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**Rural, Environment and Agricultural
Development**
North West Provincial Government
REPUBLIC OF SOUTH AFRICA



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Provincial Reference Number:
NEAS Ref Number:
Date Received:

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

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, 2014 and is meant to streamline applications.
2. This report format is current as of **December 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. 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.
4. Where applicable **tick** the boxes that are applicable in the report.
5. The use of "not applicable" in the report must be done with circumspection. An incomplete report or that does not meet the requirements in terms of Regulation 19 of the NEMA EIA Regulations, 2014, will be rejected to be revised and be resubmitted.
6. The 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 signature of the Environmental Assessment Practitioner (EAP) on the report must be an original.
9. The report must be compiled by an independent EAP.
10. 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.
11. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
12. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.
13. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
14. Shape files (.shp) for maps must be included on the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

1. PROJECT DESCRIPTION

a) Describe the project in association with the listed activities applied for

1.1 Background

Munghana Leisure and Tourism (Pty) Ltd (the applicant) appointed **Setala Environmental** as the independent Environmental Assessment Practitioner (EAP) to undertake the Environmental Impact Assessment (EIA) for the proposed Hazia Filling Station and associated infrastructure on Portion 24 (a Portion of Portion 5) of the farm HAZIA 240 JP. The proposed filling station forms part of the proposed Zeerust Extension 5 mixed use development.

The site is located to the south-east of Zeerust CBD within the jurisdiction of Ramotshere Moiloa Local Municipality, North West Province.

This Basic Assessment will conform to the National Environmental Management Act 107 of 1998 and to the Environmental Impact Assessment Regulations published in GN R982/2014 - R985/2014 of 8 December 2014.

1.2 Description of the proposed development

The proposed filling station will be constructed on Erf 2 of the proposed Zeerust Extension 5 development.

An application is made by Natura Professional Planners (Pty) Ltd in terms of the Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013) and specifically in terms of Chapters 5 and 6 of the Ramotshere Moiloa Local Municipality Land Use Management By-law, 2016 for township establishment to be known as **Zeerust Extension 5**.

The proposed Zeerust X 5 development will consist of the following zonings (and land-uses), namely:

- **“Business 1”** with an Annexure to permit a Shopping mall, including Places of refreshments; Cinema, Shops; Drive thru restaurants; Distribution centre; a Hotel including conference facility; Lounge/Waiting area; Day spa; Gym and uses compatible or approved by the Local Municipality: 1 Erf ±15,3646ha (Erf 1)
- **“Special” for a Filling station to include a 24/7 Convenience shop with take-away/Quick service restaurant (400m²) Car wash, an ATM and uses compatible or approved by the Local Municipality: 1 Erf ±0.3228ha (Erf 2)**
- **“Private Open Space”**: 1 Erf ±8,5184ha (Erf 3)
- **“Existing Public Roads”**: 4,0344ha in total.

Refer to Figure 1: Layout Plan Zeerust X 5 and Figure 2: Site Development Plan (SDP) Zeerust X 5

The filling station site (Erf 2) is 0.3228 ha in extent with a coverage of 23% (744 m²) and FSR of 0.09 (301 m²). It will include related uses, including a convenience shop. Associated infrastructure will include access roads and civil services (water, sewer, stormwater reticulation and electricity).

The combined capacity of the fuel tanks will not exceed 500m³. **Six underground storage tanks (USTs), each having a storage capacity of 23m³ (equating to a total of 138 m³) will be installed.**

After approval and proclamation of the township (to be known as Zeerust X5), the land owner will enter into a sales agreement with Munghana Leisure and Tourism (Pty) Ltd to sell off proposed Erf 2 of Zeerust X5 (proposed filling station erf).

This will be a CORO (Company Owned, Retailer Operated) site “Company Lease site “ where the landlord lets the property to the oil company as in this scenario to **Total SA (Pty) Ltd**. The development of the facility must be done by the landlord/developer himself, provided the development is done to the oil company’s standards and the landlord/developer will receive a monthly rental amount payable by Total SA. Total SA will then sub-let the business to a tenant/operator nominated and approved by them.

The design of the filling station would be according to the standard Total SA minimum requirements and in accordance with specific conventional construction techniques.

The design will also be in compliance with the minimum development requirements of the local authorities building regulations as well as SANRAL’s requirements in regards to advertisement and building lines next to national roads. An added advantage of commercial note is that the wholesaler / oil company (Total SA) could obtain the rights for brand advertising on the national road / N4 information category marketing boards alongside the N4 road.

The size of the proposed site is sufficient to be utilised for the proposed activities with ample of free space for the envisaged activities, vehicular movement and entering and exiting of larger trucks.

The filling station is of sufficient size to operate successfully. Manoeuvring space and parking space is sufficient to prevent vehicles from obstructing each other as well as the entrances and exits.

The proposed filling station and associated facilities will comprise the following:

- Fuel bay - Providing a 24-hour and courteous service. The pump islands are strategically placed on site to prevent traffic flow problems, and to ensure maximum utilization of all servicing points separately for light and heavy vehicles.
- 24/7 Petrol and diesel categories under one roof:
 - Pumps; 4 x 6 hose, 2 x 2 high speed hose.
 - Underground storage tanks (UST’s) consisting of 6 x 23m³, (2 x 23m³ DGO 50 ppm / 500ppm, 4 x 23m³ ULP93/95).
 - Four (4) islands
 - Product – Unleaded 93 & 95 RON, Diesel 50ppm & 500ppm.
 - Separate (1 island) – Diesel 50ppm & 500ppm island at the fuel delivery point to accommodate larger vehicles.
 - Submersible pump units will be used to pump the product through an approved dispenser metering device into a vehicle fuel tank or to a portable container.
 - Erection of a suspended forecourt roof above the dispensers to protect customers and dispensing facilities from the elements.
 - Remote fuel filling points will be installed as close to the UST’s as possible, although the location of the filler points is dependent on delivery tanker access.
 - Construction of a concreted forecourt surface.
 - Installation of an oil/water separator connected to the surface drainage from the concreted forecourt and fill containment areas, discharging into the municipal sewer system.
 - Storage yard for flammable products (e.g. oils and greases).
 - The tank farm will, at a minimum, to include a monitoring well and leak detection system installed around the tank farm.
- 24/7 Convenience Shop – Take- a way’s / Quick Service Restaurant (QSR) for consumers in the local trading area and or passers by - 400m².
- Parking facility for at least 13 light vehicles separate from the adjacent shopping centre parking facility.
- Staff ablution facilities.
- Ancillary offices.
- Storage area.
- Security -The premises will be well lit at night by providing a high level of illumination in the parking areas and on the walkways to the restrooms in and around the buildings as part of the larger facility.

- Security will entail guard services, armed response and armed escorts service if and when necessary servicing the adjacent shopping centre facility as well.
- Reaction services to unwanted behaviour ensuring right of admission and linkage to a centralized South African Police Services.
- State of the art security and camera surveillance will be installed and the cash will be connected to the high security safe.
- Communication services will be readily available in the event of emergencies.
 - Pay phone / Cell phones facilities for private and work related calls.
 - Provide an information display complete with a map of the trading area and descriptions, street names, major routes and places of importance.
- Convenient and functional, ablution only facilities for the vehicle operators will be developed on the proposed site, providing both male and female patrons.
- Restrooms - Sufficient restroom facilities will be provided to minimize the inconvenience to the traveling motorists when either the men or the woman's restrooms are out of service these facilities will also be incorporated to provide supplementary serve shopping centre customers as well.

The size of the proposed site is sufficient to be utilised for the proposed activities with ample of free space for the envisaged activities, vehicular movement and entering and exiting of larger trucks.

The internal layout of the service station area for light vehicles will be in accordance with the following, in addition to more restrictive local conditions and bylaws, which may be applicable:

- The width of the access driveways should be between 4 and 8 meters.
- The driveways between pumps should be 6 meters wide.
- The nearest pumps to the property boundary should be 3.5 meters clear or a distance equal to the building line restriction, whichever the larger.
- The pump islands are located behind the ingress point, to allow proper and safe circulation through the forecourt.
- The layout of the forecourt designed to minimize light vehicle traffic conflict with the balance of the site and ensure that vehicles entering the forecourt do not interfere with vehicles queuing at the stop line exiting the site.

These above mentioned facilities tend to attract passing motorist because it creates a convenient "one-stop shop" for motorists.

The filling station site is affected by the 1:100 year flood lines of the Kareespruit and Klein Marico River. A section of the filling station development i.e. access, canopy, pumps, parking bays and infrastructure fall within the 1:100 year flood lines. Please note the USTs will be installed outside the 1:100 year flood lines. The preliminary layout of the filling station is indicated in *Figure 3* below.

The final design and layout of the facility will be based on the specifications of Total SA. A detailed layout for the facility, in compliance with their own internal specification, as well as relevant industry standards, will be compiled by Total SA.



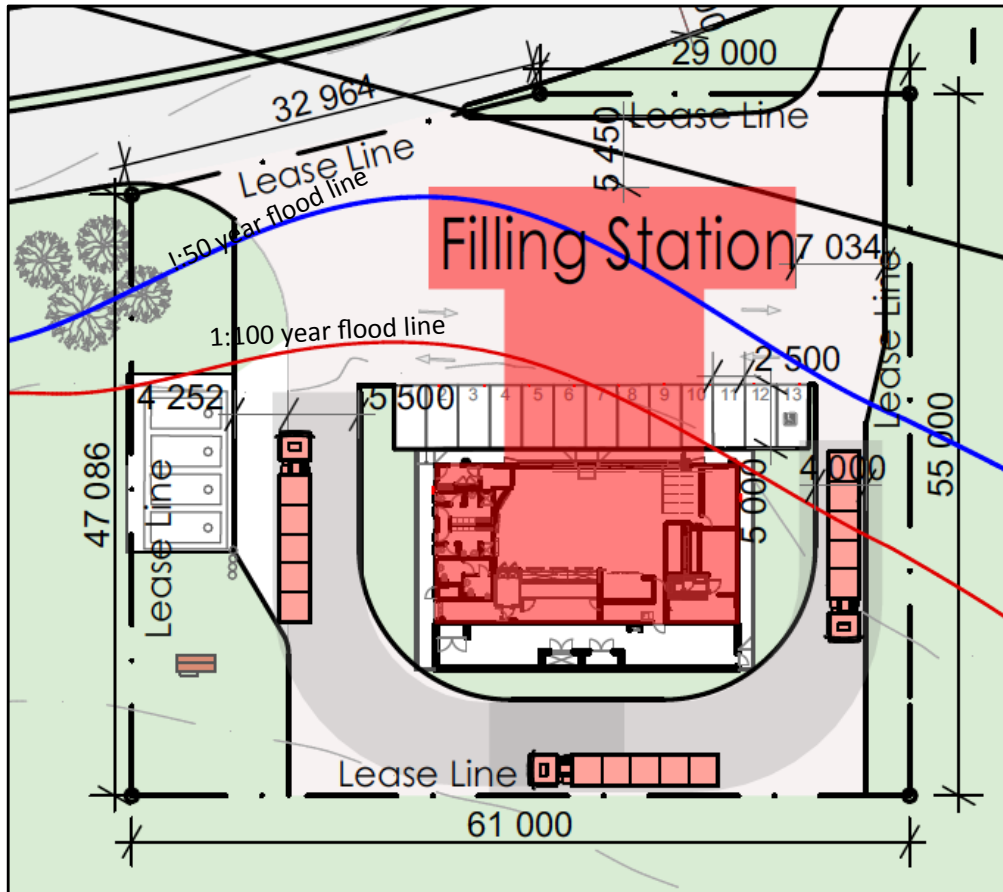


Figure 3: Preliminary Filling Station Layout

A road link is proposed as part of the proposed Zeerust X 5 to link the N4 Platinum Highway to Kloof Street. This road will form the northern boundary of the proposed filling station site and direct site access will therefore be taken off this new proposed link road.

1.3 Project Locality

The proposed project (study site) is located approximately 2km east of the Zeerust CBD, and is situated within the Ramotshere Moiloa Local Municipality, North West Province.

The proposed site is decentralized from the Zeerust CBD and located on the eastern periphery of the town adjacent to the N4 Platinum Highway on the eastern entrance or “gateway” of Zeerust. The site is well located on the main road, with visibility to passing motorists on the N4. The site is somewhat removed to the east of Zeerust CBD and can be bypassed by Botswana and Lehurutshe residents travelling to Mahikeng for shopping purposes.

Proclaimed Townships such as Ikageleng Township Extension 1 and 2 are in closely proximity, to the south of the site. The Zeerust Truck stop is also located in the vicinity. Properties, such as the subject property, with such good visibility and accessibility tend to be developed for Retail or Business purposes. The proposed project is set out in the Location Maps below.



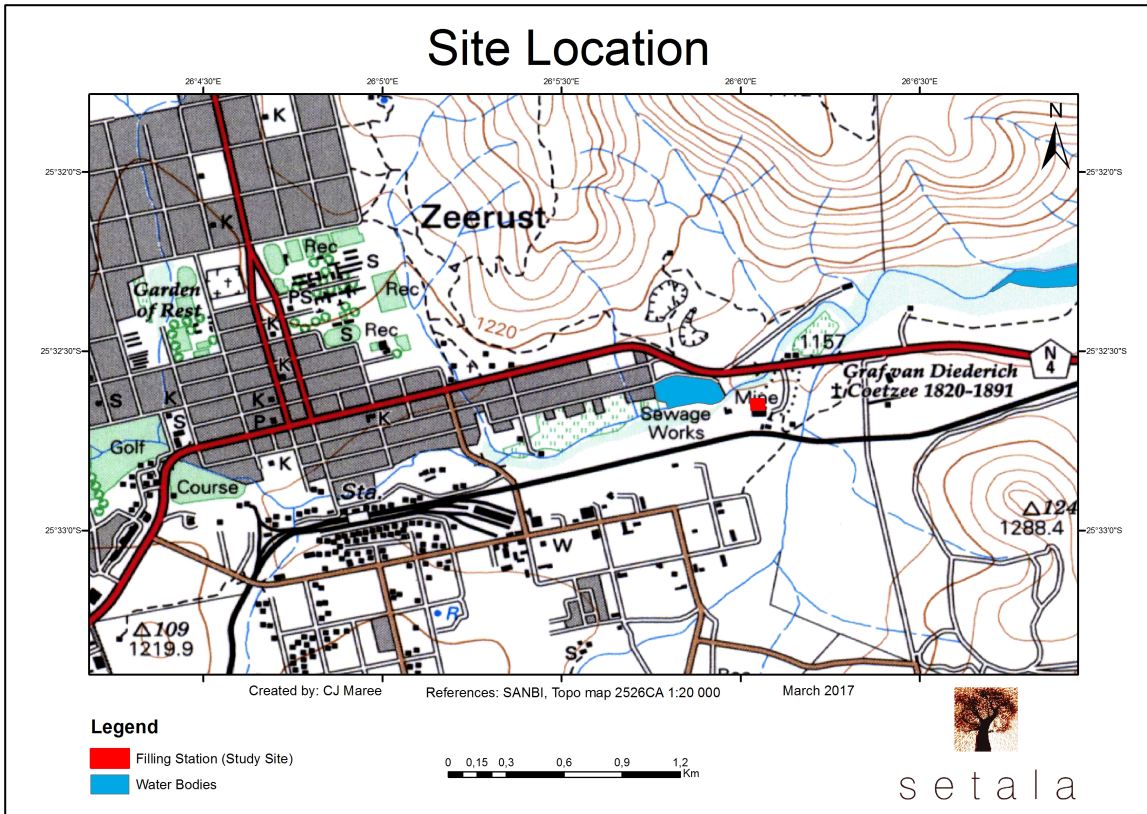


Figure 4: Site Location



Figure 5: Site Location (Google Earth)



1.4 Title Deed

In terms of the Deed of Transfer T9890/1971 the subject property is currently registered in the name of **Zeerust Modern Bricks Proprietary Limited Registration Number 68/2548**. There are no restrictive title conditions registered against the subject property that will restrict or prohibit the utilisation thereof for purposes of a service station.

After approval and proclamation of the township (to be known as Zeerust X5), the land owner will enter into a sales agreement with Munghana Leisure and Tourism (Pty) Ltd to sell off proposed Erf 2 of Zeerust X5 (proposed filling station erf).

b) Provide a detailed description of the listed activities associated with the project as applied for

Table 1: Listed Activities

Listed activity as described in GN R.983, 984 and 985	Description of project activity
<p>GN R983/2014 Activity 14</p> <p>The development of facilities or infrastructure for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres.</p>	<p>The applicant proposes to develop a filling station and associated infrastructure with a total on site dangerous goods storage capacity of less than 500 m².</p> <p>Products (Diesel and Petroleum) will be stored in 6 X 23m² USTs below the service station forecourt.</p> <p>The combined capacity of the tanks will be 138m².</p>
<p>GN R983/2014 Activity 19</p> <p>The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;</p> <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving—</p> <p>(a) will occur behind a development setback;</p> <p>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</p> <p>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</p> <p>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</p> <p>(e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.</p>	<p>To make provision for the excavation or infilling of more than 10 cubic metres of soil within the 1:100 year flood lines on the site.</p> <p>A section of the filling station development i.e. access, canopy, pumps, parking bays and infrastructure fall within the 1:100 year flood lines and will result in the excavation or infilling of soil. Please note the USTs will be installed <u>outside</u> the 1:100 year flood lines.</p>
<p>GN R985/2014 Activity 12:</p> <p>The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>a. North West</p> <p>i. World Heritage Sites; core of biosphere reserve; or</p>	<p>According to the conservation plan of the North-West Province (2009), the study area falls within a Critical biodiversity area (CBA 1). This includes large areas of the Zeerust town as well. The main reason for the area being a Critical biodiversity area (CBA1) is the importance of the catchment and watercourses of the Marico Rivers in particular for the North-West Province. The watercourses in the region of Zeerust are seen as being under threat and</p>



<p>sites or areas identified in terms of an international convention;</p> <p>ii. A protected area including municipal or provincial nature reserves as contemplated by NEMPAA or other legislation;</p> <p>iii. All Heritage Sites proclaimed in terms of National Heritage Resources Act, 1999 (Act No. 25 of 1999);</p> <p>iv. Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority;</p> <p>v. Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; or</p> <p>vi. Areas within a watercourse or wetland, or within 100 metres from the edge of a watercourse or wetland.</p>	<p>therefore in need of conservation.</p> <p>In addition, the site falls within 100m from the edge of the Kareespruit.</p> <p>The filling station site is 0,3228 ha in extent and will result in the clearance of indigenous vegetation.</p>
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c) Property description/physical address

Province	North West Province
District Municipality	Ngaka Modiri Molema District Municipality
Local Municipality	Ramotshere Moiloa Local Municipality
Ward Number(s)	Ward 15, 16 & 19
Farm name and number	HAZIA 240 JP
Portion number	Portion 24 (a Portion of Portion 5)
21 digit Surveyor General Code	T0JP0000000024000024

Where a large number of properties are involved (e.g. linear activities) please attach a full list to this application including the same information as indicated above.

2. FEASIBLE AND REASONABLE ALTERNATIVES

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

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

Describe alternatives that are considered in this application as required by EIA Regulation, 2014 Appendix 1(h). Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) 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.

Should the alternatives include different locations and layouts, the co-ordinates of the different alternatives must be provided. The co-ordinates should be in degrees, minutes and seconds using the Hartebeeshoek94 WGS84 co-ordinate system.

a) Site alternatives

List alternative sites, if applicable.

Site Alternatives	Description
Alternative Site 1 (preferred site alternative)	Erf 2 Zeerust X 5 development is regarded as the preferred site alternative. A section of Erf 2 falls within the 1:100 year flood line, however the layout of the filling station will only allow for access, parking areas, canopy and pumps to be located within the 1:100 flood lines. Underground storage tanks (USTs) will be located outside the 1:100 year flood lines. <i>Refer to Figure 6, Site Alternative 1 (Proposal)</i>
Alternative Site 2	During the planning phases of the Zeerust X 5 the filling station site was located in the north-eastern corner of the site with direct access from the N4 Highway. This alternative would allow direct access to the filling station from the N4 Highway. However, when the 1:100 year flood lines were determined it was clear that the entire site falls below the 1:100 year flood lines. Alternative Site 2 was therefore not considered as a feasible alternative. <i>Refer to Figure 7, Site Alternative 2.</i>



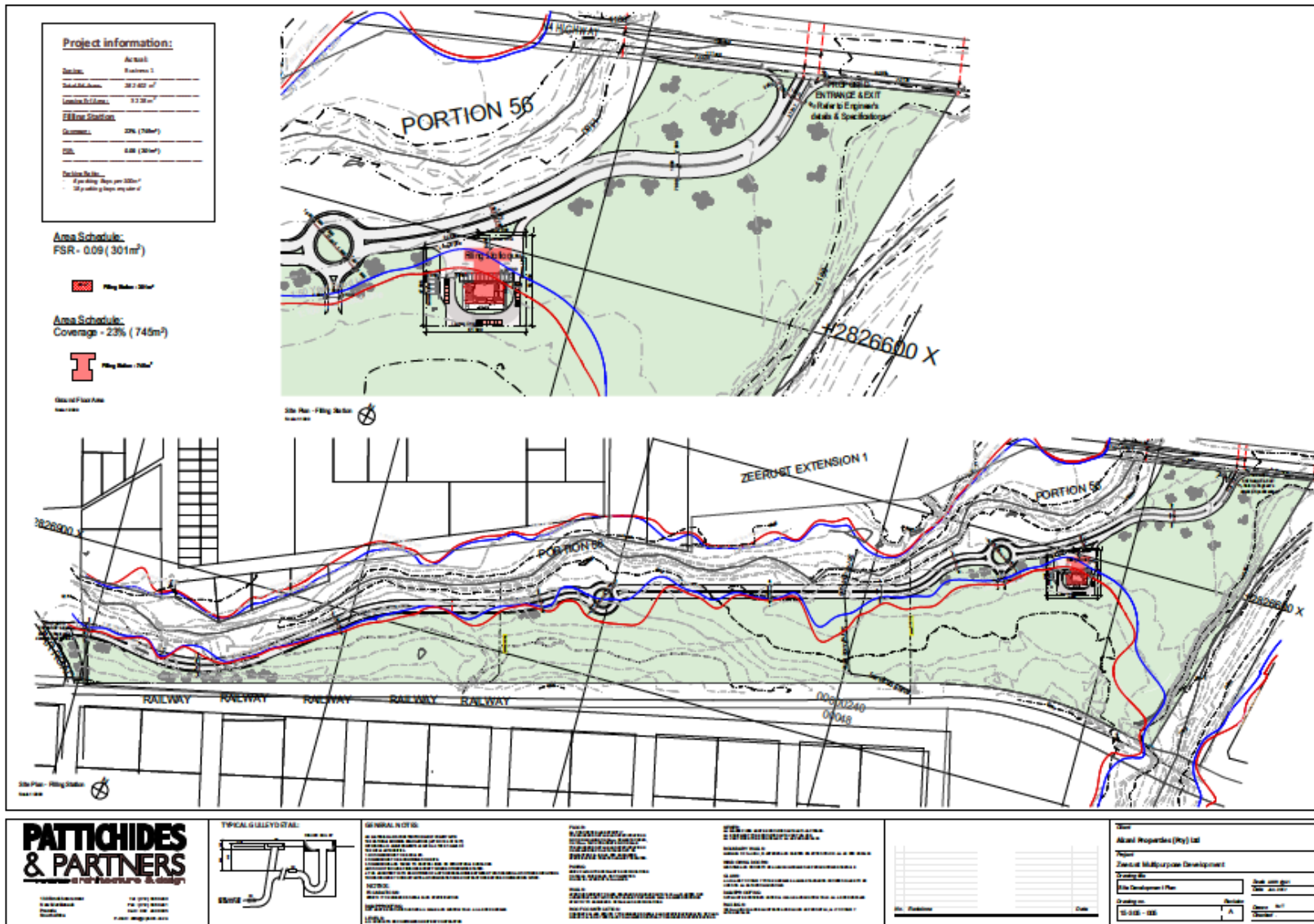


Figure 6: Site Alternative 1 (Proposal)

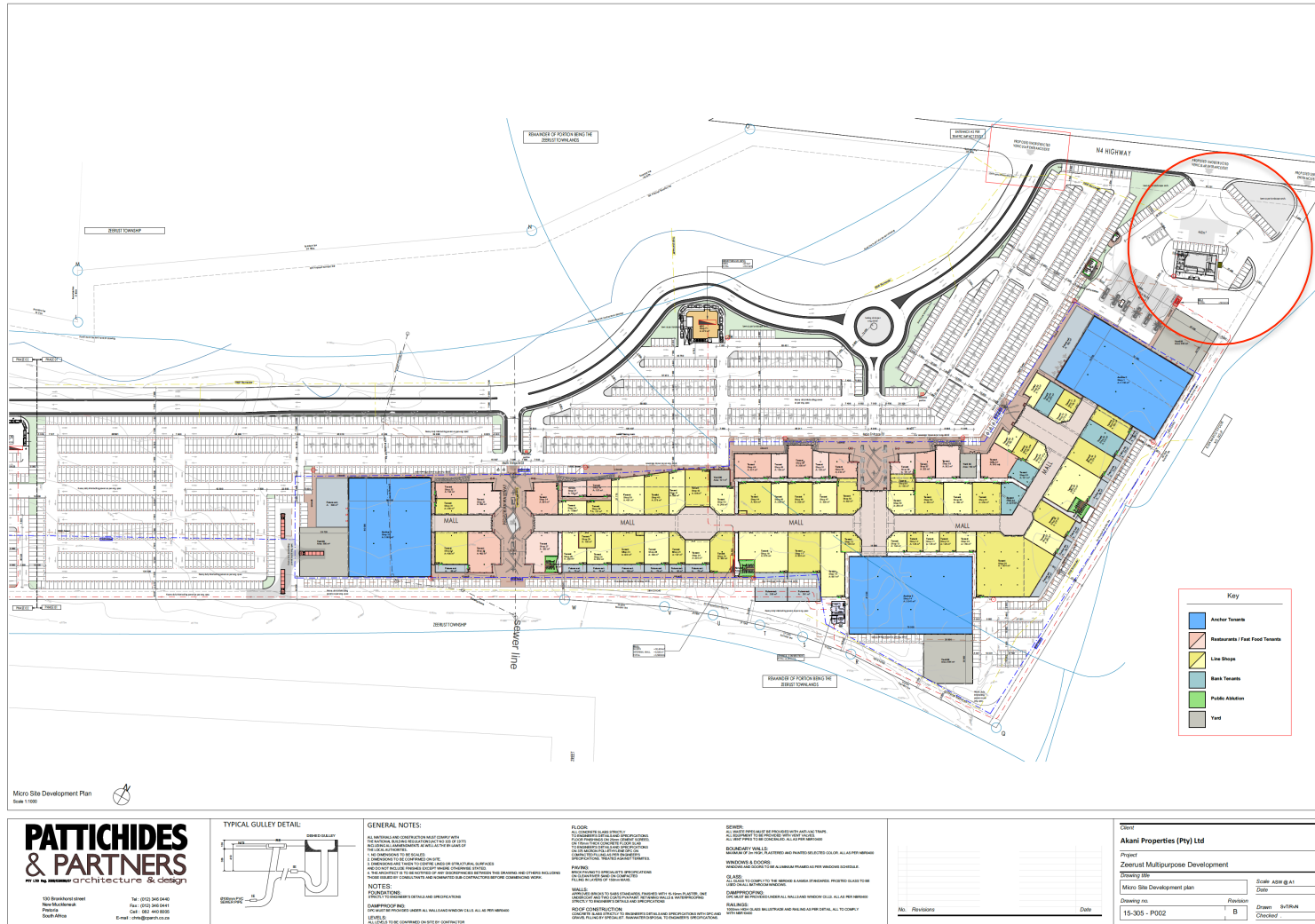


Figure 7: Site Alternative 2



Site Co-ordinates	Latitude (S):			Longitude (E):		
Alternative S1 (preferred or only site alternative)	25°	32'	37.60"	26°	06'	03.00"
	25°	32'	37.30"	26°	06'	04.00"
	25°	32'	39.10"	26°	06'	04.50"
	25°	32'	39.60"	26°	06'	02.40"
Alternative S2 (if any)	°	'	"	°	'	"

In the case of an area being under application, please provide the co-ordinates of the corners of the site as indicated on the lay-out map provided in Appendix A.

b) Lay-out alternatives

Alternatives	Description
Alternative 1 (preferred or only alternative)	<p>Due to the small size of the site, access from the link road and the encroachment of the 1:100 year flood lines layout alternatives are limited. The preliminary layout (Layout Alternative 1) is the only feasible layout Alternative considered in this DBAR. Refer to Figure 3.</p> <p>The final design and layout of the facility will be based on the specifications of the fuel supplier selected to supply the proposed station i.e. Total SA. A detailed layout for the facility, in compliance with their own internal specification, as well as relevant industry standards will be compiled. This may result in slight changes to the proposed preliminary layout.</p>
Alternative 2	N/A
Alternative 3	N/A

c) Technology alternatives

Alternatives	Description
Alternative 1 (preferred or only alternative)	No technology alternatives are being considered for this project as no alternatives which are feasible or reasonable are available. The storage of fuel for dispensing is governed by SANS 10089-3 and the installation of the underground storage tanks and associated fuel handling infrastructure will need to conform to these standards. This requirement limits the opportunity to implement alternate technology.
Alternative 2	N/A
Alternative 3	N/A

d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)

Alternatives	Description
Alternative 1 (preferred or only alternative)	Proposal with sustainable design principles. Sustainable design principles in terms of services will be implemented where feasibly possible. i.e. Solar panels.
Alternative 2	Proposal with conventional design principles. Only conventional design principles in terms of services will be implemented.
Alternative 3	N/A

e) Activity alternative

As described above, the proposed filling station is intended as part of a larger mixed-use development, Zeerust X 5, consisting of a shopping mall, hotel with conference centre, free stander drive thru's and distribution centre. No activity alternatives were considered.

f) No-go alternative

The no-go alternative involves not developing the site for a filling station and would entail leaving the site in its present state (un-serviced, untransformed stand).

This alternative would result in fewer environmental and social impacts (both positive and negative). The economic feasibility and long term viability of the larger development, would also decrease as there would be less incentive for motorists to leave the N4 to visit the establishment.

g) Please motivate for preferred site, activity and technology alternative

Site Alternative 1 (Proposal) (Erf 2 Zeerust X 5) falls partly within the 1:100 year flood lines, however the layout of the filling station will only allow for access, parking areas, canopy and pumps to be located within the 1:100 flood lines. Underground storage tanks (USTs) will be located outside the 1:100 year flood lines. Strict mitigation measures will be implemented to prevent possible groundwater and surface water pollution associated with the filling station due to leaking, spilling etc. Site Alternative 2 falls entirely within the 1:100 year flood lines and is not regarded as a feasible alternative.

The preferred site (Site Alternative 1) will obtain access from a link road proposed as part of proposed Autumn Leaf Mall, to link the N4 Platinum Highway to Kloof Street. The accessibility of the proposed filling station site would not only be from the adjacent shopping centre parking area but is further augmented by exposure to amount of traffic volumes of both heavy and light vehicles travelling eastbound or westbound on the shopping centre proposed link road connecting the N4 and Kloof street via a left in and left out, due to the proposed median, with adequate deceleration and acceleration lanes to ensure safe left in / left out.

The visibility of the site can also be classified as an outstanding development attribute due to the fact that the road carries a high number of traffic passing through Zeerust town. Some of the road based public transport services run on the N4 and it also distributes traffic to and from the CBD towards different areas of Ramotshere Moiloa Municipal area and also to Botswana and towards Mahikeng.

The visibility profile aims to highlight the exposure of the proposed site, which is directly correlated to the potential utilisation of the service station by the passing traffic as well as the motorists visiting the adjacent shopping centre. The site is highly visible and located directly along the proposed link road connecting the N4 and Kloof Street as well as from the N4 itself. The site will also be a noticeable fixture for motorists visiting the adjacent shopping centre. The proposed development is visible from approximately 150 meters westbound and ± 200 meters eastbound along the proposed connection road.

According to the Market Feasibility Study conducted by Petrorex the foreseen volume of the proposed filling station will not lead to the closure of the competition sites at all. The conclusion is that the market viability shows that the required level of sales can indeed be realised and from an Operators point of view the business is financially viable. Taking into consideration that the volume projection clearly indicates that the projected level of sales can be realized, as well as all the findings in the report, the proposed development is highly likely to be



viable.

As discussed above the proposed filling station is intended as part of a larger mixed-use development. The site is regarded as suitable for a filling station development and no activity alternatives were considered.

No technology alternatives are being considered for this project as no alternatives which are feasible or reasonable are available. The storage of fuel for dispensing is governed by SANS 10089-3 and the installation of the underground storage tanks and associated fuel handling infrastructure will need to conform to these standards. This requirement limits the opportunity to implement alternate technology.

Refer to the Market Feasibility Study conducted by Petrorex attached as Appendix G9

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

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:	Size of the activity:
Alternative A1 ¹ (preferred activity alternative)	744 m ²
Alternative A2 (if any)	
Alternative A3 (if any)	m ²

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

b) **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)	3 228 m ²
Alternative A2 (if any)	
Alternative A3 (if any)	

4. SITE ACCESS

Does ready access to the site exist?	YES	NO X
If NO, what is the distance over which a new access road will be built Access to the filling station site will be from a new link road proposed as part of the proposed Zeerust X 5, to link the N4 Platinum Highway to Kloof Street.		



Describe the type of access road planned:

As indicated in *Figure 8*, it can be seen that a road link is proposed as part of proposed Zeerust X 5 development, to link the N4 Platinum Highway to Kloof Street. This road will form the northern boundary of the proposed filling station site and direct site access will therefore be taken off this new proposed link road.

The proposed road link is a public road, meant to benefit the surrounding area and not serve only the proposed Autumn Leaf Mall. It is estimated that the travel time along the newly proposed road link between Kloof Street and N4 Highway Platinum Highway would approximately 2 minutes 10 seconds based upon an average speed of 40km/hr.

It is recommended that the proposed road link be constructed to the appropriate design standards of the local municipal.

It is further recommended that the local municipality update their road network planning in Zeerust in general.

The proposed filling station site will be accessible directly from the proposed road link adjacent to the site.

The site will comprise a left-in, left-out type of access and will not provide through fare into the proposed shopping centre site unless approved by the municipality. Refer to *Figure 9*.

Refer to the Site Development Plan (SDP) included in *Appendix B* and the Traffic Impact Assessment in *Appendix G7* for details of the access 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.

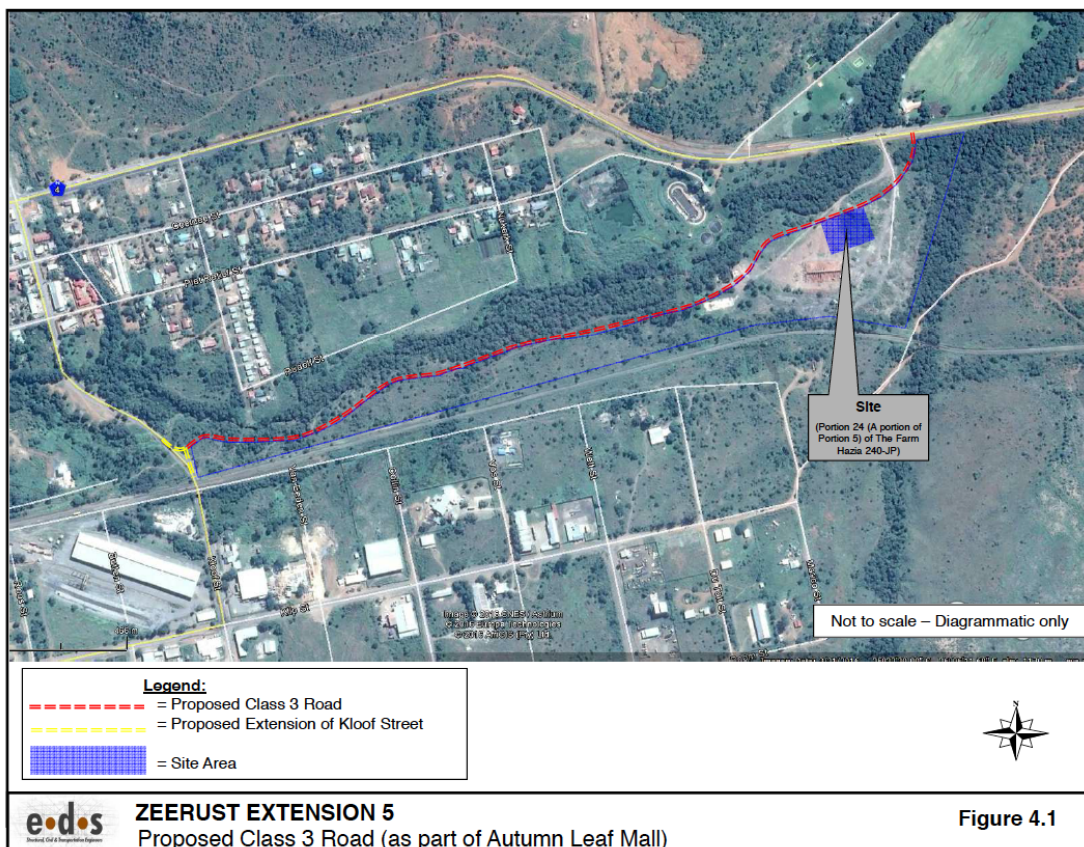


Figure 8: Proposed Access



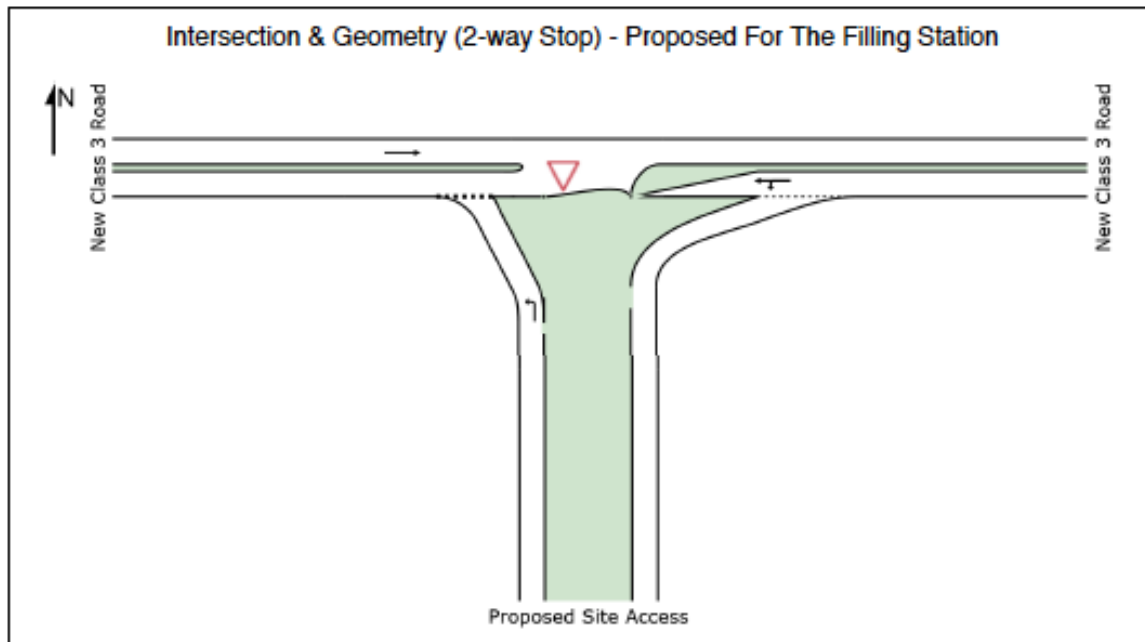


Figure 9: Intersection Geometry – proposed Filling Station

5. 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.). **Refer to Appendix A.**

The map must indicate the following:

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s);
- the accurate indication of the site in relation to closest protected environments or national parks (i.e. within 2.5 km)
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees, minutes and seconds using the Hartebeeshoek94 WGS84 co-ordinate system)

6. LAYOUT/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 B to this document. **Refer to Appendix B.**

The site or route plans must indicate the following:

- the property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;
- the current land use as well as the land use zoning each of the properties adjoining the site or sites;
- the exact position of each listed activity applied for (including alternatives);



- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

7. SENSITIVITY MAP

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- watercourses;
- the 1:100 year flood line (where available or where it is required by Department of Water and Sanitation);
- ridges;
- 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
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas and ecological support area.
- protected areas (e.g Magaliesberg Protected Environment, Pilanesberg National Park etc.)

The sensitivity map must also cover areas within 100m of the site and must be part of Appendix B. **Refer to Appendix B.**

8. 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 C to this report. It must be supplemented with additional photographs of relevant features on the site, if applicable. **Refer to Appendix C.**

9. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of at least 1:200 as Appendix D 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. **Refer to Appendix D.**



10. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?	YES	NO X	Please explain
<p>The property is presently zoned "Special". An application is made in terms of the Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013) and specifically in terms of Chapters 5 and 6 of the Ramotshere Moiloa Local Municipality Land Use Management By-law, 2016 for township establishment to be known as Zeerust Extension 5.</p> <p>The proposed Zeerust X 5 development will consist of the following zonings (and land-uses), namely:</p> <ul style="list-style-type: none"> • "Business 1" with an Annexure to permit a Shopping mall, including Places of refreshments; Cinema, Shops; Drive thru restaurants; Distribution centre; a Hotel including conference facility; Lounge/Waiting area; Day spa; Gym and uses compatible or approved by the Local Municipality: 1 Erf ±15,3646ha • "Special" for a Filling station to include a 24/7 Convenience shop with take-away/Quick service restaurant (400m²) Car wash, an ATM and uses compatible or approved by the Local Municipality: 1 Erf ±0.3228ha • "Private Open Space": 1 Erf ±8,5184ha • "Existing Public Roads": 4,0344ha in total. 			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES X	NO	Please explain
<p>North West – Provincial Spatial Development Framework, 2012/2013 is relevant.</p> <p>Key development corridors have been developed along three of the four national transport routes throughout the North West province. These corridors are considered Spatial Development Initiatives (SDIs) and play an important role in encouraging corridor and cluster development throughout the province.</p> <p>The proposed filling station development is in line with the North West Provincial Spatial Development Framework. Zeerust is on the Platinum Corridor (N4 Toll road) and classified as a Secondary node in the province.</p>			
(b) Urban edge / Edge of Built environment for the area	YES X	NO	Please explain
<p>The application is situated in both the "Existing Urban Development Boundary", as well as the "New Urban Development Boundary" in terms of the Ramotshere Moiloa Local Municipality Spatial Development Framework, 2014-2015 (SDF).</p>			



(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	YES X	NO	Please explain
<p>The application is in line with both the IDP and SDF for the Local Municipality as it is situated in the urban edge, in an area earmarked for “Mixed use” development.</p> <p>The proposed development will provide job opportunities during the construction and operational phase and will thus enhance socio-economic development to uplift communities within Zeerust and Ikageleng, in line with the IDP (2015 -2016) and SDF (2014 -2015) of the Local Municipality. According to the IDP there is a clear need for a Local Economic Development approach which will make provision for local government, private sector and communities to play an active role in securing growth and development. In furthering the development initiatives of the Municipality, it is key that Zeerust reach its full potential by focussing on the commercial growth of the town (SDF 2014 -2015).</p>			
(d) Approved Structure Plan of the Municipality	YES X	NO	Please explain
<p>No structure plan exists.</p> <p>The proposed development is in line with the Ramotshere Moiloa Spatial Development Framework, SDF 2014 – 2015. A need for a diversification of land uses exist in the area as identified in terms of the Council forward planning policies. The strengths that the site and proposed use thereon exhibit include:</p> <ul style="list-style-type: none"> • No similar facility in the area • No formal retail competition • Very good accessibility • Highly visible • Commanding Site Topography which will definitely improve the aesthetics of the surrounding area and the gateway of Zeerust town • Strategic location of the site • Close to residential areas and will attract growth, infill and will highly densify the adjacent areas earmarked for low and medium residential density 			
(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	YES	NO X	Please explain
<p>Although the site falls within a Critical Biodiversity Area (CBA) this is due to the importance of the catchment and watercourses of the Marico Rivers in particular for the North-West Province. The watercourses in the region of Zeerust are seen as being under threat and therefore in need of conservation. Sections of the filling station development fall within the 1:100 year flood areas i.e. parking bays, canopy, pump stations and infrastructure. USTs will be installed outside the flood lines. Mitigation measures will be implemented to prevent pollution of the watercourses. A Water Use License Application will be submitted for the activities within the 1:100 year flood lines.</p>			



(f) Any other Plans (e.g. Guide Plan)	YES	NO	Please explain
N/A			
3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?	YES X	NO	Please explain
<p>The property is situated in area earmarked for development in 5 – 10 years. The proposed development is in line with one of the objectives of the IDP and SDF i.e. to promote the local economic growth and investment including job creation for local residents.</p>			
4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)	YES X	NO	Please explain
<p><i>Refer to the Socio-Economic Impact Assessment compiled by Urban-Econ Development Economists, Appendix G8.</i></p> <p>The following was concluded in the Socio-Economic Impact Assessment:</p> <ul style="list-style-type: none"> • The proposed Filling station would contribute to the local economy and the economic impact would be positive. Economic growth trends show that Ramotshere Moiloa LM has a higher economic growth than the national average and appears to be more resilient to shocks to the economy. This indicates that the economy has growing potential and can be identified as having investment potential. • In the Ramotshere Moiloa Local Municipality, the construction sector (3.8%) is the biggest in the secondary sector and 8th biggest sector in the local municipality. This sector would experience growth through the construction of the Filling station. The construction sector employs only 0.1% of the workforce in Zeerust, the construction of the Filling station would increase the number of people who is employed in this sector. • The additional income generated by the Filling station would benefit the local population. The additional income is expected to benefit the lower income households which comprise a total of 54,4% of local households. Any additional income generated in a new development would be welcomed in Zeerust and would benefit the low-income households. • The impact on employment would be positive, though the impact is expected to be small, any contribution to more employment is an achievement in South Africa. • In concluding arguments, the economic impact of the Filling station would have a profound impact on the local economy, production, employment and income. This development would contribute to the development of Zeerust and the socio-economic improvement of the local population. 			
5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix E.)	YES X	NO	Please explain
<p><i>Refer to the Outline Scheme Report compiled by Klunene and Electrical Bulk Services Report compiled by Consolidated Power Engineering attached as Appendix G5</i></p>			



Bulk Services

Water Reticulation

From information obtained from the Ramotshere Moiloa Local Municipality there is an existing water network close to the site. There are 3 reservoirs that service the town which are fed by boreholes and to date there has never been any shortages from this water source. The Hospital and Smook Street Reservoirs has a capacity of 950 KL and 5000 KL respectively and service the northern part of Zeerust. The Kop Street reservoir has a capacity of 7000 KL and services the southern part of Zeerust.

The proposed filling station development will tie in to the Kop Street reservoir water network. This reservoir is located approximately 3.7km south west of the site and is roughly 65m higher than the site which means that there is a static head of roughly 6 Bar. Due to the existing draw offs from this reservoir it is expected that the pressure will drop to just above 3 Bar, which will be sufficient to service the proposed development. An onsite reservoir of 700m³ will be needed to store the 24hr peak flow in case of emergencies for the township.

There is a 150mm Ø water main running along Klip Street to the south of the site which then decreases to a 75mm Ø water main from Collin Street onwards. This 150mm Ø water main will have to be extended up Kloof Street.

Sewer Reticulation

The Zeerust Waste Water Treatment Plant (WWTP) is just to the north of the proposed development. A 450 mm HDPE sewer line bisects the site from south to north, crossing the Karee River by means of a steel frame bridge into the sewer treatment plant.

At 70% percent of full capacity this sewer line can handle up to 285.9 l/s and estimated flows from existing infrastructure is roughly 116.9 l/s. There is enough capacity in this sewer line should the WWTP be upgraded and operating functionally.

This Sewer Treatment Plant is currently running at 184m³/h but is only 15% efficient due to maintenance constraints. Ngaka Modiri Molema District Municipality is to upgrade the plant from a 3.5ML to a 17 ML Treatment plant, and is at Tender stage. Once the treatment plant is upgraded it will have sufficient capacity to support the proposed development.

As the upgrades to the WWTP do not have a specified date an alternative solution is for the development to install an onsite sewer package plant until such upgrades on the WWTP have been completed.

Stormwater

There are functional stormwater systems around the site. As the site is situated between the Karee and Klein-Marico rivers it is envisioned to use Sustainable Urban Drainage Systems (SuDS) to manage stormwater runoff generated from the new development before being discharged into the natural water bodies.

Roads

There is a fully functional road network servicing the area accesses required from the N4 and Kloof street to the site. Upgrades will have to be done to the water and roads network to the developers account.

Conclusions

The proposed development can be adequately serviced from the existing municipal infrastructure. Upgrades will have to be done to the water and roads network to the developers account. Sewer reticulation will only be handled on site prior if the upgrades of the Waste water treatment plant is not yet done.

All final designs for water, sewer, stormwater and roads will be submitted to council before any construction commences.



Electricity

The expected electrical power requirement for the Filling Station is 150kVA. Zeerust Council is the licensed electricity supply authority in the area.

Existing supply

The site already have an existing Council supply of 100kVA, with the point of supply situated under the township main overhead Medium Voltage ring network, as a pole transformer. This line cross the site, towards the main road.

As a stand alone development the Filling Station may utilize this connection, and a moderate upgrade to 150kVA may be applied for via normal application process to the Council..

Bulk Supply Contributions

The expected bulk supply contributions that Council will levy in terms of their policy, is not known at this stage but it is requested in the comments section of this report.

Availability of Power and Method of electrical connection

Two options are available to provide power to the Filling Station:-

Filling Station supply Option 1:-

CPE was informed by Council that the Town's main electrical supply, Zeerust Municipal 88/22/11kV Substation, is in the process of being upgraded, with an additional 20MVA transformer.

This main substation is approx. 2km away (in MV cable length) from the site, and a dedicated supply, preferably underground via 2xMV cables, may be installed to supply 3850 kVA at 11kV, for all phases of the Multipurpose Development as indicated in this report, as well as 150kVA for the Filling Station.

The proposed Multipurpose Development on a portion of the same property, need a 4000kVA bulk connection, which rating includes capacity for a new connection to the Filling Station.

The single bulk connection made available by Council can be configured to provide for a Council metered electrical connection to the Multipurpose Development on an individual subdivided erf, and an individual metered electrical connection direct from this bulk Council connection to the proposed Filling Station.

Filling Station Supply Option 2:-

As an alternative for a separated connection, normal application procedure can be submitted to Council to apply for the existing 100kVA existing connection on the site, to be re-located as a supply to the Filling Station, and the same application procedure need to be followed to arrange for a moderate upgrade to 150kVA

Conclusion

Council already confirmed the availability of the bulk 4000kVA connection, and that the supply can be made available as from January/February of 2017.

6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	YES X	NO	Please explain
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The confirmation of the necessary services is attached in Appendix E.



7. Is this project part of a national programme to address an issue of national concern or importance?	YES	NO X	Please explain
It is a local project in Zeerust town, but also part of a new shopping mall and other facilities, which will have substantial economic and social benefits for the local community.			
8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	YES X	NO	Please explain
<p>The proposed filling station development is located adjacent to a Platinum Corridor / N4 and is accessible through a proposed link road connecting Church Street (N4) and Kloof Street. The accessibility of the proposed filling station site would not only be from the adjacent shopping centre parking area but is further augmented by exposure to amount of traffic volumes of both heavy and light vehicles travelling eastbound or westbound on the shopping centre proposed link road connecting the N4 and Kloof street via a left in and left out, due to the proposed median, with adequate deceleration and acceleration lanes to ensure safe left in / left out.</p> <p>The site is highly visible and located directly along the proposed connection road between the N4 and Kloof Street as well as from the N4 itself. The proposed filling station development is visible from approximately 150 meters westbound and 200 meters eastbound along the proposed connection road.</p> <p>The location of the site adjacent the N4 highway, accessibility and visibility contribute to the feasibility of the proposed filling station.</p>			
9. Is the development the best practicable environmental option for this land/site?	YES X	NO	Please explain
<p>From an ecological perspective, the site has a certain degree of ecological sensitivity due to the presence of the two watercourses flowing to the north-west and east of the site. However the water courses are both polluted due to the faulty and poor managed WWTW, water quality changes due to upstream impacts etc. The majority of the vegetation of the study area is badly disturbed and degraded. Until recently, the property was an active brick-making and distribution yard.</p> <p>A stormwater management plan will be implemented during both the construction and operational phases of the proposed development to prevent pollution of the water resources. In addition a ground water monitoring program will be implemented to monitor possible pollution of the groundwater associated with the filling station. Mitigation measures will be included in the EMP.</p> <p>The site is situated within an urban area surrounded by either upcoming or already existing residential communities. The proposed development will have direct and indirect socio-economic benefits (i.e. job creation, etc.) to the surrounding communities and Zeerust.</p>			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES X	NO	Please explain
<p>According to Urban Econ the potential negative impacts of the proposed filling station are limited to job losses from other filling stations in Zeerust due to time-tables of filling stations. Any job losses will be mitigated in a few years and would be insignificant on the broader spectrum of job creation. The proposed filling station would create more employment opportunities than those lost, the nett effect on jobs would be positive.</p> <p>The proposed filling station will result in loss of average monthly fuel sales at competitor sites, however Petrorex is of the opinion that the foreseen volume loss will not lead to the closure of competitor sites at all.</p> <p>The contribution to the local economy will outweigh the negative impacts.</p>			



11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES	NO X	Please explain
The locational factors, development concept and circumstances as explained in paragraph 8 above are unique and not likely to be duplicated elsewhere in Zeerust town.			
12. Will any person's rights be negatively affected by the proposed activity/ies?	YES X	NO X	Please explain
<i>Refer to the Feasibility Study compiled by Petrorex attached as Appendix G9.</i>			
<p>The proposed filling station will result in loss of average monthly fuel sales at competitor sites within Zeerust. Competitor sites identified were based on the general guideline "within 3 kilometers of an existing filling station in a built up area." Petrorex identified six (6) existing service station outlets, the closest 0.625 km radius to the furthest at 2.5650 km radius:</p>			
<p>Competitor site 1: Zeerust 1 Stop (MBT) Competitor site 2: Zeerust Ultra (Shell) Competitor site 3: Zeerust Total Competitor site 4: Nissan Supreme (BP) Competitor site 5: NWK Zeerust (Total) Competitor site 6: Woltemade Motors (Shell)</p>			
<p>Competitor sites were surveyed to determine an average fill per vehicle at a station. These competitor service stations represent the average fill for vehicles within the study area.</p>			
<p><u>Volume impact on the existing service / filling stations</u></p>			
<p>It is expected that the competitor service stations that are located closest to the proposed site and also share the same traffic stream with the proposed new service station, will experience a greater negative economic impact than the others, e.g. Competitor site number 2 –Shell Ultra Zeerust service station. The following has been taken into account when assessing the economic impact of the proposed site on the existing service stations:</p>			
<ul style="list-style-type: none"> • The location, road function and access of proposed new service station development; • Traffic flow in the area together with shared traffic streams; and • Market area, based on surrounding residential areas. 			
<p>All competitor sites identified in the CBD of Zeerust are located within primary market area, and may have implications on the target markets of the proposed development as it would partly serves the same traffic stream on Church Street / the N4 that will also serves as a target market for the proposed service station. The proposed service station site is located adjacent to the new link road connecting Kloof Street and the Church Street / N4, as part of a larger shopping centre development and it is largely depended on the traffic generated from the centre itself.</p>			
<p>Based on the delineated study area, it has been established that the greatest economic impact, in terms of loss of average monthly fuel sales, will be experienced as follows:</p>			
<ul style="list-style-type: none"> • competitor site 2 Shell Zeerust Ultra service station of 65 kilo litres per month, • competitor site 3, Total Zeersut, 41 kilo litres per month then • competitor site 4 BP Nissan Supreme filling station by 32 kilo litres per month, • competitor site 5 Total NWK by 19 kilo litres per month and • competitor site 6 Shell Woltemade by 26 kilo litres per month. 			



Based on the modeling for the proposed new service station, it is estimated that it could sell approximately 228 kilo litres of petrol and diesel per month, which would make it sustainable. It is expect that a total of 183 kilo litres , representing a 80% of the proposed site volume projection, will be lost by the existing competitor sites, in the 3 kilometer radius.

The filling station specialist is of the opinion that the foreseen volume loss will not lead to the closure of competition sites at all.

13. Will the proposed activity/ies compromise the “urban edge” as defined by the local municipality?	YES	NO X	Please explain
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The development is situated within the approved urban edge for Zeerust town.

14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES	NO X	Please explain
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The development of filling stations is not included in any of the SIPS projects.

15. What will the benefits be to society in general and to the local communities?	Please explain
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Refer to Socio-Economic Impact Assessment compiled by Urban-Econ Development Economists attached as Appendix G8.

- The proposed Filling station would contribute to the local economy and the economic impact would be positive. Economic growth trends show that Ramotshere Moiloa LM has a higher economic growth than the national average and appears to be more resilient to shocks to the economy. This indicates that the economy has growing potential and can be identified as having investment potential.
- In the Ramotshere Moiloa Local Municipality, the construction sector (3.8%) is the biggest in the secondary sector and 8th biggest sector in the local municipality. This sector would experience growth through the construction of Filling station. The construction sector employs only 0.1% of the workforce in Zeerust, the construction of the Filling station would increase the number of people who is employed in this sector.
- The additional income generated by the Filling station would benefit the local population. The additional income is expected to benefit the lower income households, which comprise a total of 54,4% of local households. Any additional income generated in a new development would be welcomed in Zeerust and would benefit the low-income households.
- The impact on employment would be positive, though the impact is expected to be small, any contribution to more employment is an achievement in South Africa.
- In concluding arguments, the economic impact of the Filling station would have a profound impact on the local economy, production, employment and income. This development would contribute to the development of Zeerust and the socio-economic improvement of the local population.



16. Any other need and desirability considerations related to the proposed activity?	Please explain
<p>Refer to Section 2 (g) for the need and desirability as supplied by the town planner. In addition, a Feasibility study has been conducted by Petrorex. Refer to Appendix G.</p> <p>Based on the PETROREX feasibility study the filling station development could be viable in terms of the volume projections and the projected level of sales that can be realized. The proposed filling station development is located adjacent to a Platinum Corridor / N4 and is accessible through a proposed link road connecting Church Street (N4) and Kloof Street. The accessibility of the proposed service station site would not only be from the adjacent shopping centre parking area but is further augmented by exposure to amount of traffic volumes of both heavy and light vehicles travelling eastbound or westbound on the proposed link road connecting the N4 and Kloof street via a left in and left out, due to the proposed median, with adequate deceleration and acceleration lanes to ensure safe left in / left out.</p> <p>The visibility of the site can also be classified as an outstanding development attribute due to the fact that the road carries a high number of traffic passing through Zeerust town. The site is highly visible and located directly along the proposed connection road between the N4 and Kloof Street as well as from the N4 itself.</p> <p>The application site is located in Zeerust town with existing municipal services such as Sewer, Roads, Water and Storm water. Electricity is provided by Eskom. The Service Station area is of sufficient size to operate successfully. Maneuvering space and parking space is sufficient to prevent vehicles from obstructing each other as well as the entrances and exits.</p> <p>The filling station specialist is of the opinion that the potential volume loss on all off the identified competition sites would not lead to their closure at all.</p> <p>The PETROREX study concluded that the volume projection clearly indicates that the projected level of sales can be realized as well as the foreseen involvement of Total SA as a registered licensed wholesaler offering a financial involvement and a 20-year transaction for the development and operations, the proposed development is highly likely to be viable.</p> <p>It is also stated that each and every logical requirement for a Service Station is focused on the convenience and safety of the motoring public. This is what is needed and this is what the proposed service station will provide and it is therefore the ideal site.</p>	
17. How does the project fit into the National Development Plan for 2030?	Please explain
<p>It is a local business activity, but fit into the NDP priority of: "An economy that will create more jobs". Government's New Growth Path aims to create 5 million jobs by the year 2020. Every new business contributes to this objective. The NDP also states amongst other the following key ingredients for success: "(a) The active efforts of all South Africans. (b) Growth, investment and employment". This project is also part of a much bigger project in Zeerust town that will make a substantial contribution in terms of the mentioned NDP priorities and also fit into some of the stipulated key ingredients for success.</p>	



18. Please describe how the general objectives of Integrated Environmental Management as set out in Section 23 of NEMA as amended have been taken into account.

The proposed project has been undertaken according to Section 24 of the National Environmental Management Act (NEMA) (No 107 of 1998) and the following aspects of Section 23 have been considered:

- It was identified that the proposed activity will result in some detrimental environmental impacts during the construction. Thus an Application for the Environmental Authorisation is being lodged with the North West DREAD in as the competent authority;
- An Environmental Basic Assessment Process is prescribed for the proposed project instead of a Full EIA (Scoping and EIA) process due to the nature of the proposed project being classified as less significant or detrimental to the environment when compared to other developments/projects that present significant detrimental impacts - thus requiring a Full EIA process to be undertaken prior to implementation of the project;
- Potential environmental impacts (including biodiversity and water bodies) and risks associated with the construction phase of the project have been identified and assessed according to their significance. Mitigation measures have been recommended for the more significant impacts;
- A Public Participation Process is being conducted for the project, where surrounding landowners, communities and the local authority (Interested and Affected Parties) are being consulted from the onset and throughout the Environmental Basic Assessment Process in order to receive their views on the proposed development;
- The Environmental Basic Assessment Report together with the Environmental Management Programme will be submitted to the North West DREAD for review and approval prior to the implementation of the project; and
- The principles of NEMA such as the “polluter pays principle” have also been considered within the Environmental Management Programme for the project, where the applicant and its appointed Contractors will be responsible for avoiding negative impacts and where not possible, mitigating or rectifying any damages caused by the environment.

19. Please describe how the principles of environmental management as set out in Section 2 of NEMA as amended have been taken into account.

All efforts are being made to ensure that the project achieves sustainability, environmental justice and that the environmental rights of Interested and Affected Parties (local stakeholders, communities and the construction employees) are protected. This will be achieved by the applicant and it’s contractors through the implementation of the recommendations provided by the Basic Assessment specialist studies, the project’s environmental management programme and Environmental Authorisation, once issued by the NW DREAD.

11. 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	Applicability to the project	Administering authority	Date
National Environmental Management Act (Act No. 107 of 1998) (as amended)	Protection of the environment of the study area and surroundings.	National & Provincial	1998
National Environmental Management: Waste Act (Act 59 of 2008) (as amended)	Protection of the surrounding environment through efficient waste management by the appointed Contractor.	National & Provincial	2008



National Environmental Management: Air Quality Act (Act 39 of 2004)	Protection of the air quality of the study area through dust minimisation and the application of dust suppression measures.	National & Provincial	2004
National Water Act, 1998 (Act No. 36 of 1998)	Protection of water resources and where not possible relevant permits / licenses will be required.	National & Provincial	1998
National Heritage Resources Act (Act No 25 of 1999)	Protection of heritage resources surrounding the study area and those uncovered during the development phase by reporting to the nearest heritage authority.	National & Provincial	1999
National Environmental Management: Biodiversity Act (Act 10 of 2004)	Protection of biodiversity features and where not possible relevant permits will be required.	National & Provincial	2004
National Road Traffic Act (Act No 93 of 1996)	The contractor will obey traffic laws by driving at minimal speed approved by local authorities.	National & Provincial	1996
Occupational Health and Safety Act (Act No. 85 of 1993)	Protection of workers on site through the provision of Personal Protective Equipment; Training and other health and safety amenities.	National & Provincial	1993
Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983) (as amended)	Eradication and control of classified invader plant species	National & Provincial	1983
All relevant Provincial regulations and Municipal By-laws	The Contractor will obey and abide by provincial and municipal by-laws which are related to the proposed project.	Provincial & Local	
Hazardous Substances Act (Act 15 of 1973)	To provide for the control of hazardous substances which may cause injury or ill-health to or death of human beings.	National	1973
National Building Regulations and Building Standards Act (Act 103 of 1977)	Contractor will obey and abide by building regulations	National & Provincial	1977
South African National Standards (SANS) 10 of 089: The Petroleum Industry Part 1: Storage and distribution of petroleum products in above-ground bulk installations. Part 2: Electrical and other installations in the distribution and marketing sector. Part 3: The installation of underground storage tanks, pumps/dispensers and pipework at service stations and consumer installations.	The South African National Standards (SANS/SABS), applicable to the Petroleum Industry and in particular to the installation of underground storage tanks, pumps/dispensers and pipework at service stations, would be applicable and must be complied with. These standards should be considered as a minimum.	SABS National	2008 2007 1999
Petroleum Products Act 120 of 1977 as amended - Petroleum Products Site and Retail Licence	A Site or Retail Licence must be obtained from the Department of Energy.	National	2006



Regulations 2006			
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12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	YES X	NO
If YES, what estimated quantity will be produced per month?	To be confirmed	
How will the construction solid waste be disposed of (describe)?		
<p>General waste and hazardous waste will be collected and stored separately, according to the requirements of the waste type.</p> <p>General waste will be disposed of at a licensed municipal landfill site.</p> <p>Hazardous wastes will be collected by an approved waste disposal service provider and will be disposed of at a licensed hazardous waste landfill site.</p> <p>All construction waste will be cleared from the site by the end of the contract.</p>		

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

<p>Waste generated will be disposed of at the Zeerust landfill facility.</p> <p>General wastes will be directed to the nearest landfill, managed by the Ramotshere Moiloa Local Municipality. This is the GSB- Zeerust Landfill Site (Permit No. B33/220/9/S/P214).</p> <p>Hazardous wastes will be directed to the nearest licensed H:h Landfill site.</p>		
Will the activity produce solid waste during its operational phase?	YES X	NO
If YES, what estimated quantity will be produced per month?	This amount would fluctuate based on the number of customers making use of the facility	
How will the solid waste be disposed of (describe)?		
<p>Waste which will be generated during the operational phase of the filling station includes general office wastes, domestic and packaging waste from the convenience store, sludges from the oil/grease traps on the stormwater management system and contaminated materials from the clean-up of potential fuel / oil spills. These comprise both general and hazardous waste types.</p> <p>General office waste and domestic and packaging waste from the convenience store would include paper, cardboard, plastic and tins. These wastes will be stored in a general refuse area on site and will be transported on a regular basis to the nearest licensed general waste landfill site.</p> <p>The filling station operator will be responsible for undertaking monthly inspections of the oil/water separators to ensure their continued functioning. Cleaning of these separators will be undertaken by an appropriate cleaning company. Wastes generated from this cleaning process will most likely be hazardous in nature and will therefore be transported off site to an appropriate treatment and disposal facility by cleaning company. Additional hazardous wastes would include fuel / oil contaminated materials utilised at the filling station, for example, empty oil cans and oily rags, etc. These wastes will be stored in a designated, appropriately designed hazardous waste storage area, to minimize potential environmental impacts arising from this activity. Hazardous wastes will be transported on a regular basis to the nearest licensed hazardous waste landfill site.</p>		



If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.		
GSB- Zeerust Landfill Site (Permit No. B33/220/9/S/P214).		
Where will the solid waste be disposed of if it does not feed into a municipal waste stream (describe)?		
Sludges cleared from the oil / grease traps on the wash water and stormwater management systems will be collected and transported off site to an appropriate treatment and disposal facility by an appropriate waste handling company.		
<i>If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.</i>		
Can any part of the solid waste be classified as hazardous in terms of the NEM:WA?	YES X	NO
If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.		
<p>The hazardous wastes generated by the operational facility would include fuel/oil contaminated containers / materials and sludges collected in the oil / grease traps on the wash water and stormwater management systems.</p> <p>Storage and handling activities proposed as part of the operational phase of this project (i.e. for the storage and handling of fuel-contaminated materials and containers, sump and oil / grease trap contents), do not exceed the thresholds and therefore do not trigger any of the Listed Activities published in GN 921 of 29 November 2013, in terms of the NEMWA, 2008. There is therefore no requirement to change the application process to a Scoping and EIA.</p>		

Is the activity that is being applied for a solid waste handling or treatment facility?	YES	NO X
If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.		

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	YES	NO X
If YES, what estimated quantity will be produced per month?	N/A	
Will the activity produce any effluent that will be treated and/or disposed of on site?	YES X	NO
If YES, describe the type of effluent and the disposal mechanism/method		
<p>Stormwater runoff from the forecourt area will be directed into an on-site oil/water separator before discharging into a closed sewage treatment plant like Ballam-Waterslot's "GEM sewage treatment plant or similar. Refer to Outline Scheme Report compiled by Klunene attached as Appendix G5.</p>		



Will the activity produce effluent that will be treated and/or disposed of at another facility?		YES X	NO
If YES, provide the particulars of the facility:			
Facility name:	Zeerust Wastewater Treatment Works This Sewer Treatment Plant is currently running at 184m ³ /h but is only 15% efficient due to maintenance constraints. Ngaka Modiri Molema District Municipality is to upgrade the plant from a 3.5ML to a 17 ML Treatment plan, and are at Tender stage. Once the treatment plant is upgraded it will have sufficient capacity to support the proposed development. As the upgrades to the WWTP do not have a specified date, it is proposed that this development installs an onsite sewer package plant as part of the larger Zeerust X 5 development until such upgrades have been completed		
Contact person:	Mr. Victor Maboka		
Postal address:			
Postal code:			
Telephone:		Cell:	060 571 7475
E-mail:	mabokavictor@gmail.com	Fax:	
Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:			
Not applicable			

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other than exhaust emissions and dust associated with construction phase activities?	YES	NO X
If YES, is it controlled by any legislation of any sphere of government?	YES	NO X
If YES, the applicant must 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:		
Sources of emissions during the operational phase will include transfer of fuel from tankers to the storage tanks, transfer of fuel from the storage tanks to vehicles and exhaust fumes from vehicles at the petroleum filling station. Emissions released from the site during the construction and the operational phases are considered to be negligible and are expected to be well below the ambient emission standards. Emissions will not be considered further in this environmental assessment.		

d) Waste Licence/Registration

Will any aspect of the activity produce waste that will require a waste licence/registration in terms of the NEM:WA?	YES	NO X
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If YES, please submit evidence that an application for a waste licence/registration has been submitted to the competent authority

e) Generation of noise

Will the activity generate noise?	YES	NO X
If YES, is it controlled by any legislation of any sphere of government?	YES X	NO
If YES, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.		



If NO, describe the noise in terms of type and level:

The movements of construction vehicles, machinery and other construction activities will generate noise on site and affect nearby residents. However, the noise will be of a short term, temporary, localised nature and will only last during the construction phase of the project.

Noise generated during the operational phase will mainly be the noise generated by the increased traffic and noise generated by the proposed facilities and activities (i.e. air conditioners, places of refreshment, compressors etc.).

The noise level is anticipated to be less than 50dBA to the nearest sensitive receivers as required by SANS 10103 and thus authorisation will not be required for the noise impacts.

13. WATER USE

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

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water
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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	
Does the activity require a water use authorisation (general authorisation or water use licence) from the Department of Water and Sanitation?	YES X	NO
If YES, please provide proof that the application has been submitted to the Department of Water and Sanitation. Will be included in the Final BAR.		
Water Use License Application is in process.		
The National Water Act, 1998 (Act No. 36 of 1998) (NWA) regulates the use of water and the pollution of water resources. A Water Use Licence Application (WULA) will be submitted to the Department of Water and Sanitation (DWS).		

14. ENERGY EFFICIENCY

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

The Architectural design complies with latest SANS 10400 requirements.
 Standard filling station construction designs, including SANS/SABS specifications will apply.
 Where possible, it is recommended that energy saving light bulbs be utilized.
 Solar panels could be used for supplementary power supply.

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

The requirement for energy sufficiency and alternative energy sources will be communicated with the project architects during the design phase of the project.

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

If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix F.



SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

- 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 B and indicate the area, as it appears on the Site Plan.
- Paragraphs 1 - 6 below must be completed for each alternative.

Current land-use zoning as per local municipality IDP/records:	Special
	In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.
Is a change of land-use or a consent use application required?	
	YES NO
An application is made by Natura Professional Planners (Pty) Ltd in terms of the Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013) and specifically in terms of Chapters 5 and 6 of the Ramotshere Moiloa Local Municipality Land Use Management By-law, 2016 for township establishment. Proposed township to be known as Zeerust Extension 5 . The property is at present zoned as "Special". The township application will be for:	
(a) "Business 1" in terms of the Zeerust Town Planning Scheme, 1980, with an Annexure to permit a Shopping Mall including Places of refreshments; Cinema; Shops; Drive Thru Restaurants; Distribution Centre, a Hotel including conference facility; Lounge / Waiting Area; Day Spa; Gym uses compatible or approved by the Local Municipality. (Erf 1)	
(b) Special" for a Filling station to include a 24/7 Convenience shop with take-aways/Quick service restaurant (400m²) Car wash, an ATM and uses compatible or approved by the Local Municipality. (Erf 2)	
(c) "Private Open Space". (Erf 3)	
(d) "Existing Public Roads".	

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

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

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

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

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

M. J. van der Walt Engineering Geologist CC was appointed to undertake a geotechnical investigation for the proposed development. **Report attached as Appendix G4.**

4. GROUNDCOVER

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

Natural veld - good condition ^E	Natural veld with scattered aliens ^E	Natural veld with heavy alien infestation ^E	Veld dominated by alien species ^E	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil

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



5. SURFACE WATER

Indicate the surface water present on and or adjacent to the site and alternative sites?

Perennial River	YES X	NO	UNSURE
Non-Perennial River	YES	NO X	UNSURE
Permanent Wetland	YES	NO X	UNSURE
Seasonal Wetland	YES	NO X	UNSURE
Artificial Wetland	YES	NO X	UNSURE

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

Two rivers were identified during field investigations. These are the Kareespruit (Stream) and Klein-Marico River flowing to the north-west and east of the site. No other watercourses, including wetlands or farm dams are present on the study site. The Kareespruit flows into the Klein-Marico River, which in turn flows into the Klein Marico Poort Dam.

The watercourses, like all watercourses encountered, should be approached as sensitive. These areas were thus demarcated and rated as having a sensitivity rating of High. Refer to the Sensitivity Map attached as Appendix B6.

6. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that 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:

Natural area X	Dam or reservoir	Polo fields
Low density residential X	Hospital/medical centre	Filling station ^H
Medium density residential	School	Landfill or waste treatment site X
High density residential	Tertiary education facility	Plantation
Informal residential ^A	Church	Agriculture
Retail commercial & warehousing	Old age home	River, stream or wetland ^N X
Light industrial X	Sewage treatment plant ^A X	Nature conservation area ^N
Medium industrial ^{AN}	Train station or shunting yard ^N	Mountain, koppie or ridge ^N
Heavy industrial ^{AN}	Railway line ^N X	Museum
Power station	Major road (4 lanes or more) ^N X	Historical building ^N
Office/consulting room	Airport ^N	Protected Area ^N
Military or police base/station/compound	Harbour	Graveyard ^N
Spoil heap or slimes dam ^A	Sport facilities	Archaeological site ^N
Quarry, sand or borrow pit	Golf course	Other land uses (describe): The grave of Diederick Coetzee, Truck Stop



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

Railway line

Will not impact / have an impact on the proposed filling station development.

N4 Highway

Will provide visibility and accessibility to the filling station.

River

The 1:100 year flood lines will have to be taken into consideration in the layout of the filling station.

Grave of Diederick Coetzee

Will not impact / have an impact on the proposed filling station development.

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

Sewage Treatment Plant

The Zeerust Waste Water Treatment Works (WWTW) is currently faulty and poor managed and could have a negative impact on the proposed filling station in terms of odour. In addition, leaking sewage pipes is currently polluting the Kareespruit. However, the upgrading of the WWTW is listed as a priority project in the Ramotshere Moiloa Local Municipality Reviewed IDP 2015-2016. Once upgraded and properly managed the WWTW should not have a significant impact on the proposed development. Mitigation measures i.e. proper landscape around the facility may serve as a natural windbreaker and minimize potential odour dispersions, if present.

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

Not applicable

Does the proposed site (including any alternative sites) fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan)	YES X	NO
Core area of a protected area?	YES	NO X
Buffer area of a protected area?	YES	NO X
Planned expansion area of an existing protected area?	YES	NO X
Existing offset area associated with a previous Environmental Authorisation?	YES	NO X

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix B (as part of sensitivity map). **Refer to Appendix B7.**

7. BIODIVERSITY

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult <http://bgis.sanbi.org> or BGIShelp@sanbi.org. Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/ EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix B to this report.



- a) Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA) X	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	According to the conservation plan of the North-West Province (2009), the area is within a CBA 1 area. This includes large areas of the Zeerust town as well.
				The main reason for the area being a CBA1 area is the importance of the catchment and watercourses of the Marico Rivers in particular for the North-West Province. The watercourses in the region of Zeerust are seen as being under threat and therefore in need of conservation.

- b) Indicate and describe the habitat condition on site

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).
Natural	0 %	The study area's natural environment is scattered due to the fact that the property was previously an industrial site where bricks were made and distributed. There are areas of the property that have been left as 'wild veld', but there are no areas of pristine Zeerust Thornveld present.
Near Natural (includes areas with low to moderate level of alien invasive plants)	20%	The riparian areas of the Kareespruit and Klein Marico river are slightly modified to fairly pristine and have a number of beautiful, large trees.
Degraded (includes areas heavily invaded by alien plants)	80%	The study area's natural environment is scattered due to the fact that the property was previously an industrial site where bricks were made and distributed. Most of the site is disturbed ground. The natural veld, where it occurs, is dominated by Acacia thorn tree species with an herbaceous layer of mainly grasses on deep, high base-status and some clay soils on plains and lowlands.
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	%	



- c) Complete the table to indicate:
- (i) the type of vegetation, including its ecosystem status, present on the site; and
 - (ii) whether an aquatic ecosystem is present on site.

Terrestrial Ecosystems		Aquatic Ecosystems		
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	Critical	Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)		
	Endangered			
	Vulnerable			
	Least Threatened			
		YES X	NO	UNSURE

- d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)

Vegetation

Refer to Appendix G1

The study area and the surrounding region fall within the Savanna Biome, which is also known as the Bushveld Biome. According to the vegetation classification of Mucina & Rutherford (2006) the study area is found in the veldtype known as Zeerust Thornveld. According to Mucina & Rutherford the conservation status of Zeerust Thornveld is Least Concerned (LT).

The majority of the vegetation of the study area is disturbed. Until recently, the property was an active brick-making and distribution yard. The area is strewn with old, broken bricks and imported soils and gravels. Areas have been cemented around factories and stores and generally left in a poor condition.

There are areas of the property that have been left as 'wild veld', but there are no areas of pristine Zeerust Thornveld present. The vegetation of the study area is representative of Zeerust Thornveld with deciduous, open short thorny woodland in patches. The natural veld, where it occurs, is dominated by *Acacia* thorn tree species with an herbaceous layer of mainly grasses on deep, high base-status and some clay soils on plains and lowlands.

The Kareespruit Stream and the Klein-Marico River flow to the north-west and east of the study area. The vegetation within the riparian zones of the stream and river is that of *Acacia*, *Combretum* and *Celtis* woodland. The riparian zone of the Kareespruit (Stream) is slightly modified to fairly pristine and has a number of beautiful, large trees.

No red data species were observed during field investigations and none are expected to occur. No orange data plant species in terms of provincial lists were observed during field investigations either.

There are a number of alien plants in the study area. The herbaceous plants are especially prevalent in disturbed areas. Tree species such as *syringa* are also present. Alien plant species, some of which are invasive, occur scattered throughout the area, especially in disturbed areas.

No nationally or provincially protected tree species were found within the study area during field investigations.

The habitats identified were grouped into two main habitats of thornveld and watercourses. The watercourse habitat includes the associated riparian zones. No significant rocky outcrops (koppies) or rocky ridges are present.



Aquatic Ecosystem

Two rivers were identified during field investigations i.e. the Kareespruit (Stream) and Klein-Marico River flowing to the north-west and east of the site. No other watercourses, including wetlands or farm dams are present on the study site. The Kareespruit flows into the Klein-Marico River and then in turn into the Klein Marico Poort Dam.

Both watercourses are perennial in nature. The Kareespruit is fed to a significant degree by a Waste Water Treatment Works (WWTW) situated on the northern side of the stream, as well as stormwater run-off. Water in the Kareespruit is highly polluted by raw sewage leaking from the WWTW on the north side of the stream, which not only totally decimates the aquatic macro-invertebrate communities and ecosystems, but is also a serious human health hazard. The Klein-Marico River although also polluted is to a lesser degree than the Kareespruit.

All of the watercourses identified during field investigations in the larger study area were assessed based on the modified Habitat Integrity approach of Kleynhans (1996, 1999). The ratings for both the Kareespruit and the Klein-Marico were found to be that of Category C (Moderately modified).

The two watercourses are important in terms of water supply for irrigation and general human consumption. The water from both these watercourses in the vicinity of the study area supply water to the important Klein-Marico Poort Dam.

Ecological Sensitivity Analysis

Fatal flaws

There are no fatal flaws. However, development directly within the Kareespruit or Klein-Marico would constitute a fatal flaw.

Priority areas

The study site is not situated within any priority areas. Priority areas include protected areas, important bird areas (IBA), wetlands and National protected areas expansion strategy (NPAES) focus areas.

North-West Province Biodiversity Conservation Plan

According to the conservation plan of the North-West Province (2009), the area is within a Critical biodiversity area (CBA 1). This includes large areas of the Zeerust town as well.

The main reason for the area being a CBA1 area is the importance of the catchment and watercourses of the Marico Rivers in particular for the North-West Province. The watercourses in the region of Zeerust are seen as being under threat and therefore in need of conservation.

Identified sensitive areas

The sensitive areas identified during field investigations are the Kareespruit (Stream) and the Klein-Marico River. As well as their associated riparian zones. The riparian zone needs to be viewed as being a part of the watercourse ecosystem. There are no other sensitive areas or habitats identified such as rocky outcrops (koppies) or areas of protected trees, etc.

There are no natural habitats or areas in a pristine condition. The watercourses, like all watercourses encountered, should be approached as sensitive. These areas were thus demarcated and rated as having a sensitivity rating of High. These areas should ideally be viewed during project planning and development as 'No-Go' zones. The sensitivity map is shown below.

Refer to Figure 10, Sensitivity Map (also attached as Appendix B6).





Figure 10: Sensitivity Map

Mitigation measures

The following mitigating measures are recommended to help reduce the negative impacts that the project might have on the natural environment. The implementation of recommended mitigating measures are necessary if the conclusions and assessments of the report are to remain pertinent.

Construction Phase

- No temporary facilities, temporary accommodation or temporary storage sites to be erected within 50m of the any watercourse, including the riparian zone.
- No portable toilets to be positioned within a 50m bufferzone of any watercourses.
- Only existing roads to be used by heavy vehicles during construction as far as possible.
- Avoid complete impeding and diverting of waterflow in watercourses during construction. Especially at the entrance of the National Road N4.
- Ensure stormwater runoff is probably diverted and channelled. Sufficient culverts, concrete channels, etc. must be used to dissipate energy of waterflow and volume.
- No indigenous trees of the project corridor to be removed. Patches of exotic trees within the corridor may be totally removed.
- Only existing watercourse crossings and existing roads must be used during construction and the transporting of materials and equipment.
- No excess imported soils or stone (if used during the construction phase) may be left behind. These materials to be removed immediately on completion of the project or activity.
- Disturbed surface areas in the construction phase to be rehabilitated. No open trenches to be left. No mounds of soils created during construction to be left. Soils around erected poles to be levelled and sculptured to the original contours of the surrounding soils.



- All hazardous materials such as but not limited to paint, turpentine and thinners must be stored appropriately to prevent these contaminants from entering the terrestrial and water environments.
- All construction material, equipment and any foreign objects brought into the area by contractors and staff to be removed immediately after completion of construction.
- Removal of all waste construction material to an approved waste disposal site.
- Proper rubbish/waste bins to be provided. These to be emptied weekly and the waste to be removed to an official waste disposal site.
- All vehicle and machinery tracks and disturbed areas to be rehabilitated immediately after the construction phase.
- No develop allowed within the watercourse or riparian zone.
- Remove of any indigenous trees from the riparian zone is prohibited.
- Ensure a proper Stormwater Management Plan is compiled and implemented.
- Ensure as small as possible footprint during construction phase.

Maintenance Phase

- Mechanical control and monitoring of alien plants around disturbed areas to be implemented.
- No chemical control (herbicides) of alien plants to be used within 100m of watercourses. Herbicides could get into the water system and will have a detrimental effect on the environment.
- Potential erosion areas to be inspected and corrected where necessary.
- Stormwater culverts, channels, etc. to be inspected and maintained on an ongoing basis.

8. 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 Archaeological or paleontological sites, on or close (within 20m) to the site? If YES, explain:	YES	NO X
	Uncertain	
Not applicable		

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

A Phase I Heritage Impact Assessment (HIA) study was done and no heritage resources as outlined in Section 3 of the National Heritage Resources Act 25 of 1999 were found in the project area. *Refer to Appendix G2.*

The report makes the following observations:

- Most sections of the project area are very accessible and the field survey was effective enough to cover significant sections of the project receiving environs. However, some portions of the proposed development site had limited access because of thick vegetation cover.
- The project area is predominantly industrial, commercial agricultural.
- Large sections of the proposed development site are severely degraded from existing developments such as clearing for brick moulding infrastructure, access roads, railway line, power lines and other industrial activities.

Recommendations/Mitigation

Should construction work begin for this project:

- The construction teams should be inducted on the significance of archaeological resources that may be encountered during subsurface construction work before they work on the area in order to ensure



appropriate treatment and course of action is afforded to any chance finds.

- If archaeological materials are uncovered, work should cease immediately and the SAHRA be notified and activity should not resume until appropriate management provisions are in place.
- If any evidence of archaeological sites or remains (eg, remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, marine shell and charcoal/ash concentrations), unmarked human burials, or other categories of heritage resources are found during the proposed activities, SAHRA APM Unit (Philip Hine, 021 462 4502) must be alerted immediately, and a professional archaeologist or palaeontologist, depending on the nature of the finds, must be contacted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological significance, a Phase 2 rescue operation might be necessary.

This report concludes that the impacts of the proposed development on the cultural and environmental values are not significant.

In addition a Paleontological Impact Assessment (PIA) was conducted. *Refer to Appendix G2.*

The report makes the following observations:

- The development is taking place on the Time Ball Hill Formation of the Pretoria Group, Transvaal Supergroup and the intrusive diabase.
- Fossils in South Africa mainly occur in rocks of sedimentary nature and not in rocks from igneous or metamorphic nature. Therefore, if there is the presence of Karoo Supergroup strata the palaeontological sensitivity can generally be LOW to VERY HIGH, and here locally **HIGH** for the Pretoria Group including the Time Ball Hill Formation (SG 2.2 SAHRA APMHOB, 2012).

Recommendation:

- The impact of the development on fossil heritage is **HIGH** and therefore a field survey or further mitigation or conservation measures may be necessary for this development (according to SAHRA protocol) if a fossil is found.
- A Phase 2 Palaeontological Impact Assessment and or mitigation may be recommended. The overburden and inter-burden must always be surveyed for fossils. Special care must be taken during the digging, drilling, blasting and excavating of foundations, trenches, channels and footings and removal of overburden not to intrude fossiliferous layers.

Will any building or structure older than 60 years be affected in any way?	YES	NO X
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	NO X
If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.		

9. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Ramotshere Moiloa Local Municipality is one of the local municipalities under Ngaka Modiri Molema District Municipality in the North West Province and one of the five local municipalities. The major towns are Groot Marico and Zeerust. According to Census 2011, the total population is 150,713.



Level of unemployment:

According to the Ramotshere Moiloa Local Municipality Reviewed IDP 2015-2016 the official unemployment rate was 36.2% in 2011.

Amongst the youth aged 15–34, 9 329 are employed while 5 609 are unemployed. The unemployment rate for this group is 45,8%.

Employment Status	Number
Employed	22437
Unemployed	12743
Discouraged Work Seeker	9030
Not Economically Active	45719

Economic profile of local municipality:

According to the Ramotshere Moiloa Local Municipality Reviewed IDP 2015-2016 the local municipality has a very narrow economic base and a very small economy.

Income	Percentage
None income	14,9%
R1 - R4,800	5,1%
R4,801 - R9,600	10%
R9,601 - R19,600	24,2%
R19,601 - R38,200	22,4%
R38,201 - R76,4000	10,3%
R76,401 - R153,800	6,9%
R153,801 - R307,600	4,1%
R307,601 - R614,400	1,5%
R614,001 - R1,228,800	0,3%
R1,228,801 - R2,457,600	0,2%
R2,457,601+	0,1%

Level of education:

According to the Ramotshere Moiloa Local Municipality Reviewed IDP 2015-2016 the level of education in 2011 was as follow: No schooling: 20.7%; Some Primary: 19.1%; Complete Primary: 0.5 %; Secondary: 27.5%; Grade 12: 21.2% and higher: 6.4%.

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R15 358 019
What is the expected yearly income that will be generated by or as a result of the activity?	R not known yet
Will the activity contribute to service infrastructure?	YES NO X
Is the activity a public amenity?	YES NO X
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	37.09
What is the expected value of the employment opportunities during the development and construction phase?	R5.25 Million
What percentage of this will accrue to previously disadvantaged individuals?	% not known



How many permanent new employment opportunities will be created during the operational phase of the activity?	43.33
What is the expected current value of the employment opportunities during the first 10 years?	R34 Million
What percentage of this will accrue to previously disadvantaged individuals?	% not known

10. SPECIALIST(S) CONSULTATION

Has a specialist been consulted to assist with the completion of this section?	YES X	NO
If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix F. All specialist reports must be contained in Appendix G and must meet the requirement in Appendix 6 of EIA Regulations, 2014.		



SECTION C: IMPACT ASSESSMENT

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

1. 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

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts 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. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report.



1.1 PLANNING AND DESIGN PHASE

ALTERNATIVE 1 (PROPOSAL)		
DIRECT IMPACTS		
Potential Impacts	Significance Rating	Mitigation Measures
<p>Accessibility of the site</p> <p>Site that is not easily accessible will result in traffic congestion, dangerous traffic manoeuvres and risk to pedestrians</p>	MEDIUM	<ul style="list-style-type: none"> • Site access to conform to municipal standards and road traffic legislation.
<p>Impact on the Natural Habitat and watercourses</p> <p>Insensitive layout can cause a negative impact on the natural habitat of not only the site itself, but also on the surrounding natural environment. The context of the development site within the macro area in terms of conservation areas also plays a major role when suitable areas for development are being considered. The development site (or parts thereof) could form part of important ecological corridors and such corridors could be destroyed if the functioning thereof is not being supported by the development proposal.</p> <p>The site is close to two watercourses (Kareespruit and Klein Marico River) and riparian vegetation. A section of the site falls within the 1:100 year flood lines.</p>	MEDIUM	<ul style="list-style-type: none"> • Filling station design should take cognisance of the 1:100 year flood lines. USTs may not be installed within the 1:100 year flood lines • Design to include an appropriate management system for contaminated stormwater runoff from the forecourt and FDA
<p>Ground and surface water pollution</p> <p>Areas in close proximity to fuel dispensing equipment carry a high environmental risk associated with intensive fuelling activity and the potential for minor spills to</p>	MEDIUM	<ul style="list-style-type: none"> • Design to include an appropriate management system for contaminated stormwater runoff from the forecourt and FDA



accumulate.		
INDIRECT IMPACTS		
No indirect impacts were identified during the planning and design phase.		
CUMULATIVE IMPACTS		
No cumulative impacts were identified during the planning and design phase.		

NO GO ALTERNATIVE		
DIRECT IMPACTS		
Potential Impacts	Significance Rating	Mitigation Measures
No direct impacts were identified during the planning and design phase.		
INDIRECT IMPACTS		
No indirect impacts were identified during the planning and design phase.		
CUMULATIVE IMPACTS		
No cumulative impacts were identified during the planning and design phase.		



1.2 CONSTRUCTION PHASE

ALTERNATIVE 1 (PROPOSAL)		
DIRECT IMPACTS		
Potential Impacts	Significance Rating After mitigation	Mitigation Measures
<p>Geology and soils</p> <p>Stability of structures due to underlying geology.</p> <p>Soil disturbances and erosion.</p>	LOW	<ul style="list-style-type: none"> The foundation recommendations supplied by the geotechnical engineers must be implemented. The underground fuel tanks should be placed on a minimum of 150mm compacted inert material "bedding" and a minimum of 150mm inert backfill material should be placed around the tanks. The design of raft foundations (whether soil or concrete) should be done in accordance and under supervision of a civil or structural engineer and the NHBRC recommendations should be verified during construction. Strict quality control is necessary during the compaction procedure to ensure that the desired result is achieved. Densities and stiffness of the compacted soils must be controlled with suitable field tests. The design of first floor and upper slabs should take the estimated heave into account. The potential expansive nature of the soils should be borne in mind for the design of the tanks, fuel lines, pipes etc. as swell pressures may develop over time. A stormwater and erosion control plan must be implemented across the entire development site to prevent and control erosion impacts.
<p>Groundwater and surface water contamination</p> <p>Contamination of the environment, specifically the soil and groundwater could arise during the construction phase. The potential exists for construction activities, workers and materials to transfer contaminants to the surrounding environment. This could arise as a result of, for example, inadequate ablution facilities, spillage of hazardous substances stored on the site, fuel and oil leaks, inappropriate responses to hazardous spills and improper waste handling, storage and disposal.</p>	LOW	<ul style="list-style-type: none"> Portable toilets should be kept away from sensitive drainage areas. Portable toilets used during construction must be connected to the bulk sewerage lines if possible. Alternatively portable toilets should be sealed units that can be cleaned by truck and the waste must be taken to a suitable sewage facility for treatment. They should be well maintained and regularly cleaned and sewage should not be allowed to directly access the groundwater. Toilets must be used as a first priority. "Go to the bush" must be prohibited. No uncontrolled discharges from the construction camp should be permitted. All vehicles shall be properly maintained and serviced so that no oil leaks occur on site.



		<ul style="list-style-type: none"> • The large roof structures to be implemented may enhance storm water volumes that need to be managed. • A storm water plan must be available and used during all the phases of construction. • Vehicles and machines on site must be maintained properly to ensure that oil spillages are kept at a minimum. • Spill trays must be provided for refuelling of construction vehicles. • Every effort must be made to ensure that any chemicals or hazardous substances do not contaminate the soil or ground water on site.
<p>Impact on vegetation This impact is associated with disturbance to and/or destruction of the flora component.</p> <p>During construction the activities could cause a negative impact where insensitive clearing for construction and access purposes, etc. is required. Insensitive clearing can cause the destruction of habitat. Not only does vegetation removal represent a loss of seed and organic matter, but it is also a loss of protection to plants and small animals. Insensitive vegetation clearance can also cause erosion. Pressure on the natural environment will occur as a result of an influx of labourers into the area that could involve the collection of firewood and medicinal plants, as well as uncontrolled veld fires.</p> <p><u>The development site</u> The majority of the vegetation of the study area is badly disturbed and degraded. Until recently, the property was an active brick-making and distribution yard. There are no priority species, including red data species.</p>	LOW	<p>Detail mitigation measures are stipulated in the EMPr and include the following:</p> <ul style="list-style-type: none"> • Any temporary storage or accommodation facilities to be setup during construction to be within existing disturbed areas only. • No temporary facilities or portable toilets to be setup within 50m of watercourses and riparian zones. • Avoid impeding or diverting waterflow during construction phase. • Do not remove any indigenous trees from the riparian zone. • Ensure a proper Stormwater Management Plan is compiled and implemented. • No fires whatsoever may be made for the burning of vegetation and waste. Fire fighting equipment must be readily available on site. • The exact clearing areas must be identified and demarcated. • Alien vegetation shall be managed and Category 1, 2 and 3 plants shall be controlled to the extent necessary to prevent or to contain the occurrence, establishment, growth, multiplication, propagation, regeneration and spreading of such plants.
<p>Impacts associated with construction activities such as noise, dust and safety</p> <p>The negative impact of noise and dust, generally associated with construction activities, are temporary, occurring mostly during the construction phase. The</p>	MEDIUM	<p><u>Noise mitigation measures</u></p> <ul style="list-style-type: none"> • Construction hours will be restricted to specific periods that exclude Sundays and public holidays. <p><u>Dust mitigation measures</u></p>



<p>impact should however be considered in context with the nature of the surrounding area. Noise pollution exists due to the N4 adjacent to the site.</p> <p>The noise impact is therefore not expected to be significant.</p> <p>In terms of safety, it should be noted that the project involves deep excavations and open trenches. Excavations and open trenches can act as a trap for children (and also snakes, small mammals and lizards).</p>		<ul style="list-style-type: none"> • Sweeping of construction sites, clearing of building rubble and debris as well as regular watering of the construction site (storage areas, roads, etc.) must take place on a regular basis. • There should be strict speed limits on site roads to prevent the liberation of dust into the atmosphere <p><u>Safety mitigation measures</u></p> <ul style="list-style-type: none"> • The area affected by construction must be fenced prior to any activities taking place. • All excavated areas must be clearly marked and barrier tape must be placed around them for safety purposes. • A Fire Management Plan has to be identified during the pre-construction phase and must be implemented throughout the construction and operation phases of the development
<p>Traffic</p> <p>The construction phase is likely to generate additional traffic in terms of construction vehicles and heavy vehicles delivering materials to the site.</p>	<p>MEDIUM</p>	<ul style="list-style-type: none"> • The additional traffic generated is likely to be well within the capacity of the existing road network. • The heavy construction vehicles should avoid the local roads during peak traffic times and large deliveries should also be scheduled outside the peak traffic times • Signs should be erected in the vicinity of the site and N4 junction.
<p>Impact of Labourers</p> <p>An uncontrolled influx of labourers with resulting increase in crime and squatting would place pressure on the natural environment (placement of snares, removal of trees for firewood, careless waste disposal, etc.). This could be severe, resulting in permanent damage to the environment if not mitigated properly.</p>	<p>LOW</p>	<ul style="list-style-type: none"> • Mitigation measures to counter impact on the natural environment and limit potential for crime during the construction phase should include specifications in terms of control of construction workers (i.e. provision of toilet and cooking facilities, provision of either accommodation facilities or transport facilities, implementation of Environmental Educational Programmes, etc.). • Accommodation for labourers must either be limited to guarding personnel on the construction site (with labourers transported to and from existing neighbouring towns) or a separate fenced and controlled area where proper accommodation and relevant facilities are provided. • Part of the adjudication process for the successful contractor to undertake the civil works must be the use of casual and unskilled labour to stimulate local job creation through the use of labour intensive methods where possible.
<p>Impact on Cultural Heritage Resources</p> <p>No heritage resources were identified by the Phase 1</p>	<p>LOW</p>	<ul style="list-style-type: none"> • The construction teams should be inducted on the significance of archaeological resources that may be encountered during subsurface construction work before they work on the area in



<p>Heritage Impact Assessment and no fossils were identified in the Paleontological Impact Assessment.</p> <p>There is however always a probability that archaeological resources might be identified during excavations.</p>		<p>order to ensure appropriate treatment and course of action is afforded to any chance finds.</p> <ul style="list-style-type: none"> • If archaeological materials are uncovered, work should cease immediately and the SAHRA be notified and activity should not resume until appropriate management provisions are in place. • If any evidence of archaeological sites or remains (eg, remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, marine shell and charcoal/ash concentrations), unmarked human burials, or other categories of heritage resources are found during the proposed activities, SAHRA APM Unit (Philip Hine, 021 462 4502) must be alerted immediately, and a professional archaeologist or palaeontologist, depending on the nature of the finds, must be contacted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological significance, a Phase 2 rescue operation might be necessary. • The impact of the development on fossil heritage is HIGH and therefore a field survey or further mitigation or conservation measures may be necessary for this development (according to SAHRA protocol) if a fossil is found. • A Phase 2 Palaeontological Impact Assessment and or mitigation may be recommended. The overburden and inter-burden must always be surveyed for fossils. Special care must be taken during the digging, drilling, blasting and excavating of foundations, trenches, channels and footings and removal of overburden not to intrude fossiliferous layers.
<p>Waste Management</p> <p>The construction phase will create large quantities of builder's and domestic waste to be accommodated by local legal landfill sites.</p>	<p>LOW</p>	<ul style="list-style-type: none"> • Prevent unhygienic usage on site and pollution of the natural assets. • Develop a central waste temporary holding site to be used during construction. (Near the access entrance). This site should comply with the following: • Skips for the containment and disposal of waste that could cause soil and water pollution, i.e. paint, lubricants, etc.; • Small lightweight waste items should be contained in skips with lids to prevent wind littering; • Bunded areas for containment and holding of dry building waste; • These areas shall be predetermined and located in areas that is already disturbed. These areas shall not be in close proximity of drainage channels; • Workers will only be allowed to use temporary chemical toilets on the site. Chemical toilets shall not be in close proximity of drainage channels; • No French drain systems may be installed.



INDIRECT IMPACTS		
Economic impacts Positive economic impacts are anticipated	LOW SIGNIFICANCE	Positive economic impacts are anticipated during the construction phase of the proposed development. The construction phase of the proposed development will provide employment opportunities. The Local Municipality is supportive of development. The construction phase employment opportunities generated by the proposed development are considered a positive economic impact of low significance.
CUMULATIVE IMPACTS		
Ground and surface water pollution	LOW SIGNIFICANCE	

NO GO ALTERNATIVE		
DIRECT IMPACTS		
Potential Impacts	Significance Rating	Mitigation Measures
All the impacts outlined above will not apply to the No-Go alternative as the status quo will apply and the environment will remain as it is currently. However, it is important to note that the benefits associated with the development will also not materialise, and it must be noted that the majority of the impacts identified for the development were mitigated to a negative low or positive impact once the measures for mitigation were applied, indicating that maintaining the status quo is to lose the opportunity of a beneficial development with negligible environmental impacts.		
DIRECT IMPACTS		
No indirect impacts were identified during the construction phase.		
CUMULATIVE IMPACTS		
No cumulative impacts were identified during the construction phase.		



1.3 OPERATIONAL PHASE

ALTERNATIVE 1		
DIRECT IMPACTS		
Potential Impacts	Significance Rating	Mitigation Measures
<p>Soil and Groundwater Contamination</p> <p>There is potential for soil and/ or groundwater contamination during the operation phase, as a result of accidental spills or leaks from the underground fuel storage and handling infrastructure, including pipework and underground storage tanks.</p> <p>In the absence of the correct design standards, groundwater contamination could potentially arise during the operational phase of the proposed development. One mechanism through which contamination could occur could be as a result of the establishment of seasonal perched groundwater conditions. Such occurrence could render the submerged petroleum storage tanks buoyant, and could result in a rupture to the underground storage tank (UST) or the connecting ancillary infrastructure.</p> <p>Unmitigated the potential impact on groundwater aquifers would have a negative impact of very high significance. However if the underground storage tanks are designed and installed in accordance with the SABS Standards, and, if the findings and recommendations of the geotechnical investigation and the geohydrological investigation are adequately incorporated into the engineering design of the proposed development, the potential of UST rupture becomes highly unlikely. SABS Standards make provision for the anchoring of USTs to prevent tank buoyancy. Therefore, the potential impact under these conditions is expected to be of very low significance.</p> <p>When petroleum filling stations are designed and installed</p>	MEDIUM	<ul style="list-style-type: none"> • Storm water originating from the filling station surface area must be treated as dirty water. • Stormwater management from the forecourt area should be designed to collect all runoff which should pass through an oil/water separator prior to being discharged. • Clean water and dirty water systems must be separated. • Storm water must be directed away and around the filling station sites. • Leak detection systems must be implemented in all fuel storage and transmission lines and tanks. A proper leakage detection system must be installed to prevent contamination of the surrounding soil, ground water as well as the river located north of the site in the event of a leak. • Air monitoring systems must be implemented around the storage tanks. • The spillage of fuels, chemicals and or sewerage water must be immediately reported to the assigned Departments stipulated in the water use licence document and other documents stipulating monitoring practices. • The proposed two surface monitoring points (Upstream and Downstream) and borehole H/BH 3 must be used as a groundwater monitoring point. • A fourth point for surface monitoring can be added. The recommended position for the fourth point is the Bridge at the crossing of the Klein Marico River and the N4. • An emergency accidental spillage plan must be in place and workers must be trained to handle such accidents. • No uncontrolled discharges resulting in pollution of the receiving environment and aquifer shall be permitted. • Chemical storage areas should be sufficiently contained, and the use of chemicals should be controlled. • Water seeping into filled levels on site must be prevented. • Water pumped from any sump or temporary dewatering pit should be pumped into a dirty water system and should not be allowed to enter any clean water system, natural drainage line, or the aquifer. • Fuel storage tanks must be constructed according to SABS guidelines • The underground storage tank installation must comply with SANS 10089 part 1 (storage of dangerous goods in underground storage tanks).



<p>according to the correct standards, ground water contamination concerns are more focused on potential leaks from pipe fittings/valves and spillages which may occur from time to time, during the transfer of petroleum products to the underground storage tanks, and to a lesser extent, during the filling of motor vehicles. By implementing the recommended mitigation measures, the potential groundwater impact associated with the proposed development will have a low significance.</p> <p>Contamination could furthermore arise as a result of the spillage of hazardous substances, inappropriate responses to hazardous spills, improper waste handling, storage and disposal, and the failure of the effluent management system or stormwater management system.</p>		<ul style="list-style-type: none"> • An Emergency Response Plan must be in place for the site, this must clearly describe emergency procedures and include emergency contact numbers. • If contamination or leakage is detected, this Emergency Response Plan must be followed. • Following a leak or accidental spill, a remediation plan must be compiled and executed. • Accidental spills that may occur on the forecourt must be cleaned up immediately using a spill absorbent, which must then be removed by a licensed contractor. • Fuel stock must be monitored on a daily basis and these records must be kept on site. • USTs must have corrosion protection and secondary containment. • Inspection wells will be installed within the underground storage tank containment area, at all four corners of the containment area. These wells must be inspected on a monthly basis so that leaks can be detected early. • The forecourt must have an impervious surface, such that fuel and oil products will not leak into the soil
<p>Impact on water resources</p> <p>The proposed development could have a negative impact on water resources. Increased coverage of paved/hardened surfaces may increase the volume and velocity of stormwater runoff.</p>	<p>MEDIUM</p>	<p>A Stormwater Management Plan must be implemented.</p>
<p>Traffic impact</p> <p>According to the Traffic Impact Assessment Study the proposed development will have little to no impact on the surrounding road network.</p> <p>The filling station's contribution to the cumulative traffic impact is minor.</p> <p>It is expected that the filling station will intercept traffic driving to and from the larger Zeerust X 5 development and will not generate any additional trips.</p>	<p>LOW</p>	<p>No mitigation required</p>



<p>Air Quality Impacts</p> <p>Impacts on air quality will arise due to exhaust fumes from motor vehicles, emissions from vent pipes and the release of VOCs during fuel transfer.</p> <p>The VOCs released during fuel transfer and from vents will dissipate into the atmosphere shortly after being released and are not likely to travel to the surrounding areas.</p>	<p>LOW</p>	<ul style="list-style-type: none"> • The underground storage tanks must be designed and installed in accordance with the SABS 089-3-1999, Third Edition. Code of practice - The petroleum industry, Part 3: The installation of underground storage tanks, pumps/dispensers and pipework at service station and consumer installations). SANS standards adequately address various potential air quality impacts via the implementation of required engineering measures. • Underground storage tanks must be fitted with breather pipes. • Vent pipes are to be fitted such that they face away from neighbouring residential areas. • All fuel delivery vehicles must be adequately maintained to reduce exhaust emissions.
<p>Visual Impact</p>	<p>LOW</p>	<ul style="list-style-type: none"> • Building and landscaping should receive on-going maintenance to avoid visual decay. • Litter and waste should be effectively managed to avoid visual problems in the area. • All yards and storage areas to be enclosed by masonry walls or screens. • The forecourt apron and parking bays should be paved with brick or other unit pavers to minimize expansive asphalt areas. • External lighting should be confined to the dispensing forecourt, commercial outlets and other essential areas. • Lights should be low-level, where possible, and fitted with reflectors to avoid light spillage. • Lights and signage should be fixed to buildings or walls, where possible, to avoid unnecessary masts and visual clutter. • Signage related to the enterprise should be confined to the tower, canopy and entrances. Other corporate or advertising signage and flags should be avoided or restricted. • Obtain the necessary approvals for the erection of advertising and other signs at the relevant authorities. If signs are visible from the N4 Highway applications must be submitted to SANRAL.
<p>Socio-Economic Impact</p> <p>Employment opportunities</p> <p>The proposed filling station is highly likely to be viable</p> <p>The proposed filling station is largely dependant on the traffic generated by the larger Zeerust X 5 development</p>	<p>LOW POSITIVE</p>	<p>The proposed development will supply employment opportunities and will contribute to the local economy.</p>



<p>Impact on existing filling stations</p> <p>The proposed filling station development may result in a negative economic impact to fuel retailers in close proximity due to increased competition. These retailers may object to the proposed development on this basis. Limited job losses from other filling stations in Zeerust</p>	MEDIUM	No mitigation
<p>Noise Impact</p> <p>Noise caused by filling station, restaurant, places of amusement, events (especially after hours) and noise caused by air conditioners, compressors etc.</p>	LOW	<ul style="list-style-type: none"> • Equipment such as mechanical equipment, extraction fans, refrigerators that are fitted with noise reduction facilities (e.g. side flaps, silencers etc.) must be used as per operating instructions and maintained properly. • Noise levels should comply with the SANS Code of Practice 100103 – 0994 (recommended noise levels). • Local by-laws for noise levels must be adhered to.
<p>Health and Safety Impacts</p> <p>Petroleum and diesel fuel are considered dangerous substances as they are volatile and could potentially ignite under specific circumstances. Therefore, there is a risk of fire or explosions on site, which would pose a threat to on-site employees and surrounding land users and occupiers. However, this impact is highly unlikely to occur as there are numerous imbedded mitigation measures to minimize the risk of fires and explosions.</p>	LOW	<ul style="list-style-type: none"> • Fire extinguishers and sand bags must be readily available onsite and easily accessible. • Firefighting equipment must comply with SANS 1151 (Portable rechargeable fire extinguishers - Halogenated hydrocarbon type extinguishers), and must be inspected regularly. • Appropriate health and safety signage must be displayed on site. • An Emergency Response Plan must be in place for the site, this must clearly describe emergency procedures and include emergency contact numbers. • No smoking may be permitted on site. • No cell phones may be used during fuel dispensing. • Staff must be trained adequately so as to identify potential high risk situations and implement the Emergency Response Plan. • Overfill and spillages during tanker refueling and fuel dispensing should be prevented by the installation of automatic cut off devices. • Tanker delivery drivers must be present during delivery of fuel with the emergency cut off switch and a fire extinguisher. • A closed coupling must be used when fuel is being transferred from the bulk delivery vehicle to the underground storage tanks to prevent fugitive emissions.
<p>Damage to parking bays and structures due to flooding</p> <p>Structures (i.e. canopy & pumps) and parking bays within the</p>	MEDIUM	<p>The portions of the parking below the flood line should be raised with additional road layers and should be protected against potential flooding and erosion.</p>



1:100 year flood lines may be damaged due to flooding.		
INDIRECT IMPACTS		
<p>The presence of a filling station may cause a real or perceived decrease in property values in the adjacent area. The reverse is that the amenity benefit may be attractive to some neighbouring occupiers.</p> <p>The in-filling of such areas with appropriate commercial development also accords with urban planning principles.</p> <p>There is a possibility that the proposed facility will compete with existing, established filling stations located within approximately a 3 km radius of the proposed development site. This would affect the economic feasibility and long terms sustainability of both the existing facilities and the proposed new facility and may result in decreased profit margins. This may result in the need to cut down on the number of staff at the existing stations. It is not anticipated, however, that this impact will arise, as the proposed facility intends to target a market which is not targeted by the existing facilities, namely customers of the proposed shopping centre. Thus, it is anticipated that there is sufficient market demand to support all of the filling station facilities.</p> <p>The proposed development is projected to provide an input stimulus into the local economy. The direct impact on the economy, through the associated larger development, could result in growth in the local economy.</p>		
CUMULATIVE IMPACTS		
<p>Municipal Infrastructure</p> <p>The extra pressure that this development could place on the existing municipal infrastructure for waste and sewage</p>		



disposal as well as water provisions could be significant when seen together with other developments within the greater municipal area.		
Litter (if wastes are improperly handled, stored and disposed of).		
Skills development.		
Increased wealth in the community.		

NO GO ALTERNATIVE		
DIRECT IMPACTS		
Potential Impacts	Significance Rating	Mitigation Measures
All the impacts outlined above will not apply to the No-Go alternative as the status quo will apply and the environment will remain as it is currently. However, it is important to note that the benefits associated with the development will also not materialise, and it must be noted that the majority of the impacts identified for the development were mitigated to a negative low or positive impact once the measures for mitigation were applied, indicating that maintaining the status quo is to lose the opportunity of a beneficial development with negligible environmental impacts.		
DIRECT IMPACTS		
No indirect impacts were identified during the operational phase.		
CUMULATIVE IMPACTS		
No cumulative impacts were identified during the operational phase.		



1.4 DECOMMISSIONING AND CLOSURE PHASE

ALTERNATIVE 1		
DIRECT IMPACTS		
Potential Impacts	Significance Rating	Mitigation Measures
<p>Soil and Groundwater Contamination</p> <p>There is potential for soil and groundwater contamination as a result of accidental spills and leaks from underground storage tanks and associated infrastructure that may have occurred during the operation phase.</p> <p>Hydrocarbon contamination may persist in the subsurface for an extended period before degradation takes place.</p>	LOW	<ul style="list-style-type: none"> Residual product must be removed from the underground storage tanks and associated infrastructure. Underground storage tanks must be degassed before removal. Soil samples must be taken from the base and sides of the underground storage tank excavation to determine whether or not the soil has been impacted during the lifespan of the underground storage tank. Excavated soil will be screened with a PID to ensure appropriate handling of impacted soil (i.e. bioremediation at an appropriately licensed facility) or reuse of the soil as backfill onsite. Should it be determined that the site has been impacted and the soil and/or groundwater have been contaminated, a Remediation Action Plan must be developed and implemented by appropriately qualified personnel
<p>Air Quality Impacts</p> <p>There is potential for the air quality to be impacted through the decommissioning activities that may generate dust through excavation activities and disturbing the ground.</p> <p>Exhaust emissions produced by construction equipment will be dispersed and it is not anticipated they will cause a nuisance to surrounding landowners.</p>	LOW	<ul style="list-style-type: none"> Dust suppression methods, such as wetting or laying straw, should be applied where there are large tracks of exposed surfaces. Stockpiles and soil heaps must be covered with tarpaulins or straw to prevent fugitive dust. All construction vehicles must be appropriately maintained to minimise exhaust emissions
<p>Traffic Impacts</p> <p>Vehicle traffic around the site may increase during the decommissioning phase and impact the natural traffic flow around the site.</p>	LOW	<ul style="list-style-type: none"> Co-ordination of movement of vehicles on and off site to reduce risks and prevent congestion on roads in the vicinity of the site. No vehicles or machinery should be serviced or refuelled onsite. Peak traffic hours should be avoided. Large vehicle turning must take place onsite and not in the adjacent roads. In cases where activities may obstruct traffic, local traffic officials must be contacted
<p>Loss of Employment</p>	LOW	<ul style="list-style-type: none"> Existing employees may be transferred to another service station if feasible. Employees must be given adequate notice prior to closure, to allow them time to seek



<p>The closure of the service station will mean that those employed at the service station will no longer be required, and their employment may be terminated.</p>		<p>alternative employment.</p> <ul style="list-style-type: none"> • Service station management must supply employees with a letter of recommendation and certificate of skills to assist them with future job applications.
<p>Occupational Health and Safety</p> <p>During the decommissioning phase, open excavations, vehicle movement and other construction activities may pose a health and safety hazard to workers.</p>	<p>LOW</p>	<ul style="list-style-type: none"> • The construction site must be fenced off to prohibit unauthorised access and site access must be strictly controlled. • All employees, contractors and sub- contractors to wear appropriate PPE. • Open excavations must be clearly marked. • All employees, contractors and sub- contractors must comply with the relevant Health and Safety Policy. • Appropriate health and safety signage must be displayed on site.
<p>Noise and Vibrations</p> <p>Vehicles and other machinery required for decommissioning will increase the noise levels during working hours.</p> <p>Decommissioning activities which are likely to cause vibrations include:</p> <ul style="list-style-type: none"> o gaining access to the underground tanks through the demolition of concrete by excavation machinery; and o entry and use of construction vehicles as well as cranes on site. 	<p>LOW</p>	<ul style="list-style-type: none"> • The contractor will adhere to local authority by-laws relating to noise control. • Decommissioning activities will be restricted to regular working hours, i.e. Monday to Friday (08:00 –17:00). • Mechanical equipment with lower sound power levels will be selected to ensure that the permissible occupation noise-rating limit of 85 dBA is not exceeded. • Equipment will be fitted with silencers as far as possible to reduce noise. • All equipment to be adequately maintained and kept in good working order to reduce noise. • Neighbouring landowners should be informed prior to any very noisy activities e.g., high intensity drilling. • A grievance procedure will be established whereby noise complaints can be received, recorded and responded to appropriately. • Workers and personnel will wear hearing protection when required.



It is evident that the biggest impact of the project on the environment is expected to occur during the construction phase. It is expected that with the proposed mitigation of impacts and the implementation of the Environmental Management Plan, the expected negative impact could be mitigated to acceptable measures.

EVALUATION METHOD FOLLOWED

The nature and extent of expected negative impacts are described directly under the heading for each impact.

Below this description for each impact, a table has been designed to facilitate evaluation of the expected negative impact in terms of significance (intensity), duration, probability and significance after mitigation.

The numerical values used for "Impact Severity" (significance / intensity) relates to the potential severity of the proposed project on the specific environmental component without any mitigation and is being evaluated and rated on a scale from 0 to 4 where the following values apply :

- 0 = no impact
- 1= low impact
- 2 = medium impact
- 3 = significant impact
- 4 = severe impact

The duration of the expected negative impact is supplied as either "temporary" - 0-3 years (generally during construction) or "permanent". The probability that the expected negative impact would occur if not mitigated is

Briefly describe the methodology utilised in the rating of significance of impacts

2. ENVIRONMENTAL IMPACT STATEMENT

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

Alternative 1 (Proposal)

PLANNING & DESIGN PHASE

Impact Description	Impact Severity Degree (0 - 4)	Extent Local / Regional / National	Duration Temporary / Permanent	Probability Probability it would occur: low / medium / high	Severity of Impact After Mitigation
Geology and soils	2	Local	Temporary	Medium	1
Impact on Natural Habitat and watercourses	2	Local	Permanent	Medium	1
Visual Impact	2	Local	Permanent	Medium	1
Light Pollution	2	Local	Permanent	Medium	1



CONSTRUCTION PHASE

Impact Description	Impact Severity Degree	Extent Local / Regional / National	Duration Temporary / Permanent	Probability <i>Probability it would occur: low / medium / high</i>	Severity of Impact After Mitigation
Geology and soils: Stability of structures and soil erosion	2	Local	Permanent	Medium	1
Groundwater and surface water contamination	2	Regional	Permanent	Medium	1
Impact on Natural Habitat	2	Local	Temporary	Low	1
Impact on Water Resources	3	Local	Temporary	Medium	1
Impact of Noise, Safety and Dust	2	Local	Temporary	Medium	1
Traffic Impact	2	Local	Temporary	Medium	1
Impact of Labourers	2	Local	Temporary	Low	1
Impact on Cultural Heritage Resources	1	Local	Temporary	Low	1
Waste Management	2	Local	Temporary	Low	1
Economic Impacts This will be a POSITIVE impact	1	Local	Temporary	Medium	1

OPERATIONAL PHASE

Impact Description	Impact Severity Degree	Extent Local / Regional / National	Duration Temporary / Permanent	Probability <i>Probability it would occur: low / medium / high</i>	Severity of Impact After Mitigation
Soil and groundwater contamination	3	Regional	Permanent	High	2
Impact on water resources	3	Local	Permanent	High	2
Traffic impact	1	Local	Permanent	Low	1
Air Quality Impacts	1	Local	Permanent	Medium	1
Visual impacts	2	Local	Permanent	Medium	1
Noise impacts	1	Local	Permanent	Medium	1
Socio-Economic Impacts Employment opportunities This will be a POSITIVE impact	3	Local	Permanent	Medium	1
Socio-Economic Impacts Impact on existing filling stations	2	Local	Permanent	Medium	2
Health and safety Impacts	2	Local	Permanent	Medium	1



Alternative 2

N/A

Alternative 3

N/A

No-go alternative (compulsory)

<p>It is suggested that to maintain the status quo is not the best option for the macro environment. All the impacts outlined above will not apply to the No-Go alternative as the status quo will apply and the environment will remain as it is currently. However, it is important to note that the benefits associated with the development will also not materialise, and it must be noted that the majority of the impacts identified for the development were mitigated to a negative low or positive impact once the measures for mitigation were applied, indicating that maintaining the status quo is to lose the opportunity of a beneficial development with negligible environmental impacts.</p>



SECTION D: PUBLIC PARTICIPATION

Public participation plays an important role in the compilation of environmental reports as well as the planning, design, and ultimately the implementation of the project. Public participation is a process leading to informed decision-making, through joint effort by the proponent, technical experts, governmental authorities, and systematically identified I&APs.

Setela has taken cognisance of the requirements for public participation in terms of the current 2014 EIA Regulations, and has ensured that the public participation principles are upheld. A successful Public Participation Programme (PPP) is one that is inclusive, actively engages the public and provides ample opportunity for the public to participate in the process. This document provides an overview of the PPP undertaken as part of the BA process for the proposed project.

The purpose of the PPP is to ensure that the issues, inputs and concerns of Interested and Affected Parties (I&APs) are taken into account during the decision-making process. This requires the identification of I&APs (including authorities and the public), communication of the process and findings to these I&APs and the facilitation of their input and comment on the process and environmental impacts, including issues and alternatives that are to be investigated. The steps taken during the execution of the PPP undertaken for this project are detailed in the section that follows.

1. ADVERTISEMENT AND NOTICE

Publication name	Mmega Dikgang
Date published	24 February 2017 (monthly edition)
Publication name	Beeld
Date published	10 February 2017
Site notice position	1. On the billboard at the entrance to the site 2. At the proposed entrance in Kloof street to the bigger site (for all phases of the development)
Date placed	10 February 2017

(Refer to Appendix I1a: Proof of newspaper advertisements)

(Refer to Appendix I1b: Proof of site notices)

2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 41(2)(e) and 41(6) of GN R.982.

2.1 Public notification

A consultation process was undertaken with the intent of informing key community stakeholders, comprising the Municipal structures and the local communities (directly affected people) about the proposed development and the Basic Assessment process underway.



2.1.1 Identification of Interested and Affected Parties

- The PPP for the project was initiated with the development of a comprehensive I&AP database. The list of I&APs was updated on a regular basis during the course of the project. *Refer to Appendix I5a: Register of Interested and Affected Parties for a complete list.*
 - Department of Rural, Environment and Agricultural Development, North West Provincial Government: Environmental Services
 - Department of Rural, Environment and Agricultural Development: North West
 - Department of Water and Sanitation, North West Regional Office, Crocodile West and Marico WMA
 - North West Department of Community Safety and Transport Management
 - North West Department of Public Works and Roads
 - National Department of Agriculture, Forestry and Fisheries Directorate: Land Use and Soil Management
 - Department of Agriculture, Forestry and Fisheries, Forestry & Natural Resource management, Forestry Regulation & Oversight, Compliance & Enforcement Section
 - North-West Department of Rural Development and Land Reform: Land Restitution Support
 - North-West Department of Rural Development and Land Reform: Regional Land Claims Commissioner
 - North West Department of Mineral Resources
 - Department of Energy
 - North West Provincial Heritage Resources Authority (NWPHERA)
 - South African Heritage Resources Authority (submitted via SAHRIS)
 - Ramotshere Moiloa Local Municipality, Community Development Services, Environmental Management
 - Ramotshere Moiloa Local Municipality, Planning and Local Economic Development
 - Ramotshere Moiloa Local Municipality, The Municipal Manager
 - Ngaka Modiri Molema District Municipality, Municipal Manager
 - Ngaka Modiri Molema District Municipality, Municipal Health Services, Environmental Section
 - The Cradle of Humankind World Heritage Site Management Authority
 - SA National Roads Agency: Northern Regional Office
 - Bakwena Platinum Corridor Concessionaire (Pty) Ltd (N4)
 - Transnet Freight Rail: Environment Management
 - SA Civil Aviation Authority
 - Eskom Transmission, Property Rights Assets Management (PRAM)
 - Eskom Distribution North West Operating Unit
 - North West Parks and Tourism Board, Conservation Management Division
 - Wildlife and Environmental Society of SA: Northern Areas Region
 - Endangered Wildlife Trust
 - Fuel and Retailers Association
 - Shell Zeerust Ultra
 - Shell Woltemade
 - Total Zeerust
 - BP Nissan
 - BP Zeerust, Trade 280CC
 - Total NWK
 - Zeerust Shopping Centre
 - MBT Zeerust Truck Stop
 - Joske's Freight Agents
 - Thago Moso Resort Hotel
 - Hazia Instant Lawn & Irrigation
 - Zeerust Modern Bricks
 - Zeerust WWTW
 - Councillors
 - Affected landowners



2.1.2 Background Information Document

- A comprehensive background information document was compiled with the main aim to identify issues, and potential impacts associated with this project. It included a description of the status quo of all relevant environmental components as well as the proceedings of the PPP and communication with registered Interested & Affected Parties (I&APs).
- On 10 February 2017 the documentation was submitted for comment to all I&APs.
- The due date for comment was 14 March 2017. This allowed for a comment period of 30 days.
- Copies of the notification to key stakeholders are included as *Appendix I2a* and to authorities and organs of state in *Appendix I4a*.

2.1.3 Landowner notification

The landowners throughout a project area in general play an important roll in assisting with the identification of project alternatives. Only one landowner, Zeerust Modern Bricks (Pty) Ltd, is directly affected by this project. Landowners adjacent to the site were informed by hand on 10 February 2017 and by email on 10 February 2017 in terms of Regulation 41(2)(b) of GN R.982.

2.2 Meetings and site visits

2.2.1 Public meeting/ Open day

- Notification of an information meeting/ open day will be sent to all I&APs.
- The purpose of this meeting will be to furnish all interested parties with information regarding the extent of the project, the proposed alternatives, and the extent of the Environmental Impact Assessment Process.
- Copies of the notification to key stakeholders will be included as Appendix I2b and to authorities and organs of state in Appendix I4b.

2.2.2 Focus group meetings / One-on-one meetings

Key stakeholders were identified at the beginning of the PPP, these included: Key stakeholders, commenting authorities and landowner(s). Focus Group meetings to be scheduled.

2.3 Distribution of Draft Basic Assessment Report for comment

On 18 May 2017 notification of the availability of the Draft Basic Assessment Report (BAR) was submitted to all I&APs. (Proof will be included in Appendices I2c and I4c of the final BAR).

The Draft BAR was available for comment on a website using a given link. The comment period was 30 days until 20 June 2017.

Key stakeholders (other than organs of state) identified in terms of Regulation 40(2)(d) of GN R.982:

Copies of the draft BAR were submitted to the following key stakeholders:

- North West Provincial Government, Department of Rural, Environment and Agricultural Development: Environmental Services, Environmental Quality. Agri centre Building, Cnr Dr James Moroka Drive & Stadium Road, MMABATHO, 2735. For Attention: Mrs Ellis Thebe, Tel 018 389 5156.
- South African Heritage Resource Agency, 111 Harrington Street, CAPE TOWN, 8000. For Attention: Philip Hine. Tel 021 462 4502 - (submitted via SAHRIS).
- The Department of Water and Sanitation, North West Regional Office, Quaternary Drainage Area A31D, Crocodile West and Marico WMA3. Water Quality office, Old Rustenburg Road, HARTBEESSPOORT, 0216. For Attention: Clement Makwela Tel 012 253 1026.



- Ramotshere Moilola Local Municipality. C/O President & Coetzee Street, ZEERUST, 2865. For Attention Mr T Selaka, Community Development Services, Environmental Management. Cc Mr T Phakalane, The Municipal Manager. Cc Mrs B Seabi, Olebogeng Gasealahwe, Planning and Local Economic Development.

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Issues received will be included in the Final BAR.

4. COMMENTS AND RESPONSE REPORT

The practitioner must make report (s) available to I&APs record all comments received from I&APs and respond to each comment before 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 the Final BAR as Appendix I3.

The Public Participation Programme allowed for informed and responsible decision-making by all interested and affected parties. A summary of I&AP comments and the consultant's responses to these comments are provided below. The original I&AP comments are included in Appendix I3.

List of authorities from whom comments have been received:

- National Roads Agency
- ESKOM

Key stakeholders from whom comments have been received:

- Etienne van der Lith, Environamic registered as I & AP.
- Kallie Erasmus registered on behalf of Mohammed Yousuf Latif, Zeerust Ultra
- Andre du Toit Town and Regional Planners registered on behalf of NWK.
- Pieter Coetzer & Jacques de Wet registered on behalf of NWK Ltd.
- Nadine Duncan registered as I &AP.

4.1 Comments received in the notification phase

This section of the report synthesises the issues and concerns identified by interested and affected parties and various stakeholders during the public participation process and can be summarised as follows:
(The original I&AP comments are included in Appendix I3a)

Etienne van der Lith, Environamic

14 February 2017

Comment:

Registered as an I&AP.

G Erasmus, Erasmus Attorneys on behalf of Mohammed Yousuf Latif, Zeerust Ultra

13 February 2017

Comment:

Registered as Interested and Affected Party on behalf of Mohammed Yousuf Latif, Zeerust Ultra

Reply: Noted

Andre du Toit Town and Regional Planners



20 February 2017

Comment:

Registered as an interested and affected party on behalf of NWK.

Reply: Noted

Pieter Coetzer and Jacques de Wet

13 February 2017

Comment:

Registered as an interested and affected party on behalf of NWK.

Reply: Noted

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders. Key stakeholders identified in terms of Regulation 7(1) and (2) and Regulation 40(2) (a)-(c) of GN R.982.

Proof that the Authorities and Organs of State received written notification of the proposed activities is attached as Appendix 14.

Refer to Appendix 15a: Register of Interested and Affected Parties for a complete list.

6. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for any activities (linear or other) 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. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process.

A list of registered I&APs must be included. *Attached as Appendix 15.*

Copies of any correspondence and minutes of any meetings held must be included. *Attached as Appendix 16.*

7. CONCLUSION OF PUBLIC PARTICIPATION PROGRAMME

In short, the study approach followed by the Consultants, entailed the following steps:

- The first phase of the Public Participation Programme (PPP) commenced on 10 February 2017 allowing for a 30-day comment period. It included the identification of key stakeholders, the distribution of information letters (BID) with a request for registration and comment, as well as advertising of the project in the local and regional press and on site.
- In addition, an information meeting will be scheduled. The purpose of this meeting will be to furnish all interested parties with information regarding the extent of the project, the proposed alternatives, and the extent of the Environmental Impact Assessment Process.

Written comment was received in the notification phase from:

- Etienne van der Lith, Environamic registered as I & AP.
- Kallie Erasmus registered on behalf of Mohammed Yousuf Latif, Zeerust Ultra
- Andre du Toit Town and Regional Planners registered on behalf of NWK.
- Pieter Coetzer & Jacques de Wet registered on behalf of NWK Ltd.
- Nadine Duncan registered as I & AP.
- National Roads Agency



- Eskom
- A draft Basic Assessment Report was compiled with the main aim to identify issues, potential impacts and potential alternatives associated with this project. It included a description of the status quo of all relevant environmental components as well as the proceedings of the PPP and communication with registered Interested & Affected Parties (I&APs).
- On 18 May 2017 the draft Basic Assessment Report was distributed for comment.
- The due date for comment to the draft Basic Assessment Report is 20 June 2017. This will allow for a comment period of 30 days.
- Subsequently the final BAR will be submitted to DREAD. The final BAR will include all concerns raised to the draft BAR and the responses thereto. The Consultants (EAPs) will ensure that all concerns raised are addressed in appropriate detail in the final Basic Assessment Report.

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

Not applicable

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.

<p>The findings conclude that there are no environmental fatal flaws that could prevent the proposed Hazia Filling Station development if the recommended mitigation and management measures contained in the BAR and EMPr (<i>Appendix J</i>) are implemented.</p> <p>In order to achieve appropriate environmental management standards and ensure that the findings of the environmental studies are implemented through practical measures, the recommendations from this BAR are included within an EMPr (<i>Appendix J</i>).</p> <p>The EMPr must be used to ensure compliance with environmental specifications and management measures. The implementation of this EMPr for the life cycle phases of the project is considered to be vital in achieving the appropriate environmental management standards as detailed for this project.</p> <p>In addition, the following key conditions should be included as part of the authorisation:</p> <p>Filling Station Layout and Design</p> <ul style="list-style-type: none"> • The final, detailed design and construction of the proposed filling station must comply fully with the relevant standards and guidelines applicable to the design and installation of underground storage tanks, pumps and / or dispensers and related pipework at petrol filling stations. • The layout and design of the facility must include a stormwater management system that collects and directs all contaminated / potentially stormwater runoff from the site into an oil / grease separator and then into the effluent treatment system, prior to discharge to the environment. • Once completed, a copy of the layout and detailed design of the proposed filling station should be submitted to the DREAD and the Ramotshere Moiloa Local Municipality for review to check compliance with the relevant standards, conditions and by-laws. Any required amendments should be



made and approved by these parties prior to the commencement of construction activities for the filling station.

- The recommendations made by the Geotechnical Specialist regarding earthworks, founding conditions, control of surface and groundwater and the positioning of underground storage tanks, should be given consideration in the design of the filling station.
- An experienced and competent geotechnical engineer should be appointed to inspect the earthworks and foundation excavations during the development of the site to confirm founding depths and bearing pressures.

Construction Phase Management

- The EMPr (*Appendix J*) must be implemented and complied with to ensure the minimisation, control and mitigation of construction phase impacts.
- Compliance with the EMPr should be evaluated and audited by an independent, appropriately qualified and experienced ECO, on a monthly basis, as a minimum.

Operational Phase Management

- An operational plan needs to be developed for the facility. This must include an Emergency Response Plan which clearly describes emergency procedures and includes emergency contact numbers. It must also include a Water Quality Monitoring Plan.
- Spill kit stations must be established and maintained on site. Filling Station staff must receive training on the appropriate response to a spill / leak situation. In addition, all forecourt staff must undergo appropriate training to prevent spillages during fuel dispensing.
- Accidental spills that may occur on the forecourt must be cleaned up immediately using a spill absorbent, which must then be removed by a licensed contractor.
- Any significant spills or leak incidents must be reported in terms of the National Environmental Management Act, 1998 and the National Water Act, 1998.
- The underground storage tanks, pipelines and other associated infrastructure must be inspected regularly for leaks and to ensure structural integrity.
- The oil/water separator must be inspected regularly to ensure that it is functioning at all times.
- The monitoring wells installed in each corner of the underground storage tank excavations must be monitored regularly, as an early warning leak detection system. Underground storage tanks should also be fitted with automatic leak detectors that alert management to a leak.
- Fuel stock must be monitored on a daily basis and these records must be kept on site.
- If contamination or leakage is detected, this Emergency Response Plan must be followed.
- Following a leak or accidental spill, a remediation plan must be compiled and executed.

Water Quality Management

- A groundwater monitoring program or plan to facilitate groundwater monitoring must be implemented.
- Baseline water quality analysis of surface and groundwater resources should be carried out to ensure accountability is in place as well as to provide a baseline against which operational phase water quality should be measured. This baseline sampling must be undertaken prior to the commencement of construction activities.
- Monitoring of the quality of groundwater should be undertaken on a regular basis. The results of this monitoring should be compared against the baseline quality conditions. If any contamination is detected, immediate steps must be taken to locate the source of the contamination and to correct it. Until such time as the water is safe for consumption, an alternate water supply will need to be provided for the local community.

A Section 21 Water Use License in terms of the National Water Act, 1998 (Act No. 36 of 1998) must be obtained for construction activities within the 1:100 year flood lines.



The EMPr that meet the requirements of EIA Regulation,2014, Appendix 4, must be attached as Appendix J.

Is an EMPr attached?	YES X	NO
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The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as Appendix K

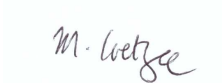
If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in Appendix F

Any other information relevant to this application and not previously included must be attached in Appendix L.



SECTION F: AFFIRMATION BY EAP

I, Mientjie Coetzee (name of person representing EAP) of Setala Environmental (name of company) declare that the information provided is correct and relevant to the activity/ project and that, the information was made available to interested and affected parties for their comments. All specialist (s) reports are relevant for the competent authority to make informed decision.



SIGNATURE OF EAP

19 May 2017



SECTION F: APPENDICES

The following appendices must be attached:

Appendix A: A3 Locality Map

Appendix B: Layout Plan and Sensitivity Maps

Appendix C: Photographs

Appendix D: Facility illustration(s)

Appendix E: Confirmation of services by Municipality (servitude and infrastructure planning)

Appendix F: Details and expertise of Specialist and Declaration of Interest

Appendix G: Specialist reports (including terms of reference)

Appendix H: Impact Assessment

Appendix I: Public Participation

Appendix J: Environmental Management Programme (EMPr)

Appendix K: Details of EAP and expertise

Appendix L: Any other Information

Appendix M: Financial Provision (if applicable)

Appendix N: Closure Plan (where applicable) as described in Appendix 5 of EIA Regulations, 2014

