

Malepa

Planning & Projects (PTY) Ltd

REF: 15/11/00019

R Vermeijs

DATE: 01 December 2015

Regional Director
North West Province
South African Heritage Resource Agency
432 Paul Kruger Street
Pretoria
0001

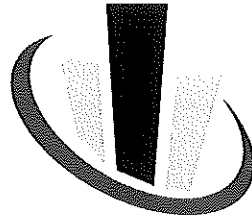
Attention: Mr Dumisani Sibayi

Sir

PROPOSED TOWNSHIP ESTABLISHMENT: STELLA EXTENSION 2

Malepa Planning and Projects (PTY)Ltd were appointed by Dr Ruth S Mompoti District Municipality to submit an application to the Local Municipality of Naledi for the establishment of the township Stella Extension 2 on the following portions:

- The Remaining Extent of Portion 6 of the farm Biesjes Bult 549-IN
- a Portion of the Remaining Extent of Portion 10 of the farm Biesjes Bult 549-IN
- a Portion of the Remaining Extent of Portion 18 of the farm Biesjes Bult 549-IN



Malepa

Planning & Projects (PTY) Ltd

Attached please find a Memorandum / Draft Scoping Report as well as a layout plan in respect of the above-mentioned proposed township for your comments **within a period of 60 days** from date of this letter. In the event of your department / organisation not wishing to comment in this matter, it would be appreciated if we could receive written confirmation thereof to enable us to continue with the finalisation of the application.

If no response is however received from your department / organisation within the said time, it will be assumed that your department / organisation does not wish to comment in this matter and the application will be processed further.

Please do not hesitate to contact us should any further information or clarification be required.

Yours faithfully

.....
R VERMEIJS

Managing Director

Malepa Planning and Projects (PTY)Ltd

**Application for township establishment on
The Remaining Extent of Portion 6,
a Portion of the Remaining Extent of Portion 10 and
a Portion of the Remaining Extent of Portion 18 of the
farm Biesjes Bult 549-IN,
North West Province**

STELLA EXTENSION 2

MEMORANDUM

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a Portion of the Remaining Extent of Portion 10 and
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farm Biesjes Bult 549-IN,
North West Province**

STELLA EXTENSION 2

1. APPLICATION

Malepa Planning and Projects (PTY)Ltd was appointed by Dr Ruth S Mompoti District Municipality 17 August 2015 to apply in terms of the provisions of Section 96 of the Town Planning and Townships Ordinance, 1986 (Ordinance 15 of 1986) for the establishment of a township Stella Extension 2, on the Remaining Extent of Portion 6, a Portion of the Remaining Extent of Portion 10 and a Portion of the Remaining Extent of Portion 18 of the farm Biesjes Bult 546-IN.

2. BACKGROUND

2.1 HISTORICAL BACKGROUND

The urban system of the Naledi Local Municipality area is mainly shaped by the occurrence of farming and grazing activities and can be divided into two categories -

- * Formal township development in and around Vryburg and Stella
- * Informal townships in and around Vryburg and Stella

The urban development forms a linear pattern due to the Stella Sparse Woodland (Vryburg Sparse Woodland), which dictated the location of farming

activities in the area. The growing farming activities and the growing rural- and urban population form the major drive towards the formation of a sub-regional area with corridors linking Mahikeng and Vryburg.

In terms of the Naledi Structure Plan (2003) a housing need was identified. The informal settlement "Baipai" to the south of the existing town Rekgarathile is growing very fast in numbers of households and must be catered for as soon as possible. It is estimated that the average annual growth rate of these settlements borders onto 27% per annum. There is also a great need for rental units in this area. Doctors, nurses, teachers and police officers from other areas need to rent accommodation in the Stella urban area and provision need to be done for this housing need.

In order to address this backlog in providing housing the concerned area was earmarked for future residential development purposes.

2.2 LOCALITY

The proposed township Stella Extension 2 is situated on the Remaining Extent of Portion 6, a Portion of the Remaining Extent of Portion 10 and a Portion of the Remaining Extent of Portion 18 of the farm Biesjes Bult 546-IN.

The township is situated approximately 1km west of the Stella Central Business District. The sites is located to the east and south east of the existing town Stella Extension 1 – Rekgarathile.

2.3 OWNER

The concerned portions of land (the Remaining Extent of Portion 6, a Portion of the Remaining Extent of Portion 10 and a Portion of the Remaining Extent of Portion 18 of the farm Biesjes Bult 546-IN) is currently registered in the name of Naledi Local Municipality, by virtue of Deeds No. :

the Remaining Extent of Portion 6 - T1147/1968

a Portion of the Remaining Extent of Portion 10 - T1147/1968

a Portion of the Remaining Extent of Portion 18 – T352/1963
of the farm Biesjes Bult 546-IN.

2.4 AREA

The area comprising the concerned development area constitutes an area of:

the Remaining Extent of Portion 6 - 25.6794ha

a Portion of the Remaining Extent of Portion 10 – 3.2213ha

a Portion of the Remaining Extent of Portion 18 – 11.0855ha
of the farm Biesjes Bult 546-IN.

TOTAL - 39.9862ha

2.5 EXISTING ZONING

In terms of the Naledi Town Planning Scheme, 2004 the land on which the proposed township is to be established is currently zoned "Agricultural".

2.6 CURRENT LAND USE

The area is surrounded with vacant land and residential related infrastructure as well as other land uses that includes a clinic, townhouses, guesthouse, agriculture and residential dwellings. The area is characterised by mixed land uses.

2.7 MINERAL RIGHTS

The rights to minerals in respect of the concerned property have not been separated from the property rights and are currently registered in the name of the Naledi Local Municipality.

2.8 BONDHOLDER

According to the said Deeds of Transfer, the Remaining Extent of Portion 6, a Portion of the Remaining Extent of Portion 10 and a Portion of the Remaining Extent of Portion 18 of the farm Biesjes Bult 546-IN, are not subject to a bond.

2.9 RESTRICTIVE TITLE CONDITIONS

In terms of the said Deeds of Transfer, the Remaining Extent of Portion 6, a Portion of the Remaining Extent of Portion 10 and a Portion of the Remaining Extent of Portion 18 of the farm Biesjes Bult 546-IN are subject to the following conditions:

“That the rights of the Proprietor shall not extend to any deposits of gold, silver, platinum or precious stones, which may at any time be or be discovered on the land hereby granted, and the rights of mining for gold, silver, platinum or precious stones is reserved by the Government under such regulations as shall from time to time be established by law.”

Preliminary indications are that none of the fore-mentioned conditions will affect the proposed development area. The applicability of the conditions of title on the proposed township area will re-affirmed by means of a surveyor certificate.

2.10 PHYSICAL ASPECTS

2.10.1 TOPOGRAPHY

The site is located on a relatively flat slope with a natural drainage area in the centre of the development. It is situated at between 1286 and 1306.5 metres above mean sea level.

The average ground slope: 0,8% (1 in 125), minimum ground slope: 0,3% (1 in 300), maximum ground slope: 5,5% (1 in 18).

2.10.2 DRAINAGE

Plate flow is the dominant drainage pattern on site, a prominent drainage channel intersects a portion of the site. Drainage occurs in a north eastern direction towards Stella town. Drainage can be accommodated in Mars Road.

2.10.3 CLIMATE

Stella normally receives about 311mm of rain per year, with most rainfall occurring mainly during mid-summer. The monthly distribution of average daily maximum temperatures (centre chart below) shows that the average midday temperatures for Stella range from 18.1°C in June to 32°C in January. The region is the coldest during June when the mercury drops to 0°C on average during the night. Consult the chart below (lower right) for an indication of the monthly variation of average minimum daily temperatures.

2.10.4 VEGETATION

The main land use in the north and west of the municipality is cultivated land, with cattle farming. Stella Sparse Woodland (Vryburg Sparse Woodland) is the predominate vegetation type in the northern are of the municipality, with some Schweizer-Reneke Bushveld, Highveld Alluvial Vegetation and Western Highveld Sandy Grassland in the western area of the municipality. There are many non-perennial rivers running though-out the area.

2.10.5 GEOLOGY

The oldest rocks of the Ventersdorp Supergroup that occur in the area are the Mosito Granite of the extreme northern portion of the district six where six small outcrops occur. Porphyries of the Makwassie Formation outcrops on the border with the Kagisane Local Municipality to (approximately 40km to the west of Vryburg). Quartz, greywacke and conglomerate of the Bothaville Formation in the form of one small outcrop occur 30km north of Vryburg.

The bulk of the rocks of Ventersdorp age are comprised of the basaltic amygdaloidal lava, agglomerate and tuff of the Allanridge Formation. These rocks outcrop to the west, north and east of Vryburg where it occupies the bulk of the area of the Local Municipality.

The Vryburg Formation consisting of quartzite, siltstone, shale, flagstone and conglomerate and andesitic lava are found throughout the area covered with the Griqualand West Sequence rocks in Naledi. In this district these rockes outcrop extensively to the north west, west, south west, south, south east and east of Vryburg. The oolitic and stromatolitic Boomplaas Formation is found (with one small exception that is found 18km east of Vryburg) mainly in the western and

southern sectors. The shale, siltstone with interbedded dolomite of the Clearwater Formation mainly outcrops in the west, south west and south of the district.

2.10.6 GROUND WATER

Groundwater is of vital importance in the municipality as it is in many instances the only source of water for the rural population. The municipality has substantial groundwater resources in the form of dolomitic compartments and fractured aquifers. Areas of highest groundwater potential shows that there are strips of highest potential in the south and southwestern edge of Naledi Local Municipality.

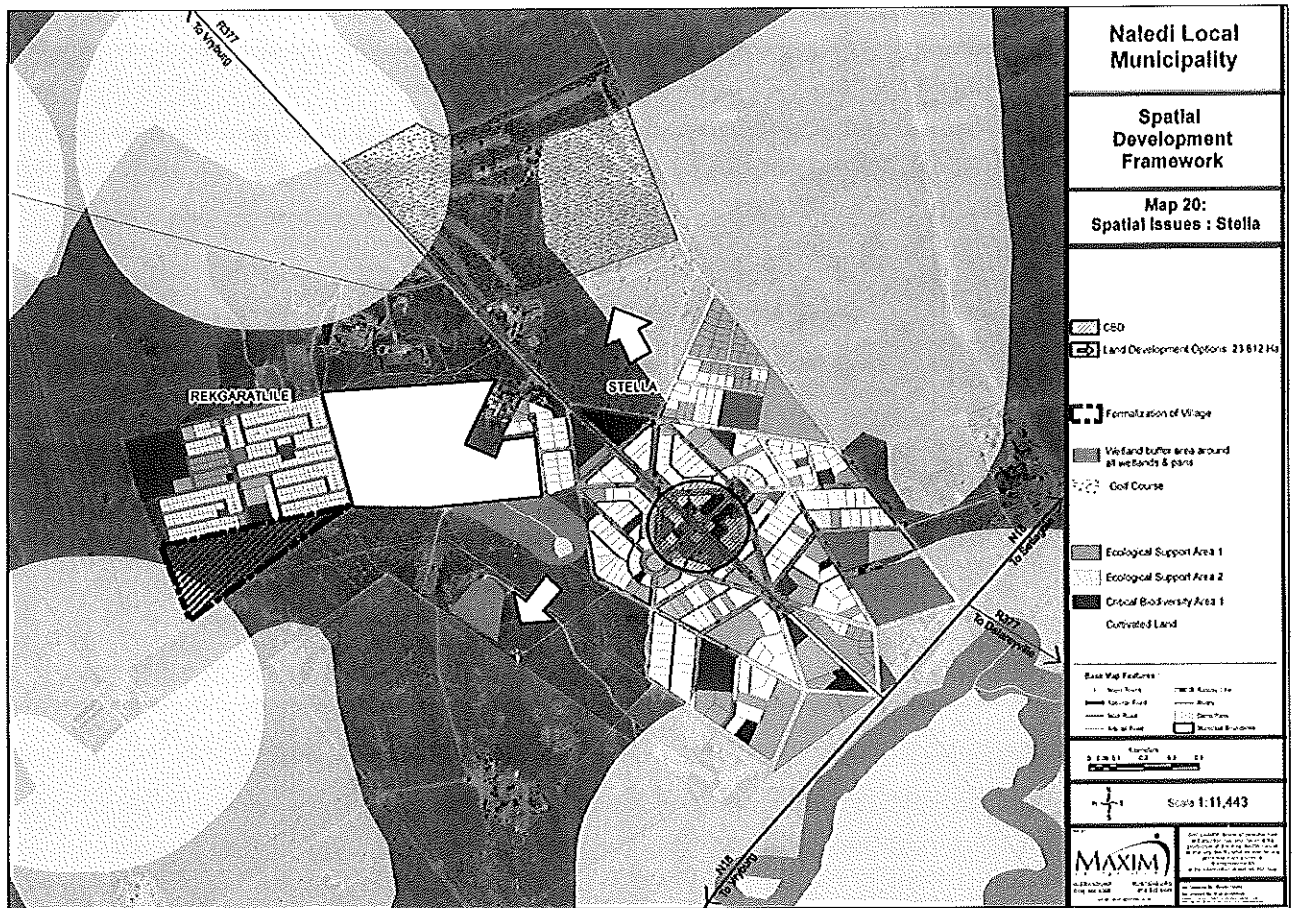
Groundwater is affected by two main factors: groundwater depletion and quality deterioration.

Climate, agriculture, population growth, urbanisation, policy and legislation all impact on the above factors. The settlement pattern of the municipality is strongly correlated to the location of watercourses and other sources of water.

2.10.7 EVALUATION FOR URBAN DEVELOPMENT

The proposed township establish is in line with the Naledi Spatial Development Framework.

See map below :



Source : Naledi Local Municipality SDF

- Formalisation of informal settlement south of Rekgarathile
- Future development areas – area between Rekgarathile and Stella, promote integration of areas as indicated in yellow and the yellow arrows indicate the direction off future development areas

2.10.8 ENVIRONMENTAL IMPACT ASSESSMENT

The following target activities were completed:

- Site Inspection
- Placement of Site Notice
- Notification to adjacent owners
- Notification to Municipal Manager and Ward Councillor
- Publication in Government Gazette
- Public Participating Meeting
- Completion of application

- Completion of Draft Scoping Report
- Submission of application form for signature
- Distribution of draft scoping report for comments to the competent authority

2.10.9 HERITAGE RESOURCE IMPACT

In terms of the North West Spatial Development Framework (2003), a register of the cultural heritage sites within the Naledi municipal area has been compiled as part of the said framework plan.

No cultural heritage sites are applicable to the proposed development area and the proposed development will have no impact on any existing cultural heritage sites.

The South African Heritage Resources Agency will be notified of any heritage artefacts that may be uncovered during the commencement of the development.

3. PROPOSED LAYOUT

3.1 FACTORS INFLUENCING THE LAYOUT

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

- * A natural drainage area which is located to the centre of the of the concerned development site.
- * Old diggings/quarry to the western boundary of the development.
- * Existing sewer line located to the western boundary of the development site.
- * Existing water pump station to the western boundary of the development.
- * Existing cemetery to the western boundary that is included to the development.

3.2 ACCESS

Access to the concerned development site will be obtained from the existing entrance road to Rekgarathile, Vrede Street, Hospital Road, Mars Road, Brand Street and Vry Street.

The internal street network which was adopted for the development consist of the following hierarchy of streets:

- * Class 3 – Local Access collector – (20 metres)
- * Class 5 – Access collectors and ring roads – (13 metres)
- * Class 6 – Internal Primary roads – (10metres)

The street network was designed to ensure property surface stormwater drainage whilst also providing for future extensions.

3.3 LAND USES

The layout plan of the proposed township Stella Extension 2 makes provision for the following land uses:

USE ZONE	LAND USE	No. of Erve	Area in ha	% of Area
Residential 1	Single Dwelling Units	519	18.4148	46.0
Residential 2	Medium density Community Residential units	2	2.1359	5.3
Business 2	canteen, tavern, shop parking, offices	5	0.3690	0.9
Industrial 2	Light industrial use	5	0.7211	1.8
Institutional 1	Place of instruction crèche	4	0.3911	1.0
	Place of worship church		0.4745	1.1
Institutional 2	Community facility sport & recreation	4	4.7044	11.8
Authority	Municipal pump station/quarry	1	1.3621	3.4
Transport 2	Public street & parking		8.1920	20.4
Cemetery	cemetery	1	3.2213	8.0
TOTAL		545	39.9862	100%

4. PROVISION OF ENGINEERING SERVICES

4.1 BULK SERVICES

Status Quo Data regarding services was retrieved from Naledi IDP 2015/2016, This data have been included in table format to illustrate the actual needs regarding services within the Municipality and Wards.

Electrification

Geography by energy or fuel for lighting for household weighted	Electricity	Solar	HH Other forms of lighting	% No electricity for lighting	Total number of HH
North West	892424	2616	166976	19%	1062015
DC39: Dr Ruth Segomotsi Mompoti	103016	350	21904	18%	125270
NW392: Naledi	14253	55	4264	23%	18572
63902001: Ward 1	1437	9	828	37%	2274

Source: Naledi Local Municipality IDP 2015/2016

Pipe Water

Geography by Pipe water for household weighted	Above RDP Standard	Water below RDP Standard	Water % below RDP Standard	Total number of HH
North West	888152	173856	20%	1062015
DC39: Dr Ruth Segomotsi Mompoti	99282	25989	21%	125270
NW392: Naledi	17022	1552	8%	18572
63902001: Ward 1	2024	251	11%	2274

Source: Naledi Local Municipality IDP 2015/2016

Sanitation

Geography by Toilet facilities for household weighted	Above RDP Standard	Sanitation below RDP Standard	Sanitation % below RDP Standard	Total number of HH
North West	611463	450551	42%	1062015
DC39: Dr Ruth Segomotsi Mompoti	74822	50447	40%	125270
NW392: Naledi	13941	4632	25%	18572
63902001: Ward 1	2024	251	11%	2274

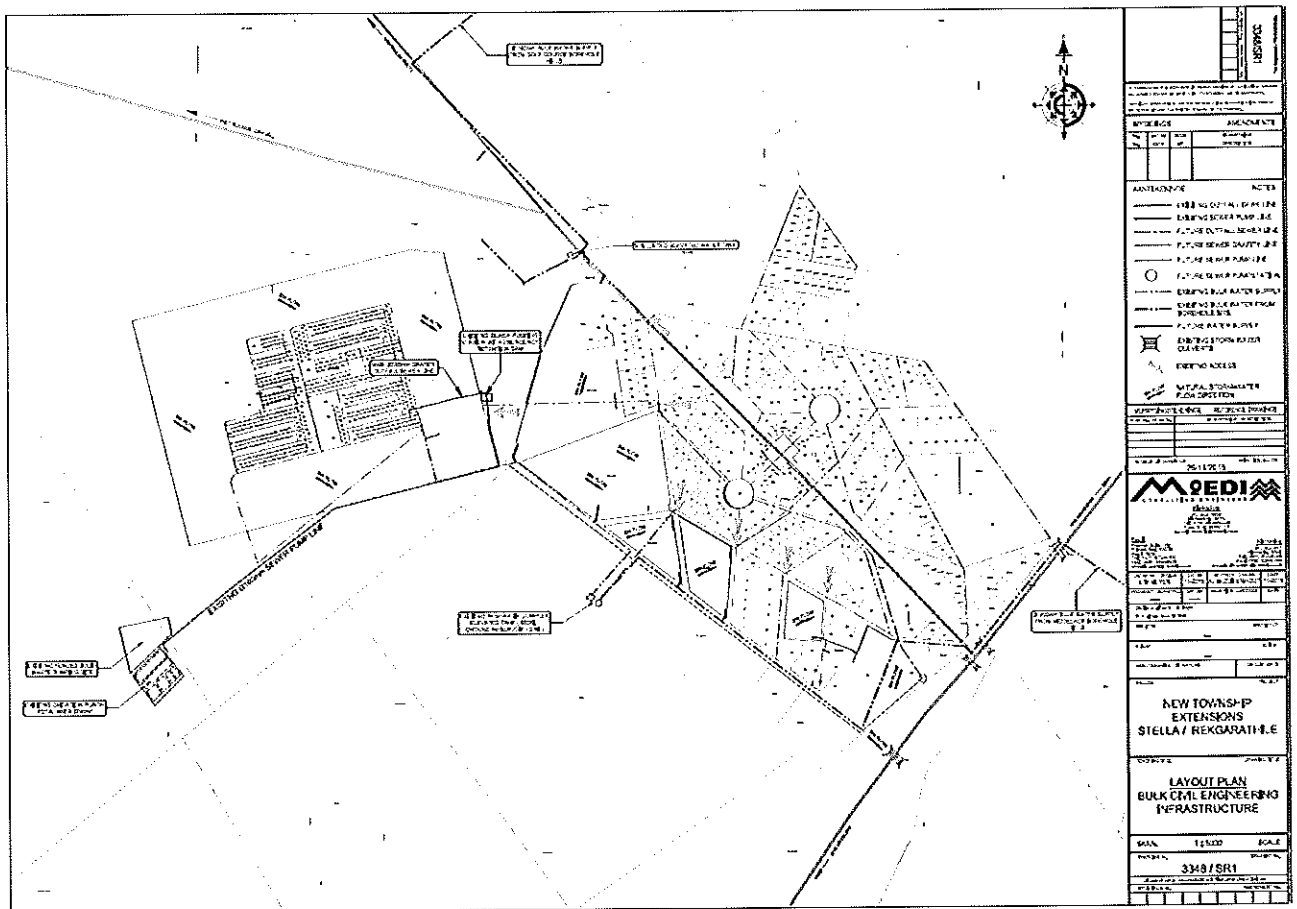
Source: Naledi Local Municipality IDP 2015/2016

Refuse Removals

Geography by Refuse disposal for household weighted	Removed by Authority/Private	No refuse removals	% No refuse removals	Total number of HH
North West	533595	528420	50%	1062015
DC39: Dr Ruth Segomotsi Mompati	39511	89758	72%	125270
NW392: Naledi	12940	5631	30%	18572
63902001: Ward 1	746	1529	67%	2274

Source: Naledi Local Municipality IDP 2015/2016

4.2 WATER SUPPLY



- **BULK AND LINK SERVICES**

- **Water**

As illustrated on the attached Layout Plan No 3348/SR1, potable water for the greater Stella / Rekgarathile is abstracted from the Middelkop Borehole field located to the south-west of Stella and pumped to the town reservoirs

via a 200mm diameter pipeline. The borehole field at Middelkop comprise of 7 No. production boreholes. The reservoir system of the town consist of a 2MI ground reservoir with an elevated tank of 660kl capacity located on the hill to the south-east of Rekgarathile next to Stella . Gravity supply lines exists from the elevated reservoir to the Rekgarathile Township intersecting the buffer zone (Remainder of Portion 30) as well as to the areas located on the south-western fringe of Stella (Reminder of Portion 6). Sufficient bulk water and supply capacity are available in the current system to serve the proposed development.

A Civil Engineers Report is available on request.

4.3 SEWERAGE DISPOSAL

➤ Sewer

The existing Rekgarathile Township in Stella consists of approximately 400 formally occupied residential stands. A water-borne sanitation system was previously installed to serve the community.

The existing infrastructure presented on the attached plan No. 3348/SR1 comprises of:

- An internal gravity sewer reticulation network connecting all household toilets;
- A 315mm diameter gravity outfall sewer;
- A sewer pumping station with submersible pumps and emergency overflow dam, and
- A 160mm diameter rising main discharging sewage into oxidation ponds located adjacent to the solid waste dumping site next to the south-western border of the existing Rekgarathile Township.

The topography of Portion 30 (Erf 958) has a natural fall towards the east which implies that sewerage runoff will naturally drain to the pump station under gravity conditions. Bulk sewer infrastructure and link services are therefore available to accommodate the proposed residential development of the Buffer Area around the existing Rekgarathile.

However, no bulk and link infrastructure exists for the infill areas described as the Remainder of Portion 6. Sewerage collected in conservancy tanks on the developed stands in Stella town is currently removed to the oxidation ponds by means of a tanker service operated by the municipality.

The Dr. Ruth Segomotsi Mompati District Municipality (DRSDM) as responsible Water Services Authority (WSA) intends to reticulate the established Stella town with a water-borne system in future. The logical approach would be to install gravity outfall lines according to the topography that will drain towards a pumping station on the southern border of the town as indicated on the attached Layout Plan. Whilst the DRSDM is in the process of planning and sourcing funding for the said sewer infrastructure, conservancy tanks can be installed on the lower sides of the respective development portions which can also be serviced by the current tanker operations. Any internal water-borne sewer network installed to these portions can be connected to the conservancy tanks as an interim measure until such time that the DRSDM has installed the necessary bulk & connector infrastructure.

4.4 ACCESS ROADS

Primary access to the development will be via the existing Rekgarathile and existing secondary access roads branching from the main street in Stella which joins the N18 road between Vryburg & Mahikeng. Access to the stands within the development will be provided from the current ring-road on the perimeter of the existing Rekgarathile Township and the internal road network indicated on the layout plan.

4.5 STORMWATER

The topography of the development site has a natural fall towards the south-east as evident from the surveyed contours. Storm-water runoff will therefore drain towards the water course and dam on the eastern side through open storm-water path-ways provided in the township layout. Overflow from the dam will find its path further downstream towards the salt-pan on the southern-side of town through existing culverts across the N18 as demonstrated on the attached Layout Plan.

4.6 REFUSE

Refuse from the proposed development will be spoiled at the existing municipal solid waste facility located next to the Oxidation Lagoons on the south-western border of Rekgarathile as shown.

The Municipal dumping site that was recently fenced is operated and maintained by the Naledi Local Municipality in accordance with the requirements of the Department of Water & Sanitation (DWS).

The additional refuse volumes from this development can be spoiled at the existing dumping site.

4.7 ELECTRICITY

➤ ***Bulk Incoming Electrical Supply from Eskom.***

A 2MVA 22000V/11000V supply exists for the existing town of Stella and Rekgarathile.

The existing load on the supply is 1.4MVA.

The remaining 600kVA is available to supply the planned 645 residential stands around Rekgarathile at 0.9kVA per stand.

The after diversity maximum demand of 0.9kVA per stand is suitable for low cost housing.

The remaining portions require the following supplies:

519 x Residential 1 stands 460kVA

2 x Residential 2 stands 100kVA

7 x Business stands 700kVA

5 x Light Industrial stands 500kVA

1 x Primary school 100kVA

5 x Crèches 250kVA

5 x Churches 35kVA

Taxi Rank 5KVA

2 x Recreational 125kVA

Total additional load to be supplied by Eskom will be 2 275kVA

Application shall be made to Eskom to upgrade the existing 2MVA transformer to the next available size of 5MVA

➤ ***Existing Electrical Supply***

Power is available for a portion of the development at this point in time.

The capacity of the existing medium voltage overhead line feeding Rekgarathile is sufficient.

The existing network can be extended to supply 645 residential stands adjacent to Rekgarathile.

4.8 INTERNAL SERVICES

➤ **Water**

The internal water supply network will consist of PVC pipes of varying diameter according to designs of the Civil Engineer. The internal network will be designed to ensure ample capacity to comply with fire flow demands.

Bulk water meters for purposes of water management will be provided.

Consumer water meters will be installed by the municipality according to municipal policy.

Isolating valves, fire hydrants and air release valves will be provided to comply with the requirements and regulations of the local authority.

➤ **Sewer**

An internal sewer network of 160mm diameter pipes with related Y-junction connections and inspection eyes will be installed to comply with the minimum specifications stipulated in the SANS 0400/89 Building Regulations.

Manholes and rodding eyes will be constructed at necessary positions to allow for effective maintenance.

The internal sewer system will be connected to the existing main gravity sewer system of the municipality.

➤ **Roads**

The proposed township layout makes provision for internal connector roads providing access to each individual property as shown on the plan.

The design of the internal access roads shall provide for an appropriate road surface.

➤ **Storm-water**

The internal roads of the Proposed Township shall be designed as water carriers to prevent ponding and flooding with associated damage to properties.

Storm-water will generally be handled as surface flow to follow the natural runoff patterns as far as possible.

➤ **Refuse**

Refuse removal is conducted by the Local Authority and their services will be extended to the proposed development.

Refuse shall be removed by the Municipality at regular intervals as required.

➤ **Electricity**

Internal Electrical Supply

Internal low voltage reticulation

Low voltage reticulation shall be provided in the proposed development area. This will consist of new overhead medium voltage lines feeding 6 x 100kVA pole top transformers.

Low voltage reticulation from the transformers will be via overhead ABC bundle conductors.

House connections from overhead line will be airdac cabling.

Split pre-paid meters shall be installed at households

➤ ***Street Lighting***

Street lights shall be installed on low voltage reticulation poles at intervals of not greater than 30meter.

Low voltage poles shall be at least 7m high with street lights mounted at 5 meter height.

Luminaires shall be aluminium die cast fittings.

Street lights shall be fed from street light conductor which will form part of the bundle conductor.

➤ ***Design parameters***

- Medium Voltage : 11000V
- Transforming substation : 11 000/420/242V / 100kVA
- Medium voltage reticulation : 11kV overhead conductors - FOX.
- Low Voltage Reticulation : main feeders – ABC Bundle conductor with streetlight conductor.

Connections – Airdac cables.

- Distribution : Pole top boxes with split pre-paid meters.
- Nominal voltage : 420 / 242V
- Earthing : Neutral / Earth
- Voltage regulation : $\pm 5\%$
- Streetlight Installation : Mounted on Low Voltage poles
- Average street illumination : ± 3.0 lux street lighting controlled by ripple relay.
- Metering / Control : Energy meters shall be mounted in Pole top boxes as per City Council Specifications.

Metering will be split pre-paid.

➤ **FLOOD-LINE**

The proposed development is not affected by the 1-in-100 year flood-line.

➤ **OPERATION & MAINTENANCE OF SERVICES**

All municipal services namely water, sewer, roads, storm-water and electricity infrastructure as well as refuse removal functions shall be taken over by the municipality who will be responsible for the operation and maintenance thereof.

See table below that indicates the level of functions performed in the Stella Area regarding services and infrastructure:

FUNCTIONS PERFORMED	DR RUTH DM	NALEDI LM
Governance and Administration	Yes	Yes
Water Services	Yes	Yes
Municipality is water services authority	Yes	No
Municipality is water services provider	No	Yes
Electricity and Gas Reticulation	No	Yes
Electricity	No	Yes
Street Lighting	No	Yes
Municipality Transport	Yes	Yes
Municipal Public Transport	Yes	No
Municipal Airports	No	Yes
Waste Management	Yes	Yes
Refuse Removal	Yes	Yes
Refuse dumps/solid waste disposal	Yes	Yes
Cleansing	No	Yes
Roads and Storm water Systems	Yes	Yes
Municipal Roads	Yes	Yes
Storm Water Systems in built-up areas	Yes	Yes
Municipality performs the 'District' roads functions	Yes	No
Planning and Development	Yes	Yes
Municipal Planning	Yes	Yes
Building Regulations	No	Yes
Land-use Management	Yes	Yes
Property development (non-municipal property)	No	No
Emergency Services	Yes	Yes
Fire Fighting: Authority	Yes	No
Fire Fighting service provision	No	Yes
Rescue Services	Yes	Yes
Disaster Management	Yes	Yes
Municipal Health	Yes	Yes
Municipal Health: Regulation & facilitation	Yes	No
Primary Health Care	No	No
Primary Health Care	No	No
Environmental Management	Yes	Yes
Environmental Planning	Yes	Yes
Bio-Diversity Management	Yes	Yes
Climate Change Interventions	No	Yes
Alternative planning	No	Yes
Air Pollution	Yes	No
Housing	No	Yes
Housing Facilitation (managing developers, housing lists etc)	No	Yes
Acting as a developer of housing	No	Yes
Landlord (owning and managing housing stock)	No	Yes
Traffic and Policing	No	Yes
Traffic and Municipal Police	No	Yes
Community safety	No	No
Control and Public nuisances	No	Yes
Driver Licencing	No	Yes
Motor Vehicle Licencing	No	Yes

Source : Naledi Local Municipality IDP 2015/2016

MOTIVATION

5.1 NEED

5.1.1 THE NEED FOR LIGHT INDUSTRIAL DEVELOPMENT

The presence of industrial areas inside the urban area plays a vital role in the compilation of the economical, social and design of urban developments. Industrial areas contribute to economic growth and stimulate urbanization. Industrial areas comprise only small percentage of the urban area.

The core function of light industrial areas is a use that is a small-scale industry, with emphases on non-noxious production activities, maintenance and repair, as well as retail trade in connection therewith, that shall not cause the deterioration of the amenity of the neighbourhood or cause disturbance in consequence of noise, appearance, odour or activities or any reason whatsoever and may include offices which are related directly to and are complementary to the main use. Therefore industrial areas could be seen as a labour intensive and high economic growth development. As the unemployment number are increasing in the area and is seen as a weakness the light industrial stands will provide potential employment.

Naledi Town planning Scheme 2004

Clause 25: Schedule 3 Zoning and Use of Land

ZONING CATEGORISATION	
ZONING	PRIMARY USE
Industrial 1	Autority use Builders yard Canteen Commercial use Filling station Funeral parlour Industrial use Light industry Municipal purposes Nursery Offices Parking Place of entertainment Public garage Railway purposes Scrap yard Service station Transport usage Veterinary clinic

Source: Naledi Local Municipality Town Planning Scheme, 2004

5.1.2 THE NEED FOR RESIDENTIAL DEVELOPMENT

According to the Naledi IDP housing backlogs are a thread throughout the municipality. Lack of sufficient township development in this area are a great need.

Baipei Informal Settlement in Ward 1 (south from Rekgarathile existing town) is the main need for residential development in this area. This informal settlement has 678 households and it is clear that there is a desperate need for serviced residential stands. The number of persons per household is 3.7 according to the Naledi Local Municipality IDP 2015/2016. The percentage of informal housing in Ward 1 is 17%. The table below was retrieved from the Naledi Local Municipality SDF (2012) :

REKGARATLHILE TOWNSHIP			
Residential		Informal Netball field	1
Formal houses	398	Informal Rugby field	1
Backyard shacks	113	Business	
Rental rooms (units)	4	Tuck shop	2
Informal houses not on stands	678	General Dealer	1
Social facilities		Tavern	2
Crèche	1	General Land Use	
Church	2	Cemetery	2
Intermediate school	1	Unused & vacant business buildings	2
Community Advice Center	1	Steel Structure	1
Sport & Recreation		Vacant stands	30
Informal Sports fields	2		

Source: Naledi Local Municipality IDP 2015/2016

5.1.3 SPATIAL DEVELOPMENT INITIATIVES

Stella is located in the centre of the agricultural heartland of Dr Ruth S Mompati District Municipality. One of the most important factors is that Road N18 link two of North West Province important towns, Mahikeng and Vryburg.

From a regional economic point of view it makes sense that Stella should be enhanced to develop into a strong growth centre. Stella could be seen as the ideal location due to its centrality with regard to farmers in this area. Stella town can be classified as a sub-regional node to cater for the immediate needs of the surrounding farms. The proposed development will therefore enhance the development axis which is forming between Mahikeng and Vryburg and the rest of the North West Province.

5.1.4 OTHER GROWTH FACTORS

Various other factors could also contribute to growth in the area. These include:

- * Growing social infrastructure stock.
- * Tourism potential in and around Stella.
- * Proximity to the main road from Mahikeng to Vryburg
- * Multiple municipal-owned land in Stella
- * The annual Bees Fees providing of Provincial infrastructure

5.2 DESIRABILITY

The desirability of the township development will be discussed in terms of location, accessibility and physical development conditions.

5.2.1 LOCATION AND ZONING

The concerned properties are located within the municipal area of Naledi Local Municipality. The township is situated approximately 1km west of the Stella Central Business District. The sites is located to the east and south east of the existing town Stella Extension 1 – Rekgaratlhile.

The concerned development area were earmarked for future industrial and residential areas due to the location of existing infrastructure as well as the close proximity. The proposed area is in line with the Naledi Spatial Development Framework, the Naledi IDP and the Naledi Town Planning Scheme.

The concerned properties are surrounded with residential related infrastructure and are currently zoned "Agriculture" in terms of the Naledi Town Planning Scheme, 2004.

5.2.2 ACCESSIBILITY

The proposed development area is accessible due to its location.

Access to the concerned development site will be obtained from the existing entrance road to Rekgarathile, Vrede Street, Hospital Road, Mars Road, Brand Street and Vry Street.

Access to the individual erven within the proposed township will be obtained from the proposed access collector roads.

5.2.3 PHYSICAL DEVELOPMENT FACTORS

In terms of physical development conditions, the sites is suitable for residential and light industrial development as:

- Slopes are moderate but drainage is still possible – 1:45 and 1:5.
- Archaeological restrictions exist – problems regarding excavability – but could be overcome by making use of these areas as municipal uses. No residential erven will be on these areas.

The following statements will serve as further motivation for the township establishment:

- The possibility exists to diversify the economy of Stella – by the use of the light industrial sites.

- Provide additional job opportunities due to the labour intensive nature of industries.
- The area was earmarked for future development areas.
- The provision of infrastructure could unleash the development potential of the area creating the opportunity for the council to broaden their income base.
- The proposed development will be able to accommodate the housing backlog in Stella.
- The proposed development is further favourably located in terms of access to social and business facilities and amenities as provided in an around Stella.
- The proposed development will also provide two Community Residential Unit sites. This will provide much needed rental units in the area for professional people from other areas.
- The large recreation area in the centre of the development will provide recreation to the community such as sport fields, tennis courts and netball fields.
- All the land uses was workshopped with the community at a public participating meeting and the community was excited about the new township establishment.

Figure 2: Engineering Geological Zone Map: Biesjesbult, Stella, Northwest Province.



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ENGINEERING GEOLOGICAL SURVEY

As shown on plan and described in report:
**ENGINEERING GEOLOGICAL INVESTIGATION
 TO DETERMINE THE POTENTIAL FOR TOWNSHIP DEVELOPMENT
 IN BIESJESBULT, STELLA, NORTHWEST PROVINCE.**

**Report Nr.: GS2015105 Dated: October 2015 Design & Drawn: DS
 Georeference: 262ADB Stella Scale App. 1:12 500 (A3)**

GEOSET CC

RAUSCHENBERG, VAN DER MERWE & CO. (Pty) Ltd
 CONSULTING ENGINEERING AND ENVIRONMENTAL GEOLOGISTS
 PO BOX 6096 TEL: (+27) (0)21 522 4904
 7801 BELLVILLE, CAPE TOWN CELL: (+27) (0)82 102 4076
 WESTFAC 082 128 5196 e-mail: david@geoset.co.za

Ingénieurgeoloog
 Engineering Geologist
David S. van der Merwe
 (Bsc, Hons.) (Eng. Geol.), Pr. Geol. Nat. VSA/EGC, MEESGC

Geotechnical Zonation

Site Class (CPT):
 Site Class (CPTA):
 This zone is underlain by slightly compressible and potentially collapsible soils comprising a thickness of less than 750mm, with an expected range of less than 5mm of total soil movement measured at surface. Underlain by coarse or cobbled pebble matrix Standard normal foundation techniques will be adequate for single story residential development, in terms of the NBISC (1995) or SANC (1995) Code of practice, it is classified as CR, and according to the geotechnical classification for urban development after Ruffage, Wood and Birk (1995), as TAF.

Modified Normal Development:
 Site Class (CPTA):
 This zone is underlain by cohesion sand or silt/clay with compressible and collapsible or slightly expansive properties comprising a thickness of more than 750mm, with an expected range of up to 10mm of total soil movement measured at surface that will require modified normal foundation techniques such as soil nails or jet in situ compaction or deep strip foundations. It is underlain by a competent cobbled pebble matrix or calcareous, less than 1.5m deep where the classification is added to the site class.

Inadequately:
 Site Class (CPT):
 A drainage feature and small dam in the centre portion will restrict and limit development to outside the flood line.