



Today's Impact | Tomorrow's Legacy

**PALMIET TRUCK STOP ON PORTION 4 OF THE
FARM PALMIET NO. 585, VREDE, FREE STATE
PROVINCE**

Draft Basic Assessment Report

15 July 2015

Prepared for:

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Today's Impact | Tomorrow's Legacy

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BASIC ASSESSMENT REPORT



destea

department of
economic, small business development,
tourism and environmental affairs
FREE STATE PROVINCE

(For official use only)

File Reference Number:

Application 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. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of **08 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. An incomplete report may be returned to the applicant for revision.
6. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. 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.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

2

"JWALE KE NAKO YA KOTULO, RE A KUBELE TSA"

BASIC ASSESSMENT REPORT

13. 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.
14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

EXECUTIVE SUMMARY

Introduction and Background

DeStudio appointed Enviroworks, an Independent Environmental Assessment Practitioner (EAP), on behalf of Mr. Willie Basson (The Applicant) to undertake the required Basic Assessment Process for the Palmiet Truck Stop (hereafter referred to as the Proposed Project), Free State Province.

The proposed project is a listed activity in terms of Sections 24(2) and 24(d) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) (as amended). The Environmental Impact Assessment (EIA) Regulations, 2014 promulgated in terms of Chapter 5 of the NEMA provide for the control of certain activities that are listed in Government Notice Regulations No. (GN R) No. R983, R984 and R985. Activities listed in these notices must comply with the regulatory requirements listed in GN R No. R982, which prohibits such activities until written authorisation is obtained from the competent authority. Such environmental authorisation, which may be granted subject to conditions, will only be considered once there has been compliance with the EIA regulations, 2014. GN R No. 982 sets out the procedure and documentation that need to be compiled with undertaking a Basic Assessment Report.

Project Description

Portion 4 of the Farm Palmiet No. 585 is situated just off the R103 road off-ramp to Vrede from the South and R34 interchange with the R103 from the Northern side. The R103 and R34 link with the North-Eastern leg of the N3 National Road. The N3 is an important National Road and serves as trade route between Johannesburg and Durban. The adjacent Roads (i.e. Road R34 and R103) are secondary roads. The study site is located 16 kilometres North-West of the town Vrede.

The property was utilized over the past fifty (50) years on and off for the purpose of a truck stop; overnight facilities; filling station, convenient and food shop, and ablution facilities. The objective of this application is to apply for Environmental Authorisation to assist the owner to create a development which will accommodate a truck stop and overnight facilities for trucks, canopy over the fuel pumps, convenient and food shop, ablution facilities, butchery, liquor store, entertainment undercover area and a putt-putt centre.

The proposed project will include the restoration and development of an old filling station, known as "Alte Veta Motel", originally established about fifty (50) years ago. The first business company to establish and develop Alte Veta Motel consisted of five business men. The place was subsequently owned by a succession of entrepreneurs who operated the station for different periods of time. It is said that the last fuel was sold there about fourteen (14) years ago.

Successful developments function on a multi-functional dimension, which best can be served if supported by different levels of transportation of vehicles and trucks as well as local residents support functions. The complex also need to focus on an effective and fully integrated transport network that provide accessibility and mobility for all employees while being environmental sustainable and economic feasible. This diverse land uses proposed will promote an influx of investment to the area and create 30 new employment opportunities for the local communities to benefit from (De Jong, 2015).

Legislative Context

The proposed project constitutes the following listed activities in terms of the NEMA:

Government Notice 983 of 2014: Listing Notice 1 of the National Environmental Management Act, 1998

(Act No. 107 of 1998)

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

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

The proposed project will have a physical footprint of 3.73 hectares (15.3% of Portion 4 of the Farm Palmiet No. 585).

National Heritage Resources Act, 1999 (Act No. 25 of 1999)

Section 38(1): Subject to the provision of subsections (7), (8) and (9), any person who intends to undertake a development categorised as –

- (c) Any development or other activity which will change the character of a site –
 - i) Exceeding 5 000 square metres in extent.

The proposed project will cover an area of 3.37 hectares on Portion 4 of the Farm Palmiet No. 585.

Report Structure

This report is set out as followed:

- **Section A: Activity Description** provides an overview of the development proposal and listed activities which are triggered in terms of listing notices GN R. 983 and R. 985; of the EIA Regulations, 04 December 2014.
- **Section B: Description of Receiving Environment** provides detail on the affected landscape in its present state. A range of aspects relating to the biophysical (e.g. geology, soil surface and sub-surface water and biodiversity), socio-economic and historic and cultural character of the immediate site and surrounding areas are described herein, whilst applicable legislation, policy and guidelines considered are recognised.
- **Section C: Public Participation** describes the consultation component of this study between the EAP and Interested or Affected Parties (I&AP's) and organs of state. Regulatory requirements of this process are discussed, with a summary of consultation made with state departments and comments and response given. Comment periods were afforded to parties, with an initial registration period provided to parties.
- **Section D: Impact Assessment, Management, Mitigation and Monitoring Measures**, describe how the proposed project may impact on the geographical and physical, biodiversity, socio-economic and historical and cultural aspects of the receiving environment. Resource uses of the proposed project phases, attributed to waste and emissions, water use, power supply and energy efficiency are further discussed.
- **Section E: Recommendation of the EAP** provides, based on such findings as various site surveys, impact assessment, investigation of alternatives and the review of strategic policy to consider the needs and desirability, the outgoing opinion of the EAP is detailed. Any noteworthy recommendations emanating from the study are described here.
- **Section F: Appendices** lists all supportive documents enclosed with this report, after which declarations of the Applicant, EAP and Specialist Parties are given.

Public Participation Process

A comprehensive **public participation** will be undertaken to engage stakeholders and interested and affected parties on the development proposal. I&AP's will be informed of the Basic Assessment Process through an advertisement in the local newspaper and poster notices will be erected at strategic locations. The surrounding landowners will be informed of the proposed project by means of the distribution of comment forms and the Basic Assessment Report (BAR), as well as relevant organs of state.

This BAR will be made available for a 30 day comment period from **DATE to DATE**. The Basic Assessment (BA) will be made available on Enviroworks website (www.enviroworks.co.za) and a link to Enviroworks website will be sent via email to all relevant stakeholders and organs of state.

Specialist Findings

On assessment of the proposed location for the alternatives, the specialist determined the following:

Ecological

- According to the *National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004): Alien and Invasive Species Regulation, 2014*, all declared aliens must be effectively controlled. In terms of this Act 198 alien species were listed as declared weeds and invaders and ascribed to one of the following categories:
 - **Category 1:** Prohibited and must be controlled. This includes the following species found on site: *Cirsium vulgare*, *Datura ferox*, *Datura stramonium*, and *Xanthium strumarium*.
- Application for a water use license must be done due to the fact that the proposed development will be taking place within 500 metres from drainage lines and bank disturbance of seasonal streams will occur.
- An Environmental Control Officer (ECO) must be appointed to oversee the proposed project.

By implementing mitigation measures, the impacts will be significantly reduced to moderate (loss of flora), low (habitat loss and direct impact) and minor impact for erosion and sedimentation risks.

One protected species (*Kniphofia ensifolia*) occur in the wetland area but will not be effected by the proposed development due to the fact that it is not near the proposed truck stop site. During the initial site inspection no Red List Plant Species were observed.

Archaeological Sites

- The impact resulting from the new development at Palmiet on the archaeological and heritage resources is considered to be of minor significance.
- There are no obvious reasons to delay further planning of the development at the specific site.
- It is recommended that the planning of the proposed project may proceed.

Geo-Technical Study

- The proposed permit area in Portion 4 of the Farm Palmiet No. 585 is considered suitable for development in terms of the Geo-Technical considerations.
- The site has a predicted total heave of medium to high which arises from the clay layer.
- Bedrock was encountered in the excavated test pits at a depth of 1.5m to 1.9m.

- The predicted heave is based on the Geo-Technical information available as presented in this report. Consequently the design engineer must make every effort to confirm that the actual Geo-Technical conditions existing on site agree with that predicted.

Geohydrological Sites

- The tanks and sewage treatment facility should be installed according to the specified SANS standards to minimize the risk for the pollution of the groundwater.
- Groundwater monitoring plan should be drafted and be approved by DWS.
- Groundwater monitoring should be done on a bi-annual basis and a groundwater monitoring report should be submitted to DWS.
- With the above mentioned precautions in mind, the proposed site is suitable for the development from a geohydrological perspective.

Bulk Services

- A 48 hour water storage facility must be provided.
- The borehole must be properly maintained.
- An onsite sewer treatment plant should be installed. A French drain is not an acceptable solution for this development. The Lilliput system is an example of such a treatment plant.
- A storm water retention facility must be designed and provided for the development. A facility has not been designed, but specifications for the design are given in the service report.
- Wayleaves must be obtained for the vehicle accesses of the R103 and R34 from the provincial authority.

Traffic Impact Study

- If the developed as planned, the site can be attractive as a filling station, truck stop and related facilities.
- Based on traffic volumes and other relevant factors, fuel sales at the site are expected to be in the order of 100 000 litres per month.
- Sales by the convenience shop are estimated at R140 000 per month.
- The percentage of trucks compared to light vehicles is relatively high and the adjacent routes can be regarded as heavy vehicle routes.

The R103 and R34 are not served by any filling stations or truck stops. The planned facility could have an impact on the Ukulala Truck Stop at Warden and the Vaal 1 Stop at Villiers, although these facilities mainly serve the N3 and are more than 50km from the site.

From the above mentioned it is evident that the proposed project will not have a negative impact on the surrounding areas.

Contents

EXECUTIVE SUMMARY	4
Section A: Activity Information	10
1. Project Description.....	10
2. Feasible and Reasonable Alternatives	11
3. Physical Size of the Activity.....	13
4. Site Access	14
5. Locality Map.....	14
6. Layout/Route Plan	15
7. Sensitivity map.....	15
8. Site Photographs	15
9. Facility Illustrations	15
10. Activity Motivation.....	16
11. Applicable Legislation, Policies and/or Guidelines.....	23
12. Waste, Effluent, Emission and Noise Management.....	23
13. Water Use.....	26
14. Energy Efficiency	26
Section B: Site/Area/Property Description	27
15. Gradient of the Site	28
16. Location in Landscape	28
17. Ground Water, Soil and Geological Stability of the Site.....	28
18. Groundcover	29
19. Surface Water.....	29
20. Land Use Character of Surrounding Area	30
21. Cultural/Historical Features	31
22. Socio-Economic Character	32
23. Biodiversity.....	34
Section C: Public Participation	38
24. Advertisement and Notice.....	38
25. Determination of Appropriate Measures	38
26. Issues raised by Interested and Affected Parties.....	38
27. Comments and Response Report	39
28. Authority Participation.....	39
29. Consultation with Other Stakeholders	39
Section D: Impact Assessment	41
30. 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	41
31 Potential Impacts during Planning, Design and Construction Phases	44
32. Potential Impacts during Operational Phase.....	49
33. Environmental Impact Statement.....	51
Section E: Recommendation of Practitioner	54
Section F: Appendixes	58
References.....	59

Acronyms and Abbreviations

BA	-	Basic Assessment
BAR	-	Basic Assessment Report
CBA	-	Critical Biodiversity Area
DESTEA	-	Department of Economic, Small Business Development, Tourism and Environmental Affairs
DWS	-	Department of Water and Sanitation (previously known as DWA / DWAF)
EAP	-	Environmental Assessment Practitioner
EIA	-	Environmental Impact Assessment
EMF	-	Environmental Management Framework
EMPr	-	Environmental Management Program Report
ESA	-	Ecological Support Area
GN	-	Government Notice
IDP	-	Integrated Development Plan
I&AP's	-	Interested and Affected Parties
NEMA	-	National Environmental Management Act
NNR	-	No Natural Area Remaining
ONA	-	Other Natural Area
PSDF	-	Provincial Spatial Development Framework
SAHRA	-	South African Heritage Resources Agency
SDF	-	Spatial Development Framework
SKA	-	Square Kilometre Array
SIP	-	Strategic Integrated Projects

Section A: Activity Information

Has a specialist been consulted to assist with the completion of this section?

YES
X

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

1. Project Description

a) Describe the project associated with the listed activities applied for

Portion 4 of the Farm Palmiet No. 585 is situated just off the R103 road off-ramp to Vrede from the South and R34 interchange with the R103 from the Northern side. The R103 and R34 link with the North-Eastern leg of the N3 National Road. The N3 is an important National Road and serves as trade route between Johannesburg and Durban. The adjacent Roads (i.e. Road R34 and R103) are secondary roads. The study site is located 16 kilometres North-West of the town Vrede.

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Successful developments function on a multi-functional dimension, which best can be served if supported by different levels of transportation of vehicles and trucks as well as local residents support functions. The complex also need to focus on an effective and fully integrated transport network that provide accessibility and mobility for all employees while being environmental sustainable and economic feasible. This diverse land uses proposed will promote an influx of investment to the area and create 30 new employment opportunities for the local communities to benefit from (De Jong, 2015).

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

GN 983 Activity 27:

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

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

The proposed project will have a footprint of 3.73 hectares on Portion 4 of the Farm Palmiet No. 585.

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 Appendix 1 (3)(h) of GN 982, Regulation 2014. 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.

The identification of alternatives should be in line with the Integrated Environmental Assessment Guideline Series 11, published by the DEA in 2004. Should the alternatives include different locations and lay-outs, the co-ordinates of the different alternatives must be provided. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

a) Site alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
Portion 4 of the Farm Palmiet No. 585	27° 27' 3.9097"	29° 00' 5.5342"
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

BASIC ASSESSMENT REPORT

In the case of linear activities:

Alternative:

Latitude (S):

Longitude (E):

Alternative S1 (preferred)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

Alternative S2 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

Alternative S3 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

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

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 of this form.

Note: There are no feasible site alternatives due to the fact that infrastructure is already in place on Portion 4 of the Farm Palmiet No. 585.

b) Lay-out alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
New 40 000litre aboveground diesel tank	29° 0'1.04"E	27°27'2.21"S
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

Note: Feasible Lay-out alternatives consist of the best suitable location for the Diesel Tank.

c) Technology alternatives

Alternative 1 (preferred alternative)
Alternative 2

BASIC ASSESSMENT REPORT

Alternative 3

Note: There are no feasible technology alternatives.

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

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

e) **No-go alternative**

The no-go option will result in the non-construction of the Palmiet Truck Stop on Portion 4 of the Farm Palmiet No. 585, Vrede District, Free State Province. The proposed project will create 10 new employment opportunities during the construction phase and another 30 permanent employment opportunities in its operational phase. The proposed project will promote the Local Economic Development of Vrede through the concentration of tourism activities in the near vicinity of town. If the proposed truck stop and its associated facilities will not be developed and upgraded, no employment opportunities will be developed and the local economy will not be enhanced.

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:

Alternative A1¹ (preferred activity alternative)
 Alternative A2 (if any)
 Alternative A3 (if any)

Size of the activity:

3.73 hectares
m ²
m ²

or, for linear activities:

Alternative:

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

Length of the activity:

m
m
m

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

¹ "Alternative A.." refer to activity, process, technology or other alternatives.

BASIC ASSESSMENT REPORT

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the site/servitude:

	m ²
	m ²

4. Site Access

Does ready access to the site exist?

YES	
X	
	m

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

Describe the type of access road planned:

N/A

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.

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.). 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);
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

Note: See A3 locality map in Appendix A-1

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 A to this document.

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.

Note: See A3 Layout/Route Plan in Appendix A-2

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 DWS);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

The sensitivity map must also cover areas within 100m of the site and must be attached in Appendix A.

Note: See A3 Sensitivity map in Appendix A-3

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 B to this report. It must be supplemented with additional photographs of relevant features on the site, if applicable.

Note: See site photographs in Appendix B

9. Facility Illustrations

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

BASIC ASSESSMENT REPORT

Note: See facility illustrations Appendix C

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		
	X		
Land Use is at present regulated by the title deeds conditions where a permit for General dealer and motor garage was approved. The property can be used for Service station and for business.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES		
	X		
<p>The proposed project is situated at the T junction of the Villiers-Warden (R103) and the Vrede and falls within the Free State Province.</p> <p>The revised Provincial Spatial Development Framework of the Free State Province (PSDF) of 25 February 2013, provides a spatial vision and directives, policy and strategies for the province. The framework describes the six growth and development pillars, each of which has its own set of drivers with long-term programmes, on which the Free State PSDF is based.</p> <p>Various drivers from at least five Pillars will be addressed to mention a few:</p> <p>PILLAR 1: INCLUSIVE ECONOMIC GROWTH AND SUSTAINABLE GROWTH JOB CREATION. The upgrade will create work opportunities on the district. The development will Diversify and expand agricultural development by offering different products and services to the surrounding farming community</p> <p>PILLAR 2: EDUCATION, INNOVATION AND SKILLS DEVELOPMENT. The work opportunities offered by the development will promote education and skill development.</p> <p>PILLAR 3: IMPROVED QUALITY OF LIFE. The development will contribute to the improvement of road infrastructure.</p> <p>PILLAR 4: SUSTAINABLE RURAL DEVELOPMENT. The development will Improve rural development, build institutions, skills, social and economic infrastructure, and promote non-farm activities.</p> <p>PILLAR 5: BUILD SOCIAL COHESION. By reopening a rural node previously referred to as <i>10 Mile</i> were communities can meet and interact</p> <p>The development of the Proposed Project can be considered as part of the long term growth and development programmes as set out in the twelfth driver of the third pillar of the PSDF.</p>			
(b) Urban edge / Edge of Built environment for the area		NO	
		X	
The proposed project is situated at the T junction of the Villiers-Warden (R103) and the Vrede turnoff			

BASIC ASSESSMENT REPORT

(R34) which is outside the Urban Edge of the town Vrede. The proposed project will however, contribute to Local Economic Development (LED) and Employment Opportunities.			
(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		
The IDP of the Phumelela Local Municipality 2015/2016 acknowledges that one of the community needs is to create more employment opportunities, in which local communities can benefit from. According to the Spatial Development Framework (SDF) it is of high priority to create more employment opportunities, but the Phumelela Local Municipality does not have the necessary economic resources to address this issue. The proposed project would contribute to Local Economic Development and will create 30 new employment opportunities for Local Communities.			
(d) Approved Structure Plan of the Municipality	YES X		
The proposed project is situated outside the Urban Edge of the town Vrede. No structure plan for Phumelela Local Municipality could be obtained.			
(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 X		
No EMF applicable for Phumelela Local Municipality, or the area under investigation and assessment.			
(f) Any other Plans (e.g. Guide Plan)		NO X	Please explain
None			
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		
The proposed project falls within the current Land Use of Portion 4 of the Farm Palmiet No. 585. The proposed project, however, is listed as a priority in the IDP and the SDF of the Phumelela Local Municipality, due to the fact that it will contribute to Employment Opportunities.			
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		
As mentioned in the IDP and SDF of Phumelela Local Municipality, it is evident that there is a need for new permanent employment opportunities and for activities that will contribute to the Local Economic			

BASIC ASSESSMENT REPORT

Development.			
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 I.)		NO X	
No municipal infrastructure is present on Portion 4 of the Farm Palmiet. Water will be obtained from an existing borehole (Enviroworks is in the process of applying for General Authorisation from DWS). A sewage plant will be constructed to cater for the Palmiet Truck Stop. Electricity will be supplied by Eskom via the existing connection. Due to the nature of the existing facilities and renovations an upgrade of the existing electrical connection will not required. Any future additions might require an upgrade of the connection depending on the additional electrical load.			
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		
The proposed project involves the upgrading of the current Truck Stop that is situated on Portion 4 of the farm Palmiet No. 585, therefore the infrastructure planning of the Phumelela Local Municipality will not be affected.			
7. Is this project part of a national programme to address an issue of national concern or importance?		NO X	
N/A			
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		
Portion 4 of the Farm Palmiet No. 585 is situated just off the R103 road off-ramp to Vrede from the south and R34 interchange with R103 from the Northern side. The R103 and R34 link with the North-Eastern leg of the N3 national road. The N3 is an important national road and trade route between Johannesburg and Durban. The proposed project is best suited for the current Land Use of Portion 4 of the Farm Palmiet No. 585.			
9. Is the development the best practicable environmental option for this land/site?	YES X		
The property was utilized over the past 50 years on and off for the purpose of a truck stop; overnight facilities; filling station, convenient and food shop, and ablution facilities. Due to the fact that existing infrastructure was designed for the purpose of a truck stop, it would be considered as the best practical environmental option.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES X		

BASIC ASSESSMENT REPORT

<p>All anticipated impacts can be mitigated to ensure that the proposed project have a minimal impact on the surrounding environment. The proposed project will contribute to the Local Economic Development of the Vrede District and new permanent employment opportunities will be created for local communities. Thus it can be concluded that the positive impacts will overweigh the negative impacts.</p>		
<p>11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?</p>		<p>NO X</p>
<p>The study area will only require one Truck Stop, thus a similar development in the vicinity of the study area is unlikely.</p>		
<p>12. Will any person's rights be negatively affected by the proposed activity/ies?</p>		<p>NO X</p>
<p>The proposed project will contribute to Local Economic Development and New Employment Opportunities.</p>		
<p>13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?</p>	<p>YES X</p>	
<p>The proposed project is situated 16 kilometres North-West of the town Vrede, and falls outside the Urban Edge as defined by the Phumelela Local Municipality. Therefore the proposed project will not compromise the Urban Edge.</p>		
<p>14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?</p>		<p>NO X</p>
<p>N/A</p>		
<p>15. What will the benefits be to society in general and to the local communities?</p>		
<p>The proposed project will contribute to Local Economic Development and New Permanent Employment Opportunities.</p>		
<p>16. Any other need and desirability considerations related to the proposed activity?</p>		
<p>None</p>		
<p>17. How does the project fit into the National Development Plan for 2030?</p>		
<p>The National Development Plan aims to improve rural development through changes in access to resources (land, water, education and skills), rural infrastructure and other government services. In areas with greater economic potential, industries such as agro-processing, tourism, fisheries and small enterprise development should be developed.</p>		
<p>18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.</p>		
<p>Through the undertaking of a Basic Assessment Process by a competent EAP, informed by guidelines, the consideration of impacts and alternatives (advantages and disadvantages coupled thereto) has been made. Moreover, the conducting of public participation and specialist investigations form part of the process, whilst mitigation measures and the need and desirability of the proposed project were interrogated. This ensured that all provisions of the Act were considered and as such Integrated Environmental Management were accounted for.</p>		
<p>19. Please describe how the principles of environmental management as set out in section 2 of</p>		

BASIC ASSESSMENT REPORT

NEMA have been taken into account.

Through the undertaking of a Basic Assessment process by a competent EAP, informed by guidelines, the consideration of impacts and alternatives (advantages and disadvantages coupled thereto) has been made. Moreover, the conducting of a public participation process and specialist investigations formed part of this basic assessment process, whilst mitigation measures and the needs and desirability of the proposed project were interrogated. This ensured that all provisions of the Act were considered and as such integrated environmental management were accounted for as follow:

(2) Environmental Management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural heritage and social interests equitably.

The goal of this BA is to identify and mitigate potential socio-economic impacts in order to meet the terms of Section 24 of the Constitution.

(3) Development must be socially, environmentally and economically sustainable.

The overall goal of this BA is to predict, identify and manage potential positive and negative impacts in the socio-economic, cultural-heritage and biophysical environments in order to meet the needs of present generations without compromising the needs of future generations which will give effect to sustainable development.

(4)(a) Sustainable development requires the consideration of all relevant factors including the following:

- i. That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;*
- ii. that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;*
- iii. that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;*
- iv. that waste is avoided, or where it cannot be altogether avoided, minimised and reused or recycled where possible and otherwise disposed of in a responsible manner;*
- v. that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;*
- vi. that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;*
- vii. that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and*
- viii. that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.*

Specialists were appointed to undertake, Ecological, Palaeontological and Archaeological, Geo-hydrological, Geo-Technical, Traffic and Services Impact Assessments as part of this Basic Assessment Process to consider all impacts relating to the above. An Environmental Management Program Report (EMP-r) was compiled to mitigate and manage all activities during the planning, construction and operational phases.

BASIC ASSESSMENT REPORT

(b) Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.

All aspects, including socio-economic, cultural-heritage and biophysical was evaluated and assessed in order to minimize potential negative impacts which will give effect to Integrated Environmental Management, as set out in Chapter 5 of NEMA, 1998.

(c) Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.

A public participation process will be undertaken in terms of Section 41 of the NEMA EIA Regulations, which came into effect on 4 December 2014, in order to give effect to Section 32 of the Constitution in such a way that adherence is given to Section 24 of the Constitution.

(d) Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination.

The proposed project will contribute to Local Economic Development and Employment Opportunities will be created to meet basic human needs.

(e) Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.

The EMPr will be applicable throughout the lifecycle of the project.

(f) The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.

A public participation process will be undertaken in terms of Section 41 of the NEMA EIA Regulations, which came into effect on 4 December 2014, in order to give effect to Section 32 of the Constitution in such a way that adherence is given to Section 24 of the Constitution.

(g) Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including traditional and ordinary knowledge.

The Department of Economic, Small Business Development, Tourism and Environmental Affairs (DESTEA) decision making process has to be in accordance with the above.

(h) Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.

(i) The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.

This BAR does give effect to Section 5 of NEMA whereby all social, economic and environmental impacts of activities were considered, assessed and evaluated.

(j) The right of workers to refuse work that is harmful to human health or the environment and to be

BASIC ASSESSMENT REPORT

informed of dangers must be respected and protected.

Human rights will be taken into account during all phases of the proposed project.

(k) Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law.

The decision will take place in an open and fair manner and to give effect to Section 32 of the Constitution. I&AP's will be notified of the decision in terms of the requirements as set out in Section 41 of the NEMA EIA Regulations, 2014.

(l) There must be intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment.

All Governmental Authorities will be considered during the BA process to give their inputs on the project.

(m) Actual or potential conflicts of interest between organs of state should be resolved through conflict resolution procedures.

Actual or potential conflicts of interest between organs of state should/will be resolved through conflict resolution procedures.

(n) Global and international responsibilities relating to the environment must be discharged in the national interest.

The proposed project will contribute to local Economic Development and New Employment Opportunities. During the construction phase of the proposed project 10 new employment opportunities will be created and a further 30 during the operational phase of the proposed project.

(o) The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.

It is not foreseen that any cultural-heritage resources will be affected by the proposed project. The appropriate Heritage Specialists were appointed to undertake Impact Assessments in this field.

(p) The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.

An EMPr were compiled in order to prevent or minimize any potential negative impacts to the environment. It will be the responsibility of the Applicant and Contractor to adhere to all measures set out in the EMPr, in order to give effect to Section 28 (1) of NEMA.

(q) The vital role of women and youth in environmental management and development must be recognised and their full participation therein must be promoted.

(r) Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.

An Ecologist was appointed to undertake an Ecological Impact Assessment in which all possible impacts on wetlands, rivers and ecosystems were assessed and mitigation measures will be implemented. Refer to the **EMPr in Appendix G** of this report.

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)	The proposed project triggers listed activities which may not commence without authorisation as stipulated in Section 24 (2)(a) of The National Environmental Management Act.	The Department of Economic, Small Business Development, Tourism and Environmental Affairs.	1998
Environmental Impact Assessment Regulations 2014 promulgated in terms of Section 24(5) of NEMA	The proposed project triggers activities that would require environmental authorisation as set out in GN R No. 983 and GN R No. 985.	The Department of Economic, Small Business Development, Tourism and Environmental Affairs.	2014
National Heritage Resources Act (Act No. 25 of 1999)	The proposed project will exceed 300 metres in length as stipulated in Section 38 (1)(c)(ii) of the National Heritage Resources Act.	South African Heritage Resource Agency (SAHRA)	1999
National Water Act (Act 36 of 1998)	The proposed project will take place within 500m of a wetland.	The Department of Water and Sanitation (DWS).	1998
Phumelela Local Municipality Free State Province Spatial Development Framework (2012 - 2016) (SDF)	The need for the proposed project is described in Section 4.5 of the Spatial Development Framework for Phumelela Local Municipality.	Phumelela Local Municipality, Free State Province.	2012 - 2016
Phumelela Local Municipality Free State Province Integrated Development Framework (2015-2016)	The proposed project forms part Community Engagement and Needs as set out in Section 4.4 of the Integrated Development Plan for Phumelela Local Municipality	Phumelela Local Municipality, Free State Province.	2015 - 2016

12. Waste, Effluent, Emission and Noise Management

a) Solid waste management

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

YES	<input type="checkbox"/>
X	<input checked="" type="checkbox"/>
If YES, what estimated quantity will be produced per month?	
	3 m ³

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

Construction waste, such as cement bags and general construction-related solid waste will be collected on site and kept at a temporary designated area and regularly removed by the Contractor to be disposed of at a registered landfill site. This will be included in the EMPr.

BASIC ASSESSMENT REPORT

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

All construction rubble will have to be disposed of by the Contractor at a registered landfill site.

Will the activity produce solid waste during its operational phase?

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

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

963 kg

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

The generated solid waste by the development may not be dumped or treated on the farm. The owner should make arrangements with the local municipality to have the solid waste removed to a registered landfill site

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

The landfill site will be specified by the municipality.

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

N/A

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.

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA?

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

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.

Is the activity that is being applied for a solid waste handling or treatment facility?

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

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

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

m³

Will the activity produce any effluent that will be treated and/or disposed of on site?

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

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.

Will the activity produce effluent that will be treated and/or disposed of at another facility?

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

If YES, provide the particulars of the facility:

Facility name: N/A

Contact person:

24

“JWALE KE NAKO YA KOTULO, RE A KUBELE TSA”

BASIC ASSESSMENT REPORT

Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

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

N/A

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other than exhaust emissions and dust associated with construction phase activities?

	NO X
If YES, is it controlled by any legislation of any sphere of government?	YES NO

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:

N/A

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?

	NO X
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If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

e) Generation of noise

Will the activity generate noise?

YES X	
If YES, is it controlled by any legislation of any sphere of government?	NO X

Describe the noise in terms of type and level:

Noise impacts will be limited to the construction phase and operational phase. The level of noise generated will be throughout the operational phase but is anticipated not to be significant.

The sources of noise includes:

- Establishment of the construction camp site;
- Delivery of materials to the construction camp site;
- Movement of heavy vehicles; and
- Excavation of trenches for the potable pipes.

BASIC ASSESSMENT REPORT

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 X	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:

12.5 KI

Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?

YES X

If YES, please provide proof that the application has been submitted to the Department of Water Affairs.

Note: The project requires a permit from the Department of Water and Sanitation (DWS) for the borehole on site as well as for the construction within 500m from a wetland. An application will be submitted to DWS.

14. Energy Efficiency

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

The upgrade of the existing facilities will comply with the provisions of South African National Standards SANS10400XA: Energy Efficiency in Buildings. Where possible alternative renewable or energy efficient sources of energy will be utilized (such as heat pumps and solar water heaters) in order to limit the demand that the operations will have on national networks.

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

Refer to comment above

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, which is covered by each copy No. on the Site Plan.

Section B Copy No. (e.g. A):

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

- Has a specialist been consulted to assist with the completion of this section?

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

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.

Property description / physical address:

Province	Free State Province
District Municipality	Thabo Mofutsanyana District Municipality
Local Municipality	Phumelela Local Municipality
Ward Number(s)	Wards 1 and 2
Farm name and number	Palmiet Farm No. 585
Portion number	Portion 4
SG Code	F037 0000 00000585 00004

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.

Current land-use zoning as per local municipality IDP / records:

Agriculture with Agricultural related services including: <ul style="list-style-type: none"> Liquor Store Tea Room; Truck Stop with overnight facilities; Service station, and; Ancillary facilities with motor workshop and dwelling house.

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?

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

15. Gradient of the Site

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20 X	1:20 – 1:15 X	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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16. Location in Landscape

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

2.1 Ridgeline	<input type="checkbox"/>	2.4 Closed valley	<input type="checkbox"/>	2.7 Undulating plain / low hills	<input checked="" type="checkbox"/>
2.2 Plateau	<input type="checkbox"/>	2.5 Open valley	<input type="checkbox"/>	2.8 Dune	<input type="checkbox"/>
2.3 Side slope of hill/mountain	<input type="checkbox"/>	2.6 Plain	<input checked="" type="checkbox"/>	2.9 Seafront	<input type="checkbox"/>
2.10 At sea	<input type="checkbox"/>				

17. Ground Water, 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):
Shallow water table (less than 1.5m deep)	<input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO
Dolomite, sinkhole or doline areas	<input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO
Seasonally wet soils (often close to water bodies)	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO
Unstable rocky slopes or steep slopes with loose soil	<input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO
Dispersive soils (soils that dissolve in water)	<input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO
Soils with high clay content (clay fraction more than 40%)	<input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO
Any other unstable soil or geological feature	<input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO
An area sensitive to erosion	<input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> 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.

18. 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.

19. Surface Water

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

Perennial River		NO X
Non-Perennial River		NO X
Permanent Wetland		NO X
Seasonal Wetland	YES X	
Artificial Wetland	YES X	
Estuarine / Lagoonal wetland		NO X

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

The site gradually slopes towards the west (Villiers-Warden Road). The site is the headwater of a small seasonal stream that flows towards the north-west. The wetland is in a very degraded state because it has been ploughed in the past and it is now invaded by exotic weeds and grasses such as *Bromus catharticus*, *Oenothera rosea*, *Persicaria lanceolate*, *Plantago lanceolata*, *Cirsium vulgare*, *Xanthium stramonium* and *Cosmos Formosa*. The wetland is situated more than 30 metres away from the existing buildings and planned new infrastructure on the site.

The wetland areas have an Ecological Importance and Sensitivity (EIS) score of 0.5. This is a value between 0 and 4, with 0 being very low and 4 very high. The wetland therefore has a low EIS score. It is regarded as being not ecologically important or sensitive with a low biodiversity and plays a low role in moderating water quality and quantity (Du Preez, 2015).

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

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:

N/A

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:

N/A

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:

N/A

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

Critical Biodiversity Area (as per provincial conservation plan)		NO X
Core area of a protected area?		NO X
Buffer area of a protected area?		NO X
Planned expansion area of an existing protected area?		NO X

BASIC ASSESSMENT REPORT

Existing offset area associated with a previous Environmental Authorisation?		NO X
Buffer area of the SKA?		NO X

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A.

21. 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:		NO X
	Uncertain	
N/A		

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:

Archaeological Sites

The Heritage Impact Assessment was undertaken by Mr. Cobus Dreyer on 11 June 2015. The land was examined for possible archaeological- and historical material, to establish the potential impact on any cultural material that might be found. The Heritage Impact Assessment (HIA) was done in terms of the National Heritage Resources Act, 1999 (NHRA)(Act No. 25 of 1999) and the National Environmental Management Act, 1998 (NEMA)(Act No. 107 of 1998).

The proposed site lies in a region of densely scattered Later Iron Age archaeological sites. To the North are the important stone walled sites at Tafelkop (Ntsuanatsatsi), with Leeukop (Peme) to the South. Further away on the Eastern escarpment near Verkykerskop, the well-known Batlokwa living site of Nkoe is located on the farm Sunrise (Morgenlicht 869)(Dreyer, 2015).

No archaeological, historical or cultural remains were found on Portion 4 of the Farm Palmiet No. 585. Further planning of the proposed project may continue and no mitigation measures will be needed.

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

If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

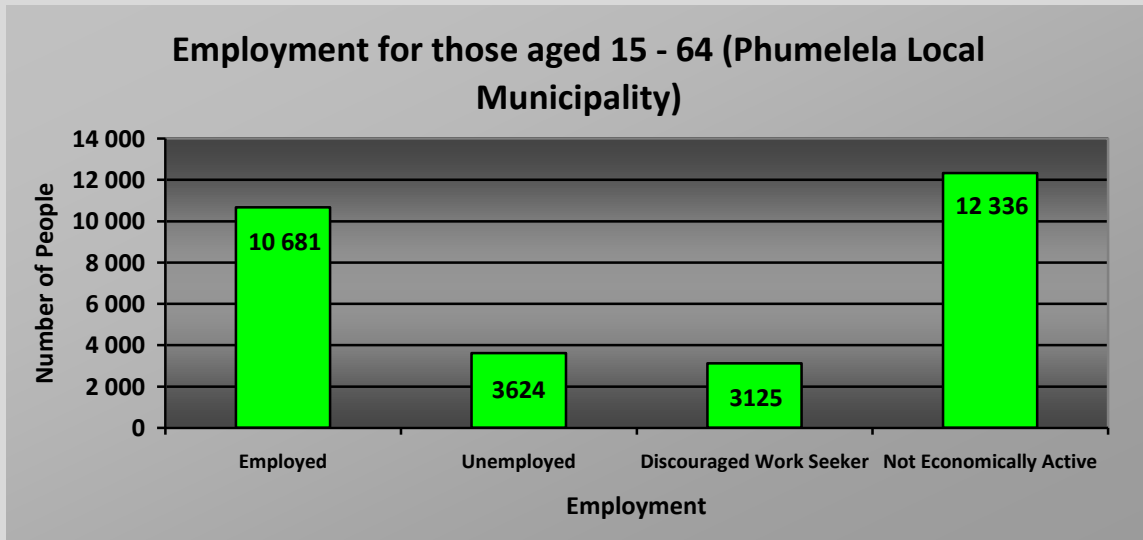
22. Socio-Economic Character

a) Local Municipality

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

Level of unemployment:

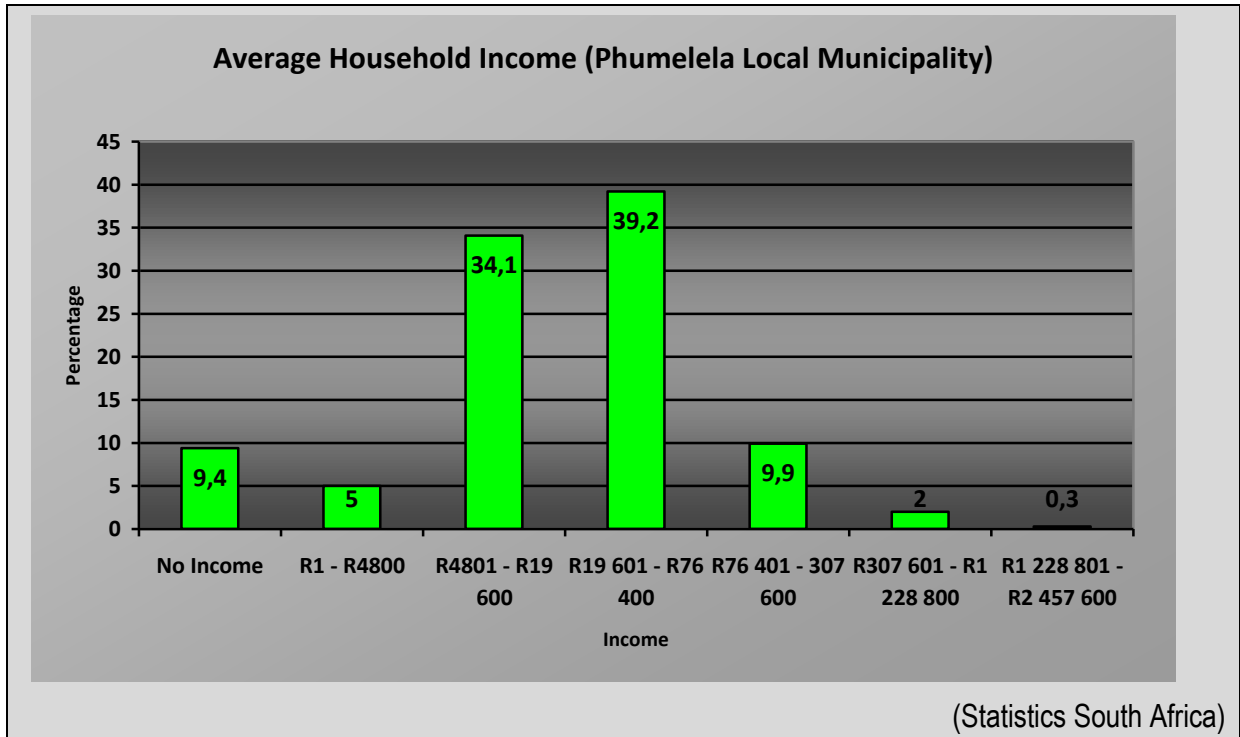
A total of 3 624 (12.19%) individuals of the community within the Phumelela Local Municipality are unemployed, while 10 681 (35.88%) of the community are employed.



(Statistics South Africa)

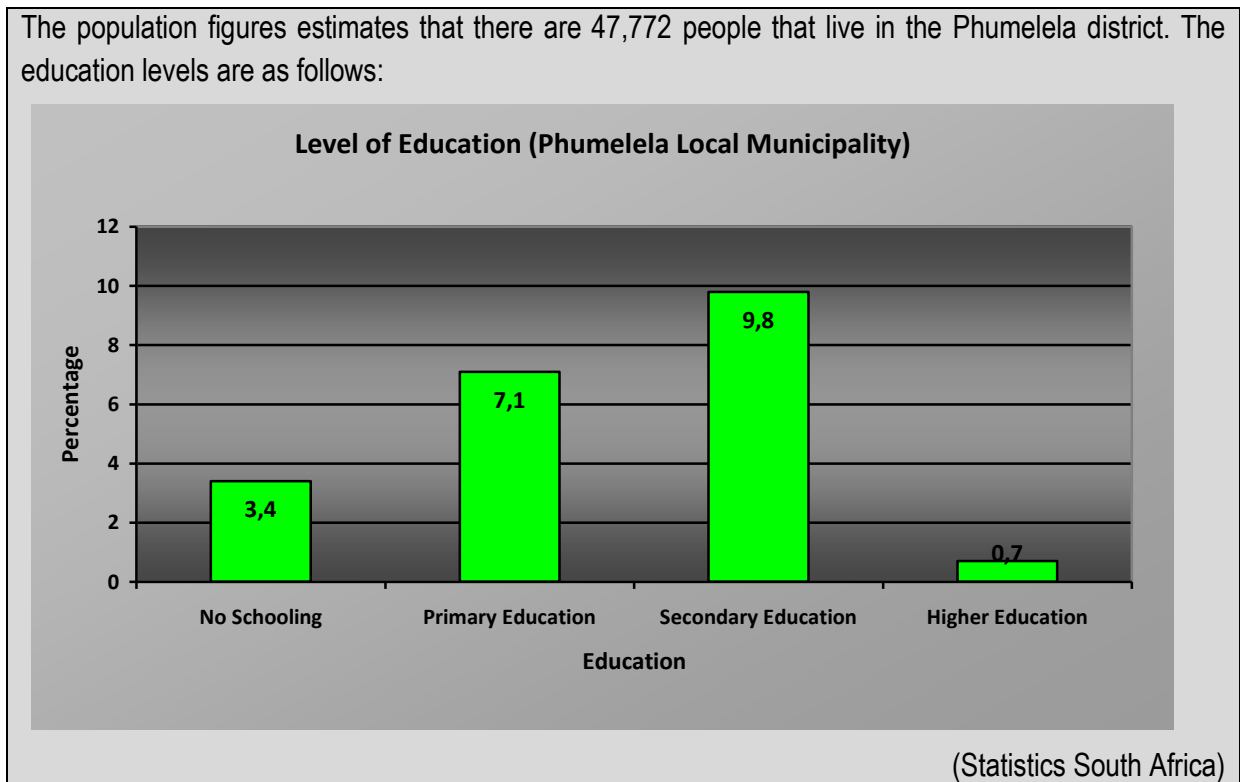
Economic profile of local municipality:

The Economic Profile of Phumelela Local Municipality is summarized below.



Level of education:

The population figures estimates that there are 47,772 people that live in the Phumelela district. The education levels are as follows:



b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R 4 000 000
What is the expected yearly income that will be generated by or as a result of the activity?	R 35 000 000
Will the activity contribute to service infrastructure?	YES X
Is the activity a public amenity?	YES X
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	10 New employments.
What is the expected value of the employment opportunities during the development and construction phase?	R 60 000.
What percentage of this will accrue to previously disadvantaged individuals?	80%
How many permanent new employment opportunities will be created during the operational phase of the activity?	30 Permanent new employment opportunities.
What is the expected current value of the employment opportunities during the first 10 years?	R 14 000 000
What percentage of this will accrue to previously disadvantaged individuals?	70%.

23. 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 D to this report.

Prof Johan du Preez from Enviro Niche was appointed by Enviroworks to conduct the Ecological, Wetland and Aquatic Impact Assessment for the proposed project.

- 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
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BASIC ASSESSMENT REPORT

	Ecological Support Area (ESA) X		No Natural Area Remaining (NNR)	<p>CBA's are included due to the fact that it is classified as a site that is irreplaceable or near-irreplaceable for meeting Biodiversity targets. The loss of a CBA site implies that biodiversity targets will not be met (Collins, 2015).</p> <p>ESA's are included due to the fact that less than 10% of the surface has been transformed or degraded. Belonging to this category are mostly natural land that are considered to represent prime corridor areas (Collins, 2015).</p>
<p>Please refer to Appendix A – Sensitivity Map for the complete Biodiversity Map. The information in the map was received by DESTEA.</p>				

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	5 %	Species richness in the vegetation of the study area is low with a total of 30 species recorded during the survey (Du Preez, 2015).
Near Natural (includes areas with low to moderate level of alien invasive plants)	8 %	The natural vegetation around the fuel filling station has been transformed due to ploughing of the natural grassland for road construction (Du Preez, 2015).
Degraded (includes areas heavily invaded by alien plants)	47 %	The proportion of naturalized exotic and invader species is high, indicating high levels of disturbance to the natural vegetation on site (Du Preez, 2015).
Transformed (includes cultivation, dams, urban, plantation, roads, etc.)	40 %	The natural vegetation around the fuel filling station has been transformed due to ploughing of the natural grassland for road construction (Du Preez, 2015).

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)		Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)		Estuary	Coastline
	Least Threatened X	YES X		NO X	NO X

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)

The following description of the vegetation type and aquatic ecosystem present on site, and information identified on site (e.g. threatened species and special habitats) were extracted from a Wetland and vegetation assessment of the proposed Truck Stop Development on the Farm Palmiet, Vrede District, Free State Province as compiled by the Ecologist P.J du Preez.

Vegetation Assessment

The site for this proposed project is situated on a degraded patch of the vulnerable Frankfort Highveld Grassland vegetation type (Gm6). It was found that the area is partially developed and an existing fuel filling station is present on site. The natural vegetation around the fuel filling station has been transformed due to ploughing of the natural grassland for crop production, road construction and grazing impacts.

Land cover of the study area:

The natural vegetation of the site has been transformed due to crop production in the past. The area directly around the existing facilities is also disturbed. The slopes wetland and drainage line have been degraded and is currently invaded by several weed species.

Alien Weeds

The declared weeds or alien invader species, according to the *National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004): Alien and Invasive Species Regulations, 2014* were noted. No alien trees occur on site. The weeds present are *Argemone ocoleuca*, *Datura stramonium*, *Pennisetum clandestinum*, *Oenothera rosea*, *Cirsium vulgare*, *Conyza braziliensis*, *Conyza bonariensis*, *Cosmos Formosa*, *Plantago lanceolata*, *Tagetes minuta*, *Bidens bipinnata*, *Conyza bonariensis* in the disturbed grassland and wetland areas.

Streams and Wetlands

The site gradually slopes towards the west (Villiers-Warden road). The site is the headwater of a small seasonal stream that flows towards the north-west. The wetland is in a very degraded state due to the fact that it has been ploughed in the past and it is now invaded by exotic weeds and grasses such as

Bromus catharticus, *Oenothera rosea*, *Persicaria lanceolata*, *Plantago lanceolata*, *Cirsium vulgare*, *Xanthium stramonium* and *Cosmos Formosa*. The wetland is situated more than 30m away from the existing buildings and planned new infrastructure on the site.

Grassland Areas

The grassland communities are also largely transformed and degraded due to ploughing activities, and road construction. Species noted are *Aristida junciformis*, *Sporobolus fimbriatus*, *Eragrotis plana*, and *Hyparrhenia hirta*.

Flora and diversity of the study area

The assessment revealed that the *Cosmos Formosa* – *Hyparrhenia hirta* grassland have a LOW conservation value. It is a transformed wetland area. Species richness of the vegetation of the site is low with a total of 30 species recorded during the survey. The proportion of naturalized exotic and invader species is high (47%), indicating high levels of disturbance to the natural vegetation on site.

Protected Species

A protected species (*Kniphofia ensifolia*) occur in the wetland area but will not be affected by the proposed development due to the fact that it is not near the proposed truck stop site (Du Preez, 2015).

Section C: Public Participation

24. Advertisement and Notice

Publication name	Volksblad Newspaper	
	Express Newspaper	
Date published		
Site notice position	Latitude	Longitude
Date placed		

Include proof of the placement of the relevant advertisements and notices in Appendix E1.

25. 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 982

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 982

Title, Name and Surname	Affiliation / key stakeholder status	Contact details (tel number or e-mail address)

Include proof that the key stakeholder received written notification of the proposed activities as Appendix E2. This proof may include any of the following:

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority.

26. Issues raised by Interested and Affected Parties

Summary of main issues raised by I&APs	Summary of response from EAP
To be completed after Public Participation	

27. Comments and Response Report

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR 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 E3.

28. Authority Participation

Authorities and organs of state identified as key stakeholders:

Authority / Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address
Phumelela Municipality Manager	Mr. Bruce William Kannemeyer	058 913 3601		mm@phumelela.gov.za	
Phumelela Municipality Environmental Officer					
Department of Water and Sanitation	Mr. Pius Lerotholi	051 403 9163		LerotholiP@dwa.gov.za	
Department of Economic, Small Business Development, Tourism and Environmental Affairs	Ms. Grace Mkhosana	051 400 4813		mkhosana@detea.fs.gov.za	
Heritage Free State	Ntando Mbatha	051 410 4750		mbatha.npz@sacr.fs.gov.za	
Department of Agriculture	Izak Venter	051 861 2052		izak@glen.agric.za	
South African National Roads Agency Limited	Victoria Bota	012 844 8031		BotaV@nra.co.za	

Include proof that the Authorities and Organs of State received written notification of the proposed activities as appendix E4.

In the case of renewable energy projects, Eskom and the SKA Project Office must be included in the list of Organs of State.

29. Consultation with Other Stakeholders

BASIC ASSESSMENT REPORT

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 as appendix E5.

Copies of any correspondence and minutes of any meetings held must be included in Appendix E6.

Section D: Impact Assessment

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

30. 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.

Impact Assessment Methodology

For each potential impact, the **DURATION** (time scale), **EXTENT** (spatial scale), **IRREPLACEABLE** loss of resources, **REVERSIBILITY** of the potential impacts, **MAGNITUDE** of negative or positive impacts, and the **PROBABILITY** of occurrence of potential impacts must be assessed. The assessment of the above criteria will be used to determine the **SIGNIFICANCE** of each impact, with and without the implementation of the proposed mitigation measures. The scales to be used to assess these variables and to define the rating categories are tabulated in **Table 1** and **Table 2** below.

Table 1: Evaluation components, ranking scales and descriptions (criteria).

Evaluation component	Ranking scale and description (criteria)
DURATION	5 – Permanent 4 – Long term: Impact ceases after operational phase/life of the activity (> 20 years). 3 – Medium term: Impact might occur during the operational phase/life of the activity (5 to 20 years). 2 – Short term: Impact might occur during the construction phase (< 5 years). 1 – Immediate
EXTENT (or spatial scale / influence of impact)	5 – International: Beyond National boundaries. 4 – National: Beyond Provincial boundaries and within National boundaries. 3 – Regional: Beyond 5 km of the proposed development and within Provincial boundaries. 2 – Local: Within 5 km of the proposed development. 1 – Site-specific: On site or within 100 m of the site boundary. 0 – None
IRREPLACEABLE loss of resources	5 – Definite loss of irreplaceable resources. 4 – High potential for loss of irreplaceable resources. 3 – Moderate potential for loss of irreplaceable resources. 2 – Low potential for loss of irreplaceable resources. 1 – Very low potential for loss of irreplaceable resources. 0 – None
REVERSIBILITY of impact	5 – Impact cannot be reversed. 4 – Low potential that impact might be reversed. 3 – Moderate potential that impact might be reversed.

BASIC ASSESSMENT REPORT

	<p>2 – High potential that impact might be reversed.</p> <p>1 – Impact will be reversible.</p> <p>0 – No impact.</p>
MAGNITUDE of NEGATIVE IMPACT (at the indicated spatial scale)	<p>10 – Very high: Bio-physical and/or social functions and/or processes might be <i>severely</i> altered.</p> <p>8 – High: Bio-physical and/or social functions and/or processes might be <i>considerably</i> altered.</p> <p>6 – Medium: Bio-physical and/or social functions and/or processes might be <i>notably</i> altered.</p> <p>4 – Low : Bio-physical and/or social functions and/or processes might be <i>slightly</i> altered.</p> <p>2 – Very Low: Bio-physical and/or social functions and/or processes might be <i>negligibly</i> altered.</p> <p>0 – Zero: Bio-physical and/or social functions and/or processes will remain <i>unaltered</i>.</p>
MAGNITUDE of POSITIVE IMPACT (at the indicated spatial scale)	<p>10 – Very high (positive): Bio-physical and/or social functions and/or processes might be <i>substantially</i> enhanced.</p> <p>8 – High (positive): Bio-physical and/or social functions and/or processes might be <i>considerably</i> enhanced.</p> <p>6 – Medium (positive): Bio-physical and/or social functions and/or processes might be <i>notably</i> enhanced.</p> <p>4 – Low (positive): Bio-physical and/or social functions and/or processes might be <i>slightly</i> enhanced.</p> <p>2 – Very Low (positive): Bio-physical and/or social functions and/or processes might be <i>negligibly</i> enhanced.</p> <p>0 – Zero (positive): Bio-physical and/or social functions and/or processes will remain <i>unaltered</i>.</p>
PROBABILITY (of occurrence)	<p>5 – Definite: >95% chance of the potential impact occurring.</p> <p>4 – High probability: 75% - 95% chance of the potential impact occurring.</p> <p>3 – Medium probability: 25% - 75% chance of the potential impact occurring.</p> <p>2 – Low probability: 5% - 25% chance of the potential impact occurring.</p> <p>1 – Improbable: <5% chance of the potential impact occurring.</p>

Evaluation component	Ranking scale and description (criteria)
CUMULATIVE impacts	<p>High: The activity is one of several similar past, present or future activities in the same geographical area, and might contribute to a very significant combined impact on the natural, cultural, and/or socio-economic resources of local, regional or national concern.</p> <p>Medium: The activity is one of a few similar past, present or future activities in the same geographical area, and might have a combined impact of moderate significance on the natural, cultural, and/or socio-economic resources of local, regional or national concern.</p> <p>Low: The activity is localised and might have a negligible cumulative impact.</p> <p>None: No cumulative impact on the environment.</p>

Once the evaluation components have been ranked for each potential impact, the significance of each potential impact will be assessed (or calculated) using the following formula:

$$\text{SP (significance points)} = (\text{duration} + \text{extent} + \text{irreplaceable} + \text{reversibility} + \text{magnitude}) \times \text{probability}$$

The maximum value is 150 SP (significance points). The unmitigated and mitigated scenarios for each potential environmental impact should be rated as per the table below.

Significance Points	Environmental Significance	Description
100 – 150	High (H)	An impact of high significance which could influence a decision about whether or not to proceed with the proposed project, regardless of available mitigation options.
40 – 99	Moderate (M)	If left unmanaged, an impact of moderate significance could influence a decision about whether or not to proceed with a proposed project.

BASIC ASSESSMENT REPORT

<40	Low (L)	An impact of low is likely to contribute to positive decisions about whether or not to proceed with the project. It will have little real effect and is unlikely to have an influence on project design or alternative motivation.
+	Positive impact (+)	A positive impact is likely to result in a positive consequence/effect, and is likely to contribute to positive decisions about whether or not to proceed with the project.

A complete impact assessment in terms of Regulation 19(3) of GN 982 must be included as Appendix F.

BASIC ASSESSMENT REPORT

31 Potential Impacts during Planning, Design and Construction Phases

PROJECT ALTERNATIVE	POTENTIAL ENVIRONMENTAL IMPACT / NATURE OF IMPACT	ENVIRONMENTAL SIGNIFICANCE																	MITIGATION	
		BEFORE MITIGATION									AFTER MITIGATION									
		Duration	Extent	Irreplaceable	Reversibility	Magnitude	Probability	TOTAL (SP)	Significance	CUMULATIVE	Duration	Extent	Irreplaceable	Reversibility	Magnitude	Probability	TOTAL (SP)	Significance		CUMULATIVE
Project activity:	Planning & Construction Phase																			

BASIC ASSESSMENT REPORT

Truck facility	Stop	Soil erosion	4	1	5	5	8	4	92	M	L	2	1	2	2	4	2	22	L	L	<p>All equipment on site must be inspected for diesel leaks prior to operation,</p> <p>Leakages must be repaired as soon as possible and drip trays must be placed underneath machinery until such leakages have been repaired,</p> <p>Soil contaminated with oil, diesel, petrol or other foreign matter must be excavated as far as contaminated and disposed of at a licensed hazardous waste disposal site,</p> <p>Topsoil and subsoil must be protected from contamination by means of proper site management, for example collect and recycle lubricants and avoid accidental spills of pollutants,</p> <p>Vehicles and machinery may not be serviced on site,</p> <p>Polluted runoff water must be isolated and not be allowed to enter drainage lines, wetland areas or storm water canals.</p>
Truck facility	Stop	Soil and water contamination	4	3	4	4	4	5	95	M	L	2	2	2	3	4	3	39	L	L	<p>Protect the wetland from direct or indirect spills of pollutants such as garbage, sewage, cement, concrete wash out water, oils, fuels, or organic material or any hazardous substances resulting from the Contractor's activities.</p>

BASIC ASSESSMENT REPORT

Truck facility	Stop	Vegetation impacts	3	2	3	3	4	5	75	M	L	2	1	2	2	4	2	22	L	L	<p>Minimize the extent of removal of vegetation within the defined construction footprint</p> <p>Do not remove any large trees without the permission of the ECO</p> <p>No open fires are permitted anywhere on site. Restrict contained fires for heating and cooking (i.e. in a fire drum) to designated areas on site, Exotic and alien vegetation identified at the site before and during construction should be managed.</p>
Truck facility	Stop	Increase in alien and invasive plant species	3	2	4	4	6	4	76	M	L	2	1	1	1	2	2	14	L	L	<p>An alien and invasive control program needs to be implemented.</p>
Truck facility	Stop	Faunal impacts	33	1	1	1	8	4	92	M	L	2	1	2	2	4	2	22	L	L	<p>Limiting general habitat destruction is the most pertinent mitigation measure to limiting the impacts on potential RDL fauna and flora species. Where the proposed road crosses and divides a sensitive site, it is imperative that access for fauna to the sensitive site is not blocked by the road and that the flow patterns of all water courses, including wetlands, are not altered. All I&APs must be kept informed of all roads that may fragment their properties.</p>

BASIC ASSESSMENT REPORT

Truck facility	Stop	Impact on adjacent agricultural land during construction	2	2	3	2	4	3	39	L	L	2	1	1	1	2	2	14	L	L	<p>Ensure that adjacent strips of agricultural land are not impacted upon</p> <p>Clearly demarcate the site boundary and ensure that workers do not enter adjacent farm boundaries</p> <p>No fires are to be allowed on site</p>
Truck facility	Stop	Traffic and safety	2	2	2	4	4	5	70	M	L	2	2	2	1	4	3	33	L	L	<p>Traffic deviations around the construction area must be planned in conjunction with the local authority to ensure safe and free flow of traffic. Safety signs and traffic control officials, if necessary must be implemented.</p>
Truck facility	Stop	Visual and aesthetic	2	2	2	4	4	5	70	M	L	2	2	2	1	4	3	33	L	L	<p>Traffic deviations around the construction area must be planned in conjunction with the local authority to ensure safe and free flow of traffic. Safety signs and traffic control officials, if necessary must be implemented.</p>
Truck facility	Stop	Noise nuisance	5	3	1	1	4	5	70	M	L	5	3	1	1	0	3	30	L	L	<p>Use asphalt surfaces to reduce noise from tire friction</p>
Truck facility	Stop	Impacts on air quality	3	3	4	4	6	4	80	M	L	2	2	2	2	4	2	24	L	L	<p>Implement dust suppression measures e.g. regular watering.</p> <p>Concrete mixing to be carried out away from sensitive areas.</p> <p>Build a settling dam off the concrete vehicle wash to catch runoff concrete mixed with water.</p>

BASIC ASSESSMENT REPORT

Truck facility	Stop	Heritage Impacts	1	0	0	0	0	1	1	L	L	1	0	0	0	0	1	1	L	L	No heritage artefacts were found If any should be discovered during the construction, an accredited heritage specialist should be notified
Truck facility	Stop	Loss of wetland-dependent biodiversity	4	2	3	3	6	4	72	M	L	2	2	3	3	4	2	28	L	L	Indiscriminate destruction of wetlands and wetland vegetation will lead to impacts on the overall wetland-dependent biodiversity; Any impacted areas should be rehabilitated and, if necessary, re-vegetated with local floral species.
Truck facility	Stop	Wetland degradation through pollution from construction activities	4	2	4	2	6	4	72	M	L	2	2	2	2	4	3	36	L	L	Administer the proper storage and handling of hazardous substances Limit, as far as possible, the operation and storage of machinery and construction-related equipment within wetland areas Provide appropriate solid waste disposal facilities and adequate signage on-site during construction
Truck facility	Stop	Wetland degradation through solid/waste / litter pollution	2	2	4	3	4	2	30	L	L	2	2	3	1	4	2	24	L	L	Appropriate solid waste disposal facilities should be provided on-site during construction No solid waste/rubble to be stored in wetland areas Rubbish should be regularly cleared from the site General waste, equipment and surplus rock should be completely removed from site once construction has been completed

BASIC ASSESSMENT REPORT

Truck facility	Stop	Wetland degradation through sedimentation from construction activities	3	3	4	4	6	4	80	M	L	2	2	2	2	4	2	24	L	L	<p>No placement of excavated material/sediments/spoil should be placed within wetlands or channels in order to reduce the possibility of material being washed downstream</p> <p>Install sediment barriers or catchment areas immediately downstream of active work areas as necessary to trap any excessive sediments generated during construction</p>
Truck facility	Stop	Wetland degradation through disturbance and destruction of wetland vegetation	2	3	3	4	4	5	80	M	L	2	2	2	2	2	3	30	L	L	<p>Clearly demarcate construction footprint area prior to commencement of construction activities to ensure that that construction vehicles do not unduly disturb the wetland areas</p> <p>Demarcate areas to be cleared of vegetation</p> <p>Minimise the width of the construction zone in sensitive wetland areas.</p>
Truck facility	Stop	Social Impacts – job creation	0	0	0	0	8	5	+40	M	M	0	0	0	0	8	5	+40	M	M	No mitigation measures were suggested.

32. Potential Impacts during Operational Phase

PROJECT ALTERNATIVE	POTENTIAL ENVIRONMENTAL IMPACT / NATURE OF IMPACT	ENVIRONMENTAL SIGNIFICANCE																		MITIGATION	
		BEFORE MITIGATION									AFTER MITIGATION										
		Duration	Extent	Irreplaceable	Reversibility	Magnitude	Probability	TOTAL (SP)	Significance	CUMULATIVE	Duration	Extent	Irreplaceable	Reversibility	Magnitude	Probability	TOTAL (SP)	Significance	CUMULATIVE		
Project activity:	Operational Phase																				

BASIC ASSESSMENT REPORT

Truck Stop facility	Soil erosion due to runoff	3	2	4	3	6	3	54	M	L	2	1	3	2	4	2	24	L	L	Runoff water must be isolated and not be allowed to enter drainage lines, wetland areas or storm water canals.
Truck Stop facility	Soil and water contamination from leaking trucks	3	1	2	2	4	3	36	L	L	2	1	2	2	2	2	18	L	L	Protect the water course from direct or indirect spills of pollutants such as oils and fuels leaking from trucks
Truck Stop facility	Loss of faunal species through road kills	5	1	4	4	4	3	54	M	L	5	1	3	2	2	2	26	L	L	Place necessary road signs to make drivers aware of the animals.
Truck Stop facility	Noise due to the trucks occupying the truck stop	3	2	0	2	2	4	36	L	L	3	2	0	2	2	4	36	L	L	Use asphalt surfaces to reduce noise from tire friction. Inforce a limit on trucks making use of their hooters at the truck stop.
Truck Stop facility	Social Impacts – job creation	0	0	0	0	8	5	+40	M	M	0	0	0	0	8	5	+40	M	M	No mitigation measures were suggested.

33. 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.

Due to the nature of the study area and the fact that layout alternative is the only option considered for the diesel tanks, the impacts are the same for both diesel tank locations.

On assessment of the proposed location for the alternatives, the specialist determined the following:

Ecological

- According to the *National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004): Alien and Invasive Species Regulation, 2014*, all declared aliens must be effectively controlled. In terms of this Act 198 alien species were listed as declared weeds and invaders and ascribed to one of the following categories:
 - **Category 1:** Prohibited and must be controlled. This includes the following species found on site: *Cirsium vulgare*, *Datura ferox*, *Datura stramonium*, and *Xanthium strumarium*.
- Application for a water use license must be done due to the fact that the proposed development will be taking place within 500 metres from drainage lines and bank disturbance of seasonal streams will occur.
- An Environmental Control Officer (ECO) must be appointed to oversee the proposed project.

By implementing mitigation measures, the impacts will be significantly reduced to moderate (loss of flora), low (habitat loss and direct impact) and minor impact for erosion and sedimentation risks.

One protected species (*Kniphofia ensifolia*) occur in the wetland area but will not be effected by the proposed development due to the fact that it is not near the proposed truck stop site. During the initial site inspection no Red List Plant Species were observed.

Archaeological Sites

- The impact resulting from the new development at Palmiet on the archaeological and heritage resources is considered to be of minor significance.
- There are no obvious reasons to delay further planning of the development at the specific site.
- It is recommended that the planning of the proposed project may proceed.

Geo-Technical Study

- The proposed permit area in Portion 4 of the Farm Palmiet No. 585 is considered suitable for development in terms of the Geo-Technical considerations.
- The site has a predicted total heave of medium to high which arises from the clay layer.
- Bedrock was encountered in the excavated test pits at a depth of 1.5m to 1.9m.
- The predicted heave is based on the Geo-Technical information available as presented in this

report. Consequently the design engineer must make every effort to confirm that the actual Geo-Technical conditions existing on site agree with that predicted.

Geohydrological Sites

- The tanks and sewage treatment facility should be installed according to the specified SANS standards to minimize the risk for the pollution of the groundwater.
- Groundwater monitoring plan should be drafted and be approved by DWS.
- Groundwater monitoring should be done on a bi-annual basis and a groundwater monitoring report should be submitted to DWS.
- With the above mentioned precautions in mind, the proposed site is suitable for the development from a geohydrological perspective.

Bulk Services

- A 48 hour water storage facility must be provided.
- The borehole must be properly maintained.
- A sewer treatment plant should be installed. A French drain is not an acceptable solution for this development.
- A storm water retention facility must be provided.
- Wayleaves must be obtained for the vehicle accesses of the R103 and R34 from the provincial authority.

Traffic Impact Study

- If the developed as planned, the site can be attractive as a filling station, truck stop and related facilities.
- Based on traffic volumes and other relevant factors, fuel sales at the site are expected to be in the order of 100 000 litres per month.
- Sales by the convenience shop are estimated at R140 000 per month.
- The percentage of trucks compared to light vehicles is relatively high and the adjacent routes can be regarded as heavy vehicle routes.
- The R103 and R34 are not served by any filling stations or truck stops. The planned facility could have an impact on the Ukulala Truck Stop at Warden and the Vaal 1 Stop at Villiers, although these facilities mainly serve the N3 and are more than 50km from the site.

No-go alternative (compulsory)

The no-go option will result in the **non-construction of the Palmiet Truck Stop** on Portion 4 of the Farm Palmiet No. 585, Vrede District, Free State Province. The proposed project will **create 10 new employment opportunities** during the construction phase and another **30 permanent employment opportunities** in its operational phase. The proposed project will promote the **Local Economic**

Development of Vrede through the concentration of tourism activities in the near vicinity of town.

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

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

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

1. Wetland habitat

- ✓ Limit the construction footprint which is to remain within designated access roads;
- ✓ Storage of machinery and surplus materials to be only allowed outside of wetland areas;
- ✓ No indiscriminate destruction of wetland vegetation.

To reduce the impact on wetland soils and hydrology during trenching, the following needs to be considered:

- ✓ Wetland boundaries should be clearly marked in work areas prior to the start of any construction activities to assist the project personnel, contractors and environmental officer to avoid unplanned disturbances to the wetlands. This is also to demarcate the area to which these guidelines apply.
- ✓ Preferably trenching should be done in the dry season to minimize the risk of compaction and disturbance to the wetland.
- ✓ Where machinery is to be used, the necessary precautionary measures need to be put in place to minimize their impact, especially when this involves driving through the wetland. Where vehicles need to enter a wetland for trenching, the impact can be mitigated by lowering the tyre pressure, thereby distributing the load over a larger area. This more so for 'wetter' wetlands. *The weight of construction vehicles can also be dissipated by creating a wooden platform (thick wooden slats / planks) for vehicles to drive on whilst trenching. This is not thought to be necessary for the wetlands associated with the proposed development area though;*
- ✓ Maintain only the minimal footprints for the work necessary to accomplish the task at hand. *This is essential to limiting the impact on the wetlands;*
- ✓ Remove the top 30 cm as sods, i.e. the vegetation and underlying soil must be removed as a unit and stored separately from the underlying material. These can be stockpiled immediately next to the trench *(by placing on a material layer (shade cloth or a geotextile). This will ensure that wetland vegetation is not smothered, and will negate the need for re-establishment of the wetland vegetation once removed if backfilling is to occur within 24 hours, and if the local hydrological conditions allow, i.e. there is no surface water on site.*
- ✓ Replace the soil in the reverse order in which it was removed, i.e. the soil that was removed

last must be used as the first backfill.

- ✓ Ensure that the top 30 cm of the backfill is the topsoil (sod) layer of the material that was excavated from the wetland;
- ✓ The backfill must be restored to its pre-construction elevation upon completion of the work. This is to prevent the establishment of preferential flow pathways.
- ✓ Ensure that trenching does not create a subsurface drain, i.e. an underground preferential flow path due to i.e. backfilling with soil of lower permeability. This in particular where trenching is to occur in the same direction of the natural flow. Precautions can include inserting clay plugs at approximate 1 m – 2 m intervals.
- ✓ *Trenching through a wetland for a pipeline of this diameter should be done to below the impermeable clay layers (the G-horizon). It is this impermeable clay layer that allows for the persistence of surface waters to within 500 mm of the surface and, therefore, the existence of the wetland. Trenching to below this layer and then the resealing of this impermeable layer will ensure the retention of proper hydrological functionality of the wetland. It cannot be stressed more that wetland functionality is dependent on the characteristics of the soil stratification within the local area. This stratification must be maintained post construction by placing soils in the reverse order of removal;*

Soil erosion:

- ✓ Make use of geotextiles within disturbed areas of steeper topography to avoid erosion through surface water runoff;
- ✓ Avoid steep-cut banks of watercourses;
- ✓ Construct within the low-flow (dry) period;
- ✓ Correct site reinstatement and landscaping following any disturbances will abate channel and gully formation.
- ✓ A storm water management plan should be in place.

Dust Nuisance:

- ✓ Implement dust suppression measures e.g. regular watering of dusty surfaces.

Noise Nuisance:

- ✓ Limit working hours of noisy equipment,
- ✓ Ensure that employees and staff conduct themselves in an acceptable manner while on site, both during work hours and after hours.

Conclusion

The contents of this report have sought to identify and assess key issues relating to the proposed Palmiet Truck Stop, Free State province.

In consolidation thereof, no environmental fatal flaws were identified to be associated with the proposed facility. The majority of impacts identified were of a medium to low significance and can be suitably mitigated to acceptable levels, provided that specifications are stipulated in the EMP are followed and adhered to.

It is thus the opinion of the EAP, supported by the findings of specialist determinations that the

BASIC ASSESSMENT REPORT

development of the proposed Palmiet Truck Stop, with the guidance of the EMPr, be authorised for construction and operation.

Is an EMPr attached?

YES	
X	

The EMPr must be attached as Appendix G.

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 H.

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

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

BASIC ASSESSMENT REPORT

Christoff du Plessis

NAME OF EAP

SIGNATURE OF EAP

DATE

Section F: Appendixes

The following appendixes must be attached:

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

Appendix J: Additional Information

References

“JWALE KE NAKO YA KOTULO, RE A KUBELETSA”

www.edtea.fs.gov.za