Draft Basic Assessment Report

Proposed Development of Thabazimbi Extension 75 Residential Township on Portion 129 of farm Doornhoek 318-KQ, Thabazimbi Local Municipality, Waterberg District, Limpopo Province

LEDET Ref. no. Pending

Project Applicant:

Bertie Joubert Eiendomme Lephalale CC

Prepared by:

Naledzi Environmental Consultants (Pty) Ltd
Independent Environmental Assessment Practitioner

Report date: 29 August 2022

Draft Basic Assessment Report for the Proposed Development of a Residential Township to be known as Thabazimbi Extension 75, Portion 129 of the farm Doornhoek 318-KQ, Thabazimbi Local Municipality, Waterberg District, Limpopo Province (LEDET Ref no. Pending)

Report prepared by:

This report has been prepared by Naledzi Environmental Consultants (Pty) Ltd.

Naledzi has been appointed by the Bertie Joubert Eiendomme Lephalale CC as the independent environmental assessment practitioner (EAP) to submit an application for environmental authorisation to the Limpopo Department of Economic Development, Environment and Tourism (LEDET) for the establishment of a 2.4-hectare residential township to be known as Thabazimbi Extension 75 on Portion 129 of the farm Doornhoek 318-KQ located at Thabazimbi.

The application process requires the submission of a Basic Assessment Report (BAR) in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) EIA Regulations (as amended in 2017). The Draft Basic Assessment Report and associated Environmental Management Programme (EMPr) is released for 30 days of public review and comment until 14 October 2022 and will subsequently be finalised to incorporate public submissions and submitted to LEDET for decision-making.

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Naledzi is an independent environmental consultancy with no vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) (See **Appendix G1** for **EAP Declaration of Independence**).

Report Author:

A team of qualified, experienced and professionally registered environmental scientists were assembled for this project and have compiled this document (**CVs attached under Appendix G2**). A number of specialist investigations were commissioned and have informed the BAR and EMPR.

Author:

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Marissa Ilse Botha
Senior Environmental Scientist
SACNASP Registered

Peer review and sign off:

……

Dr Khangwelo Desmond Musetsho
Managing Director
SACNASP and EAPASA Registered
Registered independent EAP

Report prepared for:

This report has been prepared for Bertie Joubert Eiendomme Lephalale CC (applicant), who would be the title holder of the environmental authorisation if granted by LEDET.

The township establishment application for the proposed residential development was submitted to Thabazimbi Local Municipality (TLM) in 2020 by Urban Edge Town Planners. The TLM is awaiting the outcome of the environmental authorisation process before issuing consent.

The validity period of the environmental authorisation once issued will be 6 years implying that the construction of the township must start within the authorisation validity period. All recommendations and conditions contained in the BAR, EMPR and authorisation are legally binding on the title holder and compliance therewith will be monitored by the LEDET.

Bertie Joubert
PROPERTIES / EIENDOMME

Bertie Joubert Eiendomme Lephalale CC
15 Judith Street, Thabazimbi, 0380
Postnet Suite no. 4, Private Bag X6625,
Thabazimbi, 0380

Contact person: Dr Bertie Joubert / Mr Barend Gerber
Email: Bertie2112@gmail.com / Barend.gerber74@gmail.com

Competent Authority

As previously stated, the provincial environmental affairs seated in Polokwane, LEDET is the decision-making authority on the application and will issue the environmental authorisation to Bertie Joubert Eiendomme Lephalale CC.

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
ECONOMIC DEVELOPMENT, ENVIRONMENT & TOURISM

Environmental Impact Management
Central Administration Office
Environmental Affairs Building
20 Hans Van Rensburg Street / 19 Biccard Street
POLOKWANE
0699

BASIC ASSESSMENT REPORT - EIA REGULATIONS, 2014

Basic Assessment report in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

File Reference Number:	Pending
	(For official use only)
NEAS Reference Number:	
Date Received:	
Due date for acknowledgement:	
Due date for acceptance:	
Due date for decision	

Kindly note that:

1. The report must be compiled by an independent Environmental Assessment Practitioner.

2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.

3. Where applicable **tick** the boxes that are applicable in the report.

4. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the Department of Economic Development, Environment and Tourism as the competent authority (Department) for assessing the application, it may result in the rejection of the application as provided for in the regulations.

5. An incomplete report may be returned to the applicant for revision.

6. Unless protected by law, all information in the report will become public information on receipt by the department. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.

7. The Act means the National Environmental Management Act (No. 107 of 1998) as amended.

8. Regulations refer to Environmental Impact Assessment (EIA) Regulations of 2014.

9. The Department may require that for specified types of activities in defined situations only parts of this report need to be completed. No faxed or e-mailed reports will be accepted.

10. This application form must be handed in at the offices of the Department of Economic Development, Environment and Tourism:-

Postal Address:	**Physical Address**:
Central Administration Office Environmental Impact Management P. O. Box 55464 **POLOKWANE** 0700	Central Administration Office Environmental Affairs Building 20 Hans Van Rensburg Street / 19 Biccard Street **POLOKWANE** 0699
Queries should be directed to the Central Administration Office: Environmental Impact Management:- **For attention:** Mr E. V. Maluleke **Mobile:** 082 947 7755 **Email:** malulekeev@ledet.gov.za	

View the Department's website at http://www.ledet.gov.za/ for the latest version of the documents.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?	**YES**	NO
If YES, please complete the form entitled "Details of specialist and declaration of interest" or appointment of a specialist for each specialist thus appointed:		
Refer to **Appendix D** for **Specialist Studies**.		

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail[1]:

BACKGROUND AND LOCALITY

Bertie Joubert Eiendomme Lephalale CC (the applicant and landowner) proposes to establish a 2.4-hectare residential township to be known as Thabazimbi Extension 75 on Portion 129 of the farm Doornhoek 318-KQ. The property is located within the jurisdiction of Thabazimbi Local Municipality in the Waterberg District of Limpopo Province along the D1485 Thabazimbi-Marakele Road next to and across from existing residential developments Zeldri Park (Thabazimbi Extension 32) and Akasia Park (Thabazimbi Extension 47). See **Appendix A** for the **Site Plan / Locality Plans.**

Figure 1: Locality Plan showing the application site (red polygon) along the D1485 and Medivet Road

[1] Please note that this description should not be a verbatim repetition of the listed activity as contained in the relevant Government Notice, but should be a brief description of activities to be undertaken as per the project description.

ACTIVITY DESCRIPTION

The applicant intends to generate an income from his property while addressing the high demand for housing in Thabazimbi since it is currently unused. The proposal is to establish a township comprising 35 stands which will tap into municipal services except for electricity which would be provided by Eskom. It will be a secure walled-in residential complex which will consist of the following:

- 33 "Residential 1" erven with varying sizes (500m2 and 700m2) for dwellings
- 1 'Special" erf for the purposes of a Guard House/Access Control " of approximately 150m2;
- 1 "Private Road" erf for the internal road network with a way width of 5 metres within a 10m road reserve.

The development density will be low with a ratio of 13.74 units per ha and will be limited to a building height of 2-storeys. See **Appendix C** for the **Facility Illustration.**

The project will have two phases i.e. construction and operation.

The construction period will be 24 months and include:

- Site preparation
- Site camp establishment (i.e. shipping container for material storage and tools)
- Gradual clearance of approximately 2.4 ha of vegetation with a bulldozer.
- Site works (i.e. internal street network, installation of services)
- Gradual construction of 33 residential units

Operation:

The units would be occupied by owners or tenants and the township will be managed by a Body corporate/Home Owners Association managing the complex maintenance, security and waste disposal.

ENGINEERING SERVICE REQUIREMENTS

i. **Access:**

The Township will gain access from the Medivet Road, a public access servitude running parallel to the D 1485 Thabazimbi-Marakele Road, along the south easterly border of the property. Medivet Road intersects with the intersection of D1485. Please refer to Section 5 of this report for more details.

ii. **Water:**

The water demand will be 33 Kilo litres/day for both domestic and garden use. Water will be sourced from TLM and supplied from the Thabazimbi Reservoir from an existing 160mm uPVC pipe along the Medivet Road. The inferred static pressure head to the proposed township is 110m. The water reticulation network in the area is over pressurised and a Pressure Reducing Valve (PVR) is located at the Medivet road intersection to address this. The pressure at the PRV will be increased to increase water pressure to supply both existing (Akasia and Zelri Park) and the new residential development. TLM will execute the PRV adjustment.

iii. **Sewage:**

The average daily sewage outflow will be 24.75 Kilo litres/day and will drain towards the southeastern portion of the development via the new internal sewer system (i.e. 160mm uPVC pipes). The sewage will need to be pumped to be able to connect to the existing Gravity system. The discharge from the development will drain to the Thabazimbi Waste Water Treatment Works (**Figure 2 below**).

The new internal sewer system will be connected to the existing rising sewer line running parallel to Medivet Road. The existing sewer line along the access road to the South of the development uses a sewer pump to pump effluent westwards towards the existing gravity network. The proposed development's sewer connection to the existing rising mains will also require a pump station operating in parallel to the existing station. A pump station (i.e. submersible pump system) will be installed by the applicant to operate in parallel with the existing pump station in order not to exceed the capacity of the rising mains.

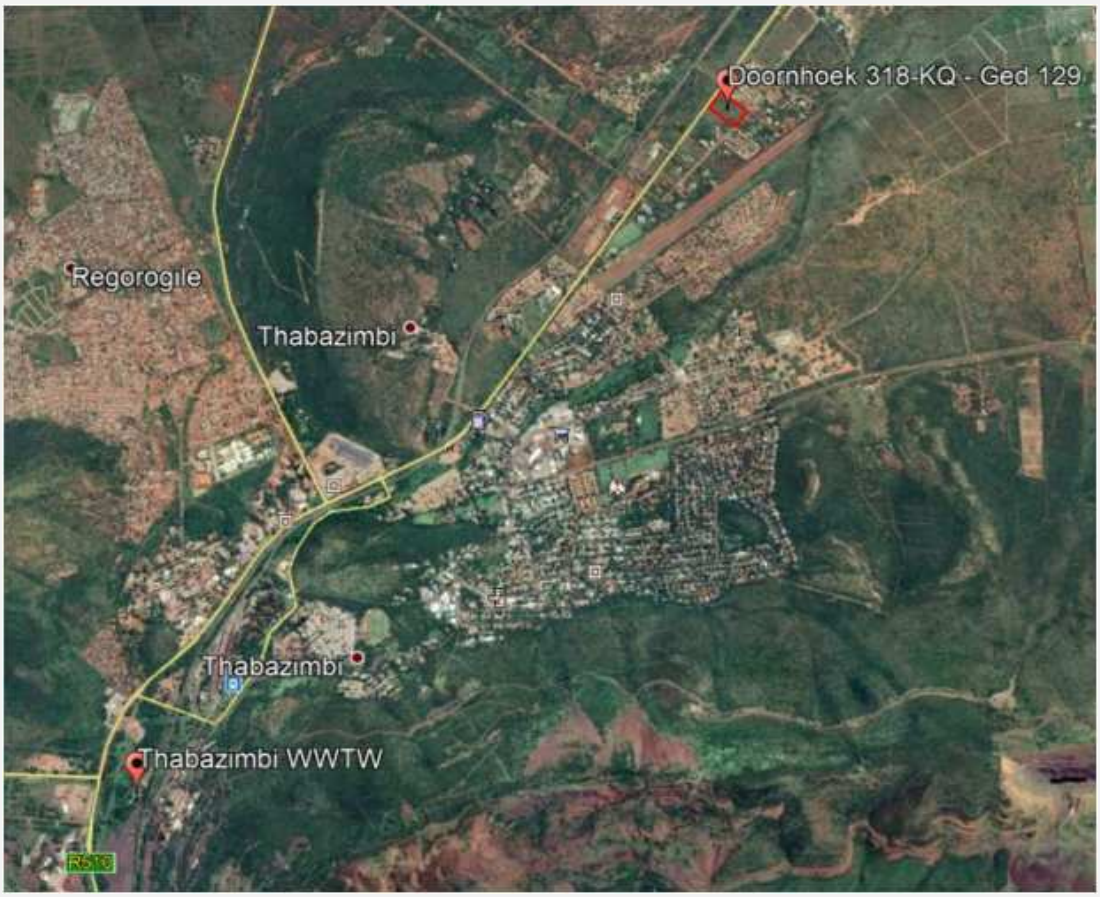


Figure 2 Location of project site in relation to the Thabazimbi Waste Water Treatment Works (image by Leo Consulting)

iv. **Storm Water Management**

The property drains in the south-easterly direction and will connect to the existing storm water system located on Medivet Road, discharging towards the Thabazimbi Airfield. The storm water will be controlled within the road reserve prism. The carrying capacity of the Medivet road reserve is 0.21 m^3/s which is under capacity for major floods (1:50 year) and has to be combined with a side channel to contribute to the road prism capacity. The total major storm water capacity will thus be 0.500m^3/s and accommodate the 1: 50-year flood.

The minor flood recurrence of the development will amount to 0.162m^3/s (1: 2-year flood). The minor flood system will consist of surface run-off with a side channel at the entrance of the development that connects to the stormwater of Medivet Road.

All services will be designed and implemented as per the requirements of the Thabazimbi Local Municipality. Please refer to **Appendix G3** for the full **Civil Engineering Services Report.**

v. **Electricity**

The electricity demand of 192 kVA will be sourced from Eskom through two possible connect points i.e. existing Eskom TS 11kV line (supplied by the Eskom Thabazimbi Combined Substation) located next to the Thabazimbi-Marakele Road or a T-off along Medivet Road. Please refer to **Appendix G4** for the **Electrical Engineering Service Report.**

Figure 3: Project site with possible electrical connection points (image by CJ Vermaak)

NEMA LISTED ACTIVITIES TRIGGERED

The above development proposal triggers a listed activity in terms of the NEMA EIA Regulations of 2014 (GNR. 326 as amended on 7 April 2017) and is the subject of assessment for the BA process.

Activity no.	Description	Relevance
GNR 327 (Listing Notice 1) **Activity 27**	The removal of 1 hectare or more indigenous vegetation, but less than 20 hectares.	The project will require the removal of 2.4 ha of degraded bushveld to construct the residential development.

2. FEASIBLE AND REASONABLE ALTERNATIVES

"alternatives", in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

(a) the property on which or location where it is proposed to undertake the activity;

(b) the type of activity to be undertaken;

(c) the design or layout of the activity;

(d) the technology to be used in the activity;

(e) the operational aspects of the activity; and

(f) the option of not implementing the activity.

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the Department may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent. **Paragraphs 3 – 13 below should be completed for each alternative.**

Site Alternatives
The preferred site for the activities was selected because the applicant owns the property and is ideally located next to similar existing residential developments along the Medivet Road in an area earmarked by the Thabazimbi Local Municipality in terms of its 2007 Spatial Development Framework for 'Proposed New Residential Development'. Existing municipal infrastructure also already exists in the area. Consequently, no alternative property/site are assessed further.

Activity Alternatives
The applicant is a real estate agent by trade and is well aware of the immense shortage of houses to rent and buy in Thabazimbi. This particular property is unused and degraded and ideally located next to existing residential developments. By establishing the township, the applicant intends to generate an income from the property while addressing the high demand for housing in Thabazimbi. Consequently, no activity alternatives are assessed further.

Design / Layout Alternatives
The project site is degraded and will face minimal further impact from any development activities. There are no sensitive features (i.e. wetland or stream, sensitive habitat) except for a number of protected tree species, Camel Thorn that need to be avoided in the township layout. The large Camel Thorn trees will be incorporated into the current township design and landscaping as far as possible (See **Figure 4** overleaf). No alternative layouts were assessed.

Technology and Operational Aspects Alternatives
No operation or technical alternatives were considered. Suggestions are made further on in the report for energy-efficient alternatives that can be implemented by the developer to reduce energy consumption at the development i.e. cool insulated roofs, solar geysers, gas stoves, and solar street lights (where possible).

No-Go Alternative

The no-go alternative is maintaining the status quo a.k.a. 'do nothing' where none of the identified negative or positive environmental and social impacts materializes. The property continues to lie fallow with no true economical use to the property owner except grazing. This alternative will therefore not see the 50 construction and 15-25 operational job opportunities, economic contribution to the local economy or housing provision materialize if this alternative is implemented.

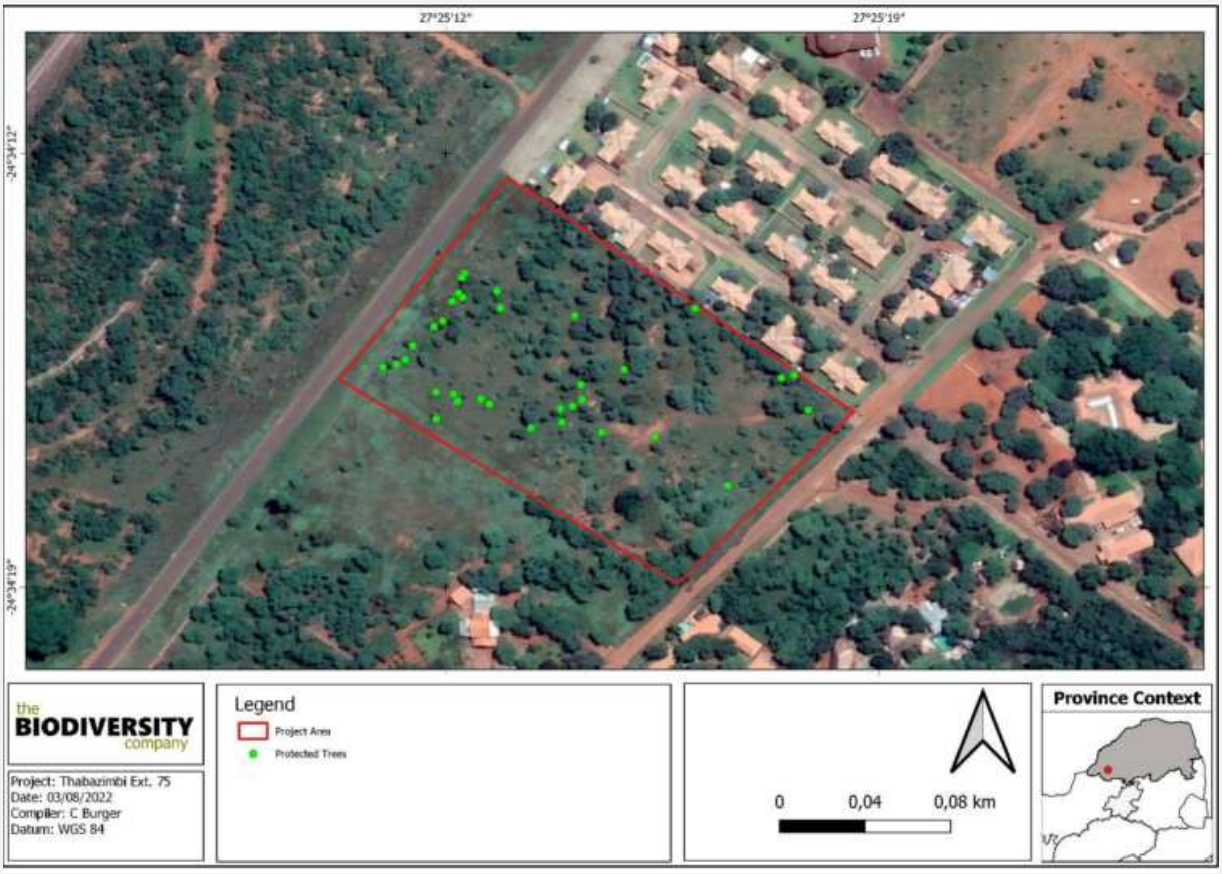


Figure 4: Location of protected tree species Camel Thorn location in the project site

3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The coordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the Hartebeeshoek 94 WGS84 spheroid in a national or local projection.

List alternative sites, if applicable.

	Latitude (S):			Longitude (E):		
Alternative:						
Alternative S1[2] (only site alternative)	**24˚**	**34'**	**16.10"**	**27˚**	**25'**	**14.52"**

[2] "Alternative S.." refer to site alternatives.

~~Alternative S2 (if any)~~	°	'	"	°	'	"
~~Alternative S3 (if any)~~	°	'	"	°	'	"

~~In the case of linear activities:~~

~~Alternative:~~	**~~Latitude (S):~~**			**~~Longitude (E):~~**		
~~Alternative S1 (preferred or only route alternative)~~						
~~• Starting point of the activity~~	°	'	"	°	'	"
~~• Middle/Additional point of the activity~~	°	'	"	°	'	"
~~• End point of the activity~~	°	'	"	°	'	"
~~Alternative S2 (if any)~~						
~~• Starting point of the activity~~	°	'	"	°	'	"
~~• Middle/Additional point of the activity~~	°	'	"	°	'	"
~~• End point of the activity~~	°	'	"	°	'	"
~~Alternative S3 (if any)~~						
~~• Starting point of the activity~~	°	'	"	°	'	"
~~• Middle/Additional point of the activity~~	°	'	"	°	'	"
~~• End point of the activity~~	°	'	"	°	'	"

~~For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.~~

No linear activities are applicable to this project.

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative:	**Size of the activity:**
Alternative A1[3] (preferred activity alternative)	**24 000 m²**
~~Alternative A2 (if any)~~	~~m²~~
~~Alternative A3 (if any)~~	~~m²~~

~~or, for linear activities:~~

~~Alternative:~~	**~~Length of the activity:~~**

[3] "Alternative A.." refer to activity, process, technology or other alternatives.

~~Alternative A1 (preferred activity alternative)~~	~~m~~
~~Alternative A2 (if any)~~	~~m~~
~~Alternative A3 (if any)~~	~~m~~

~~Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):~~

~~**Alternative:**~~	~~**Size of the site/servitude:**~~
~~Alternative A1 (preferred activity alternative)~~	~~m^2~~
~~Alternative A2 (if any)~~	~~m^2~~
~~Alternative A3 (if any)~~	~~m^2~~

5. SITE ACCESS

Does ready access to the site exist?	**YES**	**NO**
If NO, what is the distance over which a new access road will be built		m

Describe the type of access road planned:

The below access road details have been obtained from the Engineering Services Report and Traffic Impact Statement prepared by Leo Consulting Pty Ltd in 2021 for the proposed township. See **Appendix D2** for the **Traffic Impact Statement** and **Appendix G3** for the **Engineering Services Report**.

The Township will gain access from the existing Medivet Road (refer to **Figure 5** overleaf), a public access servitude running parallel to the Thabazimbi-Marakele road, along the south easterly border of the property. According to the Civil Engineer, the access road is in poor condition and needs to be upgraded.

According to the Traffic Impact Statement by Leo Consulting 2022, the road currently carries traffic from 86 units and with the addition of development would carry 119 trips. The traffic will use the two-way stop controlled intersection on the D1485 Thabazimbi-Marakele Road to access Medivet Road. The eastern leg to and from the development still operates at an acceptable Level of Service (LOS) and does not require improvement measures.

The TLM is responsible to carry out the required Medivet Road upgrade. The upgrade has been placed on the municipal IDP as a project (TBS41) and is scheduled for the next one (1) to two (2) years and will be funded by PPC Dwaalboom. The funding is being gathered over the next two financial years, expected to be available by 2024. The construction of the proposed township is planned for 2023-2024 coinciding with the planned road upgrade.

Naledzi will include any recommendations solicited from the TLM for the proposed township concerning the road upgrade in the Final Basic Assessment Report (BAR).

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

Figure 5: Existing Medivet access road intersecting with Thabazimbi-Marakele Road

6. SITE OR ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

6.1 the scale of the plan which must be at least a scale of 1:500;
6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
6.4 the exact position of each element of the application as well as any other structures on the site;
6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
6.6 all trees and shrubs taller than 1.8 metres;

6.7 walls and fencing including details of the height and construction material;
6.8 servitudes indicating the purpose of the servitude;

6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
- rivers;
- the 1:100 year flood line (where available or where it is required by Department of Water Affairs);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or invested with alien species);

6.10 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
6.11 the positions from where photographs of the site were taken.

See **Appendix A** for attached **Site Plans.**

7. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this form**.** It must be supplemented with additional photographs of relevant features on the site, if applicable.

See **Appendix B** for attached **Site Photographs**

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

See **Appendix C** for the attached Facility Illustration / Layout Plan.

11. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	**R 10 000 000**	
What is the expected yearly income that will be generated by or as a result of the activity?	R 2 580 000	
Will the activity contribute to service infrastructure?	**YES**	NO
Is the activity a public amenity?	YES	**NO**
How many new employment opportunities will be created in the development phase of the activity?	**50**	
What is the expected value of the employment opportunities during the development phase?	R 3 250 000	
What percentage of this will accrue to previously disadvantaged individuals?	85 %	

How many permanent new employment opportunities will be created during the operational phase of the activity?	**15-25**
What is the expected current value of the employment opportunities during the first 10 years?	R 12 960 000
What percentage of this will accrue to previously disadvantaged individuals?	95%

9(b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

NEED:			
i.	**Was the relevant municipality involved in the application?** The township establishment application for the development was submitted to the local authority, Thabazimbi Local Municipality (TLM) in 2020 by Urban Edge Town Planners. The TLM has reviewed the application and is awaiting the outcome of the environmental authorisation process before issuing consent. The TLM has also been notified of the application for environmental authorisation and has been furnished with the project Background Information Document (BID) in July 2022. The draft BAR and EMPR are also currently available to the TLM for review and comment.	**YES**	NO
ii.	**Does the proposed land use fall within the municipal Integrated Development Plan?** Yes, and it is echoed in the municipal SDF. The Medivet Road upgrade is also highlighted in the municipal IDP on page 223 as part of a strategic action plan to upgrade poor-condition road infrastructure (refer to section 5 above).	**YES**	NO
iii.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:		
DESIRABILITY:			
i.	**Do the proposed land use / development fit the surrounding area?** The proposed township will be located in an area characterized by similar residential developments along the Medivet Road therefore in line with the surrounding land uses. The site is located next to Thabazimbi Extension 32 (Zeldri Park) to the east and across from Thabazimbi Extension 47 (Akasia Park). The rest of the properties along Medivet Road are also residential small holdings.	**YES**	NO
ii.	**Does the proposed land use / development conform to the relevant structure plans, Spatial development Framework, Land Use Management Scheme, and planning visions for the area?**	**YES**	NO

	According to the 2007 Thabazimbi Spatial Development Framework, the application site is earmarked for 'Proposed New Township Establishment Area or Subdivision According to Council Policy' including 'Mixed Development'. The application for environmental authorisation is for a residential township therefore directly in line with the development planning/vision of the SDF.		
iii.	**Will the benefits of the proposed land use / development outweigh the negative impacts of it?** The negative impacts during the construction of the township would be short-term nuisance impacts (i.e. dust, noise, traffic) which may negatively affect the abutting properties but can be managed and reduced through mitigation measures recommended in the EMPr. The proposed township will also affect the external municipal services; however, the developer will install services and bulk services and conclude a service level agreement with TLM. The Medivet Road is in poor condition due to a cumulative impact from existing residential developments and small holdings, but TLM is proposing to upgrade the road in the next one to two financial years which will address the issue. The negative impacts can therefore be addressed. The benefit of the development would therefore outweigh the negative impacts. i.e. • The proposed development will fill a much-needed rental and selling gap in Thabazimbi and will provide safe and secure housing options; • Capital will be injected into the local economy (i.e. purchase of building material, the appointment of construction works); • Approximately 50 job opportunities will be created during construction and 15 to 25 permanent job opportunities during operation. • Increased rates and taxes paid to the local authority. • The development will also be located close to existing services and amenities in Thabazimbi town. • The EAP, therefore, reasons that the benefits of the development would outweigh the negative impacts.	**YES**	NO
iv.	If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation:		

v.	**Will the proposed land use / development impact on the sense of place?**	YES	**NO**
vi.	**Will the proposed land use / development set a precedent?**	YES	**NO**
vii.	**Will any person's rights be affected by the proposed land use / development?**	YES	**NO**
viii.	**Will the proposed land use / development compromise the "urban edge"?** It's located within the urban edge of Thabazimbi amid existing residential developments.	YES	**NO**
ix.	If the answer to any of the question 5-8 was YES, please provide further motivation / explanation.		

BENEFITS:			
i.	**Will the land use / development have any benefits for society in general?**	**YES**	NO
ii.	Explain:		
	Township establishments (i.e. gated communities) usually encourage and help community living and provide safe and secure housing options. Thabazimbi Extension 75 will be a secure walled in residential complex (gated community) which will offer secure housing options.		
iii.	**Will the land use / development have any benefits for the local communities where it will be located?**	**YES**	NO
iv.	Explain:		
	The property market in Thabazimbi is very active and a large shortage exists of available affordable houses (rent and buy). According to the Township Establishment Memorandum (Urban Edge Development Planners, 2020), there are various contracts at various surrounding mines and Government departments in the process of being initiated. This development will supply the local community with safe affordable housing for the average market. The residential units can also offer good potential rental income prospects. The development will inject capital into the local economy during the construction phase through the purchase of building materials and create job opportunities during construction (50 jobs) and operation (15 to 25 permanent jobs).		

10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Abbreviations used below:

- DFFE – Department of Forestry, Fisheries and Environment
- LEDET – Limpopo Department of Economic Development, Environmental and Tourism
- DWS – Department of Water and Sanitation
- SAHRA – South African Heritage Resources Agency
- LIHRA – Limpopo Heritage Resources Agency
- TLM – Thabazimbi Local Municipality

	Title of legislation, policy or guideline:	Administering authority:	Date:
1	**National Environmental Management Act of 1998 (Act 107 of 1998)**	**LEDET**	**27 November 1998**
2	Environmental Impact Assessment Regulations of 2014 (as amended by GNR 326, 327 and 324)	LEDET	7 April 2017
3	NEMA Notice GNR. 960 Notice of the Requirement to Submit a Report Generated by the National Web Based Environmental Screening Tool.	DFFE, LEDET	5 July 2019
4	NEMA GN R. 320 Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes in terms of Section 24 (5)(a) and (h) and 44 of NEMA when Applying for Environmental Authorisation		20 March 2020
5	GNR 1150 Protocols for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Terrestrial Plant Species and Animal Species.		30 October 2020
6	**National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004)**	**DFFE, LEDET**	**7 June 2004**
7	Waterberg District Bioregional Plan 2019 (promulgated in terms of NEM: Biodiversity Act)	LEDET LEDET	04 January 2019
8	Limpopo Conservation Plan (2018)		2018
9	Alien and Invasive Species Regulations, 2014		1 August 2014
10	National Freshwater Priority Areas, Rivers and Wetlands (NFEPA) (as part of the National Biodiversity Assessment 2011)	North West DWS	2011
11	South African Inventory of Inland Aquatic Ecosystems (SAIIAE) (as part of National Biodiversity Assessment 2018)	DWS	3 July 2019
12	**National Water Act, 1998 (Act 36 of 1998)**	**North West DWS**	**26 August 1998**
12	General Notice (GN) 509 under Section 39 of the National Water Act 36 of 1998 The applicability of this piece of legislation is covered in the Terrestrial Statement (Appendix D) however disputed by the EAP. There is no wetland within the 500m regulated area only an unclassified drainage line and its regulated area is considered its 1: 100-year flood line. The site is not affected by the flood line of this drainage line accordingly does not require a General Authorisation in terms of the NWA. Comments will be obtained from North West DWS in this regard.		26 August 2016
13	**Limpopo Environmental Management Act of 2003 (Act 7 of 2003)**	**LEDET**	**30 April 2004**
14	**National Heritage Resources Act, 1999 (Act 25 of 1999)**	**SAHRA LIHRA**	**28 April 1999**
15	**National Forest Act 84 of 1998 (NFA)**	**DFFE Forestry**	**30 October 1998**

16	List of Protected Tree Species 2022 published under section 12 of the NFA Several Camelthorn trees are present onsite and is nationally protected.	**Regulation and Support**	25 March 2022
17	Section 15 (1) application for license regarding a Protected Tree in terms of NFA. The applicant will conserve as many as possible Camelthorn trees within the township layout. In the event where removal of individual trees cannot be avoided removal permits will be obtained in terms of section 15 (1) of the NFA from the DFFE before the construction of the township.		30 October 1998
18	Thabazimbi Local Municipality Spatial Development Framework	TLM	2007
19	Thabazimbi Local Municipality Integrated Development Plant		2020 - 2021

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	**YES**	NO
If yes, what estimated quantity will be produced per month?	**Undetermined** m^3	

How will the construction solid waste be disposed of (describe)?

- Waste skips/bins will be provided at a designated area on the construction site.
- Waste shall be separated into different categories at the source (i.e. construction waste into skips and bags, plastic etc into bins) and will be made available at the point where wastes are generated or within the vicinity of such areas.
- Vermin and weatherproof bins with lids of sufficient number and capacity to store the waste produced on a daily basis will be used.
- All solid waste will be removed off-site by means of waste disposal trucks to a licensed landfill site.

Where will the construction solid waste be disposed of (describe)?

All solid waste shall be disposed of at the Thabazimbi/Donkerpoort Municipal Landfill site located approximately 8km southwest of the application site along the Mooivallei-Dwaalboom Road (**Figure 6 below**). The site was licensed in August 1999 by the Department of Water Affairs and Forestry under the Environmental Conservation Act. The landfill site status as per the TLM Waste Management Plan of February 2016:

Total Capacity	22.08
Existing capacity	7.04
Available airspace	14.68

Figure 6: Thabazimbi Landfill Site 8km southwest of the application site

Will the activity produce solid waste during its operational phase?	**YES**	NO
If yes, what estimated quantity will be produced per month?		**8 – 9 m³ ***

*** Calculation method of solid waste produced / month:**

World average is 0.74 kg/day/person (EAP used conservative 1kg/day/person)
With an average of 4 people per residential unit @ 33 Units there would be 132 people
= 132 kg/day @ average of 30 days / month
= 3960 – 4000 kg/month
There is 481 kg of solid waste in 1 m^3
= 4000kg/month divide by 481 kg
= 8.3 m^3
It is therefore estimated that an average of **8 – 9m^3** / month of waste will be generated.

How will the solid waste be disposed of (describe)?

Each household will dispose of its domestic waste in a wheelie garbage bin and provision will be made for a garden refuse collection point.

TLM is constitutionally mandated to ensure that household waste is collected from the residential complex. The municipality will collect the domestic waste once every week by means of municipal waste collection trucks by emptying the wheelie bins and removing them to the Thabazimbi/Donkerpoort Landfill site. Private local waste contractors (i.e. Dail-a-Drum) are usually appointed by a residential complex homeowners association to collect garden refuse and remove it to the local landfill site.

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

It will feed into the municipal waste stream and disposed of at the Thabazimbi/Donkerpoort Landfill site (see **Figure 6**).

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the department to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?	YES	**NO**

If yes, inform the department and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility?	YES	**NO**

If yes, then the applicant should consult with the Department to determine whether it is necessary to change to an application for scoping and EIA.

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	YES	**NO**
If yes, what estimated quantity will be produced per month?	m^3	
Will the activity produce any effluent that will be treated and/or disposed of on-site?	Yes	**NO**

~~If yes, the applicant should consult with the Department to determine whether it is necessary to change to an application for scoping and EIA.~~

~~Will the activity produce effluent that will be treated and/or disposed of at another facility?~~	YES	NO

~~If yes, provide the particulars of the facility:~~

~~Facility name:~~			
~~Contact person:~~			
~~Postal address:~~			
~~Postal code:~~			
~~Telephone:~~		~~Cell:~~	
~~E-mail:~~		~~Fax:~~	

~~Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:~~

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere? **Only dust during construction.**	YES	**NO**
If yes, is it controlled by any legislation of any sphere of government?	YES	**NO**

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.
If no, describe the emissions in terms of type and concentration:

The township construction and operation will not release potentially harmful emissions into the atmosphere controlled under the National Environmental Management Air Quality Act 39 of 2004. No Atmospheric Emission License is required.

Emissions will be limited to fugitive dust emitted during construction resultant from site clearing, handling and loading of construction material (i.e. cement, sand) including vehicle entrained dust on the Medivet Road during transportation of construction material and movement onsite.

It is anticipated that dust levels would be moderate to low if controlled since the township would be developed gradually i.e. first the wall, then clear and construct the internal road network and install services thereafter gradually clear vegetation as stands are bought and houses constructed.

The National Dust Control Regulations (NDCR) were gazetted on 1 November 2013 in terms of Section 53 (o), read with Section 32 of the NEM: AQA (39 of 2004). These regulations prescribe a standard for acceptable dust fall rate for residential (<600mg/m^2/day). The minimum thresholds as stipulated in the NDCR will not be crossed by the proposed project. Mitigation measures to minimise dust emissions resulting from the project construction period have been outlined in the Environmental Management Programme attached as **Appendix F**.

11(d) Generation of noise

Will the activity generate noise? **Only during construction.**	**YES**	NO
If yes, is it controlled by any legislation of any sphere of government?	YES	**NO**

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.
If no, describe the noise in terms of type and level:

The proposed development will not trigger any legislation relating to noise pollution. The construction phase activities would however need to comply with the municipal bylaws and prescribed sound level zone recommended limits as set out in the Environmental Noise Control Regulations (NCR) were also promulgated in 1994 under Section 25 of the Environmental Conservation Act.

The ambient noise levels in the area is owned to:

- Traffic noise (light passenger vehicles along Medivet Road and Marakele Road);
- Domestic type (residential)
- Natural noises (insects, birds etc.)

NCR defines nuisance noise as; "any sound which disturbs/impair the convenience/piece of any person" and "any noise level which exceeds the zone sound level / or a noise level which exceeds the ambient sound level at the same measuring point by 7dBA or more".

According to the South African Bureau of Standards SANS: 2008 Edition '*The measurement and rating of environmental noise with respect to annoyance and to speech communication'* (SABS 10103:2008) the recommended **ambient noise rating level** which should not be exceeded in residential districts is **50dBA** during daytime and **40 dBA during night time**.

Intermittent noise will be generated during the construction phase of the township (i.e. excavators, machinery, hand tools, vehicles) and will subsequently be very low during the operation phase, similar to the existing residential developments in the area. The construction phase noise will be limited to working hours (07h00 to 17h00), as indicated intermittent (not continuous) and would radiate from the proposed site (point source) and the shape of exposure is generally a circular area around the source (**Figure 7** overleaf). The township would also be developed incrementally, first the wall then the internal road network followed by houses (refer to Section 11 (c) above).

The typical noise from construction equipment (i.e. Grader, Dozer, Paver, Loader, Roller, Compactor, Concrete Mixer, Trucks) is provided in **Table 1** below and also indicates the expected intermittent increase of noise levels in the day during construction and infrequently exceed the recommend district sound level at abutting properties.[4]

Table 1: Expected noise levels from construction equipment at different distances from source

Source		**Distance from source**			
	15m	**60m**	**150m**	**250m**	**500m**
Construction equipment	70-75dBA	65dBA	55dBA	52dBA	46dBA
Sound level Zone	**Daytime Max**				
Suburban District	50dBA				
Increase above recommended sound level	**20-25dBA**	**15dBA**	**5dBA**	**2dBA**	**4dBA below sound level**
Intermittent noise intrusion level	**Very High**	**High**	**Low**		**Not audible**

According to the NCR a 7dBA noise increase above the relevant zone sound level is considered a nuisance. Sensitive receptors within a 15m to 100m distance from the application site would experience intermittent noise intrusion but would be further decreased by the established complex wall. Properties beyond 150m from the site would experience a low increase in noise levels. Mitigation measures for noise will be carried out in terms of the Environmental Management Programme attached as **Appendix F** to the report, to lower the intensity of the impact from the project.

[4] The sound levels obtained from 'Noise Impact Assessment for Lephalale Railway Yard by B v/d Merwe, 2019 (068/2019)

Figure 7 Google Earth Satellite image showing the application site (yellow - point source of construction noise), sensitive receptors (i.e. residential developments, small holdings) and a circular area of exposure to the noise around the application site. Noise levels decrease in distance from the point source.

12. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es)

municipal	water board	groundwater	river, stream, dam or lake	other	the activity will not use water

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate
the volume that will be extracted per month:

	Litres

Does the activity require a water use permit from the Department of Water Affairs?

YES	**NO**

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

Water supply will be municipal sourced; no water use license application is required.

13. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

No design measures have been taken into consideration. The project will optimize the use of existing municipal infrastructure and resources in the area. Prepaid metering is proposed for each residential unit.

Means to develop an energy-efficient residential township may include the following designs to be considered by the developer:

- Cool roofs (insulate the roof)
- Installation of gas stoves
- Solar geysers
- Install low-energy lighting system throughout the residential units.
- Solar street lights

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

None have been built into the design of the activity but have been suggested to the developer/applicant as per above.

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

1. For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No. (e.g. A):	**1 of 1**

2. Paragraphs 1 - 6 below must be completed for each alternative.

3. Has a specialist been consulted to assist with the completion of this section?	**YES**	NO
If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed:		
All specialist reports must be contained in Appendix D.		
Specialist Studies are attached under **Appendix D**.		

Property description/physical address:	**Farm name and portion:** Portion 129 of the farm Doornhoek 318-KQ, **Street address:** Medivet Road (accessed via the D1485 Thabazimbi-Marakele Road)

(Farm name, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application.

Town: Thabazimbi
District: Waterberg District

In instances where there is more than one town or district involved, please attach a list of towns or districts to this application.

Current land-use zoning:	'Agriculture'

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to , to this application.

Is a change of land-use or a consent use application required?	**YES**	NO
Must a building plan be submitted to the local authority?	**YES**	NO

Locality map:

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.) The map must indicate the following:

- an indication of the project site position as well as the positions of the alternative sites, if any;
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection)

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1: Portion 129, farm Doornhoek 318-KQ (Generally flat slope of 2.5%)

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

~~Alternative S2 (if any):~~

~~Flat~~	~~1:50 – 1:20~~	~~1:20 – 1:15~~	~~1:15 – 1:10~~	~~1:10 – 1:7,5~~	~~1:7,5 – 1:5~~	~~Steeper than 1:5~~

~~Alternative S3 (if any):~~

~~Flat~~	~~1:50 – 1:20~~	~~1:20 – 1:15~~	~~1:15 – 1:10~~	~~1:10 – 1:7,5~~	~~1:7,5 – 1:5~~	~~Steeper than 1:5~~

2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

The site is located in a slightly undulating plain.

2.1 Ridgeline		2.6 Plain	
2.2 Plateau		**2.7 Undulating plain / low hills**	**X**
2.3 Side slope of hill/mountain		2.8 Dune	
2.4 Closed valley		2.9 Seafront	
2.5 Open valley			

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

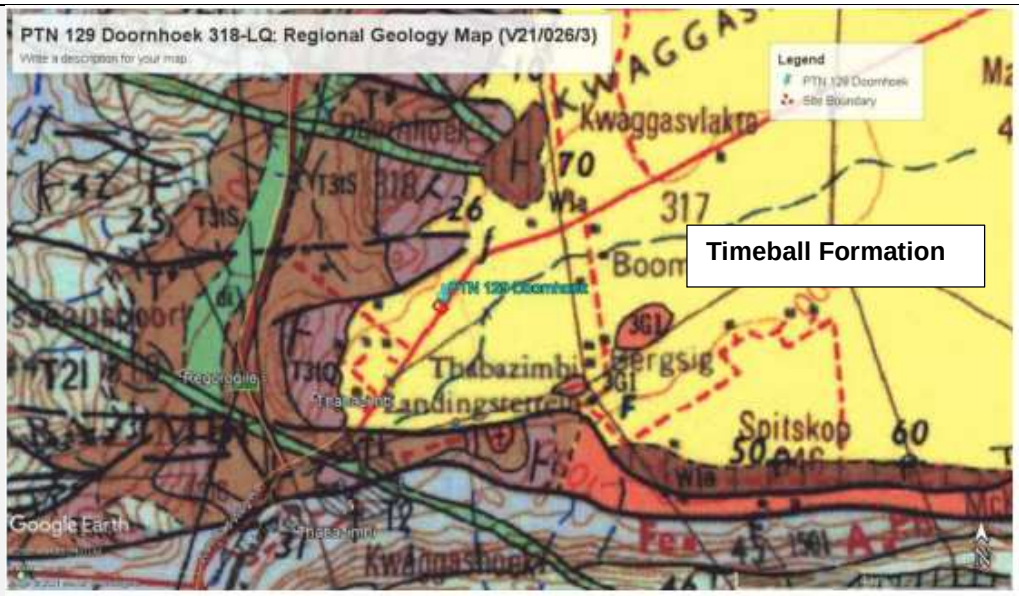
Is the site(s) located on any of the following (tick the appropriate boxes)?

	Alternative S1:		~~**Alternative S2 (if any):**~~		~~**Alternative S3 (if any):**~~	
Shallow water table (less than 1.5m deep)	YES	**NO**	~~YES~~	~~NO~~	~~YES~~	~~NO~~
Dolomite, sinkhole or doline areas	YES	**NO**	~~YES~~	~~NO~~	~~YES~~	~~NO~~
Seasonally wet soils (often close to water bodies)	YES	**NO**	~~YES~~	~~NO~~	~~YES~~	~~NO~~
Unstable rocky slopes or steep slopes with loose soil	YES	**NO**	~~YES~~	~~NO~~	~~YES~~	~~NO~~
Dispersive soils (soils that dissolve in water)	YES	**NO**	~~YES~~	~~NO~~	~~YES~~	~~NO~~
Soils with high clay content (clay fraction more than 40%)	YES	**NO**	~~YES~~	~~NO~~	~~YES~~	~~NO~~
Any other unstable soil or geological feature	YES	**NO**	~~YES~~	~~NO~~	~~YES~~	~~NO~~
An area sensitive to erosion	**YES**	NO	~~YES~~	~~NO~~	~~YES~~	~~NO~~

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

A **Phase 1 Geotechnical Investigation** has been conducted for the application site by Martin van der Walt Engineering Geologists CC and is attached as **Appendix D3** to this report. The investigation was conducted during May 2021 (winter season) and comprised the excavation of seven (7) test pits. Soil samples (i.e. disturbed and undisturbed soils) were retrieved from the test pits and submitted for commercial soil laboratory tests. The study finds that the site is suitable for residential development but geotechnical recommendations need to be implemented as stipulated in the Geological Report.

According to the report the site falls within the Timeball Formation within the Transvaal Supergroup however no residual soil or rock was encountered in the test pits. No boulders or sub/rock outcrop were observed on the surface.



Extract form published Geology Map Sheet 2426 Thabazimbi (1:250,000)

However according to the recent Council of Geoscience 1: 250 000 Geological Formations Layers / Map the site is underlain by 'alluvium, colluvium, eluvium, gravel, sand, soil and debris (see **Figure 8** below).

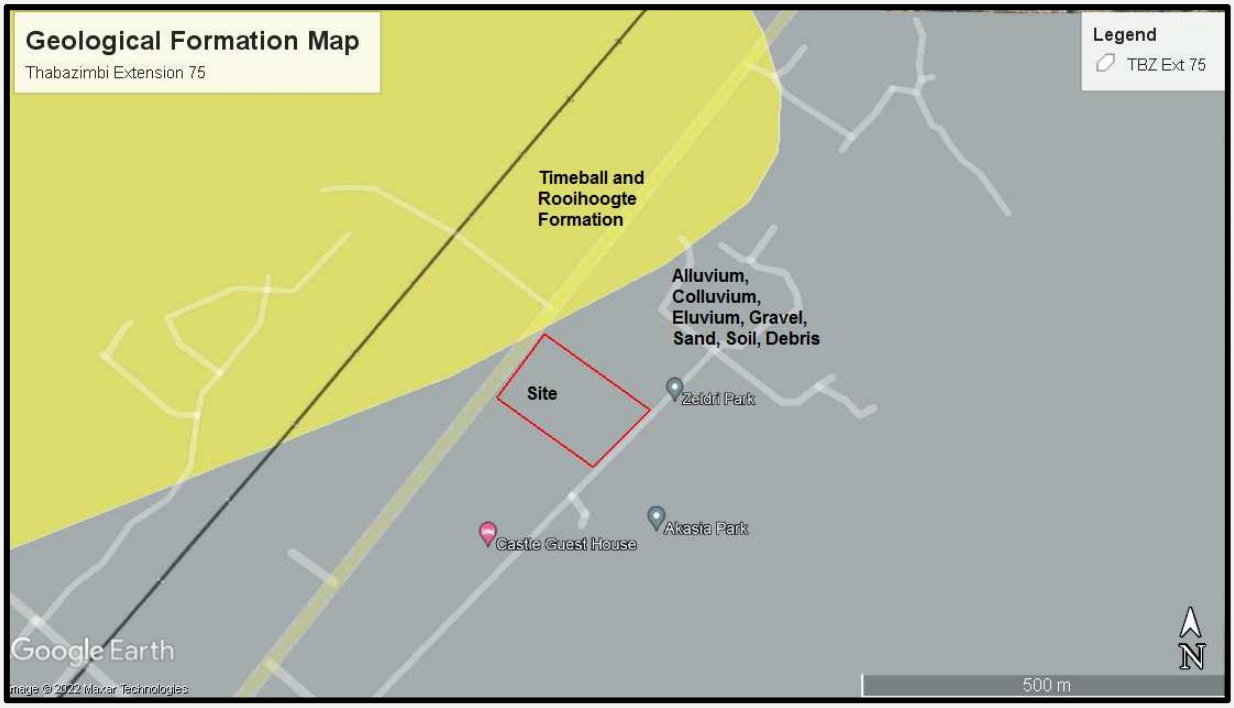


Figure 8: Geological Formations applicable to the application site in terms of the Council of Geoscience 1: 250 000 Geological Formations Layers

The Geotechnical Investigations confirm the presence of loose to medium dense, voided, silty sand and hillwash onsite confirming the Council of Geoscience geological formations. Hillwash refers to loose unconsolidated sediment that has been deposited at the base of a hillslope by either rain or sheet wash.

The investigation and soil tests were able to divide the site into two geological zones (see **Figure 9** overleaf) i.e.

- **Zone A** – North-western portion of the site where a moderately thick layer (1.25m thick on average) of potentially moderately collapsible and slightly compressible soil underlain by very soft rock ferricrete was encountered.
- **Zone B** – South-eastern portion of the site where a thick layer (2.1m thick on average) of potentially high collapsible and slightly compressible soil was encountered.

The main features identified were as follows:

- The site is blanketed by a layer of variable thickness of red-brown hillwash that is considered to exhibit a collapsible grain structure regarded as moderately to highly collapsible and slightly compressible.
- The hillwash consists of sand with moderate silt but very low clay content (low expansiveness).
- No perched or permanent water table was encountered on site. The presence of ferruginous concretions and ferricrete in the soil profile is indicative of a seasonal fluctuating water table. The hillwash is considered to be highly permeable with underlying ferricrete of dense or better consistence fairly impermeable and a perched water table 'could' develop on this interface during the wet season**.** The EAP was however not able to identify any areas with vegetation indicators or soil indicators indicative of perched / wetland conditions forming anywhere onsite. Soil samples taken with an auger also could not detect such close to the surface.
- Storm water from the North West portion of the site should be adequately controlled to prevent potential flooding/erosion of the lower-lying ground (south-east) as this can present a problem during construction and operation.
- The soil in the upper reaches of the profile is considered to be erodible if subjected to high water velocity, as it is generally cohesion-less. No erosion channels or gullies were observed onsite due to the abundance of vegetation.

Figure 9: Geotechnical Map showing the two geological zones onsite and location of test pits

Rivers / Streams in proximity to the site

The study area is situated in the A24H quaternary catchment (Crocodile Management Area), 450m south-west of the Rooispruit. The drainage region falls under the management of the North West Department of Water and Sanitation. There is therefore only the unclassified drainage line within 450-500m of the site but no wetland (**Figure 10**).

Therefore only the regulated area of the Rooispruit is applicable i.e. 1: 100-year flood line. The site is not affected by the flood line of this drainage line and is located more than 100m from the spruit (i.e. 450-500m), accordingly would not require a General authorisation in terms of GNR 509 under Section 39 of the NWA. Comments will also be obtained from North West DWS in this regard.

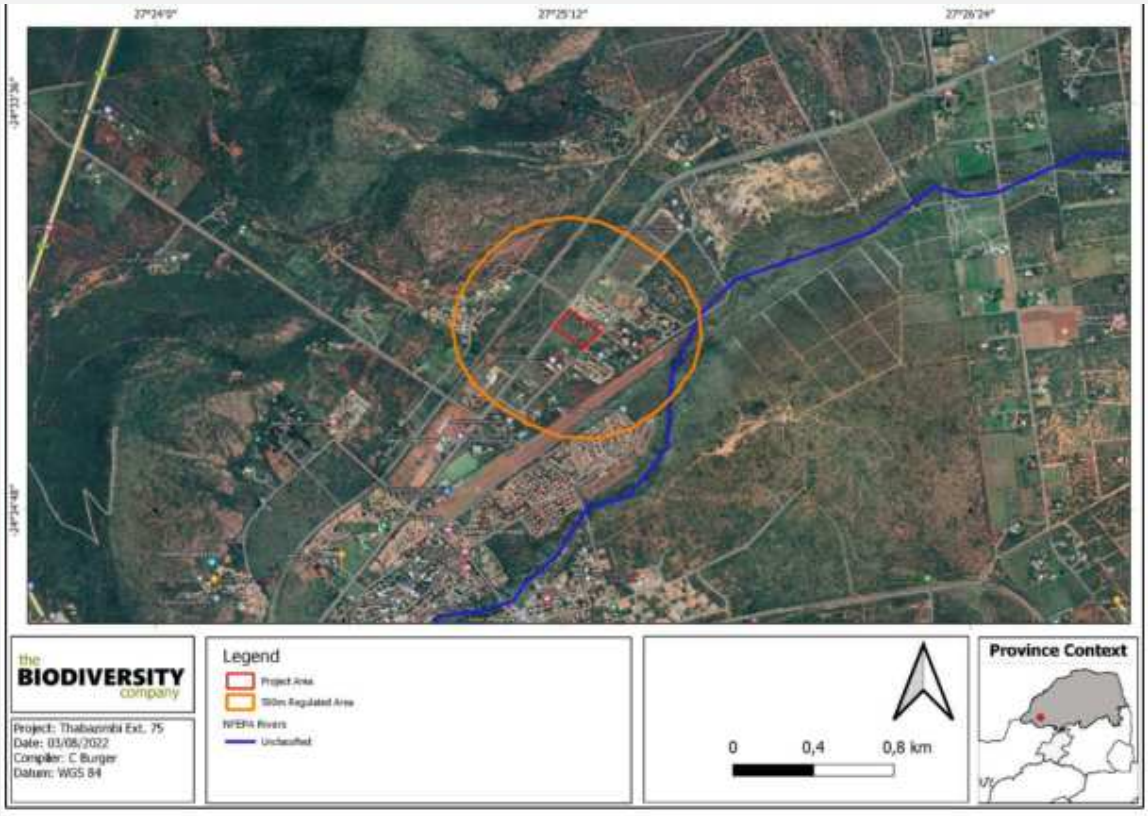


Figure 10: Map illustrating the location of rivers and streams within 500m of the project site.

4. GROUNDCOVER

Indicate the types of groundcover present on the site: The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition[E]	**Natural veld with scattered aliens[E]**	Natural veld with heavy alien infestation[E]	Veld dominated by alien species[E]	Gardens

Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil

If any of the boxes marked with an "E "is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

Please refer to **Appendix D4** for the Terrestrial Biodiversity Statement.

The project site overlaps with one vegetation type, Western Sandy Bushveld, characterised by tall open woodland to low woodland with broad-leaved as well as microphyllous tree species being prominent. Dominant species include Blue Thorn on flat areas, Red Bush Willow on shallow soils of gravelly upland sites and Silver Cluster-leaf / Vaalbos on deep sandy soils (Mucina & Rutherford, 2006). The site also lies within Ecological Support Area 1 based on the 2019 Waterberg District Bioregional Plan (see **Figure 11**).

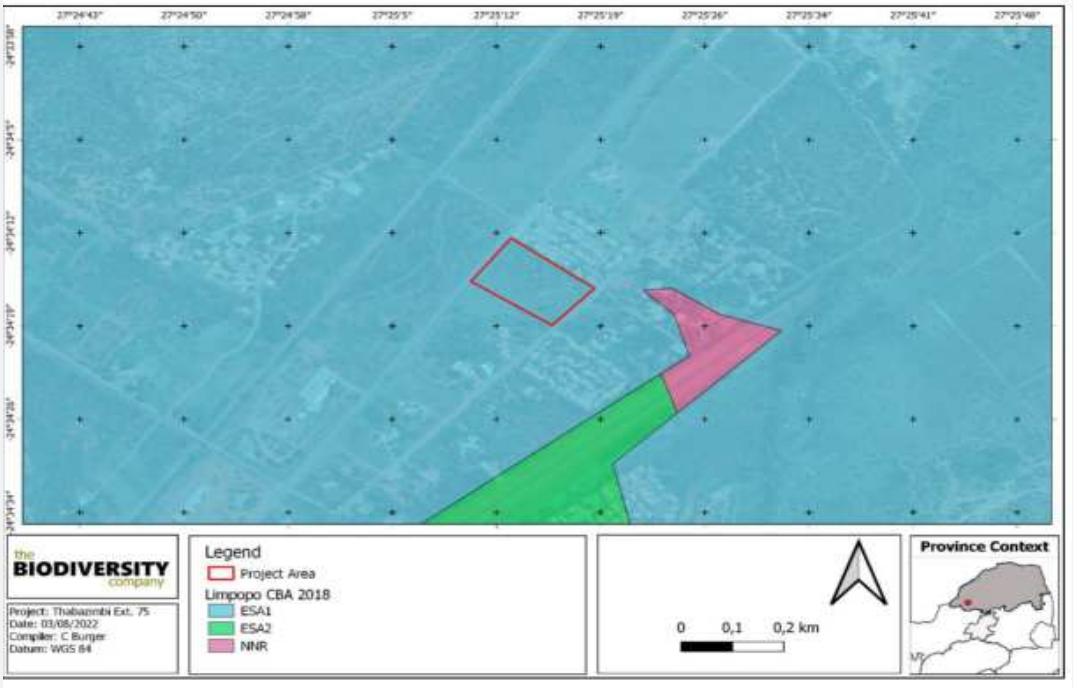


Figure 11: Project area in relation to the Waterberg Bioregional Plan / Limpopo Conservation Plan 2018

Based on the Terrestrial Biodiversity Investigation done by the Biodiversity Company on 14 July 2022 the site was confirmed to be of 'Low' sensitivity.

The project site comprises largely degraded Bushveld impacted by historic mismanagement, land use and anthropogenic (human) activities (see **Figure 12**). The habitat comprises several indigenous trees i.e.

- Silver Cluster-leaf / Vaalbos, Velvet Bushwillow / Basterrooibos, Wild Seringa / Wildesering
- **Camel Thorn / Kameeldoringboom**

The habitat is not entirely transformed but in a constant disturbed state as it can't recover to a more natural state due to ongoing disturbances and impacts from anthropogenic activities. The site is located on the outskirts of Thabazimbi town, is fenced off and used for grazing and is completely fragmented from large open areas. Historical impacts from several residential developments adjacent to the project area have led to edge effects such as the spread of alien and invasive plants in the area.

Figure 12: Degraded Bushveld habitat associated with project site (Photo by Biodiversity Company)

It is important to note that the tree species **Camel Thorn** was found in the project area. **A map showing the location of the Camel Thorn trees on the project site is included in Appendix A** of this report. The species is protected by the 2022 List of Protected Tree Species published under section 12 of the National Forest Act, 1998 (Act No. 84 of 1998). The applicant intends to conserve as many as possible Camel Thorn trees within the township layout. In the event where removal of individual trees cannot be avoided removal permits will be obtained in terms of section 15 (1) of the NFA from the DFFE Forestry Management and Regulation before the construction of the township since an environmental authorisation must first be issued.

Only common faunal species associated with residential areas were observed i.e. Grey Lourie, Common Bulbul, Cape Turtle Dove, Hoopoes and Rock Pigeons. No avifaunal species of conservation concern were observed. Mammal activity was low and only one mammal species was observed onsite i.e. Nyala introduced to the area for grazing purposes.

Table 2: Site Ecological Importance

Habitat	Conservation Importance	Functional Integrity	Biodiversity Importance	Receptor Resilience	Site Ecological Importance
Degraded Bushveld	Low – No confirmed SCC	Low – Almost no habitat connectivity	Low	Medium	Low

The project site is assigned a sensitivity rating of 'Low'. Both the animal and plant species themes are classified as having 'Low' sensitivities since there is very little suitable habitat to support any species of conservation concern. The proposed site will face minimal further impact from any development activities in terms of terrestrial ecology. Please refer to the Terrestrial Compliance Statement for more details.

5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that does currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

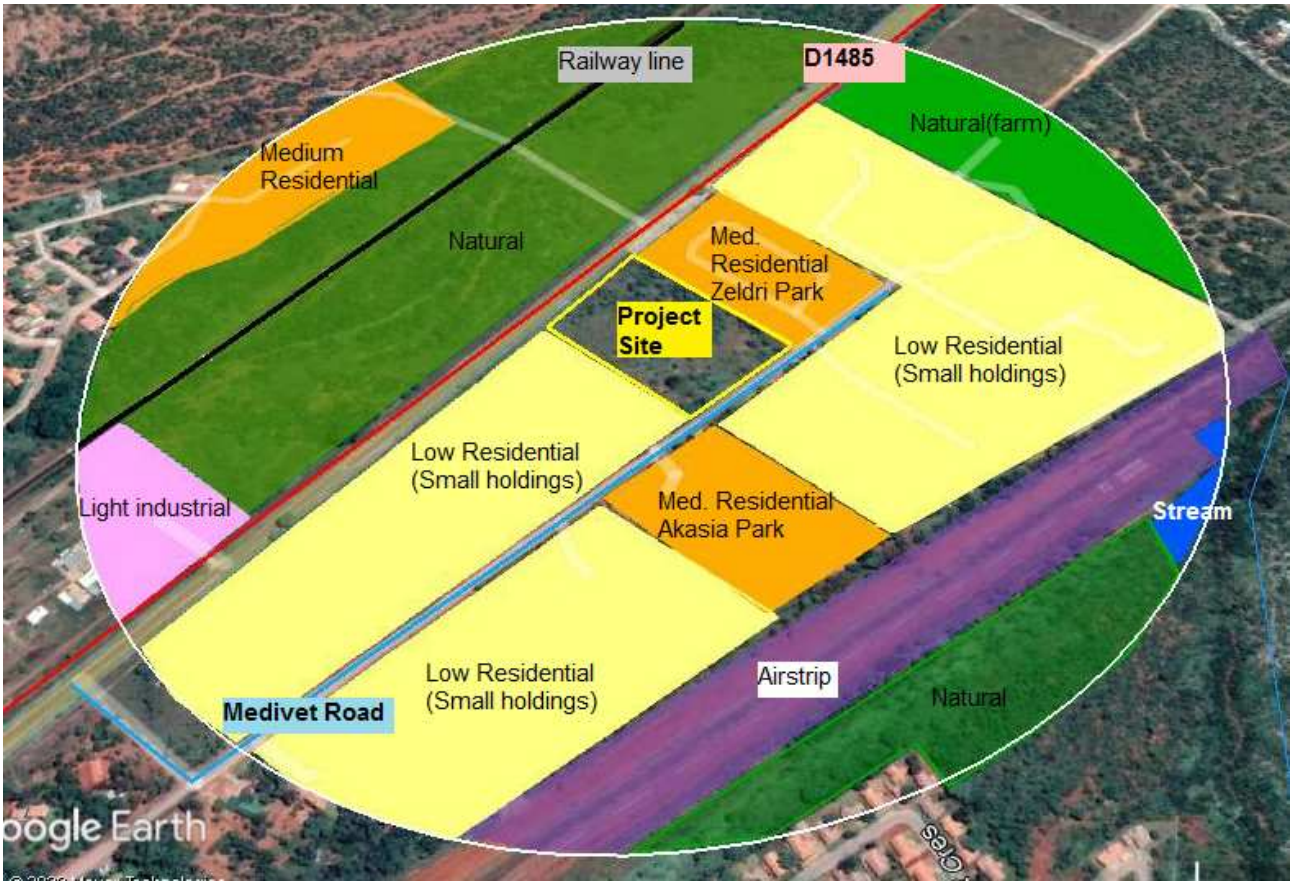


Figure 13: Surrounding land uses within 500m radius of the project site

5.1 Natural area	**X**	5.22 School	
5.2 Low density residential (small holdings)	**X**	5.23 Tertiary education facility	
5.3 Medium density residential	**X**	5.24 Church	
5.4 High density residential		5.25 Old age home	
5.5 Medium industrial [AN]		5.26 Museum	
5.6 Office/consulting room		5.27 Historical building	
5.7 Military or police base/station/compound		5.28 Protected Area	
5.8 Spoil heap or slimes dam [A]		5.29 Sewage treatment plant [A]	
5.9 Light industrial (Eskom Office)	**X**	5.30 Train station or shunting yard [N]	
5.10 Heavy industrial [AN]		**5.31 Railway line [N]**	**X**
5.11 Power station		5.32 Major road (4 lanes or more)	
5.12 Sport facilities		5.33 Airport [N]	
5.13 Golf course		5.34 Harbour	
5.14 Polo fields		5.35 Quarry, sand or borrow pit	
5.15 Filling station [H]		5.36 Hospital/medical centre	
5.16 Landfill or waste treatment site		5.37 River**, stream** or wetland **(Just outside/inside the 500m zone)**	**X**
5.17 Plantation		5.38 Nature conservation area	
5.18 Agriculture		5.39 Mountain, koppie or ridge	
5.19 Archaeological site		5.40 Graveyard	
5.20 Quarry, sand or borrow pit		5.41 River, stream or wetland	
5.21 Dam or Reservoir		5.42 Other land uses (describe) **Thabazimbi Airfield**	**X**

If any of the boxes marked with an "[N] "are ticked, how this impact will / be impacted upon by the proposed activity?

See explanation overleaf.

Railway line - The **Transnet Thabazimbi – Lephalale Railway line (single track) is located approximately 200m north-west of the application site** with the D1485 Thabazimbi-Marakele Road in between. The railway noise is a familiar background noise for the abutting existing residential developments (i.e. small holdings, Zeldri Park, Akasia Park) and are unaffected by it. The same goes for the proposed residential township.

Airfield - Although the explanation is not required it is worth explaining that the **Thabazimbi Airfield** is located **250m south-east of the project site (Figure 14)**. The National Screening Tool, therefore, assigns a 'High' Civil Aviation sensitivity theme. The EAP has consulted the Thabazimbi airfield management including the South African Civil Aviation Authority (SACAA) (Lizelle Stroh, Obstacle Inspector) in this regard. According to the SACAA, the airfield is already restricted by developments (i.e. township, residential complex). Data shows that the ground elevation from the airfield towards the application site escalates and requires the 1: 7 slope to the airfield to be clear. (Refer to detailed comments in Comments and Response Report attached under **Appendix E** to this report).

The EAP is of the submission that the proposed residential township would not affect or pose a safety risk to the airfield operations since it will be situated next to an existing similar residential development. It will also have the same building height (2-storeys).

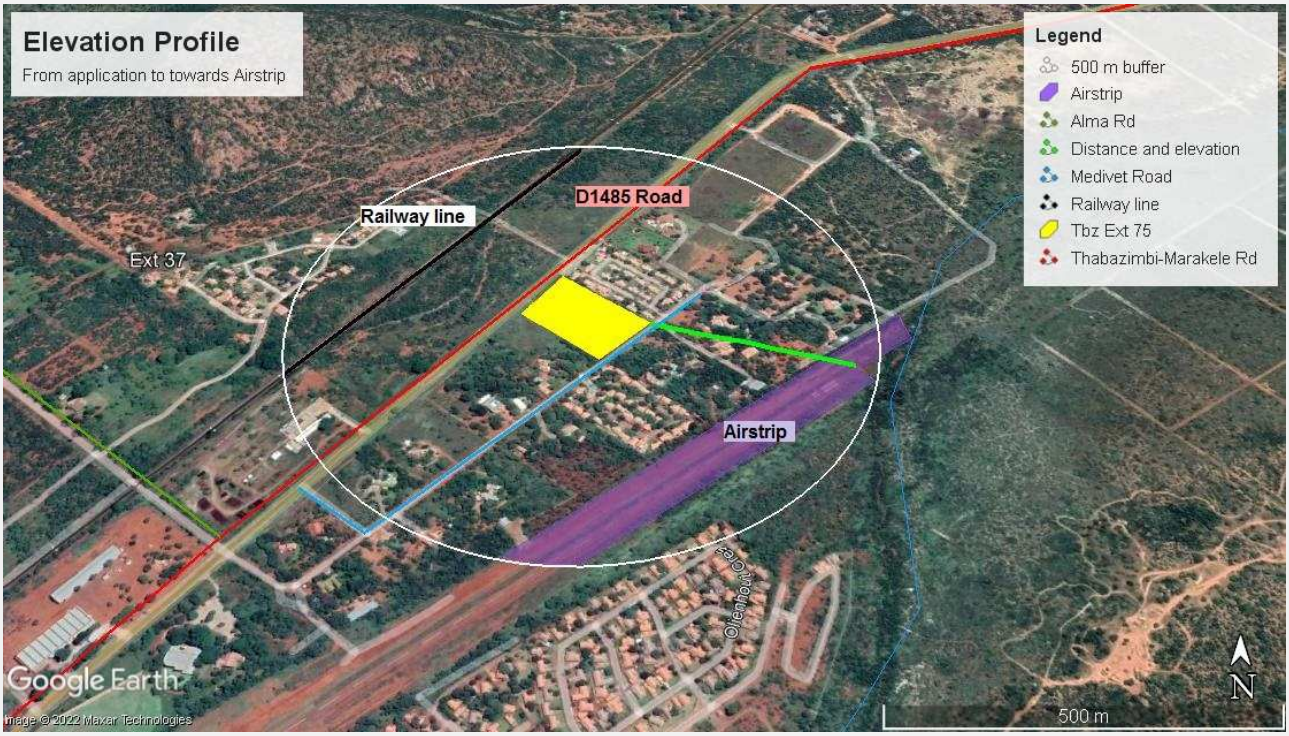
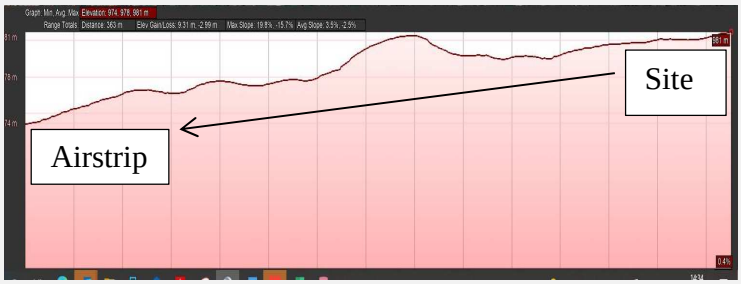


Figure 14: Locality of railway line and airstrip within 500m of the application site. The below figure shows the elevation profile from the site drops towards the airstrip.



~~If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity?~~

~~If YES, specify and explain:~~	
~~If NO, specify:~~	

~~If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity.~~

~~If YES, specify and explain:~~	
~~If NO, specify:~~	

6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including	YES	**NO**
Archaeological or palaeontological sites, on or close (within 20m) to the site?	Uncertain	
If YES, explain:		

If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist:	The EAP conducted a two-hour site walkthrough on 21 June 2022 (winter season) and no cultural heritage resources were found. The EAP contracted Ubique Heritage Consultants to further investigate the matter and have prepared a Heritage Statement including Desktop Palaeontological Study attached to this report under **Appendix D5**. According to the Heritage Study/Statement, the site is of low heritage sensitivity. Sites and resources ranging from low to high significance have been documented in a 5-20km radius of the site but not onsite. According to the Desktop Palaeontological Study, the development may be authorised as the whole extent of the development footprint is not considered sensitive in terms of palaeontological heritage.

Will any building or structure older than 60 years be affected in any way?	YES	**NO**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	**NO**

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

(a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the department) at a place conspicuous to the public at the boundary or on the fence of—

  (i) the site where the activity to which the application relates is or is to be undertaken; and

  (ii) any alternative site mentioned in the application;

(b) giving written notice to—

  (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;

  (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;

  (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;

  (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;

  (v) the municipality which has jurisdiction in the area;

  (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and

  (vii) any other party as required by the department;

(c) placing an advertisement in—

  (i) one local newspaper; or

  (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;

(d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and

(e) using reasonable alternative methods, as agreed to by the department, in those instances where a person is desiring of but unable to participate in the process due to—

  (i) illiteracy;

  (ii) disability; or

  (iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

(a) indicate the details of the application which is subjected to public participation; and

(b) state—

(i) that the application has been submitted to the department in terms of these Regulations, as the case may be;

(ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;

(iii) the nature and location of the activity to which the application relates;

(iv) where further information on the application or activity can be obtained; and

(v) the manner in which and the person to whom representations in respect of the application may be made.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the department in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of these Regulations.

Advertisements and notices must make provision for all alternatives.

- A newspaper advertisement was published in the Platinum Bushvelder on Friday, 15 July 2022 in English.
- Onsite notices were placed in the project area and onsite on 15 July 2022 in English and Afrikaans

These notifications announced the project, called for the registration of Interested and Affected Parties on the project database and indicated the availability of the project Background Information Document (BID) for public review and comment. An I&AP Database has been maintained during the registration period and adequate contact details have been obtained for I&APs and stakeholders notification of the availability of the Draft BAR and EMPR for public review and comment will take place by means of distribution of notification letters by email, hand or telephonic communication.

Refer to **Appendix E1 and E2** for a copy of the Newspaper Tear Sheet and Site Notice Photographs.

4. DETERMINATION OF APPROPRIATE MEASURES

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the department to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

The public participation process is executed in line with regulations 40-44 of the NEMA EIA Regulations of 2014 (GNR 326 as amended on 7 April 2017).

The project was announced to the public, Interested and Affected Parties (I&APs) and organs of state to afford them the opportunity to register on the project database and the opportunity to raise comments, issues or concerns with regards to the application through the following:

- Placement of a press advertisement in the Platinum Bushvelder on 15 July 2022
- Site notices were placed at publicly frequented areas, along Medivet Road and onsite;
- During site notice placement Naledzi also obtained contact details of the landowners along the Medivet Road and Body Corporate's for existing residential developments.
- Subsequently, written notification letters were distributed via email. The letters were provided in Afrikaans and English.
- A Background Information Document (BID) was also distributed via email and made available in Afrikaans and English for download on the Naledzi website www.naledzi.co.za/publicdocuments. It was made available for public review and comment for a period of 30 days until 15 August 2022.
- The South African Heritage Resources Agency was also informed through the creation of a Case Study on the SAHRIS online application system.

The above communication methods and notification gave the I&APs and commenting authorities the opportunity to review the project detail and the BA process to be followed and to submit comments for consideration in the BAR and EMPr.

Availability of Draft BAR and EMPr for 30-day public review and comment

This Draft BAR and EMPR have also been released for a 30-day public review period. All registered I&APs and relevant commenting authorities have been notified of the availability of the draft report via email and are able to access the report electronically from the Naledzi website at www.naledzi.co.za/publicdocuments.

A hard copy of the report can also be viewed at the following public venues:

- Thabazimbi Public Library at 4th Avenue in Thabazimbi Town; and
- Offices of Bertie Joubert Eiendomme located at 15 Judith Street, Thabazimbi

Comments submitted on the draft report will be considered, responded to and incorporated into the Final BAR and EMPr and submitted to LEDET for decision making.

Proofs of the above PPP activities are attached under **Appendix E3 – E5** to this report along with the Comments and Response Report.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in these Regulations and be attached to this application. The comments and response report must be attached under Appendix E.

The Comments and Response Report and correspondence trail between Nalediz and I&APs are included in **Appendix E6**. The Comments and Response Report will be updated to add any additional concerns raised during the Draft BAR and EMPR review period and will be incorporated into the final BAR and EMPR for submission to LEDET.

6. AUTHORITY PARTICIPATION

Please note that a complete list of all organs of state and or any other applicable authority with their contact details must be appended to the basic assessment report or scoping report, whichever is applicable.

An I&AP Database has been maintained through the registration period and is attached under **Appendix E7**. The list of commenting authorities is included.

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input.

Name of Authority informed:	**Comments received (Yes or No)**
Waterberg District Local Municipality	No comments have been submitted yet. It is envisaged that comments will be received during the 30-day public review and comment period on the Draft BAR and EMPR.
Thabazimbi Local Municipality	
North West Department of Water and Sanitation	
Limpopo Department of Economic Development, Environment and Tourism (through a pre-application engagement)	
Limpopo Department of Agriculture and Rural Development (Waterberg District Office – Lephalale)	
Department of Forestry Fisheries and Environment: Forestry Regulation and Support	
Limpopo Heritage Resources Agency (Dept. Sports, Arts and Culture –SAC)	
South African Heritage Resources Agency (SAHRA)	
Limpopo Department of Public Works, Roads and Infrastructurewill also be consulted during the Draft BAR review period.	

7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that subregulation to the extent and in the manner as may be agreed to by the department.

Proof of any such agreement must be provided, where applicable.

Has any comment been received from stakeholders?	**YES**	**NO**

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

1. **Abutting residential complex Zeldri Park, Homeowners Association Chairperson, Mr Neil Serfontein highlighted the following:**

- The Medivet road needs to be rebuilt before the construction of the township.
- The town already has a shortage of water supply. The new development will take water out of the system before it reaches Zeldri Park.
- TLM does not have money to repair /replace sewage pumps. Zeldri Park pumps sewage past Extension 75 to join the main sewer of TLM. How is Extension 75 going to reach the main sewer line?
- Endangered trees are not allowed to be removed.
- Noise and dust during construction will negatively impact the lives of Zeldri Park residents.

2. **South African Civil Aviation Authority, Obstacle Inspector (Lizelle Stroh)**

- SACAA provided several aerial maps showing the location of the site in relation to the project site via email.
- According to SACAA, the airfield is already restricted by developments.
- Data shows that the ground elevation from the airfield to the application site escalates. The 1: 7 slope to the airfield must be clear.
- The EAP was provided with an obstacle surface identification diagram in this regard.

A detailed Comments and Response Report is attached as **Appendix E6** outlining the correspondence between the stakeholders and the EAP.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

- The access road is in poor condition and must be upgraded.
- Water pressure and availability
- Sewage management
- Impact on protected tree species
- Noise and dust generated during the construction phase will negatively impact Zeldri Park residents
- Safety risk to airstrip users. The transitional surface area from the edges of the runway strip must be clear (1:7 slope).

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report as Annexure E):

- **Road upgrade** - TLM is responsible to carry out the Medivet Road upgrade which is scheduled for either 2023 or 2024. The construction of the township is scheduled to start either by 2023 or 2024 depending on when all the approvals are issued. It may therefore coincide with the planned road upgrade.

- **Water availability:** The water reticulation network in the area is over pressurised and there is a PRV located at the Medivet road intersection to address this. TLM must adjust the PRV pressure and there would be enough water pressure to supply both existing and new residential developments.

- **Sewage –** The township effluent will drain via a new internal sewer system to the existing rising main sewer line running parallel to Medivet Road. The sewage will be pumped to connect to the existing Gravity system. An additional pump station will be constructed by the applicant to operate in parallel with the existing pump station to reach the existing Gravity system.

- **Protected tree species –** One protected tree species was found onsite i.e. Camel Thorn. The applicant will conserve as much as possible in the township layout and landscaping. Where removal cannot be avoided Protected Tree Removal Permits will be obtained in terms of section 15 (1) of the NFA from the DFFE Forestry Regulation and Support before the construction of the township.

- **Noise and Dust –** These nuisance impacts will be temporary (12-24 months) and of moderate significance during construction. Construction will be limited to 07h00 to 17h00 during weekdays when most residents are at work. The noise during the operational phase will be very low similar to the existing residential developments in the area. Dust and noise abatement will be implemented through the Environmental Management Programme.

- **Safety risk to Airstrip** – The development will not pose a hazard to the airstrip. The township is proposed amid (next to and across from) existing residential developments. The building height will not exceed a 2-storey height similar to the abutting residential complex. The Thabazimbi Airfield management has also been furnished with the development detail. Comments will be included in the final BAR.

2. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

ENVIRONMENTAL IMPACT DETERMINATION AND EVALUATION

According to the NEMA EIA Regulations, a significant impact means 'an impact that may have a notable effect on one or more aspects on the environmental or may result in non-compliance with accepted environmental quality standards, thresholds, targets and is determined through rating the positive and negative effects of an impact on the environment based on criteria such as duration, magnitude, intensity and probability of occurrence.'

The purpose of the environmental impact assessment is therefore to assess and address the potential environmental impacts identified for the project based on the environmental features identified onsite (i.e. vegetation, plants, animals, soils etc.) through EAP and specialist field investigations and highlighted through the public consultations. The relevance of the impacts is considered, a significance rating assigned and where necessary, mitigation measures are proposed to reduce/avoid/minimise any negative impact and or enhance positive impacts. Specialist inputs obtained for the project have been included and attached to this BAR.

The impact significance ranking /scoring for each identified impact considers the extent, duration, probability of occurrence, intensity, the magnitude of an impact and to which degree the impact and risk can be mitigated.

Since the applicant already owns the application site and the proposal is located next to existing residential developments in an area allocated by the SDF for further residential development next to existing municipal infrastructure, the site is considered optimal and no other alternatives have been considered. Consequently, one site location is being assessed. The impacts would therefore be assessed based only on the selected property according to the following project stages:

- Planning Phase
- Construction Phase
- Operational Phase

Decommissioning is not foreseen in the near future since residential units become assets traded in the real estate market for decades. Any decommissioning activities in the future will be subject to a separate Basic Assessment process in terms of the NEMA EIA Regulations.

In terms of the NEMA, 1998 Chapter 1, sets out the National Environmental Management Principles which ultimately strive to ensure that development is socially, environmentally and economically sustainable. The core values of a BA process are therefore integrity, utility and sustainability. The BA, therefore, provides balanced credible information for decision-making to LEDET and provides environmental safeguards.

METHODOLOGY USED IN DETERMINING THE SIGNIFICANCE OF IMPACTS

The list of identified impacts for the proposed Thabazimbi Extension 75 Township will be evaluated using several rating scales as listed below. These ratings include extent, duration, intensity, significance, the status of impact, and probability. The calculation of the significance of the impacts is then simplified as follows:

Significance = (Extent + Duration + Intensity) x Probability

The rating system is described below in table format.

Table 3 Assessment Methodology

Criteria: STATUS – Describes whether the impact would have a negative, neutral or positive effect on the affected environment		
RATING		**DESCRIPTION**
+	Positive	Benefit to the environment
=	Neutral	Standard / impartial
-	Negative	cause damage to the environment
Criteria: PROBABILITY – Describes the likelihood of impact occurring		
RATING		**DESCRIPTION**
0	Improbable	Where the possibility of the impact occurring is low.
1	Probable	Where there is a distinct possibility that the impact will occur.
2	Highly probable	Where it is most likely that the impact will occur.
3	Definite	Where the impact will occur regardless of any prevention measures.

Criteria: EXTENT – Defines the physical extent or spatial scale of the potential impact		
RATING		**DESCRIPTION**
1	Site specific	Impacts extending as far as the activity, limited to the site and its immediate surroundings
2	Local	Impacts extending within 5km from the site boundary
3	Regional	Impacts extending to the district (20km from the boundary of the site)
4	Provincial	Impacts extending to provincial scale eg. Limpopo Province
5	National	Impacts extending to within the country i.e. South Africa.
6	International	Impacts extending beyond international border / the borders of South Africa/Botswana

Criteria: DURATION – Defines the temporal scale (for how long will the impact endure)		
RATING		**DESCRIPTION**
1	Immediate	Less than 1 year
2	Short term	1-5 years
3	Medium term	6-15 years
4	Long term	Between 16 – 30 years
5	Permanent	Over 30 years. Where mitigation either by natural processes or by human intervention will not occur in such a way or in such time span that the impact can be considered transient.

Criteria: INTENSITY NEGATIVE FOR ALL ASPECTS EXCEPT ECOLOGY Establishes whether the impact would be destructive or benign			
Status	**RATING**		**DESCRIPTION**
Negative	0	Negligible	Where impacts do not really affect the environment and no mitigation is required
	1	Low	Where impacts will result in short-term effects on the social and/or natural environment. These impacts are not deemed largely substantial and are likely to have little real effect. (marginally affected)
	2	Medium	Where impacts will result in medium-term effects on the social and/or natural environment. These impacts will need to be considered as constituting a fairly important and usually medium-term change to the environment, these impacts are real but not substantial. Impacts are fairly easy to mitigate
	3	High	Whereby effects will be long-term on social, economic and/or bio-physical environment. These will need to be considered as constituting usually long-term change to the environment. Mitigation is considered challenging and expensive
	4	Very High	Where impacts should be considered as constituting major and usually permanent change to the environment, and usually result in severe to very severe effects. Mitigation would have little to no effect on irreversibility.

Criteria: INTENSITY POSITIVE FOR ALL ENVIRONMENTAL ASPECTS			
Status	**RATING**		**DESCRIPTION**
Positive	0	Negligible	Where impacts affect the environment in such a way that natural, cultural and social functions and processes are not great and in instances, no mitigation measures will be required. (environment not really affected)
	1	Low	Minor improvement is anticipated over the short term in the social and/or natural environment.
	2	Medium	Where moderate improvements are anticipated over a medium- to long-term on the social and/or natural environment.
	3	High	Where large improvements are anticipated over a long term period on the social, economic and/or bio-physical environment.
	4	Very High	This results in permanent improvements of the social/or natural environment.

Criteria: INTENSITY RATING FOR ECOLOGY **Establishes whether the ecological impact would be destructive.**			
Status	**RATING**		**DESCRIPTION**
Negative	0	Negligible	Where impacts do not really affect the environment and no mitigation is required
	2	Minor	A limited impact is foreseen which could possibly affect the environment and these impacts are not substantial and can easily be mitigated.
	4	Low	Where impacts will result in short-term effects on the social and/or natural environment. These impacts are not deemed largely substantial and are likely to have a little real effect. (marginally affected)
	6	Medium	Where impacts will result in medium-term effects on the social and/or natural environment. These impacts will need to be considered as constituting a fairly important and usually medium-term change to the environment, these impacts are real but not substantial. Impacts are fairly easy to mitigate.
	8	High	Whereby effects will be long-term on social, economic and/or bio-physical environment. These will need to be considered as constituting usually long-term change to the environment. Mitigation is considered challenging and expensive.
	10	Very High	Where impacts should be considered as constituting major and usually permanent change to the environment, and usually result in severe to very severe effects. Mitigation would have little to now effect on irreversibility.

Table 4: Methodology of determining the significance rating of an impact

Criteria: SIGNIFICANCE		
"Significance"- attempts to evaluate the importance of a particular impact with mitigation measures included and also excluded. The significance was calculated using the following formula: **Significance = (Extent + Duration + Intensity) X Probability**		
RATING		**DESCRIPTION**
0-4	Very Low	Where the impacts will not influence the development, social, cultural or natural environment
5 -12	Low	Where impacts will result in short-term effects on the social and/or natural environment. The impacts merits attention however are not deemed largely substantial and are likely to have little real effect
13-25	Medium	Where impacts will have a medium-term effect on the social and/or natural environment. These impacts need to be considered as constituting a fairly important and usually medium-term change to the environment, these impacts can be mitigated by implementing effective mitigation measures.
26-44	High	Whereby effects will be long-term on the social economic and or bio-physical environment. The impacts could have a major effect on the environment. This may bring forth the consideration of no-go areas/open areas on the development land regardless of mitigations implemented. Mitigation is however possible.
45	Very High	Whereby effects will be permanent on the social economic and or bio-physical environment. Such impacts cannot be mitigated.

Table 5: Identified Planning Phase Impacts

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:
Flora (Terrestrial Biodiversity Impact)			
Loss of protected tree species	(18) Moderate (-)	▪ Where possible large Camel Thorn tree individuals should be incorporated into the layout design and or landscaping of the residential township. ▪ Prior to construction the protected tree species Camel Thorn must be marked onsite indicating which remains and which will be removed (if any). Based on the tree count permit for Removal of Protected Trees in terms of Section 15(1) of the National Forest Act must be submitted and obtained from DFFE: Forestry Regulation and Support.	(10) Low (-)
Surface Water / Stormwater Management			
Improper stormwater design for the township may damage and flood infrastructure (i.e. Medivet Road, ponding around housing units etc.), and cause rill and gully erosion.	(15) Moderate (-)	▪ The property drains in the south-easterly direction and will connect to the existing stormwater system located on Medivet Road, discharging towards the Thabazimbi Airfield. ▪ The stormwater will be controlled within the road reserve prism. A side channel will be constructed to contribute to the road prism capacity to cater for a 1:50-year flood. ▪ Minor flood recurrences (1: 2-year flood) will be controlled with a side channel at the entrance of the development that connects to the storm water of Medivet Road	(6) Low (-)
Services		▪	
Impact on water services and availability to existing residential developments	(15) Moderate (-)	▪ The water reticulation network in the area is over-pressurized. ▪ Arrangements/commitment from TLM must be sought through a services agreement to increase the pressure at the Pressure Reducing Valve (PRV) located at the Medivet Road intersection to ensure sufficient water pressure to supply both existing and the proposed Thabazimbi Extension 75 residential development. ▪ TLM must execute the PRV adjustment.	(6) Low (-)
Impact on existing sewage infrastructure	(15) Moderate (-)	▪ A pump station (i.e. submersible pump system) will be installed by the applicant to operate in parallel with the existing pump station in order not to exceed the capacity of the rising mains. The installation of the additional pump station will be written off against the contribution of services.	(6) Low (-)

Table 6: Identified Construction Phase Impacts

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:
Geology and Soils			
Disturbance of surface geology for township foundations	(12) Low (-)	▪ The soil profile as exposed on-site to an average depth of 1.7m is not considered an adequate founding medium and comprises two zones. ▪ **Zone A** in the northwestern half of the site has moderately collapsible soils (1.25m) and difficult excavations are expected within 1.5m of the surface. The following construction methods should be implemented as prescribed in the Geological Report attached under Appendix D: o Modified Normal Construction o Deep Strip Foundations ▪ **Zone B** in the southeastern half comprises moderate to highly collapsible soils and the following foundation recommendations are made: o Stiffened Concrete / Cellular Rafts o Pad and Pier Foundations o Dynamic Compaction ▪ Old septic tanks, French drains, swimming pools, duck/fish ponds/rubbish pits may be encountered in both zones. This will need to be excavated and backfilled with suitable inert material compacted in controlled layers. ▪ The design of foundations should be done in accordance with and under the supervision of a civil/structural engineer and the founding recommendations given above should be verified during construction. ▪ Stick quality control is necessary during the compaction procedure to ensure that the desired result is achieved and densities of compacted soil must be controlled with suitable field tests. ▪ The roads and paved areas should be designed according to the anticipated traffic and axle loads bearing the estimated settlement of the roadbed into account. Adequate drainage should be provided to ensure that ponding of surface water on and in the vicinity of the roadbed is prevented. No trees should be planted close to the road surface. ▪ All excavations exceeding 1.5m should be adequately stabilized to ensure a safe working environment. ▪ Although the water table, whether perched or permanent was not encountered during the investigation, the necessary damp proofing precautions should be taken underneath all structures and provision will have to be made to prevent ingress of water beneath foundations. ▪ It is recommended that all constructed embankments exceeding 1,5m or as deemed necessary by the design engineers be stabilized and/or protected by means of retaining walls. ▪ Embankments and all terrace faces should be adequately compacted and protected from erosion and potential failure.	(6) Low (-)

The upper soil profile of the site is erodible. Clearing of vegetation will leave the soil exposed and may lead to increased stormwater runoff and erosion. (Erosion may occur in wet season).	(15) Moderate (-)	▪ Gradual removal of vegetation for township components is recommended to reduce the risk of soil erosion. ▪ Protect all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction area. ▪ Proper stormwater management measures must be in place on the construction site. ▪ Stockpiles should not exceed 1.5 meters heights.	(6) Low (-)
Loss of soil from excavations due to erosion	(11) Low (-)		(3) Very Low (-)
Fauna and Flora (Terrestrial Biodiversity Impact)			
Destruction and loss of 2.4 ha of degraded Bushveld including loss and fragmentation of vegetation communities in adjacent natural areas.	(18) Moderate (-)	▪ Areas to be developed/disturbed must be specifically demarcated so that during construction, only the demarcated areas are impacted upon. ▪ Areas of indigenous vegetation, even secondary communities outside of the direct project footprint, should not be fragmented or disturbed further. ▪ All construction vehicles must make use of existing roads and paths. ▪ Areas that are denuded during construction that are not within the development footprint need to be re-vegetated with indigenous vegetation to prevent erosion during flood events and strong winds and to support adjacent habitats. This will also reduce the likelihood of alien invasive plants.	(12) Low (-)
Loss of protected tree species (Individual Camel Thorn Trees, but widespread in area)	(18) Moderate (-)	▪ The sensitivity and importance of the species must be part of the environmental awareness program. ▪ High visibility flags (markers) must be placed near any protected trees (not identified for removal) to avoid any damage or destruction to the trees by construction machinery.	(10) Low (-)
Spread of alien invasive species to abutting property (Portion 127/318) or natural areas resulting in altered habitat integrity.	(16) Moderate (-)	▪ The implementation of an Alien Invasive Plant management plan is important, especially because of the invasive species identified on site, which if left unchecked, will continue to grow and spread resulting in further deterioration of adjacent natural areas. ▪ The footprint area of the construction site should be kept to a minimum and clearly demarcated to avoid unnecessary disturbances to adjacent areas. ▪ Spread of alien invasive species to adjacent areas will reduce its grazing capacity.	(5) Low (-)
Loss of faunal habitat and disturbance to fauna.	(12) Low (-)	▪ The site has low faunal activity mostly with common avifauna species present. It's fenced off and provides little habitat for faunal species. ▪ The majority of the Camel Thorn trees would remain to provide some form of habitat for small reptiles and common avifaunal species. ▪ Vegetation will also be gradually removed allowing the limited faunal species that might be onsite to gradually vacate the area. ▪ A qualified Environmental Control Office must be onsite when clearing begins. ▪ The areas to be developed must be demarcated to prevent the movement of construction staff/equipment into surrounding environments. Signs must be put up to enforce this.	(8) Low (-)
Ground and Surface Water Pollution			
Potential leaking equipment and hydrocarbon spillages may cause groundwater pollution.	(15) Moderate (-)	▪ Leaking equipment and vehicles must be repaired immediately or taken off-site to facilitate repair. ▪ Drip trays or any form of oil absorbent material must be placed underneath	(5) Low (-)

		vehicles/machinery and equipment not in use. ▪ Avoid any servicing of vehicles onsite. ▪ The contractor shall be in possession of an emergency spill kit that must always be complete and available onsite. ▪ Clean small oil or fuel spills with an approved absorbent material (e.g. Sawdust, “Drizit” or “Spill-sorb”) ▪ Immediately clean any accidental oil or fuel spillages or leakages; ▪ Carefully control all on-site operations that involve the use of cement and concrete. ▪ Contain any diesel storage tanks/machinery spills (e.g. accidental spills of hydrocarbons, oils, and diesel) in such a way as to prevent it from leaking into the environment.	
Altering of surface water flows and increased stormwater runoff due to increased hardened surfaces	(15) Moderate (-)	▪ Stormwater from the higher-laying ground (northwest) should be adequately controlled to prevent potential flooding /erosion of lower-lying ground (southeast).	(6) Low (-)
Dust emissions			
Construction activities will result in increased dust emissions as a result of site clearance, movement of construction vehicles onsite, transportation of construction material and vehicle entrained dust along the Medivet Road (if not upgraded by the time of construction).	(13) Moderate (-)	▪ Minimize vegetation clearance to reduce exposure of bare soil surfaces (i.e. gradual removal of vegetation for project components) ▪ No burning of vegetation cover and waste is permitted during construction. ▪ Minimize dust generation activities, especially during strong winds; ▪ Apply wet dust suppression where necessary to manage dust emissions from vehicle movement, site clearance and along the Medivet road (as necessary). ▪ Alternative environmentally friendly dust suppressants can be used (i.e. Dust-A-Side) ▪ Control vehicle speeds along the Medivet Road to 40km/hour. ▪ Construction materials piles (i.e. building sand etc.) must not exceed a height of 2m.	(9) Low (-)
Noise impact			
The construction activities, machinery, excavators, site clearance and operation of construction material will result in increased noise levels and will cause a nuisance to abutting properties and nearby small holdings.	(15) Moderate (-)	▪ It is advisable to first establish the development boundary wall to assist in reducing the noise propagation and visual impact (if possible). ▪ Construction works should be carried out between 07h00 – 17h00 on weekdays, and Saturdays from 07h00 – 14h00. ▪ No construction work should be carried out on Sundays or public holidays. ▪ All equipment on site should be kept in good working condition and all activities must comply with the Noise Control Regulations and SABS standards. ▪ The contractor will take preventative measures (screening, timing, pre-notification of affected parties) to minimize complaints regarding noise nuisances; ▪ A community complaints register must be kept onsite. Respond to complaints with regard to noise generation by taking responsible action to reduce the impact. ▪ Notify adjacent landowners (abutting) prior to undertaking activities that may generate high noise levels that may cause a nuisance. ▪ Workers' exposure to ambient noise levels exceeding 85dBA must wear appropriate Personal Protective Equipment (PPE).	(12) Low (-)

Heritage, Cultural and Palaeontological Impacts			
No heritage or cultural sites were found on the project site. The Archaeologist still indicates that it is probable that deep excavations might unearth any cultural or heritage resources.	(9) Low (-)	Chance Find Protocols are recommended in case any resources are unearthed: ▪ If any heritage resources are uncovered the construction activities should halt. ▪ SAHRA APM Unit (Natasha Higgit/PHilllip Hine 021-462-5402) must be alerted per section 35 (3) of the National Heritage Resources Act. ▪ Although highly unlikely, if any unmarked graves are discovered, the SAHRA Burial Grounds and Graves Unit (Thingahangwi Tshivhase 012-941-4960) must be alerted immediately as per Section 36 (6) of the National Heritage Resources Act. ▪ A professional archaeologist or palaeontologist must be contacted as soon as possible to inspect the findings. ▪ If the newly unearthed heritage resources are of high significance a Phase 2 rescue operation may be required with permits issued by SAHRA. ▪ Contact Ubique Heritage Consultants: Heidi@ubiquecrm.com; jan@ubiquecrm.com; (+2772-141-8860).	(7) Low (-)
Loss of fossil heritage (destroy of permanent seal in of fossils below surface.	(25) Moderate (-)	If fossil remains/trace fossils are discovered during any phase of construction, either on the surface or exposed by excavations, the Environmental Control Officer (ECO) in charge of the development must report to SAHRA (111 Harrington Street, Cape Town, Tel: 021-462-4502) so that mitigation can be carried out by a palaeontologist.	(12) Low (-)
Visual Impact			
Site clearing may be visually intrusive to abutting properties, and motorists travelling on the D1485 Marakele Road and Medivet Road. Sources of impact include: ▪ Removal of vegetation ▪ Use of construction equipment ▪ Clearing for the internal street network and stands.	(12) Low (-)	▪ Screening of the construction site is recommended to shield the construction activities from the abutting land owners and small holdings to minimize the visual impact, alternative establish the development boundary wall first with only screening measures implemented along Medivet Road. ▪ Gradual removal of vegetation for the internal road network, services and residential units will reduce the visual intrusion further. ▪ The construction site must be kept free of litter, contained in appropriate bins/containers and must be removed on a weekly basis.	(6) Low (-)
Construction lights from the laydown area could be intrusive to abutting properties at night.	(7) Low (-)	Lighting at the construction site (at night) should be sufficient for security but should not constitute illumination/light pollution to abutting properties.	(3) Very Low (-)
Traffic (Impact on roads)			
Increased traffic at the Thabazimbi-Marakele intersection and Medivet Road from construction vehicles and heavy vehicles delivering construction material (building sand, bricks etc.). The D1485 intersection will still operate at an acceptable Level of Services (Los) but the added traffic on the Medivet road may disrupt road users.	(18) Moderate (-)	▪ The traffic statement requires no road improvements to the D1485 Marakele-Thabazimbi road. It states the intersection with the Medivet Road (eastern leg) is operating at an acceptable LoS. ▪ No recommendations are made for the upgrading of the Medivet Road. ▪ Movement of construction vehicles to and from the site should be conducted in off-peak traffic flow; ▪ Heavy vehicle crossing signs and entrance road construction signs must be placed along the D1485 (at intersection) and along Medivet Road. ▪ Caution signs of 60km/h speed limit shall be placed at heavy vehicle crossing points.	(12) Low (-)
There will be a further deterioration of the Medivet Road condition, which is already in poor condition (if not upgraded	(21) Moderate (-)	▪ The Traffic Statement does not recommend any road upgrades. The Civil engineering reports make note of a required road upgrade.	(10) Low (-)

yet by TLM when construction starts)		▪ TLM is proposing to upgrade the Medivet Road (it's an action item in the municipal IDP) scheduled for the next two financial years 2023 – 2024. It will be funded by PPC Dwaalboom. ▪ The applicant cannot carry this responsibility since the deterioration is owed to a cumulative impact from existing residential developments and small holdings. ▪ If the road upgrade has not taken place by the start of construction the applicant/contractor would need to take photographic evidence of the condition of the road before construction starts. ▪ Any proven damage caused to the road by construction vehicles must be repaired/rectified by the applicant.	
Waste Management			
Waste will be generated during the construction phase, if not controlled/managed, will have a negative impact (i.e. littering, windblown contamination, pollution of soil, stormwater runoff etc.). Wastes are likely to include domestic waste, spent containers, waste concrete mix, spent paint containers and brushes, and rubble.	(12) Low (-)	▪ Waste skips/bins will be provided at a designated area on the construction site; ▪ All solid waste must be removed off-site on a weekly basis (pending on the volume of waste produced) by means of waste disposal trucks to the Thabazimbi Landfill Site. ▪ The maximum domestic waste storage period must be 10 days.	(6) Low (-)
Health, Safety and Security			
Increased construction workers/movement in the local area may threaten the security in the area.	(11) Low (-)	▪ Workers must be identified by an overall of the contractor's logo. ▪ Workers must not be allowed to trespass on adjacent private land. ▪ The construction site must have controlled access.	(5) Low (-)
The health, and safety of workers and other personnel utilizing the site might be at risk if proper preventative measures are not put in place.	(14) Moderate (-)	• The contractor must implement standards set out in the OHS Act 85 of 1993). This act aims at protecting workers with regard to their activities at work. • Emergency procedures applicable to the construction phase must be set up prior to commencement of construction activities; • Workers must be supplied with hearing protection if noise levels exceed 85dB (decibels);	(11) Low
Social and Economic Impact			
Create 50 construction jobs	(14) Moderate (+)		
Capital injection into the local economy through the purchase of building materials.	(14) Moderate (+)		
Nuisance impact resultant from the construction activities may impact on abutting residential development and small holdings.	(14) Moderate (-)	Controls and mitigation recommended for nuisance impacts are required in terms of noise, dust and visual impact including traffic.	(11) Low (-)

Table 7: Identified Operational Impacts

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:
Groundwater pollution			
Sewage leakages from pipelines may occur and impact the groundwater quality	(10) Low (-)	▪ Any leaks should be reported and fixed immediately.	(5) Low (-)
Visual Impact			
The development will contribute to a cumulative effect of gradual transformation of the direct area from small holding to medium density residential. The impact is not negative per se as similar developments already exist next to and across from the proposed township.	(10) Low (-)	No mitigation is proposed.	(10) Low (-)
Traffic (Impact on roads)			
Increased traffic at the D1485 Thabazimbi Marakele Road intersection (33 AM and PM trips)	(7) Low (-)	▪ No road improvements are required in terms of the Traffic Impact Statement. The intersection is operating at an acceptable.	(7) Low (-)
Increased traffic along the Medivet Road will add to the further deterioration of the road surface (if not upgraded yet by TLM when the township is in operation).	(14) Moderate (-)	▪ The upgrade of Medivet Road must be implemented by TLM and is scheduled for the 2023-2024 financial years.	(8) Low (-)
Waste Management			
Generation of domestic and garden waste by development	(21) Moderate (-)	▪ Waste will be collected by the TLM and disposed of at the registered Thabazimbi Landfill Site.	(7) Low (-)
Generation and disposal of sewage by the development	(24) Moderate (-)	▪ Sewage will be drained to the Thabazimbi Waste Water Treatment Works. ▪ A pump station (i.e. submersible pump system) will be installed by the applicant to operate in parallel with the existing pump station in order not to exceed the capacity of the rising mains. ▪ Regular sewage infrastructure inspections should be implemented by the township body corporates and faults/leaks must be reported immediately to the TLM for repair.	(10) Low (-)
Social and Economic Impact			
Create 15-25 permanent jobs	(16) Moderate (+)		
Provision of 33 additional secure housing units in Thabazimbi where there is a shortage to rent or to buy.	(27) High (+)		
Increased revenue and taxes collected by the local authority	(24) Moderate (+)	No mitigation required.	

3. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Alternative A (preferred alternative)

A summary of the impacts including significance pre and post mitigation is provided below in **Table 8**.

Table 8: Summary of the significance of impacts pre and post mitigation

Impact	Significance (pre-mitigation)	Significance (post mitigation)
Planning Phase		
Loss of protected tree species	Moderate (-)	Low (-)
Improper stormwater management system /design	Moderate (-)	Low (-)
Impact on water services and availability to existing residential developments	Moderate (-)	Low (-)
Impact on existing sewage infrastructure	Moderate (-)	Low (-)
Construction Phase		
Disturbance of surface geology for township foundations	Low (-)	Low (-)
Clearing of vegetation will leave the site exposed and will lead to increased surface run-off and erosion.	Moderate (-)	Low (-)
Loss of soil from excavations due to erosion	Low (-)	Low (-)
Destruction and loss of 2.4 ha of degraded bushveld (low) and fragmentation of vegetation communities in adjacent natural areas (moderate).	Moderate (-) to Low (-)	Low (-)
Loss of limited protected tree species	Moderate (-)	Low (-)
Spread of alien invasive species	Moderate (-)	Low (-)
Loss of faunal habitat and disturbance of fauna	Low (-)	Low (-)
Potential leaking equipment and hydrological spillages may pollute the groundwater.	Moderate (-)	Low (-)
Altering the surface water flows and increased stormwater runoff due to increased hardened surfaces.	Moderate (-)	Low (-)
Dust emissions from construction activities	Moderate (-)	Low (-)
Increased noise levels from construction activities	Moderate (-)	Low (-)
Accidental unearthing of any cultural or heritage resources	Low (-)	Low (-)
Loss of fossil heritage (destroy of permanent seal in of fossils below the surface)	Moderate (-)	Low (-)
Site clearing may be visually intrusive to abutting properties.	Low (-)	Low (-)
Construction lights from the laydown area/construction storage area could be intrusive to abutting properties at night.	Low (-)	Very Low (-)
Increased traffic using the D1485 Thabazimbi-Marakele Intersection and further deterioration of the Medivet Road condition (if not upgraded by TLM by the time of construction).	Moderate (-)	Low (-)
Waste impact (management)	Low (-)	Low (-)
Increased construction workers/movement in the local area may pose a security risk.	Low (-)	Low (-)

Impact	Significance (pre-mitigation)	Significance (post mitigation)
Create 50 construction jobs	Moderate (+)	Not required
Capital injection in the local economy by purchasing building material	Moderate (+)	Not required
Nuisance impacts resultant from construction activities may impact on abutting residential development and small holdings	Moderate (-)	Low (-)
Operational Phase		
Sewage leakages from pipelines may occur and impact on groundwater quality	Low (-)	Low (-)
The cumulative visual effect of gradual transformation of the direct area from small holding to medium density residential. Not negative per se due to existing similar developments in the direct area.	Low (-)	Low (-)
Increased traffic at the D1485 Thabazimbi-Marakele Road intersection	Low (-)	No road improvements required
Increased traffic on Medivet Road results in further road deterioration (if not upgraded by TLM once the township is in operation)	Moderate (-)	Low (-)
Generation of domestic, garden waste and sewage disposal by development.	Moderate (-)	Low (-)
Create 15 – 25 permanent	Moderate (+)	No mitigation is required. Positive impact
Provision of housing	High (+)	
Increased revenue and taxes to local authority	Moderate (+)	

Several negative impacts of moderate and low significance ratings have been identified for the planning, construction and operational phase of the project of which the majority can be reduced/controlled or remedied to a low significance rating ultimately minor. No impacts of high negative significance ratings have been identified for the project given the degraded nature of the site and activity type proposed. Five (5) positive social and economic impacts have been identified for the project during construction and operation i.e.

- Creation of jobs during construction (50) and operation (15-25)
- Capital injection in the local economy through the purchase of building materials
- Provision of housing in a market with a significant shortage of houses available for rent and to buy in the town near to amenities and schools is rated as a high positive impact;
- Increased revenue and taxes to the local authority

No-go alternative (compulsory)

If the status quo of the site is maintained, none of the potential negative or positive impacts provided in Table 8 will materialize i.e.

- Geology
- Soil erosion
- Nuisance impacts (i.e. noise, dust)
- Traffic Impact
- A gradual change in the visual character of the direct area (visual)
- Low impact on fauna and flora
- Potential surface and groundwater pollution risks

- Job creation, increased expenditure in the local community when purchasing building material
- Provision of housing in a town with a significant shortage of houses.

The no-go alternative, therefore, has a negative socio-economic impact and a low positive ecological impact. It must also be highlighted that whether the township is developed or not Medivet Road is scheduled for the upgrade by TLM as a strategic action item on the 2021-2022 IDP. The road has been deteriorating for years due to the cumulative impact from small holdings and existing residential developments but is still drivable by sedan or bakkie and in daily use by residence owners along the access road.

~~**Alternative C**~~

For more alternatives please continue as alternative D, E, etc.

SECTION E. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?	**YES**	NO

~~If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):~~

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the department in respect of the application:

A.
This is a small-scale project which will be developed on degraded bushveld vegetation which will face minimal further impact from any development activities in terms of terrestrial ecology. Due to the limited and degraded habitat available faunal activity is also low.

B.
A number of large Camel Thorn trees (relatively widespread in the area) are present onsite and will be conserved and incorporated into the township layout and landscaping as far as possible. Where removal of the protected tree species cannot be avoided Permits for Removal will be obtained from DFFE Forestry Regulation and Support prior to construction.

C.
Existing municipal services infrastructure exists at the site and the developer undertakes to install the necessary infrastructure required to connect to the services and install a pump station to augment the sewer pump station currently pumping sewage to the rising main. Water pressure is available through the municipal system to supply water to the new and existing residential developments.

D.
The development would have moderate-low impacts which can be adequately alleviated by mitigation measures implemented through the project phases. Given the significant shortage of housing in Thabazimbi and the minor impact associated with the relatively small-scale township development, the benefits will outweigh the significance of the negative aspects.

E.
The Medivet Road is scheduled for the upgrade by TLM in the next two financial years which will address the concern of the poor road condition of the access road, which is nonetheless still drivable and in daily use.

F.
According to the Engineering Geologist ferruginous concretions and ferricrete in present in the soil profile indicative of a seasonal fluctuating water table. Neither the Environmental Scientist nor Ecological Specialist could identify any areas with vegetation indicators or soil indicators indicative of perched / wetland conditions forming anywhere onsite. Soil samples taken with an auger also could not detect such close to the surface. According to the soil profiles, the concretions were present 1.8-2m below ground. This area has not been excluded by the Geologist. Specific foundation recommendations are proposed.

G.
Based on the above there are no fatal flaws associated with the development. Naledzi Environmental Consultant Pty Ltd is of the opinion that the proposed township development should be approved based on specialist findings and strict implementation of management measures. The content of this BAR and EMPR is considered sufficient for LEDET to reach an informed decision and it's recommended that the environmental authorisation is issued.

The environmental authorisation should be issued for a period of 6 years to allow the applicant to secure the necessary land use consent from TLM and finalise the services agreement contracts and contributions.

H.
It is recommended that the project be subject to the following conditions:

Construction Phase

- **Noise:**
  - ✓ All the mitigation measures proposed in the Basic Assessment Report and EMPr must be adhered to.
  - ✓ The EMPr is to include controls to restrict construction activities to working hours from 08h00 to 17h00 during weekdays, and 07h00 – 14h00 on Saturdays. No construction activities is permitted on Sundays or public holidays.
  - ✓ A community complaints register must be kept onsite. The applicant/contractor must respond to the complaints with regard to noise generation taking responsible action to reduce the impact.
  - ✓ Abutting landowners must be notified prior to undertaking activities that may generate high noise levels that may cause a nuisance.
- **Dust Impact:**
  - ✓ Apply wet dust suppression where necessary to manage fugitive dust from vehicle movement along the Medivet Road, onsite including from excavations and site clearance and onsite. Alternatively, environmentally friendly dust suppressants can be used (i.e. Dust-A-Side).
- **Waste Impact:**
  - ✓ All waste generated during the construction phase must be disposed of on a weekly basis at the registered Thabazimbi Landfill Site. No domestic waste may be kept/stored for longer than 10-days.
- **Flora (Ecology):**
  - ✓ Large Camel Thorn tree individuals should be incorporated into the layout design and or landscaping of the residential township as far as possible.
  - ✓ Prior to construction the protected tree species Camel Thorn must be marked with highly visible flags

placed near the protected trees to avoid any damage or destruction to the trees by construction machinery.
  - ✓ Where removal of individual Camel Thorn trees cannot be avoided, due to placement of essential infrastructure a permit for Removal of Protected Trees in terms of Section 15(1) of the National Forest Act must be submitted and obtained from to DFFE: Forestry Regulation and Support.
  - ✓ A qualified Environmental Control Officer must be onsite when clearing begins.
  - ✓ The implementation of an Alien Invasive Plant management plan is important, especially because of the invasive species identified on site, which if left unchecked, will continue to grow and spread resulting in further deterioration of adjacent natural areas.
- **Surface and Groundwater**
  - ✓ Proper stormwater management must be implemented during construction.
  - ✓ The contractor shall be in possession of an emergency spill kit that must always be complete and available onsite.
  - ✓ Clean small oil or fuel spills with an approved absorbent material (e.g. Sawdust, "Drizit" or "Spill-sorb")
  - ✓ Immediately clean any accidental oil or fuel spillages or leakages;
  - ✓ Carefully control all on-site operations that involve the use of cement and concrete.
  - ✓ Chemical sanitation facilities or systems such as 'toilets' must be provided at a ratio of one for every 15 workers. These must be placed such that spills and leaks to the environment are prevented and must be maintained according to operating instructions and the content thereof must be disposed at the Thabazimbi Waste Water Treatment Works.
- Construction workers must be identified by overalls /contractor's logo and not be allowed to trespass onto adjacent private land.
- Construction activities must be suspended and a preventative of SAHRA and/or LIHRA be contacted immediately in the event of finding or uncovering heritage or palaeontological features.
- All services must be designed and implemented as per the requirements of the Thabazimbi Local Municipality.

Operational Phase

- Storm water must be controlled within the Medivet Road reserve prism. A side channel is to be constructed to contribute to the road prism capacity to cater for a 1:50-year flood event. Minor flood occurrences (1:20 year flood) are to be controlled with a side channel at the entrance of the development that connects to the stormwater of Medivet Road.
- Regular sewage infrastructure inspections should be implemented by the township body corporate and faults/leaks must be reported immediately to the TLM for repair.

- **Monitoring and Reporting Requirements**
  - ✓ Given the small scale of the project and low sensitivity of the application site limited monitoring would be required i.e.
    - o A qualified Environmental Control Officer must be appointed to:
      - Conduct an initial site visit during site establishment
      - Conduct another site visit three months into construction including the submission of one (1) monthly report to LEDET
      - One (1) post-construction site visit and close-out report to LEDET
- **Management of the Activity**
  - ✓ A copy of the environmental authorisation must be kept at the property/onsite office where the development will be undertaken. The EA must be produced to any authorised official of LEDET requesting to see it and must be available for inspection by any employee/agent of the holder of the EA who undertakes work on the property;

✓ A copy of the EMPR must also be available onsite and its content and objectives must be known by contractors, subcontractors, agents and other people working onsite.

Is an EMPr attached? The EMPr must be attached as Appendix F.	**YES**	NO

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plans

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

D – Site Verification Report (SVR) including National Screening Tool Report (STR)

D1 – Specialist Declarations

D2 – Traffic Impact Statement (Comissioned as part of the Town Planning Application)

D3 –Geotechnical Investigation Report (Commissioned as part of the Town Planning Application)

D4 – Terrestrial Compliance Statement (Naledzi commissioned)

D5 – Heritage Statement and Desktop Palaeontological Study (Naledzi commissioned)

Appendix E: Public Participation

E1 - Newspaper Advertisement Tear Sheet

E2 - Site Notice Photographs

E3- Copy of Notification Letter and BID (Afrikaans and English)

E4 - Proof of emailed notification to I&APs and commenting authorities

E5 - Proof of public notifications placed on the Naledzi website and uploaded onto SAHRIS online system

E6 - Comments and Response Report inclusive of public submissions and responses by Naledzi

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information
G1 – EAP Declaration
G2 – CV of EAP and Environmental Scientist
G3 - Engineering Services Report (Commissioned as part of Town Planning Application)
G4 – Electrical Engineering Report (Comissioned as part of Town Planning Application)

SECTION G1: DECLARATION BY THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

I, Khangwelo Musetsho declare that I –

(a) act as the independent environmental practitioner in this application;
(b) do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014;
(c) do not have and will not have a vested interest in the proposed activity proceeding;
(d) have no, and will not engage in, conflicting interests in the undertaking of the activity;
(e) undertake to disclose, to the competent authority, any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the Environmental Impact Assessment Regulations, 2006;
(f) will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
(g) will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the Department in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the Department may be attached to the report without further amendment to the report;
(h) will keep a register of all interested and affected parties that participated in a public participation process; and
(i) will provide the Department with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not.

Signature of the Environmental Assessment Practitioner:

Naledzi Environmental Consultants
Name of company:

09 September 2022
Date: