proposed township area of Glaudina Extension 2. The primary aim of the township area is to address the urgent need experience by the Mamusa Local Municipality in the Glaudina urban complex for vacant residential erven that can be utilized for low income / subsidized housing. Due to the non-availability of erven for residential settlement purposes, informal occupation of the land to the west and south of the existing township area of Glaudina Extension 1 occurred. This area is currently occupied by an estimated 350 – 400 informal dwelling units.

According to the terms of reference of this appointment, Maxim Planning Solutions (Pty) Ltd set out to accommodate the largest number of informal residential structures onto erven in the proposed township area to limit the number of informal residential structures that need to be re-located. For this purpose a detail survey of all structures and fences on the development area was commissioned. The results of this survey are reflected in **Annexure L**.

In terms of the project appointment, it was indicated that the commission should also include the formalization of the informal settlement on Erf 395, Glaudina Extension 1. During the preparation of the layout plan of the proposed township Glaudina Extension 2, consideration was given to the alignment of the street network of the proposed township area to fit in with the re-layout plan that was compiled in respect of Erf 395, Glaudina Extension 1. The matter in respect of the re-layout of Erf 395, Glaudina Extension 1 will be dealt with under a separate application.

The layout plan of the proposed township Glaudina Extension 2 was therefore to a large extent influenced by the location of the existing informal residential structures and makes provision for the following land uses:

**Table 4: Glaudina Extension 2 proposed land uses**

Use Zone	Proposed Land Use	Number of erven	Area in hectares	% of area
Residential 1	Dwelling house (average stand size 339m <sup>2</sup> )	407	13,8050	66,0%
Business 1	Shops	1	0,0291	0,1%
Municipal	Water reservoir and cemetery	2	0,9556	4,6%
Institutional	Church / Creche	3	0,2062	1,0%
Public Open Space	Parks	1	0,0132	0,1%
Existing public roads	Streets		5,9069	28,2%
<b>Total</b>		<b>414</b>	<b>20,9160</b>	<b>100%</b>

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

- **Residential 1**

The layout plan makes provision for 407 residential erven with an average stand size of 339m<sup>2</sup>. These erven will be alienated on a full title basis.

The proposed “Residential 1” erven will be subject to the following development restrictions as imposed in terms of the Mamusa Land Use Scheme, 2018:

- Maximum Height: 2 storeys
- Coverage: 50%
- Building line: Street boundary – 3m  
Other boundaries – 2m along any two boundaries if required for the installation of services

- **Business 1**

The layout plan incorporates one (1) erf that can be utilized for business purposes and same was positioned along the main access road to the proposed township area to limit walking distances whilst also ensuring easy accessibility to this facility for all residents of the proposed township area.

The proposed “Business 1” erf will be subject to the following development restrictions as imposed in terms of the Mamusa Land Use Scheme, 2018:

- Maximum Height: 2 storeys
- Coverage: 70%
- Building line: Street boundary – 0m  
Other boundaries – 2m along any two boundaries if required for the installation of services

- **Institutional**

The erven provided for churches and a crèche were largely dictated by existing facilities already located within the development area and where such structures were accommodated on a proper erf. The layout plan currently accommodates two (2) erven for a church and one (1) erf that can be utilized for a crèche.

The proposed “Institutional” erven will be subject to the following development restrictions as imposed in terms of the Mamusa Land Use Scheme, 2018:

- Maximum Height: 2 storeys
- Coverage: 70%
- Building line: Street boundary – 5m  
Other boundaries – 2m along any two boundaries if required for the installation of services

- **Municipal**  
The layout plan of the proposed township area makes provision for two (2) “Municipal” erven. These erven will be utilized respectively to accommodate an existing elevated water reservoir as well as an existing cemetery located along the western boundary of the development area.
- **Public Open Space**  
The one (1) public open space erf provided as part of this development will primarily accommodate an area within the south-eastern corner of the development area that cannot be utilized for residential purposes.

**Annexure X** to the application for township establishment contains a list of the erven in the proposed township area and the areas of each erf as contemplated in terms of paragraph 3(i) of Schedule 6 of the Mamusa By-Law on Spatial Planning and Land Use Management.

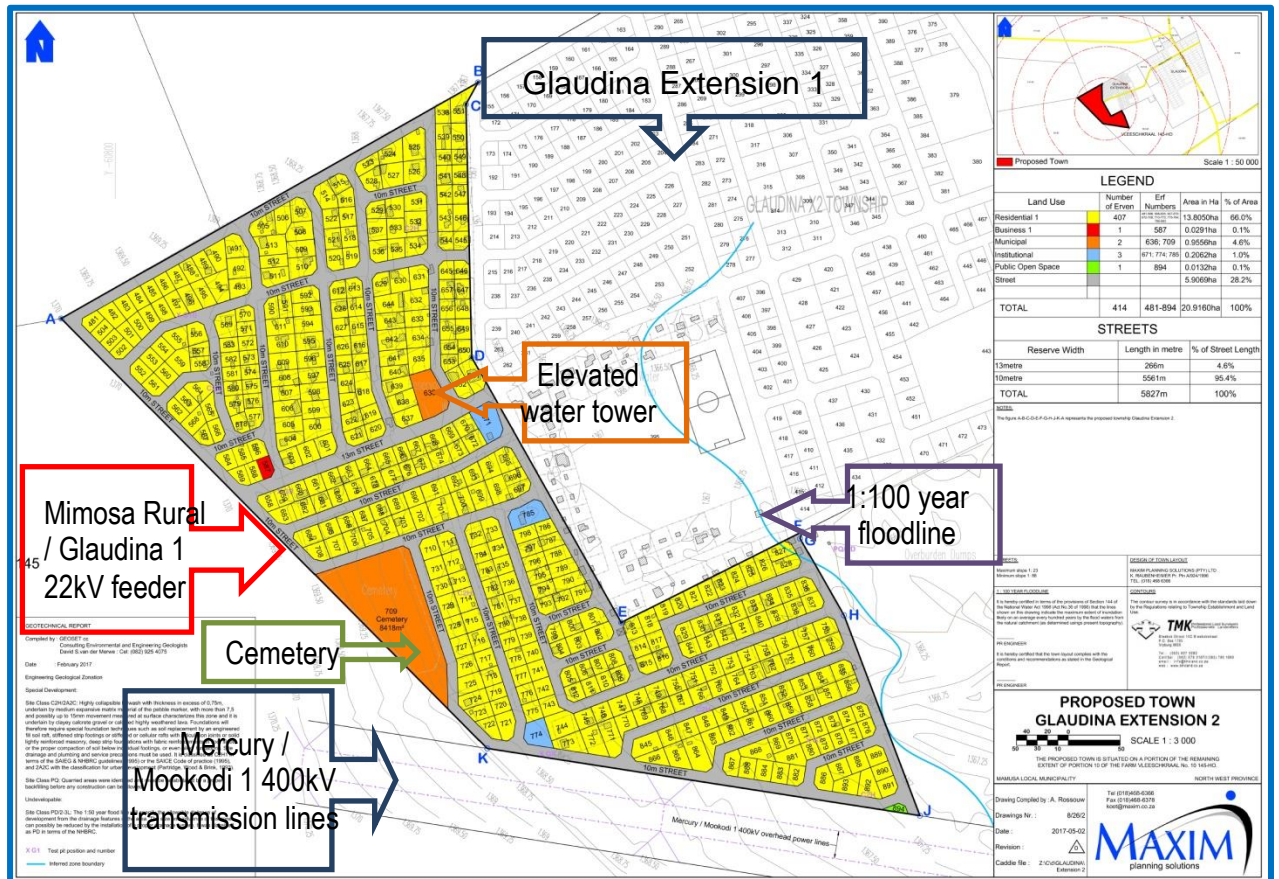
## **4.2 FACTORS INFLUENCING THE LAYOUT PLAN**

The layout plan of the proposed township area of Glaudina Extension 2 was influenced by the following factors:

- ✦ Accommodating the largest number of informal residential structures already present on the development area on erven within the proposed township area to limit the number of informal residential structures that will have to be relocated;
- ✦ Aligning the western and northern boundaries of the proposed township area with the surveyed cadastral boundary of the relevant farm portions;
- ✦ Aligning the street network of the proposed township area with the street network in the existing township area of Glaudina Extension 1;
- ✦ Accommodating the existing non-residential facilities already established on the development area on erven in the proposed township area;
- ✦ Accommodating the 1:100 year floodline applicable to the drainage feature and limiting development to the area outside the 1:100 year floodline;
- ✦ Accommodating the existing elevated water reservoir on an erf in the proposed township area;
- ✦ Accommodating an existing cemetery located along the western boundary of the development area on an erf in the proposed township area;
- ✦ Aligning the southern boundary of the township area with a proposed building restriction of 40 metres provided from the centre line of the Mercury / Mookodi 1 400kV overhead power line. In terms of the building restrictions of Eskom applicable to Eskom distribution and transmission lines, a 27,5m building restriction applies to a 400kV transmission line. By only providing for a 27,5m building restriction would have entailed that some of the infrastructure associated with the fore-mentioned powerline would have encroached into the township area.
- ✦ The street network of the township was designed in such a manner to enhance stormwater drainage on this flat development area;



- ★ The western boundary of the proposed township area is bordered to the west by the existing Mimosa Rural / Glaudina 1 22kV feeder MV overhead line. Even though this powerline is located on the adjacent farm portion, the locality thereof in relation to the western boundary of the proposed township area entails that the prescribed 9m building restriction imposed by Eskom does affect the proposed township area and provision was made in the layout plan to accommodate the fore-mentioned building restriction area within two (2) streets in the township area. The proposed erf in the township area that will accommodate the existing cemetery, will also be made subject to a 9m building restriction along the western boundary thereof.



Map 6: Locality of physical features that affected the layout plan

### 4.3 ACCESS

Access to the proposed township area of Glaudina Extension 2 will be provided from the existing street network of the adjacent township area of Glaudina Extension 1.

The street network adopted for the proposed township area comprises a network of 13m and 10m streets and were designed to ensure proper surface stormwater drainage.

## CHAPTER 5: PROVISION OF ENGINEERING SERVICES

### 5.1 INTRODUCTION

NEP Consulting Engineers investigated and reported on the provision of civil engineering services to the proposed township area.

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

- Section 5.2: Water Supply
- Section 5.3: Sanitation
- Section 5.4: Roads and Stormwater
- Section 5.5: Solid Waste

### 5.2 WATER SUPPLY

#### 5.2.1 BULK WATER SUPPLY

Potable water for the township of Glaudina is obtained from two existing boreholes located on the southern outskirts of Glaudina; connected to the existing 750kl elevated storage tank located within the development. These boreholes have a reliable yield of approximately 12l/s at recommended 12 hours delivery.

The existing Glaudina stands have a total theoretical required storage capacity of 210kl. Considering a total number of 500 residential stands of the proposed town with a daily consumption of 80l/c/day, a total additional storage of 326kl is needed. The current total storage capacity of 750 kl is therefore adequate to serve the development of Glaudina Ext 2 including the proposed town to provide for a 48hrs storage requirement. It is recommended that an additional borehole be established to augment the supply to 15l /s.

**Table 5: Water Demand**

MAMUSA LOCAL MUNICIPALITY				
WATER DEMAND AND DESIGN CRITERIA CALCULATIONS -Glaudina Township				
Item	Description	Unit	Input	Output
<b>1</b>	<b>Populations</b>		<b>New</b>	<b>Existing</b>
1.1	Year of Population Count	Year	2017	2017
1.2	Number of Houses Counted	No	500	322
1.3	House Occupancy	p/h	3.7	3.7
1.4	Population Count - Year of Population Count	Total	1850	1191.4
1.5	Year of Construction	Year	2017	2017
1.6	Year Difference - Population Count till Construction	Years	0	0
1.7	Annual Population Growth	%	0	0
1.8	Population at Construction Stage	Year	1850	1191
<b>2</b>	<b>Demand Calculations</b>	<b>Unit</b>	<b>Design Horizon</b>	
<b>2.1</b>	<b>Average Annual Daily Demand</b>		<b>2017</b>	<b>2017</b>
	HLOS - 80 l/c/d	kℓ/d	148	95

<b>2.2 Gross Average Annual Demand</b>			
Loss Factor	10%		
HLOS - 80 l/c/d	kℓ/d	163	105
<b>2.3 Summer Daily Demand</b>			
Summer Peak Factor	2.4		
<b>2.3.2 HLOS - 80 l/c/d</b>			
SDDpu = SPF * GAADD : ( supply)	kℓ/d	391	252
<b>2.4 Source Demand</b>			
<b>2.4.2 HLOS - 80 l/c/d</b>			
Based on SDDpu			
Source demand for 12-hour pumping day	ℓ/s	9.04	5.82
Source demand for 24-hour pumping day	ℓ/s	4.52	2.91
<b>2.5 Storage Capacity</b>			
<b>2.5.1 Required Storage Capacity 48hours</b>	kℓ	325.60	209.69
<b>2.5.2 Required Storage Capacity 24hours</b>	kℓ	162.80	104.84
<b>2.5.3 Total required Storage Capacity 48hours</b>	kℓ	535.29	

**5.2.2 INTERNAL WATER RETICULATION**

The water reticulation for this proposed town will be supplied from the existing 750kl elevated tank. A ring feeder system with a 90-75mm diameter upvc pipe is suggested. The waterlines that connect the houses to the ring feeder line are 75mm diameter upvc pipe line. (Refer **Map 7**)



**Map 7: Water layout plan for Glaudina Extension 2**

**5.3 SANITATION**

**5.3.1 BULK SEWER**

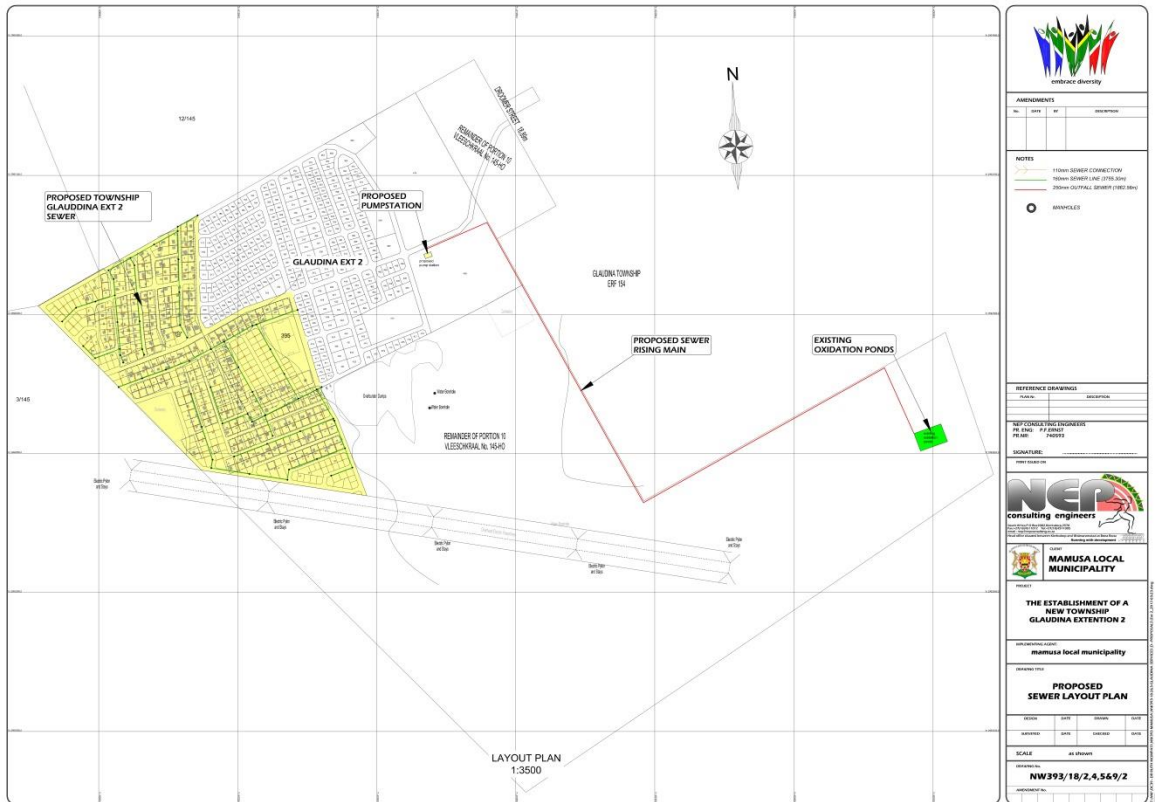
Currently there are no bulk sewer services in Glaudina township. The town is being serviced by VIP toilets. However, it was indicated by Mamusa Local Municipality

that an oxidation pond for the area is on construction phase with a capacity of 1.429ML/day south east of Gaudina.

As mentioned above, the new oxidation pond will afford the proposed town to be serviced by a full waterborne system. The sewer generated will gravitate towards the east of the town. The oxidation ponds are located southeast of Gaudina on high ground. Due to the topography of the area, a sewer pumpstation is needed to transport sewer to the oxidation ponds. The sewage pumpstation will be located east of Gaudina. A theoretical capacity of 0.6ML is needed to treat sewerage generated by the existing township as well as the proposed town of Gaudina Ext 2. Therefore, the capacity of the oxidation ponds is more than adequate to serve the proposed development as well as future developments (refer **Map 8**).

**Table 6: Bulk sewer and Pumpstation design**

<b>GLAUDINA NEW SEWAGE PUMP STATION</b>				03 May 2017	
<b>POPULATION AND SUMP STORAGE CAPACITY CALCULATION</b>					
<b>1.</b>	<b><u>Stands, population and hydraulic load</u></b>		<b>Glaudina</b>		
1.1	Number of stands @ 2017	each	822		
1.2	Persons per stand.	persons/ stand	4		
1.3	Number of persons.	each	3041		
1.4	Sewage per stand.	l/stand/ day	257.143		
	Sewage per capita.	l/person/ day	72.000		
1.5	Daily avg.hydraulic load.	m <sup>3</sup> /d	211.371		
		l/s	2.446		
1.6	Hydraulic peak.	-	<b>2.063</b>		
1.7	Emg. storage = 4 x Q <sub>avg</sub>	m <sup>3</sup>	<b>35.229</b>		
<i>Guidelines for the provision of engineering services and amenities in township development</i>					
1.7	Peak hydraulic load.	l/s	5.046	Q <sub>Peak</sub>	
1.8	% Infiltration.	%	20	%Infil	
1.9	Maximum hydraulic load.	l/s	6.055	Q <sub>Max</sub>	
<b>2.</b>	<b><u>Sump Storage Capacities</u></b>		V <sub>1</sub>	V <sub>2</sub>	V <sub>3</sub>
2.1	Sump Storage Capacities	ℓ	3490.0	0	0.000
2.5	<b>Total volume.</b>	ℓ			<u>3490.0</u> V <sub>Tot</sub>



**Map 8: Sewer layout plan for Glaudina Extension 2**

**5.3.2 CONNECTOR AND INTERNAL SEWER NETWORK**

Sewer generated from the proposed development will gravitate towards the eastern corner of the proposed town to the sewage pump station. From there sewage will be gravitated via a new 110mm diameter rising main towards the oxidation ponds. The following components are proposed for the development:

- Sewage pumpstation with a capacity of 6.055l /s
- 110 mm rising main.
- New internal sewer reticulation will be 160mm gravity sewerage system laid at a gradient of approximately 1:150 in the road reserve 1m from the stand boundary (refer **Map 8**)

**5.4 ROADS AND STORMWATER**

The proposed town is located to the north of the main road R504 between Schweizer-Reneke and Wolmaransstad. Primary access to the proposed development will be provided via the existing road network.

All internal roads surfaces for the development will be constructed according to the proposed pavement design in **Table 7**. The majority of the residential development is proposed to drain towards and ultimately to discharge north east of the development to follow the natural water course

All stormwater in the areas have been allowed to run off surfaces and to drain of stormwater side channels. All storm water runoff from the roof gutters, uncovered

driveways and hard paved areas on the site is considered to be “clean” water and must be diverted into proposed stormwater systems. It is proposed that an interlock paved road system, stormwater concrete channels and culverts will accommodate flows generated by land development. Refer to **Map 9** for typical roads and stormwater details.

**Table 7: Pavement Design for Internal Roads**

Design	Description
Surfacing	60 mm Paving blocks
Base C4	150mm thick stabilized gravel compacted to 97% of modified AASTHO density. Minimum UCS>1000kPa at 97% of modified AASTHO density. GM>1.75, PI<4
Subbase G5	150mm thick natural gravel compacted to 95% of modified AASTHO density. CBR>50 at 95% of modified AASTHO density. GM>1.5 (Min), PI<6
Roadbed Preparation	150mm thick natural gravel compacted to 90% of modified AASTHO density. Minimum CBR > 7 at 90% of modified AASTHO density.

The design norms for the roads are given in **Tables 7** and **8**.

**Table 8: Geometric Design Standards for internal roads**

Standards	
Design Speed	40km/h
Travel Width	7/6m
Crossfall	2%
Favoured maximum gradient	10%
Vertical Curve k-value: Crest	6
Sag	6



**Map 9: Road Layout Plan for Glaudina Extension 2**

## 5.5 SOLID WASTE

Solid waste removal is a function of the Mamusa Local Municipality.

## CHAPTER 6: MOTIVATION

### 6.1 INTRODUCTION

This need and desirability in respect of the application for township establishment will 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)
- White Paper on Wise Land Use, 2001
- Millennium Development Goals (MDG)
- National Spatial Development Perspective, 2006
- North West Provincial Spatial Development Framework, 2017
- Mamusa Spatial Development Framework, 2012
- Mamusa Housing Sector Plan, 2013
- 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-coordinating 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.

The following sections outline 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 Mamusa 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 6.16 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.

## **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.

## **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.

## **6.5 A COMPREHENSIVE 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.

## **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.

## **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)**

A municipality must 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.**

## 6.11 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:

Principles. 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.

## 6.12 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.

## 6.13 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 prerequisite 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.

#### **6.14 NORTH WEST PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK, 2017**

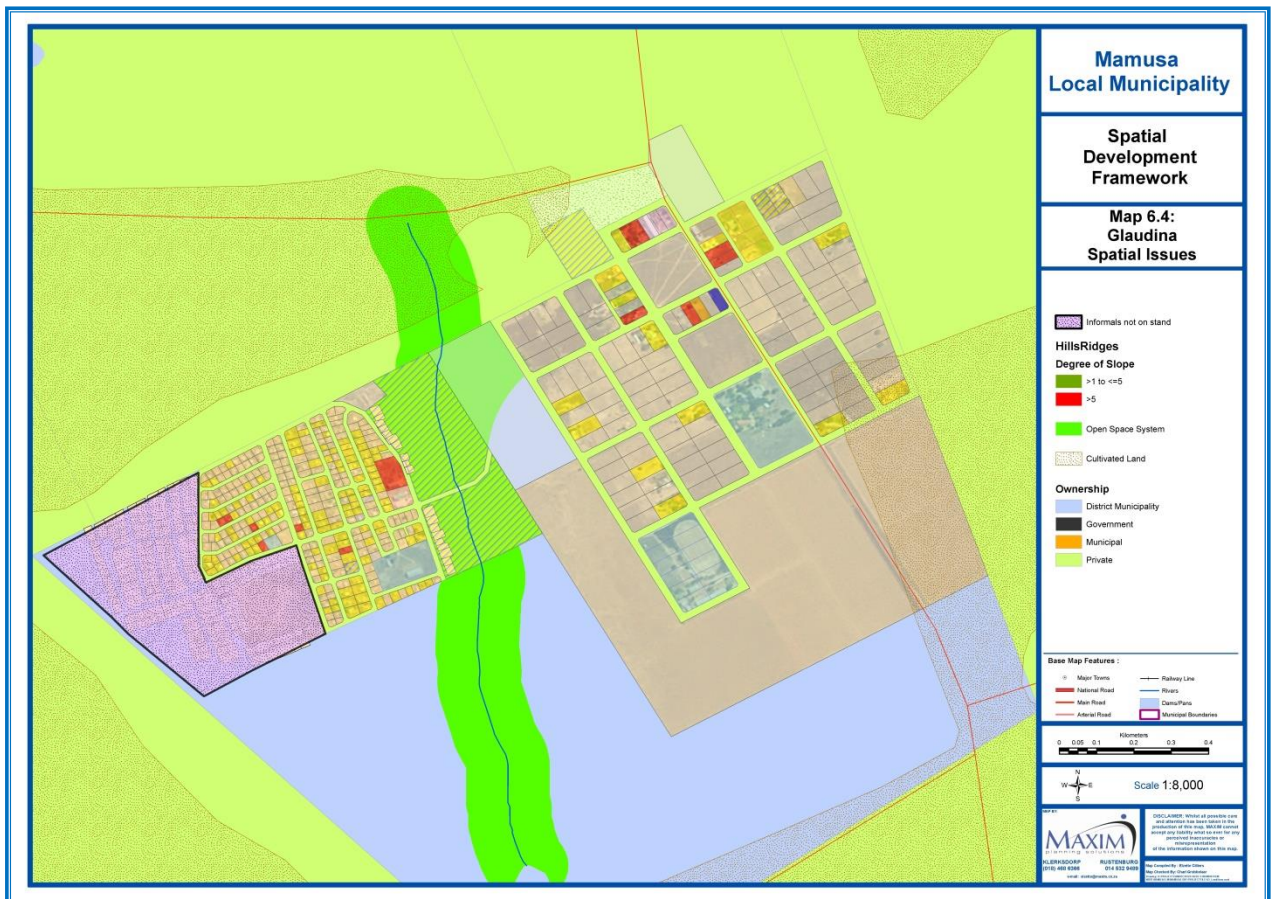
- In terms of the development guidelines set forth in the North West Provincial Spatial Development Framework, 2017 in respect of the Mamusa urban area, it was stated that the focus should be on **backlog eradication** in the smaller nodes, whilst creating **new affordable housing opportunities** in Schweizer-Reneke as well as the crucial role of **proactive infrastructure development and planning** in the upgrading of informal settlements and the creation of new settlements.
- In terms of development guidelines it was stated that the focus should be on the backlog eradication and providing access to basic services whilst also formalizing housing and ensuring land tenure security.

#### **6.15 MAMUSA LOCAL MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK, 2013**

According to the Mamusa Local Municipality Spatial Development Framework, 2012, the 2012 land use survey indicated that there are a total of 192 informal houses on stands and 256 informal structures (squatters) not on stands, bringing the total housing backlog in the Glaudina urban area to 448. At the time of the compilation of the SDF in 2012 there were 109 vacant stands in Glaudina and only 4 vacant stands in Glaudina Extension 1.

At the time of the compilation of the SDF in 2012, informal occupation of the development area had already occurred and this community has been living in squalid conditions in excess of 6 years.

In terms of the Spatial and Environmental Issues identified in the Mamusa Spatial Development Framework, 2012, the formalization of the 256 illegal informal structures located west of Glaudina Extension 1 was identified (refer **Map 10**).



**Map 10: Glaudina Spatial Issues**

In terms of the Spatial Development Proposals relating to the Glaudina area, it is proposed that the informal settlement west of the Glaudina township be formalized as a priority within the urban edge.

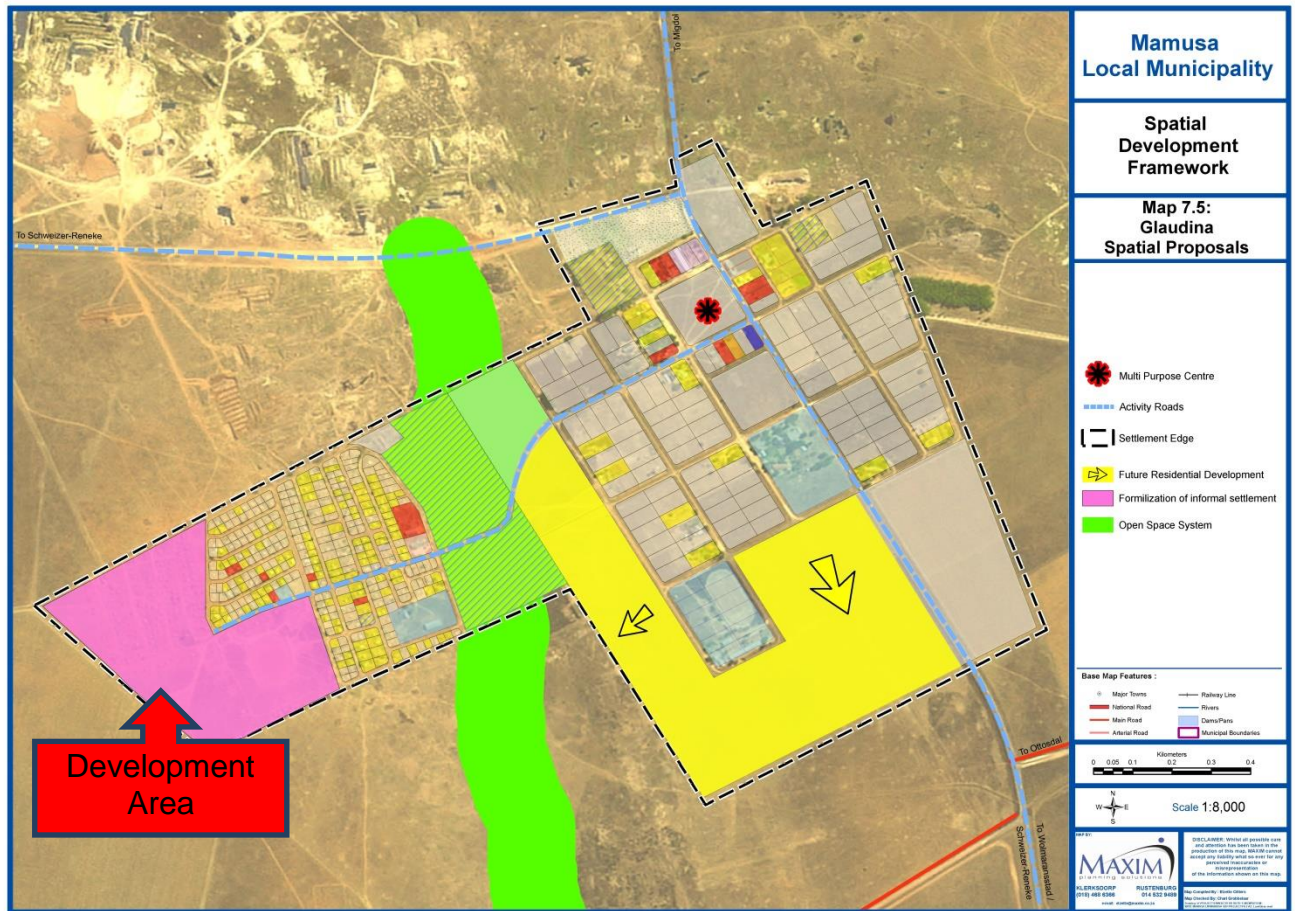
Although integration should be promoted, careful consideration should be taken of the development in this area because of the occurrence of a stream that runs through the town and also the un-rehabilitated mining diggings that surrounds the town especially the area south of the Glaudina township. Specific development conditions should be adhered to.

The 2012 physical land use survey indicated 158 formal houses including flat units and an immediate backlog of 448 informal structures for Glaudina area. Applying the long term growth rate forecast for the municipality, provision should be made for a total of 479 units up to 2017. The spatial needs amount to 32ha over the next five (5) years (at a density of 15 units/ha). However, this backlog could be provided through a process of settlement infilling. Future expansion is also possible to the south and west of Glaudina town.

The main focus of this area with regard to residential development should be settlement infilling and formalization of settlement.



The area to which this application for township establishment relates, was earmarked for “formalization of informal settlement” in terms of the Spatial Proposals contained in the Mamusa Spatial Development Framework, 2012 (refer **Map 11**).



**Map 11: Glaudina Spatial Proposals**

**6.16 NORTH WEST MULTI YEAR HOUSING DEVELOPMENT PLAN, 2014**

In terms of the North West Multi Year Housing Development Plan, 2014, the housing demand in the Mamusa Local Municipality is estimated at 6318 units comprising a 5 year housing programme (for subsidized housing) of 3147 units and a backlog of 3171 units. It is specifically due to this large demand and the non-availability of vacant erven for settlement purposes that illegal occupation of vacant land has occurred where people live in squalid conditions without basic services

**6.17 MAMUSA HOUSING SECTOR PLAN, 2013**

In terms of the Housing Sector Plan of the Mamusa Local Municipality, the following housing demand was identified:

**Table 9: Housing Demand in terms of the Mamusa Housing Sector Plan, 2013**

	Schweizer / Ipelegeng	Amalia / Molatswaneng	Glaudina	Migdol	Total
<b>Needs based on land use survey and outstanding projects</b>					
Informal Structures on stands	1844	56	192	0	2092
Informal Structures in backyards & landless	1107	800	256	358	2521
Vacant Stands	435	135	113	0	683
Land needed for landless and backyard dwellings	92.25 ha	66.66 ha	21.33 ha	29.83 ha	210.07 ha
<b>Additional Households, Planned projects and land needs</b>					
Expected additional households 2013 – 2017	438	58	32	36	564
Expected land needs based on 5 year growth	36.5 ha	4.8 ha	2.7 ha	3 ha	47 ha

The establishment of the proposed township Glaudina Extension 2 specifically aims at providing the necessary residential erven to accommodate the informal structures in backyards and the landless community.

The development of the proposed new integrated human settlement of Glaudina Extension 2 will take place against the background of Outcome 8. 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.

## **6.18 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 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 this principle would be on integration or development of rural and/or traditional settlements and urban integration strategies. This development will afford the landless community of Gladina access to the land which they have to date occupied illegally. The township establishment process has as its ultimate goal to create full title residential erven that can be transferred to the various beneficiaries. As mentioned in section 3.15 above, the integration of the urban areas of Gladina and Gladina Extension 1 is hampered by the presence of the 1:100 year floodline of the drainage feature that traverses the area between the two township areas. The development of the Gladina Extension 2 township will however still take place within the demarcated urban edge as set out in the Mamusa Spatial Development Framework, 2012.

As mentioned in the preceding sections, cognisance should be taken of the fact that the development area has already been occupied by approximately 350-400 informal housing structures clearly highlighting the need for residential erven for the housing of the landless community of Gladina. This township establishment will afford the landless community of Gladina the opportunity to access land for formalized housing provision.

**(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 Mamusa Spatial Development Framework, 2012, 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. This development will specifically aim at addressing the squalid conditions in which the landless community of Glaudina has been living in in excess of 6 years. In this regard it is pertinent to note that the Department of Local Government and Human Settlements has already earmarked the Glaudina Extension 2 project as a subsidized housing project and in this regard they have even commissioned a contractor for the construction of houses pending the finalization of the statutory township establishment process.

**(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 this specific portion of land within the local municipal area, through the Spatial Development Framework, to redress access to land by previously disadvantaged people. The proposed development of Glaudina Extension 2 will focus on providing erven for subsidized housing.

**(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 Mamusa Local Municipality municipal area are governed by a wall-to-wall land use management system. The proposed land uses in the township area of Glaudina Extension 2 will be regulated by the Mamusa Land Use Scheme, 2018. 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**

According to the Mamusa Housing Sector Plan the need for housing was estimated to total 448 housing units in 2013. The township establishment process has at its core the intent to create additional residential erven that can, after proclamation of the township area, be alienated to the beneficiaries thereof. This new township development will afford the community of Glaudina 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 vacant for a number of years with no economic or social advantage for the community.

**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 Mamusa Local Municipality has sufficient fiscal, institutional and administrative capacity and resources to administer the development. The Mamusa Local Municipality will ensure that the development complies with the requirements contained in the Mamusa Land Use Scheme, 2018 and the Mamusa Spatial Development Framework, 2012. In this regard it is pertinent to also note that the fiscal capacity of the Mamusa Local Municipality is also enhanced through the assistance of the Department of Local Government and Human Settlement who is currently funding this project and who will also be responsible for the construction of 500 subsidized housing units.

- (ii) **ensure that special consideration is given to the protection of prime and unique agricultural land;**

The area where the concerned property is situated is not regarded as prime or unique agricultural land, in terms of the Mamusa Land Use Management Scheme, 2018 and the Mamusa Local Municipality Spatial Development Framework, 2012. The agricultural value of the concerned portion is negligible specifically due to its size and location within an already existing urban area.

- (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.

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.

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 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 development will contribute to a more efficient usage of the concerned property and will also ensure the effective usage of the existing infrastructure network available in the direct vicinity of the concerned

property. 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. The infrastructure details set out in Section 5 also prove that the Mamusa Local Municipality has sufficient capacity and resources to accommodate the development.

**(vi) promote land development in locations that are sustainable and limit urban sprawl; and**

The area to the west and south of the existing township area of Glaudina Extension 1 was specifically earmarked for future residential development purposes in terms of the Mamusa Local Municipality Spatial Development Framework, 2012 to limit further urban sprawl of the built up urban area of Glaudina and due to the fact that this area can function in a sustainable manner due to the availability of services to this area.

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. In this regard it should be noted that the proposed township area of Glaudina Extension 2 is located within the demarcated urban edge as set out in the Mamusa Spatial Development Framework, 2012.

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.

**(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 close to the existing social facilities and basic services already on offer in the existing township area of Glaudina Extension 1.

**(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 township establishment application will be processed in accordance with both the prescriptions of the Town Planning and Townships Ordinance, 1986 (Ordinance 15 of 1986) and the Mamusa By-law on Spatial Planning and Land Use Management which prescribes in detail the township establishment application and approval processes. 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. The provision of proper housing for the landless community of Glaudina 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 Mamusa 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 Mamusa Land Use Scheme, 2018 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 this township area 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 was also referred to the following government and non-government departments as integral part of the public participation process:

- ✧ Department of Public Works and Roads
- ✧ Openserve (former Telkom SA Limited)
- ✧ Eskom
- ✧ Dr. Ruth Segomotsi Mompati District Municipality
- ✧ Department of Minerals Resources
- ✧ Department of Agriculture, Forestry & Fisheries (DAFF)
- ✧ Department of Water and Sanitation
- ✧ Department of Local Government and Human Settlements
- ✧ Department of Education
- ✧ Department of Health
- ✧ South African Post Office
- ✧ Transnet Freight Rail
- ✧ South African Heritage Resources Agency (SAHRA)
- ✧ South African National Roads Agency Limited (SANRAL)

- (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. Following approval of the application for township establishment, the further processes in finalizing the township establishment process will be government by the timeframes set out in the Town Planning and Townships Ordinance, 1986 as well as the Mamusa By-Law on Spatial Planning and Land Use Management.

- (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:

- The application in respect of the establishment of the proposed township Glaudina Extension 2 will be advertised in accordance with Section 98(1)(a) of the Mamusa By-Law on Spatial Planning and Land Use Management and Section 108(1)(a), Regulation 26(1) and Schedule 16 of the Town Planning and Townships Ordinance, 1986 (Ordinance 15 of 1986) in the Stellalander Newspaper on 24 and 30 January 2018 as well as in the North West Provincial Gazette on 23 and 30 January 2018. Objectors will be afforded a period of 30 days from 24 January 2018 to submit objections or comments in respect of the proposed township area to the Municipal Manager and the authorised agent.
- The application will also, in accordance with the prescriptions of Section 99(1)(c) of the Mamusa By-Law on Spatial Planning and Land Use Management read with Section 108(1)(b) of the Town Planning and Townships Ordinance, 1986 (Ordinance 15 of 1986) be referred to the following external organizations / departments for comments or objections:
  - ✘ Department of Public Works and Roads
  - ✘ Openserve (Telkom SA Limited)
  - ✘ Eskom
  - ✘ Dr. Ruth Segomotsi Mompati District Municipality
  - ✘ Department of Minerals Resources (DMR)

- ✘ Department of Agriculture, Forestry & Fisheries (DAFF)
- ✘ Department of Water and Sanitation
- ✘ Department of Local Government and Human Settlements
- ✘ Department of Education
- ✘ Department of Health
- ✘ South African Post Office
- ✘ Transnet Freight Rail
- ✘ South African Heritage Resources Agency (SAHRA)
- ✘ South African National Roads Agency Limited (SANRAL)

The fore-mentioned organizations / departments will be afforded a period of 60 days to comment in this matter in accordance with the prescriptions of Section 108 (1) of the Town Planning and Townships Ordinance, 1986 (Ordinance 15 of 1986) read with paragraph (l) of Schedule 1 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013).

- In addition to the fore-mentioned notices, notices will also be served on all adjacent property owners in accordance with the prescriptions of Section 99(1)(c) of the Mamusa By-law on Spatial Planning and Land Use Management.
- To ensure the greatest extent of public participation, notices will also be posted on the subject property in accordance with the prescriptions of Section 101(1)(a) of the Mamusa By-law on Spatial Planning and Land Use Management.

**(v) policies, legislation and procedures must be clearly set in order to inform and empower members of the public;**

The procedures prescribed in terms of the Town Planning and Townships Ordinance, 1986 and the Mamusa By-Law on Spatial Planning and Land Use Management clearly sets out the process to be followed during the establishment of a township area and said procedures 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 30 days to comment on or object to this development.

## **6.19 GENERAL**

From a land use and town planning point of view the proposed development areas are ideally suited for residential purposes due to the following:

- The purpose of the application for township establishment is to provide sufficient erven within the Glaudina urban complex to address the urgent short term need for

residential erven that can be utilized for low income / subsidized housing purposes.

- 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 Gaudina and constitutes infill development.
- The proposed township area is easily accessible through numerous connector roads linking the township area through the existing street network of the adjacent township area of Gaudina Extension 1. The proposed township area is therefore easily accessible.
- The proposed township area of Gaudina Extension 2 will also be linked to the economic activities offered within the Gaudina urban area through the existing road network of Gaudina Extension 1 which links with the proposed road network of the proposed township area.
- The layout plan that was compiled in respect of the township area comprehensively addresses the issues identified during the pre-planning studies relating inter alia to the following:
  - Geotechnical restrictions encountered on site;
  - Topographical features encountered on site;
  - Incorporating the road network with that of the adjacent township areas;
  - Incorporating the building restriction areas;
  - Incorporating all existing servitudes and Eskom powerlines within the layout plan of the township area;
  - Incorporating the results of the geotechnical investigation which indicated that the development area is suitable for township establishment purposes;
  - Engineering services can be provided to the proposed township area.

In view of the fore-mentioned, we trust that this application will be considered favourably.

**K. RAUBENHEIMER**  
**Pr. PIn A/924/1996**