

THE APPLICATION FOR TOWNSHIP ESTABLISHMENT ON PORTION 4, 5, 13, 22 AND THE REMAINDER OF PORTION 12 OF THE FARM GEMSBOKSPRUIT 229 JR SUBMITTED IN TERMS OF THE PROVISIONS OF SECTION 57 (A) AND SECTION 59 OF THE THEMBISILE HANI LOCAL MUNICIPALITY BY-LAW ON SPATIAL PLANNING AND LAND USE MANAGEMENT, 2016 READ TOGETHER WITH THE RELEVANT PROVISIONS OF THE SPATIAL PLANNING AND LAND USE MANAGEMENT ACT, 2013 (ACT NO. 16 OF 2013)

MAY 2021

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1 BACKGROUND

The Thembisile Hani Local Municipality has appointed Nkanivo Development Consultants (Pty) Ltd to undertake the project for township establishment on Portion 4, 5, 13, 22 and the Remainder of Portion 12 of the Farm Gemsbokspruit 229 JR. The township establishment application is hereby submitted to the Thembisile Hani Local Municipality in terms of the provisions of Section 57 (a) and Section 59 of Thembisile Hani Local Municipality By-Law on Spatial Planning and Land Use Management, 2016, read together with the relevant provisions of the Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013).

The proposed township will be known as Sokhabo Township as proposed by the Ndzundza-Somphalali Traditional Council.

2 PURPOSE OF THE APPLICATION

The Thembisile Hani Local Municipality has identified a portion of land in the Gemsbokspruit area which forms part of Portion 4, 5, 13, 22 and the Remainder of Portion 12 of the Farm Gemsbokspruit 229 JR for the purpose of township.

The purpose of this township establishment is to enable the Municipality to provide access to decent/properly planned erven, provide adequate engineering/infrastructure services, while simultaneously allowing flexible access to social and economic facilities to previously disadvantaged communities and direct future development through an effective land-use management system resulting in improved livelihoods. The proposed township establishment will also ensure that housing development is in line with the prescribed standards and requirements of the local authority and government departments. Additionally, successful rural development is critical for the long-term sustainability of rural areas.

3 LOCALITY

The proposed township establishment is to be undertaken on Portion 4, 5, 13, 22 and the Remainder of Portion 12 of the Farm Gemsbokspruit 229 JR. The project area is situated within the Thembisile Hani Local Municipality and forms part of the Gemsbokspruit area in the Mpumalanga Province as depicted in the Locality Map in Figure 1 below. The proposed township establishment is located adjacent to the existing Gemsbokspruit – A Township. The project area is bordered by a Provincial Road PI00 (Absalom Road) which is a Regional Distributer. Additionally, the Provincial Road i.e. D2918 transverse the project area and further connects it to the existing Gemsbokspruit – A Township and Kwaggafontein. As a result, the proposed township is highly accessible through the existing provincial roads that also connect the area to key nodes within the region.

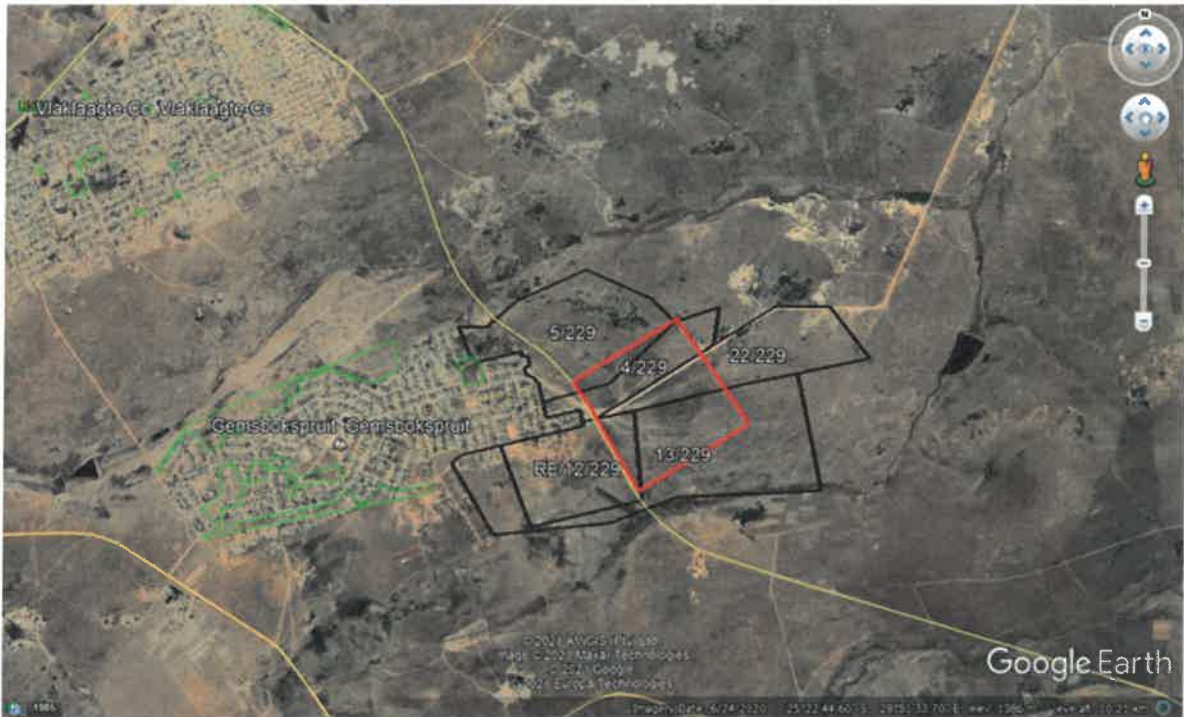


Figure 1: Locality of Map

4 PROJECT DETAILS

4.1 Land Ownership

The proposed township is to be situated on Portions 4, 5, 13, 22 and the Remainder of Portion 12 of the Farm Gemsbokspruit 229 JR. All the properties are owned by the National Government of the Republic of South Africa i.e. Portion 13, 22 and the Remainder of Portion 12 of the Farm Gemsbokspruit 229 JR as per the Title Deed No T4105/1980 attached hereto as Annexure A1, Portion 4 of the Farm Gemsbokspruit 229 JR as per the Title Deed No T7088/1980 attached hereto as Annexure A2 and Portion 5 of the Farm Gemsbokspruit 229 JR as per the Title Deed No T6013/1980 attached hereto as Annexure A3. A parallel application has been forwarded to the Department of Rural Development and Land Reform to initiate the state land release process concerning the proposed township establishment. The subject properties fall under the custodian of the Ndzundza-Somphalali Traditional Council, who requested the Municipality to plan and budget for the project of township establishment based on the need for serviced stands in the area of Gemsbokspruit, see the letter of consent attached hereto as Annexure B. The sizes of the subject properties are as follows as per the SG Diagrams attached hereto as Annexure C and Title Deeds attached hereto as Annexure A1, A2 and A3:

- Portions 4 of the Farm Gemsbokspruit 229 JR - 206,9838 Hectares
- Portions 5 of the Farm Gemsbokspruit 229 JR - 276,8125 Hectares
- Portions 13 of the Farm Gemsbokspruit 229 JR - 174,1544 Hectares
- Portions 22 of the Farm Gemsbokspruit 229 JR - 82.9109 Hectares
- The Remainder of Portion 12 of the Farm Gemsbokspruit 229 JR - 82.5697 Hectares

However, the proposed township will only utilize approximately 116.66 Hectares of the subject properties.

4.2 Area of Jurisdiction

The subject properties are situated within the Thembisile Hani Local Municipality jurisdictional area in the Mpumalanga Province. The subject properties fall under the custodian of the Ndzundza-Somphalali Traditional Council.

4.3 Current Zoning

The subject properties i.e. Portion 4, 5, 13, 22 and the Remainder of Portion 12 of the Farm Gemsbokspruit 229 JR are all currently zoned "Agriculture" in terms of the Thembisile Hani Land Use Management Scheme, 2020 as per the zoning certificates attached hereto as Annexure D.

The uses permitted under the zone "Agriculture" include Agriculture, Agricultural Uses, Forestry Building and Forestry Housing as stipulated in the Zoning Certificates attached hereto as Annexure D. As a result, town planning processes must be followed to alter the current zoning and other development controls of the subject properties to allow for the development of the several land uses envisioned by the proposed township establishment.

4.4 Existing Land Uses

Small parts of Portion 4, 5 and the Remainder of Portion 12 of the Farm Gemsbokspruit 229 JR are currently being used for residential purposes. However, the portion of land where the proposed township is to be situated/established is currently vacant as depicted in the land use map in Figure 2 below.

4.5 Surrounding Land Uses

The western boundary of the project area is dominated by residential properties that form part of the Gemsbokspruit - A Township. Gemsbokspruit - A Township comprises of various social facilities such as educational, recreational and business uses as depicted in the Land Use Map in Figure 2 below. The north, east and southern boundaries of the project area are largely vacant with a few properties used for agricultural purposes.

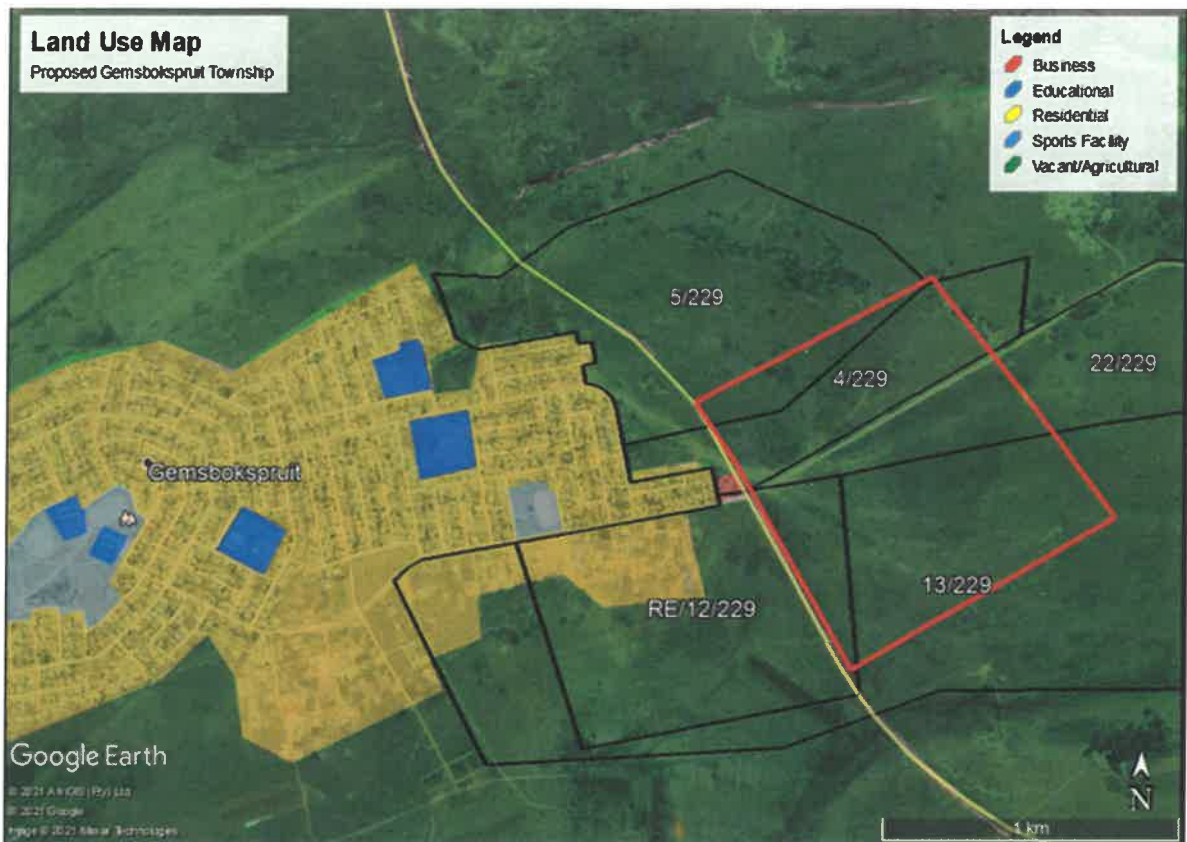


Figure 2: Land Use Map

4.6 Servitudes

Portion 13 of the Farm Gemsbokspruit 229 JR is affected by the following servitudes as per the Conveyancer's Certificate attached hereto as Annexure EI and Title Deed attached hereto as Annexure AI:

- A Right of Way to the water for the animals over Portions 4 & 8 of the Farm Gemsbokspruit 229 JR.
- The property is subject to a Right of Way to the water for the animals in favour of Portions 2, 4 and 5 and subject to a Right of Way in favour of Portions 2, 3, 4 and 5 and the remainders of Portions 2, 4 and 5.
- Right to the use of 1/3 portion of water from the fountain and the dam and is subject to 1/3 right to maintain, clean and repair said dam.
- Right of way to the dam over Portions 5 & 8 of the Farm Gemsbokspruit 229 JR;
- Entitled to a Right of Way 4,72 meters over Portion 5 of the Farm Gemsbokspruit 229 JR.
- Subject to the Right of way over this property in favour of Portions 5 & 8 2/3 share in all water from the fountain and dam subject to the maintenance, cleaning and repair of the said dam.

The Remainder of Portion 12 of the Farm Gemsbokspruit 229 JR is affected by the following servitudes as per the Conveyancer's Certificate attached hereto as Annexure E1 and Title Deed attached hereto as Annexure A1.

- The property is subject to a Right of Way to the water for the animals to Portion 6 Farm Gemsbokspruit 229 JR.
- Right to the use of 1/3 portion of water from the fountain on Portion 6 and Portion 5 and the dam and is subject to 1/3 right to maintain, clean and repair said dam.
- Subject to a Right of Way 4,72 meters in favour of Portion 6 Farm Gemsbokspruit 229 JR.
- Subject to the Right of way over this property in favour of the Government of the Republic of South Africa, owner of a portion marked "a" of Portion 5 of the Farm Gemsbokspruit 229 JR, to the nearest public road and nearest reachable water. Subject to the use of water to the said property for all erven and subject to the laying of a pipeline to the said property and to agree to the use of machinery for electricity development and water over this property.

Portion 4 of the Farm Gemsbokspruit 229 JR is affected by the following servitudes as per Conveyancer's Certificates attached hereto as Annexure E2 and Title Deed attached hereto as Annexure A2.

- The property is subject to the Right of Way (Road) in favour of Portion 3 and
- The remainder of the Farm Gemsbokspruit 229.

The aforementioned servitudes do not affect the proposed township establishment as they lie farther away from the portion of land where the township is proposed. Portion 5 and 22 of the Farm Gemsbokspruit 229 JR is not affected by any servitudes as per the Conveyancer's Certificates attached hereto as Annexure E1 and E3, and Title Deed attached hereto as Annexure A1 and A3.

4.7 Title Deed Restrictions

Portion 4, 5, 13, 22 and the Remainder of Portion 12 of the Farm Gemsbokspruit 229 JR are not affected by any restrictive conditions except for the Title Deed conditions relating to the servitudes on the section above.

4.8 Access and Transportation

The project area is bordered by a Provincial Road P100 (Absalom Road) which is a Regional Distributors. Additionally, the Provincial Road i.e. D2918 transverse the proposed township establishment and further connects it to the existing Gemsbokspruit – A Township and Kwaggafontein. As a result, the location of the proposed township establishment is highly accessible through the existing provincial roads which also connects the area to key nodes within the Mpumalanga Province.

4.9 Topographical Survey

The topographical survey was conducted by Windus M Madubanya as a Professional Land Surveyor who produced the base map comprising of 1m interval contours as well as the depiction of identified site features such as property boundaries/fences, attached hereto as Annexure F.

4.10 Mineral Rights

Since May 2005, all the mineral rights are vested in the state, represented by the Department of Minerals and Energy in terms of the provisions of Section 3 (1) of the Mineral and Petroleum Resources Act 2002, accordingly, the consent of the Department of Mineral Resources will be obtained.

4.11 Land Claims Verification

The letter of the Mpumalanga Regional Land Commissioner dated 16th of April 2021 indicates that there is an existing claim lodged against the parent farm i.e. Farm Gemsbokspruit 229 JR as part of the recent 2014 - 2016 claims. The Constitutional Court ordered that the claims that were lodged between 1 July 2014 and 27 July 2016 are validly lodged, however, it interdicted the Commission from processing those claims until the Commission has finalised the claims lodged by 31 December 1998 or until Parliament passes a new law providing for the re-opening of lodgement of land claims.

It is important to note that it is not within the powers of the Regional Land Claims Commissioner to grant or withhold permission for development or alienation in respect of land subject to a claim until such a claim has been gazetted unless such development would constitute an obstruction to the achievement of the aims and objectives of the Restitution of Land Rights Act 22 of 1994. As a result, the proposed township establishment will not be hindered by the existing land claim because it has not yet been gazetted.

4.12 Small-Scale Diagram

The small-scale diagram is attached hereto as Annexure H. The diagram illustrates the envisaged township to be situated on Portion 4, 5, 13, 22 and the Remainder of Portion 12 of the Farm Gemsbokspruit 229 JR. The portion of land to be utilized for the proposed township measures approximately 116.66 hectares.

5 SPECIALIST STUDIES

5.1 Geotechnical Investigation Report (See Annexure I)

Nkanivo Development Consultants appointed Zwandazwashu Consulting (Pty) Ltd to undertake a Geotechnical Investigation complying with the requirements of a Phase I Geotechnical Site Investigation as per the NHBRC Guidelines, for the proposed Township Establishment. The investigation was conducted to determine the suitability of the project area with regard to the proposed township establishment. The key findings of the report are as follows:

5.1.1 Foundation Recommendations

The report indicates that according to the desktop study, field investigation as well as laboratory testing, the following was concluded:

5.1.1.1 Foundations on residual soils

Residual soils were encountered at various, uneven depths with an average of 0.93m below the ground level. Therefore, the recommended foundation type is a reinforced strip foundation. Reinforcement should be designed by a competent person. The following construction procedures apply.

- All topsoil to be stripped to spoil;
- Foundation trenches for 500mm wide strip footing to be over-excavated to 1.0m wide by 1.3m deep below existing ground level;
- Excavation to be backfill with G6 quality material to a depth of 0.6m existing ground level; (material on-site can be utilised as backfill material)
- G6 material to be compacted in 150mm thick layers to 93% Mod AASHTO density at -1% to +2% OMC;
- Strip footings 500mm wide and adequately reinforced should be constructed at a depth of 0.6m;
- The allowable bearing capacity should be limited to 150kPa on the engineered soil mattress;
- Articulation joints at some internal doors and all external doors;
- Light reinforcement in masonry;

5.1.1.2 Foundations on a slightly weathered Granite

The medium hard rock granite is encountered at a depth of 0.5m below existing ground level. The recommended foundation type is a normal strip foundation onto the medium hard rock granite. The following construction procedures apply:

- All topsoil to be stripped to spoil;

- Foundation excavation to the slightly weathered, medium hard rock at an average depth of 0.8m below existing ground level;
- The excavation onto the weathered Granite to be hand cleaned and all loose material to be removed;
- Concrete blinding to be cast to onto cleaned rock surface before casting foundations;
- The allowable bearing capacity should be limited to 300kPa on the weathered Granite bedrock.

5.2 Civil Engineering Services Report (See Annexure J)

Nkanivo Development Consultants appointed Ukhozikazi Projects (Pty) Ltd to prepare the Civil Engineering Services Report for the proposed township establishment. The report outlines the civil engineering services needed for the proposed township development/establishment, i.e. roads, water, sewer:

5.2.1 New Development Water Demand Calculation

Table I below shows the summary of calculated water demand required for the proposed township establishment as shown on the draft township layout plan (shown in Figure I above).

5.2.2 Water Demand

Land Use	No. of Erven	No. of Units	Area (Ha)	F.A.R	Unit Flow	Unit of Measure	Water Demand (Kl/d)			
Residential	914	914	76.44		0.4	Kl/ unit	365.6			
Business/ Commercial	9		2.81	0.4	0.65	Kl/100m ²	73.06			
Industrial	1		0.38	0.4	0.4	Kl/100m ²	6.08			
Multi-Purpose Centre	1		0.34	0.4	0.6	Kl/100m ²	8.16			
School/ Creche	4		4.44	0.4	0.6	Kl/100m ²	106.56			
Thusong Centre	1		0.41	0.4	0.6	Kl/100m ²	9.84			
Churches	5		0.84	0.4	0.6	Kl/100m ²	20.16			
Public Open Spaces	6		3.18	0.4						
Total AADD							589.46	Kl/d	6.8225	l/s
Total GAADD							648.406	Kl/d	7.5047	l/s
PAADD							972,609	Kl/d	11,2570	l/s

Table I: Calculated Average Water Daily Demand

5.2.3 Water bulk proposed Supply – Option I

This option proposes that the new development site be directly serviced from the Buhlebesizwe/Gemsbokspruit reservoir (Co-ordinates 25°23'40.06"S, 28°51'18.94"E). The current reservoir is approximately 5 kilometers away from the proposed development site, with an estimated 88-meter difference in ground elevation between the reservoir and the development site. As a result of the elevation difference the proposed bulk water can take advantage of the gravity and deliver water to the proposed site. Figure 3 below shows the

proposed 6000m long bulk water pipeline from the reservoir to the proposed development site.

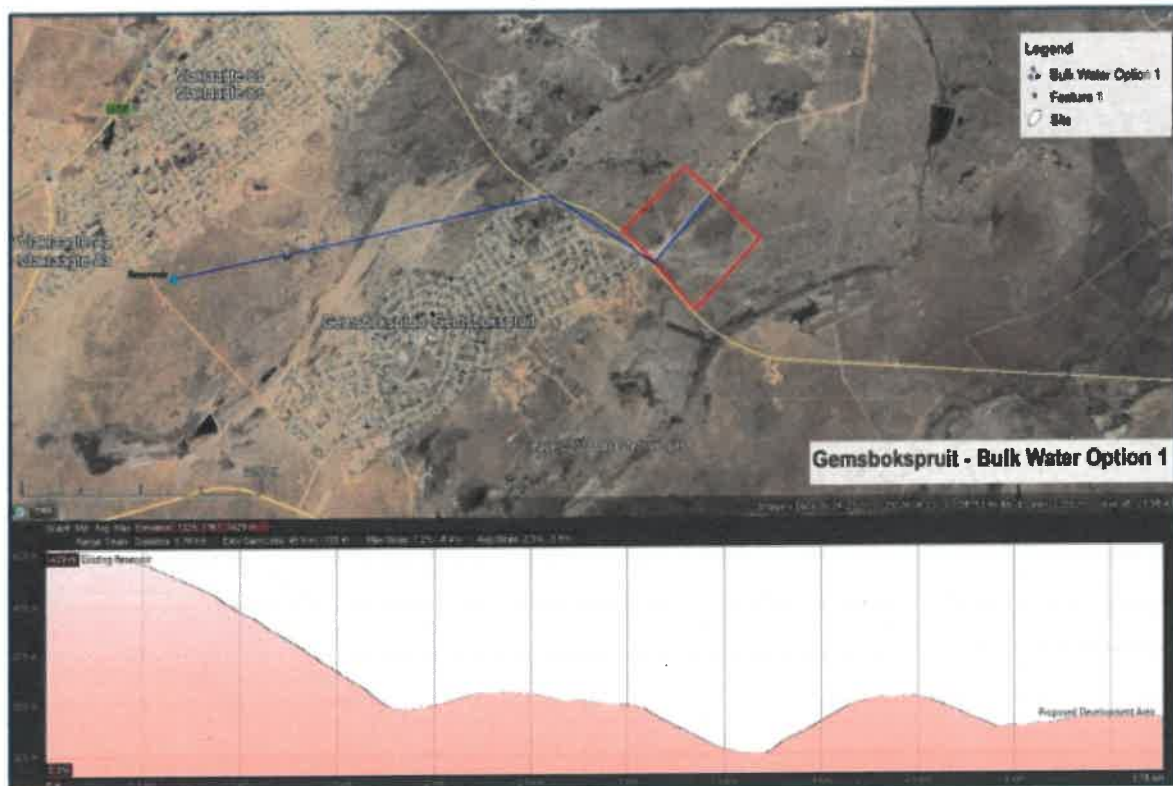


Figure 3: Proposed Bulk Water Supply Option 1 Layout and Long Section

5.2.4 Proposed Bulk Water Supply – Option 2

This option proposes that the new development site be directly serviced from the two Kwaggafontein E reservoirs (Co-ordinates 25°22'0.49"S, 28°55'50.62"E). The current reservoir site is approximately 4.5 kilometres away from the proposed development site as depicted by Figure 4. The estimated bulk water line is a 28meter difference in ground elevation between the reservoir and the development site. The proposed site is higher in elevation in comparison to the existing reservoir site. As a result, the proposed bulk water line will require a booster pump station to deliver bulk water to the proposed site at the required functioning pressure. Figure 4 below shows the proposed 5400m long bulk water pipeline from the reservoir to the proposed development site.

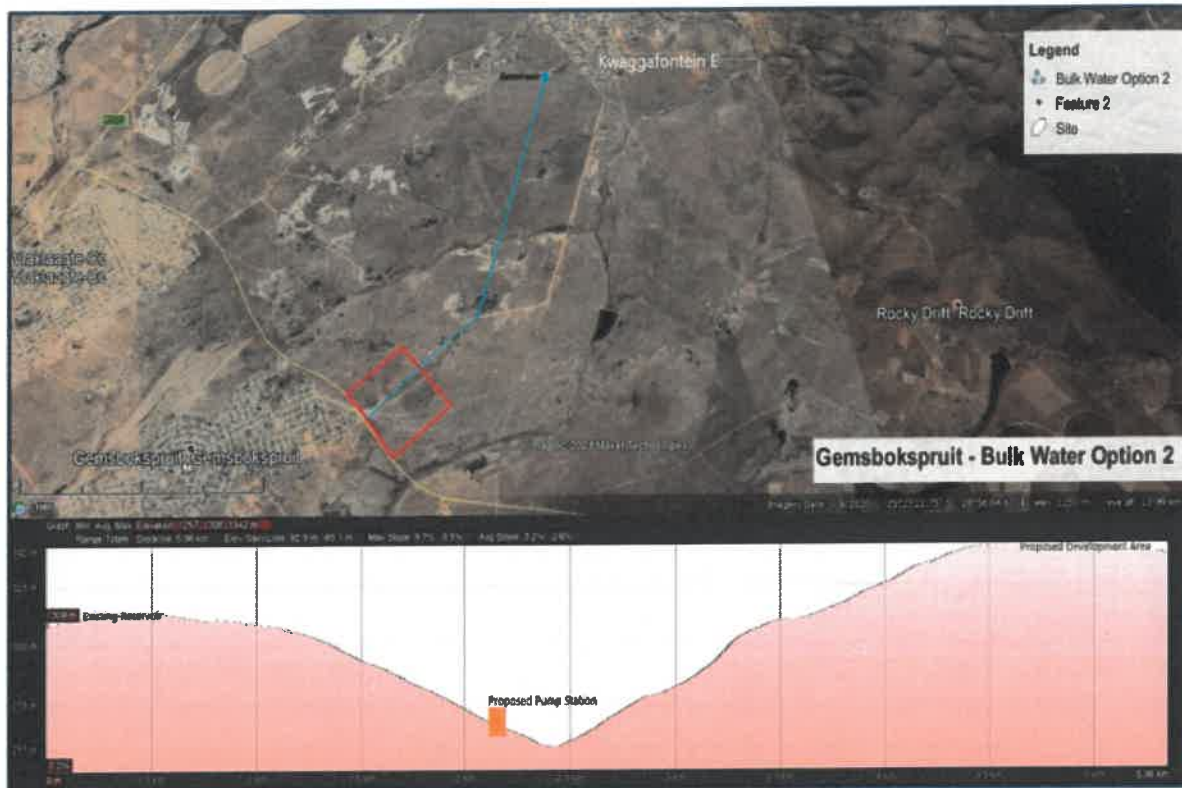


Figure 4: Proposed bulk water supply option 2 layout and long section

5.2.5 Sanitation

5.2.5.1 Findings and Status Quo

A large portion of the municipal population currently lacks adequate sanitation facilities and is served below RDP standards. Pit latrines are available in most parts of the municipal area. Only KwaMhlanga and Tweefontein K have water borne sewerage systems. The rest of the population only has access to VIP toilets. There is currently an existing sewer pipeline between the Tweefontein K wastewater treatment works and Tweefontein while sanitation in the municipality is primarily constituted of pit latrines. Figure 10 shows pit latrines in one of the existing homes.

During the site investigation, it was evident that the proposed has no existing sewer reticulation system. The surrounding areas of Gemsbokspruit and Kwaggafontein all make use of VIP toilets by means of dry sanitation. This is as shown in figure 5 below



Figure 5: VIP Design Considerations

5.2.5.2 Summarized Findings

The area of the proposed new development does not have existing sanitation. Nearby settlements do not have dedicated sewer reticulation and the majority of the settlements use pit latrines. It was observed that the majority of the installed latrines in the neighbouring settlements were VIP toilets and were in fair condition in most homes.

5.2.6 Roads

5.2.6.1 Existing Roads Infrastructure

The following information was recorded on the existing roads:

- The site is bordered by a Provincial Road P100 (Absalom Road) which is a Regional Distributer, according to Mpumalanga Public Works Road Asset Management System (RAMS).
- The access road from the western direction (D2918) is a Provincial gravel road that connects Gemsbokspruit and Kwaggafontein is in satisfactory condition with few potholes, however, a traffic assessment will have to be conducted to detail the intersection upgrade requirements. The access is surfaced with a single seal for approximately 20m.

5.2.7 Stormwater Drainage

5.2.7.1 Existing Stormwater Infrastructure

The information for stormwater infrastructure was recorded as follows:

There is an existing stormwater v-drain that discharges to a box culvert trapezoidal channel (1200mm x 600mm) adjacent to the main road (P100).

- There is another concrete channel that collects the stormwater flow from Gemsbokspruit Township on D2918 that discharges to a box culvert, the flow then discharges towards the watercourse.
- The intersection is furnished with a kerb for surface (road run-off) and stormwater culverts which appear to be in good condition.

5.2.7.2 Planned Stormwater Drainage

The surface stormwater system will consist of a combination of surface channels as well as underground conduits which eventually drain into the natural stream. The surface channels will be designed for the minor storms and the underground conduits will be designed for both the minor and major storms. The stormwater system is also designed to incorporate measures or structures to deal with erosion control, silt control as well as control of the peak discharge from the development.

5.3 Electrical Services (See Annexure K)

Nkanivo Development Consultants appointed BuroTech Consulting Engineers CC to prepare the Electrical Engineering Services Report. The findings of the Electrical Engineering Services Report can be summarised as follows:

The proposed development township has no electrical reticulation networks that exist within the project envelope of the proposed Gemsbokspruit. The proposed township is located approximately 9.3km east-northeast (straight line distance) from the Eskom Gemsbokspruit 132/22kV Substation (The Eskom Gemsbokspruit 132/22kV) substation as depicted by Figure 6 Transformers on the Gemsbokspruit substation 22kV feeder is used to step down the electricity from 22kV to 231-Volt for use in the adjacent township.



Figure 6: Gemsbokspruit 132/22kV- Substation

5.3.1 Estimate Load Demand

The Total Estimate Load Demand is 616.8KVA as per the below table.

Pts 4, 5, R/12, 13, & 22 of the farm Gemsbokspruit 229-JR							Rev 01	2021-04-28	
Notation	AREA OF ERF		PROPOSED ZONING	Units	FAR	DEVELOPABLE FLOOR AREA (m ²)	kVA/unit or VA/m ²	Unit	Total Load (kVA)
	Hectare	m ²							
	76.4400 Ha	764 400 m ²	Residential 1	914		—	2.4	kVA[ADMD]	2 193.6 kVA
	2.6100 Ha	28 100 m ²	Business 1	—	0.50	14 050.0 m ²	80	VA/m ²	1 124.0 kVA
	0.3800 Ha	3 800 m ²	Light Industrial	—	0.70	2 660.0 m ²	40	VA/m ²	106.4 kVA
	0.3400 Ha	3 400 m ²	Municipal	—	0.50	1 700.0 m ²	80	VA/m ²	136.0 kVA
	4.4400 Ha	44 400 m ²	Educational	—	0.40	17 760.0 m ²	20	VA/m ²	355.2 kVA
	0.4100 Ha	4 100 m ²	Municipal	—	0.60	2 460.0 m ²	80	VA/m ²	196.8 kVA
	0.8400 Ha	8 400 m ²	Place of Worship	5		—	13.8	kVA	69.0 kVA
	3.1600 Ha	31 800 m ²	P O S	6		—	13.8	kVA	82.8 kVA
	88.8400 Ha	888 400 m²		925				SUB-TOTAL	4 263.8 kVA
								<i>Overall Diversity Factor Applied</i>	80%
								FINAL DEMAND	3 411.04 kVA
								FINAL DEMAND Say	3 400 kVA

Table 2: Total Estimated Electrical Notified Maximum Demand

5.3.2 Available capacity

Inputs/Comment from Eskom with respect to available capacity at the Gemsbokspruit 132/22kV substation is still pending/outstanding.

During the site assessment conducted on the 26th of April 2021, it was noted that extensive upgrade & new built projects on the 22kV feeders from the Gemsbokspruit substation is currently in process. It is expected that these works are part of the Eskom masterplan for the area to unlock additional electrical capacity and it must be assumed that the Gemsbokspruit Substation have sufficient spare capacity available to service development.

The above will be confirmed and the report updated accordingly once formal inputs/comments from Eskom are received.

5.3.3 Conclusion

The proposed development comprises of the layout of a new settlement in accordance with town planning best practices. The electrification of the future development will comply with the standards and specifications as prescribed by Eskom.

The final estimated maximum demand for the new development is calculated to be 3 400 kVA (3.4MVA).

Given current new built & upgrade construction activities on the 22kV feeders from the Gemsbokspruit substation, it must be assumed that there is sufficient spare capacity. It is recommended that the development can be connected according to Eskom Distribution Standard.

5.4 Traffic Impact Assessment (See Annexure L)

Nkanivo Development Consultants appointed Ajayi-Jantjies-Adams and Associates (AJA Consulting) to conduct the Traffic Impact Assessment concerning the proposed township establishment. Below are some of the findings contained in the Traffic Impact Assessment Report, please refer to the attached report for more details on the Traffic Impact Assessment.

5.4.1 Access to the site

Access to the proposed development is proposed via Somphalali Road (D2918) which in turn intersects with Road R544. Intersections along Somphalali Road will have to be positioned and designed in line with relevant road authorities (i.e. Mpumalanga Public Works Roads & Transport and Thembisile Hani Local Municipality) guidelines. The designs thereof will require approvals from the relevant road authorities. Somphalali Road will have to be classified as a Class 4 road as it will serve an accessibility function to the proposed development.

5.4.2 Traffic Counts

Classified / Turning movement counts were conducted at one station, Stations I at the intersection of Somphalali Road and Road R544 as shown in Figure 7. The turning movement counts were classified into vehicle types for modal split analysis. The raw data that was collected is attached as Annexure A of the Traffic Impact Assessment report.



Figure 7: Traffic Counting Stations

5.4.3 Turning movement traffic counts

The 12-hour traffic counts data for turning movement counts is summarized in Table 3.

APPROACH	12 Hour Volume (2346)			
	Left	Through	Right	TOTAL
Road R544 (Northbound)	104	717	29	850
Somphalali Road (Westbound)	31	35	9	75
Road R544 (Southbound)	19	749	258	1026
Somphalali Road (Eastbound)	282	33	80	395

Table 3: Turning Movement Traffic Volume at Road R544 and Somphalali Road (Station I)

The peak hour volumes for the intersection were recorded as shown in Table 4. The peak hours for the intersection are indicated in the table.

Table 3: Peak hour traffic volume at Road R544 and Somphalali Road (Station 1)

APPROACH	Morning Peak Volumes (06h45 to 07h45)			
	Left	Through	Right	TOTAL
Road R544 (Northbound)	7	45	3	55
Somphalali Road (Westbound)	2	2	-	4
Road R544 (Southbound)	-	97	36	133
Somphalali Road (Eastbound)	29	2	9	40
APPROACH	Afternoon Peak Volumes (15h00 to 16h00)			
	Left	Through	Right	TOTAL
Road R544 (Northbound)	9	99	2	110
Somphalali Road (Westbound)	2	2	-	4
Road R544 (Southbound)	-	77	25	102
Somphalali Road (Eastbound)	24	2	9	35

Table 4: Peak Hour Traffic Volume at Road R544 and Somphalali Road (Station 1)

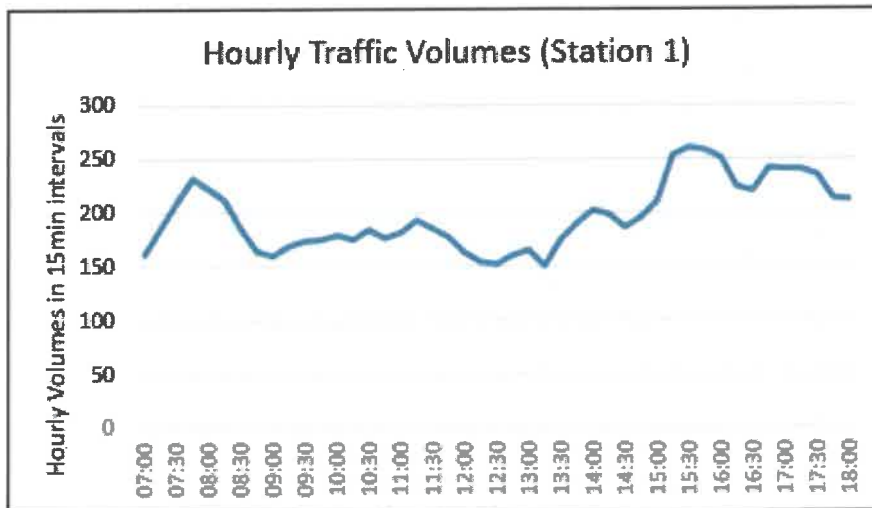


Figure 8: Hourly Traffic Volumes (Station 1)

It can be noted in Table 4 that for the Road R544 and Somphalali Road (Station 1) intersection, the morning peak hour is from 06h45 to 07h45 and the afternoon peak is from 15h00 to 16h00. The intersection peak hour volumes are 232 and 251 vehicles per hour for the morning and afternoon peaks respectively.

5.4.4 Traffic Demand

5.4.4.1 Trip Generation

The proposed development will generate trips to the proposed access/exit point and will generate additional traffic on the road network based on the proposed Site Development Plan.

The proposed development is as discussed in Chapter 2 of the Traffic Impact Assessment report.

The trips to be generated by the proposed development are as detailed in Table 5.

Description	Units	Size	Trips Generated			
			Daily	AM	PM	W/end
Residential Single Dwelling Units	No.	914	1097	274	274	137
Business (Retail)	m ²	28100	843	67	67	506
Light Industrial	m ²	2660	48	7	7	1
Municipal Offices	m ²	3400	202	50	50	50
Educational (Schools)	Student	965	386	145	48	0
Educational (Creches)	Student	241	145	48	39	0
Government (Thusong Centre)	m ²	4100	244	61	61	61
Places of Worship	Seats	5000	200	50	50	200
Public Open Space	ha	3,18	37,5	20	20	20
			3202	723	617	975

Table 5: Development Trip Generation

The proposed development will generate 3202 daily trips, 723 morning peak trips, 617 afternoon peak trips and 975 weekend peak trips. The traffic to be generated by the proposed development will gain access mainly via the existing intersection of Road R544 (Absalom Road) and Somphalali Road.

5.4.5 Conclusions

Given the findings in the Traffic Impact Assessment Report, the following conclusions are drawn:

- Access to the proposed Development is proposed via the existing intersection of Road R544 and Somphalali Road.
- Traffic counts and site observations were conducted on the 13th of April 2021.
- Tomtom traffic index of 2020 reported a reduction in congestion levels due to the national lockdown that was instituted due to the COVID-19 pandemic.
- The effect of the lockdown and reduced traffic volumes was factored into the traffic analysis.
- The proposed development will generate 3202 daily trips, 723 morning peak trips, 617 afternoon peak trips and 975 weekend peak trips
- The traffic growth that was adopted for this report was aligned to the GDP rate that was expected for the period 2013 to 2018 of 3.3% per annum.
- Design and Planning Horizon analysis was undertaken for the intersection in question.
- The intersection performs at acceptable Levels of Service (LOS) under the prevailing traffic conditions.
- The intersection will require upgrades to be able to perform at acceptable LOS under the Planning Horizon Traffic Conditions (refer to chapter 6.1 of the Traffic Impact Assessment Report).

- All the streets adjacent to the site including Somphalali Road will be classified as residential Class 4, 5 and 6 urban roads.
- The proposed road reserve widths are 16m to 40m for Class 4 roads, and 10m to 25m for Class 5 urban roads.
- Public Transport constitutes about 8% of traffic in the study area.
- Public Transport facilities such as bus stops must be provided along all major access roads (refer to chapter 8 of the Traffic Impact Assessment report).
- NMT and Universal Access infrastructure need to be provided for within the road reserve (refer to chapter 9 of the Traffic Impact Assessment report).
- The first-order construction cost estimate is R 7 000 000.00 (refer to chapter 7.2 of the Traffic Impact Assessment report).
- It should be noted that the estimate is based on schematic layouts which were completed without detailed services information.

5.4.6 Traffic Impact Assessment Recommendations

Given the findings in the report, the following recommendations are made:

- The proposed development should be considered favourably from a traffic engineering point of view by the relevant authorities given the proposed road, public transport and NMT upgrades.
- Detailed designs for the proposed road improvements should be undertaken by a professional engineer/technologist with suitable road design experience.

5.5 Floodline Assessment (See Annexure M)

Nkanivo Development Consultants appointed Dalimede Projects (PTY) LTD to conduct the Floodline Assessment concerning the proposed township establishment. Below are some of the findings contained in the Floodline Assessment Report, please refer to the attached report as Annexure M for more details on the Floodline Assessment.

5.5.1 Flood analysis

To make the analysis possible, properties of the catchments that influence the runoff relating to the 1:100 return flood event need to be determined. These properties are described in the following sections.

5.5.1.1 Catchment Properties

The catchment topography is composed of mainly flat areas. The topographic elevation ranges from 1290m to 1420m above sea level. The landscape soils are mostly with slow infiltration rates with restricted permeability (Schulze, 2010). The soils are classified to have a moderately high runoff potential.

The Mean Annual Precipitation (MAP) of the catchment was determined from weather stations gridded from in the vicinity of the site. The MAP for the catchment is estimated to be 668mm.

Station Name	SAWS	Distance (km)	Record (Years)	Latitude		Longitude		MAP (mm)
	Number			(°)	(')	(°)	(')	
Kwaggafontein	0551769 W	9.7	26	25	19	28	56	669
Verena-Pol	0552029 W	15.5	27	25	29	29	1	668
Zustershoek-Pol	0551386 W	19.9	30	25	25	28	43	606
Enkeldoorn-Pol	0551354 W	21.6	54	25	24	28	42	600
Hawerspruit	0514452 W	22	39	25	31	28	44	606
Klipplaatdrift	0551853 W	25	34	25	12	29	1	561

Table 6: Rainfall Data

The climate is characterised by hot and rainy summers for a long period as well as cool and dry winters over a short period.

5.5.1.2 Catchment Delineation

There was one catchment that was delineated. The catchment areas are within the Olifants Water Management Area. Catchments in the table below were delineated to cover the stream nearest to the project boundary and were utilised to determine the flood peaks for 1:100 return extreme events. The catchment information is listed in Table 7 below.

Catchment Site	Catchment area (km ²)	Remark	Quaternary catchment
C1	12.717	Catchment	B32G

Table 7: Catchment Area



Figure 9: Quaternary Catchments



Figure 10: Catchment delineation (yellow line boundary)

5.5.1.3 Floodline Conclusion and Recommendations

The determination of the 1:100 return period floodlines was undertaken for the site of the proposed development. The results of this determination indicate the extent of the areas that will be inundated by the 1:100 return design flood.

It is recommended that a buffer zone of 20m should be provided between the 1:100 flood line and any proposed development.

The lateral extent of the 1:100 return flood line is shown in Annexure 2 of the Floodline Assessment report.

5.6 Ecology Assessment (See Annexure N)

Nkanivo Development Consultants appointed Afrika Enviro & Biology to conduct the Ecology Assessment concerning the proposed township establishment. Below are some of the findings

contained in the Ecology Assessment Report, please refer to the report attached hereto as Annexure N for more details on the Ecology Assessment. The Ecological sensitivity map is depicted in Figure 11 below.

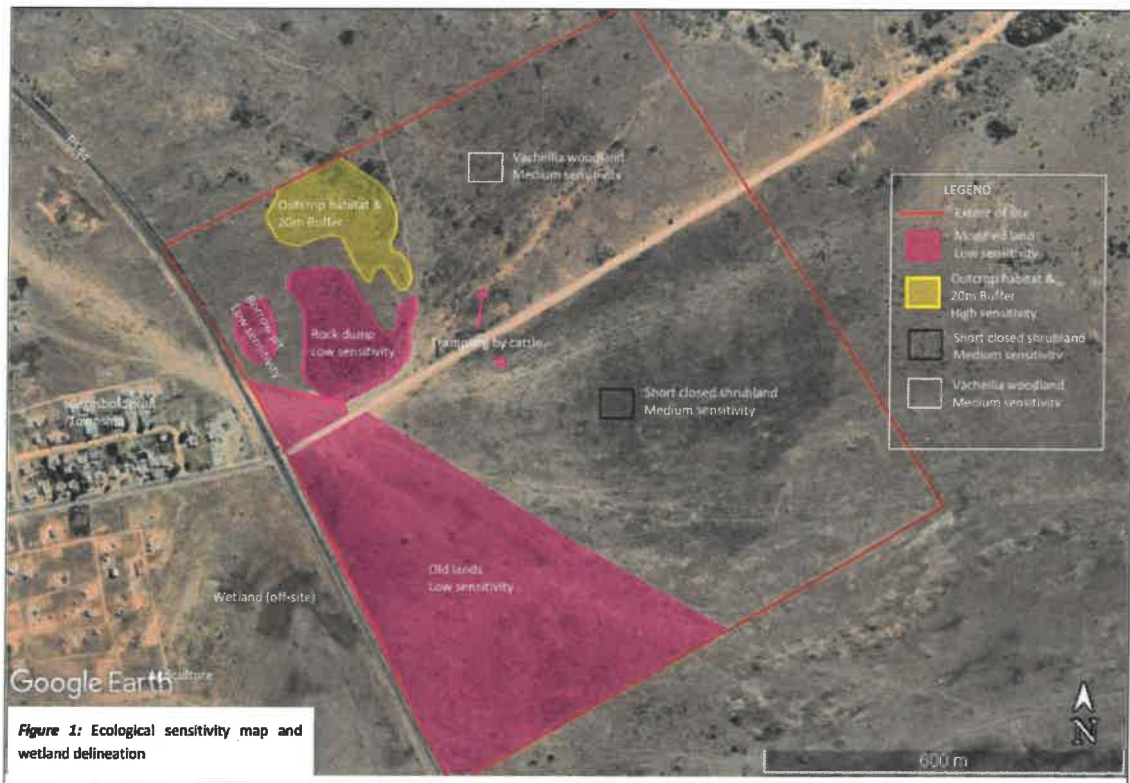


Figure 11: Ecological sensitivity map and wetland delineation

Nature of impacts	Duration	Intensity	Probability	Significance before mitigation	Mitigation measures	Significance after mitigation
Loss of vegetation	Long term	High	Definite	High	<ul style="list-style-type: none"> Retain indigenous trees where possible. Limit vegetation clearing to the activity footprints only. 	Medium
Loss of important flora species	Long term	High	Probable	High	<ul style="list-style-type: none"> Retain large protected trees where possible. Identify and relocate important species and individuals before commencement. Conserve the rocky outcrop habitat with a 20m buffer zone. 	Medium

Increased levels of weeds	Long term	High	Definite	Medium	<ul style="list-style-type: none"> • Implement weed control program. • Use only indigenous flora for landscaping. 	Low
Changes to- and fragmentation of habitats	Long term	High	Definite	High	<ul style="list-style-type: none"> • Follow all the above measures. • Construction activities must be kept to the minimum and be respectful of the environment. • Conserve the rocky outcrop habitat with a 20m buffer zone. • Strict access control to natural habitats and no unauthorized collection of wood or plants by construction personnel or residents. 	Medium
Negative impacts on terrestrial fauna	Long term	High	Definite	High	<ul style="list-style-type: none"> • Construction personnel must be familiarized with the sensitivity of specific species and the importance of not disturbing any wild animals. • Reptiles and/or subterranean vertebrates that are unearthed during construction must be allowed to escape to the surroundings or must be relocated by a specialist. • No one is allowed to kill snakes or any other wild animals. • Excavations must be inspected daily to rescue trapped animals. 	Low

Negative impacts on local ecology	Long term	Medium	Definite	High	<ul style="list-style-type: none"> • Follow all the above measures. • It will be important to protect the surrounding environment from potential pollution originating from the operational phase. Solid waste disposal and wastewater disposal must be strictly regulated and monitored. 	Low
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Table 4 Impact assessment and mitigation measures

5.6.1 Ecology Conclusions:

It is concluded that although the transformation of land for this project will have a relatively large ecological footprint, the potential negative impacts and consequences can be mitigated to reduce the magnitude of the potential impacts on the natural environment.

5.7 Heritage Impact Assessment (See Annexure O)

Nkanivo Development Consultants appointed Umlando: Archaeological Surveys and Heritage to conduct the Heritage Assessment concerning the proposed township establishment. Below are some of the key findings contained in the Heritage Assessment Report, please refer to the report attached hereto as Annexure O for more details.

5.7.1 Heritage Impact Assessment Conclusions:

- No heritage sites were noted within the study area.
- Only three historical settlements were identified adjacent to the site
- The aforementioned settlements may have human graves and should not be affected in any manner, especially by access roads.
- The development must ensure that the three settlements are demarcated before construction occurs since human graves could occur within the settlements.
- No further mitigation is required; however, the development must ensure that the three settlements are demarcated before construction occurs since human graves could occur on site.

5.8 Stormwater Management Plan (See Annexure P)

Nkanivo Development Consultants appointed Dalimede Projects (PTY) Ltd to conduct the Stormwater Management Plan concerning the proposed township establishment. Below are some of the findings contained in the Stormwater Management Plan report, please refer to Annexure P for the detailed Stormwater Management Plan.

The following recommendations are made for the proposed township development:

- 1) That the stormwater design parameters used in the design of the stormwater management system are accepted and approved.
- 2) The detailed design of the stormwater system includes recommendations of this plan.
- 3) Rainwater harvesting should be encouraged at all residential dwellings.
- 4) Rainwater harvesting tanks should be included in building plans submitted to the municipality for building plan approval.
- 5) The stormwater attenuation ponds should be constructed off-channel before draining into the stream.
- 6) The stormwater system must be kept separate from the sewerage system.
- 7) All chemicals, cement, fuel and other hazardous material used during construction should be stored in controlled areas and not lower than the internal road.
- 8) The concentration of stormwater should be prevented where possible, but energy dissipaters should be provided in areas of concentration.
- 9) On completion of every construction phase within the development, comprising the construction of buildings, roads and parking areas, all remaining exposed embankments and open areas must be vegetated as soon as possible, including the use of "Soilsaver", where necessary.
- 10) During the construction phase, the following aspects shall be closely monitored by the ECO to ensure the contractor complies:
 - ❖ Temporary berms and cut-off drains must be provided on-site to collect runoff, especially until the stormwater attenuation pond is complete and functional.
 - ❖ Silt screens must be provided at the catch pits during road/stormwater construction.
 - ❖ Topsoil must be conserved on-site and prevented from entering the stormwater system.
 - ❖ Exposed embankments, cut/fill slopes and open areas must be vegetated as soon as possible to reduce runoff.
 - ❖ Dust control during construction must be always applied.
 - ❖ Excess spoil material from topsoil or bulk earthworks must be placed in areas or even removed entirely off-site to minimise silt deposition, scouring and soil erosion.
 - ❖ Post-construction, all exposed areas must be covered in vegetation, grass, or landscaped.

5.9 Environmental Impact Assessment (See Annexure Q1 and Q2)

Leago Environmental Solutions has been appointed by Nkanivo Development Consultants on behalf of Thembisile Hani Local Municipality as an Independent Environmental Assessment Practitioners (EAP) to undertake an Environmental Impact Assessment Process for the proposed township establishment Portion 4, 5, 13, 22 and the Remainder of Portion 12 of the Farm Gemsbokspruit 229 JR, Thembisile Hani Local Municipality in the Mpumalanga Province.

The scoping report attached hereto as Annexure Q1 indicates that the NEMA EIA Regulations, 2017 identifies the following listed activities associated with the proposed project that requires environmental authorisation by means of a full EIA:

(a) Government Notice No. R325, Listing Notice 2 Activity 15

“The Clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for-

- (i) The undertaking of a linear activity; or
- (ii) Maintenance purposes undertaken in accordance with a maintenance management plan”

(b) Government Notice No. R327, Listing Notice 1 Activity 28

Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development:

- (i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or
- (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare; excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.

The scoping report has been submitted to the Mpumalanga Department of Agriculture, Rural Development, Land and Environmental Affairs in Nkangala District as per the acknowledgement letter attached hereto as Annexure Q2.

6 MOTIVATION

The township establishment application is hereby submitted to the Thembisile Hani Local Municipality in terms of the provisions of Section 57 (a) and Section 59 of the Thembisile Hani Local Municipality By-Law on Spatial Planning and Land Use Management, 2016 read together with the relevant provisions of the Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013).

6.1 Policy Documents

6.1.1 Guidelines for Human Settlement Planning and Design

To design and plan the proposed township, several principles had to be taken into account, this includes conforming to the planning principles as stipulated in the Guidelines for Human Settlements and Design, Volume I. The following section looks at the available social facilities within the immediate 4-kilometer radius. The analysis of existing social/community/institutional facilities is combined with the demand that arises from the proposed residential erven. Table 8 below details the minimum threshold required for the provision of certain social and community facilities as sourced from Human Settlement Planning and Design Volume I.

Facility	Locality	Access	Size and Dimensions	Use capacities and threshold
Crèche/nursery school	They should be within walking distance of residential units	A maximum walking distance of 750 m	Minimum size for the facility: 130 m ²	Estimated minimum population: 5 000
Primary school	They should be located within easy reach of the local areas which it is intended to serve. As a result, it needs to be located close to, but not necessarily along, a public transport route. Maximum walking distance: 1,5 km	Maximum travel time: 20 minutes (whether by foot, bicycle or by vehicle)	The minimum size of a primary school site is estimated at 2,4 ha	Estimated minimum population: 3 000 - 4 000
High school	They should be situated on a major transport route with public transport stops.	Maximum travel time : 30 minutes. Maximum walking distance : 2,25 km.	The minimum size of a high school is estimated at 4,6 ha	Estimated minimum population: 6 000 - 10 000.

Clinic	Clinics should be accessible to the greatest number of people and as such should be located close to public transport stops. The facility need not be located along a major route and can be located a block or two back, in quieter surroundings.	Maximum walking distance: 2 km. Or within a maximum walk of 5 minutes from the public transport stop to the facility. Maximum travel time of 30 minutes to reach the facility.	The following guidelines are suggested: • 0,1 ha per 5 000 people • 0,2 ha per 10 000 people • 0,5 ha per 20 000 people • 1 ha per 40 000 people • 1,5 ha per 60 - 80 000 people.	An estimated minimum of 5 000 people
Libraries	Should be easily accessible, preferably on main thoroughfare convenient to main traffic and transportation routes	Walking distance: 1,5 km - 2,25 km. Maximum travel time of 20-30 minutes	Libraries require a minimum of two books per capita and the size of the library will depend upon the population being served. The suggested minimum size is 130 m ²	Libraries can serve populations of 5 000 - 50 000.
Community Centres	Should be easily accessible to these communities, preferably on the main thoroughfare in close proximity to public transport stops	The suggested walking distance is 1,5 km - 2,25 km. A maximum travel time of 20 - 30 minutes is recommended.	The estimated minimum size is 5 000 m ²	A minimum population of about 10 000 people
Religious centres (churches,	The location will generally depend on the community	Maximum walking distance: 1,5 km. The	The size will depend on the facilities provided (i.e. if	It is estimated that approximately 2 000 people are

<p>synagogues, mosques, etc.)</p>	<p>being served and the existing facilities in the area surrounding the site</p>	<p>maximum travel time by foot or public transport or vehicle: 20 minutes</p>	<p>there is a religious school attached, the site will be much larger). A site can therefore range from 150 m² - 3 000 m².</p>	<p>required to support a single church.</p>
<p>Police stations</p>	<p>Community police stations should be located central to all the communities which they are required to serve and should be on the main thoroughfare - so that emergency vehicles can be easily dispatched to adjoining communities.</p>	<p>a walking distance of 1,5 km is recommended. Maximum travel time: 20 minutes</p>	<p>Varies between 0,1 ha - 1 ha, depending on the type of facility provided.</p>	<p>Estimated minimum population: 25 000.</p>

Table 8: CSIR Guidelines



Figure 13: Gembokspruit Clinic



Figure 14: Police station near Gembokspruit

6.1.2 Nkangala District Municipality Integrated Development Plan

The Nkangala District Municipality Integrated Development Plan (IDP) is guided by the following principles and associated development activities but not limited to:

- **Ensure Integrated Human Settlements:**
 - **Commitment 1:** Enhancing the capacity of local municipalities to accelerate the upgrading, formalization and integration of informal settlement
 - **Commitment 2:** Ensuring that serviced land is available and sold to affording community members
 - **Commitment 3:** Ensuring that municipalities develop integrated and coordinated planning and development strategies to deal with social exclusion, environmental threats, economic inefficiencies, decaying infrastructure and the impact of new technologies
 - **Commitment 4:** Promoting better connected and coordinated rural towns and villages for sustainable growth and Development
 - **Commitment 5:** Availing state-owned land to respond to rapid urbanization, economic development and settlement of communities
 - **Commitment 6:** Ensuring the development of by-laws to avert the mushrooming of informal settlements and land invasion in constituent local municipalities
 - **Commitment 7:** Ensuring continuous assistance to constituent local municipalities through formalization and township establishment

The proposed township establishment (development) is aligned with the aforementioned commitments. The intention is to establish a township on Portion 4, 5, 13, 22 and the Remainder of Portion 12 of the Farm Gemsbokspruit 229 JR. The proposed township establishment will play a major role in enabling the Municipality to invest in services and infrastructure such as water reticulation, sewerage, Stormwater management, etc. Moreover, the proposed township establishment is a step towards the full realisation of integrated human settlements whereby residents have secure tenure and easy access to employment opportunities.

According to the Nkangala District Municipality IDP, the Thembisile Hani Local Municipality is the most affected, underdevelopment with high levels of services backlog. The population within the Municipality increases rapidly in large numbers of migrants to the areas for employment which in turn leads to high demands for affordable housing and basic services, highlighting that there is a need for the provision of adequate and affordable housing. Figure 15 below indicates the level of access to formal housing in the Thembisile Hani Local Municipality in relation to the other Municipalities in the District. Thembisile Hani is second with high access to formal housing within the District, however, the need for the provision of sustainable housing remains within the Municipality.

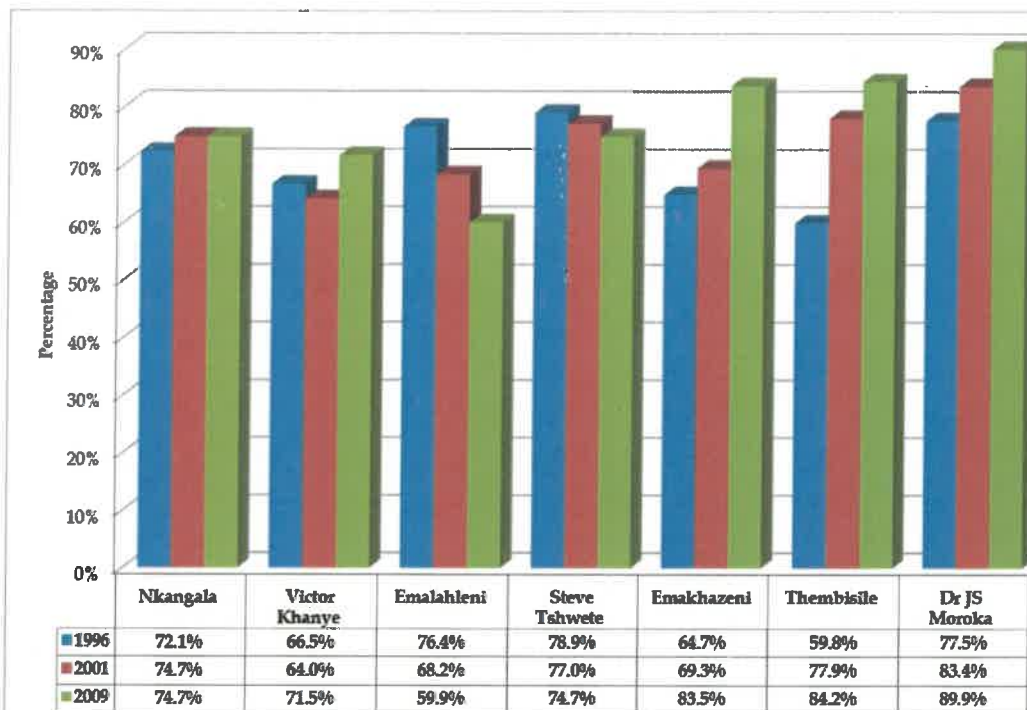


Figure 15: Area with access to formal housing- (Source, Nkangala District Municipality IDP)

As a result, the proposed development will assist the Municipality to provide access to formal housing.

6.1.3 Thembisile Hani Local Municipality Integrated Development Plan (IDP) 2019/2022

The vision of the Thembisile Hani Local Municipality IDP is to better the lives of the people through equitable and sustainable service delivery and economic development and aims to towards achieving its vision by:

- Sustainable, accountable and accelerated service delivery
- Promoting socio-economic development
- intensifying community participation
- Shared economic growth
- Allocating resources within budgetary constraints
- Ensuring effective and efficient financial governance
- Applying good and transparent corporate governance and Batho Pele principles to create a high-performing municipality.

The Thembisile Hani Local Municipality aims to achieve the following strategic objectives:

To provide households with basic services including water, adequate sanitation, adequate public lighting and accessible roads:

The proposed land development application is in line with the above goal. It will ensure and promote sustainable livelihoods by providing sustainable human settlements that are well

located, closer to employment opportunities and with adequate access to basic services such as water, sanitation, adequate public lighting, refuse removal and electricity. The Municipality aims to provide 20 000 households with access to adequate sanitation. Therefore, the well-configured erven will simplify the provision of sanitation.

To create integrated and sustainable human settlements through the proactive planning and development of land:

The Municipality aims to establish and formalize priority settlements in line with national norms and standards. As a result, the proposed development is aligned with the IDP, due to its location within 10 kilometres from the Kwaggafontein Central Business District that houses various economic opportunities. Moreover, the proposed township will be an extension of the existing Gemsbokspruit A – Township. The proposed development will ensure that present and future housing needs are proactively guided through a land use management system. The development application has also taken into account the Integrated Development Plan as it aligns with the Municipality's quest to address the housing backlog that stood at 9 764 in 2009.

To create a conducive environment for economic development, investment attraction and job creation:

The proposed development will improve the economic status of the Municipality. The proposed township proposes a few business erven along the existing provincial road which is going to play a major role in strengthening the economic status of the Municipality as well as the Gemsbokspruit area.

Additionally, the proposed development is also aligned to the objectives of a Human Settlements Sector Plan as outlined below:

- To accelerate the delivery of houses as key for poverty alleviation.
- To utilise the provision of human settlements as a major job creation strategy.
- To leverage growth in the economy.
- To combat crime, format social cohesion and improve quality of life for the poor.
- To support the function of the entire single residential property market to reduce duality within the sector by breaking the barriers between the first economy residential property boom and the second economy slump.
- To ensure the effective allocation of limited resources (specifically financial and human) to a large pool of potential development interventions.
- To provide a formal and practical method of prioritizing human settlements projects and obtaining political consensus for the sequencing of their implementation.

6.1.4 Thembisile Hani Local Municipality Spatial Development Framework

The spatial vision of the municipality is to better the lives of people through equitable, sustainable service delivery and economic development. The Spatial Development Objectives of the Thembisile Hani Local Municipality is based on the following:

- To consolidate, through infill development and densification, the urban structure in the form of Transit Orientated Development around the Moloto Rail Initiative. This will be achieved by way of upgrading of existing infrastructure (rail) and improved access to public transport;
- To promote the utilisation of public transport along the Moloto Road and within the residential areas;
- To consolidate economic activities at some strategic locations in the municipal area.
- To promote the provision of community facilities and services, as well as the development of economic activity by way of the concept of Multi-Purpose Service Delivery Centres;
- To formalise all informal towns and settlements in the Thembisile Hani area in order to provide engineering services;
- To continuously implement a program of Tenure Upgrading in the formalised towns;
- To utilise the nature reserves in the municipal area to promote eco-tourism;
- To enhance biodiversity conservation through environmentally sustainable development;
- To promote extensive, small scale and community farming in the southern portions of the municipal area; and
- To identify and promote cultural historic sites

The proposed township establishment is in line with the abovementioned principle. The development will encourage the use of public transportation due to its proximity to the two provincial roads. Additionally, the proposed development will consolidate and strengthen economic activities in Gemsbokspruit Area by ensuring that business/retail activities are located along major roads. The proposed township also accommodates various social and community facilities such as a primary school, multi-purpose centre, Thusong centre, etc. in line with the Municipal objective outline above. The proposed development will also play a major role in ensuring that people have access to secure tenure. Most importantly, initiating township establishment, will also promote the provision of service delivery such as water, roads, sewage, and drainage system, etc., to the community.

Additionally, according to the Mpumalanga Sustainable Human Settlement Master Plan, the Thembisile Hani Local Municipality had about 63 296 formal houses and 12 334 informal houses in 2011. The 12 334 informal houses comprised 2 875 traditional structures, 3 807 backyard units, and 5 654 structures in informal settlements. It also projected incremental subsidized demand of 2 800 units by 2032, and 32 200 bonded units by the same time. As a

result, the proposed development will contribute towards addressing housing challenges within the Municipality Specifically the Kwaggafontein and Gembokspruit area.

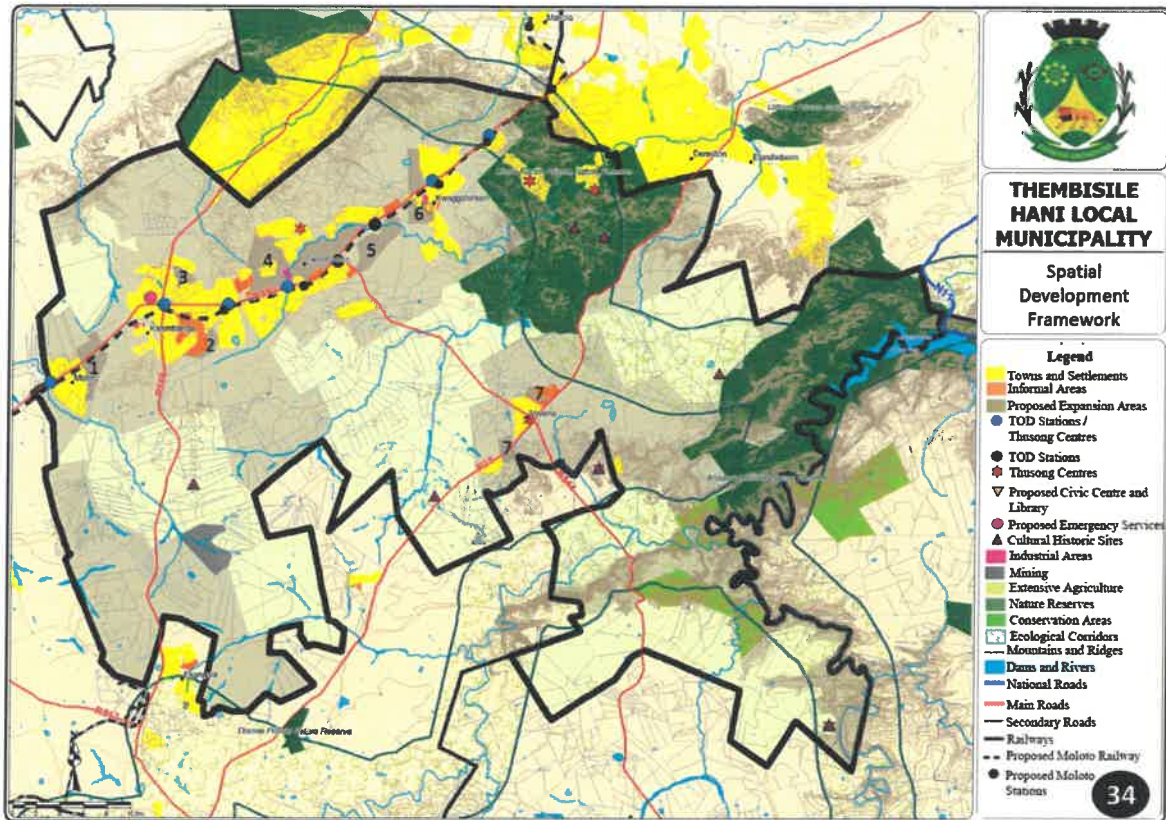


Figure 16: Thembisile Hani Locality Municipality Spatial Development Framework

The SDF indicates that there are about five other emerging or secondary activity nodes in the Thembisile Hani area namely: the vicinity of Moloto, Enkeldoornoog B, Vlaklaagte 2, Mathys Zyn Loop to the north, and the Verena around the intersection between routes R25 and R544 in the southern parts of the Thembisile Municipality as depicted by Figure 16 above. Therefore, the proposed township is within a reasonable distance to the abovementioned nodes as well as the Kwaggafontein node.

6.1.5 Compliance with Development Principles of the Spatial Planning and Land Use Management Act, 2013

The Spatial Planning and Land Use Management Act of 2013 in Chapter 2 identifies several development principles that should inform any spatial planning, land development and use of land. In this regard, the proposed township establishment complies with these general principles. The proposed township establishment particularly reinforces principles of development sustainability, efficiency, good administration spatial resilience. The extent to which the land development application has taken into consideration the principles of the SPLUMA is outlined below.

i) Section 7 (a) The principle of spatial justice whereby-

- Policies and spatial development frameworks at all levels of government must deal with the inclusion of people and areas that were previously excluded, with prominence on informal settlements, former homeland areas and areas characterized by widespread poverty and deprivation.

The township establishment process will assist the Municipality to ensure that previously disadvantaged groups have access to formal configured erven and ease access to services and infrastructure. The proposed development will ensure that residents have access to orderly laid out townships with access to various land uses in the form of mixed-use.

ii) Section 7 (b) The principles of spatial sustainability, whereby spatial planning and land use management systems must-

- Promote land development that is within the fiscal, institutional and administrative means of the republic.
- Uphold consistency of land use measures in harmony with environmental management instruments.
- Promote and stimulate the effective and equitable functioning of land markets.
- Consider all present and future costs to all parties for the provision of infrastructure and social services in land developments.
- Promote land development in locations that are sustainable and limit urban sprawl; and
- This result in viable communities

The land development application has taken into account the principles of spatial sustainability in the sense that the proposed land development area will be an extension of an existing occupied township. Additionally, the use of planning tools such as Environmental Impact Assessments has ensured that the proposed development is undertaken in an environmentally sustainable manner by conserving sensitive areas.

iii) Section 7 (c) The principle of efficiency, whereby-

- Decision-making procedures are designed to minimize negative financial, social, economic or environmental impacts.
- Land developments optimize the use of existing resources and infrastructure. Development application procedures are efficient and streamlined and timeframes are adhered to by all parties.

The location of the township as an extension of an existing settlement will capitalize on existing resources such as the availability of well-located land and services such as existing power lines, pipelines, etc.

iv) Section 7 (e) The principle of good administration, whereby-

- 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.
- All government departments must provide their sector inputs and comply with any other prescribed requirements during the preparation or amendments of spatial development frameworks.
- The requirements of any law relating to land development and land use are met timeously. 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 allow all parties to provide inputs on matters affecting them and
- Policies legislation and procedures must be set in order to inform and empower members of the public.

The township establishment application will be advertised, and an extensive public participation process will be undertaken to allow all interested and affected parties to have a say on the proposed land development area. The subject property falls within an area managed by, through spatial planning framework and land use management system. The land development application is therefore guided by spatial planning and land use management systems. The land development application was prepared to take into consideration the SDF and the governing land use management scheme.

6.2 Proposed Township Establishment

The proposed Gembokspruit Township Establishment will consist of 941 erven zoned “Residential 1”, “Business 1”, “Industrial 1”, “Institutional”, “Public Open Space”, “Government”, and “Place of Worship” purposes. The township layout plan attached hereto as Annexure R depicts the proposed township establishment.

The development controls as stipulated in the Conditions of Establishment for the Township will apply to the proposed Township Establishment. The proposed Conditions of Establishment for the Township are attached hereto as Annexure S.

6.2.1 Proposes Layout Plan and Design

All proposed land uses are intended to enhance the quality of life for the beneficiaries residing in the proposed township. It is the intention to provide the basic needs of the residents. There is a need to provide access to formal erven to counter the prevalent informal erven in the area by also ensuring access to important facilities i.e. schools, churches, etc. The proposed land uses per use zone are detailed in Table 9 below.

LAND USE ZONE		ERF NUMBERS	NO. OF ERVEN	AREA (HA)	PERCENTAGE OF TOWNSHIP
RESIDENTIAL I		1-914	914	76.44	65.54
INSTITUTIONAL	School/Crèche	924-927	4	4.44	3.81
	Place of Worship	928-932	5	0.84	0.72
GOVERNMENT USE		934 - 935	2	0.75	0.62
BUSINESS I		915-923	9	2.81	2.41
INDUSTRIAL I		933	1	0.38	0.33
PUBLIC OPEN SPACE		936-941	6	3.18	2.72
TRANSPORTATION				27.82	23.85
TOTAL			941	116.66	100 %

Table 9: Proposed Land Uses

6.3 Proposed Use Zone

6.3.1 Residential I

The township layout plan has accommodated approximately 914 residential erven. These erven will be accommodated individually, with an average size of 800 m². The prevalent informal laid erven adjacent to the project area demonstrates that there is an increasing number of residents who need affordable, accessible and well-located and well-configured land for housing.

6.3.2 Business I

There are 9 Business I erven in the proposed township. The location of the proposed "Business I" erven will ensure good accessibility and the sustainability of businesses located on these erven. The business erven are located along the proposed class 4 roads to ensure accessibility and functionality.

6.3.3 Institutional

10 erven will be zoned "institutional" to accommodate various land uses such as School/Crèche, Place of Worship and Government Use. The institutional facilities are located closer to the proposed business uses to enable the functionality of the node within the proposed township.

6.3.4 Government (Municipal)

2 erven will be zoned "government" to accommodate a Thusong Centre and a Multi-purpose centre. The erven are located closer to the proposed business uses to enable the functionality of the key uses within the proposed township to act as a node/anchor.

6.3.5 Public Open Space

6 proposed erven will ensure that ample a park or open space is provided for sports, recreational and conservation purposes. This will ensure that the layout complies with various legislation protecting the sensitive environment. These sites will be treated as both active and passive open spaces to cater to the residents

6.4 Proposed Development

The following development controls are proposed:

6.4.1 "Residential 1"- Erf Number (1 – 914)

- i. Coverage : 60%
- ii. Floor Area Ratio : 1.5
- iii. Height : 2 Storeys
- iv. Parking : As per Site Development Plan (SDP)
- v. Building lines : Street = 3 m
: Rear = 2 m
: Side = 2 m

6.4.2 "Business 1" - Erf Number (915-923)

- i. Coverage : 70 %
- ii. Floor Area Ratio : 3
- iii. Height : 6 Storeys
- iv. Parking : As per SDP
- v. Building lines : Street = 5 m
: Side = 2 m
: Rear = 2m

6.4.3 "Institutional"- Erf Number (924 - 932)

- i. Coverage : 50%
- ii. Floor Area Ratio : As approved by the Local Municipality
- iii. Height : 3 Storeys
- iv. Parking : **For Crèche - 1 space for every 4 children and**

1 Space per first 2000 m² floor area, or part thereof and 1 space per every 2000 m² floor area thereafter.

For Place of Education - 2 Spaces per 100m² office floor area and 1 space per classroom and 5 drop-off spaces for passenger vehicles per 100 students and 1 drop-off space for buses per 100 students.

For Place of Worship - 1 space per 6 seats 2 spaces per first 1000m² floor area, or part thereof and 1 space per every 1000m² floor area thereafter.

- v. Building lines : Street = 5 m
- : Rear = 2 m
- : Side = 2 m

6.4.4 "Industrial I"- Erf Number (933)

- i. Coverage : 75%
- ii. Floor Area Ratio : 2.7
- iii. Height : 3 Storeys
- iv. Parking : 1 per 100m² parking gross leasable area for industry & 2 per 100m² parking gross leasable area for offices and 2 per 1000m² parking gross leasable area.
- v. Building lines : Street = 5 m
- : Rear = 2 m
- : Side = 2 m

6.4.5 "Government"- Erf Number (934 - 935)

- I. Coverage : 50%
- II. Floor Area Ratio : As approved by the Local Municipality
- III. Height : As approved by the Local Municipality
- IV. Parking : As approved by the Local Municipality
- V. Building lines : As approved by the Local Municipality

6.4.6 "Public Open Space" – Erf Number (936 - 941)

- i. Coverage : As approved by the Local Municipality
- ii. Floor Area Ratio : As approved by the Local Municipality
- iii. Height : As approved by the Local Municipality
- iv. Parking : As approved by the Local Municipality
- v. Building lines : As approved by the Local Municipality

7 Need and Desirability

7.1 Need

Since 2011, the national State of the Nation Addresses (SONAs) in South Africa have focused on rural development as one of the main priorities of the government, a neglected practice for more than two decades. As a result, much of the headlines when it comes to property development revolve around major projects in urban areas i.e. cities with high growth rates and ample opportunities for profitable construction. However, there is an area that needs just as much development attention i.e. rural communities. Rural South Africa has deteriorated consistently over the last few decades. The main reason for this phenomenon is urbanisation. Rural areas are competing with larger cities, with comparative and competitive advantages, identified globally as engines of growth due to skewed resource allocation. Turn-around strategies are required to ensure that rural areas provide economic and social opportunities for local communities. As a result, the proposed township establishment in Gembokspruit will contribute towards the creation of jobs and generation of income, provision of quality services and infrastructure and the reduction of inequality within the local community.



Figure 17: Aerial Image 2004



Figure 18: Aerial Image 2020

The google earth aerial images above i.e. Figure 17 and 18 depicts the Gemsbokspruit Area in 2004 and 2020 respectively. It is clear from the 2020 aerial image (Figure 18) that there is a need to guide residential development through the establishment of a township. The increasing population in the area has led to the invasion of the adjacent vacant farm portions resulting in informal erven as depicted by Figure 18 above. The aforementioned alarming issue necessitates that the surrounding land parcels be utilised optimally to establish more formal residential units to address the housing backlogs and informal settlements as outlined in the District IDP.

Moreover, it has been noted that the challenges of poverty and unemployment are compounded by limited access to basic municipal services such as water, sanitation and electricity, as well as a lack of good quality social services (education, health and ambulances) and transport services (roads and buses). Therefore, the provision of basic services can be an important agent in the reduction of poverty and unemployment and strengthening of social capital. All proposed land uses i.e. housing and the associated mixed-uses are intended to enhance the quality of life for the beneficiaries and contribute towards the economic development of the area.

7.2 Desirability

The proposed township establishment on Portion 4, 5, 13, 22 and the Remainder of Portion 12 of the Farm Gemsbokspruit 229 JR is an initiative of the Thembisile Hani Local Municipality to provide access to well-configured and sustainable settlements erven in the rural parts of the Municipality. Firstly, it is important to highlight that the project area is located close to an existing residential Township. Therefore, it can be seen as an extension of Gemsbokspruit – A Township.

Road infrastructure connects rural areas to urban centres and facilitates the mobility of goods and people within the area. In this case, the proposed township is well located as it is bordered by a Provincial Road PI00 (Absalom Road) which is a Regional Distributors. Additionally, the Provincial Road i.e. D2918 transverse the proposed development and further connects it to the existing Gemsbokspruit – A Township and Kwaggafontein. Roads provide the connections necessary for local markets to develop and facilitate the provision of public services ambulances and policing etc. Moreover, the availability of public transport and the existing road network will also increase the accessibility of the project area and ease of access to various nodes such as the Phola mall in Kwa-Mhlanga and Kwagga Crossing in Kwaggafontein. As a result, the proposed township establishment is well-located, desirable and can be classified as an integrated human settlement due to the proximity to various major nodes in the Municipality.

The proposed development will also include supporting facilities such as schools, multipurpose centre, public open spaces and institutional facilities to ensure the long terms sustainability and functionality of the development. It can therefore be said that the proposed development of the subject property, which is located close to a major transport route will not only contribute to the sustainability of the public transport system but will also provide for housing opportunities to previously disadvantaged households.

The proposed township layout design ensures the efficient provision of engineering services such as efficient road network, stormwater management, and water and sewer reticulation. The configuration of main streets to large extent links with those of adjacent areas, this was done to ensure that points of egress and ingress to the proposed township are not compromised. Additionally, the township layout plan does not only provide for residential development but also supporting facilities such as schools, multipurpose centre, public open spaces and institutional facilities to ensure the long terms sustainability and functionality of the township. The proposed township will create job opportunities in the construction sector during the construction phase, but also over the long term job opportunities will be created by the proposed business and other facilities to be established in the town.

The proposed land development is in line with the Spatial Development Framework of the Municipality and it will adhere to the development controls as provided in the Thembisile Hani Land Use Management Scheme, 2020.

8 Conclusion

The township establishment application is hereby submitted to the Thembisile Hani Local Municipality in terms of the provisions of Section 57 (a) and Section 59 of Thembisile Hani Local Municipality By-Law on Spatial Planning and Land Use Management, 2016 read together with the relevant provisions of the Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013). The project provides for the provision of integrated human settlements and will enable the provision of various engineering services in the area. This motivation has provided merits for the approval of the township which can be summarized as follows:

- The development is aligned with the objectives and principles of the Nkangala District Municipality Integrated Development Plan, Thembisile Hani Local Municipality Integrated Development Plan (IDP) 2019/2022, Thembisile Hani Local Municipality Spatial Development Framework and the Spatial Planning and Land Use Management Act, 2013.
- All topographical and physical limitations, servitudes, and natural drainage areas guided by the professional studies have effectively been accommodated in the layout plan to ensure the feasibility of the development and to accommodate natural assets sensibly.
- The land uses applied for is desirable in terms of locality, the scale of the development and accessibility.
- The proposed land uses will also not only provide housing but will also ensure the establishment of a quality living environment with access to key infrastructure services, social and community facilities.

It is concluded that this application is both necessary and desirable from a town planning point of view, and will result in a development that enhances the appearance of the whole area. Approval of this application will have no detrimental effect on the surrounding properties because the proposed development will have a similar urban fabric to the adjacent/surrounding area.

ANNEXURES