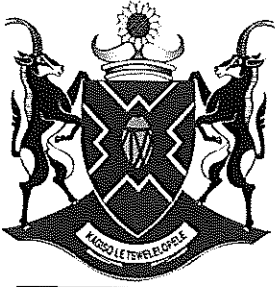


# **BASIC ASSESSMENT REPORT**



the DEDECT

Department:  
Economic Development, Environment, Conservation and  
Tourism  
North West Provincial Government

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**CHIEF DIRECTORATE: ENVIRONMENTAL SERVICES**  
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(For official use only)

File Reference Number:  
Application Number:  
Date Received:


Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2010 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
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. An incomplete report may be returned to the applicant for revision.
5. 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 competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
6. This report must be handed in at offices of the relevant competent authority as determined by each authority.
7. No faxed or e-mailed reports will be accepted.
8. The report must be compiled by an independent environmental assessment practitioner.
9. *Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.*
10. *A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.*

## SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?   NO

If YES, please complete the form entitled "Details of specialist and declaration of interest"

for 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 detail<sup>1</sup>:

The property, Portion 385 of the farm Waterkloof 305 JQ, Rustenburg, is 17ha in size and currently partly developed with the Cynthiana hotel, a caravan park, commercial shops (liquor store, car dealership etc) and a roadhouse that exist on site.

The applicant wishes to establish a filling station, residential, commercial and retail areas on the site.

Describing the development from the far western end of the property towards the road (R24/R30), it will consist of the following:

#### Open space area:

This includes the ridge or steeper slopes area (approximately 5ha) towards the Magaliesberg Mountain which is currently highly disturbed due to illegal dumping and burning of waste but worth conserving due to its natural beauty, natural vegetation, elevations and aesthetic appeal.

#### Residential area:

The area for the construction of the new residential area is approximately 8 hectares in size and includes:

- 13 large residential properties (low density – one unit per stand) with stand sizes varying between 2 130m<sup>2</sup> and 4 069m<sup>2</sup> over approximately 4ha just below the ridge/elevated area.
- Two areas with high density units: 46 units at a density of 30 units/ha over 1.588ha; 123 units at a density of 60 units/ha over 2.07ha.

#### Commercial and retail area:

This area of approximately 4ha will include the following:

- A hotel and offices
- A retail and restaurant area (1.566ha)
- A filling station (250m<sup>2</sup>) and take-away area (150m<sup>2</sup>). The proposed filling station area (4 620.73m<sup>2</sup>) will be located at the new entrance to the site just off the R24/R30 (P16-1). The establishment of a filling station is based on existing rights for a filling station on the property. The filling station will require underground fuel storage tanks for petrol and diesel. Thirty (30) kilolitre (m<sup>3</sup>) tanks will be established for each of the following diesel 50ppm; diesel 500ppm; ULP 93; ULP 95

#### Legislation:

Based on Government Notice Regulation (GNR) 544 (18 June 2010), the proposed

<sup>1</sup> 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.



development requires a Basic Assessment in terms of the following listed activities (Listing Notice 1):

13) The construction 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 but not exceeding 500 cubic metres. *The underground storage tanks for fuel for the filling station require authorisation in terms of this listed activity.*

23) The transformation of undeveloped, vacant or derelict land to – (a) residential, retail, commercial, recreational, industrial or institutional use, inside an urban area, and where the total area to be transformed is 5 hectares or more, but less than 20 hectares. *A large portion of the site has been disturbed and/or developed (illegally). The applicant wishes to formally transform and develop the site of 17ha for residential, retail and commercial purposes.*

The property has an existing permit from the Transvaal Provincial Administration in terms of Section 6(1) of the Act on physical planning, 1967 (Act 88 of 1967) for the establishment of a filling station (garage) and café (Ref 15/33/91(3)) – see Appendix G.

**Construction activities:**

- Clearance of vegetation;
- Demolition of existing structures;
- Earthworks;
- Delivery of construction equipment and material to the site;
- Movement of construction vehicles and equipment on site and around the site;
- Installation of service infrastructure including stormwater infrastructure and sand/soil, hydrocarbon (oil, grease, fuel) separators for potentially polluted run-off from the site; and extended/adapted water supply, electricity supply, and sewerage reticulation;
- Installation of underground storage tanks for petrol/diesel;
- Construction of above ground filling station pumps and service area;
- Upgrade of current infrastructure & building of new infrastructure - hotel, commercial shops and restaurants; and
- Building of new residential units which will include:
  - 13 large residential properties with gardens;
  - 46 units at a density of 30 units/ha;
  - 123 units at a density of 60 units/ha;
  - Perimeter walls with an entrance; and
  - Internal roads.

**Operational activities:**

- The use of water, electricity, municipal sewage system and storm water drainage system;
- Commercial trading hours for shops and restaurants; and
- Traffic of residents and of use of the filling station 24 hours a day.

A service agreement will be entered into with the Rustenburg Local Municipality (RLM) after township establishment in terms of the provision of solid waste removal services, water and electricity supply and linking with existing sewage infrastructure in the area to convey sewage to the RLM Sewage Treatment Works. Storm water from the site will also flow into the municipal storm water management infrastructure located in the area along the road reserve. All service infrastructure will be located along roads.



**Specialist studies:**

The following specialist studies were undertaken as part of the project:

- Fauna and Flora Assessment due to naturally vegetated area in the western portion of the site extending towards the Magaliesberg Mountain area.
- Aesthetic/Visual Assessment due to steeper slopes which are highly visible and located in the western portion of the site.
- Geotechnical study to establish soil conditions and determine building and foundation requirements.

**2. FEASIBLE AND REASONABLE ALTERNATIVES**

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

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

No alternative properties have been considered. This property has been identified by Rustenburg Local Municipality (RLM) as a “Zone of Opportunity” which supports the view of an area of potential developable land. RLM described the property as having the potential to be used for township establishment as the property is situated close to an existing proclaimed township (see letter from RLM, Ref GO 15/8/2/2/40/431 – see Appendix G).

The site is already disturbed and highly impacted, containing existing infrastructure (hotel, roadhouse, caravan park, businesses etc). It is suitably located adjacent to the R24 (P16-1) providing easy and convenient access for the public and tourists to specifically the filling station, hotel and other businesses. The site falls within the urban edge of RLM and is serviced by the municipality in terms of water, sewage and electricity. The site is in close proximity to other townships and developed areas which form part of Rustenburg. The site is located 7km from the Rustenburg Central Business District (CBD). The proposed site is therefore deemed suitable for development as a result of the following factors:

- Disturbed nature of the site and existing disturbed (developed) footprint.
- Location adjacent to R24 (P16-1) providing easy access.
- Within area provided with services by RLM.
- Proximity to Rustenburg CBD and already developed areas.

**(b) the type of activity to be undertaken;**

No alternative activities have been considered as this development is in line with the letter from RLM (Ref GO 15/8/2/2/40/431, 30 January 2002) and the mandate of the Draft Rustenburg Spatial Development Framework (SDF, 2010) to alleviate the housing shortage and address the need for formal housing presently experienced in the Rustenburg area. Furthermore, according to the SDF (2010), due to the potential future growth of the population in Rustenburg area, an additional 57 000 housing units will be required by 2015 (over a 5 year period). There is therefore a great need and motivation for the development of the residential units and additional services such as commercial shops, hotels and filling stations for public and tourist use. According to the SDF (2010), this area has been earmarked for “single residential” development.

A previous application in 2002 to subdivide the property was denied by RLM (Ref GO 15/8/2/2/40/431, 30 January 2002).

The inclusion of the filling station is due to the existing rights/permit from the Transvaal Provincial Administration in terms of Section 6(1) of the Act on physical planning, 1967 (Act 88 of 1967) - Ref 15/33/91(3) (Appendix G).



**(c) the design or layout of the activity;**

No alternative design or layout has been considered, as a town planner was approached to establish and develop the best applicable layout and design for the area. A preliminary layout of the activity is included in Appendix C. The layout considers the more sensitive natural area at the western boundary (towards the Magaliesberg Mountain) and therefore left the portion of the property with steeper slopes as an open area and proposes low density housing east of it to reduce any possible impacts. . The layout further considers the location of the R24 (P16-1) on the eastern boundary which provides high visibility and easy, convenient access and therefore proposes business, commercial and retail uses (including a filling station) in this area.

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

Standard construction methods will be used. Construction will comply with the National Home Builders Registration Council (NHBC) standards.

The location, design and construction of the Underground Storage Tanks (UST) are important issues, as this is where the greatest potential for impacts is - contamination of soil and groundwater (fuel leakage); dangers (fire, explosions, accidents). The following aspects has been considered:

- UST location options.
- UST construction options.
- Materials and methods for dealing with leaks & spillages (Drizit, Zorbit).

**(e) the operational aspects of the activity; and**

The RLM will be responsible for operational aspects in terms of service provision. An agreement with the RLM will be established in terms of the increased/adapted service provision.

The filling station will be operated by a company familiar with the operation of filling stations.

**(f) the option of not implementing the activity.**

The "no-go" alternative is a possible alternative, and must be considered. Issues affecting this option may emanate from current dumping and illegal waste burning as well as opposition from I&AP's regarding the filling station.

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 competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

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



### 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 and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

List alternative sites, if applicable.

Alternative:	Latitude (S):		Longitude (E):	
Alternative S1 <sup>2</sup> (preferred or only site alternative)	25°	42.866'	27°	15.058'
Alternative S2 (if any)	0	'	0	'
Alternative S3 (if any)	0	'	0	'

#### In the case of linear activities:

Alternative:	Latitude (S):		Longitude (E):	
Alternative S1 (preferred or only route alternative)				
• Starting point of the activity	0	'	0	'
• Middle/Additional point of the activity	0	'	0	'
• End point of the activity	0	'	0	'
Alternative S2 (if any)				
• Starting point of the activity	0	'	0	'
• Middle/Additional point of the activity	0	'	0	'
• End point of the activity	0	'	0	'
Alternative S3 (if any)				
• Starting point of the activity	0	'	0	'
• Middle/Additional point of the activity	0	'	0	'
• End point of the activity	0	'	0	'

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.

<sup>2</sup> "Alternative S.." refer to site alternatives.



**4. PHYSICAL SIZE OF THE ACTIVITY**

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

Alternative:

Size of the activity:

Alternative A1<sup>3</sup> (preferred activity alternative)

± 12 ha developed

Alternative A2 (if any)

m<sup>2</sup>

Alternative A3 (if any)

m<sup>2</sup>

or, for linear activities:

Alternative:

Length of the activity:

Alternative A1 (preferred activity alternative)

m

Alternative A2 (if any)

m

Alternative A3 (if any)

m

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

Alternative:

Size of the site/servitude:

Alternative A1 (preferred activity alternative)

17.0193 ha

Alternative A2 (if any)

m<sup>2</sup>

Alternative A3 (if any)

m<sup>2</sup>

**5. SITE ACCESS**

Does ready access to the site exist? Access to the site can be obtained directly from the R24 (P16-1). Current site entrances are from the R24. The access road will be as per the site layout (Appendix C) on the northern boundary (existing gravel road between roadhouse and R24 (P16-1). The road will be extended and tarred.

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

YES	<input checked="" type="checkbox"/>

<sup>3</sup> "Alternative A.." refer to activity, process, technology or other alternatives.





Describe the type of access road planned:

Tarred road.

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; **Refer to Appendix E, Public Participation Report on surrounding property numbers and owners.**
- 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; **currently normal wire fence of 1m high**
- 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; **917m north west runs the Watervalspruit**
  - the 1:100 year flood line (where available or where it is required by DWA);
  - ridges; **A ridge occurs in the Magaliesberg Natural Protected Environment (MNPE) south west of the site; the site has steep slopes on its western boundary which will not be disturbed by the development.**
  - cultural and historical features; **None.**
  - areas with indigenous vegetation (even if it is degraded or invested with alien species); **Degraded indigenous vegetation was found on site as identified in the vegetation report Appendix D.**
- 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 **Refer to Site Layout (Appendix C) and Aesthetic Report (Appendix D).**
- 6.11 the positions from where photographs of the site were taken.

## 7. SITE PHOTOGRAPHS

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



## 8. FACILITY ILLUSTRATION

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

## 9. ACTIVITY MOTIVATION

### 9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?

What is the expected yearly income that will be generated by or as a result of the activity?

Will the activity contribute to service infrastructure? **Service infrastructure already exists on site, the demand however will be higher.**

Is the activity a public amenity? **It does however include a hotel, commercial shops, restaurant and filling station to improve public services.**

How many new employment opportunities will be created in the development phase of the activity?

What is the expected value of the employment opportunities during the development phase?

What percentage of this will accrue to previously disadvantaged individuals?

How many permanent new employment opportunities will be created during the operational phase of the activity?

What is the expected current value of the employment opportunities during the first 10 years?

What percentage of this will accrue to previously disadvantaged individuals?

R 200 000 000	
Unknown	
<input checked="" type="checkbox"/>	NO
<input checked="" type="checkbox"/>	NO
100	
Unknown	
90%	
Approximately 150	
Unknown	
80%	



9(b) Need and desirability of the activity

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

NEED:			
1.	Was the relevant provincial planning department involved in the application?	YES	<input checked="" type="checkbox"/>
2.	Does the proposed land use fall within the relevant provincial planning framework?	YES	<input checked="" type="checkbox"/>
3.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:		

DESIRABILITY:			
1.	Does the proposed land use / development fit the surrounding area?	YES	<input checked="" type="checkbox"/>
2.	Does the proposed land use / development conform to the relevant structure plans, SDF and planning visions for the area? <b>SDF states single residential. The area between Rustenburg and Olifantsnek Dam is also earmarked for tourism. The development is therefore balanced between the two with more residential due to its closer proximity to Rustenburg.</b>	YES	<input checked="" type="checkbox"/>
3.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	YES	<input checked="" type="checkbox"/>
4.	If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation:		
5.	Will the proposed land use / development impact on the sense of place?	<input checked="" type="checkbox"/>	NO
6.	Will the proposed land use / development set a precedent? <b>Precedent has already been set in the area by surrounding developments.</b>	<input checked="" type="checkbox"/>	NO
7.	Will any person's rights be affected by the proposed land use / development?	<input checked="" type="checkbox"/>	NO
8.	Will the proposed land use / development compromise the "urban edge"?	<input checked="" type="checkbox"/>	NO
9.	If the answer to any of the question 5-8 was YES, please provide further motivation / explanation.		

BENEFITS:			
1.	Will the land use / development have any benefits for society in general?	YES	<input checked="" type="checkbox"/>
2.	Explain:  <b>Employment opportunities</b> Constructing the proposed development (construction phase) will result in construction jobs being created directly for the construction of the various facilities and structures. During the operational phase, jobs will also be created in terms of gardeners and domestic workers for the residential properties, fuel attendants etc for the filling station, hospitality personnel for the hotel, workers in businesses etc.  Indirectly, jobs will also be created in industries that supply goods, materials and		



	<p>services. For example, a large amount of goods used in construction will be required from businesses and industries in the construction sector and goods will be required from the catering/food sector in terms of supplies to restaurant, take-away/café and hotel. Both short-term (construction phase) and long-term (operational phase) employment will be created in this case. Due to the current instability in the Platinum Mines as a major supplier of work in Rustenburg (job losses and retrenchments announced in the press), alternative jobs and markets to provide jobs are required.</p> <p><b><u>Improved and increased public services</u></b>  The development of the filling station, commercial shops and restaurant will lead to an increase in the number of convenience facilities available to the public. This includes the upgraded hotel for individuals traveling to or through Rustenburg.</p> <p><b><u>Alleviate housing shortage and establish formal housing with services:</u></b>  This development is in line with the mandate of the Draft Rustenburg Spatial Development Framework (SDF, 2010) to alleviate the housing shortage and address the need for formal housing presently experienced in the area.</p>
3.	Will the land use / development have any benefits for the local communities where it will be located? <b>YES</b> <input checked="" type="checkbox"/>
4.	<p>Explain:</p> <p>The development of this property will greatly improve the status quo on the site (illegal dumping, waste burning, dilapidated buildings etc) and contribute to the development and growth of Rustenburg (residential housing, tourism facility, public conveniences), consequently adding to the Gross Domestic Product (GDP) of the city as a whole and providing a platform to:</p> <ul style="list-style-type: none"> <li>• Increase money brought into the area and therefore spending patterns; and</li> <li>• Create new employment opportunities to the local community.</li> </ul>



## 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:
Constitution of the Republic of South Africa, 1996 (Act 108 of 1996)	Constitutional Court	1996
National Environmental Management Act (NEMA), 1998 (Act 107 of 1998) as amended	North West Department of Economic Development, Environment, Conservation and Tourism (NW DEDECT).	1998
Government Notice Regulations 543 & 544 – List of activities identified in terms of Section 24 of NEMA		2010
Chapter 6, NEMA, Public Participation in terms of (GN R543) Regulation 54 - 57		2010
National Environmental Management: Waste Act (Act 59 of 2008)		2008
National Heritage Resources Act (Act 25 of 1999)	South African Heritage Resources agency (SAHRA)	1999
Hazardous Substance Act (Act 15 of 1973).		1973
Health Act (Act 63 of 1977)	Department of Health (DoH)	1977
Mineral and Petroleum Resources Development Act (Act 28 of 2002)	Department of Mineral Resources (DMR)	2002
Minimum requirements for handling, classification and disposal of hazardous waste (DWAf, second edition, 1998) based on the Environment Conservation Act 73 of 1989.	Department of Water Affairs (DWA)	1998
South African National Standard (SANS) 10 089 The Petroleum Industry Part 1: Storage and distribution of petroleum products Part 2: Electrical Code Part 3: The Installation of Underground Storage Tanks etc	SABS	2008 2007 1999
Rustenburg Spatial Development Framework (SDF) Draft	RLM	2010
Rustenburg Environmental Management Framework (EMF)	RLM	2007 & 2009



## 11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

### 11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase? **Most of the solid waste generated during the construction phase will be as a result of vegetation clearance and demolished infrastructure/buildings as part of the upgrade of facilities.**

YES	<input checked="" type="checkbox"/>
50 000m <sup>3</sup>	

If yes, what estimated quantity will be produced per month? **Over construction period**

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

**Solid construction waste** from the site will include:

- Building rubble generated during demolition of existing buildings and construction of new infrastructure/buildings.

**Biodegradable/organic waste** will include:

- Vegetation waste (as a result of vegetation clearance to allow for the development) which can be converted to compost at a composting facility).

**General waste** will include:

- Waste generated by builders on site (food containers etc).

All waste will be collected in skips (to be placed on site by the construction contractor) and disposed of at the local municipal waste disposal facility (Rustenburg) by the construction contractor. No special handling or disposal methods will be required and landfill/landbuild is adequate due to the general nature of the waste.

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

Waste will be transported to the nearest registered municipal landfill site (Rustenburg) for disposal.



Will the activity produce solid waste during its operational phase?

YES

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

200 m<sup>3</sup>

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

Solid waste generated during the operational phase will predominantly be **urban (domestic) general type solid waste** generated by residents and the commercial facilities and **hazardous waste from the filling station** such as:

**Domestic waste** (for possible recycling) including:

- Glass;
- Plastics;
- Paper;
- Metals; and
- Inert materials (clothes, cloths etc.).

**Biodegradable waste** including:

- Green/garden waste (for possible composting and reuse);
- Food waste; and
- Paper (possible recycling).

Small quantities of **hazardous waste** diluted in the waste stream including:

- Medication (expired and/or unused);
- Chemicals (mainly household);
- Fluorescent light tubes;
- Batteries;
- Pesticides/Herbicides; and
- Paints.

**Hazardous waste** from the filling station including:

- Hydrocarbon contaminated material such as rags, sand/soil from spillages, petrol, diesel, oil and grease spillages.

General waste - This waste will feed into the municipal waste stream. Therefore, it will be stored in bins/bags by residents which will be collected on a weekly basis by the municipality or its contractor for disposal to the local municipal landfill site. The waste can be classified as a general type of waste and therefore no special handling or disposal methods are required and normal landfilling or landbuilding type disposal will be acceptable. The hazardous solid waste quantities will be minimal and diluted within the general stream as is the case in all municipal waste streams. Recycling should be encouraged by the local municipality by providing recycling domes for collection of recycleable waste such as glass, plastic, paper etc.

Hazardous waste – This waste will require recycling through Exol oil refinery (collection by Oilkol) or disposal at a registered hazardous landfill site. These materials may be removed by an appropriate hazardous waste Contractor. Proof of appropriate disposal/recycling must be obtained from the Waste Collector (waste manifests).

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

Waste will feed into the municipal waste stream.







### 11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

YES	<input type="checkbox"/>
<input type="checkbox"/>	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:

During the **construction phase** of the activity, emissions may be expected from:

- Construction vehicles and equipment exhausts systems;
- Fires utilised by on site construction personnel for cooking and/or warmth;
- Dust generation as a result of ground clearance (removal of vegetation), construction works (earth works) and associated vehicle movement.

As far as the **operational phase** of the activity is concerned, emissions released into the atmosphere would be typical of that expected from residential and commercial areas and will include emissions from:

- Fireplaces during winter;
- Outdoor cooking methods using charcoal and/or wood (braai);
- Vehicle exhausts systems; and
- Aerosols.

### 11(d) Generation of noise

Will the activity generate noise?

YES	<input type="checkbox"/>
<input type="checkbox"/>	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:

During the **construction phase**, noise generation would be associated with construction activities such as earth moving equipment, construction vehicles etc. as well as noise from construction workers.

During the **operational phase**, noise generation would be associated with human activities in residential areas such as:

- People talking/shouting;
- Children playing;
- Music;
- Pets (dogs barking etc.); and
- Vehicles moving.



## 12. WATER USE

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

municipal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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
<input type="checkbox"/> 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:

None. It will be up to the tenants and owners within the development to decide on the use of energy efficient technologies (energy saving light bulbs, solar panels, solar geysers etc).

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

No alternative energy sources have been taken into account or been built into the design of the activity.



**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

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:

The proposed township establishment will take place on Portion 385 of the farm Waterkloof 305 JQ, Rustenburg, North West Province. The said portion of land is located approximately 5 km south from the Rustenburg Central Business District (CBD), on the R24/R30 (P16-1) road between Magaliesburg and Rustenburg (Johannesburg road). Global Positioning System (GPS) coordinates are 25 42' 51.25" South and 27°15' 07.33" East (Farm name, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application.

Portion 385 of the farm Waterkloof 305 JQ  
SG Code: TOJQ00000000030500385

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	<input checked="" type="checkbox"/>
YES	<input type="checkbox"/>

Must a building plan be submitted to the local authority?

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 and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection)

## 1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

*Alternative S1:*

		1:20 1:15	-				
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*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
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*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
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## 2. LOCATION IN LANDSCAPE

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

NB: Indicate by highlighting/ticking

2.1 Ridgeline

2.2 Plateau

2.3 Side slope of hill/mountain

2.4 Closed valley

2.5 Open valley



2.6 Plain

2.7 Undulating plain / low hills

2.8 Dune

2.9 Seafront

### 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)	<input checked="" type="checkbox"/>	NO	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	<input checked="" type="checkbox"/>	NO	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	<input checked="" type="checkbox"/>	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil <b>Western portion of property but there will be no development on the area.</b>	YES	<input checked="" type="checkbox"/>	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	<input checked="" type="checkbox"/>	NO	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	<input checked="" type="checkbox"/>	NO	YES	NO	YES	NO
Any other unstable soil or geological feature – <b>collapsible soil – see geotechnical report (Appendix D)</b>	YES	<input checked="" type="checkbox"/>	YES	NO	YES	NO
An area sensitive to erosion	<input checked="" type="checkbox"/>	NO	YES	NO	YES	NO

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



#### 4. GROUND COVER

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 in good condition <sup>E</sup>	Natural veld with scattered aliens <sup>E</sup>	Natural veld with heavy infestation <sup>E</sup>	Natural veld with alien species <sup>E</sup>	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. Vegetation specialist was consulted – see Appendix D.

#### 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:

**NB: Indicate by highlighting/ticking**

**5.1 Natural area** – MPNE south west of site; no impacts expected as western portion of site is left undeveloped to protect MPNE.

**5.2 Low density residential** – SDF - area targeted for planned residential type development

5.3 Medium density residential

5.4 High density residential

5.5 Informal residential<sup>A</sup>

**5.6 Retail commercial & warehousing** – no impacts expected; development fit in with this

5.7 Light industrial

5.8 Medium industrial<sup>AN</sup>

5.9 Heavy industrial<sup>AN</sup>

5.10 Power station

5.11 Office/consulting room

5.12 Military or police base/station/compound

5.13 Spoil heap or slimes dam<sup>A</sup>

5.14 Quarry, sand or borrow pit



5.15 *Dam or reservoir*

5.16 *Hospital/medical centre*

5.17 *School*

5.18 *Tertiary education facility*

**5.19 Church** – Revival Centre adjacent (south) of the site

5.20 *Old age home*

5.21 *Sewage treatment plant<sup>A</sup>*

5.22 *Train station or shunting yard<sup>N</sup>*

5.23 *Railway line<sup>N</sup>*

5.24 *Major road (4 lanes or more)<sup>N</sup>*

5.25 *Airport<sup>N</sup>*

5.26 *Harbour*

5.27 *Sport facilities*

5.28 *Golf course*

5.29 *Polo fields*

**5.30 Filling station<sup>H</sup>** - authorised on property (portion 365) across the road (R24) from site, but not built yet – the two filling station will address traffic on both sides of the R24.

5.31 *Landfill or waste treatment site*

**5.32 Plantation** – historical orchards

**5.33 Agriculture** – most of the properties in the area is still zoned agricultural but none in the immediate vicinity (500m) is used as such

5.34 *River, stream or wetland*

5.35 *Nature conservation area* – MPNE south west of site; no impacts expected as western portion of site is left undeveloped to protect MPNE.

**5.36 Mountain, koppie or ridge** – MPNE; steeper slopes on western portion of site.

5.37 *Museum*

5.38 *Historical building*

**5.39 Protected Area** – Magaliesberg Protected Natural Environment (MPNE)

5.40 *Graveyard* \_\_\_\_\_

5.41 *Archaeological site*



5.42 Other land uses (specify): Restaurants and Garden centre

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

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

If YES, specify and explain:

If YES, specify:

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

If YES, specify and explain: The filling station on portion 365 has been authorised by environmental authorities (NW DEDECT; NWP/EIA/301/2008) but has not yet been built (status of other authorisations unknown). The proposed project includes the establishment of a filling station. The two (2) filling stations across the road (R24) from each other will be convenient for travellers in both directions - entering and exiting Rustenburg on the Johannesburg road. Two (2) filling stations across the road from each other will affect the business (volumes of fuel sold) of both filling stations (approved and proposed that already has a filling station right).

If YES, 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

<input checked="" type="checkbox"/>	NO
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Archaeological or palaeontological sites, on or close (within 20m) to the site?

No	
----	--

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:

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

<input checked="" type="checkbox"/>	NO
-------------------------------------	----

Buildings are extremely dilapidated.





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

<input checked="" type="checkbox"/>	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.*



## SECTION C: PUBLIC PARTICIPATION

### 1. **ADVERTISEMENT** Please refer to Appendix E

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 competent authority) at a place conspicuous to the public at the boundary or on the fence of—
  - (i) the site where the activity to which the application relates is or is to be undertaken; and
  - (ii) any alternative site mentioned in the application;
- (b) giving written notice to—
  - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
  - (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  - (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
  - (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
  - (v) the municipality which has jurisdiction in the area;
  - (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
  - (vii) any other party as required by the competent authority;
- (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 metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and
- (e) using reasonable alternative methods, as agreed to by the competent authority, 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 Please refer to Appendix E**

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 competent authority 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
  - (iv) the manner in which and the person to whom representations in respect of the application may be made.

## **3. PLACEMENT OF ADVERTISEMENTS AND NOTICES Please refer to Appendix E**

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority 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 the EIA regulations.

*Advertisements and notices must make provision for all alternatives.*

## **4. DETERMINATION OF APPROPRIATE MEASURES Please refer to Appendix E**

*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 competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.*

## **5. COMMENTS AND RESPONSE REPORT Please refer to Appendix E**

*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 the EIA regulations and be attached to this application. The comments and response report must be attached under 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.

*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.*

*List of authorities informed:*

- Rustenburg Local Municipality (RLM)
- Bojanala Platinum District Municipality
- North West Department of Economic Development, Environment, Conservation and Tourism (NW DEDECT)
- Department of Environmental Affairs (DEA)
- Department of Agriculture, Forestry and Fisheries (DAFF)
- Department of Public Works, Roads and Transport (DPWRT)
- Department of Housing
- South African Heritage Resources Agency (SAHRA)

*List of authorities from whom comments have been received:*

- RLM
- DAFF

## 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 competent authority.

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

*Has any comment been received from stakeholders?*

YES	<input checked="" type="checkbox"/>
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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 **APPENDIX E**):*

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**Correspondence from Department of Agriculture, Forestry & Fisheries (DAFF):**

Mr Lufuno Nevhufumba conducted a site visit with HydroScience on 16 November 2013 and provided written comments. He indicated that on the proposed site as you move towards the foot of the hill next to one of the structures/houses there is one big Marula tree. Marula trees are protected in terms of the National Forest Act, Act 84 of 1998. If the identified Marula tree will be disturbed, an application form should be sent to the office of the DAFF in order for a permit to be issued as required by the National Forest Act, Act 84 of 1998 as amended. It is noted that trees are important for their services to people, therefore during the development of the site, an attempt should be made to keep those trees that are valuable or alternatively indigenous trees should be planted for various purposes.

**Correspondence from Rustenburg Local Municipality (RLM):**

Mr Tshepo Lenake from RLM commented on:

- The challenge of accessing municipal services; and
- Illegal waste burning currently taking place on the site.

Ms Kelebogile Mekgoe conducted a site visit with HydroScience on 18 September 2012 and indicated that she will comment on the BAR once it is received. Other comments included:

- Concerned about another filling station in the area; and
- The development will improve the current condition of the site.



## SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, 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.

#### **Mr Michael Samuel Meko (Contractor that saw notice)**

- Required additional information.
- The project can help to grow small businesses and to reduce unemployment in the rural areas especially in the Rustenburg area.

#### **Ms Ellie Swannepoel (Daughter of a resident of Cynthiana)**

- Required additional information.
- The high cost of alternative accommodation.

#### **Mrs Susan Swanepoel (Resident of Cynthiana)**

- Required to be registered as an I&AP;
- Early notification is required in order to make alternative living arrangements.
- Contact is Ms Ellie Swanepoel her daughter.

#### **Mr Willie Engelbrecht (EPS Consulting Engineers)**

- Another site for a filling station had been approved, 600m east on the P16/1. The economic viability of the approved site will be severely affected.

#### **Mr W.J. de Beer (Owner of an approved filling station in close vicinity)**

- A new filling station had been approved in the area already – construction to commence in the near future.

#### **Mr Andre Du Toit (Regional Planners representing Engen)**

- Required to be registered as an I&AP.
- Objects on behalf of Engen.

#### **Rickhelm Agencies trading as BP Waterfall Park (Mr Louw & Skalk)**

- Required to be registered as an I&AP.
- Objection against development.
- Proximity to existing BP (3km south on R24).
- 5 existing operational filling stations in 15 km on R24 entering & exiting Rustenburg.
- Existing filling stations are able to provide adequate service to travellers between Johannesburg/Krugersdorp & Rustenburg.
- Detrimental financial impact on existing filling stations.
- Existing filling stations have not reached full capacity.
- Objection submitted to Fuel Retailers Association (FRA).

#### **Jabes Motors filling station (Ms Anna-Marie Cilliers)**

- Required to be registered as an I&AP.
- 5 Platinum Shafts closing down, chrome market deteriorating – Rustenburg cannot afford to lose business.
- Jabes will lose ± 22% business.



**Shell N4 Platinum (Mr Etienne de Villiers)**

- Required to be registered as an I&AP.
- 5 filling stations in 15 km radius are enough.

**Rudan 1 stop – Engen (Mr Ruan Venter)**

- Required to be registered as an I&AP.
- Previous refusals on R24 for filling stations.
- Mining problems: Strikes resulting in mines closing shafts which reduce business in Rustenburg.
- Not running at full capacity – can supply demand in area.
- 5 filling stations in 15 km from Olifantsnek to R24/R27 crossing;
- 2 relatively new hotels (City Lodge & Stay Easy).
- Rudan has bakery and Wimpy – more stores affect our business.
- Increase of vehicles on Highway from Marikana Plaza is irrelevant because motorists will not enter Rustenburg.

**Summary:**

- Project can help to grow small businesses and to reduce unemployment.
- Shortage of affordable accommodation in Rustenburg.
- Other filling stations (Engen, BP, Jabes, Shell and new) object based on economic impacts on existing filling stations:
  - Number of existing filling stations in area.
  - Existing filling stations have capacity to meet demand.
  - Direct financial impacts – loss of business due to another competitor.
  - Economy of Rustenburg - reduction in business due to problems in mining industry.

**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):**

**Services:** Municipal services are extending to the south and are available on the property.

**Waste management:** Waste burning will not be allowed.

**Vegetation:** An attempt will be made to incorporate the Marula tree (as well as all other larger indigenous trees) into the development. If it is not possible to leave the Marula intact, an application for a permit from DAFF will be made in terms of the National Forest Act, Act 84 of 1998.

**Accommodation:** The project will partly address the housing shortage in Rustenburg though it does not address the need for low cost housing.

**Filling stations:** The project involves more than just a filling station, though the inclusion of the filling station as part of the project resulted in the project receiving many comments and objections. The concerns raised by other filling stations are valid and require consideration in terms of approvals. However, the applicant included the filling station as part of the development since the property has rights for a filling station - an existing permit from the Transvaal Provincial Administration in terms of Section 6(1) of the Act on physical planning, 1967 (Act 88 of 1967) for the establishment of a filling station (garage) and café (Ref 15/33/91(3)) – see Appendix G.



## 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)

### **DIRECT IMPACTS:**

#### **Planning and design phase:**

No direct impacts were identified as this phase entails studies, preparation of documentation and applications for permits/licences and authorisation and does not include any actual work on the site. All potential impacts during other phases of the project were however identified during the planning and design phase to ensure these are considered during the follow-up phases (construction & operation).

#### **Construction phase:**

- ***Fauna & Flora***

**Removal of vegetation:** Vegetation will be removed throughout the site which can lead to other indirect impacts such as erosion due to increased stormwater flow and limited attenuation.

**Indigenous trees:** As suggested by the fauna and flora specialist as well as DAFF, indigenous trees should not be removed where possible but incorporated into the landscaping of the development to add to the aesthetics of the site and maintain bird life. Also protected species according to the National Forest Act (Act 84 of 1998), such as the Marula tree identified, may not be removed by the applicant unless a permit has been applied for and obtained from DAFF.

**Alien infestation:** Where alien invasive plants occur, as identified by CARA, 1983 (Act 43 of 1983), that will not be removed for construction purposes, these must be uprooted, cut and/or chemically treated (use only approved chemicals as suggested by DAFF). The contractor's representative must appoint a registered weed control officer to chemically treat any invader species. Care must be taken to avoid the spread of seeds of alien vegetation.

**Fauna:** No fauna species may be captured or killed by any of the construction crew or inhabitants of the site during the operational phase. A trained person must be contacted to relocate animals if any are encountered, including snakes.

**Revegetation:** Any open space must be revegetated with indigenous species of grasses and trees to promote the re-establishment of avifaunal species and other fauna disturbed during construction.

**Western portion:** The western portion of the site should be left undisturbed except for the control of alien infestation. This is to protect the MPNE to the south west and add to the aesthetic value of the property.





- **Visual impact**

Indigenous tree species will be relocated or incorporated into the development for aesthetic purposes where possible. The more large trees removed, the more significant the visual impact will be as the western portion of the site is located on a steep slope visible from a distance. No refuse, waste or builders rubble generated on the premises may be placed, dumped or deposited on adjacent/surrounding properties including road verges, roads or public places and open spaces during or after the construction period of the new development. No waste burning should be allowed. No waste may remain on the construction site for more than two weeks and the developer must abide by the guideline stipulations as in the South African Manual for Outdoor Advertising Control (SAMOAC). Lastly the construction crew camp must be placed in a position removed from the adjacent properties and at the bottom of the site – away from slopes.

- **Building materials & hydrocarbons**

Spillage of building aggregate (concrete, bitumen) and other construction related materials as well as hydrocarbon leaks can cause soil, runoff and groundwater contamination.

Construction contractor will ensure that all building materials / chemicals are effectively stored (containers) and managed (mixing etc in dedicated areas) to prevent contamination of soil and water. In the unlikely event of a spillage, sufficient clean-up procedures will be carried out immediately.

All fuel, reagents, reagent/fuel storage tanks and mixing units will be supplied with a bunded area built to contain 110% of the capacity of the facility, to contain any spilled material and possibly return back into the system. The system will be maintained in a state of good repair and standby pumps must be provided.

Any hazardous substances will be handled according to the relevant legislation relating to transport, storage and use of the substance (Material Safety Handling Datasheets).

All construction vehicles and equipment will be in a good working condition, will be parked/stored off site (when not working) and will be maintained off site to prevent any leakages or spillages of hydrocarbon. If emergency maintenance is required on site, drip trays and absorbent mats will be placed underneath the vehicles / equipment where maintenance work is done.

If hydrocarbons are leaked or spilled, immediate rehabilitation with a product such as that produced by Drizit or Ecodynamics will be used and contaminated soils will be removed for disposal off-site or be rehabilitated in-situ. Spillage clean-up kits will be kept on the site. Rehabilitation kits produced by Ecodynamics are environmentally friendly in that hydrocarbons can be recovered (recycling) and the remains biodegrade (no waste to be disposed).

- **Sewage management & sanitary practices**

Improper sanitary practises could lead to soil and/or groundwater contamination.

Some of existing facilities (linked to the municipal system) could be kept initially (not demolished) for use by construction contractors. Portable dry chemical toilets must be provided by the construction contractor for workers. Chemical toilets must be serviced as required to prevent overflows. Construction contractor must ensure that there are an appropriate number of mobile dry chemical toilets on site (typically 1 toilet for 20 people). Contractor to provide suitable ablution facilities (washing and changing area)



for construction workers and no builders/workers may be housed on the site.

- ***Solid waste management***

Poor solid waste management practises can lead to soil contamination and unsightly construction zones as well as pests/vermin and associated health issues.

Solid waste streams generated during the construction phase include:

- Solid construction waste due to construction activities and/or demolition of buildings;
- Biodegradable waste due to removal of vegetation; and/or
- General solid waste generated by builders (biodegradable and non-biodegradable).

Construction waste (building rubble) and general waste will be collected in suitable containers (skips on site) and be removed from site for disposal at the Rustenburg Local Municipal landfill/waste management facility by the building contractor on a regular basis (at least weekly or when skip is full). The construction contractor will ensure sufficient skips are available for storage of waste prior to removal off site to prevent overflow and littering on the site and surroundings. Non-biodegradable refuse such as glass bottles, plastic bags, etc. must be stored in suitable containers to allow for recycling and emptied on an as-required basis for recycling purposes during the construction and clean-up phase. Waste manifests (proof of removal and responsible disposal of waste) will be kept. Waste manifests for any hazardous waste removed (hydrocarbon contaminated soil for example) will also be kept. Furthermore, the contractor will ensure that no litter, refuse, waste, rubble and construction waste generated on the premises is placed, dumped or deposited on this, adjacent or surrounding properties during or after construction. Biodegradable waste (site/vegetation clearance) can be taken to a composting facility.

- ***Safety & security***

An increase in workers in the area may pose security or safety risks. However, a positive impact can be recognised here as various employment opportunities may arise.

Construction contractor will ensure management of staff/workers and give instructions as to socially acceptable and environmentally responsible behaviour. Contractor will transport workers to and from the site on a daily basis to prevent movement of workers outside the property onto surrounding properties and within the area. No overnight stays and no loitering during working hours will be allowed. No ad-hoc employment in construction area as this will encourage job-seekers to loiter in the area. A security guard will keep watch during non-working hours to prevent illegal access and security problems on the site or in the surrounds.

- ***Noise***

Noise generated by construction crew/equipment.

Construction contractor will ensure vehicles are road worthy. Construction will take place only during regular working hours (7:00 – 17:00) and not on weekends to minimize disturbance to neighbours. In the event that it becomes necessary to work on weekends or outside these hours, this will be discussed with neighbours.

- ***Traffic***

Increase in traffic due to movement of construction vehicles can impact on traffic flow on public roads. Vehicles that are used for construction purposes will be travelling outside



the boundaries of the site in order to retrieve materials used on site. This will influence the traffic along the R24 (P16-1). The construction vehicles are heavy-duty and thus travel at a lower speed than the rest of the traffic that use the R24.

All construction vehicle drivers will be trained in terms of driving protocols, i.e. adhering to speed limits; ensuring materials are safely secured, etc. Sign boards will be erected on both sides of all access roads to make the public aware of slow moving construction vehicles entering and exiting the site. The credentials of the drivers will be verified by the construction contractor. Vehicles will only be allowed to exit the site in a northerly direction (towards Rustenburg) on the R24.

- ***Emissions into the atmosphere***

Emissions, resulting from vehicles and machinery (carbon monoxide emissions, smoke), dust (site clearance), solvents, cooking fires (workers) and malodours as a result of waste not being removed from the construction site, may be released into the atmosphere.

All vehicles and machinery/equipment used on, or entering, the site must be maintained and serviced regularly to ensure that they do not emit smoke or fumes. The contractor's representative or environmental officer must ensure that all on-site vehicles comply with the old SABS 0181 standards (now SANS 10181:2003 in conjunction with SANS 10281:2003).

Dust must be suppressed, on access roads and construction sites, during dry periods, by the regular application of water or a biodegradable soil stabilisation agent. Water used for this purpose must be used in quantities that will not result in the generation of runoff.

Any solvent based finishes such as paints, varnishes, sealants and polishes will contain minimal levels of volatile organic compounds (VOC) and no chloro fluoro carbons (CFC) which may harm the atmosphere. Earthcote produces an environmentally-friendly paint. Water-based paints are to be used where possible (interior) and plant based stains and sealants must be considered as these are more environmentally-friendly.

No ad hoc cooking fires are to be allowed on site except in designated cooking areas.

Waste will not be burnt and must be disposed, as soon as possible, to a municipal transfer station, skip or on a permitted landfill site. Waste must not be allowed to stand on site to decay, resulting in malodours and attracting vermin.

- ***Disturbance of surrounding environment***

Disturbance and construction activities must remain within demarcated areas and avoid the western portion of the site. Disturbance to the surrounding farm steads north and south may not take place. Disturbance of the MPNE and the steep slopes on the western portion of the site is prohibited and can be limited by walling/fencing the area of construction and by instructing construction staff that no activities may take place outside of the demarcated area. This includes dumping, storage of construction material or trespassing of staff onto adjacent land.

- ***Collapsible soils***

During the geotechnical specialist study, collapsible soils were identified.

The design of heavier structures such as double- and three-storey structures should take cognizance of the potentially problematic foundation conditions on the property. It



is recommended that the foundation excavations for residential structures be inspected by a competent person prior to construction in order to determine whether disturbed ground conditions were caused by historic activities. Where present, the disturbed ground should be reinstated properly in accordance with a civil engineer's requirements prior to construction of residential units. The design and construction of raft foundations (whether soil or concrete) should be done in accordance and under supervision of a civil or structural engineer.

During construction of the underground tanks, the side walls of the cavity must be supported or battered back to an adequate slope if constructed on areas where collapsible soils have been identified. The excavations must be inspected by a geotechnical engineer prior to placing any concrete, backfilling, foundations or underground tanks and all excavation conditions must be done in accordance to SABS 1200D. A secondary containment unit should be implemented, as well as leak detection measures. Damp proofing precautions should be undertaken and implemented beneath the storage tanks.

- **Storm water management**

Due to clearance of the site and possible storm events, erosion may result. The construction phase should be scheduled during the dry season (winter) to prevent any erosion due to increased uncontrolled runoff on a cleared site.

**Operational phase:**

- ***Storm water management***

The proposed development will lead to an increase in impermeable surfaces, i.e. buildings, roofs, paved walkways, parking bays, roads etc. An increase in such impermeable surfaces minimises the area available for rain water infiltration and prevents the effective infiltration of precipitation into the soils and therefore leads to an increase in surface water flow volumes to be managed as well as the velocity at which it flows.

A storm water management plan for the development, that will take cognisance of the contribution of the entire catchment, will be put in place by a qualified civil engineer. The engineer will ensure that proper storm water management and erosion control practices are enforced during site clearance and construction. The site storm water management system will be linked to the municipal storm water system in the area. The storm water design will be done in accordance with the "Guidelines for Human Settlement Planning and Design" compiled under the patronage of the Department of Housing by the CSIR.

An efficient storm water drainage system must be installed around all structures, roads and parking bays to effectively collect and drain surface water. All surface areas where vehicle movement will take place (i.e. roads and parking bays) must be sealed by means of bitumen, concrete paving or a concrete slab, to prevent the infiltration of liquids into the underlying soil. The soil material underlying this layer must be compacted to prevent ingress of liquids through zones of weakness (i.e. along joints) within the surface seal. Storm water drains on the site will be along roads (road servitude) and flow towards the R24 to link with municipal storm water management.

Rainwater harvesting will be considered for implementation in the residential area.

Storm water runoff from the filling station will be directed by the storm water drains via catch pits to sand and hydrocarbon (oil, grease, fuel) separators prior to reuse or



release in the storm water drains on site. Technologies for recycling, that can be considered, by the applicant, are available, including recycling of grey water and storm water capture and use. The storm water management plans must be approved by local authority prior to commencement of construction activities.

- **Traffic**

Increase in traffic due to additional residential units with associated increase in local residents, as well vehicles that will utilise the filling station and commercial facilities.

Traffic studies have been conducted within this region due to the numerous development applications and it was established that various road upgrades will be made in the area in anticipation of the various developments in the area. Introduce speed reducing elements at the access points to the proposed filling stations, e.g. speed humps and ensure that no advertising boards are erected in close proximity to the access point that can result in decreased visibility to traffic to or from the development. The filling station will not generate traffic but merely makes use of the existing traffic volumes.

- **Socio-economic**

The development of housing addresses the accommodation shortage in Rustenburg to a small extent. Due to the establishment of additional housing units in the area, additional employment opportunities may arise as the demand for domestic workers and gardeners (or garden services) will most likely increase. Also the requirement for filling station attendants, shop assistants, hotel and hospitality management and restaurant staff will create additional job opportunities. Considering the mining problems in Rustenburg with associated job losses lurking (Anglo Platinum announced planned 14 000 retrenchments on 15 January 2013), creating alternative work opportunities are becoming increasingly important.

Another filling station in this area and on this route will impact on the financial situation of existing filling stations. The filling station in this development was included due to existing rights and it is therefore not possible to mitigate this impact.

- **Emissions into the atmosphere**

Fuel emissions due to the operation of the filling station.

Fuel emissions can be reduced by the installation of the following equipment:

- Vapour recovery systems at the tanks (expensive option)
- Vapour recovery systems at the fuel point
- Carbon filters on the vents

Regular monitoring of all filters, extraction fans, refrigeration compressors and air conditioning units must take place to ensure acceptable working conditions.

Regular monitoring of pump devices to ensure acceptable working conditions and the implementation of an air quality emission monitoring plan.

- **Noise**

Noise due to the operation of commercial shops, restaurant and filling station, as well as residents of the residential area.

Ensure that the activities of the filling station, shops and restaurant abide by the Rustenburg Local Municipality Noise by-laws, with regards to the abatement of noise



caused by mechanical equipment, extraction fans and refrigerators. Ensure that noise from the site does not negatively impact on the surrounding properties. The placement of noise creators must be determined during the conceptual development phase as the architects need to design the buildings with noise reduction measures in mind. Comply with the provisions of SABS Code of Practice 0103-1994 for the recommended sound and noise levels for different areas of occupancy and activities for residential and non-residential indoor spaces.

- **Groundwater contamination**

During the operation of the filling station there is potential for the underground storage tanks (UST) to crack or leak fuel (hydrocarbon) as a result of unstable soil structures creating unnecessary movement below the ground (collapsible soils). This may result in leakage of hazardous substances.

A qualified engineer must inspect the site, paying special attention to the excavations prior to the placing of any concrete and/or backfilling. The installation of drainage channels, containment tanks and separators etc that are already incorporated into the design of the filling station. Storage tanks and dispensing equipment must be installed to SABS standards as follows:

- SABS 089, 1535 and 0131 relating to tank installation.
- SABS 0108 relating to classification of hazardous locations and selection of apparatus for such installations.
- SABS 0400 relating to building regulations.

The USTs must be built according to the applicable specifications to ensure that high standards are adhered to in terms of product and installation methods. This will reduce the risk of underground leakages. Pipes that deliver fuel to the pump must be adequately sealed from the surrounding soil – impermeable casing. A cut-off trench that drains into a sump tank or dam with a sealed base must be installed on the downstream side of the filling station, to prevent the lateral spread of liquid pollutants from the site. The surface of the forecourt must be impermeable to any liquid/hazardous substance so that it will not be able to penetrate into the underlying soil.

In the event of continued spillages onto the forecourt area, groundwater contamination may result. This is reflected by the change in the water chemistry and a downstream borehole should be installed and monitored. The underground tanks and pipelines must be monitored regularly to detect leaks and unnatural discharges as soon as possible (refer to EMP). The relevant authorities must be kept informed of spills and contingency plans must be in place to minimise pollution should a spill occur. Dipstick electronic readings of the fuel tanks must be taken daily and documented on site as well as correlated with sales volumes. Stock reconciliation must be performed monthly and all fuel lines and fuel dispensers must be leak-proof. Contamination clearing specialists for the area must be identified and their details available at all times. Routine monitoring of fuel levels, water levels, abstraction volumes, rainfall figures and groundwater quality is strongly recommended. These data will form the basis from which any changes in the groundwater regime and possible contamination are recognised.

Leak detection facilities must be installed around the fuel UST and monitored according to the set monitoring programme. The installation of leak detection facilities around the UST facilities must be regarded as a minimum requirement. This will serve as a monitoring system of the unsaturated zone and ensure the early detection of leakages from the pipe network and storage facilities. Vapour samples must be taken according to a three monthly monitoring programme.



- **Health and Safety**

The handling and storage of fuel holds a certain amount of safety-related risks. It is important that standard industry security measures are implemented thereby reducing the risk of explosions and fire-related incidences occurring.

Staff must regularly be informed of the necessary safety procedures and be competent in the work they are employed to do. Ensure that staff is familiar with the Occupational Health and Safety Policy (Occupational Health and Safety Act). All the necessary safety regulations must be abided by including building codes and fire practice requirements. Provide adequate facilities on site to treat emergencies to staff and/or the public. Ensure that the contact details of the police and/or Security Company, ambulance service and fire brigade are available on site (display). Ensure adequate and appropriate fire fighting equipment. A fire break should be established between the filling station and the rest of the property to prevent spread of fires. Do not allow for the congregation of vagrants on the site and CCTV systems are to be installed.

- **Wastewater management**

Improper management of wastewater can cause soil, groundwater and runoff pollution.

All sewage will feed into the municipal sewage management system for treatment at the Rustenburg Sewage Treatment Works as is currently the case. A services agreement will be entered into with the RLM during the township application in terms of service provision (services required will increase compared to current capacity requirement).

**Decommissioning and closure phase:**

Not applicable, the housing development and commercial developments are intended to serve the population of Rustenburg indefinitely.

**INDIRECT IMPACTS:**

**Planning and design phase:**

The establishment of the proposed development will benefit the residents of Rustenburg as well as tourists to the area. The establishment of another filling station will impact negatively on the financials of existing filling stations.

**Construction phase:**

- **Job creation**

New job opportunities will be created (positive impact).

- **Soil erosion**

Removal of vegetation in certain areas will occur during construction, resulting in exposure of the soil surface to potential erosion during rainfall events.

To reduce the likelihood of exposed soils being eroded by surface runoff, construction activities should be limited to the dry season when the probability of rainfall events is



very low. All areas stripped of vegetation during construction and not destined to be covered by hard surfaces (buildings) should be re-vegetated with appropriate ground cover as quick as possible at the close of construction.

**Operational phase:**

Additional pressure on service provision from RLM. Impact on financials of other operating filling stations.

**Decommissioning and closure phase:**

Not applicable, the housing and commercial developments are intended to serve the community indefinitely.

**CUMULATIVE IMPACTS:**

**Planning and design phase:**

The establishment of a housing development will assist in relieving the current housing shortages in Rustenburg and the North West Province as well as contribute to the Gross Domestic Product (both local and provincial).

**Construction phase:**

No cumulative impacts have been identified as a result of the construction phase.

**Operational phase:**

The development will put pressure on the existing municipal services infrastructure. Furthermore it will result in:

**Groundwater impact** - Potential reduced groundwater quality due to UST containing hazardous substances that may leak. These tanks will be stringently monitored and are to be placed within a secondary containment system.

**Air quality impact** – Increased air pollution due to vehicle-entrained dust emissions, motor vehicle emissions, and Volatile Organic Carbon (VOC) emissions. Other factors contributing to the reduced air quality is the vapours released on site during operation of the fuel pumps etc. At present there is no fume build-up on site.

**Visual and Light intrusion** - There will be a general visual and light intrusion caused by the proposed filling station due to the construction activities as well as the lighting utilised during the operational phase. A visual impact is required for any business and the site currently has existing businesses.

**Surface water pollution** - Increased run-off volumes will occur as a result of the increased covered, paved and built surfaces. However, it will be managed as the area will be provided with a comprehensive storm water management system that will discharge to the municipal storm water management system along the R24 (P16-1). This will be accompanied by oil/grease separators, grit and hydrocarbon traps and other measures implemented by the applicant during the construction phase. Water associated with a car wash will be recycled.

**Economic impact:** Seven (7) filling stations on the same route (R24) and within the same area (15km radius).

**Decommissioning and closure phase:**

Not applicable, the housing and commercial developments are intended to serve the community indefinitely.





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### 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.

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Alternative A (preferred alternative)

**Construction phase:**

**NOTE: Significance of impacts is rated based on the implementation of the associated mitigation measures.**

- **Loss of vegetation and habitat for animals**

*Impact:* Low significance (landscaping after construction)  
*Probability:* Definite (large areas will be cleared for buildings)  
*Intensity:* Low (the site is already disturbed and built-up)  
*Extent:* On-site  
*Duration:* Long term

- **Soil erosion**

*Impact:* Negligible significance  
*Probability:* Moderate (construction during dry season)  
*Intensity:* Very low  
*Extent:* On-site  
*Duration:* Short term (construction phase only)

- **Loss of aesthetic value**

*Impact:* Negligible significance  
*Probability:* Moderate  
*Intensity:* Low (current aesthetic value very low, will improve with development)  
*Extent:* On-site  
*Duration:* Long term

- **Soil or groundwater contamination due to spillage of building materials and/or hydrocarbons**

*Impact:* Negligible significance  
*Probability:* Low  
*Intensity:* Low  
*Extent:* On-site  
*Duration:* Short term (construction phase only)



- **Soil or groundwater contamination due to poor sanitary practises**

*Impact:* Negligible significance  
*Probability:* Low (portable dry chemical toilets will be supplied)  
*Intensity:* Low  
*Extent:* On-site  
*Duration:* Short term (construction phase only)

- **Poor waste management practises**

*Impact:* Negligible significance  
*Probability:* Low (skips will be supplied)  
*Intensity:* Low  
*Extent:* On-site  
*Duration:* Short term (construction phase only)

- **Increase in workers in the area**

*Impact:* Low significance  
*Probability:* Moderate  
*Intensity:* Low  
*Extent:* On-site  
*Duration:* Short term (construction phase only)

- **Noise pollution**

*Impact:* Low significance  
*Probability:* Definite  
*Intensity:* Low  
*Extent:* On-site  
*Duration:* Short term (construction phase only)

- **Increase in traffic**

*Impact:* Negligible significance  
*Probability:* High (construction vehicles entering and exiting site)  
*Intensity:* Low  
*Extent:* Local  
*Duration:* Short term (construction phase only)

- **Emissions into the atmosphere**

*Impact:* Negligible significance  
*Probability:* Moderate  
*Intensity:* Low  
*Extent:* Local  
*Duration:* Short term (construction phase only)

- **Disturbance to the surrounding environment**

*Impact:* Low significance  
*Probability:* Moderate  
*Intensity:* Low  
*Extent:* Local  
*Duration:* Medium term



- **Collapsible soils**

*Impact:* Low significance  
*Probability:* Low (collapsible soils were identified by geotechnical engineer but Buildings/structures will be engineered around this)  
*Intensity:* Moderate  
*Extent:* On Site  
*Duration:* Short term (construction phase only)

**Operational phase:**

- **Increased storm water runoff and surface water pollution risk**

*Impact:* Low significance  
*Probability:* Definite (impermeable surfaces increase storm water runoff volumes)  
*Intensity:* Low  
*Extent:* Local  
*Duration:* Long term

- **Socio-economic upliftment**

*Impact:* Positive (Moderate)  
*Probability:* Definite (job creation & housing shortage addressed to an extent)  
*Intensity:* Moderate  
*Extent:* Local  
*Duration:* Long term

- **Pressure on municipal services**

*Impact:* Negligible significance (already use municipal services)  
*Probability:* Definite  
*Intensity:* Low  
*Extent:* Local  
*Duration:* Long term

- **Traffic congestion**

*Impact:* Low significance  
*Probability:* Definite  
*Intensity:* Low  
*Extent:* Local  
*Duration:* Long term

- **Health and safety**

*Impact:* Low significance  
*Probability:* Low  
*Intensity:* High  
*Extent:* Local  
*Duration:* Permanent



- **Generation of noise**

*Impact:* Negligible significance  
*Probability:* Definite  
*Intensity:* Low  
*Extent:* Local to On-site  
*Duration:* Long term

- **Emissions into the atmosphere**

*Impact:* Negligible significance  
*Probability:* Moderate  
*Intensity:* Low  
*Extent:* On-site  
*Duration:* Long term

- **Groundwater contamination (applicable to filling station only)**

*Impact:* Low significance (containment design & monitoring)  
*Probability:* Moderate  
*Intensity:* Moderate  
*Extent:* Local  
*Duration:* Medium term

- **Economic / financial (other filling stations)**

*Impact:* Moderate significance (no mitigation possible)  
*Probability:* Definite  
*Intensity:* Moderate  
*Extent:* Local (15km radius)  
*Duration:* Long term

No-go alternative (compulsory)

The following negative impacts in terms of the no-go option were identified:

- **Deterioration of site:** Currently facilities are dilapidated and accommodation standards are low. The structural integrity of buildings is questionable. Without the development, the site will remain aesthetically unpleasing, allow low living standards etc which could reduce the local market value of properties and attract crime. This in turn poses safety and security risks to the local community.
  - **Duration:** Long term
  - **Likelihood:** Moderate
  - **Significance:** High
- **Contribution to existing housing issues:** As Rustenburg is experiencing housing shortages, not moving forward with the project will result in amplifying this issue.
  - **Duration:** Long term
  - **Likelihood:** High
  - **Significance:** Moderate
- **Loss of Gross Domestic Product (GDP):** An opportunity to contribute to the local GDP of Rustenburg and that of the Province as a whole will be lost if the development is not to move forward.
  - **Duration:** Medium term
  - **Likelihood:** High
  - **Significance:** Moderate



## 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	<input checked="" type="checkbox"/>
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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 competent authority in respect of the application:

### Construction works

- All vehicles and machinery used on, or entering, the site must be maintained and serviced regularly. Maintenance and servicing of vehicles/machinery must be planned for and conducted off site except under emergency situations;
- Dust must be suppressed on access roads and construction sites cleared of vegetation, especially during dry periods, by the regular application of water or a biodegradable soil stabilisation agent. Water used for this purpose must be used in quantities that will not result in the generation of runoff;
- Workers must be trained/educated on socially acceptable (no loitering and entering neighbouring sites) and environmentally responsible behaviour (no snaring/killing of animals, burning of waste and appropriate use of toilet facilities) as well as on health and safety practices (proper waste management and wearing a harness when working at heights);
- Management of surface water runoff to prevent soil erosion;
- Waste management must be implemented (sufficient skips on site for collection and off-site removal for disposal), specifically hazardous waste;
- A groundwater testing and monitoring programme must be initiated;
- Safety (personal protective equipment) and caution signage (in terms of heavy vehicle movement) must be in place on public roads affected by construction activities(R24); and
- An incident and complaints register must be kept throughout the construction phase.

### Vegetation management in terms of natural area (open space) and proximity to MPNE

- Remain within demarcated areas during construction to limit disturbances to surrounding areas as well as the western portion of the site (ridge/steeper sloped area);
- Erect a fence (palisade to maintain visual value to residents) between the developed areas and the western portion (ridge/open space) in order to limit access (access gate for residents) and so prevent illegal waste dumping and burning that currently impacts on this area as well as prevent disturbance to flora and fauna in this area and create a buffer to further protect the MPNE;
- Remove all exotic/invasive species as CARA, 1983 (Act 43 of 1983) requires;
- Limit the removal of indigenous Bushveld trees where possible (specifically *Burkea africana*) and incorporate it into the landscaping features of the development which will assist in the aesthetic value of the site. Keep the Marula tree or apply for a permit to remove it;
- Limit construction activities to the day time and working hours for the purpose of not disturbing activities and ecological processes of nocturnal birds, small mammal etc;
- Avoid ground disturbance to the mole habitat found on site or remove the mole



species through capture and release;

- No fauna species (snakes, small mammals etc.) may be killed if encountered during construction, but rather be relocated towards the ridge area;
- Have a Waste Management Plan in place so as not to pollute the site or surrounding ecology thereby further reducing the ecological integrity; and
- Limit dust on site and the spreading thereof to surrounding vegetation.

#### **Geotechnical management**

- All recommendations as per the geotechnical investigation regarding construction limitations must be adhered to at all times (please see Appendix D).

#### **Operation of filling station**

- Compliance with SABS codes in terms of installation of Underground Storage Tanks (UST) for fuels;
- All hydrocarbon (oil, grease, fuel) spillages/leakages must be cleaned immediately and contaminated material (soil of fibres used in clean-up) removed to a registered hazardous waste management facility (waste manifest to be kept) for disposal or recycling;
- A testing and monitoring programme to ensure no leakages from UST (recording of fuel volumes with dipsticks, reconciliation of sale volumes, groundwater monitoring);
- Recycling of washwater at car wash as is standard practice.

Is an EMPr attached?

YES



The EMPr must be attached as Appendix F.



## **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

