



LIMPOPO

PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF ECONOMIC DEVELOPMENT, ENVIRONMENT & TOURISM

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:

Ref Nr: 12/1/9/1-C245

NEAS Reference Number:

(For official use only)

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.

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:-

<p><u>Postal Address:</u> Central Administration Office Environmental Impact Management P. O. Box 55464 POLOKWANE 0700</p>	<p><u>Physical Address:</u> Central Administration Office Environmental Affairs Building Cnr Suid and Dorp Streets POLOKWANE 0699</p>
<p>Queries should be directed to the Central Administration Office: Environmental Impact Management:-</p> <p>For attention: Mr E. V. Maluleke</p> <p>Tel: (015) 290 7138/ (015) 290 7167</p> <p>Fax: (015) 295 5015</p> <p>Email: malulekeev@ledet.gov.za</p>	

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FINAL BASIC ASSESSMENT REPORT

<p>MAGATLE FILLING STATION AND SHOPPING CENTRE (A PART OF THE FARM ZEBEDIELAS LOCATION 123 KS)</p>

Ref Nr: 12/1/9/1-C245

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ABBREVIATIONS

CBA	Critical Biodiversity Area
CFLs	Compact fluorescent lamps
ECO	Environmental Compliance Officer
EMPr	Environmental Management Programme
HIA	Heritage Impact Assessment
I&APs	Interested and Affected Parties
IDP	Integrated Development Plan
Km	Kilometres
LDP	Limpopo Development Plan
LEDET	Limpopo Department of Economic Development, Environment & Tourism
LEGDP	Limpopo Economic Growth and Development Plan
m	Metres
NDP	National Development Plan
PIA	Palaeontological Impact Assessment
RDL	Red Data Listed

UST

Underground Storage Tank

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:

Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail¹:

The development entails the establishment of a Filling Station that is to accommodate 499m³ of fuel on site as well as a Mini Shopping Centre on a Part of the Farm Zebedielas Location 123 KS. The development is to include all required services thereto. The proposed development will measure approximately 51 914m² in extent.

Filling Station

The fuel tanks will be stored underground on the north western part of the site. The filling station will include a Car wash, Convenient store and a Parking area.

The tanks will be double jacketed tanks and the estimated tanks to be on site will be 12 with a capacity of 40 000 litres. It is understood that the applicant will look into the recommendations provided in the feasibility study and might phase the development in relation to market growth. The type of fuel to be stored will be Unleaded petrol both 93 and 95 and Diesel.

Tank installation

Tanks are to be installed according to applicable South African National Standards.

Mini shopping Centre

The Mini shopping centre will be situated on the south eastern part of the site and will include a delivery area and parking facilities.

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.

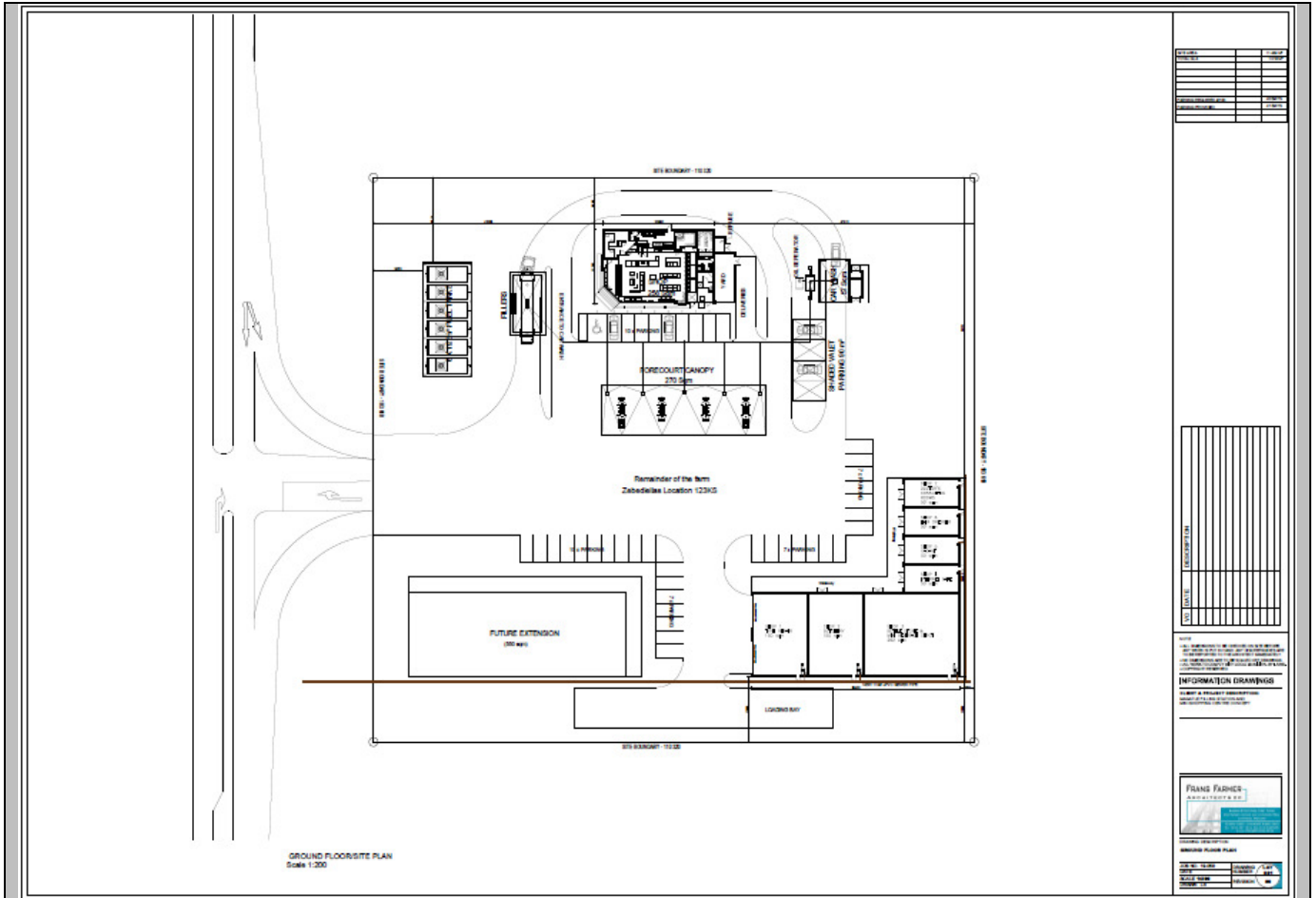


Figure 1: Layout Plan

Project locality

The site is situated approximately 15km to the south of the R518 Road, 13km north west of the R579 Road, 5.6km north of Molapo Village and directly opposite the Magatle Police Station, Magatle, Limpopo Province. The Nkumpi River a tributary of the Olifants River, is situated approximately 300m to the east of the site.

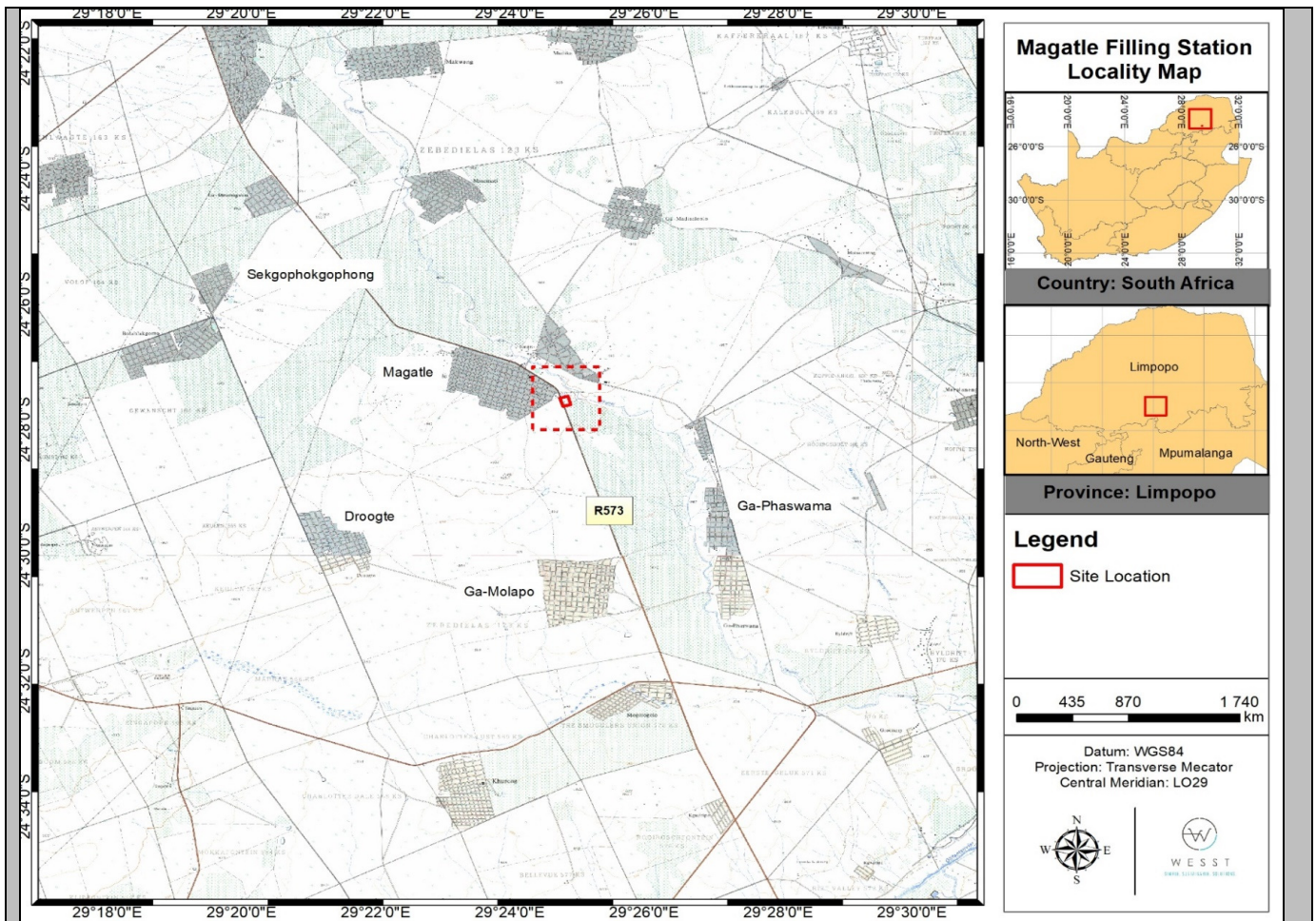


Figure 2: Locality of the site, WESST Consulting (Pty) Ltd 2019

Regulatory process

In terms of the National Environmental Management Act, 1998 (Act No 107 of 1998) and associated EIA Regulations published in 2014 as amended in 2017, an environmental authorisation should be obtained from the relevant decision making authority, prior to the commencement of certain listed activities that may result in potential negative impacts on the environment.

Authorisation is sought in terms of Activities 14 and 27 in Listing Notice 1 and Activity 12 in Listing Notice 3 of the EIA Regulations 2014 (as amended 2017) as described below:

Activities listed under GN R327 (Listing Notice 1):

Activity 14: The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres.

Activity 27: The clearance of an area of 1hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for-

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

Activity listed under GN R324 (Listing Notice 3):

Activity 12: The clearance of an area of 300 square metres or more of indigenous vegetation. E. Limpopo (i) Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such list, within an area that has been identified as critically endangered in the National Spatial

Biodiversity Assessment 2004; (ii) Within critical biodiversity areas identified in bioregional plans.

The application is for the development of a Filling Station to accommodate 499m³ of fuel and a Mini Shopping Centre to be situated on a site measuring approximately 5.1914ha in extent. The site is situated within a Critical Biodiversity Area (CBA). The CBA is delineated as an Optimal Area (CBA 2).

2. FEASIBLE AND REASONABLE ALTERNATIVES ASK APPLICANT WHICH ALTERNATIVES WERE CONSIDERED

“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;

No alternative properties were investigated to undertake the proposed activity because the Applicant has identified the need for a Filling Station and a Mini shopping Centre for the Magatle area. This is due to the following:

- The nearest Zebediela Plaza is situated approximately 14.3km to the north west of the site.
- Only one informal Filling exists in a 5km radius of the site and one formal Filling Station exists approximately 14.3km to the north west of the site, thus indicating a need for such a development in this area.

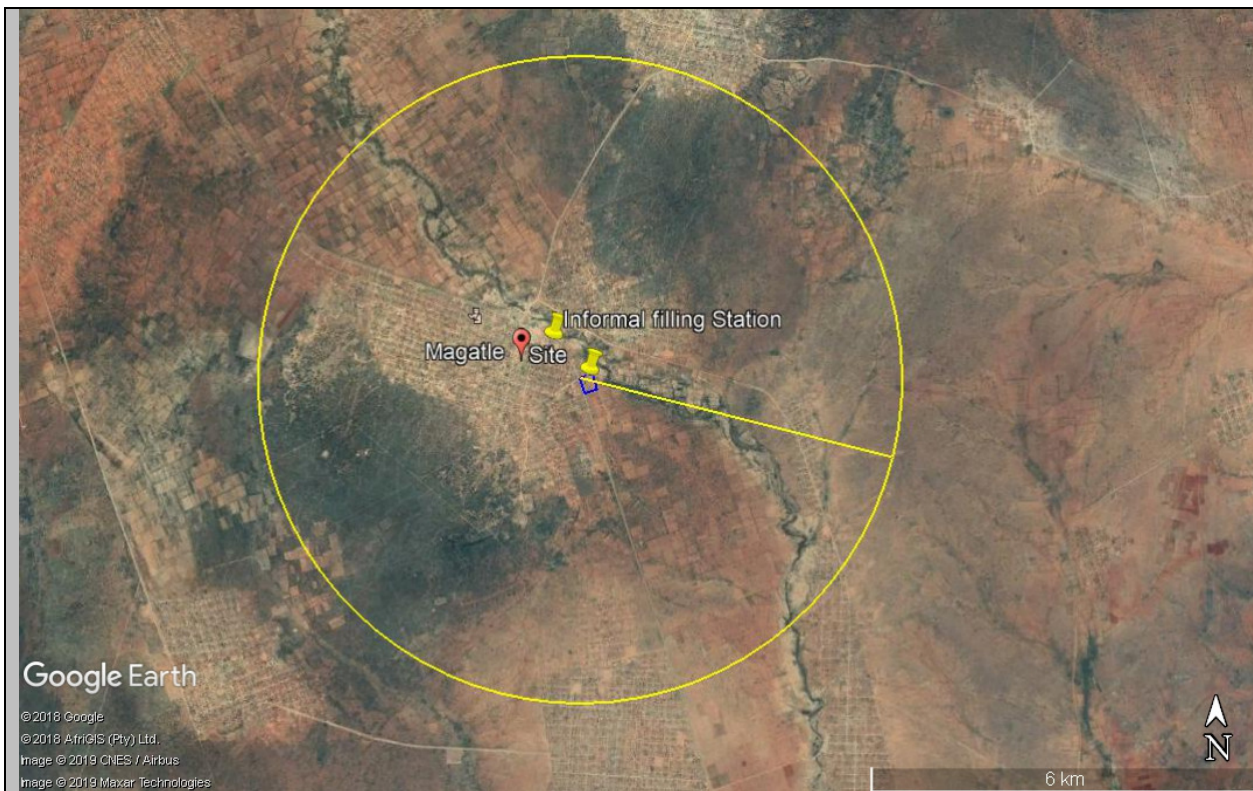


Figure 3: Filling stations within 5km radius

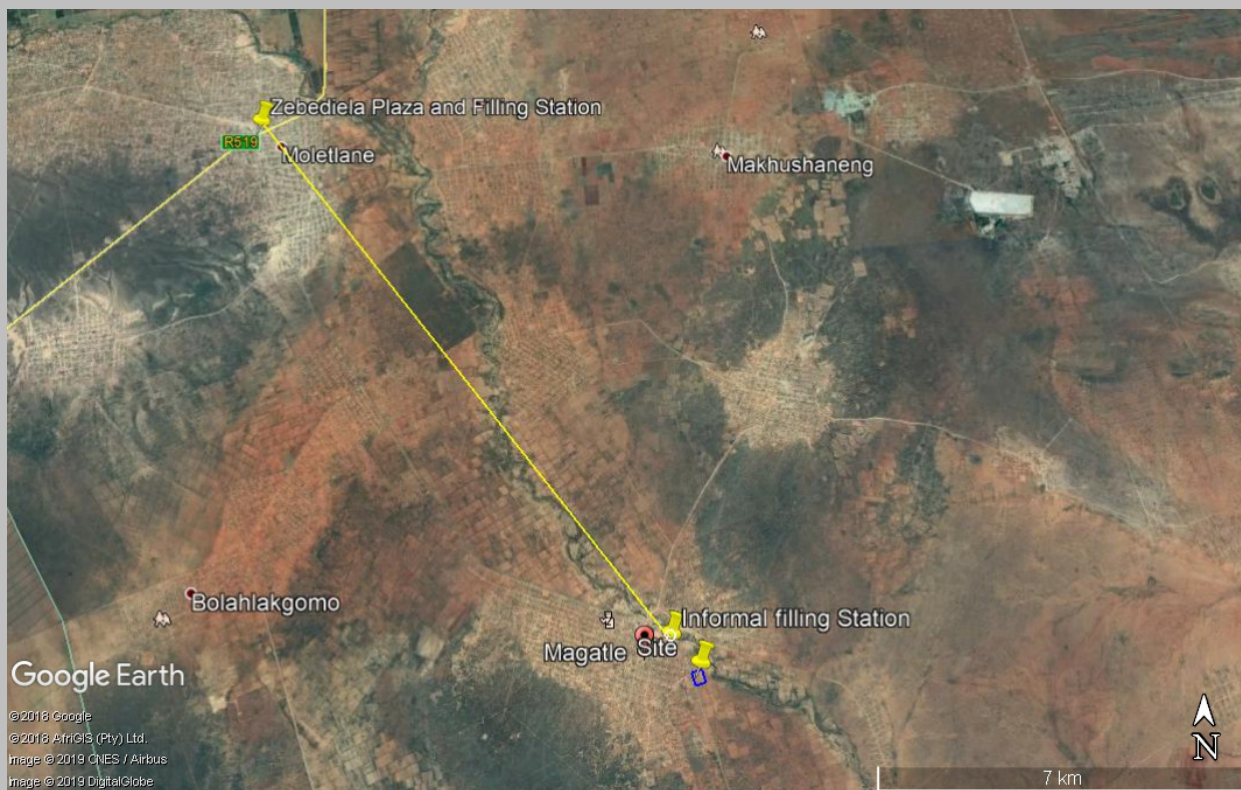


Figure 4: Distance from proposed site to Zebediela and Formal Filling Station

(b) the type of activity to be undertaken;

1. No alternatives in terms of the type of activity to be undertaken were investigated because according to the Applicant this is a stimulative business initiative responding to growth and increasing access to petroleum products in a safe and secure facility and so is the Shopping centre.
2. Furthermore, the applicant initially identified the need for a filling station and then discovered that there is also an existing need for a Mini Shopping Centre

(c) the design or layout of the activity;

No other layout was investigated because the Draughtsman stated that the design of the layout was based on the functional flow of vehicles and taking into consideration potential noise impacts on the Mini Shopping Centre that may arise from the Filling station during the operational phase.

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

Filling Station

The SABS tank installation guidelines will be used.

Mini shopping Centre

Energy technology is an interdisciplinary engineering science having to do with the efficient, safe, environmentally friendly and economical extraction, conversion, transportation, storage and use of energy, targeted towards yielding high efficiency whilst skirting side effects on humans and the environment. For people, energy is an overwhelming need and a scarce resource. The gathering and use of energy resources can be harmful to local ecosystems and may have global outcomes (https://en.wikipedia.org/wiki/Energy_technology)

Having said the above, the following energy efficiency parameters will be taken into consideration when completing the internal electrical design:

- Solar geysers where applicable;
- Gas bottle reticulation for cooking and space heating;
- Compact fluorescent lamps (CFLs) will definitely be used

(e) the operational aspects of the activity; and

In terms of the proposed Filling Station, the alternative of installing the tanks underground or aboveground was investigated and it was deemed feasible to install the tanks underground. The underground storage was chosen because this will allow the applicant to maximize the use of their property (i.e. freeing up more land for productive use), and it will reduce fire and explosion risks. Furthermore the storage of the tanks underground will not have a negative visual impact.

(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.

The no-go alternative would entail not using the site and maintaining the site as it is. This will present both direct and indirect negative environmental and socio-economic impacts such as:

- No employment opportunities will be created;
- Loss of investment;
- No access to a Fuel Service and to a Mini Shopping Centre;
- Should the no-go option be followed it has a possibility of shifting the development activity to a different location where there could be greater loss of sensitive features.
- Escalation of disturbances on site and possibility of using the site as a dumping area.

Paragraphs 3 – 13 below should be completed for each alternative.

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 co-ordinates 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 S1² (preferred or only site alternative)

Alternative S2 (if any)

Alternative S3 (if any)

24°	27'	32.63"	29°	24'	47.60"
°	'	"	°	'	"
°	'	"	°	'	"

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)

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

- 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.

4. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

- Alternative A1³ (preferred activity alternative)
- Alternative A2 (if any)
- Alternative A3 (if any)

or,

for linear activities:

Size of the activity:

51 914m ²
m ²
m ²

Length of the activity:

Alternative:

- Alternative A1 (preferred activity alternative)
- Alternative A2 (if any)
- Alternative A3 (if any)

m
m
m

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

Size of the site/servitude:

Alternative:

- Alternative A1 (preferred activity alternative)
- Alternative A2 (if any)
- Alternative A3 (if any)

51 914m ²
m ²
m ²

5. Site Access

Does ready access to the site exist?

YES	NO
-----	----

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

If NO, what is the distance over which a new access road will be built

m

Describe the type of access road planned:

--

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.

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.

Please refer to Appendix A for the Site Plan.

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.

Please refer to Appendix B for the 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.

Not yet available.

9. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R5 000 000.00	
What is the expected yearly income that will be generated by or as a result of the activity?	R2 200 000.00	
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?	15	
What is the expected value of the employment opportunities during the development phase?	R1 000 000.00	
What percentage of this will accrue to previously disadvantaged individuals?	60%	
How many permanent new employment opportunities will be created during the operational phase of the activity?	15	
What is the expected current value of the employment opportunities during the first 10 years?	R10 000 000.00	
What percentage of this will accrue to previously disadvantaged individuals?	90%	

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?	YES	NO
ii.	Does the proposed land use fall within the municipal Integrated Development Plan?	YES	NO
iii.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:		
	The land use pattern of the Lepelle-Nkumpi Municipality jurisdiction is provided below:		

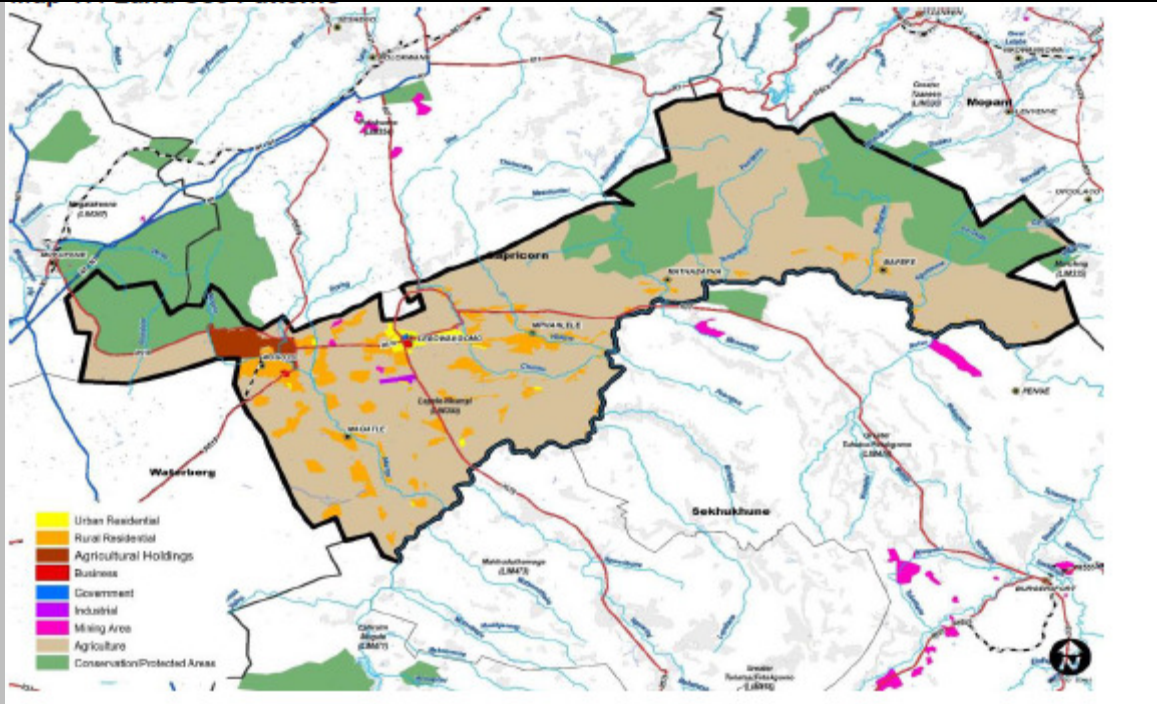


Figure 5: Land use patterns

According to the figure above from Lepelle-Nkumpi Local Municipality IDP, the proposed development site falls within a Rural residential land use pattern. This means that the residential area is located in less formal settlements or settlements which might have been surveyed, but in many instances not. Land normally belongs to the State and it includes those areas/settlements held in trust by Traditional Authorities (e.g. Magatle, Molapo). Areas between these settlements are utilized for subsistence farming. Furthermore these areas form an integral part of the national government's Comprehensive Rural Development Programme (CRDP) initiatives.

Having said the above the IDP incorporates policies and/or legislative framework in its Planning Framework:

1. **Limpopo Development Plan (LDP) (2015-219):** The LDP was developed on the foundations of the Limpopo Economic Growth and Development Plan (LEGDP) 2009-2014 and the Limpopo Provincial Growth and Development Strategy (PGDS) 2004-2008. The LDP takes cognisance and is fully aligned and is fully aligned to the National Development Plan, which seeks to create a South African economy that is more inclusive, more dynamic and in which the fruits of growth are shared more equitably.
2. **Limpopo Spatial Development Framework Principles:** Development Principle 6: Create conditions conducive to development in multi-functional business areas and implement Urban Revitalisation Strategies in such areas where required.
3. **National Development Plan (NDP) 2030:**
 - Uniting South Africans of all races and classes around a common programme to eliminate poverty and reduce inequality.
 - Citizens to be active in their own development in strengthening democracy and in holding their government accountable.
 - Raising economic growth, promote exports and make the economy more labour absorbing.
 - Focusing on key capabilities of both people and the country.
 - Capabilities include skills, infrastructure, social security, strong institutions and partnerships both within the country and with key international partners.
 - Building a capable and developmental state
 - Strong leadership throughout society to work together to solve our problems.

<p>This NDP sets jobs, education and a capable and developmental state as the highest priorities.</p> <p>Having said the above, it is indicated that the proposed development is in line with a number of legislative frameworks/policies as it will help in achieving set goals, although the site falls within a Rural residential land use pattern. Furthermore the existence of an informal Filling station indicates a need for the services that this proposed development aims to offer.</p>

DESIRABILITY:			
i.	Does the proposed land use / development fit the surrounding area?	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
iii.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	YES	NO
iv.	If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation:		
	Not applicable		
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"?	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:		
	<p>The proposed development will assist in employment opportunities in the area and provide easy access to fuel and other necessary services as proposed for the Mini Shopping Centre.</p>		
iii.	Will the land use / development have any benefits for the local communities where it will be located?	YES	NO

iv.	Explain:
	The proposed development will assist in employment opportunities in the area and provide easy access to fuel and other necessary services as proposed for the Mini Shopping Centre.

A feasibility study was conducted by Urban Studies for the proposed development. The study concluded the following:

A small sub-node with a basic convenience retail store and a filling station could be considered.

The proposed development should incorporate convenience retail linked to the filling station facility.

It is however important to note that the market is very dispersed and mainly characterized by a low to middle income market.

The proposed facilities therefore need to cater for the basic needs of the market.

The proposed filling station is estimated to pump between 90 000 & 100 000 litre fuel per month. These levels will be too low for the branded petroleum companies and it is therefore recommended to consider a local operator with a small operation (2 pumps). The facility could be enlarged once the market grows and the demand for fuel increases.

It is not recommended to initially develop a free standing Shopping Centre facility and rather consider this as phase 2 & 3 of the development.

Please refer to Appendix D for the complete report.

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:

Title of legislation, policy or guideline:	Administering authority:	Date:
South Africa's Constitution, 1996 (Act 108 of 1996)	National Government	1996
Conservation of Agricultural Resources Act (Act No 43 of 1983)	Department of Agriculture, Land Reform and Rural Development	1983
Hazardous Substances Act (Act No 15 of 1973)	National Government	1973
Lepelle-Nkumpi Local Municipality Integrated Development Plan	Lepelle-Nkumpi Local Municipality	2018-2019
Lepelle-Nkumpi Local Municipality Growth and Development Strategy	Lepelle-Nkumpi Local Municipality	2040
National Development Plan 2030	National Planning Commission	2011
Lepelle-Nkumpi Local Municipality Relevant By-Laws	Lepelle-Nkumpi Local Municipality	-
Mineral Petroleum Resources Development Act (Act No 28 of 22)	Department of Minerals Resources	2002

National Environmental Management Act (Act No 107 of 1998)	Department of Environment, Forestry and Fisheries and LEDET	1998
National Environmental Management: Biodiversity Act (Act No 10 of 2004)	Department of Environment, Forestry and Fisheries and LEDET	2004
National Environmental Management: Air Quality Act (Act No 39 of 2004)	Department of Environment, Forestry and Fisheries and LEDET	2004
National Environmental Management: Waste Act (Act No 59 of 2008)	Department of Environment, Forestry and Fisheries and LEDET	2008
NEMA EIA Regulations 2014 (Government Notice Nos. GN R982, R983, R984 and R985) as amended 2017	Department of Environment, Forestry and Fisheries and LEDET	2014
National Water Act (Act No 36 of 1998)	Department of Water and Sanitation	1998
National Road Traffic Act (Act No 93 of 1996)	National Department of Transport	1996
National Heritage Resources Act (Act No 25 of 1999)	South African Heritage Resource Agency	1999
Occupational Health and Safety Act (Act No 85 of 1993) (OHS Act) as amended in July 2001, Including Major Hazard Installation Regulation, GNR 692, 30 July 2001.	National Government	1993 2001

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

It is understood that the applicant has appointed engineers who will be responsible for preparing a Services Report for the proposed development.

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

YES	NO
100m ³	

If yes, what estimated quantity will be produced per month?

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

Building rubble not used for in filling will be disposed of at a licensed landfill site.

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

The material is to be removed to a licensed landfill site.

Will the activity produce solid waste during its operational phase?

If yes, what estimated quantity will be produced per month?

YES	NO
50m ³	

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

General waste and hazardous waste will be collected and stored separately according to the specific requirements of the waste type.

General waste will be disposed at a licensed landfill site.

Hazardous waste will be collected by an approved waste disposal service provider and will be disposed of at an approved hazardous waste disposal site.

Masana Waste & Environmental Management has been appointed to provide waste management services for the proposed development. Please refer to Appendix G for the Waste Removal Resolution.

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

Not applicable.

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
-----	----

Used lubricating oils, used hydraulic oils and water contaminated with oil are considered hazardous waste.

Health care waste such as contaminated sharps, pathological waste including secretions and surgical specimens, infectious waste is also considered hazardous.

All hazardous solid waste is to be collected and disposed by an approved waste disposal service provider.

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
-----	----

Surface water run off that may contain oil/fuel will be directed into catch pits/oil water separators and clean water will then be directed to the sewer system.

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:

The separation of storm water from grey water to use it for the irrigation of the landscaped areas is encouraged.

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

YES	NO
YES	NO

If yes, is it controlled by any legislation of any sphere of government?

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:

Emissions during the construction will mostly be in the form of dust and smoke during the construction phase.

Emissions may be in the form of gas being released from the tank vents during filling, vehicle refueling and motor vehicle exhausts.

Odours may arise from the waste generated on site if not disposed of appropriately

11(d) Generation of noise

Will the activity generate noise?

YES	NO
YES	NO

If yes, is it controlled by any legislation of any sphere of government?

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 activity does not generate noise however noise may be generated by vehicles entering and exiting the site, personnel, consumers and the associated facilities, car sound system and hooters, and ventilation equipment. However due to the surrounding land uses it is not expected that the noise levels will be significant.

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
------------------	-------------	-------------	----------------------------	-------	---------------------------------

Water supply information to be provided in the Services Report which is yet to be prepared.

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	
YES	NO

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

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.

13. ENERGY EFFICIENCY

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

The installation and promotion of technologically advanced energy efficient systems, components and upgrades as well as innovative use of recycled building materials is strongly encouraged.

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

The following energy efficiency parameters will be taken into consideration when completing the internal electrical design:

- **Solar geysers where applicable;**
- **Gas bottle reticulation for cooking and space heating;**
- **Compact fluorescent lamps (CFL) will be definitely be used, however some luminaire will be fitted with LED lamps.**

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):

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

Flori Scientific Services CC was appointed as the Independent Consultancy to conduct a Specialist Biodiversity Impact Assessment, which includes a Terrestrial Ecological Assessment and a Wetland Impact Assessment of the study site during April 2019. The findings are described below:

Vegetation:

The vegetation of the study site is moderately to highly degraded and transformed thornveld (Springbokvlakte Thornveld). The conservation status of Springbokvlakte Thornveld is vulnerable. The site was previously used as the show grounds for Magatle Village and surrounding areas. Therefore, the area was cleared of most bushveld years ago and the grass regularly cut. During the site investigations it appeared that the site has stood dormant for a while and some of the grasses, with a few short acacia thorn shrubs, have returned and grown. Most of the site is still cleared of bush and trees. There are a few trees growing on the site that were obviously left on purpose, mostly invasive gumtrees but some of which are protected trees species of Marula (*Sclerocarya birrea*) and Stink Shepered's tree (*Boscia foetida*). The site is situated within the savanna biome of South Africa.



Figure 6: Some old buildings used for show grounds on site

Priority species

During field investigations no Red Data Listed (RDL) species were observed and none are expected to occur.

Protected tree species identified in the study area

Two protected trees are present on the study site. Marula (*Sclerocarya birrea*), which is a national protected tree, and Stink Sheperd's tree (*Boscia foetida*) which is a provincial protected tree.



Figure 7: A Stink shepherd's tree (pale trunk) directly in front of a Marula tree on site



Figure 8: Marula tree

Fauna

Mammals

No large-medium sized mammals were observed during field investigations, with the exception of some common bird species and a few signs of mongoose and field mice. Some rodent species are more than likely to be present, although not observed during field investigations, except for signs such as droppings. Some priority species (including RDL species) are likely to occur in the study area due to the openness of bushveld areas to the south and west (in particular) as well as the presence of the nearby Nkumpi River. However, large and medium sized mammals will be limited in variety and numbers due to rural villages (such as Magatle) and the cultivation of lands (farming) in the area. Large free-roaming mammals are non-existent to rare in the region.

Avifauna

A few common species to the area such as doves, bulbuls, swallows, swifts, bee-eaters, francolins (*Pternistis spp*), guinea fowl (*Numida meleagris*) and some raptors were observed. The study site is not situated within, or adjacent to, any Important Bird Areas (IBAs). The closest IBA (Wolkberg Forest Belt) is shown in the map below, which is approximately 16 km north of the site. No nesting or breeding birds were observed on the study site. A few nests were observed down at the Nkumpi River in the riparian zone. These were of more common bird species such as weavers. The river and riparian habitat is suited to a number of common bird species. The study site and proposed activities will not have any impact on the river or riparian zone.

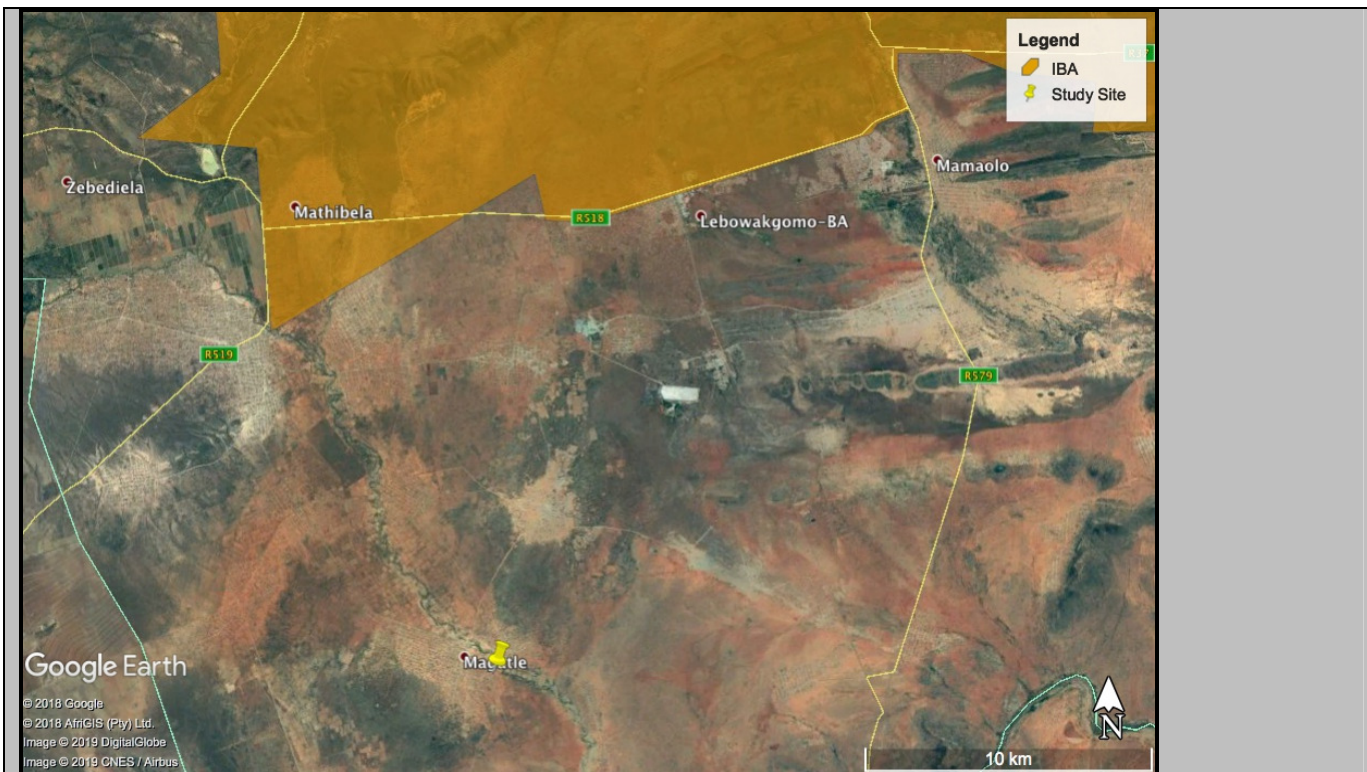


Figure 9: Important Bird Areas

Reptiles

No reptiles were observed during field investigations. Lizards tend to prefer rocky habitats and there are no rocky outcrops (koppies), rocky ridges or areas of large rock sheets within the study area. The likelihood is rare that any priority lizard species will be present in the study area. Snakes tend to be more mobile and adaptable to various and altered environments. It is likely that some common snake species will be found on site from time to time, due especially to the nearby Nkumpi River.

Invertebrates

Invertebrates such as spiders, scorpions and butterflies are important faunal groups, but are difficult to fully assess in a short time period. During field investigations specific attention was given to priority species such as Mygalomorphae arachnids (Trapdoor and Baboon spiders) and red data butterflies. A few common sheet-web spiders (Linyphiidae) were found on site but no priority species were observed.

Faunal Species of Conservation Concern

During field investigations no faunal species of conservation concern were encountered. The general habitats present in the study area are not ideal for most priority species, including mammals, reptiles and most birds. Priority species, if encountered, will most likely be encountered traversing the area and not so much as breeding on the study site, due to lack of ideal habitat. No active or even old animal burrows were found in the study site.

Aquatic Ecology

Watercourses in the study area

There are no watercourses in the study area, including distinctive drainage lines, wetlands and freshwater pans (which is a type of wetland). The closest main river is the Nkumpi River, which is approximately 120m to 200m east of the study site. The proposed project will have no negative or positive impacts on the river, but the river was highlighted for the sake of transparency and investigations into the broader surrounding areas of the study site.

The outer edges of the river and riparian zone have been delineated as per the figure below. Between the study area and the river area existing negative impacts in the form of cultivated lands (farm lands).



Figure 10: Delineated watercourse



Figure 11: Nkumpi River

Ecology Sensitivity Analysis

The ecological sensitivity of the study area is determined by combining the sensitivity analyses of both the floral and faunal components. The highest calculated sensitivity unit of the two categories is taken to represent the sensitivity of that ecological unit, whether it is floristic or faunal in nature, please refer to the table below:

Table 1: Ecological sensitivity analysis

Ecological community	Floristic sensitivity	Faunal sensitivity	Ecological sensitivity	Development Go-ahead
Degraded Bushveld (Thornveld)	Medium/Low	Medium/Low	Medium/Low	Go-Slow

Go slow: Areas of medium/Low sensitivity.

These would typically be areas where large portions of the veld has been transformed and/or is highly infested with alien vegetation and lacks real faunal component. Few mitigation measures are typically needed, but it is always wise to approach these areas properly and slowly.

Priority areas

National priority areas include formal and informal protected areas (nature reserves); important bird areas (IBAs); RAMSAR sites; National fresh water ecosystem priority areas (NFEPA) and National protected areas expansion strategy (NPAES) areas. The study site is not situated within any priority areas.

Critical Biodiversity Areas (CBAs)

The study area is situated within a critical biodiversity area (CBA). The CBA is delineated as an Optimal Area (CBA 2).

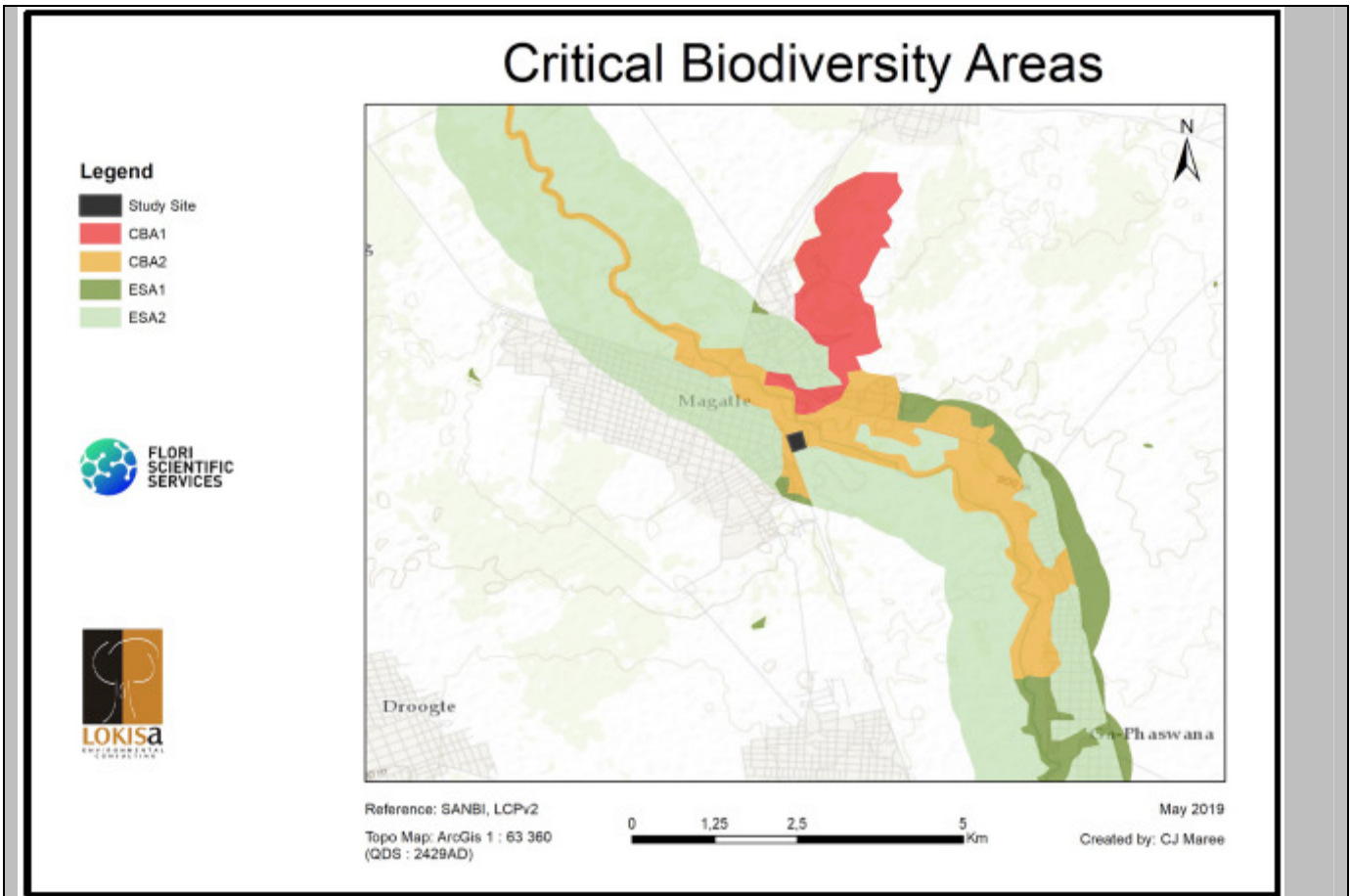


Figure 12: CBAs & ESAs

Fatal flaws

There are no fatal flaws and the project may proceed.

Sensitivity map

No high sensitive areas or ‘No-Go’ zoned were identified during field investigations. All information and data sets are taken into account when determining the sensitivity of the study site, including CBAs, ESAs, priority areas, ideal habitats for priority species (fauna and flora), watercourses, ridges, koppies (rock outcrops), presence of RDL and ODL species, threat status of the veldtype in which the study site is situated and the present levels of development, degradation found on site.

According to datasets the delineation of the study area within a CBA has been taken into consideration. But it also needs to be kept in mind that the actual site is mostly degraded and transformed due to the fact that it was historically used as a show grounds for the region. The resulting sensitivity map is shown below.



Figure 13: Sensitivity Map

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.

Property description/physical address:

A Part of the Farm Zebedielas Location 123 KS

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

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:

“Agricultural”

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
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Must a building plan be submitted to the local authority?

YES	NO
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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)

Please refer to Appendix A for the Locality Map.

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

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
------	-------------	-------------	-------------	--------------	-------------	------------------

According to the Hydrological report the regional topography is relatively flat with slightly undulating plains and hills. The site itself is situated on topography of approximately 906 mamsl (metres above sea level), slightly sloping in a south-eastern direction.

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:

2.1 Ridgeline		2.6 Plain	X
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

WESST Consulting (Pty) Ltd was appointed to conduct a hydrological study for the proposed development. The findings of the study are described below:

The objective of the assessment was to provide more information on the status quo of the associated groundwater system, characterization of the site and aim to predict potential environmental impacts on the receiving environment as a result of the proposed activities.

The objective of this study was to:

- Establish site baseline and background conditions and identify potential environmental receptors.
- Aquifer classification, delineation and vulnerability rating.
- Calculation of soil permeability.
- Hydrogeological impact assessment and contamination risk matrix.
- Formulation of best practise management and mitigation measures.
- Compilation of a surface water and groundwater monitoring program.

Physiography

The site topography is relatively flat with the highest on-site topographical elevation point recorded at 908 mamsl (metres above sea level) and the lowest point at 904 mamsl. The site falls within quaternary catchment B51G that forms part of the Olifants water management area (WMA).

The calculated mean annual precipitation (MAP) is 528 mm/a. During the cold- dry winter, temperatures in the area can drop as low as 14.0°C on average during the day and reach as high as 25°C during the summer months. Geologically, the site is underlain by the Clarens Formation which is made up out of fine grained red and cream

sandstone. Also underlying the site is the Eccra Group, which in turn comprises shale, sandstone, grit, conglomerate.

Hydrogeology

Two main hydrostratigraphic units/aquifer systems can be inferred in the saturated zone:

- A shallow, weathered zone aquifer occurring in the transitional soil and weathered bedrock can be classified as a secondary porosity aquifer. This aquifer is generally unconfined with phreatic water levels. Usually this aquifer is most susceptible to impacts from contaminant sources.
- A deeper fractured aquifer where groundwater yields, although more heterogeneous, can be expected to be higher than the weathered zone aquifer. This aquifer system usually displays semi-confined or confined characteristics with piezometric heads often significantly higher than the water-bearing fracture position.

No site characterization i.e. pump tests were conducted to verify aquifer hydraulic parameters, however literature suggest that the yield of the underlying aquifer is anticipated to be along the vicinity of 10 480 m³/km²/a. While the available storage is expected to be 13 100 m³/km²/a (DWAF, 2006). An approximation of recharge for the study area is estimated at 12 mm/annum.

Site investigation

A hydrocensus user survey was conducted in October 2019 during which relevant hydrogeological baseline information was recorded and samples collected for water quality analysis. Geosites logged include six (6) boreholes of which three (3) were sampled for water quality analysis.

Of the geosites recorded, the majority of water application is for water supply (66 %), where 17 % of boreholes sampled in the area are used for irrigation, and 17 % used for other purposes.

Hydrochemistry

The quality of groundwater samples analyzed is indicative of an overall moderate to poor water quality. Although the sampled water is classed as 'Soft and Neutral' (pH 6 > 8.5), with pH averaging 7.63, elevated salinity was found in all three samples as the Na & Cl significantly exceeded the SANS 241:2015 limits. Also exceeding these limits, are the EC and the TDS. This is indicative of a dry area with a low recharge, also seen in water which has been stagnant for extended periods.

Borehole H01-1284 was also analyzed for TPH content that indicated acceptable levels according to the World Health Organization (WHO) guidelines.

Contamination risk assessment

Geological and hydrogeological information obtained indicate that the DRASTIC Index (Di) lies between 1 – 100, suggesting that the overall potential for groundwater pollution is low. The GQM Index was calculated at 2 and as such a "low" level groundwater protection is required for this aquifer system.

Impact assessment

The main impacts associated with the construction phase activities include the following:

- Erosion of site and siltation of surface water features.
- Oil, grease and diesel spillages, hydrocarbon contamination from construction vehicles and heavy machinery.
- Pollution of groundwater and surface water due to sanitation facilities and related anthropogenic activities.
- Groundwater and surface water pollution due to spillage of chemicals and building materials.

The main impacts associated with operational phase activities include the following:

- Hydrocarbon pollution of groundwater (seepage/percolation) and surface water (drainage).
- Hazardous liquids and hydrocarbons spilled on surface will either run off the sealed areas into local surface water drainages or enter the sub-surface soil profile and percolate vertically down the vadose zone to the

groundwater level. Light non-aqueous phase liquids (LNAPL's) i.e. petrol and diesel will be transported on the groundwater in an inferred easterly direction, while dense non-aqueous phase liquids (DNAPL's) such as oil will percolate through the vadose zone until solid bedrock is encountered where it will move along the bedding planes and through fractures.

The main impacts associated with the post-operational phase activities include the following:

- Hydrocarbon pollution of groundwater and surface water.

Recommendations

The following recommendations are proposed following this investigation:

The following mitigation and management measures are recommended during the construction phase of the development:

- Excavations should be open for as short period as practically possible, while cleared and stripped areas should be vegetated as soon as possible.
- Ensure vehicle and heavy machinery used on-site are regularly inspected for leaks and serviced at frequent intervals. Spill trays to be used where applicable.
- Construction camp should be situated outside riparian buffer. Chemical sanitary facilities must be provided for construction workers and emptied on regular intervals.
- All materials, fuels and chemicals must be stored in a secured, sealed and bunded area to prevent pollution from spillages and leakages. The use of chemicals should be controlled.

The following mitigation and management measures are recommended during the operational phase of the development:

- The use of all detergents, oil, fuels and chemicals which could potentially leach into underground water must be controlled. This can be done by sealing of the forecourt and refueling bay area to prevent infiltration of hydrocarbon into the aquifer underlying the site.
- Storm water draining from the surfaced areas should be collected in a sealed sump to be treated or removed. All contact water should be discharged into the municipal system and not into any streams, or open fields.
- Subsurface fuel storage facilities should be constructed in concrete encasements with a sump system to prevent spilled fuel from entering the soil and weathered rock. Storage facilities should also be fitted with a leakage detection system.
- Fuel lines and dispensers should be rendered leak-proof by a competent person. Fuel pumped into underground fuel tanks should be accounted for, for the early detection of leakages.

The following mitigation and management measures are recommended during the post-operational phase of the development:

- Decommissioning of underground storage facilities, decommissioning must be approved and signed-off by a competent person.

It is recommended that groundwater monitoring as outlined in this report be conducted on a quarterly basis to serve as an early warning and detection system for the impact on environmental receptors and contaminant migration from the site.

Water monitoring results be evaluated and reviewed on a bi-annual basis by a registered hydrogeologist for interpretation and trend analysis.

Please refer to Appendix D for the Hydrology report. The abovementioned mitigation measures have been incorporated into the Environmental Management Programme.

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).

Nkophele Holdings was appointed to conduct a Geotechnical investigation for the proposed development. The aim of the investigation was to evaluate engineering characteristics of near surface soils underlying the site. The findings are described below. Please refer to Appendix D for the complete report.

The investigation was carried out by means of test pitting and laboratory testing of collected samples.

According to the 1:250 000 geological map sheet 2428 Nylstroom Geological Map Series, the investigated area is underlain by sedimentary rocks of the Karoo Sequence. The Karoo sequence in the Nylstroom is made up of the volcanic rocks and sandstone of the Letaba Formation; red sandstone of the Clarens Formation, sandstone, mudstone, siltstone, and shale of the Irrigasie Formation and shale, sandstone, conglomerate and coal beds of the Eccia Group. The development site is underlain by the red sandstone of the Clarens Formation.

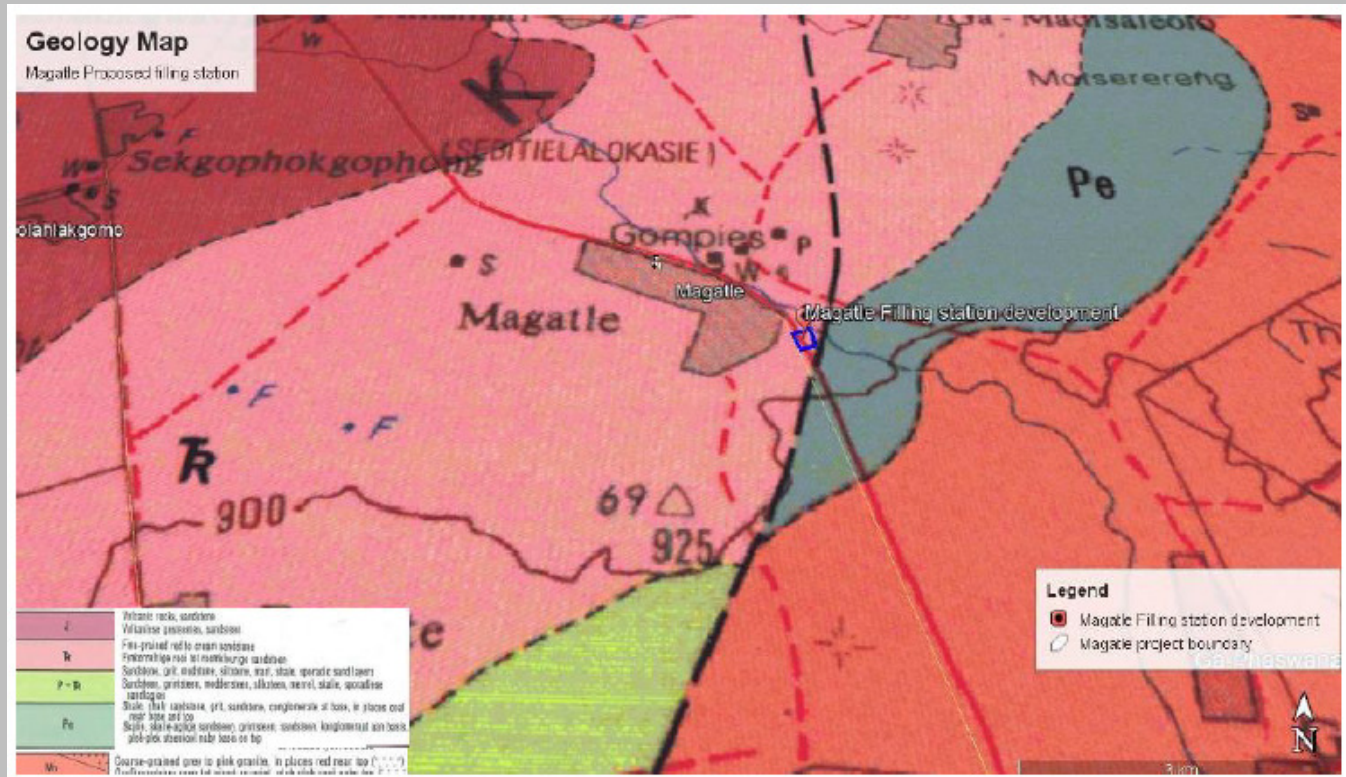


Figure 14: Site geology

Based on the field investigation and laboratory testing the following conclusion can be drawn:

1. The site is typically underlain by transported material, pebble marker and residual sandstone. The bedrock encountered on the site is dominantly red sandstone.
2. Laboratory testing of the collected samples indicates that the underlying soil exhibits low potential expansiveness.
3. The residual sandstone soils underlying the site are classified as g5a and 56, therefore are suitable for subbase, selected layer and subgrade construction.
4. Groundwater seepage was not encountered in the entire test pits excavated.
5. The investigated site is relatively flat lying which may lead to poor storm water drainage. The site must be shaped

to improve storm water runoff and extensive management must be considered.

Overall the Geotechnical investigation findings suggest that the site is developable albeit with precautionary measures. The recommendations have been incorporated in Section D of this report and Environmental Management Programme.

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.

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 15: Land use character within 500m of the site

5.1 Natural area	X	5.22 School	
5.2 Low density residential		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		5.30 Train station or shunting yard ^N	
5.10 Heavy industrial ^{AN}		5.31 Railway line ^N	
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	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	X
5.21 Dam or Reservoir		5.42 Other land uses (describe) Community services (Police station)	X

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

Not applicable

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?

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:

A Heritage Impact Assessment (HIA) was undertaken for the proposed development. The HIA is required in terms of section 38(8) of the National Heritage Resources Act (Act No. 25 of 1999) and was also conducted as per the Department's request. The findings of the assessment are described below:

Aim

The aim of the study was to survey the proposed development footprint to identify cultural heritage sites, document, and assess their importance within local, provincial and national context. It serves to assess the impact of the proposed project on non-renewable heritage resources, and to submit appropriate recommendations with regards to the responsible cultural resources management measures that might be required to assist the developer in managing the discovered heritage resources in a responsible manner.

Findings of the survey

It is important to note that only the development footprint was surveyed. The entire study area was cultivated from 1968 onwards and has been completely transformed with no surface indicators of heritage sites or features. More recently the site has been extensively modified through the clearing of topsoil for construction of numerous structures indicated on historical maps from 2000 onwards. Ruins and foundations of these structures occur on site but are of no heritage significance. No Archaeological remains were identified on site.

In terms of the palaeontological component of Section 35, an independent study was conducted by Prof Marion Bamford (2019). The study concluded that the proposed site lies entirely on the sandstone and aeolian sands of the Clarens Formation, in the northernmost part of the Karoo-aged Springbok Flats Basin. It is extremely unlikely that any fossils would be preserved in the soils and loose sands of the Clarens Formation. There is a very small chance that fossils of dinosaur bones or silicified wood may occur below ground so a Fossil Chance Find Protocol should be added to the EMP. If fossils are found once excavations for foundations, fuel storage tanks and associated infrastructure has commenced then they should be rescued and a palaeontologist called to assess and collect a representative sample Bamford (2019).

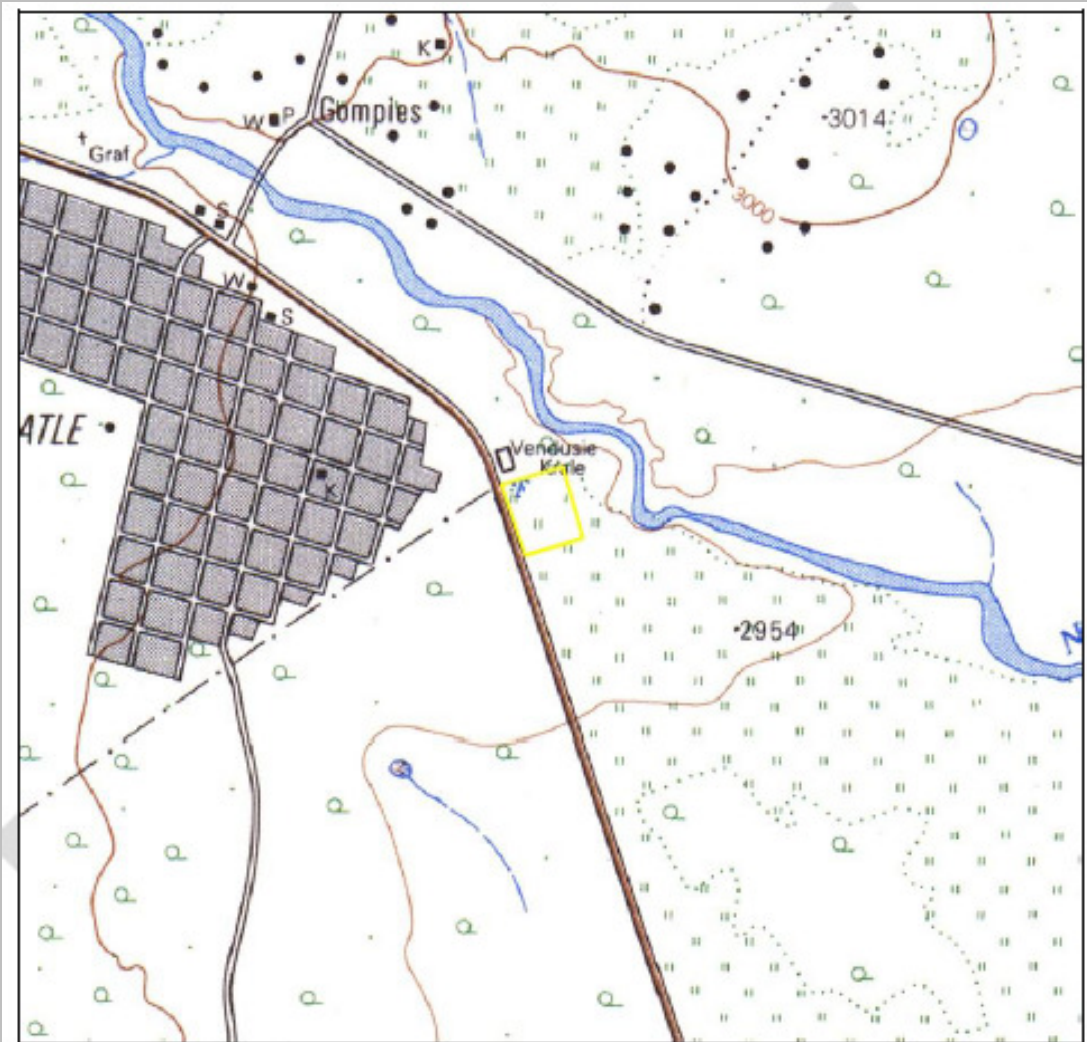


Figure 16: 1968 Topographical map of the site under investigation

Potential impacts

The chances of impacting unknown archaeological sites in the study area are considered negligible. Any direct impacts that did occur would be during the construction phase only and would be of low to medium significance. Cumulative impacts occur from the combination of effects of various impacts on heritage resources. The importance of identifying and assessing cumulative impacts is that the whole is greater than the sum of its parts. Due to the fact that the area has been previously disturbed by cultivation and construction activities the possibility of unearthing subsurface heritage resources is small.

Recommendations and conclusion

The study area has been completely transformed by cultivation activities from 1968 onwards and later y construction activities. These impacts would have obliterated surface evidence of heritage resources. The lack of significant heritage resources was confirmed during the survey and no heritage features or sites of significance were identified.

An independent paleontological assessment was conducted by Prof. Marion Bamford and concluded that there is a very small chance that fossils of dinosaur bones or silicified wood may occur below ground so a Fossil Chance Find Protocol should be added to the EMP. If fossils are found once excavations for foundations, fuel storage tanks and associated infrastructure has commenced then they should be rescued and a palaeontologist called to assess and collect a representative sample (Bamford 2019).

The impact of the proposed project on heritage resources is considered to be acceptable and it is recommended that the proposed project can commence on the condition that the following recommendations are implemented and based on approval from SAHRA:

- Implementation of a chance find procedure and Fossil chance find procedure as outlined below.

Chance Find Procedure

The possibility of the occurrence of subsurface finds or previously unknown sites cannot be excluded. Therefore, if during construction any possible finds such as stone tool scatters, artefacts or bone and fossil remains are made, the operations must be stopped and a qualified archaeologist must be contacted for an assessment of the find and therefor chance find procedures should be put in place for the project. A short summary of chance find procedures is discussed below.

This procedure applies to the developer's permanent employees, its subsidiaries, contractors and subcontractors, and service providers. The aim of this procedure is to establish monitoring and reporting procedures to ensure compliance with this policy and its associated procedures. Construction crews must be properly inducted to ensure they are fully aware of the procedures regarding chance finds as discussed below.

- If during the pre-construction phase, construction, operations or closure phases of this project, any person employed by the developer, one of its subsidiaries, contractors and subcontractors, or service provider, finds any artefact of cultural significance or heritage site, this person must cease work at the site of the find and report this find to their immediate supervisor, and through their supervisor to the senior on-site manager.
- It is the responsibility of the senior on-site Manager to make an initial assessment of the extent of the find, and confirm the extent of the work stoppage in that area.
- The senior on-site Manager will inform the ECO of the chance find and its immediate impact on operations. The ECO will then contact a professional archaeologist for an assessment of the finds who will notify the SAHRA.

Paleontological Chance Find Protocol

Monitoring Programme for Palaeontology – to commence once the excavations begin (for photographs please refer to Bamford 2019).

- The following procedure is only required if fossils are seen on the surface and when excavations for foundations and infrastructure commence.
- When excavations begin the rocks and must be given a cursory inspection by the environmental officer or designated person. Any fossiliferous material (plants, insects, bone, coal) should be put aside in a suitably protected place. This way the mining activities will not be interrupted.
- Photographs of similar fossil plants must be provided to the developer to assist in recognizing the fossil plants in the shales and mudstones. This information will be built into the EMP's training and awareness plan and procedures.
- Photographs of the putative fossils can be sent to the palaeontologist for a preliminary assessment.
- If there is any possible fossil material found by the developer/environmental officer/miners then the qualified palaeontologist sub-contracted for this project, should visit the site to inspect the selected material and check the dumps where feasible.
- Fossil plants or vertebrates that are considered to be of good quality or scientific interest by the palaeontologist must be removed, catalogued and housed in a suitable institution where they can be made available for further study. Before the fossils are removed from the site a SAHRA permit must be obtained. Annual reports must be submitted to SAHRA as required by the relevant permits.
- If no good fossil material is recovered then no site inspections by the palaeontologist will be necessary. A final report by the palaeontologist must be sent to SAHRA once the project has been completed and only if there are fossils.
- If no fossils are found and the excavations have finished then no further monitoring is required.

The Chance Find protocols for both the Heritage Impact Assessment and the Palaeontological Impact Assessment have been incorporated in Section D of this report and in the Environmental Management Programme.

Please refer to Appendix D for the complete reports. The specialist declaration of independence have been incorporated into the specialist reports.

Will any building or structure older than 60 years be affected in any way?

YES	NO
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There are ruins and foundations of structures that were previously constructed from 2000 onwards however these structures are of no heritage significance.



Figure 17: Remains of modern structure in the study area



Figure 18: Cement foundation in the study area

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

YES	NO
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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.

The Heritage Impact Assessment Report and Palaeontological Impact Assessment Report will be submitted to SAHRA for approval as per the Specialist's recommendation.

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;

Two site notices were placed on site on 9 May 2019. Please refer to Appendix G for the photos of site notices on site.

- (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;

Notices were hand delivered to adjacent land owners/occupiers. Please refer to Appendix G for the Acknowledgement of receipt.

- (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;

The Ward Councillor was notified via email on 10 May 2019. Please refer to Appendix G.

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

The Lepelle-Nkumpi Local Municipality was notified via email on 10 May 2019. Please refer to Appendix G.

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

Organs of state were notified via email on 10 May 2019. Please refer to Appendix G.

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

Stakeholders were notified via email on 10 May 2019. Please refer to Appendix G.

- (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

A notice was published in the Daily Sun Newspaper on 9 May 2019. Please refer to Appendix G.

- (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.

Please refer to Appendix G – for a copy of the advertisement/notice.

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
LEDET BA Report, EIA 2014: Project Name: **Magatle Filling Station and Mini Shopping Centre** - 46

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.

The proposed activity will not have impacts that extend beyond the municipal area where it is proposed. The Daily Sun Newspaper was used to advertise the proposed development. A description was given of the proposed project.

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.

Lokisa Environmental Consulting conducted the Public Participation Process (PPP) for the proposed Magatle Filling Station and Mini Shopping Centre.

During the PPP, the aim was to ensure that a full range of stakeholders were informed about the proposed development throughout the period in question. No concerns have been brought forward by the local community therefore no public meeting was required.

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.

Comments received were recorded in the Comments and Response Report. Please refer to Appendix E.

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.

Please refer to Appendix G for the List of all organs of state and any other applicable authority

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)
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Limpopo Department of Health and Social Development	No comments received.
Department of Rural Development and Land Reform	No comments received.
Limpopo Department of Local Government and Housing	No comments received.
Department of Agriculture, Forestry and Fisheries	No comments received.
Department of Mineral Resources	No comments received.
Department of Energy	No comments received.
Department of Water and Sanitation	No comments received. Follow up emails were sent to the Department, and no comments were received to date.
Limpopo Provincial Heritage Resources Authority	No comments received.
SASOL	Comments received.
Eskom	Comments received.
Transnet Freight Rail	No comments received.
Transnet Pipelines	No comments received.
WESSA	No comments received.
SANRAL	No comments received.
Limpopo Road Agency	No comments received. No comments received. Follow up emails were sent to the Department, and no comments were received to date.
Lepelle-Nkumpi Local Municipality	No comments received. The Local Authority stated that comments would be provided on 11 October 2019. Comments will be submitted to the department once received.

Department	Comments	Response
Limpopo Department of Economic Development, Environment and Tourism	<p>The following comments were provided by the Limpopo Department of Economic Development, Environment and Tourism on the Draft Basic Assessment Report submitted to them on 12 July 2019.</p> <ol style="list-style-type: none"> 1. The total capacity of the filling station as per the information provided in the report is 499m³, information concerning the type of fuel, the number of tanks, tank capacities as well as the fuel grade must be provided in the report. The application form (page 11) must be corrected for the confirmation of the total combined capacity for the proposed filling station and must be included with the forthcoming BAR for consistency. 2. In addition to the above, the information about the filling station including the capacities as well as the fuel grade and type must be included on the project description on page 6 of the BAR. 3. Furthermore to the above a layout plan with legend and markings, that shows how 	<ol style="list-style-type: none"> 1. The tanks will be double jacketed tanks and the estimated tanks to be on site will be 12 with a capacity of 40 000 litres. The type of fuel to be stored will be Unleaded petrol both 93 and 95 and Diesel. The application form has been amended. 2. Page 6 of this Final BAR has been amended. 3. Please refer to Appendix A for the 3 Layout plan. 4. It is understood that the applicant has appointed engineers who will be responsible for information pertaining to services for the proposed development. It is understood that once the services report has been finalised information regarding water use will be available. <p>It is therefore recommended that a condition be included in the Environmental Authorisation, should it be granted, that before the construction of the proposed development, confirmation of water supply be submitted to the</p>

	<p>the 5 hectares as the total footprint of the development will be subdivided for all the facilities on site, information of all the facilities of the development must be provided.</p> <p>4. It is stated in the report that water will be provided by the Municipality, a letter from the municipality for such a service and the availability of capacity must be attached to the report.</p> <p>5. Considering that the proposed development is for the storage and handling of dangerous goods, where tanks are most likely to be underground, the applicant was required to conduct a hydrological investigation report that will reveal the baseline of the surface and groundwater, and also address but not limited to the following;</p> <ul style="list-style-type: none"> • Determination of water table at the proposed site; • Surface and underground water quality; • Flow direction of the underground water and position of the underground water monitoring boreholes (up and downstream); • The permeability rate of liquids through the soil type present within the proposed site; • The determination of the potential and extent of the impacts to water resources (both surface and underground); • Underground tanks installation designs to avoid soil and underground water contamination and • The recommendation of operational standards and remedial actions required to minimise the impacts of the proposed development on the environment. <p>6. Confirmation of the availability of service for waste disposal at local municipality landfill site for the proposed commercial development must be provided. Proof of which must be attached to the BAR. Furthermore, the Department requires the information on how hazardous waste (including sewage) will be managed on site for the proposed development. The information must include but not limited to the following:</p>	<p>Department.</p> <p>5. A Hydrological investigation was conducted as requested please refer to Appendix D for the report.</p> <p>6. Please refer to Appendix G for the resolution for waste removal. Further information will be available in the services report to be provided. At this stage it is understood that hazardous waste will be removed from site twice a month, depending on the need.</p> <p>7. The Department of Water and Sanitation was consulted in the following manner:</p> <ol style="list-style-type: none"> a. A written notice was sent to the Department on 10 May 2019. b. The Draft Basic Assessment Report was sent to Department on 17 July 2019. c. Numerous follow-up emails were sent to the department for their comments; to date no comments were received. Please refer to Appendix G for the proof of emails. d. The Final Basic Assessment Report will also be submitted to the Department for their review and comments. <ul style="list-style-type: none"> • The Applicant has sourced quotations for the determination of the 1:50 and 1:100 year flood lines and is yet to appoint the appropriate individual. It is understood that one needs sufficient time (approximately a month) in order to conduct this type of investigation, therefore it is recommended that a condition be included in the Environmental Authorisation should it be granted that before the proposed development is commenced with, a floodline certificate should be submitted to the department. Furthermore no development will be allowed to take place within the 1:50 and 1: 100 year floodlines. <p>8. A Draft Basic Assessment Report was submitted to the Limpopo Road Agency and follow up emails were sent to the agency. Comments are yet to be received. The Final Basic Assessment Report will also be submitted to the Agency for their review and comments.</p> <p>9. A Heritage Impact Assessment and a</p>
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	<ul style="list-style-type: none"> • The company or person certified to collect, transport and dispose of hazardous waste as well as the agreement for provision of such services; • The name of the hazardous waste site to be used and the agreement of using such a landfill; and • How often will hazardous waste be collected from site? <p>7. It was mentioned in the report that Nkumpi River is approximately 12m to 20m from the development; as such the Department of Water and Sanitation (DWS) must be consulted to provide comments on the required distance from a development of this nature from the watercourse.</p> <p>8. Furthermore, a flood line certificate which has been signed by an engineer must be attached to the report.</p> <p>9. The authority of the road where the access will be gained from must be consulted to provide comments concerning the access road.</p> <p>10. According to the National Heritage Act 25 of 1999 a Heritage Assessment must be conducted for any development that is 5000m² or more, therefore a heritage assessment report conducted by a heritage specialist must be attached to the report.</p>	<p>Palaeontological Impact Assessment was undertaken for the proposed development. Please refer to Appendix D for the reports. The reports will be uploaded on the SAHRA website for approval.</p>
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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 sub regulation 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
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If “YES”, briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

Entity	Date	Comment
Sasol Gas	10 May 2019	Not Affected
T. Mavunda (Eskom)	10 May 2019	<p>Eskom has no objection in principle of the above mentioned application, on the following conditions:</p> <ul style="list-style-type: none"> • There is a 9 metres building and tree restriction on either side of the centre line of the 22Kv power lines respectively, which must be acknowledged to in future development. • Eskom Distribution's services and equipment must be acknowledged at all times and may not be tempered or interfered with. • All work within Eskom Distribution reserve area must be done in accordance with the requirements of the Occupational Health and Safety Act No. 85 of 1993 as amended. • Special attention must be given to the clearances between Eskom's conductors, structures, cables and electrical apparatus and the proposed work as stipulated by Regulation R15 of the Electrical Installations Regulations of the aforementioned Act or any other legal requirements. • No construction work may be executed closer than 9 metres from any of Eskom's structures from the middle of the power line and no squatting to be allowed in the restriction area. • No tree shall be planted within the restriction area or will be allowed to grow to a height in excess of the horizontal distance of that tree from the nearest conductor or any power line or to grow in such a manner as to endanger that line should it fall or be cut down. • Natural ground level must be maintained within Eskom Distribution restriction area. • Eskom Distribution shall not be liable for the death or injury to that person or for the loss of or damage to any property whether as a result of the encroachment or of the use of the area where Eskom Distribution has its services, by the applicant, his/her agent, contractors, employees, successors in title and assigns. • The applicant indemnifies Eskom against loss, claims or damages including claims pertaining to interference with Eskom Distribution services or apparatus or otherwise. • The applicant's attention is drawn to section 27 (3) of the Electricity Act 1987, as amended in 1994, which stipulates that the applicant can be fined and/or imprisoned as a result of damage to Eskom's apparatus. • Eskom Distribution shall at all times have unobstructed access to and egress from its services. • The ineffective management and handling of waste is of crucial importance. No dumping shall be allowed within Eskom Distribution restriction areas. All unwanted (gaseous, liquid or solids) should be disposed of at a registered waste disposal site as stipulated under Section 20 of the Environmental Conservation Act (Act 73 of 1989). • Any relocation of Eskom's services, due to this development, will be for the account of the Developer. The Developer will also be responsible for granting Eskom an alternative route for the power line. Please contact Eskom Customer Contact Centre; 0860 37566 in connection with cost. • The Eskom's unauthorised area representative for Zebediela Technical Service Area, Nthabiseng Mamabolo at Telephone Number: 015 230 4395 / 073 732 6442, MamaboND@eskom.co.za.

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.

Eskom – Possible impact on services and infrastructure.

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):

Eskom – All conditions provided by Eskom will be adhered to.

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.

Alternative (preferred alternative)

Planning and design phase	
<p><u>Direct impacts</u></p> <ul style="list-style-type: none"> The planning and design phase will not result in any direct impacts. 	<p><u>Mitigation measures</u></p> <p>None required.</p>
<p><u>Indirect impacts</u></p> <ul style="list-style-type: none"> No impacts anticipated 	<p><u>Mitigation measures</u></p> <p>None required.</p>
<p><u>Cumulative impacts</u></p> <ul style="list-style-type: none"> No impacts expected 	<p><u>Mitigation measures</u></p> <p>None required.</p>
Construction phase	
<p><u>Direct impacts</u></p> <ul style="list-style-type: none"> Dust/Air pollution <p>The generation of fugitive dust associated with construction activities & earthworks.</p>	<p><u>Mitigation measures</u></p> <p>Dust generation should be kept to a minimum.</p> <p>Dust must be suppressed at construction areas during dry periods by the regular application of water or a biodegradable soil stabilisation agent.</p>

	<p>Speed limits must be implemented in all areas, including public roads and private property to limit the levels of dust pollution.</p> <p>Excavating, handling or transporting erodible materials in high wind or when dust plumes are visible shall be avoided.</p> <p>All materials transported to site must be transported in such a manner that they do not fly or fall off the vehicle. This may necessitate covering or wetting friable materials.</p> <p>No burning of refuse or vegetation is permitted.</p>
<ul style="list-style-type: none"> Visual Intrusion and Light pollution <p>Lights from the contractor's camp and construction site could be visually intrusive.</p>	<p>Site development to be limited to footprint area.</p> <p>The construction camp must be located as far from residential properties as possible.</p> <p>Light pollution should be minimised.</p> <p>Construction / management activities must be limited to the daylight hours between 7:00am and 5:30pm weekdays; 7:00am and 1:30pm on Saturdays.</p> <p>Lighting on site is to be sufficient for safety and security purposes, but shall not be intrusive to neighbouring residents, disturb wildlife, or interfere with road traffic. In this situation low flux and frequency lighting shall be utilised.</p>
<ul style="list-style-type: none"> Destruction of fauna and flora, Destruction of habitats (Springbokvalke Thornveld) 	<p>Only existing roads to be used by vehicles during construction. Roads to be rehabilitated after construction by contractors.</p> <p>The contractor must ensure that no fauna species are disturbed, trapped, hunted, or killed during the construction phase.</p> <p>No trees to be cut down and removed unless within the actual development zone.</p> <p>Disturbed surface areas in the construction phase to be rehabilitated. No open trenches to be left. No mounds of soils created during construction to be left.</p> <p>There are protected trees on site. Therefore any trees that need to be removed must first be discussed and authorised by the ECO and/or Ecologist.</p> <p>Although not a priority species, all aloes found in the study area must be lifted and transplanted in a similar nearby habitat. No permit is required for this activity.</p>
<ul style="list-style-type: none"> Geology and soils (Soil erosion, loss of topsoil, deterioration of soil quality, soil pollution) 	<p>Appropriate erosion and storm water management structures must be installed around the construction site.</p> <p>All construction vehicles, plant, machinery and equipment must be properly maintained to prevent leaks.</p> <p>Plant and vehicles are to be repaired immediately upon developing leaks. Drip trays shall be supplied for all repair work undertaken on machinery on site or campsite area.</p>

	<p>Drip trays are to be utilised during daily greasing and re-fuelling of machinery and to catch incidental spills and pollutants</p> <p>Drip trays are to be inspected daily for leaks and effectiveness, and emptied when necessary. This is to be closely monitored during rain events to prevent overflow.</p> <p>Ensure appropriate handling of hazardous substances.</p> <p>Vehicles to be used during the construction phase are to be kept in good working condition and should not be the source of excessive fumes.</p> <p>Fuels and chemicals must be stored in adequate storage facilities that are secure, enclosed and banded.</p> <p>Once earthworks are complete, disturbed areas are to be stabilised with an appropriate approved method.</p> <p>Disturbed surfaces to be rehabilitated with locally indigenous grass species. No open trenches to be left.</p> <p>No mounds of soils created during construction to be left. Soils around erected poles to be leveled and sculptured to the original contours of the surrounding soils.</p> <p><u>Recommendations as per the Geotechnical report</u></p> <p>Founding conditions are favourable for the proposed development and conventional construction methods can be implemented. Depending on the design and loads to be applied, the following foundation recommendations are made:</p> <p><u>Strip footing</u></p> <ul style="list-style-type: none"> • The width of the strip footings must be at least 600mm in the case of a foundation to a load-bearing or free standing masonry wall or to a timber framed wall supporting a roof. • Where any strip foundation is laid at more than one level, the higher portion of the foundation shall extend over lower portion for a distance at least equal to the thickness of the foundation. <p><u>Precautions</u></p> <p>The following precautions may be considered during construction on the site:</p> <ul style="list-style-type: none"> • The site is relatively flat therefore extensive site drainage and plumbing/service precautions must be considered. • Structures to have damp proofing. • The site must be graded to prevent ponding of storm water. • 1.5m apron around the structures to prevent water ingress under the immediate area or the foundation. • Walkways and drive ways must be paved to allow easy access to the property during wet seasons. • Planting of grass/lawn on the stands may be considered to prevent erosion • Roads must be paved or tarred. Specialist advice must be sought for installation of the roads.
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	<ul style="list-style-type: none"> Care must be taken with foundation designs where foundations straddle different soil mediums such as rock and soil. <p>Pavement layers</p> <p>The soils underlying the site exhibit good compaction characteristics or road building and pavement construction. According to the TRH14 guidelines, the residual sandstone soils underlying the site are classified as G5 and G6, therefore are suitable for subbase, selected layer and subgrade construction.</p>
<ul style="list-style-type: none"> Hydrology <p>The main impacts associated with the construction phase activities include the following:</p> <ul style="list-style-type: none"> Erosion of site and siltation of surrounding surface water features. Oil, grease and diesel spillages, hydrocarbon contamination from construction vehicles and heavy machinery. Pollution of groundwater and surface water due to sanitation facilities and related anthropogenic activities. Groundwater and surface water pollution due to spillage of chemicals and building materials. 	<p>Strict adherence to the mitigations provided in the hydrological report including the mitigation measures below.</p> <p>Excavations should be open for as short period as practically possible, while cleared and stripped areas should be vegetated as soon as possible.</p> <p>Ensure vehicle and heavy machinery used on-site are regularly inspected for leaks and serviced at frequent intervals. Spill trays to be used where applicable.</p> <p>Construction camp should be situated outside any riparian buffer. Chemical sanitary facilities must be provided for construction workers and emptied on regular intervals.</p> <p>All materials, fuels and chemicals must be stored in a secured, sealed and bunded area to prevent pollution from spillages and leakages. The use of chemicals should be controlled.</p> <p>No temporary laydown areas or site offices, etc. may be established within 100m of any watercourses, with particular reference to the Nkumpi River.</p> <p>Storm water management plans to be compiled and implemented. Special attention to be given to areas along the northern and western boundaries of the site. It is in these areas that there is a slight down gradient and polluted water can potentially flow from here into the Nkumpi River catchment.</p> <p>All watercourses are 'no-go' zones in terms of the movement of people, vehicles and materials.</p> <p>No water may be extracted from the Nkumpi River for construction use, unless the client and contractor have acquired relevant permits.</p> <p>No vehicles, especially cement trucks may be washed down by the river.</p> <p>No construction vehicles may go within 100m of the Nkumpi River and its riparian area.</p> <p>Utilize proper waste management practices.</p> <p>Ensure that the handling, transport, storage and disposal of hazardous substances is adequately controlled and managed.</p> <p>Provide containment areas for potential pollutants at construction</p>

	<p>camps, refuelling, depot and concrete batching plants.</p>
<ul style="list-style-type: none"> Noise <p>Noise as a result of construction activities.</p>	<p>Noise levels shall be kept within acceptable limits, and construction crew must abide by National Noise Laws and local by-laws regarding noise.</p> <p>No sound amplification equipment such as sirens, loud hailers or hooters are to be used on site except in emergencies and no amplified music is permitted on site.</p> <p>Construction / management activities involving use of the service vehicle, machinery, hammering etc, must be limited to the hours between 7:00am and 5:30pm weekdays; 7:00am and 1:30pm on Saturdays; no noisy activities may take place on Sundays or Public Holidays.</p> <p>Activities that may disrupt neighbours (e.g. delivery trucks, excessively noisy activities etc.) must be preceded by notice being given to the affected neighbours at least 24 hours in advance.</p> <p>Equipment that is fitted with noise reduction facilities (e.g. side flaps, silencers etc.) must be used as per operating instructions and maintained properly during site operations.</p>
<ul style="list-style-type: none"> Waste <p>Refuse and waste produced during the construction phase</p> <p>Dumping of building material, rubble and any material used during construction or rehabilitation</p> <p>Stockpiled material</p>	<p>Adequate number of waste disposal receptacles is to be positioned at strategic locations within the development. These are to be emptied weekly to an official waste disposal site.</p> <p>No burning of waste.</p> <p>Waste will be collected and removed off-site to a registered waste site.</p>
<ul style="list-style-type: none"> Destruction of cultural / heritage sites 	<p>Chance Find Procedure (Heritage Impact Assessment report)</p> <p>The possibility of the occurrence of subsurface finds or previously unknown sites cannot be excluded. Therefore, if during construction any possible finds such as stone tool scatters, artefacts or bone and fossil remains are made, the operations must be stopped and a qualified archaeologist must be contacted for an assessment of the find and therefor chance find procedures should be put in place for the project. A short summary of chance find procedures is discussed below.</p> <p>This procedure applies to the developer's permanent employees, its subsidiaries, contractors and subcontractors, and service providers. The aim of this procedure is to establish monitoring and reporting procedures to ensure compliance with this policy and its associated procedures. Construction crews must be properly inducted to ensure they are fully aware of the procedures regarding chance finds as discussed below.</p> <ul style="list-style-type: none"> If during the pre-construction phase, construction, operations or closure phases of this project, any person employed by the developer, one of its subsidiaries, contractors and subcontractors, or service provider, finds any artefact of cultural significance or heritage site, this person must cease work at the site of the find and report this find to their immediate supervisor, and through their supervisor to the senior on-site manager.

	<ul style="list-style-type: none"> • It is the responsibility of the senior on-site Manager to make an initial assessment of the extent of the find, and confirm the extent of the work stoppage in that area. • The senior on-site Manager will inform the ECO of the chance find and its immediate impact on operations. The ECO will then contact a professional archaeologist for an assessment of the finds who will notify the SAHRA. <p>Paleontological Chance Find Protocol Monitoring Programme for Palaeontology – to commence once the excavations begin.</p> <ul style="list-style-type: none"> • The following procedure is only required if fossils are seen on the surface and when excavations for foundations and infrastructure commence. • When excavations begin the rocks and must be given a cursory inspection by the environmental officer or designated person. Any fossiliferous material (plants, insects, bone, coal) should be put aside in a suitably protected place. This way the mining activities will not be interrupted. • Photographs of similar fossil plants must be provided to the developer to assist in recognizing the fossil plants in the shales and mudstones. This information will be built into the EMP's training and awareness plan and procedures. • Photographs of the putative fossils can be sent to the palaeontologist for a preliminary assessment. • If there is any possible fossil material found by the developer/environmental officer/miners then the qualified palaeontologist sub-contracted for this project, should visit the site to inspect the selected material and check the dumps where feasible. • Fossil plants or vertebrates that are considered to be of good quality or scientific interest by the palaeontologist must be removed, catalogued and housed in a suitable institution where they can be made available for further study. Before the fossils are removed from the site a SAHRA permit must be obtained. Annual reports must be submitted to SAHRA as required by the relevant permits. • If no good fossil material is recovered then no site inspections by the palaeontologist will be necessary. A final report by the palaeontologist must be sent to SAHRA once the project has been completed and only if there are fossils. • If no fossils are found and the excavations have finished then no further monitoring is required.
<ul style="list-style-type: none"> • Safety & Security The construction site could result in harm to people and property. 	<p>Signs should be erected on all entrance gates to the site camp indicating that no temporary jobs are available, thereby limiting opportunistic labourers and crime.</p> <p>The site and crew are to be managed in strict accordance with the Occupational Health and Safety Act (Act No. 85 of 1993) and the National Building Regulations</p> <p>All structures that are vulnerable to high winds must be secured (including toilets).</p> <p>Potentially hazardous areas such as trenches are to be cordoned off and clearly marked at all times.</p>

	<p>The Contractor is to ensure traffic safety at all times, and shall implement road safety precautions for this purpose when works are undertaken on or near public roads.</p> <p>Necessary Personal Protective Equipment (PPE) and safety gear appropriate to the task being undertaken is to be provided to all site personnel (e.g. hard hats, safety boots, masks etc.).</p> <p>All vehicles and equipment used on site must be operated by appropriately trained and / or licensed individuals in compliance with all safety measures as laid out in the Occupational Health and Safety Act (Act No. 85 of 1993) (OHSA).</p> <p>An environmental awareness training programme for all staff members shall be put in place by the Contractor. Before commencing with any work, all staff members shall be appropriately briefed about the EMP and relevant occupational health and safety issues.</p> <p>All construction workers shall be issued with ID badges and clearly identifiable uniforms.</p> <p>Access to fuel and other equipment stores is to be strictly controlled.</p> <p>Emergency procedures must be produced and communicated to all the employees on site. This will ensure that accidents are responded to appropriately and the impacts thereof are minimised. This will also ensure that potential liabilities and damage to life and the environment are avoided.</p> <p>Adequate emergency facilities must be provided for the treatment of any emergency on the site.</p> <p>The nearest emergency service provider must be identified during all phases of the project as well as its capacity and the magnitude of accidents it will be able to handle. Emergency contact numbers are to be displayed conspicuously at prominent locations around the construction site and the construction crew camps at all times.</p> <p>The Contractor must have a basic spill control kit available at each construction crew camp and around the construction site. The spill control kits must include absorptive material that can handle all forms of hydrocarbon as well as floating blankets / pillows that can be placed on water courses.</p> <p>The Contractor shall make available safe drinking water fit for human consumption at the site offices and all other working areas.</p> <p>Washing and toilet facilities shall be provided on site and in the Contractors camp.</p>	
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	<p>Adequate numbers of chemical toilets must be maintained in the Contractors camp to service the staff using this area. At least 1 toilet must be available per 20 workers using the camp. Toilet paper must be provided.</p> <p>The chemical toilets servicing the camp must be maintained in a good state, and any spills or overflows must be attended to immediately.</p> <p>The chemical toilets must be emptied on a regular basis.</p> <p>The Contractors site must be located on the high side of the site so any leakages or spillages will be contained on site.</p>
<ul style="list-style-type: none"> Services and infrastructure 	<p>Integrity of existing services to be ensured.</p> <p>Adherence to the conditions provided by Eskom.</p>
<u>Indirect impacts</u>	<u>Mitigation measures</u>
<ul style="list-style-type: none"> Construction traffic <p>Construction traffic may be caused by construction vehicles moving in and out of the construction site and site camp.</p>	<p>The contractor is to ensure traffic safety at all times and shall implement road safety precautions.</p>
<ul style="list-style-type: none"> Safety & Security <p>Construction sites by their nature act as a magnet to the unemployed, so people may gather on or around the site. These people must be kept off the site for safety reasons.</p>	<p>Signs should be erected on all entrance gates indicating that no temporary jobs are available, thereby limiting opportunistic labourers and crime.</p>
<ul style="list-style-type: none"> Spread of alien vegetation <p>Due to the disturbance of the site alien plants could be able to establish and could become a problem by infesting neighbouring land.</p>	<p>Alien vegetation re-growth must be controlled throughout the entire site during the construction period.</p>
<ul style="list-style-type: none"> Socio economic (Employment opportunities) <p>Employment opportunities will be created during the development of this site thus leading to an increase in the level of local employment in the surrounding areas. Both short term and long term employment will be created.</p>	<p>Make use of local labour.</p> <p>Provide clear and realistic information regarding employment opportunities and other benefits for local communities in order to prevent unrealistic expectations.</p>
<ul style="list-style-type: none"> Potential impact on services & infrastructure (Eskom) 	<p>Adherence to the conditions provided by Eskom.</p>
<u>Cumulative impacts</u>	<u>Mitigation measures</u>
<ul style="list-style-type: none"> Surface water pollution <p>Spillages of oil, lubricants and fuel from construction vehicles, plant and machinery has the potential to contaminate surface water bodies.</p>	<p>Appropriate erosion and storm water management structures must be available around the construction site.</p> <p>All construction vehicles, plant, machinery and equipment must be properly maintained to prevent leaks.</p>
<ul style="list-style-type: none"> Increased run off of water <p>The increase in paved areas such as the roads and driveways and forecourt could increase the amount of storm water runoff and cause a reduction in the</p>	

<p>infiltration of water into the groundwater</p> <p>Storm water runoff has the potential to erode the topsoil and result in sedimentation of water bodies if not controlled.</p>	
<ul style="list-style-type: none"> Ground water pollution <p>The construction phase could result in increased infiltration of contaminants into the ground water and soil.</p> <p>The clearing of the site could result in exposed soil surfaces which may be prone to erosion and sedimentation of water bodies.</p>	
<ul style="list-style-type: none"> Socio Economic <p>Employment opportunities will be created from the proposed development thus improving the lives of those employed.</p>	<p>Make use of local labour</p>
<ul style="list-style-type: none"> Fauna & Flora <p>The immediate area where the site is to be situated will be irreparably damaged by the construction activities. This impact adds to the destruction of the already disturbed habitat.</p>	<p>The site footprint is to be demarcated and no access or destruction of the adjacent area is to be allowed.</p> <p>Any area impacted on that falls outside the construction area is to be rehabilitated.</p> <p>Site clearing is to be limited to only the area necessary for carrying out the specified works and the destruction of vegetation should be minimised.</p> <p>No littering by construction workers is permitted. Any litter must be collected and removed offsite to a registered waste site.</p>
Operational phase	
<u>Direct impacts</u>	<u>Mitigation measures</u>
<ul style="list-style-type: none"> Air pollution <p>Vapours produced by fuel are potentially hazardous to human health. These emissions might occur during the service of underground storage tanks from the breather pipes, minor spillages and the dispensing of fuel.</p>	<p>Standard vents fitted to the breather pipes minimise the loss of vapours.</p>
<ul style="list-style-type: none"> Hydrology (Storm water flow and drainage) Hydrocarbon pollution of groundwater (seepage/percolation) and surface water (drainage). Hazardous liquids and hydrocarbons spilled on surface will either run off the sealed areas into local surface water drainages or enter the sub-surface soil profile and percolate vertically down the vadose zone to the groundwater level. Light non-aqueous phase liquids (LNAPL's) i.e. petrol and diesel will be transported on the groundwater in an inferred easterly direction, while dense non-aqueous phase liquids (DNAPL's) such as oil will percolate through the vadose zone until solid bedrock is encountered where it will move along the bedding planes and through fractures. 	<p>Storm water systems to be checked on a regular basis to ensure that they are working properly and there are no leaks, blockages, erosion and siltation.</p> <p>The use of all detergents, oil, fuels and chemicals which could potentially leach into underground water must be controlled. This can be done by sealing of the forecourt and refuelling bay area to prevent infiltration of hydrocarbon into the aquifer underlying the site.</p> <p>Storm water draining from the surfaced areas should be collected in a sealed sump to be treated or removed. All contact water should be discharged into the municipal system with the required approval and not into any streams, or adjacent areas.</p> <p>Subsurface fuel storage facilities should be constructed in concrete</p>

	<p>encasements with a sump system to prevent spilled fuel from entering the soil and weathered rock. Storage facilities should also be fitted with a leakage detection system.</p> <p>Fuel lines and dispensers should be rendered leak-proof by a competent person. Fuel pumped into underground fuel tanks should be accounted for, for the early detection of leakages.</p> <p>An on-site monitoring borehole should be drilled and monitored on a quarterly basis in order to identify changes in water quality timeously.</p>
<ul style="list-style-type: none"> Alien invasion and loss of biodiversity 	<p>Mechanical control of alien plants around disturbed areas to be implemented within three months of completion of construction. Thereafter every six months. Mechanical control to be of such nature as to allow local indigenous grasses and other pioneers to colonise the previously disturbed areas, thereby keeping out alien invasives. After the first year weed control can form part of the routine maintenance programme.</p>
<ul style="list-style-type: none"> Noise <p>Noise from the development includes staff talking and shouting, vehicles moving to and from the site, music and radio broadcasts and this might be disruptive late at night and during weekends.</p>	<p>Ensure acceptable noise levels</p>
<ul style="list-style-type: none"> Socio-Economic <p>The operational phase of the development will result in the generation of employment opportunities.</p>	<p>Implement local labour</p>
<ul style="list-style-type: none"> Provision of a needed service 	<p>None required</p>
<ul style="list-style-type: none"> Visual impact <p>The buildings and advertising may be visually intrusive.</p> <p>Lights from the Filling Station may be visually intrusive</p>	<p>The buildings must be regularly painted</p> <p>Signs for advertising must conform to the standards of South African Manual for Outdoor Advertising Control (SAMOAC).</p> <p>Light pollution should be minimised</p> <p>Lighting on site is to be sufficient for safety and security purposes, but shall not be intrusive to neighbouring residents, disturb wildlife, or interfere with road traffic</p> <p>All lights used for non-security purposes should be energy efficient for example compact fluorescent lights (CFL). Fluorescent lamps give five times the light and last up to 10 times as long as ordinary bulbs</p> <p>Areas that have been landscaped must be maintained</p>
<ul style="list-style-type: none"> Waste 	<p>Ensure proper waste management.</p> <p>Sorting of waste</p> <p>Regular cleaning of waste yard so that it does not become a nuisance in terms of odour and vermin.</p>
<ul style="list-style-type: none"> Pressure on existing infrastructure and services 	<p>Integrity of existing services in the area to be ensured.</p>

<u>Indirect impacts</u>	<u>Mitigation measures</u>
<ul style="list-style-type: none"> • Surface water pollution 	No chemical control (herbicides) of alien plants to be used within 100m of any watercourses.
<ul style="list-style-type: none"> • Safety & Security 	<p>The development should be provided with essential security personnel. Staff should be adequately trained with respect to dealing with crime</p> <p>Staff must be adequately updated about safety procedures.</p> <p>Appropriate measures should be in place for the correct storage and handling of fuel as well as the procedures for dealing with dangerous situations.</p> <p>Equipment and materials must be handled by staff that has been adequately trained.</p> <p>Emergency contact details for the police, Security Company and fire department must be readily available.</p>
<ul style="list-style-type: none"> • Traffic 	Compliance to Traffic laws.
<ul style="list-style-type: none"> • Groundwater pollution 	<p>Strict procedures for the management of the site must be developed and adhered to.</p> <p>An emergency accidental spillage plan must be in place and workers must be trained to handle such accidents.</p> <p>Leak detection measures/systems must be implemented in all fuel storage and transmission lines and tanks.</p> <p>Fuel dispenser pumps must be located on a hardened surface to contain spillages.</p> <p>The underground storage tanks (UST's) must comply with the relevant SANS standards with respect to tank manufacture and installation.</p> <p>UST's must have corrosion protection.</p> <p>Tanker delivery driver must be present during delivery of fuel with the emergency cut off switch</p>
<u>Cumulative impacts</u>	<u>Mitigation measures</u>
<ul style="list-style-type: none"> • Infrastructure and services 	Integrity of services and infrastructure should be ensured to prevent a negative impact on the surrounding residential area.
<i>Decommissioning and Closure phase</i>	

Due to the nature of the development it is anticipated that the infrastructure would be permanent, thus not requiring decommissioning or rehabilitation. However should it take place the potential impacts are described below (Proposal & Alternative 1)

<u>Direct impacts</u>	Mitigation
<ul style="list-style-type: none"> • Waste • Visual impacts • Dust • Noise • Fires and explosions might occur 	<ul style="list-style-type: none"> • Decommissioning should take place during dry winter months. • Dismantling of equipment must be conducted by an accredited contractor. • Deep excavations must be cordoned off prior to being back filled • Once the site has been filled, it must be rehabilitated. • Decommissioning of underground storage facilities, decommissioning must be approved and signed-off by a competent person. • Water quality monitoring.
<u>Indirect impacts</u>	
<ul style="list-style-type: none"> • Construction traffic • Security • Spread of alien vegetation • Loss of employment opportunities 	
<u>Cumulative impacts</u>	
<ul style="list-style-type: none"> • Surface water pollution • Increased runoff of water • Ground water pollution 	

Alternative 1

Alternative 1 entails the development of the site only for a Filing Station. This means the Mini Shopping Centre will be excluded from the development. The impacts for Alternative 1 will be similar to that of the Proposal with the exception being the reduced positive impact of providing the local community with a needed service and the unproductive utilisation of the site.

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)

As a necessary part of infrastructure and a business service, this development is bound to have a positive effect on the surrounding area in terms of employment opportunities and it will provide needed services to the immediate area.

From a purely biophysical perspective the natural environment within the study area is uniform and consists of only one natural habitat, namely open degraded bushveld (thornveld). There are no significant rocky outcrops or rocky ridges within the study area that proposed activities of the project will impact on. There are also no aquatic habitats in the study area including streams and wetlands. The ecological sensitivity of the site is rated as medium/low. The biophysical impact of the development will be limited in a regional context and will be more than offset by the social benefits of the development. The proposal can therefore proceed from an environmental perspective.

From a geo-hydrological point of view the overall potential for groundwater pollution is low. During the construction phase the potential impacts without mitigation measures are rated as "Moderate". With mitigation measures the significance of the impact is rated as "Low" to "Negligible". During the operational phase the potential impacts

without mitigation measures are rated as “High”. With mitigation measures the significance is rated “Low”.

The geotechnical study concluded that the overall geotechnical investigation findings suggest that the site is developable albeit with precautionary measures.

From a Heritage point of view the study area has been completely transformed by cultivation activities from 1968 onwards and later by construction activities. These impacts would have obliterated surface evidence of heritage resources. The lack of significant heritage resources was confirmed during the survey and no heritage features or sites of significance were identified. The palaeontological assessment concluded that there is a very small chance that fossils of dinosaur bones or silicified wood may occur below ground. Both the studies recommended the inclusion of a chance find procedure in the EMR and the reports submitted to SAHRA for approval.

The construction phase has the greatest impact on the environment even with mitigation. The negative impacts associated with the construction phase include:

- Dust /Air pollution
- Visual Impacts and light pollution
- Soil erosion, loss of topsoil, deterioration of soil quality, soil pollution
- Degradation, destruction of habitats/ ecosystem and loss of natural vegetation
- Increased runoff of water
- Surface and groundwater pollution
- Noise/ vibration
- Safety and Security
- Construction related traffic
- Waste production
- Spread of alien vegetation

The construction phase will also be associated with positive socio-economic impacts in terms of job creation. A number of mitigation measures to reduce or improve these impacts have been identified and are presented in the tables above. A key environmental imperative of the construction phase would be to prevent soil, air, water and damage to the existing Eskom infrastructure in the immediate vicinity.

The negative impacts relating to the operational phase include the following:

- Due to the disturbance of the site alien plants will be able to establish and could become a problem by infesting neighbouring land.
- Increased run off of water
- Surface and groundwater pollution
- Air pollution
- Waste generation
- Pressure on existing services and infrastructure
- Noise
- Traffic

The primary positive impacts relate to the provision of needed services and employment opportunities.

The cumulative negative impacts that were identified in the construction and operational phase of the proposed development relate to the Increased run off of water from the site, alien infestation, pressure on existing infrastructure and services and surface and groundwater pollution. If the mitigation measures outlined in the report are implemented the cumulative impacts should be nullified.

The construction phase will be of medium term duration (2-15 years) and the operational phase will have limited environmental impacts if constructed according to the conditions outlined in this report and if managed according

to the Environmental Management Programme (EMPr)

No-go alternative (compulsory)

Should this alternative be followed there are no related environmental impacts as no action is to be taken that could influence the environment.

The Socio-Economic Impact however relates to the lack of access to necessary services and no employment opportunities will be created and a loss of investment.

Alternative B

Should this alternative be followed the impacts would be similar to that of the Proposal, however the positive impacts would be minimised in terms of significance (i.e. less employment opportunities will be created, the local community will still need to travel a significant distance in order to obtain some basic services that they could have obtained from the Mini Shopping Centre).

Alternative C

No further alternatives were investigated.

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
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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:

ISSUE	ENVIRONMENTAL MANAGEMENT REQUIREMENTS
Specialist reports	All recommendations provided in the specialist studies undertaken for the proposed development should be implemented.
Outstanding information	A condition should be provided in the Environmental Authorisation should it be granted, that the outstanding information be submitted to the Department before the activity is commenced with.
Construction	Short-term nuisance impacts must be managed as they occur. This includes dust control, erosion prevention, noise control through appropriate construction hours etc.

Fauna & Flora	<p>Protected Plant species</p> <p>According to datasets the delineation of the study area within a CBA has been taken into consideration. But it also needs to be kept in mind that the actual site is mostly degraded and transformed due to the fact that it was historically used as a show grounds for the region. The few protected trees on site have also been taken into consideration. The proposed project should have no impact on these trees and recommendations are that they should not be removed at all, but nurtured and protected.</p> <p>If (as an absolute last resort) some of the trees need to be removed, then a tree permit application through National and Provincial Departments will first need to be done.</p> <p>Alien plants</p> <p>Mechanical control of alien plants around disturbed areas to be implemented within three months of completion of construction. Thereafter every six months. Mechanical control to be of such a nature as to allow local, indigenous grasses and other pioneers to colonise the previously disturbed areas, thereby keeping out alien invasives. After the first year weed control can form part of the routine maintenance.</p> <p>No chemical control of alien plants to be used within 100m of any watercourses.</p>
Surface and Underground Water	<p>Storm water systems to be monitored on a regular basis to ensure that they are working properly and there are no leaks, blockages, erosion, siltation etc.</p> <p>No water for construction may be taken from out of the Nkumpi River unless the relevant permits have been obtained.</p> <p>Adherence to the Geohydrology report.</p>
Pollution	<p>Regular leak detection and proper surface water management will keep the risk low.</p>
Air quality	<p>Vapour release from filling station activities can be limited using equipment that automatically limit the release pathway, or specifically return vapour to the storage tanks. Any unnecessary exposure of liquid fuels must be prevented.</p>
Noise	<p>Noise from vehicles and equipment can be reduced by the strategic placement of signage, low walling elements or landscaping. The use of noisy machinery at night must be limited as the absorption capacity of the surroundings will be at its lowest. Noise from vehicles and equipment can be reduced by the strategic placement of signage, low walling elements or landscaping. The use of noisy machinery at night must be limited as the absorption capacity of the surroundings will be at its lowest.</p>
Lighting	<p>External lighting must be limited in order to blend in with the immediate area. Illuminated signage and areas must not be 'floodlit', but rather specifically and for a particular purpose – such as backlighting that does not illuminate more than just the display in front of the light source. Appropriate screening can also be provided to prevent the lights of vehicles entering or exiting the site from becoming a nuisance.</p>
Services and infrastructure	<p>The Applicant is to ensure full compliance regarding the conditions brought forward by Eskom.</p> <p>The provision of services for the development to proceed is of crucial</p>

	importance, thus the Applicant will ensure that the development is provided with adequate services and necessary infrastructure.
Rehabilitation	Rehabilitation of denuded and disturbed areas resulting from construction is required.

Is an EMPr attached?

The EMPr must be attached as Appendix F.

YES	NO
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SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information

SECTION G: DECLARATION BY THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

I, **Faith Makena**

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:

Lokisa Environmental Consulting CC

Name of company:

11 October 2019

Date:

