
FINAL ENVIRONMENTAL ASSESSMENT REPORT

The proposed construction of a diesel depot on Portion 1 of Plot 42, Estoire, Bloemfontein

Location: Portion 1 of Plot 42, Estoire, Bloemfontein, Free State
Applicant: Mack's Petroleum (PTY) LTD
Competent Authority: The Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs (DESTEA)
MDA Ref No: 40813
DESTEA Ref No: EMS/4/20/02
NEAS Ref No: FSP/EIA/0000324/2020
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Executive Summary

The proposed project entails the construction / development of a fuel depot with ancillary amenities, including a wash bay on Portion 1 of Plot 42, Sand du Plessis Avenue, Estoire Small Holdings, Bloemfontein.

The storage tanks will be above ground of nature. The above ground tanks will be bunded to carry at least 110% of the total volume of fuel to be kept in the tanks. It is proposed that the following above ground tanks be installed during various phases:

- Phase 1: 1 x 79 000ℓ (existing)
- Phase 2: 5 x 83 000 ℓ
- Phase 3: 5+ x 83 000 ℓ

The applicant identified a need to develop the said property for the above mentioned purposes and have appointed MDA Town and Regional Planners, Environmental and Development Consultants to apply for an environmental authorisation to the DESTEA for the storage of hazardous material. The current document serves as the Final Environmental Impact Assessment (EIA) following the:

- Application
- Draft Scoping Report
- Final Scoping Report as well as the
- Draft EIA.

The applicant provides road transportation of bulk fuel products and operates its own fleet of tankers. Thus, the main purpose of the project is to construct fuel tanks for the storage of fuel. The stored fuel will mainly be used by the applicant to fill the tanks of its own fuel transportation trucks.

Due to the current land use, the site is in a degraded condition and the natural vegetation composition has been transformed to a large degree.

The Draft & Final EIA's have been conducted in terms of the 2014 EIA Regulations as amended in 2017 which fall under the National Environmental Management Act 107 of 1998 (NEMA) to obtain Environmental Authorisation (EA). The EIA Regulations under the NEMA consist of two categories of activities namely:

- Activities which require a Basic Assessment Process, and
- Activities which require both a Scoping and an EIA Report.

The activities associated with the proposed project require a Scoping and an EIA Report for an EA and fall under Regulation GNR 325 (Listing Notice 2) of the 2014 EIA Regulations as amended on 07 April 2017.

The Scoping and an EIA process fall under Activity 4 of Listing Notice 2 (GNR 325) of the 2014 EIA Regulations as amended on 07 April 2017:

'The development and related operation of facilities or infrastructure, for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 cubic metres.'

In addition, Activity 27 of Listing Notice 1 (GNR 327) of the 2014 EIA Regulations as amended on 07 April 2017 was also considered as part of the proposed project:

'The clearance of an area of 1 hectare 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.'

However, the area to be developed as part of the proposed project is less than 1 hectare and therefore the above mentioned activity is not triggered as part of the proposed project.

The key objectives of the Scoping report were to:

- Facilitate the introduction of stakeholders to the project and to provide information regarding the project;
- Assist in the identification process of main stakeholders;
- Identify possible issues, concerns and values relating to the project;
- Identify important issues and impacts related to the project and set the stage for these impacts and issues to be addressed in the EIA;
- Identify all regulatory and legislative requirements;
- Define the process ahead and establish the extent of the subsequent EIA;
- Scope for issues that would be associated with this planned project;
- Conduct an initial investigation into biophysical and socio-economic aspects, focusing on key issues;
- Advise the applicant about the potential impacts (positive and negative impacts) of their planned development, as well as the implications for the design, construction and operational phases of the project;
- Facilitate public input on environmental and social matters.

After careful consideration of all aspects as identified during the Scoping Report as well as the identification of all stake holders the Draft & Final EIA Reports were compiled.

The key objectives of the EIA Report are as follows;

- The identification of the need and desirability of the proposed project;
- To evaluate, discuss and conduct an comparative assessment of the potential alternatives identified during the initial phase of the project (if applicable);
- To identify and assess the possible advantages and disadvantages that the proposed project might have on the environment and community involved;
- To provide a description and explanation of the methodology used in order to determine the significance of potential environmental impacts related to the proposed project;
- To provide a summary of the findings and recommendations as stipulated in the necessary and / or conducted specialist studies;
- To provide an in depth description of all environmental issues as identified by specialists and the findings of the scoping phase of the project;
- The thorough assessment relating to the significance of each identified environmental issue as well as the provision of an indication relating to the extent to which these issues can be addressed using different mitigation measures;
- To provide a description of any assumptions, uncertainties and gaps in knowledge;
- The provision of an environmental impact statement containing the key findings of the assessment and comparative assessments of the positive and negative implications of the proposed project;
- To assist in and provide the necessary tools and identification procedures in order to draft the Environmental Management Programme (EMPr).

List of Abbreviations

DESTEA: Department of Economic, Small Business Development, Tourism and Environmental Affairs

EAP: Environmental Assessment Practitioner

EIA: Environmental Impact Assessment

EMPr: Environmental Management Programme

IAPs: Interested and / or Affected Parties

MMM: Mungaung Metropolitan Municipality

NEMA: National Environmental Management Act

SDF: Spatial Development Framework

DWS: Department of Water and Sanitation

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1. PROJECT INTRODUCTION

MDA has been appointed by the applicant (i.e. Mack's Petroleum (PTY) LTD) to undertake the Environmental Impact Assessment (EIA) process for the proposed fuel depot. The proposed development is situated on Portion 1 of Plot 42, Estoire, Bloemfontein, Free State.

The applicant identified a need to develop the property as mentioned above, given the location of the property as well as current development trends in the surrounding areas. Therefore the applicant applied for an Environmental Authorization to the Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs (DESTEA) in order to subsequently establish a fuel depot on the property.

The EIA Report focuses on the possible environmental impacts of the proposed fuel depot on the receiving environment. A multidisciplinary approach was adopted and undertaken in order to design an integrated proposed development which will have minimal environmental impacts. **TABLE 1** below depicts a summary of the proposed development.

| TABLE 1. SUMMARY OF THE PROPOSED PROJECT | |
|---|---|
| Project Name | The proposed construction of a Diesel Depot on Portion 1 of Plot 42, Estoire, Bloemfontein. |
| Site Location | Portion 1 of Plot 42, Estoire, Bloemfontein. |
| Surveyor-General 21 Digit Code | F 003 003 100 000 042 000 01 |
| Development Footprint | Less than 1 hectare |
| Proposed Layout of Development | <p>The proposed project entails the construction / development of a fuel depot with ancillary amenities, including a wash bay on Portion 1 of Plot 42, Sand du Plessis Avenue, Estoire Small Holdings, Bloemfontein.</p> <p>The Fuel Storage Tanks will be above ground of nature. The above ground tanks will be bunded to carry at least 110% of the total volume of fuel to be kept in the tanks. It is proposed that the following above ground tanks be installed during various phases:</p> <ul style="list-style-type: none"> • Phase 1: 1 x 79 000ℓ (existing tank; no listed activity triggered due to the volume of fuel to be stored on site during this phase) • Phase 2: 5 x 83 000ℓ • Phase 3: 5+ x 83 000ℓ <p>A borehole monitoring system will be implemented should any fuel be stored underground in future.</p> |
| Proposed Layout | Please refer to Annexure C for a copy of the proposed design layout. |

The proposed project entails the construction / development of a fuel depot with ancillary amenities, including a wash bay on Portion 1 of Plot 42, Sand du Plessis Avenue, Estoire Small Holdings, Bloemfontein.

The storage tanks will be above ground of nature. The above ground tanks will be bunded to carry at least 110% of the total volume of fuel

to be kept in the tanks. It is proposed that the following above ground tanks be installed during various phases:

- Phase 1: 1 x 79 000ℓ (established tank; no listed activity triggered due to the volume of fuel to be stored on site during this phase)
- Phase 2: 5 x 83 000ℓ
- Phase 3: 5+ x 83 000ℓ

A borehole monitoring system will be implemented should any fuel be stored underground in future.

The applicant provides road transportation of bulk fuel products and operates its own fleet of tankers. Thus, the main purpose of the project is to construct fuel tanks for the storage of fuel. The stored fuel will mainly be used by the applicant to fill the tanks of its own fuel transportation trucks.

Due to the current land use, the site is in a degraded condition and the natural vegetation composition has been transformed to a large degree.

1.1 Project Schedule

An Environmental Impact Assessment (EIA) will be conducted in terms of the 2014 regulations EIA Regulations as amended in 2017 which fall under the National Environmental Management Act 107 of 1998 (NEMA) to obtain Environmental Authorisation (EA). The EIA Regulations under the NEMA consist of two categories of activities namely:

- Activities which require a Basic Assessment Process, and
- Activities which require both a Scoping and an EIA Report.

The activities associated with the proposed project require a Scoping and an EIA Report for an EA and fall under Regulation GNR 325 (Listing Notice 2) of the 2014 EIA Regulations. Please refer to **TABLE 2** for the anticipated time frames in accordance to the NEMA EIA Regulations 2014.

1.2 Short summary of project proceedings to date

The competent authority to approve the proposed fuel depot is the DESTEA. Furthermore the site does not have implications for international environmental commitments or relations; and will not take place within an area protected by means of an international

environmental instrument. Furthermore the site is not a conservancy; a protected natural environment; a proclaimed private nature reserve; a natural heritage site; the buffer zone or transitional area of a biosphere reserve; or the buffer zone or transitional area of a world heritage site. Therefore, the competent authority has been correctly identified, based on the above reasons.

The Draft and Final Scoping reports were compiled and submitted to all IAPs and DESTEA. The comments received during this period along with the findings and recommendations of the Specialist studies were then used to identify possible environmental impacts and issues which were used to compile the EMPr as well as the Draft and Final EIA Reports.

| TABLE 2. SUMMARY OF THE PROPOSED PROJECT SCHEDULE | | | | | | | | |
|---|---|--------------------------------------|---|--|--|-------------------------------------|--------------------------|---|
| Project Phase | Initial notification of proposed project | Application and Draft Scoping Report | Processing of comments and information received | Final Scoping Report | Draft EIA and Draft EMPr submission / amendments | Final EIA and Final EMPr submission | Record of Decision | Appeal process and notification of EA |
| Description | IAPs & Stakeholder identification | Application submission to DESTEA | Process comments and amend information | Amendments and update PPP Submission of Final Scoping Report to DESTEA | Provision of information in terms of studies, impacts, mitigation measures and recommendations | Amendments and final submission | Granting / refusal of EA | Notifying IAPs , including stakeholders on EA |
| Time frame | Please note that the timeframes were amended, due to Covid-19 | | | | | | DESTEA Dependant | N/A |
| Duration | 30 days | 30 days | 5 days | 5 days | 30 days | +/-120 days | N/A | 35 days |
| Status | Completed | Completed | Completed | Completed | Completed | Completed | To be completed | To be completed |

2. DETAILS OF ENVIRONMENTAL ASSESSMENT PRACTITIONERS

A multi-disciplinary team of specialists contributed to the information presented in this document **TABLE 3** and **TABLE 4** summarizes the environmental assessment practitioner's (EAP) expertise and involvement in the proposed project.

| TABLE 3. EAP DETAILS | |
|---|--------------------------------------|
| Division / Aspect | Key EAP |
| <ul style="list-style-type: none"> • Co-ordination • Supervision • Management | Mr. Neil Devenish (MDA Consultants) |
| <ul style="list-style-type: none"> • Biophysical Aspects • Visual Aspects • Public Participation • Report writing | Me. Hanlie Stander (MDA Consultants) |

2.1 Expertise of the EAPs

| TABLE 4. EXPERTISE OF EAP | |
|---------------------------|--|
| EAP | Details |
| Mr. Neil Devenish | <p>Key qualifications:</p> <ul style="list-style-type: none"> • Key competencies and experience include development control applications (applications and appeals pertaining to rezoning, consolidations, subdivisions etc.), township establishment applications, environmental management and control applications. <p>Education:</p> <ul style="list-style-type: none"> • B.A. (Sociology, Geography) University of the Free State, SA, 1994 • Master of Town and Regional Planning, University of the Free State, SA, 1996 • Managing the Environmental Impact Assessment Process, Environmental Management Unit, PU for CHE, 2000 • Environmental Management Consulting, South African Institute of Ecologists & Environmental Scientists, 2001 • Water Law of South Africa, The South African Institution of Civil Engineers (SAICE), 2006 • Introduction to SAMTRAC, Hazard Identification and Risk Assessment, NOSA, NQF Level 5, 2015 |
| Me. Hanlie Stander | <p>Key qualifications:</p> <ul style="list-style-type: none"> • Environmental management & research • Environmental impact assessment and report writing • <p>Education:</p> <ul style="list-style-type: none"> • B.Sc. (Zoology), University of the Free State, South Africa, 2005 • B.Sc. Honours (Zoology), University of the Free State, South Africa, 2006 • M.Sc. (Zoology), University of the Free State, South Africa, 2012 |

2.2 Contact Details of the EAPs

| TABLE 5. MDA CONTACT DETAILS | |
|------------------------------|---|
| Telephone no | 051 447 1583 |
| Postal Address | P.O. Box 100982 Brandhof Bloemfontein 9324 |

| | |
|------------------------|--|
| Email addresses | neil@mdagroup.co.za hanlie@mdagroup.co.za |
|------------------------|--|

2.3 EAP Declaration

Please refer to **Annexure E** for the EAP declaration.

3. PROJECT DESCRIPTION

3.1 Baseline information

MDA was appointed by the Applicant [Mack's Petroleum (PTY) LTD] to undertake the Environmental Impact Assessment (EIA) process for the proposed construction of a Fuel Depot on Portion 1 of Plot 42, Estoire, Bloemfontein.

The applicant of the above mentioned property identified a need to develop the property by constructing a fuel depot mainly to be utilized for filling of its own fleet of tankers.

The location of the property as well as the current development trends in the surrounding areas suit the proposed development. Therefore the applicant wishes to apply for an Environmental Authorisation to the Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs (DESTEA) in order to establish the Fuel Depot on the said property. The current Report focuses on the possible environmental impacts that the proposed development may have on the receiving environment.

3.2 Project Locality

The proposed fuel depot will be located on Portion 1 of Plot 42, Estoire, Bloemfontein, Free State Province (please refer to the locality plan in **Annexure A**).

Although the property is more than 2 Ha in extent, the proposed development will be limited to an area of less than 1 Ha.

3.3 Land use

The land-use of the property in review is currently zoned as Special Business: Type 2. Land Use for purposes of Special Business: Type 2 will be lost on the development property.

The proposed development site is surrounded by housing, agricultural and light industrial land uses. This makes the proposed development suitable to the area.



Figure 1. Locality Map of the proposed Development

3.4 Project Layout

The layout of the proposed fuel depot makes provision for various fuel tanks. Access to the site will be obtained from Sand du Plessis Avenue, Estoire. Please refer to the layout plan attached in **Annexure C**.

3.5 Existing Infrastructure and property conditions

Portion 1 of Plot 42, Estoire, Bloemfontein is approximately 2.15 Ha in size. The land-use is currently zoned as Special Business: Type 2. The proposed fuel depot is situated on a relatively flat area.

The existing infrastructure on site consists of a warehouse, offices, ablution facilities as well as a store with a canopy. Parking is available at the existing warehouse. In addition, a diesel tank with a total volume of 79 262L is also located on site.



3.5.1 Bulk Civil Services

The design criteria are based on the "Guidelines for Human Settlement Planning and Design" or the Red Book, as it is commonly known as well as the criteria as set out by the Mangaung Metropolitan Municipality.

3.5.2 Electrical Services

The existing activities undertaken on site, as well as the proposed fuel depot will have a calculated expected maximum electrical load of 150kVA.

CENTLEC (SOC) Ltd confirmed that electricity to the site is possible from the Estoire Distribution Centre.

3.5.3 Roads and Access

The proposed development will be accessed from Sand du Plessis Avenue, Estoire.

A traffic impact assessment was undertaken to determine and report on the traffic impact of the planned Rezoning of Plot 1/42 Estoire Small Holdings, Bloemfontein in order to establish a fuel depot.

To determine the actual impact of the change in land use, the potential of the current zoning should be considered. The site is zoned Special Business 2. With the zoning allowing Business Buildings, which allows shops, any other use such as the fuel depot and the overnight facilities will result in a reduction in the development potential, and thus a reduction in the potential trip generation.

Due to the following, the expected trip generation of the applied for facilities will be limited:

- The fuel depot will only serve the developers own fleet of trucks;
- The site licence from the Department of Mineral Resources will only allow for wholesale fuel sales and no retail;
- The site is relatively inaccessible from higher order roads; and
- The overnight facilities will be used by employees.

Considering the above, the change in land use will reduce the potential trip generation of the development and is

not expected to generate in excess of 50 peak hour trips, with a result that capacity analyses are not required. Sight distances should be acceptable.

Sufficient space should be available on the site to provide the required parking; this can be addressed as part of building plans.

The following conclusions can be made from the Traffic Impact Study:

- The change in land use is not expected to generate in excess of 50 peak hour trips during any peak period and in fact trip generation will be quite low. A formal Traffic Impact Statement with Capacity Analyses was thus not warranted.
- Considering the expected trip generation of the development, rezoning of the property as per the zoning application will not have a notable impact on traffic volumes in the area.
- The original rezoning conditions of Plot 42 were not implemented and the site has significant development potential. The planned rezoning will reduce the development potential and is not expected to generate in excess of 50 peak hour trips.

Considering the findings and recommendations of the study, it is recommended that the development be approved from a traffic point of view.

3.5.4 Water

The Annual Average Daily Demand for Hostels is calculated at 150ℓ/resident, as per the Red Book, Table 9.14.

The Annual Average Daily Demand for the entire site was calculated at 21.65k ℓ/day, with a Peak Demand of 0.652 ℓ/s.

The main pipeline currently supplying water to the site is a 350mm diameter pipe, which should be able to supply sufficient water to the site. However, due to the nature of the type of development, specific standards or regulations governing the fire-service requirements should be made.

3.5.5 Sanitation and water associated with the Wash Bay

- According to the information at hand the estimated sewer runoff is calculated to 0.330 l/s (Peak Wet Weather Flow).
- Due to faulty flow of municipal sewerage lines, a 23m³ underground septic tank was installed in 2009.
- The applicant currently makes use from a sewerage removal company (JBX TRADING 1004 CC t/a JBX VACUUM & CLEANING) to remove sewerage on a monthly basis.
- The content of the septic tank is discharged into the Bloemspruit WWTW. The said WWTW is operated by the Mangaung Metropolitan Municipality.
- Mitigation measures will be implemented to prevent contamination of local groundwater and surface water.
- The effluent will not be discharged on site, after it is drained from the septic tank and therefore Authorisation for Section 21(g) of the National Water Act (Act 36 of 1998) is not required.
- The applicant and EnviroTechSA have reached an agreement for the removal of hazardous waste.
- Should the existing septic tank be of insufficient capacity an additional septic tank might be required to control the sewer runoff generated from the proposed extensions.
- The size of the septic tank, the amount of use, and the type of material discharged is used to determine how often the septic tank will need to be drained.
- The applicant will ensure that the septic tank is approved by DWS.
- The tank is sited in such a way that it does not cause water or other pollution.
- Due to the nature of the proposed development an oil separator pit should be constructed to separate oil from

the water. The water must be directed to the septic tank and the oil should be removed and disposed of in an acceptable manner. Proper maintenance must be conducted to ensure the system functions efficiently.

3.5.6 Storm water

The proposed project will have no adverse effects on the natural stormwater runoff. According to the information at hand there is no municipal stormwater infrastructure in the area and the water should be controlled overland. By applying the pre-set design principals the risk of flooding will be minimized.

3.6 Proposed Activity and Applicable Legislation

3.6.1 Applicable legislation

This process has been conducted in terms of the relevant legislative requirements, namely in terms of:

- National Environmental Management Act (Act No 107 of 1999)
- National Heritage Resources Act (Act No 25 of 1999)
- National Environmental Management Biodiversity Act, 2004 (Act 10 of 2004)
- Occupational Health and Safety Act (Act 85 of 1993)
- South African Civil Aviation Act (SACAA) (Act 13 of 2009)

3.6.2 NEMA and Applicable Legislation

The identified applicable National Environmental Management Act (NEMA) Regulations for the proposed Fuel Depot are depicted in **TABLE 6**.

| TABLE 6. DESCRIPTION OF IDENTIFIED LISTED ACTIVITIES | |
|--|--|
| Regulation 984 of 2014, EIA, as amended on 7 April 2017 (Regulation no. 325) | |
| Listed Activity | Project Activity Description |
| <p>Activity No 4: The development and related operation of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 cubic metres.</p> | <p>It is anticipated that more than 500 cubic meters of fuel will be stored on site.</p> |

An Environmental Impact Assessment (EIA) process is followed for activities listed in GN325 Listing Notice 2 of 2014 (as amended April 2017) and will therefore be prepared in accordance with the Environmental Impact Assessment Regulations, 2014 (Government Notice No. 326 as amended 7 April 2017) promulgated in terms of Sections 24(5) and 44 of the National Environmental Management Act (Act No. 107 of 1998). Application for Scoping and EIA has therefore been made to the Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs (DESTEAs).

3.7 Specialist Studies

The need for Specialist Input on the following aspects related to the proposed Fuel Depot was assessed:

| TABLE 7. IDENTIFICATION OF TYPE OF SPECIALIST STUDIES REQUIRED FOR THE PROPOSED DEVELOPMENT OF A FUEL DEPOT | | |
|--|---|--|
| Type of Specialist Input | Sensitivity & Sensitivity Features | Specialist Input Required / Not required |
| Agricultural Impact Assessment | Medium Sensitivity: Land capability; 06. Low-Moderate/07. Low-Moderate/08. Moderate | The land-use is currently zoned as Special Business: Type 2, and not agricultural. Thus, an agricultural impact assessment is not required. |
| Archaeological and Cultural Heritage Impact Assessment | High Sensitivity: Within 1 km of a protected area | The site is located in Sand du Plessis Avenue. The Estoire residential smallholdings have been established more than sixty years ago, but many of the original residential structures have been replaced by commercial and industrial properties. The affected area covers an area of degraded land, containing several modern commercial building structures. No historically significant building structure older than 60 years of age is present at the site. Existing roads already provide access to the site. The proposed development will take place on land formerly altered by modern industrial / commercial activities. Potential archaeological impact at the proposed site is considered to be non-existent. Underlying geology at the site consist of |

| TABLE 7. IDENTIFICATION OF TYPE OF SPECIALIST STUDIES REQUIRED FOR THE PROPOSED DEVELOPMENT OF A FUEL DEPOT | | |
|---|------------------------------------|--|
| Type of Specialist Input | Sensitivity & Sensitivity Features | Specialist Input Required / Not required |
| | | <p>potentially fossil-bearing Beaufort Group (Adelaide Subgroup) strata. Superficial sediments are made up of residual soils of varying depth that are not considered to be palaeontologically significant. The likelihood of palaeontological impact on bedrock sediments underneath the degraded overburden is considered to be extremely low given latter's overall depth, the low topography terrain and the fact that no subsurface development is planned for this project. During the site visit, no graves or items of archaeological or palaeontological significance were observed. Should any items of archaeological or palaeontological significance be unearthed or found on the site during construction all activities will cease and a specialist will be appointed to investigate the finds. SAHRA will also be notified thereof. With the above in mind, it is recommended that the proposed development is</p> |

| TABLE 7. IDENTIFICATION OF TYPE OF SPECIALIST STUDIES REQUIRED FOR THE PROPOSED DEVELOPMENT OF A FUEL DEPOT | | |
|--|--|---|
| Type of Specialist Input | Sensitivity & Sensitivity Features | Specialist Input Required / Not required |
| | | exempted from a Phase 1 Heritage Impact Assessment. |
| Palaeontology Impact Assessment | High sensitivity: Rock units with a high paleontological sensitivity | The site is located in Sand du Plessis Avenue. The Estoire residential smallholdings have been established more than sixty years ago, but many of the original residential structures have been replaced by commercial and industrial properties. The affected area covers an area of degraded land, containing several modern commercial building structures. No historically significant building structure older than 60 years of age is present at the site. Existing roads already provide access to the site. The proposed development will take place on land formerly altered by modern industrial / commercial activities. Potential archaeological impact at the proposed site is considered to be non-existent. Underlying geology at the site consist of potentially fossil-bearing Beaufort Group (Adelaide Subgroup) strata. Superficial sediments are made up of residual soils of varying depth that are not considered to be |

| TABLE 7. IDENTIFICATION OF TYPE OF SPECIALIST STUDIES REQUIRED FOR THE PROPOSED DEVELOPMENT OF A FUEL DEPOT | | |
|---|--|---|
| Type of Specialist Input | Sensitivity & Sensitivity Features | Specialist Input Required / Not required |
| | | <p>palaeontologically significant. The likelihood of palaeontological impact on bedrock sediments underneath the degraded overburden is considered to be extremely low given latter's overall depth, the low topography terrain and the fact that no subsurface development is planned for this project. During the site visit, no graves or items of archaeological or palaeontological significance where observed. Should any items of archaeological or palaeontological significance be unearthed or found on the site during construction all activities will cease and a specialist will be appointed to investigate the finds. SAHRA will also be notified thereof. With the above in mind, it is recommended that the proposed development is exempted from a Phase 1 Heritage Impact Assessment.</p> |
| Terrestrial Biodiversity Impact Assessment | Very High Sensitivity: Vulnerable ecosystem; | Due to the existing land use, the site is in a degraded condition and the natural vegetation composition has |

| TABLE 7. IDENTIFICATION OF TYPE OF SPECIALIST STUDIES REQUIRED FOR THE PROPOSED DEVELOPMENT OF A FUEL DEPOT | | |
|---|------------------------------------|--|
| Type of Specialist Input | Sensitivity & Sensitivity Features | Specialist Input Required / Not required |
| | Ecological support area 2 | <p>been transformed to a large degree.</p> <p>The entire proposed development site is highly disturbed and transformed by past and present human activities and is entirely surrounded by urban sprawl. It was identified that no suitable habitat, on and surrounding the proposed development site for any Red Data faunal species and no rupicolous (living among, inhabiting, or growing on rocks), arboreal (pertaining to moving about, living in or among trees) or wetland habitats are present. The site was found to be disturbed and that the proposed development would not have a negative effect in on any Red Data faunal species or any other faunal species found on site. No natural / indigenous vegetation is located on site. Therefore, no ecological assessment (including vegetation assessment) is required.</p> |
| Aquatic Biodiversity Impact Assessment | Low Sensitivity | No surface water resources are located on site. Thus, an aquatic biodiversity impact assessment is not required. |


| TABLE 7. IDENTIFICATION OF TYPE OF SPECIALIST STUDIES REQUIRED FOR THE PROPOSED DEVELOPMENT OF A FUEL DEPOT | | |
|--|---|--|
| Type of Specialist Input | Sensitivity & Sensitivity Features | Specialist Input Required / Not required |
| Hydrology | Not indicated | <p>The proposed project entails the construction / development of a fuel depot with ancillary amenities, including a wash bay on Portion 1 of Plot 42, Sand du Plessis Avenue, Estoire Small Holdings, Bloemfontein.</p> <p>The storage tanks will be above ground of nature. The above ground tanks will be bunded to carry at least 110% of the total volume of fuel to be kept in the tanks.</p> <p>A borehole monitoring system will be implemented should any fuel be stored underground in future. A hydrological study will be undertaken should it be decided to construct underground storage facilities in future.</p> |
| Noise Impact Assessment | Not indicated | <p>A noise impact assessment is deemed unnecessary for the proposed project, due to the existing activities currently being undertaken in close proximity to the proposed development. Note that there are no industrial facilities associated with the area which elevates the ambient noise levels.</p> |

| TABLE 7. IDENTIFICATION OF TYPE OF SPECIALIST STUDIES REQUIRED FOR THE PROPOSED DEVELOPMENT OF A FUEL DEPOT | | |
|---|------------------------------------|---|
| Type of Specialist Input | Sensitivity & Sensitivity Features | Specialist Input Required / Not required |
| Traffic Impact Assessment | Not indicated | A traffic impact assessment was required to determine and report on the traffic impact of the planned Rezoning of Plot 1/42 Estoire Small Holdings, Bloemfontein in order to establish a Fuel Depot. |
| Geotechnical Assessment | Not indicated | The site is located in Sand du Plessis Avenue. The Estoire residential smallholdings have been established more than sixty years ago, but many of the original residential structures have been replaced by commercial and industrial properties. The affected area covers an area of degraded land, containing several modern commercial building structures. No geotechnical assessment is required. |
| Socio-Economic Assessment | Not indicated | The Socio-Economic Character of the area can be summarised as: Mangaung Metropolitan Municipality has an unemployment rate of 27.7% (Stats SA, 2011). Below are some statistics relating to the level of education in the MMM area. <ul style="list-style-type: none"> • No Schooling 3,3% |

| TABLE 7. IDENTIFICATION OF TYPE OF SPECIALIST STUDIES REQUIRED FOR THE PROPOSED DEVELOPMENT OF A FUEL DEPOT | | |
|---|------------------------------------|--|
| Type of Specialist Input | Sensitivity & Sensitivity Features | Specialist Input Required / Not required |
| | | <ul style="list-style-type: none"> • Some Primary 37,7% • Completed Primary 5,4% • Some Secondary 30,6% • Completed Secondary 16,5% • Higher Education 3,7% (data derived from: Stats SA, 2011). <p>The land-use is currently zoned as Special Business: Type 2. The proposed new project will provide additional employment opportunities and will therefore have a positive impact on the socio-economic character of the nearby community.</p> <p>Note that the proposed depot will mainly be utilized for filling of the applicant's own fleet of tankers. Thus, no nearby filling stations will be negatively affected due to the proposed project.</p> <p>No socio-economic specialist report is therefore required.</p> |
| Plant Species Assessment | Low Sensitivity | Due to the existing land use, the site is in a degraded condition and the natural vegetation composition has been transformed to a large degree. |

| TABLE 7. IDENTIFICATION OF TYPE OF SPECIALIST STUDIES REQUIRED FOR THE PROPOSED DEVELOPMENT OF A FUEL DEPOT | | |
|---|------------------------------------|--|
| Type of Specialist Input | Sensitivity & Sensitivity Features | Specialist Input Required / Not required |
| | | The entire proposed development site is highly disturbed and transformed by past and present human activities and is entirely surrounded by urban sprawl. It was identified that no suitable habitat, on and surrounding the proposed development site for any Red Data faunal species and no rupicolous (living among, inhabiting, or growing on rocks), arboreal (pertaining to moving about, living in or among trees) or wetland habitats are present. The site was found to be disturbed and that the proposed development would not have a negative effect in on any Red Data faunal species or any other faunal species found on site. No natural / indigenous vegetation is located on site. Therefore, no ecological assessment (including vegetation assessment) is required. |
| Animal Species Assessment | Low Sensitivity | Due to the existing land use, the site is in a degraded condition and the natural vegetation composition has been transformed to a large degree. |

| TABLE 7. IDENTIFICATION OF TYPE OF SPECIALIST STUDIES REQUIRED FOR THE PROPOSED DEVELOPMENT OF A FUEL DEPOT | | |
|---|--|---|
| Type of Specialist Input | Sensitivity & Sensitivity Features | Specialist Input Required / Not required |
| | | The entire proposed development site is highly disturbed and transformed by past and present human activities and is entirely surrounded by urban sprawl. It was identified that no suitable habitat, on and surrounding the proposed development site for any Red Data faunal species and no rupicolous (living among, inhabiting, or growing on rocks), arboreal (pertaining to moving about, living in or among trees) or wetland habitats are present. The site was found to be disturbed and that the proposed development would not have a negative effect in on any Red Data faunal species or any other faunal species found on site. No natural / indigenous vegetation is located on site. Therefore, no ecological assessment (including animal life assessment) is required. |
| Civil Aviation | High Sensitivity: Within 15km of a Civil Aviation Radar; Within 8 km of other Civil Aviation | The proposed infrastructure to be constructed will be of the same height or lower than buildings / infrastructure in the nearby vicinity. |

| TABLE 7. IDENTIFICATION OF TYPE OF SPECIALIST STUDIES REQUIRED FOR THE PROPOSED DEVELOPMENT OF A FUEL DEPOT | | |
|---|---|---|
| Type of Specialist Input | Sensitivity & Sensitivity Features | Specialist Input Required / Not required |
| | Aerodrome; Within 5 km of an air traffic control or navigation site. | CAA was notified of the proposed project and commented that an application is required. |
| Relative Defence | Medium Sensitivity: Defence site | The Bloemspruit Air Force Base is located more than 3400m from the site. The proposed project will therefore not have an impact on the activities undertaken at the Air Force Base / vice versa.  |
| Electrical and Civil Studies | Not indicated | Specialist Input was obtained regarding the following aspects: <ul style="list-style-type: none"> • Water • Sewer • Electrical • Civil Aspects |

4. TASKS CONDUCTED FOR THE EIA PROCESS

4.1 Proceeding with the Public Participation Process

Following the acceptance of the Draft and Final Scoping Report by the DESTEA, the PPP for the EIA proceeded according to Section 41 of the NEMA 2014 Regulations.

A copy of the Draft Environmental Impact Assessment (EIA), Environmental Management Programme Report (EMPr) together with all specialist reports was made to all registered IAPs. Parties had 30 days to comment on the Draft EIA Report. The current document (Final EIA Report) will be forwarded to all registered IAPs. Parties have 30 days to comment on the Final EIA Report.

4.2 Steps in Accordance with the Plan of Study for EIA

All activities and processes have been undertaken in accordance with the submitted Plan of Study for EIA for the proposed project. This process is subject to acceptance of the Final EIA by the DESTEA.

4.3 Register IAPs

4.3.1 List of IAPs

All departments and organisations having jurisdiction in respect of any aspect of the proposed development was included in the list of IAPs. Also all adjacent landowners were given the opportunity to register as an IAP. All persons giving written comments (positive or negative) on the proposed project have been registered.

The initial list of Possible IAPs is as follows:

- Stakeholders
- Public registered
- Surrounding landowners

4.3.2 Issues, Comments and Concerns Raised by IAPs

A summary of all issues raised by the IAPs, as well as the responses from the Environmental Assessment Practitioner (EAP) or relevant specialists have been included in the current report. The compilation of a Comments and Response Report have been included which states all comments received during the process (including comments received on all previous notifications and reports) as well as the response taken and feedback given by the EAP to address these comments where possible.

4.4 Development Alternatives

Site and activity alternatives are not applicable for this project.

4.5 Assessment of Identified Potentially Significant Impacts

The potential impacts identified during the scoping process, comments and issues raised by IAPs as well as findings in the specialist reports will be discussed in terms of their:

- Cumulative impact
- Nature of the impact
- Extent and duration of the impact
- The probability of the impact occurring
- Degree to which the impact can be reversed
- Degree to which the impact can cause irreplaceable loss of recourses and
- Degree to which the impact can be mitigated.

4.5.1 Summary of Findings

A summary of all the significant findings in the previous section will be drawn up. Overall, this will include the following:

- Summary of the key findings of the EIA
- An indication of the extent to which the issues could be addressed by the adoption of listed mitigation measures
- Recommendations from the environmental practitioner and specialists
- Any specialist reports or reports on specialized processes
- Description of any assumptions, uncertainties and gaps in knowledge
- Option to whether the activity should be authorized and any conditions that should be made in respect of the authorization.

4.5.2 Specialist Reports and Specialised Processes

The required process regarding specialist reports and specialized processes for the relevant development is as follows:

- Specialists have been appointed by the EAP and the developer.
- The reports and processes have been performed and obtained from the relevant specialists.
- Obtained reports and processes have been incorporated in the current document.
- Project plans will be reviewed according to recommendations of specialists to ensure minimum environmental impact.

4.5.3 Stages of Authority Consultation

DESTEAs were consulted at stages when guidance was required in terms of clarification of listed activities, as well as correct processes to follow in the case of unusual projects or requests. Currently the DESTEAs have confirmed the receipt of and accepted the Scoping Reports.

4.6 Methodology of Assessing Environmental Issues

The EIA Report addresses the biophysical, as well as the socio-economic environments for all alternative site locations and activities. The information was captured in the following manner:

- Site visits to determine the setting, visual character and land-uses in the area were undertaken
- Site surveys to address the identified impacts of the development on any plant and animal populations were undertaken
- The project plans were superimposed onto the gathered baseline environmental information of identified impacts
- The project plans were revised according to the identified environmental sensitive areas to ensure the least environmental impact possible
- Detailed discussions were held with the client to address specific aspects of the development which could affect environment
- IAPs were consulted by phone, letters and / or meetings to capture additional issues of importance
- Made recommendations and presented guidelines for the mitigation of impacts addressed during this exercise
- The option of not proceeding with the development was considered and evaluated.

4.7 Specific Information Required from the Competent Authority

Additional relevant information will be provided on request of the Competent Authority.

4.8 Consideration of the Final EIA Report

The Competent Authority should consider the Final EIA Report within 30 days of receipt by either:

- Accepting the Final EIA Report
- Requesting EAP to amend the EIA Report
- Rejecting the EIA Report or EIA if it
 - Does not contain material / information required;
 - Has not taken the relevant guidelines into account.

Please note that the current document is the Final EIA.

5. ENVIRONMENTAL DESCRIPTION

5.1 Topography

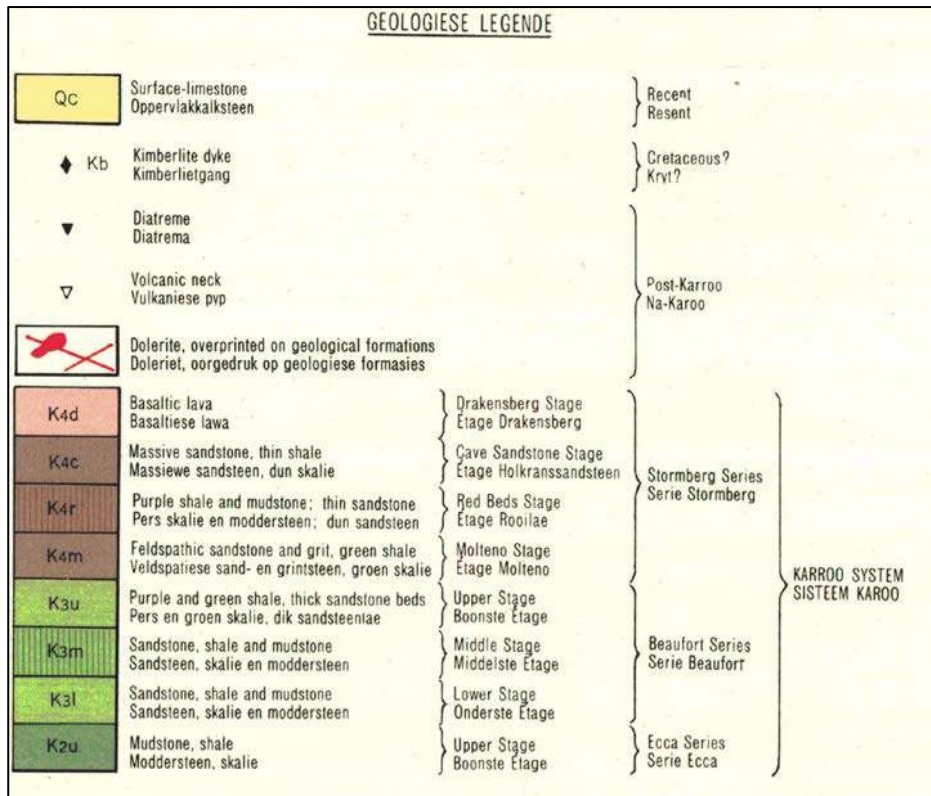
The proposed site is situated on a relatively flat plain. Typical grasses are found on site, with a few trees. Please note that the trees will not be removed as part of the proposed construction activities.

5.2 Geology and Soil Characteristics

The geology of the Bloemfontein area is underlain by the Lower Stage of the Beaufort Group which is part of the Karoo Super Group. The sedimentary rocks that are present in this group consist of fine-grained grey sandstone and coarse arkose alternating with green and maroon coloured mudstone beds. The typical materials / rock type found in the area of Bloemfontein are Mudstone and Dolerite. Furthermore it is known that the soils to the northern parts of Bloemfontein consist of higher clay volumes therefore, the soil forms associated with these soils is the Arcadia and Rensburg soil forms. The above-mentioned soil forms are mainly characterised by sandy top layers, (Le Roux et al. 2013).

Underlying geology at the site consists of potentially fossil-bearing Karoo Supergroup strata (Beaufort Group, Adelaide Subgroup, K3I).





Underlying geology at the site consist of potentially fossil-bearing Beaufort Group (Adelaide Subgroup) strata (K3l).

Sedimentary mudstones and layers of sandstone mainly of the Adelaide Subgroup (Beaufort Group, Karoo Supergroup) occur in the Bloemfontein Dry Grassland Region. This vegetation type occurs in the South-central part of the province, with Bloemfontein more or less centrally. It extends from Petrusburg in the west to the Rustfontein Dam in the east and from Reddersburg in the South to the Soetdoring Nature Reserve in the north.

Volksrust Formation mudstones of the Ecca Group (also Karoo Supergroup) dominate the western part of the Dry Grassland Region. Deep (>300 mm) layer of red sand (Aeolian origin) covers the more clayey B-horizons. Soil forms such as arable Hutton, Bainsvlei and Bloemdal occur in this area and are typical of the Ca land type. The Ea land type has shallow gravelly soils underlain by dolerite sills. Ca and Ae land types are nearly equally represented (Musina & Rutherford, 2006).

5.3 Ground and Surface Water

The proposed development site falls within the C52F Quaternary Drainage Region. No drainage line / surface water body is situated on site.

The necessary storm water management systems will be implemented in and around the proposed Fuel Depot as stipulated and according to MMM Municipal Building Regulations.

5.4 Climate

The Bloemfontein area is a moderate region with primarily summer rainfall. The rainfall is between 250mm and 500mm per year. The monthly distribution of average daily maximum temperatures shows that the average midday temperatures for Bloemfontein ranges from 16°C in June to 29.2°C in January. The region is the coldest during July when the mercury drops to 0°C on average during the night.

Figure 2 and **Figure 3** illustrates the average monthly and total annual rainfall for Bloemfontein according to Weather Station C5E009 Uitvlugt – West at Krugersdrift Dam situated at 28°53'4.37"S and 25°56'56.87"E. This weather station was chosen according to its distance to Bloemfontein and most recent available rainfall data.

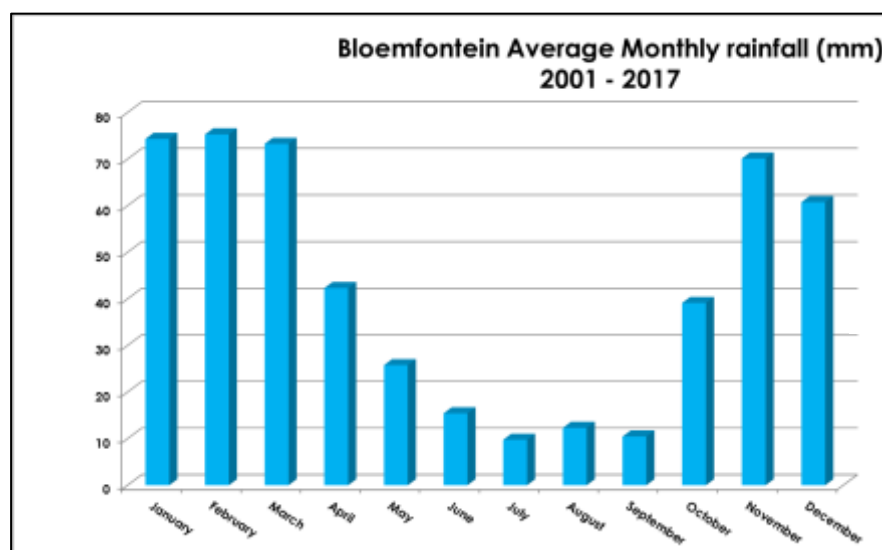


Figure 2. Bloemfontein average monthly rainfall (mm)

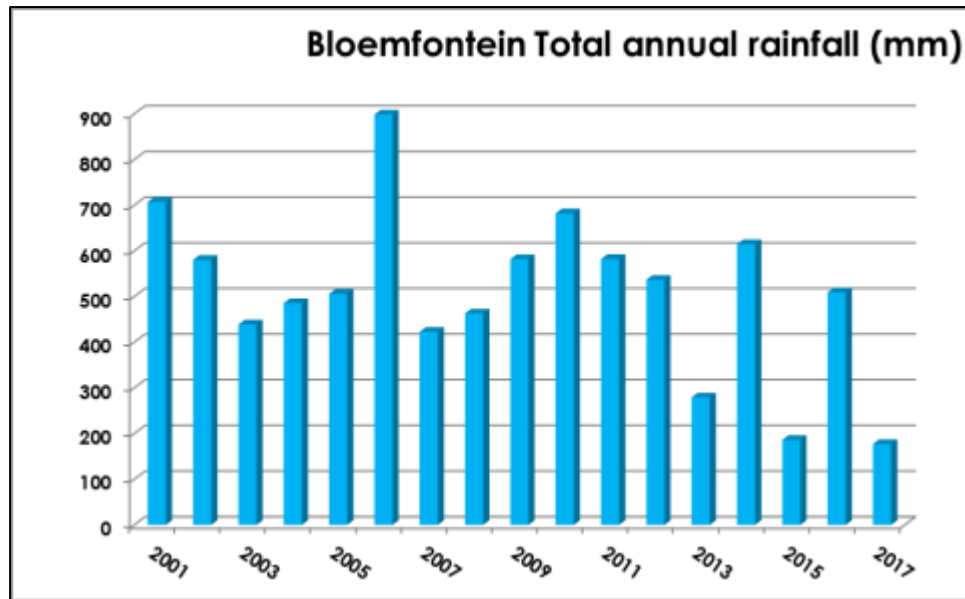


Figure 3. Bloemfontein total annual rainfall (mm)

5.5 Air Quality

In general the Bloemfontein area has exceptionally good air quality. It should also be noted that there are no major contributors to atmospheric emissions in the Bloemfontein area due to the absence of Power stations. It should however be noted that the site lies in close proximity to other light industrial sites.

5.6 Vegetation

The study found that a large area of the site is cleared of vegetation / paved. Due to the existing land use, the site is in a degraded condition and the natural vegetation composition has been transformed to a large degree.

The entire proposed development site is highly disturbed and transformed by past and present human activities and is entirely surrounded by urban sprawl. It was identified that no suitable habitat, on and surrounding the proposed development site for any Red Data faunal species and no rupicolous (living among, inhabiting, or growing on rocks), arboreal (pertaining to moving about, living in or among trees) or wetland habitats are present. The site was found to be disturbed and that the proposed development would not have a negative effect in on any Red Data faunal species or any other faunal species found on site. No

natural / indigenous vegetation is located on site. Therefore, no ecological assessment (including vegetation assessment) is required.

5.7 Animal Life

Due to the existing land use, the site is in a degraded condition and the natural vegetation composition has been transformed to a large degree.

The entire proposed development site is highly disturbed and transformed by past and present human activities and is entirely surrounded by urban sprawl. It was identified that no suitable habitat, on and surrounding the proposed development site for any Red Data faunal species and no rupicolous (living among, inhabiting, or growing on rocks), arboreal (pertaining to moving about, living in or among trees) or wetland habitats are present. The site was found to be disturbed and that the proposed development would not have a negative effect in on any Red Data faunal species or any other faunal species found on site. No natural / indigenous vegetation is located on site. Therefore, no ecological assessment (including animal life assessment) is required.

5.8 Surrounding Land Uses

The proposed development site is surrounded by housing, agricultural and light industrial land uses. This makes the proposed development suitable to the area.

5.9 Noise

Given the associated activities in close proximity to the proposed development (residential, agricultural and light industrial), the proposed development will not have a large impact on the noise levels associated with the area.

5.10 Socio-Economic Character of the Area

Mangaung Metropolitan Municipality has an unemployment rate of 27.7% (Stats SA, 2011). 292 971 are economically active

(employed or unemployed but looking for work). 37,2% of the 150 128 economically active youth (15 – 34 years) in the area are unemployed. Below are some statistics relating to the level of education in the MMM area.

- No Schooling 3,3%
- Some Primary 37,7%
- Completed Primary 5,4%
- Some Secondary 30,6%
- Completed Secondary 16,5%
- Higher Education 3,7% (data derived from: Stats SA, 2011).

5.11 Historical or Cultural Importance

During the site visit, no graves or items of archaeological or palaeontological significance were observed.

The site is located in Sand du Plessis Avenue. The Estoire residential smallholdings have been established more than sixty years ago, but many of the original residential structures have been replaced by commercial and industrial properties. The affected area covers an area of degraded land, containing several modern commercial building structures. No historically significant building structure older than 60 years of age is present at the site. Existing roads already provide access to the site. The proposed development will take place on land formerly altered by modern industrial / commercial activities. Potential archaeological impact at the proposed site is considered to be non-existent. Underlying geology at the site consists of potentially fossil-bearing Beaufort Group (Adelaide Subgroup) strata. Superficial sediments are made up of residual soils of varying depth that are not considered to be palaeontologically significant. The likelihood of palaeontological impact on bedrock sediments underneath the degraded overburden is considered to be extremely low given the latter's overall depth, the low topography terrain and the fact that no subsurface development is planned for this project. During the site visit, no graves or items of archaeological or palaeontological significance were observed. Should any items of archaeological or palaeontological significance be unearthed or found on the site during construction all activities will cease and a specialist will be appointed to investigate the finds. SAHRA will also be notified thereof. With the above in mind, it is recommended that the

proposed development is exempted from a Phase 1 Heritage Impact Assessment.

Please refer to **Annexure E** for a copy of the findings by the Heritage Specialist.

5.12 Traffic Impact

The site is zoned Special Business 2. With the zoning allowing Business Buildings, which allows shops, any other use such as the fuel depot and the overnight facilities will result in a reduction in the development potential, and thus a reduction in the potential trip generation.

Please refer to **Annexure F** for a copy of the Traffic Impact Study.

6. PUBLIC PARTICIPATION

6.1 Background

The objectives of the Public Participation Process (PPP) is to provide the local community, all applicable departments, the competent authority and potential / identified interested and / or affected parties (IAPs) with adequate information and give them an opportunity to raise their issues and concerns. Methods used to inform the various IAPs of the project included direct contact, an on-site notice, registered mail, and an advertisement in the local newspaper. All potential IAPs were included as required by Regulation 41(2)(e) and 41(6) of GN 326. Furthermore, key stakeholders (other than organs of state) were identified in terms of Regulation 41(2)(b) of GN 326.

6.2 Identification of possible IAPs

The identified possible IAPs included the following:

- MMM City Manager
- MMM Planning Division
- MMM Environmental Division
- MMM Ward Councillor: Ward 47
- Department of Agriculture, Forestry and Fisheries
- Department of Water and Sanitation

- Department Police, Roads and Transport
- South African Heritage Resources Agency (SAHRA)
- Free State Heritage Resources Agency (FSAHRA)
- Adjacent Landowners

6.3 Adjacent Land Owners

Due to the residential / small business / light industrial nature of the surrounding environment related to this project all adjacent landowners are also included as identified IAPs. All identified adjacent landowners have been provided with a notification letter.

A copy of the Draft - and Final Scoping Reports was provided to all Registered IAPs. Furthermore all IAPs will be given an opportunity to comment on the above mentioned Reports. All Registered Parties will be given the opportunity to comment on the Draft EIA Report. Please note that all comments and responses received up to date have been noted and included in the current (Final EIA Report) document. Copies of the current document will be provided to all Registered IAPs and will have 30 days to comment on the current document.

6.4 Public Participation methods used

A site notice was put up onsite at the proposed development entrance on the 18th of July 2019. Furthermore a legal notice was published in Die Volksblad on the 28th of June 2019. Hereafter no IAPs came forward within the 30 Day notice period. Notification letters were sent to all organs of state and applicable departments. Furthermore all Registered IAPs were supplied with the Draft and Final Scoping Reports, the Draft EIA Report as well current (Final EIA) Report. Please refer to **Annexure C** for more information on the Public Participation Process undertaken to date.

6.5 List of all IAPs, as well as a summary of the Comments received during the Public Participation Process

| TABLE 8. SUMMARY OF COMMENTS RECEIVED & RESPONSE TO THE COMMENTS | | | | |
|--|---|--|--|---|
| Name of IAP / Description | Organisation / Interest | Contact details | Summary of Comments | Summary of Response |
| Mrs. Grace Mkhosana | Free State Department of Economic Development , Tourism and Environmental Affairs | Tel: 051 400 4843 Fax: 051 400 4842 Private Bag X20801 Bloemfontein 9300 Mkhosana@detea.fs.gov.za | The Scoping Report was accepted by DESTEA. | Copies of the following reports were provided to the Registered IAPs: <ul style="list-style-type: none"> • Draft Scoping • Final Scoping • Draft EIA • Final EIA(current document) |
| Mangaung Metropolitan Municipality: The City Manager | Mangaung Metropolitan Municipality | P.O. Box 3704 Bloemfontein 9300 | None to date | Copies of the following reports were provided to the Registered IAPs: <ul style="list-style-type: none"> • Draft Scoping • Final Scoping • Draft EIA • Final EIA(current document)) |
| The Ward Councillor Ward:47 | Mangaung Metropolitan Municipality | Ward Councillor, Ward 47 Clr John Matthews De Bruin 0603461410 johndebruin38@gmail.com Delivered by hand at the DA Offices | None to date | Copies of the following reports were provided to the Registered IAPs: <ul style="list-style-type: none"> • Draft Scoping • Final Scoping • Draft EIA • Final EIA(current document) |

| TABLE 8. SUMMARY OF COMMENTS RECEIVED & RESPONSE TO THE COMMENTS | | | | |
|--|---|---|--|--|
| Name of IAP / Description | Organisation / Interest | Contact details | Summary of Comments | Summary of Response |
| Mr. W Grobler | Department of Water and Sanitation (Free State) | Mr. W Grobler Private Bag X528 Bloemfontein 9300 | <ul style="list-style-type: none"> • Bund wall of fuel tanks should be within the capacity to be able to contain spillages • All effluent from the wash bay should be disposed of in a properly constructed drain and must be situated as far as possible away from a watercourse • Only domestic wash water may be allowed to enter the drain and any effluent containing oil and grease or other industrial substances must be collected in a suitable receptacle and removed from site. • The name of the Hazardous Waste Company to be used for the removal of hazardous material should be provided to DWS. A | <ul style="list-style-type: none"> • The conditions stipulated by DWS are noted. • The applicant and EnviroTechSA have reached an agreement for the removal of hazardous waste. See Appendix O. • Due to faulty flow of municipal sewerage lines, a 23m³ underground septic tank was installed in 2009. The applicant currently makes use from a sewerage removal company to remove sewerage on a monthly basis. <p>Copies of the following reports were provided to the Registered IAPs:</p> <ul style="list-style-type: none"> • Draft Scoping • Final Scoping • Draft EIA • Final EIA(current document) |

| TABLE 8. SUMMARY OF COMMENTS RECEIVED & RESPONSE TO THE COMMENTS | | | | |
|--|-------------------------|-----------------|---|---------------------|
| Name of IAP / Description | Organisation / Interest | Contact details | Summary of Comments | Summary of Response |
| | | | <p>written agreement between the applicant and the said company should also be forwarded to DWS.</p> <ul style="list-style-type: none"> • The applicant should ensure that the septic tank is approved and is sited in such a way that it does not cause water or other pollution. Mitigation measures must be in place to prevent contamination of local groundwater and surface water. • The applicant should indicate where the effluent will be discharged after it is drained from the septic tank. The applicant should clearly indicate how the septic tanks will be handled and Authorisation for Section 21(g) of the National | |

| TABLE 8. SUMMARY OF COMMENTS RECEIVED & RESPONSE TO THE COMMENTS | | | | |
|--|-------------------------|-----------------|---|---------------------|
| Name of IAP / Description | Organisation / Interest | Contact details | Summary of Comments | Summary of Response |
| | | | <p>Water Act (Act 36 of 1998) should be obtained if required.</p> <ul style="list-style-type: none"> • It is important that any spillages of chemicals are reported to DWS and relevant authorities. • The applicant should ensure that no unacceptable impact on the quality of both surface and groundwater is associated with the proposed project. If pollution of any surface or groundwater occurs, it must be immediately reported to DWS and appropriate mitigation measures must be implemented. • Ensure that all specialist studies form part of the EIA and must be submitted to DWS before construction commences. • All relevant sections and | |

| TABLE 8. SUMMARY OF COMMENTS RECEIVED & RESPONSE TO THE COMMENTS | | | | |
|--|---|--|--|---|
| Name of IAP / Description | Organisation / Interest | Contact details | Summary of Comments | Summary of Response |
| | | | regulation of the National Water Act, 1998 (Act 36 of 1998) regarding water use must be adhered to. | |
| Me. Mpolokeng Kolobe | Mangaung Metro Municipality: Environmental Division | Me. Mpolokeng Kolobe Tel: 051 405 8871 Fax: 051 405 8310 Email: mpolokeng.kolobe@mangaung.co.za P.O. Box 3704 Bloemfontein 9300 | <ul style="list-style-type: none"> • An EMPr must be compiled and submitted to MMM. • Should any fuel be stored underground in future, the following should be undertaken: <ul style="list-style-type: none"> - A geohydrological study must be conducted. - Stormwater management plan must be compiled. - All other relevant authorities must be consulted. • An ECO must be appointed • A waste management plan must be compiled and also provide | <ul style="list-style-type: none"> • An EMPr will be attached to the EIA document (current document). • Please note that a geohydrological study will be required in future, should the applicant decide to construct underground fuel tanks in future. • The EMPr will form part of the Environmental Impact Assessment Report. • It is not anticipated that any fuel will be stored underground. However, should any fuel be stored underground in future, the necessary specialists will assess the site. • An ECO and Health and Safety Officer will be appointed by the contractor during the construction phase of the project. • The necessary environmental |

| TABLE 8. SUMMARY OF COMMENTS RECEIVED & RESPONSE TO THE COMMENTS | | | | |
|--|-------------------------|-----------------|--|---|
| Name of IAP / Description | Organisation / Interest | Contact details | Summary of Comments | Summary of Response |
| | | | <p>guidance to ensure that domestic, industrial and hazardous wastes are managed at the proposed site in a way that is protective of health, safety and environmental.</p> <ul style="list-style-type: none"> • Material Safety Data Sheets shall be available on site for all chemicals and hazardous substances to be used on site. It should additionally include (where available) information on measures to minimize negative environmental impacts during accidental releases or escapes. • Site and Employees are to be managed in strict accordance with the OHS Act and National building Regulations. A health and safety representative should be appointed if | <p>legislations and requirements regarding issues such as noise, light, air and water pollution will be adhered to. Waste – and Storm Water Management will also be undertaken according to Best Practices.</p> <ul style="list-style-type: none"> • The proposed facility will register with the Local Fire Fighters Organization. <p>Copies of the following reports were provided to the Registered IAPs:</p> <ul style="list-style-type: none"> • Draft Scoping • Final Scoping • Draft EIA • Final EIA (current document) |

| TABLE 8. SUMMARY OF COMMENTS RECEIVED & RESPONSE TO THE COMMENTS | | | | |
|--|---|--|---|---|
| Name of IAP / Description | Organisation / Interest | Contact details | Summary of Comments | Summary of Response |
| | | | <p>more than 20 employees are employed.</p> <ul style="list-style-type: none"> • Facility must register with the local Fire Fighters Organization and periodically conducts drill in conjunction with the local fire fighter's unit. • Proposed development must comply with other environmental legislation and requirements that are related to issues such as noise and light pollution, air quality, water use and management, solid waste management and storm water management. | |
| Mr Hannes Maree | Department of Police, Roads and Transport | Room 106, Medfontein Building, 155 St Andrew Street P.O. Box 119, Bloemfontein, 9300 MareeH@freetrans. | <ul style="list-style-type: none"> • The provincial tertiary road T4730 will be affected by the proposed project • The Department will formulate comments subsequent to obtaining a site development plan | <ul style="list-style-type: none"> • A proposed layout map (attached as Appendix C of the dScoping Report) was forwarded to the said Department • A Traffic Impact Assessment will be undertaken and the findings thereof will be included in the |

| TABLE 8. SUMMARY OF COMMENTS RECEIVED & RESPONSE TO THE COMMENTS | | | | |
|--|--|---|---|---|
| Name of IAP / Description | Organisation / Interest | Contact details | Summary of Comments | Summary of Response |
| | | gov.za F. van Heerden Medfontein Building, 155 St Andrew Street P.O. Box 119, Bloemfontein, 9300 fabivanheerden@gmail.com 051 4098280 | and information on the expected traffic to determine the impact on the provincial road network | Environmental Impact Assessment Report (the current document). The said report will be forwarded to all registered IAPs. Copies of the following reports were provided to the Registered IAPs: <ul style="list-style-type: none"> • Draft Scoping • Final Scoping • Draft EIA • Final EIA (current document) |
| Collin Dihemo | Mangaung Metro Municipality: Planning Division | Collin Dihemo Tel: 051 405 8212 Fax: 051 405 8707 Email: Collin.dihemo@mangaung.co.za P.O. Box 3704 Bloemfontein 9300 | None to date | Copies of the following reports were provided to the Registered IAPs: <ul style="list-style-type: none"> • Draft Scoping • Final Scoping • Draft EIA • Final EIA (current document) |
| Mr A. Salomon | SAHRA | Mr A. Salomon Tel: 021 462 4509 South African Heritage Resources Agency (SAHRA) | <ul style="list-style-type: none"> • Initially mentioned that, as this is a NEMA application the draft BAR must be submitted to the application before the | <ul style="list-style-type: none"> • A Scoping Report uploaded to the SAHRIS website. • The conditions stipulated by SAHRA will be included in the EMPr. |

| TABLE 8. SUMMARY OF COMMENTS RECEIVED & RESPONSE TO THE COMMENTS | | | | |
|--|-------------------------|--|---|---|
| Name of IAP / Description | Organisation / Interest | Contact details | Summary of Comments | Summary of Response |
| | | Head Office 111 Harrington Street Cape Town 8001 | <p>SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit will issue a final comment on it.</p> <ul style="list-style-type: none"> • After SAHRA reviewed the Final Scoping Report as well as the Recommendations by the Archaeological Specialist, SAHRA commented that it has no objections against the proposed development subject to the following conditions <ul style="list-style-type: none"> - The Draft and Final EIAs must be submitted to SAHRA - Should any objects or archaeological or palaeontological remains be found during construction activities, work must immediately stop in | <p>Copies of the following reports were provided to the Registered IAPs:</p> <ul style="list-style-type: none"> • Draft Scoping • Final Scoping • Draft EIA • Final EIA(current document) |

| TABLE 8. SUMMARY OF COMMENTS RECEIVED & RESPONSE TO THE COMMENTS | | | | |
|--|-------------------------|-----------------|--|---------------------|
| Name of IAP / Description | Organisation / Interest | Contact details | Summary of Comments | Summary of Response |
| | | | <p>that area and the ECO must be informed.</p> <ul style="list-style-type: none"> - The ECO must inform SAHRA and contact an archaeologist and / or palaeontologist, depending on the nature of the find, to assess the importance and rescue them if necessary (with the relevant SAHRA permit). No work may resume in the area without the permission from the ECO and SAHRA. - If the newly discovered heritage resource is considered significant, a Phase 2 assessment may be required. A permit from the | |

| TABLE 8. SUMMARY OF COMMENTS RECEIVED & RESPONSE TO THE COMMENTS | | | | |
|--|-------------------------|-----------------|--|---------------------|
| Name of IAP / Description | Organisation / Interest | Contact details | Summary of Comments | Summary of Response |
| | | | <p>responsible heritage authority will be required.</p> <ul style="list-style-type: none"> - A Chance Finds Procedures must be developed for the project to ensure that standard protocols and steps are followed should any heritage and / or fossil resources be uncovered during all phases of the project. These procedures should outline the steps and reporting structure to be followed in the instance that heritage resources are found. This must be included in the Environmental Awareness Plan. | |

| TABLE 8. SUMMARY OF COMMENTS RECEIVED & RESPONSE TO THE COMMENTS | | | | |
|--|-------------------------|---|--|--|
| Name of IAP / Description | Organisation / Interest | Contact details | Summary of Comments | Summary of Response |
| | | | <ul style="list-style-type: none"> Should the project be granted EA, SAHRA should be notified and all relevant documents be submitted to the case file. | |
| SAHRA (Free State) Ntando Mbatha | SAHRA (Free State) | FSAHRA Cell: 074 945 3255 Email: mbatha.npz@sacr.fs.gov.za C/O Henry & East Burger Street Business Partner Building Office 307 Bloemfontein 9301 | None to date | Copies of the following reports were provided to the Registered IAPs: <ul style="list-style-type: none"> Draft Scoping Final Scoping Draft EIA Final EIA(current document) |
| Lizell Stroh | CAA | 011 545 1232 Strohl@caa.co.za | <p>2020/08/28: After evaluating the site position to the obstacle application form dated 20 May 2020, in principle the SACAA has no objection, the following conditions and restrictions applies:</p> <ul style="list-style-type: none"> Any exterior lighting is restricted to full cut-off | <ul style="list-style-type: none"> An application was submitted to CAA. <p>Copies of the following reports were provided to the Registered IAPs:</p> <ul style="list-style-type: none"> Draft Scoping Final Scoping Draft EIA Final EIA(current document) |

| TABLE 8. SUMMARY OF COMMENTS RECEIVED & RESPONSE TO THE COMMENTS | | | | |
|--|-------------------------|---|---|---|
| Name of IAP / Description | Organisation / Interest | Contact details | Summary of Comments | Summary of Response |
| | | | <p>lighting 0° above the horizontal plane.</p> <ul style="list-style-type: none"> • Non-reflecting painting and Materials should be applied to reduce glare and prevent blinding pilots. <p>Kindly note that approval for the construction of cranes, if used, must be obtained 6 weeks prior to construction from this department. This conditional approval is valid for 5 years from the date of this letter.</p> | |
| Holdings RE/37, Estoire | | <p>Wiehanhn Eiedomme Boland Pty Private Bag x34 Suite 203 Somerset –West 7103</p> | <p>None to date (did not register as a IAP)</p> | <p>An initial notification letter was sent to all possible IAPs. However, as the party did not register as an IAP, no additional information was forwarded.</p> |
| Holdings 1/37, Estoire | | <p>Vodacom P.O. Box 100958 Brandhof</p> | <p>None to date (did not register as a IAP)</p> | <p>An initial notification letter was sent to all possible IAPs. However, as the party did not register as an IAP, no additional information was</p> |

| TABLE 8. SUMMARY OF COMMENTS RECEIVED & RESPONSE TO THE COMMENTS | | | | |
|--|-------------------------|---|---|--|
| Name of IAP / Description | Organisation / Interest | Contact details | Summary of Comments | Summary of Response |
| | | 9324 | | forwarded. |
| Holdings 1/38, Estoire | | Mile Investments P.O. Box 28966 Danhof 9310 | None to date (did not register as a IAP) | An initial notification letter was sent to all possible IAPs. However, as the party did not register as an IAP, no additional information was forwarded. |
| Holdings 3/41, Estoire | | TNT Trust / Dumani Builders 21 Sand du Plessis Estoire Bloemfontein 9323 freestate@domani. co.za | None to date (did not register as a IAP) | An initial notification letter was sent to all possible IAPs. However, as the party did not register as an IAP, no additional information was forwarded. |
| Holdings 1/41, Estoire | | TNT Trust / Dumani Builders 21 Sand du Plessis Estoire Bloemfontein 9323 freestate@domani. co.za | None to date (did not register as a IAP) | An initial notification letter was sent to all possible IAPs. However, as the party did not register as an IAP, no additional information was forwarded. |
| Holdings RE/62, Estoire | | Lougat Property Investments P.O. Box 167 Bedfordview | None to date (did not register as a IAP) | An initial notification letter was sent to all possible IAPs. However, as the party did not register as an IAP, no additional information was |

| TABLE 8. SUMMARY OF COMMENTS RECEIVED & RESPONSE TO THE COMMENTS | | | | |
|--|-------------------------|--|---|--|
| Name of IAP / Description | Organisation / Interest | Contact details | Summary of Comments | Summary of Response |
| | | 2008 | | forwarded. |
| Holdings 61, Estoire | | BBT Elec & Plumbing cons P.O. Box 2341 Bloemfontein 9300 | None to date (did not register as a IAP) | An initial notification letter was sent to all possible IAPs. However, as the party did not register as an IAP, no additional information was forwarded. |
| Holdings RE/42, Estoire | | M & J trust 19 Sand du Plessis Estoire Bloemfontein 9323 | None to date (did not register as a IAP) | An initial notification letter was sent to all possible IAPs. However, as the party did not register as an IAP, no additional information was forwarded. |

6.6 Summary of Comments and Responses

6.6.1 Comments and concerns received on the Draft and / or Final Scoping Report:

a) Department of Police, Roads and Transport

- The provincial tertiary road T4730 will be affected by the proposed project
- The Department will formulate comments subsequent to obtaining a site development plan and information on the expected traffic to determine the impact on the provincial road network

b) CAA

- Initially commented that an application should be forwarded to CAA.
- After CAA reviewed the application, the following comments were received:
 - After evaluating the site position to the obstacle application form dated 20 May 2020, in principle the SACAA has no objection, the following conditions and restrictions applies:
 - Any exterior lighting is restricted to full cut-off lighting 0° above the horizontal plane.
 - Non-reflecting painting and Materials should be applied to reduce glare and prevent blinding pilots.
 - Kindly note that approval for the construction of cranes, if used, must be obtained 6 weeks prior to construction from this department.
 - This conditional approval is valid for 5 years from the date of this letter.

c) SAHRA

- Initially mentioned that, as this is a NEMA application the draft BAR must be submitted to the application before the SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit will issue a final comment on it.
- After SAHRA reviewed the Final Scoping Report as well as the Recommendations by the Archaeological Specialist, SAHRA commented that it has no objections against the proposed development subject to the following conditions
 - The Draft and Final EIAs must be submitted to SAHRA

- Should any objects or archaeological or palaeontological remains be found during construction activities, work must immediately stop in that area and the ECO must be informed.
- The ECO must inform SAHRA and contact an archaeologist and / or palaeontologist, depending on the nature of the find, to assess the importance and rescue them if necessary (with the relevant SAHRA permit). No work may resume in the area without the permission from the ECO and SAHRA.
- If the newly discovered heritage resource is considered significant, a Phase 2 assessment may be required. A permit from the responsible heritage authority will be required.
- A Chance Finds Procedures must be developed for the project to ensure that standard protocols and steps are followed should any heritage and / or fossil resources be uncovered during all phases of the project. These procedures should outline the steps and reporting structure to be followed in the instance that heritage resources are found. This must be included in the Environmental Awareness Plan.
- Should the project be granted EA, SAHRA should be notified and all relevant documents be submitted to the case file.

d) DWS

- Bund wall of fuel tanks should be within the capacity to be able to contain spillages
- All effluent from the wash bay should be disposed of in a properly constructed drain and must be situated as far as possible away from a watercourse
- Only domestic wash water may be allowed to enter the drain and any effluent containing oil and grease or other industrial substances must be collected in a suitable receptacle and removed from site.
- The name of the Hazardous Waste Company to be used for the removal of hazardous material should be provided to DWS. A written agreement between the applicant and the said company should also be forwarded to DWS.
- The applicant should ensure that the septic tank is approved and is sited in such a way that it does not cause water or other pollution. Mitigation measures must be in place to prevent contamination of local groundwater and surface water.
- The applicant should indicate where the effluent will be discharged after it is drained from the septic tank. The applicant

should clearly indicate how the septic tanks will be handled and Authorisation for Section 21(g) of the National Water Act (Act 36 of 1998) should be obtained if required.

- It is important that any spillages of chemicals are reported to DWS and relevant authorities.
- The applicant should ensure that no unacceptable impact on the quality of both surface and groundwater is associated with the proposed project. If pollution of any surface or groundwater occurs, it must be immediately reported to DWS and appropriate mitigation measures must be implemented.
- Ensure that all specialist studies form part of the EIA and must be submitted to DWS before construction commences.
- All relevant sections and regulation of the National Water Act, 1998 (Act 36 of 1998) regarding water use must be adhered to.

e) Mangaung Metropolitan Municipality

- An EMPr must be compiled and submitted to MMM.
- Should any fuel be stored underground in future, the following should be undertaken:
 - A geohydrological study must be conducted.
 - Stormwater management plan must be compiled.
 - All other relevant authorities must be consulted.
- An ECO must be appointed
- A waste management plan must be compiled and also provide guidance to ensure that domestic, industrial and hazardous wastes are managed at the proposed site in a way that is protective of health, safety and environmental.
- Material Safety Data Sheets shall be available on site for all chemicals and hazardous substances to be used on site. It should additionally include (where available) information on measures to minimize negative environmental impacts during accidental releases or escapes.
- Site and Employees are to be managed in strict accordance with the OHS Act and National building Regulations. A health and safety representative should be appointed if more than 20 employees are employed.
- Facility must register with the local Fire Fighters Organization and periodically conducts drill in conjunction with the local fire fighter's unit.
- Proposed development must comply with other environmental legislation and requirements that are related to issues such as

noise and light pollution, air quality, water use and management, solid waste management and storm water management.

Please refer to **Annexure D** for the report and proof of PPP.

6.6.2 Feedback on comments and concerns received on the Draft and Final Scoping Report

a) Department of Police, Roads and Transport

- A proposed layout map (attached as Appendix C of the dScoping Report) was forwarded to the said Department.
- A Traffic Impact Assessment will be undertaken and the findings thereof will be included in the Environmental Impact Assessment Report (the current document). The said report will be forwarded to all registered IAPs.

b) CAA

- An application was submitted to CAA.

c) SAHRA

- A Scoping Report uploaded to the SAHRIS website.
- The conditions stipulated by SAHRA were included in the EMPr.

d) DWS

- The conditions stipulated by DWS are noted.
- The applicant and EnviroTechSA have reached an agreement for the removal of hazardous waste. See Appendix O.
- Due to faulty flow of municipal sewerage lines, a 23m³ underground septic tank was installed in 2009. The applicant currently makes use from a sewerage removal company to remove sewerage on a monthly basis.

e) Mangaung Metropolitan Municipality

- An EMPr will be attached to the EIA document (current document).
- Please note that a geohydrological study will be required in future, should the applicant decide to construct underground fuel tanks in future.
- The EMPr will form part of the Environmental Impact Assessment Report.

- It is not anticipated that any fuel will be stored underground. However, should any fuel be stored underground in future, the necessary specialists will assess the site.
- And ECO and Health and Safety Officer will be appointed by the contractor during the construction phase of the project.
- The necessary environmental legislations and requirements regarding issues such as noise, light, air and water pollution will be adhered to. Solid Waste – and Storm Water Management will also be undertaken according to Best Practices.
- The proposed facility will register with the Local Fire Fighters Organization.
- Copies of the dScoping & fScoping Report were forwarded to all registered IAPs

6.6.3 Comments and concerns received on the Draft EIA Report:

- No comments and / or concerns were received on the Draft EIA Report.
- Please note that a copy of the Final EIA will be provided to all registered IAPs.

6.6.4 Feedback on comments and concerns received on the Draft EIA Report:

- No feedback, as no comments and / or concerns was received on the Draft EIA Report.
- Please note that a copy of the Final EIA will be provided to all registered IAPs.

7. NEED AND DESIRABILITY

The applicant provides road transportation of bulk fuel products and operates its own fleet of tankers. The applicant identified the need to construct fuel tanks for the storage of fuel. The stored fuel will mainly be used by the applicant to fill the tanks of its own fuel transportation trucks.

The site is extremely well located for this type of development given numerous favourable locality aspects such as;

a) Access

Easy access to the site can be obtained from Sand du Plessis Avenue.

b) Surrounding land uses

The proposed development site is surrounded by housing, agricultural and light industrial land uses. This makes the proposed development suitable to the area.

8. MOTIVATION FOR NO ALTERNATIVES

8.1. Preferred Alternative

The preferred site is ideally located for the proposed fuel depot as easy access can be obtained from Sand du Plessis Avenue. The proposed development site is surrounded by housing, agricultural and light industrial land uses.

The applicant is also in process to obtain legal ownership of the proposed development property.

8.2. Alternative 2 - Locality

As an alternative, the construction of a fuel depot at another site, in an industrial part of Bloemfontein can be considered. However, this option is not economically viable, as the applicant is in process to obtain legal ownership of the preferred site.

No other alternatives will be discussed or considered for this EIA process (Draft or Final Scoping Report, or the Draft or Final EIA Report) due to the above mentioned reasons.

8.3. No-go Alternative

Not constructing a fuel depot. The applicant will then have to buy fuel from other companies (at a higher price) and this will have cost implications.

9. POSSIBLE ENVIRONMENTAL IMPACTS, ISSUES AND CUMULATIVE IMPACTS

The possible environmental impacts and issues were identified by evaluating different aspects of the receiving environment from both an urban and environmental point of view relating to the proposed fuel depot. Other tools allocated in order to identify possible environmental impacts that were used includes comments received from stakeholders

and other IAPs during the Scoping process, and recommendations and issues identified during specialist studies.

9.1 Impacts, issues identified by IAPs

| TABLE 9. POTENTIAL IDENTIFIED IMPACTS BY IAPS | |
|--|--|
| IAP | Summary of Comments & Concerns |
| Department of Police, Roads and Transport | <ul style="list-style-type: none"> • The provincial tertiary road T4730 will be affected by the proposed project • The Department will formulate comments subsequent to obtaining a site development plan and information on the expected traffic to determine the impact on the provincial road network |
| CAA | <ul style="list-style-type: none"> • Initially commented that an application should be forwarded to CAA. • After CAA reviewed the application, the following comments were received: <ul style="list-style-type: none"> - After evaluating the site position to the obstacle application form dated 20 May 2020, in principle the SACAA has no objection, the following conditions and restrictions applies: <ul style="list-style-type: none"> - Any exterior lighting is restricted to full cut-off lighting 0° above the horizontal plane. - Non-reflecting painting and Materials should be applied to reduce glare and prevent blinding pilots. - Kindly note that approval for the construction of cranes, if used, must be obtained 6 weeks prior to construction from this department. - This conditional approval is valid for 5 years from the date of this letter. |
| SAHRA | <ul style="list-style-type: none"> • Initially mentioned that, as this is a NEMA application the draft BAR must be submitted to the application before the SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit will issue a final comment on it. • After SAHRA reviewed the Final Scoping Report as well as the Recommendations by the Archaeological Specialist, SAHRA commented that it has no objections against the proposed development subject to the following conditions |

| TABLE 9. POTENTIAL IDENTIFIED IMPACTS BY IAPS | |
|--|--|
| IAP | Summary of Comments & Concerns |
| | <ul style="list-style-type: none"> - The Draft and Final EIAs must be submitted to SAHRA - Should any objects or archaeological or palaeontological remains be found during construction activities, work must immediately stop in that area and the ECO must be informed. - The ECO must inform SAHRA and contact an archaeologist and / or palaeontologist, depending on the nature of the find, to assess the importance and rescue them if necessary (with the relevant SAHRA permit). No work may resume in the area without the permission from the ECO and SAHRA. - If the newly discovered heritage resource is considered significant, a Phase 2 assessment may be required. A permit from the responsible heritage authority will be required. - A Chance Finds Procedures must be developed for the project to ensure that standard protocols and steps are followed should any heritage and / or fossil resources be uncovered during all phases of the project. These procedures should outline the steps and reporting structure to be followed in the instance that heritage resources are found. This must be included in the Environmental Awareness Plan. - Should the project be granted EA, SAHRA should be notified and all relevant documents be submitted to the case file. |
| DWS | <ul style="list-style-type: none"> • Bund wall of fuel tanks should be within the capacity to be able to contain spillages • All effluent from the wash bay should be disposed of in a properly constructed drain and must be situated as far as possible away from a watercourse • Only domestic wash water may be allowed to enter the drain and any effluent containing oil and grease or other industrial substances must be collected in a suitable receptacle and removed from site. • The name of the Hazardous Waste |

| TABLE 9. POTENTIAL IDENTIFIED IMPACTS BY IAPS | |
|--|--|
| IAP | Summary of Comments & Concerns |
| | <p>Company to be used for the removal of hazardous material should be provided to DWS. A written agreement between the applicant and the said company should also be forwarded to DWS.</p> <ul style="list-style-type: none"> • The applicant should ensure that the septic tank is approved and is sited in such a way that it does not cause water or other pollution. Mitigation measures must be in place to prevent contamination of local groundwater and surface water. • The applicant should indicate where the effluent will be discharged after it is drained from the septic tank. The applicant should clearly indicate how the septic tanks will be handled and Authorisation for Section 21 (g) of the National Water Act (Act 36 of 1998) should be obtained if required. • It is important that any spillages of chemicals are reported to DWS and relevant authorities. • The applicant should ensure that no unacceptable impact on the quality of both surface and groundwater is associated with the proposed project. If pollution of any surface or groundwater occurs, it must be immediately reported to DWS and appropriate mitigation measures must be implemented. • Ensure that all specialist studies form part of the EIA and must be submitted to DWS before construction commences. • All relevant sections and regulation of the National Water Act, 1998 (Act 36 of 1998) regarding water use must be adhered to. |
| Mangaung Metropolitan Municipality | <ul style="list-style-type: none"> • An EMPr must be compiled and submitted to MMM. • Should any fuel be stored underground in future, the following should be undertaken: • A geohydrological study must be conducted. • Stormwater management plan must be compiled. • All other relevant authorities must be |

| TABLE 9. POTENTIAL IDENTIFIED IMPACTS BY IAPS | |
|---|--|
| IAP | Summary of Comments & Concerns |
| | <p>consulted.</p> <ul style="list-style-type: none"> • An ECO must be appointed • A waste management plan must be compiled and also provide guidance to ensure that domestic, industrial and hazardous wastes are managed at the proposed site in a way that is protective of health, safety and environmental. • Material Safety Data Sheets shall be available on site for all chemicals and hazardous substances to be used on site. It should additionally include (where available) information on measures to minimize negative environmental impacts during accidental releases or escapes. • Site and Employees are to be managed in strict accordance with the OHS Act and National building Regulations. A health and safety representative should be appointed if more than 20 employees are employed. • Facility must register with the local Fire Fighters Organization and periodically conducts drill in conjunction with the local fire fighter's unit. • Proposed development must comply with other environmental legislation and requirements that are related to issues such as noise and light pollution, air quality, water use and management, solid waste management and storm water management. |

9.2 Findings and Recommendations by Specialists

A summary of the findings and recommendations by the specialists is provided in **TABLE 10**.

| TABLE 10. SUMMARY OF SPECIALIST FINDINGS & RECOMMENDATIONS | | |
|--|--|--|
| Specialist Studies | Findings | Recommendations |
| Heritage | The site is located in Sand du Plessis Avenue. The Estoire | It is recommended that the proposed development is |

| TABLE 10. SUMMARY OF SPECIALIST FINDINGS & RECOMMENDATIONS | | |
|--|--|---|
| Specialist Studies | Findings | Recommendations |
| | <p>residential smallholdings have been established more than sixty years ago, but many of the original residential structures have been replaced by commercial and industrial properties. The affected area covers an area of degraded land, containing several modern commercial building structures. No historically significant building structure older than 60 years of age is present at the site. Existing roads already provide access to the site. The proposed development will take place on land formerly altered by modern industrial / commercial activities. Potential archaeological impact at the proposed site is considered to be non-existent. Underlying geology at the site consist of potentially fossil-bearing Beaufort Group (Adelaide Subgroup) strata. Superficial sediments are made up of residual soils of varying depth that are not considered to be palaeontologically significant. The likelihood of palaeontological impact on bedrock sediments underneath the degraded overburden is considered to</p> | <p>exempted from a Phase 1 Heritage Impact Assessment.</p> |

| TABLE 10. SUMMARY OF SPECIALIST FINDINGS & RECOMMENDATIONS | | |
|---|---|--|
| Specialist Studies | Findings | Recommendations |
| | <p>be extremely low given latter's overall depth, the low topography terrain and the fact that no subsurface development is planned for this project. During the site visit, no graves or items of archaeological or palaeontological significance were observed. Should any items of archaeological or palaeontological significance be unearthed or found on the site during construction all activities will cease and a specialist will be appointed to investigate the finds. SAHRA will also be notified thereof.</p> | |
| Traffic Impact Study | <p>To determine the actual impact of the change in land use, the potential of the current zoning should be considered.</p> <p>The site is zoned Special Business 2. With the zoning allowing Business Buildings, which allows shops, any other use such as the fuel depot and the overnight facilities will result in a reduction in the development potential, and thus a reduction in the potential trip generation.</p> <p>Due to the following, the expected trip generation of the applied for facilities will be limited:</p> | <p>Considering the above, it is thus recommended that only one access be provided, but if there is sufficient motivation why a separate entrance and exit should be provided, these will have to be spaced at 50m centreline to centreline.</p> <p>Sight distances should be acceptable.</p> <p>Sufficient space should be available on the site to provide the required</p> |

| TABLE 10. SUMMARY OF SPECIALIST FINDINGS & RECOMMENDATIONS | | |
|--|---|--|
| Specialist Studies | Findings | Recommendations |
| | <ul style="list-style-type: none"> • The fuel depot will only serve the developers own fleet of trucks; • The site licence from the Department of Mineral Resources will only allow for wholesale fuel sales and no retail; and • The site is relatively inaccessible from higher order roads. • The overnight facilities will be used by employees <p>Considering the above, the change in land use will reduce the potential trip generation of the development and is not expected to generate in excess of 50 peak hour trips, with a result that capacity analyses are not required.</p> <p>The layout makes provision for two accesses consisting of an entrance and a separate exit. This is contrary to what is prescribed by TRH 26, namely:</p> <ul style="list-style-type: none"> • Normally only one access per erf is allowed. However, developments such as shopping centres should preferably have separate accesses for private vehicles and for large delivery vehicles. A separate access may also be desirable for use by public transport. • The spacing and separation requirements of this manual, however, | <p>parking; this can be addressed as part of building plans.</p> <p>The following conclusions can be made from the Traffic Impact Study:</p> <ul style="list-style-type: none"> • The change in land use is not expected to generate in excess of 50 peak hour trips during any peak period and in fact trip generation will be quite low. A formal Traffic Impact Statement with Capacity Analyses was thus not warranted. • Considering the expected trip generation of the development, rezoning of the property as per the zoning application will not have a notable impact on traffic volumes in the area. |

| TABLE 10. SUMMARY OF SPECIALIST FINDINGS & RECOMMENDATIONS | | |
|--|--|--|
| Specialist Studies | Findings | Recommendations |
| | <p>are applicable to each individual access and may not be relaxed to accommodate the additional accesses.</p> <ul style="list-style-type: none"> In an industrial area with access from a lower classification road, two accesses can possibly be considered, although considering the available space there is no obvious reason why two accesses should be provided. <p>Given the fact that provision is made for a separate entrance and exit, and considering the zoning of the site, the entrance and exit will be high volume accesses and will thus as per TRH 26 have to comply with the appropriate access spacing.</p> <p>The access spacing as per the plan is approximately 35m centreline to centreline.</p> <p>If assumed as low volume truck accesses as per UTG10 for a commercial local street, the access separation should be 20m, but considering the zoning of the site, the entrance and exit could be high volume motor car and mixed driveways. In the latter case the access spacing should be 50m centreline to centreline based on UTG10.</p> | <ul style="list-style-type: none"> The original rezoning conditions of Plot 42 were not implemented and the site has significant development potential. The planned rezoning will reduce the development potential and is not expected to generate in excess of 50 peak hour trips. As part of the original rezoning and subdivision of Plot 42, certain road reserves should have been registered on the property. These were not registered and due to construction of buildings, the originally planned road network in the area is no longer possible. As a result, the future road network alignments will have to be |

| TABLE 10. SUMMARY OF SPECIALIST FINDINGS & RECOMMENDATIONS | | |
|---|--|--|
| Specialist Studies | Findings | Recommendations |
| | | <p>reviewed.</p> <ul style="list-style-type: none"> • An acceptable site layout is possible, although the position of accesses as indicated in the concept layout plan will have to be reconsidered. • Considering the findings and recommendations of the study, it is recommended that the development be approved from a traffic point of view. |
| Electrical | <p>The existing activities undertaken on site, as well as the proposed fuel depot will have a calculated expected maximum electrical load of 150kVA.</p> <p>CENTLEC (SOC) Ltd confirmed that electricity to the site is possible from the Estoire Distribution Centre.</p> | <p>Recommended that a maximum electrical load of 150kVA will be required.</p> |
| | <p>The Annual Average Daily Demand for Hostels is calculated at 150€/resident, as per the Red Book, Table 9.14.</p> <p>The Annual Average Daily</p> | <p>Specific standards or regulations governing the fire-services requirements should be taken into consideration</p> |

| TABLE 10. SUMMARY OF SPECIALIST FINDINGS & RECOMMENDATIONS | | |
|---|---|---|
| Specialist Studies | Findings | Recommendations |
| | <p>Demand for the entire site was calculated at 21.65k ℓ/day, with a Peak Demand of 0.652 ℓ/s.</p> <p>The main pipeline currently supplying water to the site is a 350mm diameter pipe, which should be able to supply sufficient water to the site.</p> | |
| Storm water | <p>The proposed project will have no adverse effects on the natural stormwater runoff. According to the information at hand there is no municipal stormwater infrastructure in the area and the water should be controlled overland.</p> | <p>By applying the pre-set design principals the risk of flooding will be minimized.</p> |
| Sanitation and water associated with the Wash Bay | <p>According to the information at hand the estimated sewer runoff is calculated to 0.330 ℓ/s (Peak Wet Weather Flow). Due to faulty flow of municipal sewerage lines, a 23m³ underground septic tank was installed in 2009.</p> <p>The applicant currently makes use from a sewerage removal company (JBX TRADING 1004 CC t/a JBX VACUUM & CLEANING) to remove sewerage on a monthly basis. The content of the septic tank is discharged into the Bloemspruit WWTW. The said WWTW is operated by the Mangaung Metropolitan Municipality.</p> <p>Mitigation measures will be implemented to prevent contamination of local groundwater and surface</p> | <p>Should the existing septic tank be of insufficient capacity an additional septic tank might be required to control the sewer runoff generated from the proposed extensions.</p> <p>The size of the septic tank, the amount of use, and the type of material discharged is used to determine how often the septic tank will need to be drained.</p> <p>The applicant will ensure that the septic tank is approved by DWS. The tank is sited in such a way that it</p> |

| TABLE 10. SUMMARY OF SPECIALIST FINDINGS & RECOMMENDATIONS | | |
|--|--|---|
| Specialist Studies | Findings | Recommendations |
| | <p>water.</p> <p>The effluent will not be discharged on site, after it is drained from the septic tank and therefore Authorisation for Section 21(g) of the National Water Act (Act 36 of 1998) is not required.</p> <p>The applicant and EnviroTechSA have reached an agreement for the removal of hazardous waste.</p> | <p>does not cause water or other pollution.</p> <p>Due to the nature of the proposed development an oil separator pit should be constructed to separate oil from the water. The water must be directed to the septic tank and the oil should be removed and disposed of in an acceptable manner. Proper maintenance must be conducted to ensure the system functions efficiently.</p> |

TABLE 11 is a summary of the preliminary possible environmental impacts identified at this stage of the project.

| TABLE 11. POTENTIAL IDENTIFIED IMPACTS | |
|---|--|
| Possible Environmental Impacts | |
| Geology | |
| Potential impacts | Preliminary significance of potential impacts |
| <ul style="list-style-type: none"> Loss of topsoil. The correct management tools for the storage thereof will be needed during the construction phase. The characteristics of the soil can be altered due to possible spillage/ disturbance during construction activities. | <ul style="list-style-type: none"> Proper management along with implementation of best practices will ensure that the possible impacts on soil characteristics will be low. |

| TABLE 11. POTENTIAL IDENTIFIED IMPACTS | |
|---|--|
| Possible Environmental Impacts | |
| Cumulative impacts | Preliminary significance of cumulative impacts |
| <ul style="list-style-type: none"> • There will be a negligible cumulative impact. | <ul style="list-style-type: none"> • Negligible significance. |
| Climate | |
| Potential impacts | Preliminary significance of potential impacts |
| <ul style="list-style-type: none"> • It is not expected that the proposed fuel depot will have an impact on the climate in the area. | <ul style="list-style-type: none"> • N/A |
| Cumulative impacts | Preliminary significance of cumulative impacts |
| <ul style="list-style-type: none"> • It is not expected that the proposed fuel depot will have an impact on the climate in the area. | <ul style="list-style-type: none"> • N/A |
| Air Quality | |
| Potential impacts | Preliminary significance of potential impacts |
| <ul style="list-style-type: none"> • The air quality may be negatively impacted by vehicle emissions and dust, especially during the construction phase. | <ul style="list-style-type: none"> • The impact can be low if the proper management measures are implemented during this phase. |
| Cumulative impacts | Preliminary significance Preliminary significance of cumulative impacts |
| <ul style="list-style-type: none"> • No impacts | <ul style="list-style-type: none"> • No impacts |
| Ground & Surface Water | |
| Potential impacts | Preliminary significance of potential impacts |
| <ul style="list-style-type: none"> • Ground and surface (if applicable) water could be contaminated during the construction & operational phases due to spillages of hazardous chemicals and storm water runoff from | <ul style="list-style-type: none"> • Impacts will be low should proper housekeeping and storm water management principles be implemented during the construction & operational phase. |

| TABLE 11. POTENTIAL IDENTIFIED IMPACTS | |
|--|---|
| Possible Environmental Impacts | |
| stockpiles. | |
| Cumulative impacts | Preliminary significance Preliminary significance of cumulative impacts |
| <ul style="list-style-type: none"> • There will be a negligible cumulative impact. | <ul style="list-style-type: none"> • Negligible significance. |
| Land Use | |
| Potential impacts | Preliminary significance of potential impacts |
| <ul style="list-style-type: none"> • The land-use is currently zoned as Special Business: Type 2. Land Use for purposes of Special Business: Type 2 will be lost on the development property. | <ul style="list-style-type: none"> • Impact will be low as similar types of land-uses occur on nearby properties. |
| Cumulative impacts | Preliminary significance Preliminary significance of cumulative impacts |
| <ul style="list-style-type: none"> • Impact will be low as similar types of land-uses occur on nearby properties. | <ul style="list-style-type: none"> • Low |
| Vegetation | |
| Potential impacts | Preliminary significance of potential impacts |
| <ul style="list-style-type: none"> • Loss of vegetation | <ul style="list-style-type: none"> • Medium – Indigenous vegetation will not re-establish on the site when construction activities has come to an end. Only if the site is rehabilitated (which is not foreseen) will the indigenous vegetation re-establish. • It should be noted that the site is already disturbed due to the existing activities being undertaken on the property. • The loss of indigenous vegetation will be localised (to the construction site). |

| TABLE 11. POTENTIAL IDENTIFIED IMPACTS | |
|---|---|
| Possible Environmental Impacts | |
| Cumulative impacts | Preliminary significance Preliminary significance of cumulative impacts |
| <ul style="list-style-type: none"> The population in and around Bloemfontein is expanding and therefore will result in the removal of vegetation for future developments / expansions. | <ul style="list-style-type: none"> Medium. |
| Animal Life | |
| Potential impacts | Preliminary significance of potential impacts |
| <ul style="list-style-type: none"> Due to the current operational activities on site, it is not believed that a large number of animal species use the site for feeding / sleeping activities. | <ul style="list-style-type: none"> Medium – Low. Some animal habitats will be disturbed. However, this will be localised. |
| Cumulative impacts | Preliminary significance Preliminary significance of cumulative impacts |
| <ul style="list-style-type: none"> The growth of the population, increasing urbanisation and expansion of cities will result of the relocation of many animals and the loss of habitats in these areas on the outer boundaries of towns and cities as they expand. | <ul style="list-style-type: none"> Medium. |
| Cultural Heritage | |
| Potential impacts | Preliminary significance of potential impacts |
| <ul style="list-style-type: none"> The proposed site and surrounding area is not known for elements of archaeological or palaeontological value. | <ul style="list-style-type: none"> Low. |
| Cumulative impacts | Preliminary significance Preliminary |

| TABLE 11. POTENTIAL IDENTIFIED IMPACTS | |
|---|--|
| Possible Environmental Impacts | |
| | significance of cumulative impacts |
| <ul style="list-style-type: none"> No cumulative impacts on paleontological and archaeological assets are foreseen. | <ul style="list-style-type: none"> Negligible significance. The impact is expected to be low as it is only temporary and can be managed by proper housekeeping on site during the construction phase. |
| Noise | |
| Potential impacts | Preliminary significance of potential impacts |
| <ul style="list-style-type: none"> The construction activities and specific activities that will be associated with the Construction Phase will result in elevated noise levels. | <ul style="list-style-type: none"> The impact is expected to be medium during the construction activities. However with the implementation of management tools such as the limiting of construction activities where possible to normal working hours, the significance of noise can be made bearable to surrounding land owners. |
| Cumulative impacts | Preliminary significance Preliminary significance of cumulative impacts |
| <ul style="list-style-type: none"> The existing land uses in the area ranges from residential, agricultural and light industrial. It is therefore not foreseen that the proposed activities will have a potential increase in the ambient noise levels of the area during the operational phase. | <ul style="list-style-type: none"> Low |
| Aesthetics | |
| Potential impacts | Preliminary significance of potential impacts |
| <ul style="list-style-type: none"> The existing land uses in the area ranges from residential, agricultural and | <ul style="list-style-type: none"> Medium, during the construction phase. |

| TABLE 11. POTENTIAL IDENTIFIED IMPACTS | |
|---|---|
| Possible Environmental Impacts | |
| light industrial. • Possible impacts on the areas aesthetics during the construction phase. | |
| Cumulative impacts | Preliminary significance Preliminary significance of cumulative impacts |
| • The existing land uses in the area ranges from residential, agricultural and light industrial | • Low significance. |
| Traffic Impacts | |
| Potential impacts | Preliminary significance of potential impacts |
| • The site is zoned Special Business 2, with the zoning allowing Business Buildings, which allows shops. The proposed fuel depot and overnight facilities will result in a reduction in the development potential, and thus a reduction in the potential trip generation is possible. | • It is not anticipated that a high volume of additional vehicles will make use of the road towards the access road, as it is mainly the applicant's own tankers that will make use of the proposed fuel depot. • The impact is expected to be low as additional traffic restrictions can be implemented depending on the findings of the Traffic Impact Assessment to be conducted. • Given the relatively inaccessible location of the development it is in any event highly unlikely to attract other trips. |
| Cumulative impacts | Preliminary significance Preliminary significance of cumulative impacts |
| The site is zoned Special Business 2, with the zoning allowing Business Buildings, which allows shops. The proposed fuel depot and overnight facilities will result in a reduction in the | • Low significance. • Due to the following, the expected trip generation of the applied for facilities will be limited: - The fuel depot will only serve the developers own fleet of trucks; |

| TABLE 11. POTENTIAL IDENTIFIED IMPACTS | |
|---|--|
| Possible Environmental Impacts | |
| development potential, and thus a reduction in the potential trip generation is possible. | <ul style="list-style-type: none"> - The site is relatively inaccessible from higher order roads. - The overnight facilities will be used by employees • Considering the above, the change in land use will reduce the potential trip generation of the development and is not expected to generate in excess of 50 peak hour trips, with a result that capacity analyses are not required. |

10. ASSESSMENT OF IDENTIFIED ENVIRONMENTAL ISSUES

10.1 Assessment

The main objective of the EIA process is to assess and quantify the potential impacts that were identified by the project team, specialists and IAPs during the Scoping Phase.

All specialist studies are included in the current document (i.e. the Final EIA Report). Through the results and outcomes of the specialist studies, an accurate and comprehensive Impact Assessment was compiled through the concept of significance.

The concept of significance is at the core of impact identification, evaluation and decision-making during the EIA process and can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. intensity, duration and likelihood), while impact significance is the value placed on the change by different affected parties (i.e. level of acceptability) (DEAT, 2002).

The significance is rated from Low to High as indicated in the tables below with an explanation of the impact magnitude and a guide that reflects the extent of the proposed mitigatory measures deemed necessary.

10.1.1 Concluding Consequence

Consequence analysis is a mixture of quantitative and qualitative information and the outcome can be positive or negative. Several factors can be used to determine consequence. For the purpose of determining the environmental significance in terms of consequence, the following factors were chosen: Severity / Intensity, Duration and Extent / Spatial Scale. Each factor is assigned a rating of 1 to 5, as described below.

10.1.2 Determination of Severity

Severity relates to the nature of the event, aspect or impact to the environment and describes how severe the aspects impact on the biophysical and socio-economic environment. **TABLE 12** indicates the severity rating on a quantitative and qualitative level.

| TABLE 12. SEVERITY RATING | | | | | |
|---|---|--|--|--|---|
| Type of Criteria | Rating Score | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| Quantitative | 0-20% | 21-40% | 41-60% | 61-80% | 81-100% |
| Qualitative | Insignificant / Non-harmful | Small / Potentially Harmful | Significant / Harmful | Great / Very harmful | Disastrous Extremely harmful |
| Social/ Community response | Acceptable / IAP satisfied | Slightly tolerable / Possible objections | Intolerable/ Sporadic complaints | Unacceptable / Widespread complaints | Totally unacceptable / Possible legal action |
| Irreversibility | Very low cost to mitigate / High potential to mitigate impacts to level of insignificance / Easily reversible | Low cost to mitigate | Substantial cost to mitigate / Potential to mitigate impacts / Potential to reverse impact | High cost to mitigate | Prohibitive cost to mitigate / Little or no mechanism to mitigate impact Irreversible |
| Biophysical (Air quality, water quantity and quality, waste production, fauna and flora) | Insignificant change / deterioration or disturbance | Moderate change / deterioration or disturbance | Significant change / deterioration or disturbance | Very significant change / deterioration or disturbance | Disastrous change / deterioration or disturbance |

10.1.3 Determination of Duration

Duration refers to the amount of time that the environment will be affected by the event, risk or impact, if no intervention (e.g. remedial action) takes place. **TABLE 13** indicates the rating of duration according to a measure of the life span of the possible impact.

| TABLE 13. DURATION RATING | |
|---------------------------|----------------------------|
| Rating | Description |
| 1: Low | One month |
| 2: Low-Medium | Between 1 and three months |
| 3: Medium | 3 months to 1 year |
| 4: Medium-High | 1 to 10 years |
| 5: High | More than 10 years |

10.1.4 Determination of Extent / Geographical Extent

Extent refers to the spatial influence related to an impact (thus immediate area / surrounding area / regional/ national / international).

| TABLE 14. EXTENT RATING AND DESCRIPTION | | |
|---|--------------------------|--|
| Rating | Exposure | Description |
| 1: Low | Very limited | Immediate site / limited to site and immediate areas |
| 2: Low-Medium | Limited | Surrounding areas |
| 3: Medium | Municipal area | Municipal area |
| 4: Medium-High | Province / Region | Province |
| 5: High | National / international | National / International |

10.1.5 Determination of Overall Consequence

Overall consequence is determined by adding the factors determined above (severity, duration and extent) as summarised in the example below, and then dividing the sum by 3 (3 factors; severity, duration and extent).

| TABLE 15. EXAMPLE OF OVERALL CONSEQUENCE CALCULATION | |
|--|--------|
| Consequence | Rating |
| Severity | 3 |
| Duration | 2 |
| Extent | 4 |
| Subtotal: 9 | |
| Total Consequence : 3 | |

10.1.6 Likelihood

The determination of likelihood is a combination of Frequency and Probability. Each factor is assigned a rating of 1 to 5, as described below and in **TABLE 16** and **TABLE 17**.

10.1.7 Determination of Frequency

Frequency refers to how often the specific activity, related to the event, aspect or impact, is undertaken.

| TABLE 16. RATING AND DESCRIPTION OF FREQUENCY | |
|---|---------------------------------|
| Rating | Description |
| 1: Low | Once / twice a year |
| 2: Low-Medium | Once or more every 6 months |
| 3: Medium | Once or more on a monthly basis |
| 4: Medium-High | Once or more on a weekly basis |
| 5: High | On a daily basis |

10.1.8 Determination of probability

Probability refers to how often the activity/event or aspect has an impact on the environment.

| TABLE 17. RATING AND DESCRIPTION OF PROBABILITY | |
|---|---------------------------------------|
| Rating | Description |
| 1: Low | Almost never / almost impossible |
| 2: Low-Medium | Very seldom / highly unlikely |
| 3: Medium | Infrequent / unlikely / seldom |
| 4: Medium-High | Often / regularly / likely / possible |
| 5: High | Daily / highly likely / definitely |

10.1.9 Overall likelihood

Overall likelihood is calculated by adding the factors determined above and summarised below, and then dividing the sum by 2.

| TABLE 18. EXAMPLE CALCULATING OVERALL LIKELIHOOD | |
|--|--------|
| Overall Likelihood | Rating |
| Frequency | 3 |
| Probability | 2 |
| Subtotal: 5 | |
| Total Likelihood: 2.5 | |

10.1.10 Determination of Overall Environmental Significance

The multiplication of overall consequence with overall likelihood will provide the environmental significance, which is a number that will then fall into a range of LOW, LOW-MEDIUM, MEDIUM, MEDIUM-HIGH or HIGH, as shown in **TABLE 19**.

| TABLE 19. DETERMINATION OF OVERALL ENVIRONMENTAL SIGNIFICANCE AND DESCRIPTION | | | | | |
|---|---------|------------|-----------|-------------|---------|
| Significance / risk | Low | Low-Medium | Medium | Medium-High | High |
| Overall Consequence Multiplied (x) by Overall Likelihood | 1 – 4.9 | 5 – 9.9 | 10 – 14.9 | 15 – 19.9 | 20 – 25 |

10.1.11 Qualitative Description of Environmental Significance

The qualitative description relating to environmental significance is used to supply us with an indication of the nature of the significance of a risk or potential impact.

This can be used as a valuable tool to guide the decision making process relating to a particular event, impact or aspect.

| TABLE 20. QUALITATIVE DESCRIPTION & RATING OF SIGNIFICANCE | | | | | |
|--|---|---|---|---|---|
| Significance | Low | Low-Medium | Medium | Medium-High | High |
| Impact Magnitude | <ul style="list-style-type: none"> Impact is of very low order and therefore likely to have very little real effect. | <ul style="list-style-type: none"> Impact is of very low order and therefore likely to have very little real effect. Acceptable | <ul style="list-style-type: none"> Impact is real, and potentially substantial in relation to other impacts. Can pose a risk | <ul style="list-style-type: none"> Impact is real and substantial in relation to other impacts. Pose a risk to the company. | <ul style="list-style-type: none"> Impact is of the highest order possible. Unacceptable. Fatal flaw. |
| Action Required | <ul style="list-style-type: none"> Maintain current management measures. Where possible improve. | <ul style="list-style-type: none"> Maintain current management measures. Implement monitoring and evaluate to determine potential increase in risk. Where possible improve. | <ul style="list-style-type: none"> Implement monitoring. Investigate mitigation measures and improve management measures to reduce risk, where possible. | <ul style="list-style-type: none"> Improve management measures to reduce risk. | <ul style="list-style-type: none"> Implement significant mitigation measures or implement alternatives |

Should any fatal flaws be identified during the EIA process which will be indicated by a "high" significance rating, the activity related with the potential impact will undergo the "no-go" alternative (i.e. be excluded from the proposed project) if the impact cannot not be managed and / or mitigated to acceptable levels.

11. ENVIRONMENTAL IMPACT ASSESSMENT

11.1 Geology and Soil

The following geology and soil related impacts have been identified and may occur as a result of the construction and operation phase of the proposed development;

- Potential loss of topsoil.
- Alteration of soil characteristics due to possible spillages / disturbances.
- Contamination of soil as a result of chemical / hazardous substances / pollution / sewage leaks.

| TABLE 21. GEOLOGY AND SOIL ASSESSMENT | | | | |
|---------------------------------------|--|-----------------------------|---|-----------------------------|
| Assessed aspect | Without Mitigation | | With Mitigation | |
| | Value | Description | Value | Description |
| Severity | 2 | Small / Potentially Harmful | 1 | Insignificant / Non-harmful |
| Duration | 5 | High | 2 | Low-Medium |
| Extent | 2 | Low-Medium | 1 | Low |
| Consequence | 3 | | 1 | |
| Frequency | 2 | Low-Medium | 1 | Low |
| Probability | 3 | Medium | 2 | Low-Medium |
| Likelihood | 2.5 | | 1.5 | |
| Significance | 7.5 | Low-Medium | 1.5 | Low |
| Impact Magnitude | Impact is of low order and therefore likely to have very little real effect. | | Impact is of very low order and therefore likely to have very little real effect. | |
| Status | Negative | | Negative | |

As depicted in **TABLE 21** the environmental significance of the geology and soil impacts related to the proposed development can qualitatively be described as LOW-MEDIUM. The possible impact is of low order and therefore likely to have little real effect. The implementation of monitoring, mitigation and

management measures are necessary in order to reduce risk where possible. This can be motivated by the mitigated environmental significance depicted – LOW.

11.1.1 Proposed Mitigation measures

- Remove topsoil prior to construction.
- Topsoil stockpiling in such a manner as to avoid / prevent the loss thereof.
- No topsoil should be used for construction purposes.
- Topsoil should only be used post construction for rehabilitation, landscaping, storm water system construction and levelling purposes.
- All new sewage pipes should be sealed during the construction phase.
- The upgrading / installation of an adequate sewage system should be constructed / implemented in order to prevent leakages / spillage during the operation phase. This must also include a maintenance and monitoring plan for the sewer system.
- Sewer infrastructure must be equipped with all necessary access chambers in order to prevent / facilitate repairs of blockages in the lines which may lead to overflowing (where necessary).
- During the construction phase all equipment must be maintained. The necessary precautionary measures must be taken for example
 - drip trays must be used to protect soil against spillages of hazardous chemicals.
 - all hazardous substances must be stored in a demarcated area lined with an impermeable floor and walls with sufficient capacity in terms of storage.
- Any leakage / spillage events must be reported immediately and the contaminated / affected soil must be removed and disposed of as hazardous waste.
- Fuel storage tanks should be installed in an area with a buffer wall that has the capacity of 110% of the fuel storage tanks.

11.2 Climate

It is not expected that the proposed development will have any impact on the climate of the area.

11.3 Air Quality and Noise

The following air quality and noise related impacts have been identified and may occur as a result of the construction and operation phase of the proposed development;

- The majority of air quality and noise impacts will occur during the construction phase of the proposed development.
- Air quality impacts will be due to the operation of construction vehicles, the clearance of vegetation and other related construction activities.
- Noise impacts will be elevated during the construction phase due to construction activities.
- The impact is expected to be medium during the construction activities. However with the implementation of management tools such as the limiting of construction activities where possible to normal working hours, the significance of noise can be made bearable to surrounding land owners.
- The existing land uses in the area ranges from residential, agricultural and light industrial. It is therefore not foreseen that the proposed activities will have a potential increase in the ambient noise levels of the area during the operational phase.

| TABLE 22. AIR QUALITY AND NOISE ASSESSMENT | | | | |
|--|--------------------|-----------------------------|-----------------|-----------------------------|
| Assessed aspect | Without Mitigation | | With Mitigation | |
| | Value | Description | Value | Description |
| Severity | 2 | Small / Potentially Harmful | 1 | Insignificant / Non-harmful |
| Duration | 3 | Medium | 2 | Low-Medium |
| Extent | 2 | Low-Medium | 1 | Low |
| Consequence | 2.3 | | 1.3 | |
| Frequency | 5 | High | 2 | Low-Medium |
| Probability | 2 | Medium | 1 | Low-Medium |
| Likelihood | 3.5 | | 1.5 | |
| Significance | 8.2 | Low- | 2 | Low |

| | Medium | |
|-------------------------|---|---|
| Impact Magnitude | Impact is of very low order and therefore likely to have very little real effect. | Impact is of very low order and therefore likely to have very little real effect. |
| Status | Negative | Negative |

As depicted in **TABLE 22** the environmental significance of the air quality and noise impacts related to the proposed development can qualitatively be described as LOW-MEDIUM. The possible impact is of a very low order without mitigation and therefore likely to have very little real effect. Mitigation measures should be investigated and management measures should be implemented in order to reduce risk where possible.

11.3.1 Proposed Mitigation Measures

- In order to reduce dust emissions on the site during the construction phase of the proposed development dust suppression should be implemented.
- Strict adherence to speed limits on site can ensure minimum travel speeds of vehicles as well as minimum noise and dust levels.
- Construction activities should be avoided during very windy conditions, where possible.
- Vehicles and construction equipment should be serviced on a regular basis in order to reduce emissions during operation.
- No open fires or waste burning should be allowed on site.
- Noise levels can be kept to an acceptable minimum by restricting the use of construction vehicles and noisy activities to normal working hours.

11.4 Ground and Surface Water

The following ground and surface water related impacts have been identified and may occur as a result of the construction and operation phase of the proposed development;

- Contamination due to spillages of hazardous chemicals or substances during the construction phase.

- Surface water resources downstream of the proposed development could be contaminated / silted due to surface water runoff during rain events.
- Contamination of ground and downstream surface water during the construction phase by waste as a result of incorrect or inappropriate storage practices.
- Contamination of ground and downstream surface water due to sewage leaks during construction and operation.
- Contamination of ground and downstream surface water during the operational phase by fuel spillages (from the fuel storage tanks on site).

| TABLE 23. GROUND AND SURFACE WATER ASSESSMENT | | | | |
|--|---|-----------------------------|---|-----------------------------|
| Assessed aspect | Without Mitigation | | With Mitigation | |
| | Value | Description | Value | Description |
| Severity | 2 | Small / Potentially Harmful | 1 | Insignificant / Non-harmful |
| Duration | 4 | Medium-High | 2 | Low-Medium |
| Extent | 3 | Medium | 2 | Low-Medium |
| Consequence | 2.3 | | 1.3 | |
| Frequency | 3 | Medium | 2 | Low-Medium |
| Probability | 2 | Medium | 1 | Low-Medium |
| Likelihood | 3.5 | | 1.5 | |
| Significance | 7.5 | Low-Medium | 2 | Low |
| Impact Magnitude | Impact is of very low order and therefore likely to have very little real effect. | | Impact is of very low order and therefore likely to have very little real effect. | |
| Status | Negative | | Negative | |

As depicted in **TABLE 23** the environmental significance of the ground and surface water impacts related to the proposed development can qualitatively be described as LOW-MEDIUM. The possible impact is of a very low order without mitigation and therefore likely to have very little real effect. Mitigation measures should be investigated and management measures should be

implemented in order to reduce risk where possible. A monitoring system can also be implemented to further reduce risk.

11.4.1 Proposed Mitigation Measures

- Potentially hazardous substances must be stored on an impermeable surface inside a bunded area to prevent seepage of the substance and pollution of the groundwater.
- In the event of spillages of any potentially hazardous substances the area should be cleaned immediately by removing the spill and the contaminated soil and disposing thereof as hazardous waste.
- Proper engineering and maintenance and management of the sewage systems must be conducted / implemented. Sewer systems should be inspected and cleaned regularly.
- Adequate storm water management measures and systems must be implemented and maintained before and during construction as well as the operational phase of the proposed development.
- Good housekeeping measures should be implemented to prevent general waste and littering from occurring in downstream surface water resources.

11.5 Land Use

The following land use impacts have been identified and may occur as a result of the construction and operation phase of the proposed development;

- The land-use is currently zoned as Special Business: Type 2. Land Use for purposes of Special Business: Type 2 will be lost on the development property.
- The impact will be low as similar types of land-uses occur on nearby properties.

| Assessed aspect | Without Mitigation | | With Mitigation | |
|-----------------|--------------------|-----------------------------|-----------------|-----------------------------|
| | Value | Description | Value | Description |
| Severity | 1 | Insignificant / Non-harmful | 1 | Insignificant / Non-harmful |

| | | | | |
|-------------------------|---|-------------------|---|-------------------|
| Duration | 5 | High | 5 | High |
| Extent | 1 | Low | 1 | Low |
| Consequence | 2.3 | | 2.3 | |
| Frequency | 5 | High | 5 | Low-Medium |
| Probability | 1 | Medium | 1 | Low-Medium |
| Likelihood | 3 | | 3 | |
| Significance | 7 | Low-Medium | 7 | Low-Medium |
| Impact Magnitude | Impact is of very low order and therefore likely to have very little real effect. | | Impact is of very low order and therefore likely to have very little real effect. | |
| Status | Negative | | Negative | |

As depicted in **TABLE 24** the environmental significance of the Land Use impacts related to the proposed development can qualitatively be described as LOW-MEDIUM. The possible impact is of a very low order without mitigation and therefore likely to have very little real effect. Mitigation measures should be investigated and management measures should be implemented in order to reduce risk where possible. A monitoring system can also be implemented to further reduce risk.

11.5.1 Proposed Mitigation Measures

- The sense of place should be protected during all phases of the proposed development by limiting the construction activities to a minimum area.
- Good housekeeping should be ensured during the construction phase in order to keep the area clean.
- Refuse removal should be conducted on a regular basis.

11.6 Vegetation and Animal Life

The following impacts on the vegetation and animal life of the proposed site have been identified and may occur as a result of the construction and operation phase of the proposed development;

- Due to the existing land use, the site is in a degraded condition and the natural vegetation composition has been transformed to a large degree.
- The entire proposed development site is highly disturbed and transformed by past and present human activities and is entirely surrounded by urban sprawl.
- It was identified that no suitable habitat, on and surrounding the proposed development site for any Red Data faunal species and no rupicolous (living among, inhabiting, or growing on rocks), arboreal (pertaining to moving about, living in or among trees) or wetland habitats are present.
- The site was found to be disturbed and that the proposed development would not have a negative effect in on any Red Data faunal species or any other faunal species found on site.
- No natural / indigenous vegetation is located on site.
- During the construction phase, less than 1 ha of vegetation will be removed.
- Transformation of the land will occur.
- Vegetation growth as well as the habitats of certain species will be disturbed.
- Destruction of habitat and loss of animal life may occur.
- The growth and distribution of alien plant species may occur.
- Loss of vegetation due to fires made on-site during the construction phase may occur.

| TABLE 25. VEGETATION | | | | |
|-----------------------------|---------------------------|-----------------------------|------------------------|-----------------------------|
| Assessed aspect | Without Mitigation | | With Mitigation | |
| | Value | Description | Value | Description |
| Severity | 2 | Small / Potentially Harmful | 1 | Insignificant / Non-harmful |
| Duration | 3 | Medium | 2 | Low-Medium |
| Extent | 2 | Low-Medium | 1 | Low |
| Consequence | 2.3 | | 1.3 | |
| Frequency | 5 | High | 2 | Low-Medium |
| Probability | 2 | Medium | 1 | Low-Medium |
| Likelihood | 3.5 | | 1.5 | |

| Significance | 8.2 | Low-Medium | 2 | Low |
|-------------------------|---|------------|---|-----|
| Impact Magnitude | Impact is of very low order and therefore likely to have very little real effect. | | Impact is of very low order and therefore likely to have very little real effect. | |
| Status | Negative | | Negative | |

As depicted in **TABLE 25** the environmental significance of impacts on the vegetation related to the proposed development can qualitatively be described as LOW-MEDIUM. The possible impact is of a very low order without mitigation and therefore likely to have very little real effect. Mitigation measures should be investigated and management measures should be implemented in order to reduce risk where possible. A monitoring system can also be implemented to further reduce risk.

11.6.1 Proposed Mitigation Measures

- Indigenous vegetation will not re-establish on the site when construction activities has come to an end. Only if the site is rehabilitated (which is not foreseen) will the indigenous vegetation re-establish.
- It should be noted that the site is already disturbed due to the existing activities being undertaken on the property.
- The loss of vegetation will be localised (to the construction site).
- Due to the current operational activities on site, it is not believed that a large number of animal species use the site for feeding / sleeping activities.
- Some animal habitats will be disturbed. However, this will be localised.
- The growth of the population, increasing urbanisation and expansion of cities will result of the relocation of many animals and the loss of habitats in these areas on the outer boundaries of towns and cities as they expand.
- Alien plant species will be removed before seeding to prevent the spread of these plants to the surrounding

environment. Alien vegetation should be controlled throughout the lifetime of the project.

- No open fires will be allowed on the site.
- The hunting, capturing and trapping of fauna should be prevented by making this a punishable offense during the construction phase and inhabitation of the development (capturing and removal is only to be undertaken by a suitable, qualified person).

11.7 Cultural Heritage

The proposed site and surrounding areas are not known for elements of archeological or paleontological value. As far as the palaeontological heritage is concerned, the proposed development may proceed with no additional heritage assessments necessary; however it is strongly recommended that all excavation activities are restricted within the boundaries of the development footprint. Furthermore in the event of archaeological findings (if any), these findings should be recorded and reported to SAHRA. No construction activities in the area (where archaeological or palaeontological findings were observed) may proceed without the authorisation from SAHRA.

11.8 Aesthetics

The following impacts on the aesthetics of the proposed site have been identified and may occur as a result of the construction and operation phase of the proposed development;

- The land-use is currently zoned as Special Business: Type 2.
- The existing land uses in the area ranges from residential, agricultural and light industrial.
- The proposed fuel depot will not have a large impact on the aesthetics of the surrounding areas, due to the current activities being undertaken in the nearby area.
- During the construction phase of the proposed development there will be a negative impact on the aesthetics of the surrounding land owners.
- During the construction phase there may also be a negative visual impact on surround land and road users.

| TABLE 26. AESTHETICS | | | | |
|-----------------------------|---|-----------------------------|---|-----------------------------|
| Assessed aspect | Without Mitigation | | With Mitigation | |
| | Value | Description | Value | Description |
| Severity | 2 | Small / Potentially Harmful | 1 | Insignificant / Non-harmful |
| Duration | 3 | Medium | 2 | Low-Medium |
| Extent | 2 | Low-Medium | 1 | Low |
| Consequence | 2.3 | | 1.3 | |
| Frequency | 4 | High | 2 | Low-Medium |
| Probability | 2 | Medium | 1 | Low-Medium |
| Likelihood | 3.5 | | 1.5 | |
| Significance | 7 | Low-Medium | 2 | Low |
| Impact Magnitude | Impact is of very low order and therefore likely to have very little real effect. | | Impact is of very low order and therefore likely to have very little real effect. | |
| Status | Negative | | Negative | |

As depicted in **TABLE 26** the environmental significance of impacts on the aesthetics related to the proposed development can qualitatively be described as LOW-MEDIUM. The possible impact is of a very low order without mitigation and therefore likely to have very little real effect. Mitigation measures should be investigated and management measures should be implemented in order to reduce risk where possible. A monitoring system can also be implemented to further reduce risk.

11.8.1 Proposed Mitigation Measures

- During the construction phase of the proposed development the site should be kept clean at all times and solid and building waste must be removed on a regular basis.
- Contractors should strictly adhere to the EMP and also make sure that they implement best practices throughout the construction phase.

11.9 Traffic

The following traffic impacts have been identified and may occur as a result of the construction and operation phase of the proposed development;

- The site is zoned Special Business 2. With the zoning allowing Business Buildings, which allows shops, any other use such as the fuel depot and the overnight facilities will result in a reduction in the development potential, and thus a reduction in the potential trip generation.
- Due to the following, the expected trip generation of the applied for facilities will be limited:
 - The fuel depot will only serve the developers own fleet of trucks;
 - The site licence from the Department of Mineral Resources will only allow for wholesale fuel sales and no retail; and
 - The site is relatively inaccessible from higher order roads.
 - The overnight facilities will be used by employees
- Considering the above, the change in land use will reduce the potential trip generation of the development and is not expected to generate in excess of 50 peak hour trips, with a result that capacity analyses are not required.
- The layout makes provision for two accesses consisting of an entrance and a separate exit. This is contrary to what is prescribed by TRH 26, namely:
 - Normally only one access per erf is allowed. However, developments such as shopping centres should preferably have separate accesses for private vehicles and for large delivery vehicles. A separate access may also be desirable for use by public transport.
 - The spacing and separation requirements of this manual, however, are applicable to each individual access and may not be relaxed to accommodate the additional accesses.
 - In an industrial area with access from a lower classification road, two accesses can possibly be considered, although considering the available space there is no obvious reason why two accesses should be provided.
- Given the fact that provision is made for a separate entrance and exit, and considering the zoning of the site, the entrance

and exit will be high volume accesses and will thus as per TRH 26 have to comply with the appropriate access spacing.

- The access spacing as per the plan is approximately 35m centreline to centreline.
- If assumed as low volume truck accesses as per UTG10 for a commercial local street, the access separation should be 20m, but considering the zoning of the site, the entrance and exit could be high volume motor car and mixed driveways. In the latter case the access spacing should be 50m centreline to centreline based on UTG10.
- Considering the above, it is thus recommended that only one access be provided, but if there is sufficient motivation why a separate entrance and exit should be provided, these will have to be spaced at 50m centreline to centreline.
- Sight distances should be acceptable.
- Sufficient space should be available on the site to provide the required parking; this can be addressed as part of building plans.

| TABLE 27. TRAFFIC | | | | |
|--------------------------|---|-----------------------------|---|-----------------------------|
| Assessed aspect | Without Mitigation | | With Mitigation | |
| | Value | Description | Value | Description |
| Severity | 2 | Small / Potentially Harmful | 1 | Insignificant / Non-harmful |
| Duration | 3 | Medium | 2 | Low-Medium |
| Extent | 2 | Low-Medium | 1 | Low |
| Consequence | 2.3 | | 1.3 | |
| Frequency | 5 | High | 5 | Low-Medium |
| Probability | 3 | Medium | 1 | Low-Medium |
| Likelihood | 3.5 | | 1.5 | |
| Significance | 9.3 | Low-Medium | 4 | Low |
| Impact Magnitude | Impact is of very low order and therefore likely to have very little real effect. | | Impact is of very low order and therefore likely to have very little real effect. | |
| Status | Negative | | Negative | |

As depicted in **TABLE 27** the environmental significance of impacts on the aesthetics related to the proposed development can qualitatively be described as LOW-MEDIUM. The possible impact is of a very low order without mitigation and therefore likely to have very little real effect. Mitigation measures should be investigated and management measures should be implemented in order to reduce risk where possible. A monitoring system can also be implemented to further reduce risk.

11.9.1 Proposed Mitigation Measures

- During the construction phase construction vehicles should limit / schedule their transport activities outside of peak traffic hours, where possible.
- The change in land use is not expected to generate in excess of 50 peak hour trips during any peak period and in fact trip generation will be quite low. A formal Traffic Impact Statement with Capacity Analyses was thus not warranted.
- Considering the expected trip generation of the development, rezoning of the property as per the zoning application will not have a notable impact on traffic volumes in the area.
- The original rezoning conditions of Plot 42 were not implemented and the site has significant development potential. The planned rezoning will reduce the development potential and is not expected to generate in excess of 50 peak hour trips.
- As part of the original rezoning and subdivision of Plot 42, certain road reserves should have been registered on the property. These were not registered and due to construction of buildings, the originally planned road network in the area is no longer possible. As a result, the future road network alignments will have to be reviewed.

12. ASSUMPTIONS, UNCERTAINTIES OR GAPS IN KNOWLEDGE

Assumptions:

- The scope is limited to assessing the potential impacts associated with the proposed development; therefore the effect on the surrounding environment is based on the current land use.
- All information provided by MDA and specialists involved is deemed valid and correct at the time it was provided.
- During the public participation process, no indigenous local information surfaced, it is assumed that there are no sensitive cultural sites on the proposed site.
- The EAP does not accept any responsibility in the event that additional information comes to light at a later stage of the process.

Limitations / Uncertainties:

- None at this stage.

13. ENVIRONMENTAL MANAGEMENT PROGRAMME

The EMPr (**Annexure L**) has been included in the EIA phase of the proposed development.

13.1 Objectives of the EMPr

The EMPr aims to fulfil the requirements in terms of the National Environmental Management Act (Act 107 of 1998), with the following objectives:

- To identify, predict and evaluate actual and potential impacts on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimizing negative impacts, maximizing benefits and promoting compliance with the principles of environmental management;
- To identify and employ the modes of environmental management best suited to ensuring that the activity is pursued in accordance with best environmental management practices;
- To be able to respond to unforeseen events; and
- To provide feedback on compliance.

13.2 Implementation of the EMPr

The applicant, namely Mack's Petroleum (PTY) LTD is responsible for the implementation of the EMPr. All contractors should be

supplied with a copy of the EMPr and should ensure that construction staff adheres to the mitigation measures.

14. ENVIRONMENTAL AWARENESS PLAN

14.1 Objectives of the Environmental Awareness Plan

It is important that the employees understand how each action of the project may influence the environment. It is just as important that each person understand the management strategies as it ensures that the impact on the environment is kept to a minimum.

The Environmental Awareness Plan should be sufficient to make all those involved in the proposed project aware of the risks that may occur as well as the necessary mitigation required to minimise the risks involved. Please refer to **Annexure M** for the Environmental Awareness Plan.

15. ENVIRONMENTAL IMPACT STATEMENT

Unfortunately during any development it is impossible to entirely avoid negative environmental impacts. Therefore it is of utmost importance that these negative environmental impacts should be minimised and limited by using appropriate mitigation and management measures.

Following the Scoping Phase of the EIA process a number of environmental impacts, concerns and issues were identified. These impacts, issues and concerns were found to most certainly occur during the construction and operational phases of the proposed development.

The identified impacts, concerns and issues are shortly listed below;

- Loss of topsoil,
- Possible changes in soil characteristics,
- Surface flooding,
- Air quality impacts,
- Elevated noise impacts,
- Ground and downstream surface water contamination,
- Flooding and erosion,
- Habitat disturbances affecting fauna and flora species,
- Aesthetic impacts,

- Traffic impacts,
- Possible damage / destruction to unfound heritage sites.

Following the assessment process of the identified impacts it was found that the majority of the identified impacts can be reduced in terms of environmental significance ratings to Low or Low-Medium. This can be done by implementing certain mitigation and management tools along with very strict adherence to the final EMPr. Thus impact occurrence due to the proposed development can be minimised to a great extent and furthermore also be limited to site specific and local extents.

Inputs from the required specialists were obtained as part of the compilation of the current document.

The applicant provides road transportation of bulk fuel products and operates its own fleet of tankers. Thus, the main purposed of the project is to construct fuel tanks for the storage of fuel. The stored fuel will mainly be used by the applicant to fill the tanks of its own fuel transportation trucks.

Due to the current land use, the site is in a degraded condition and the natural vegetation composition has been transformed to a large degree. The proposed layout will result in the lowest environmental impact as long as the mitigation measures as stipulated in the current document as well as the EMPr are implemented.

The proposed fuel depot area covers an area of degraded land, containing several modern commercial building structures. No historically significant building structure older than 60 years of age is present at the site. Existing roads already provide access to the site. The proposed development will take place on land formerly altered by modern industrial / commercial activities. Potential archaeological impact at the proposed site is considered to be non-existent. Underlying geology at the site consist of potentially fossil-bearing Beaufort Group (Adelaide Subgroup) strata. Superficial sediments are made up of residual soils of varying depth that are not considered to be palaeontologically significant. The likelihood of palaeontological impact on bedrock sediments underneath the degraded overburden is considered to be extremely low given latter's overall depth, the low topography terrain and the fact that no subsurface development is planned for this project. Thus, as far as the palaeontological heritage is concerned, the proposed development may proceed with no additional heritage assessments

necessary, provided that all excavation activities are restricted to within the boundaries of the development footprint.

The change in land use is not expected to generate in excess of 50 peak hour trips during any peak period and in fact trip generation will be quite low. Considering the expected trip generation of the development, rezoning of the property as per the zoning application will not have a notable impact on traffic volumes in the area. An acceptable site layout is possible, in terms of a Traffic Impact point of view.

The proposed site in light of all the above is suitable for the proposed development. This can mainly be attributed to the compatibility of the proposed development with the surrounding area.

The applicant identified the need to construct fuel tanks for the storage of fuel. The stored fuel will mainly be used by the applicant to fill the tanks of its own fuel transportation trucks.

The site is extremely well located for this type of development given numerous favourable locality aspects such as;

a) Access

Easy access to the site can be obtained from Sand du Plessis Avenue.

b) Surrounding land uses

The proposed development site is surrounded by housing, agricultural and light industrial land uses. This makes the proposed development suitable to the area.

During the PPP no objections against the proposed development were received. The issues and concerns raised by IAPs have been included in this report as well as the Environmental Impact Assessment.

Should the described project not be authorised by the competent authority, the proposed fuel depot will not be constructed. The applicant will then have to buy fuel from other companies (at a higher price) and this will have cost implications to the applicant as well as the fuel companies that the applicant are to be serving.

16. EAP RECOMMENDATION

It is the opinion of MDA that the development is environmentally feasible due to the fact that the majority of environmental impacts can be mitigated to a satisfactory level.

However it should be noted that the following recommendations along with the recommendations raised by the various appointed specialists as well as Registered IAPs should be deemed important and considered;

- The loss of topsoil during the construction phase should be avoided as far as possible by implementing the mitigation measures as set out in the EMPr.
- Dust suppression and noise management measures must be implemented as per the EMPr.
- No open fires or waste burning should take place on site.
- Potentially hazardous substances should be stored on an impermeable surface and inside a bunded area. In the event of hazardous substance spillage the area must be cleaned immediately and authorities should be notified.
- Adequate storm water management measures and systems must be implemented and maintained before during and after construction activities.
- Good housekeeping measures should be implemented at all times during the construction phase.
- No endangered or protected plant species are to be harmed / removed from the site without a valid permit. In the event that such plants are encountered they should be transplanted from the site.
- Alien plant species will be removed before seeding to prevent the spread of these plants to the surrounding environment. Alien vegetation should be controlled throughout the lifetime of the project.
- The hunting, capturing and trapping of fauna should be prevented by making this a punishable offense during the construction phase and the operational phase of the development (capturing and removal is only to be undertaken by a suitable qualified person).
- In the event that during the construction phase of the proposed development any archaeological discoveries are made construction works should stop, the findings must be recorded and reported to SAHRA immediately. No construction activities at the

area where archaeological discoveries were made, may proceed without authorization from SAHRA.

- Bund wall of fuel tanks should be within the capacity to be able to contain spillages
- All effluent from the wash bay should be disposed of in a properly constructed drain and must be situated as far as possible away from a watercourse
- Only domestic wash water may be allowed to enter the drain and any effluent containing oil and grease or other industrial substances must be collected in a suitable receptacle and removed from site.
- The name of the Hazardous Waste Company to be used for the removal of hazardous material should be provided to DWS. A written agreement between the applicant and the said company should also be forwarded to DWS.
- The applicant should ensure that the septic tank is approved and is sited in such a way that it does not cause water or other pollution. Mitigation measures must be in place to prevent contamination of local groundwater and surface water.
- The applicant should indicate where the effluent will be discharged after it is drained from the septic tank. The applicant should clearly indicate how the septic tanks will be handled and Authorisation for Section 21(g) of the National Water Act (Act 36 of 1998) should be obtained if required.
- It is important that any spillages of chemicals are reported to DWS and relevant authorities.
- The applicant should ensure that no unacceptable impact on the quality of both surface and groundwater is associated with the proposed project. If pollution of any surface or groundwater occurs, it must be immediately reported to DWS and appropriate mitigation measures must be implemented.
- Ensure that all specialist studies form part of the EIA and must be submitted to DWS before construction commences.
- All relevant sections and regulation of the National Water Act, 1998 (Act 36 of 1998) regarding water use must be adhered to.
- An EMP must be compiled and submitted to MMM.
- Should any fuel be stored underground in future, the following should be undertaken:
 - A geohydrological study must be conducted.
 - Stormwater management plan must be compiled.
 - All other relevant authorities must be consulted.
- An ECO must be appointed

- A waste management plan must be compiled and also provide guidance to ensure that domestic, industrial and hazardous wastes are managed at the proposed site in a way that is protective of health, safety and environmental.
- Material Safety Data Sheets shall be available on site for all chemicals and hazardous substances to be used on site. It should additionally include (where available) information on measures to minimize negative environmental impacts during accidental releases or escapes.
- Site and Employees are to be managed in strict accordance with the OHS Act and National building Regulations. A health and safety representative should be appointed if more than 20 employees are employed.
- Facility must register with the local Fire Fighters Organization and periodically conducts drill in conjunction with the local fire fighter's unit.
- Proposed development must comply with other environmental legislation and requirements that are related to issues such as noise and light pollution, air quality, water use and management, solid waste management and storm water management.
- The provincial tertiary road T4730 will be affected by the proposed project
- The Department will formulate comments subsequent to obtaining a site development plan and information on the expected traffic to determine the impact on the provincial road network



N. DEVENISH Pr. Pln (A/1133/1999)

MANAGER: TOWN PLANNING / ENVIRONMENTAL

17. LIST OF REFERENCES

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APPENDIX A

Maps



Legend:

- Portion 1 of Plot 42, Estoire
- Proposed fuel tanks

Coordinates of proposed site:
 29° 6'41.19"S, 26°16'12.26"E
 29° 6.669'S; 26° 16.227'E

TYPE OF PLAN: LOCALITY PLAN


 Town & Regional Planners,
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PROJECT:
 THE PROPOSED CONSTRUCTION OF A DIESEL DEPOT, PORTION 1 OF PLOT 42, ESTOIRE, BLOEMFONTEIN

PROJECT BY:
 MACK'S PETROLEUM

DRAWN BY:
 HS



- Legend:**
- Portion 1 of Plot 42, Estoire
 - Proposed fuel tanks
 - Proposed road
 - Proposed site boundary

Coordinates of proposed site:
A: 29° 6'39.80"S; 26°16'12.01"E
B: 29° 6'39.25"S; 26°16'14.46"E
C: 29° 6'39.79"S; 26°16'14.61"E
D: 29° 6'40.34"S; 26°16'12.15"E
E: 29° 6'40.36"S; 26°16'12.63"E
F: 29° 6'40.09"S; 26°16'14.07"E
G: 29° 6'40.62"S; 26°16'14.21"E
H: 29° 6'40.90"S; 26°16'12.78"E

TYPE OF PLAN: LOCALITY PLAN

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- Legend:**
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 - Proposed fuel tanks
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C: 29° 6'39.79"S; 26°16'14.61"E
D: 29° 6'40.34"S; 26°16'12.15"E
E: 29° 6'40.36"S; 26°16'12.63"E
F: 29° 6'40.09"S; 26°16'14.07"E
G: 29° 6'40.62"S; 26°16'14.21"E
H: 29° 6'40.90"S; 26°16'12.78"E

TYPE OF PLAN: LOCALITY PLAN

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PROJECT:
 THE PROPOSED CONSTRUCTION OF A DIESEL DEPOT, PORTION 1 OF PLOT 42, ESTOIRE, BLOEMFONTEIN

PROJECT BY:
 MACK'S PETROLEUM

DRAWN BY:
 HS

APPENDIX B

Photographs

Indication of existing activities operational activities on site:



APPENDIX C

Facility Illustration(s)

REMAINDER OF PLOT 42

108212

6500 13250 13250 6500 28510

SITE BOUNDARY 226700

6075

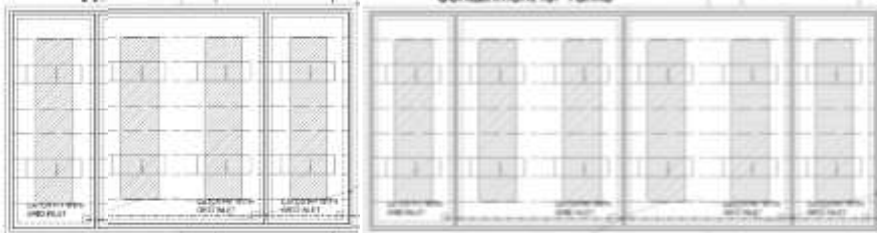
14450

Spill Slab

NEW EXIT:
SELF-CLOSING GATE
(NO-OBSTRUCTION)

5000

Containment for Tanks



FLY IN/OUT SCREENED WITH
WIRED MESH TO APPLIC.

SITE BOUNDARY 94450

PAVED
OUTLET

PAVED
OUTLET

EXIST. ENTRANCE

PAVED
OUTLET

PAVED
OUTLET

PAVED
OUTLET

PLOT 42, 19A SAND DU PLESSIS RD

1360.60

54250

1360.40

Spill Slab

Paving

31985

1360.40

18040

EXISTING WAREHOUSE

EXIST STORE

EXIST CANOPY



PLOT 42

23610

1360.60

SEPTIC TANK TO COMPLY WITH SANS DETAILS

MH 3

MH 2

MH 1

EXISTING SEWER PIPE: 100mm DIA. uPVC WITH MAX. 1:40 FALL
TO SEPTIC TANK

6000 10085

1360.20

APPENDIX D

Public Participation

APPENDIX D₁

List of identified possible interested and affected parties

The proposed construction of a Fuel Depot, Portion 1 of Plot 42, Estoire, Bloemfontein**Table 1: List of identified possible interested and / or affected parties**

| Authorities & Stakeholders | |
|--|--|
| Organization | Contact person and contact detail |
| Free State Department of Economic Development, Tourism and Environmental Affairs | Mrs. Grace Mkhosana Tel: 051 400 4843 Fax: 051 400 4842 Private Bag X20801 Bloemfontein 9300 Mkhosana@detea.fs.gov.za |
| The Municipal Ward Councillor: Ward 47 | Ward Councillor, Ward 47 Clr John Matthews De Bruin 0603461410 johndebruin38@gmail.com Delivered by hand at the DA Offices |
| Mangaung Metro Municipality City Manager | The City Manager P.O. Box 3704 Bloemfontein 9300 |
| Mangaung Metro Municipality: Environmental Division | Me. Mpolokeng Kolobe P.O. Box 3704 Bloemfontein 9300 |
| Mangaung Metro Municipality: Planning Division | Collin Dihemo P.O. Box 3704 Bloemfontein 9300 |
| SAHRA | South African Heritage Resources Agency (SAHRA) Head Office 111 Harrington Street CAPE TOWN 8001 |
| FSHRA | Ntando PZ Mbatha Heritage Coordinator Corner Henry and East Burger Street Department of Sport Arts Culture and Recreation Office 204 Bloemfontein 9301 |
| Department of Police, Roads and Transport | Hannes Maree Room 106, Medfontein Building, 155 St Andrew Street P.O. Box 119, Bloemfontein, 9300 MareeH@freetrans.gov.za |

The proposed construction of a Fuel Depot, Portion 1 of Plot 42, Estoire, Bloemfontein**Table 1: List of identified possible interested and / or affected parties**

| | |
|------------------------------------|---|
| | F. van Heerden Medfontein Building, 155 St Andrew Street P.O. Box 119, Bloemfontein, 9300 fabiaivanheerden@gmail.com 0514098280 |
| Department of Water and Sanitation | Mr Masia Mgwambani The Director: Water Regulation in the Free State Mr. W Grobler Private Bag X528 Bloemfontein 9300 mgwambanim@dwaf.gov.za |
| CAA | Lizell Stroh 011 545 1232 Strohl@caa.co.za |
| Adjacent Landowners | |
| Holdings RE/37, Estoire | Wiehanhn Eiedomme Boland Pty Private Bag x34 Suite 203 Somerset –West 7103 |
| Holdings 1/37, Estoire | Vodacom P.O. Box 100958 Brandhof 9324 |
| Holdings 1/38, Estoire | Mile Investments P.O. Box 28966 Danhof 9310 |
| Holdings 3/41, Estoire | TNT Trust / Dumani Builders 21 Sand du Plessis Estoire Bloemfontein 9323 freestate@domani.co.za |
| Holdings 1/41, Estoire | TNT Trust / Dumani Builders 21 Sand du Plessis Estoire Bloemfontein 9323 freestate@domani.co.za |
| Holdings RE/62, Estoire | Lougat Property Investments |

The proposed construction of a Fuel Depot, Portion 1 of Plot 42, Estoire, Bloemfontein

Table 1: List of identified possible interested and / or affected parties

| | |
|-------------------------|--|
| | P.O. Box 167 Bedfordview 2008 |
| Holdings 61, Estoire | BBT Elec & Plumbing cons P.O. Box 2341 Bloemfontein 9300 |
| Holdings RE/42, Estoire | M & J trust 19 Sand du Plessis Estoire Bloemfontein 9323 |

Map indicating the properties adjacent to Portion 1 of Plot 42, Estoire, Bloemfontein (the proposed development property)



APPENDIX D₂

Proof of notification

Site Notices:



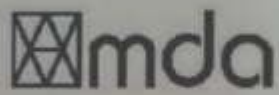
Proof of notification to adjacent landowners:

Proof of postage

 **Initial Notification: 40813**

| Organization | Contact person and contact detail | Proof of postage |
|-------------------------|---|---|
| Holdings RE/37, Estoire | Wiehanhn Eiedomme Boland Pty Private Bag x34 Suite 203 Somerset -West 7103 | ORDINARY PARCEL ShareCall 2802 111 822 www.spsa.co.za PE 905 070 056 ZA CUSTOMER COPY 301016 |
| Holdings 1/37, Estoire | Vodacom P.O. Box 100958 Brandhof 9324 | ORDINARY PARCEL ShareCall 2802 111 822 www.spsa.co.za PE 905 070 039 ZA CUSTOMER COPY 301016 |
| Holdings 1/38, Estoire | Mile Investments P.O. Box 28966 Danhof 9310 | ORDINARY PARCEL ShareCall 2802 111 822 www.spsa.co.za PE 905 070 011 ZA CUSTOMER COPY 301016 |
| Holdings RE/62, Estoire | Lougat Property Investments P.O. Box 167 Bedfordview 2008 | ORDINARY PARCEL ShareCall 2802 111 822 www.spsa.co.za PE 905 069 999 ZA CUSTOMER COPY 301016 |
| Holdings 61, Estoire | BBT Elec & Plumbing cons P.O. Box 2341 Bloemfontein 9300 | ORDINARY PARCEL ShareCall 2802 111 822 www.spsa.co.za PE 905 069 971 ZA CUSTOMER COPY 301016 |
| Holdings RE/42, Estoire | M & J trust 19 Sand du Plessis Estoire Bloemfontein 9323 | ORDINARY PARCEL ShareCall 2802 111 822 www.spsa.co.za PE 905 069 954 ZA CUSTOMER COPY 301016 |

 SA POST OFFICE
 2019 -07- 12
 No 1
 BRANDHOF 9321



Proof of hand delivery

Initial Notification: 40813

| Reason for IAP | Contact person and contact detail | Proof of hand delivery |
|------------------------|---------------------------------------|--|
| Holdings 3/41, Estoire | TNT Trust Estoire Settlement 41 |  15/07/2019 |
| Holdings 1/41, Estoire | TNT Trust Estoire Settlement 41 | |

APPENDIX D₃

List of registered parties

The proposed construction of a Fuel Depot, Portion 1 of Plot 42, Estoire, Bloemfontein

Table 2: List of registered parties

| Authorities & Stakeholders | | |
|---|--|---|
| Organization | Contact person and contact detail | Comments and Response |
| The Municipal Ward Councillor: Ward 47 | Ward Councillor, Ward 47 Clr John Matthews De Bruin 0603461410 johndebruin38@gmail.com Delivered by hand at the DA Offices | Comment: None to date Response: Copies of the Scoping Reports and EIA Reports were forwarded to all registered IAPs. |
| Mangaung Metro Municipality City Manager | The City Manager Mangaung Metro Municipality P.O. Box 3704 Bloemfontein 9300 | Comment: None to date Response: Response: Copies of the Scoping Reports and EIA Reports were forwarded to all registered IAPs. |
| Mangaung Metro Municipality: Environmental Division | Me. Mpolokeng Kolobe Mangaung Metro Municipality P.O. Box 3704 Bloemfontein 9300 | Comment: <ul style="list-style-type: none"> • An EMPr must be compiled and submitted to MMM. • Should any fuel be stored underground in future, the following should be undertaken: <ul style="list-style-type: none"> - A geohydrological study must be conducted. - Stormwater management plan must be compiled. - All other relevant authorities must be consulted. • An ECO must be appointed • A waste management plan must be compiled and also provide guidance to ensure that domestic, industrial and hazardous wastes are managed at the proposed site in a way that is protective of health, safety and environmental. • Material Safety Data Sheets shall be available on site for all chemicals and hazardous substances to be used on site. It should additionally include (where available) information on |

The proposed construction of a Fuel Depot, Portion 1 of Plot 42, Estoire, Bloemfontein

Table 2: List of registered parties

| | | |
|--|--|---|
| | | <p>measures to minimize negative environmental impacts during accidental releases or escapes.</p> <ul style="list-style-type: none"> • Site and Employees are to be managed in strict accordance with the OHS Act and National building Regulations. A health and safety representative should be appointed if more than 20 employees are employed. • Facility must register with the local Fire Fighters Organization and periodically conducts drill in conjunction with the local fire fighter's unit. • Proposed development must comply with other environmental legislation and requirements that are related to issues such as noise and light pollution, air quality, water use and management, solid waste management and storm water management. <p>Response:</p> <ul style="list-style-type: none"> • An EMPr will be attached to the EIA document (current document). • Please note that a geohydrological study will be required in future, should the applicant decide to construct underground fuel tanks in future. • The EMPr will form part of the Environmental Impact Assessment Report. • It is not anticipated that any fuel will be stored underground. However, should any fuel be stored underground in future, the necessary specialists will assess the site. • And ECO and Health and Safety Officer will be appointed by the contractor during the construction phase of the project. • The necessary environmental legislations and requirements regarding issues such as noise, light, |
|--|--|---|

The proposed construction of a Fuel Depot, Portion 1 of Plot 42, Estoire, Bloemfontein

Table 2: List of registered parties

| | | |
|---|--|--|
| | | <p>air and water pollution will be adhered to. Solid Waste – and Storm Water Management will also be undertaken according to Best Practices.</p> <ul style="list-style-type: none"> • The proposed facility will register with the Local Fire Fighters Organization. • Copies of the dScoping & fScoping Report were forwarded to all registered IAPs <p>Copies of the following reports were provided to the Registered IAPs:</p> <ul style="list-style-type: none"> • Draft Scoping • Final Scoping • Draft EIA • Final EIA (current document) |
| Mangaung Metro Municipality: Planning Division | Mr. Collin Dihemo Mangaung Metro Municipality P.O. Box 3704 Bloemfontein 9300 | <p>Comment: None to date</p> <p>Response: Copies of the Scoping Reports and EIA Reports were forwarded to all registered IAPs.</p> |
| FSHRA | Ntando PZ Mbatha Heritage Coordinator Corner Henry and East Burger Street Department of Sport Arts Culture and Recreation Office 204 Bloemfontein 9301 | <p>Comment: None to date</p> <p>Response: Copies of the Scoping Reports and EIA Reports were forwarded to all registered IAPs.</p> |
| SAHRA | South African Heritage Resources Agency (SAHRA) Head Office 111 Harrington Street CAPE TOWN 8001 | <p>Comment:</p> <ul style="list-style-type: none"> • Initially mentioned that, as this is a NEMA application the draft BAR must be submitted to the application before the SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit will issue a final comment on it. • After SAHRA reviewed the Final Scoping Report as well as the Recommendations by the Archaeological Specialist, SAHRA |

The proposed construction of a Fuel Depot, Portion 1 of Plot 42, Estoire, Bloemfontein

Table 2: List of registered parties

| | | |
|--|--|---|
| | | <p>commented that it has no objections against the proposed development subject to the following conditions</p> <ul style="list-style-type: none">- The Draft and Final EIAs must be submitted to SAHRA- Should any objects or archaeological or palaeontological remains be found during construction activities, work must immediately stop in that area and the ECO must be informed.- The ECO must inform SAHRA and contact an archaeologist and / or palaeontologist, depending on the nature of the find, to assess the importance and rescue them if necessary (with the relevant SAHRA permit). No work may resume in the area without the permission from the ECO and SAHRA.- If the newly discovered heritage resource is considered significant, a Phase 2 assessment may be required. A permit from the responsible heritage authority will be required.- A Chance Finds Procedures must be developed for the project to ensure that standard protocols and steps are followed should any heritage and / or fossil resources be uncovered during all phases of the project. These procedures should outline the steps and reporting structure to be followed in the instance that heritage resources are found. This must be included in the Environmental Awareness Plan. <ul style="list-style-type: none">• Should the project be granted EA, SAHRA should be notified and all |
|--|--|---|

The proposed construction of a Fuel Depot, Portion 1 of Plot 42, Estoire, Bloemfontein

Table 2: List of registered parties

| | | |
|---|---|--|
| | | <p>relevant documents be submitted to the case file.</p> <p>Response:</p> <ul style="list-style-type: none"> • A Scoping Report uploaded to the SAHRIS website. • The conditions stipulated by SAHRA will be included in the EMPr. <p>Copies of the following reports were provided to the Registered IAPs:</p> <ul style="list-style-type: none"> • Draft Scoping • Final Scoping • Draft EIA • Final EIA (current document) |
| <p>Department of Water and Sanitation</p> | <p>Mr Masia Mgwambani The Director: Water Regulation in the Free State Mr. W Grobler Private Bag X528 Bloemfontein 9300</p> | <p>Comment:</p> <ul style="list-style-type: none"> • Bund wall of fuel tanks should be within the capacity to be able to contain spillages • All effluent from the wash bay should be disposed of in a properly constructed drain and must be situated as far as possible away from a watercourse • Only domestic wash water may be allowed to enter the drain and any effluent containing oil and grease or other industrial substances must be collected in a suitable receptacle and removed from site. • The name of the Hazardous Waste Company to be used for the removal of hazardous material should be provided to DWS. A written agreement between the applicant and the said company should also be forwarded to DWS. • The applicant should ensure that the septic tank is approved and is sited in such a way that it does not cause water or other pollution. Mitigation measures must be in place to prevent contamination of local groundwater and surface water. • The applicant should indicate where |

The proposed construction of a Fuel Depot, Portion 1 of Plot 42, Estoire, Bloemfontein

Table 2: List of registered parties

| | | |
|--|--|---|
| | | <p>the effluent will be discharged after it is drained from the septic tank. The applicant should clearly indicate how the septic tanks will be handled and Authorisation for Section 21 (g) of the National Water Act (Act 36 of 1998) should be obtained if required.</p> <ul style="list-style-type: none">• It is important that any spillages of chemicals are reported to DWS and relevant authorities.• The applicant should ensure that no unacceptable impact on the quality of both surface and groundwater is associated with the proposed project. If pollution of any surface or groundwater occurs, it must be immediately reported to DWS and appropriate mitigation measures must be implemented.• Ensure that all specialist studies form part of the EIA and must be submitted to DWS before construction commences.• All relevant sections and regulation of the National Water Act, 1998 (Act 36 of 1998) regarding water use must be adhered to. <p>Response:</p> <ul style="list-style-type: none">• The conditions stipulated by DWS are noted.• The applicant is currently in the process of acquiring an agreement with a hazardous waste removal company for the removal of hazardous waste. More information on the above will be provided in the EIA (current document).• Due to faulty flow of municipal sewerage lines, a 23m³ underground septic tank was installed in 2009. The applicant currently makes use from a sewerage removal company to remove sewerage on a monthly basis. |
|--|--|---|

The proposed construction of a Fuel Depot, Portion 1 of Plot 42, Estoire, Bloemfontein

Table 2: List of registered parties

| | | |
|---|---|---|
| | | <p>Copies of the following reports were provided to the Registered IAPs:</p> <ul style="list-style-type: none"> • Draft Scoping • Final Scoping • Draft EIA • Final EIA (current document) |
| <p>Free State Department of Economic Development, Tourism and Environmental Affairs</p> | <p>Mrs. Grace Mkhosana Tel: 051 400 4843 Fax: 051 400 4842 Private Bag X20801 Bloemfontein 9300 Mkhosana@detea.f s.gov.za</p> | <p>Comment: The Scoping Report was accepted by DESTEA.</p> <p>Response: Copies of the following reports were provided to the Registered IAPs:</p> <ul style="list-style-type: none"> • Draft Scoping • Final Scoping • Draft EIA • Final EIA (current document) |
| <p>Department of Police, Roads and Transport</p> | <p>Hannes Maree Room 106, Medfontein Building, 155 St Andrew Street P.O. Box 119, Bloemfontein, 9300 MareeH@freetrans. gov.za</p> <p>F. van Heerden Medfontein Building, 155 St Andrew Street P.O. Box 119, Bloemfontein, 9300 fabivanheerden@ gmail.com 0514098280</p> | <p>Comment:</p> <ul style="list-style-type: none"> • The provincial tertiary road T4730 will be affected by the proposed project • The Department will formulate comments subsequent to obtaining a site development plan and information on the expected traffic to determine the impact on the provincial road network <p>Response:</p> <ul style="list-style-type: none"> • A proposed layout map (attached as Appendix C of the dScoping Report) was forwarded to the said Department • A Traffic Impact Assessment will be undertaken and the findings thereof will be included in the Environmental Impact Assessment Report (the current document). The said report will be forwarded to all registered IAPs. <p>Copies of the following reports were provided to the Registered IAPs:</p> <ul style="list-style-type: none"> • Draft Scoping • Final Scoping • Draft EIA |

The proposed construction of a Fuel Depot, Portion 1 of Plot 42, Estoire, Bloemfontein

Table 2: List of registered parties

| | | |
|------------|---|--|
| <p>CAA</p> | <p>Lizell Stroh 011 545 1232 Strohl@caa.co.za</p> | <ul style="list-style-type: none"> • Final EIA (current document) <p>Comment: After evaluating the site position to the obstacle application form dated 20 May 2020, in principle the SACAA has no objection, the following conditions and restrictions applies:</p> <ul style="list-style-type: none"> • Any exterior lighting is restricted to full cut-off lighting 0° above the horizontal plane. • Non-reflecting painting and Materials should be applied to reduce glare and prevent blinding pilots. <p>Kindly note that approval for the construction of cranes, if used, must be obtained 6 weeks prior to construction from this department. This conditional approval is valid for 5 years from the date of this letter.</p> <p>Response:</p> <ul style="list-style-type: none"> • An application was submitted to CAA. <p>Copies of the following reports were provided to the Registered IAPs:</p> <ul style="list-style-type: none"> • Draft Scoping • Final Scoping • Draft EIA • Final EIA (current document) |
|------------|---|--|

Please note that no adjacent landowners registered as IAPs for the proposed development.

APPENDIX D₄

Comments received

SOUTH AFRICAN

CIVIL AVIATION
AUTHORITY

Physical Address:
Ikhaya Lokundlaba
Treur Cloes
Waterfall Park
Bekker Street
Midrand

Postal Address:
Private Bag X1
Halfway House
1685

Telephone Number:
+27 11 545 1232
Fax Number:
+27 11 545 1451

E-mail Address:
obstacles@saa.co.za
Website Address:
www.saa.co.za

OBSTACLE APPROVAL

CAA Obstacle ID

CAA_2020_5_135

APPLICANT

Applicant Name: MDA
Contact Person: Neil Devenish
Cell Nr: 082770 058
Tel Nr: (051) 447-1583
Email: neil@mdagroup.co.za
VAT Nr: 4110177195
Address: 9 Barnes Street, Westdene, Bloemfontein
City: Bloemfontein
Province: Free State
Postal Code: 9301

OWNER

Owner Name: Mack's Petroleum (PTY) LTD
Contact Person: George Myers
Cell Nr: 0828811310
Tel Nr: 051 933 93
Email: airport@mweb.co.za
Application Date: 2020/05/20 Received Date: 2020/05/26
Application Type: New Shared Replacement
Attachments: GIS/Google File Survey Report
 Plan/Eng Drawing Other

DETAILS OF PROPOSED STRUCTURE

Type of Structure: Tank Construction Start Date: 2020/08/03
Site Name: Above Ground Fuel Tanks - Mack's Petrol Construction End Date:
Site ID: Mack's Petroleum, Estoire
LAT (Degrees): 29 LAT (Minutes): 6 LAT (Seconds): 41.42 Jib/Guywire (m): 0
LONG (Degrees): 26 LONG (Minutes): 16 LONG (Seconds): 12.5 Datum: WGS84
Site Elevation (m): 1366 Notes: Coord Data Source: Chart/Map Derived
Substructure Height (m): 0.4 Other (specify):
Superstructure Height (m): 5.5 Elevation Data Source: Chart/Map Derived
Structure Elevation (m): 1371.9 Other (Specify):

APPROVAL STATUS: CONDITIONALLY APPROVED

Note: 1. Conditional Approval only valid for 5 years from date of signature.
2. Final approval subject to applicant/owner providing 'As-Built' data.

Approval Conditions:

- No Markings
 Day Markings
 Night Markings
 Day/Night Markings
 UPS
 Other/Special

Other/Special Conditions:

Find letter attached.

FOR THE SCAA



SOUTH AFRICAN



Physical Address:
Ikhaya Lokundiza
Treur Close
Waterfall Park
Belcker Street
Midrand

Postal Address:
Private Bag X 73
Halfway House
1685

Telephone Number:
+27 11 545 1000

Fax Number:
+27 11 545 1465

E-mail Address:
mail@caa.co.za

Website Address:
www.caa.co.za

Southern Region Office:
PO Box 174
Cape Town
International Airport
Tel. Number:
+27 21 934 4744
Fax Number:
+27 21 934 1326

MDA

9 Barnes Street
Westdene
Bloemfontein
Free State
9301
CA15/2/Bloemfontein

Enquiries: L Stroh
Tel: 011 545 1232
strohl@caa.co.za

28 September 2020

Ref. CAA_2020_5_135

Attention: Neil Devenish

Conditional Approved: for the proposed ground fuel tanks Mack's Petrol, proposed in Bloemfontein.

After evaluating the site position to the obstacle application form dated 20 May 2020, in principle the SACAA has no objection, the following conditions and restrictions applies:

- Any exterior lighting is restricted to full cut-off lighting 0° above the horizontal plane.
- Non-reflecting painting and Materials should be applied to reduce glare and prevent blinding pilots.

Kindly note that approval for the construction of cranes, if used, must be obtained 6 weeks prior to construction from this department.

This conditional approval is valid for 5 years from the date of this letter.

Note that this SACAA letter of no objection does not substitute or replace other approvals which may be required by the applicant.

Yours truly,

A handwritten signature in black ink, appearing to read "L Stroh".

Lizell Stroh
Obstacle Inspector
PANS-OPS Section
Air Navigation Services Department
Tel: +27 11 545 1232 | Mobile: +27 083 461 6660
Email: Strohl@caa.co.za | www.caa.co.za

Board Members: Mr Ernest Khosa (Chairperson); Mr Mongezi India; Prof Ntombizozuko Dyani-Mhango Mr Suren Sooklal;
Dr Brian Snedding; Ms Balewa Koyana; and Ms Tshitshi Phewa;
DCA: Ms Poppy Khoza; Company Secretary: Ms Nivashnee Naraindath

From: Lizell Stroh [<mailto:Strohl@caa.co.za>]
Sent: 28 September 2020 11:07 AM
To: hanlie@mdagroup.co.za
Cc: neil@mdagroup.co.za; Evelyn Shogole
Subject: FW: 40813: Mack's Petroleum

Good day Hanlie, hope this e-mail finds you well,

No input was received from the SACAA Environmental office as yet,

From an Obstacle operational perspective this office would not have an objection to proposed development.

Kind regards



Lizell Stroh
Obstacle Inspector
PANS-OPS Section
Air Navigation Services Department
Tel: +27 11 545 1232 | Mobile: +27 083 461 6660
Email: Strohl@caa.co.za | www.caa.co.za
Follow us on    



The SACAA moving with the times!

In line with international requirements, the SACAA is implementing a new centralised reporting system, with the aim of collecting, sharing and analysing safety and security information.

This system is in the interest of public transport safety and will be available online, 24 hours a day, 7 days a week, from any device.

Keep watching this space and visit our online resources regularly to see the training schedules and to stay informed.

Join us on our journey towards sustainable aviation

Keeping you safe in the sky

www.caa.co.za @SACAA @OfficialSACAA OfficialSACAA South African Civil Aviation Authority



police, roads & transport

Department of
Police, Roads and Transport
FREE STATE PROVINCE

REF: P29/4/172/P6/1/E42
ENQ: Me. F. van Heerden

MDA
P.O. Box 100982
BRANDHOF
9324

For attention: Mr. N. Devinish

DRAFT SCAPING REPORT FOR THE PROPOSED CONSTRUCTION OF A DIESEL DEPOT ON PORTION 1 OF PLOT 42, ESTOIRE, BLOEMFONTEIN

1. Your letter with reference no. 40813 dated 30 October 2019 refers.
2. The Department perused the above mentioned report and it is identified that provincial road tertiary road T4730 is affected.
3. The Department will only formulate comments subsequent to obtaining a site development plan and information on the expected traffic to determine the impact on the provincial road network
4. Should you have any enquiries pertaining to this matter please do not hesitate to contact the Department's Me. F. van Heerden, (Tel: 0664733113 / 0514098280 and/or email fabivanheerden@gmail.com)

Yours faithfully


DIRECTOR: ROAD ASSET MANAGEMENT SYSTEMS

Date:4/12/2019.....

Directorate Road Asset Management Systems

P.O. Box 119, BLOEMFONTEIN, 9300
Medfontein Building, 1st Floor, 155 St Andrew Street, BLOEMFONTEIN
Tel: 0664733113 Fax: (051) 862757396
E-mail: vanheerdenf@freetrans.gov.za

40813 Mack's Petroleum

Our Ref:



an agency of the
Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za
South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Ragna Redelstorff
Tel: +27 (0)21 202 8651
Email: rredelstorff@sahra.org.za
CaseID: 15015

Date: Thursday July 02, 2020
Page No: 1

Final Comment

In terms of Section 38(8) of the National Heritage Resources Act (Act 25 of 1999)

Attention: Mack's Petroleum

The proposed construction of a diesel depot on Portion 1 of Plot 42, Estoire, Bloemfontein, Free State

The proposed project entails the construction of a diesel depot on Plot 1/42 Estoire, Bloemfontein, Free State Province. The draft Scoping Report and a Letter of Recommendation for Exemption from heritage studies were submitted with the application.

ROSSOUW, L. 2020. EXEMPTION FROM PHASE 1 HERITAGE IMPACT ASSESSMENT: PROPOSED NEW ABOVEGROUND DIESEL DEPOT ON PLOT 1/42 ESTOIRE, BLOEMFONTEIN FREE STATE PROVINCE.

The proposed area is highly degraded by previous commercial and industrial properties. As a result no historically significant building structures older than 60 years of age are present and potential archaeological impact is considered to be non-existent.

The area is underlain by potentially fossil-bearing sediments of the Adelaide Subgroup (Beaufort Group, Karoo Supergroup), which are capped by superficial sediments made up of residual soils of varying depth that are not considered to be palaeontologically significant in this case.

Recommendations:

The author recommends that the proposed development is exempt from a Phase 1 Heritage Impact Assessment based on the degraded nature of the area, overall depth of the superficial deposits, the low topography terrain and the fact that no subsurface development is planned for this project.

The final Scoping Report, as requested in an interim comment on 08/05/2020, was submitted to the case.

Our Ref:



an agency of the
Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za
South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Ragna Redelstorff
Tel: +27 (0)21 202 8651
Email: rredelstorff@sahra.org.za
CaseID: 15015

Date: Thursday July 02, 2020
Page No: 2

Final comment

The SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit has reviewed the Letter of Recommendation for Exemption and based on it has no objections against the proposed development subject to the following conditions that must be adhered to and must be incorporated into the EIA and Environmental Management Programme (EMPr) for implementation:

1. The draft and final EIAs must still be submitted to SAHRA.
2. Should any objects of archaeological or palaeontological remains be found during construction activities, work must immediately stop in that area and the Environmental Control Officer (ECO) must be informed.
3. The ECO must inform the South African Heritage Recourse Agency (SAHRA) and contact an archaeologist and/or palaeontologist, depending on the nature of the find, to assess the importance and rescue them if necessary (with the relevant SAHRA permit). No work may be resumed in this area without the permission from the ECO and SAHRA.
4. If the newly discovered heritage resource is considered significant a Phase 2 assessment may be required. A permit from the responsible heritage authority will be needed.
5. A Chance Finds Procedures must be developed for the project to ensure that standard protocols and steps are followed should any heritage and/or fossil resources be uncovered during all phases of the project. These procedures should outline the steps and reporting structure to be followed in the instance that heritage resources are found. This must be included in the Environmental Awareness Plan.
6. Should the project be granted Environmental Authorisation, SAHRA must be notified and all relevant documents submitted to the case file.

Should you have any further queries, please contact the designated official using the case number quoted above in the case header.

Yours faithfully

40813 Mack's Petroleum

Our Ref:



an agency of the
Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za
South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Ragna Redelstorff
Tel: +27 (0)21 202 8651
Email: rredelstorff@sahra.org.za
CaseID: 15015

Date: Thursday July 02, 2020
Page No: 3

Ragna Redelstorff
Heritage Officer
South African Heritage Resources Agency

ADMIN:

Direct URL to case: <http://www.sahra.org.za/node/535715>
(DESTE, Ref:)

Terms & Conditions:

1. This approval does not exonerate the applicant from obtaining local authority approval or any other necessary approval for proposed work.
2. If any heritage resources, including graves or human remains, are encountered they must be reported to SAHRA immediately.
3. SAHRA reserves the right to request additional information as required.



water & sanitation

Department
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

Enquiries: D Ramuhovhi
Telephone: 051 405 9000
Reference: 16/2/7/C522/D1

MDA
P O Box 100982
BRANDHOF
9324

Dear Sir/Madam

DRAFT BASIC SCOPING REPORT FOR THE PROPOSED CONSTRUCTION OF A DIESEL DEPOT ON PORTION 1 OF PLOT 42, ESTOIRE IN BLOEMFONTEIN

APPLICANT: Mack's Petroleum (PTY) LTD
MDA REF No: 40813

The Department of Water and Sanitation has assessed the submitted Draft Scoping Report for the proposed Construction of a Diesel Depot on Portion 1 of Plot 42, Estoire in Bloemfontein. The project is to construct fuel tanks for the storage of fuel facilities including a wash bay.

- The applicant should ensure that the bund wall of the diesel tank that will be constructed should be within the capacity to be able to contain spillages.
- All effluent water from the wash bay should be disposed of in a properly constructed drain and must be situated as far as possible away from a watercourse.
- Only domestic wash water should be allowed to enter this drain and any effluent containing oil and grease or other industrial substances must be collected in a suitable receptacle and removed from site.
- Page 11 indicates that all the hazardous material will be removed from site by Hazardous Waste Company. The applicant should provide the name of the company that will handle the hazardous waste and also a written agreement between the applicant and the hazardous waste company should be submitted to this Department.
- The report indicates that septic tank will be used for sewage disposal. The applicant should ensure that the septic tanks is approved and is sited in such a way that it does not cause water or other pollution. Mitigation measures must be in place to prevent contamination of local groundwater and surface water.
- The applicant should indicate where the effluent will be discharged after it is drained from the septic tank. However; the applicant should clearly indicate how the septic tanks will be handled and authorization for Section 21 (g) of National Water Act (Act 36 of 1998) should be obtained if required.
- It is important that any spillages of chemicals during the operations are reported to this office and relevant authority.



NATIONAL DEVELOPMENT PLAN
Our Future - make it work

- The applicant should always ensure that there is no unacceptable impact on the quality of both surface and groundwater in the area. If pollution of any surface or groundwater occurs, it must be immediately reported to this Department and appropriate mitigation measures must be implemented.
- Ensures that all specialist studies form part of the Environmental Impact Assessment (Scoping Report) and must be submitted to this Department before the construction commences.
- All relevant sections and regulation of the National Water Act, 1998 (Act 36 of 1998) regarding water use must be adhered to.

For further enquiries, please do not hesitate to contact D Ramuhovhi at telephone 051 405 9000 or on e-mail: ramuhovhid@dws.gov.za

Yours sincerely,

Dr T Ntuli
PROVINCIAL HEAD: FREE STATE
DATE:




Our Ref: EIA/02/2020

Your Ref: Diesel depot portion 1 of plot 42 Estoire

Enquiries: M. Ramongalo

Date: 21 February 2020

MDA Consultants
P.O Box 100982
Brandhof
9324
Email: admin@mdagroup.co.za

FINAL SCOPING FOR THE PROPOSED CONSTRUCTION OF A DIESEL DEPOT ON PORTION 1 OF THE FARM ESTOIRE, BLOEMFONTEIN.

Reference is made to your report received by this office regarding the above-mentioned application. This office reviewed the report and does not have any objections to the proposed development on portion 1 of the Farm Estoire, on conditions that;

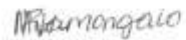
1. A detailed and complete EMPr must be compiled and be submitted with the report. This EMPr must aim to fulfil the requirements in terms of National Environmental Management Act number 107 of 1998 and the Environmental Impact Assessment Regulations 2014 as amended with the following objectives amongst others; it should provide recommendations, indicate actual remediation activities which will be binding on the applicant and to ensure that the operational phases of the project continue within the principles of Integrated Environmental Management System (EMS) ISO 14001 Principles.
2. The following must be conducted, geohydrological study, the storm water management plan and all other relevant authorities must be consulted should any fuel be stored underground in the future.
3. The Environmental Control Officer (ECO) must be appointed. She or he must keep and maintain a detailed incidents report (including spillage or any other materials) and complaint register regarding the issues of contaminated soil on site indicating how these issues were addressed, what rehabilitation measures were taken and what preventative measures were implemented to avoid re-occurrence of incidents/ complaints.
4. Waste management plan must be compiled to facilitate compliance with the condition of NEMA waste Act number 59 of 2008 and also to provide guidance to ensure that domestic, industrial and hazardous wastes are managed at the proposed site in a way that is protective of health, safety and the environmental.
5. Material Safety Data Sheet (MSDS) shall be readily available on site for all chemicals and hazardous substance to be used on site. Where possible and available MSDS should additionally include information on measure to minimize negative environmental impacts during accidental releases or escapes.
6. The site and the crew are to be managed in strict accordance with the Occupational Health and Safety Act 1993 (Act No 85 of 1993) and the National Building Regulations. The act requires the designation of a health and safety representative when more than 20 employees are employed.
7. The proposed facility must register with the local Fire Fighters Organization and periodically conducts drill in conjunction with the local fire fighter's unit.

PO Box 3704, Bloemfontein 9300, Room 1017, 10th floor, Bram Fischer Building, Cnr Nelson Mandela & Markgraaff Street
Tel: +27 51 405 8577; E-Mail: Mpolokeng.ramongalo@mangaung.co.za, Website: www.manguang.co.za

8. The proposed development must comply with other environmental legislation and requirements that are related to issues such as noise and light pollution, air quality, water use and management, solid waste management and storm water management

Should more information be required, please contact this office?

Kind Regards



Ms. M. Ramongalo

Manager: Environmental Assessment

DESTEA

ACCEPTANCE OF SCOPING REPORT FOR THE PROPOSED CONSTRUCTION OF A DIESEL DEPOT WITH ANCILLARY AMENITIES ON PORTION 1 OF PLOT 42, ESTOIRE, BLOEMFONTEIN, FREE STATE PROVINCE.



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

Reference: EMS/27, 4/20/02
NEAS ref: FSP/EIA/0000324/2020
Enquiries: Ms. Boipelo Mogorosi
113 St. Andrews Building, Bloemfontein
Tel: (051) - 400 4815
E-mail: mogorosib@destea.gov.za

To: Neil Devenish
Environmental Assessment Practitioner (EAP)

MDA
P.O. Box 100982
Brandhof
9324

Tel: 051 447 1583
Email: neil@mdagroup.co.za

Dear Neil,

ACCEPTANCE OF SCOPING REPORT FOR THE PROPOSED CONSTRUCTION OF A DIESEL DEPOT WITH ANCILLARY AMENITIES ON PORTION 1 OF PLOT 42, ESTOIRE, BLOEMFONTEIN, FREE STATE PROVINCE.

The Department of Economic, Small Business Development, Tourism and Environmental Affairs (DESTEA) - 'the Department' hereby accept the scoping report without conditions and advise the applicant to proceed or continue with the tasks contemplated in the plan of study for environmental impact assessment as per regulation 22.

The applicant must within 106 days of the acceptance of the scoping report submit to the competent authority an environmental impact report as per regulation 23 (1) (a) or (b).

Please also note that the activity applied for may not commence prior to an Environmental Authorisation being granted by the CA.

Regards,

Ms. B. Mogorosi
Environmental Officer Production Grade A: EIM

Date: 16/9/2020

Sub-Directorate:
113 Saint Andrew Street
Bloemfontein
9300

Environmental Impact Management
Tel +27 (0)51 400 4812
E-mail: mkhosana@destea.gov.za

www.destea.fs.gov.za

Any further comments received will be forwarded to DESTEA.

APPENDIX D₅

Response to comments received

a) SAHRA

Comments:

- Initially mentioned that, as this is a NEMA application the draft BAR must be submitted to the application before the SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit will issue a final comment on it.
- After SAHRA reviewed the Final Scoping Report as well as the Recommendations by the Archaeological Specialist, SAHRA commented that it has no objections against the proposed development subject to the following conditions
 - The Draft and Final EIAs must be submitted to SAHRA
 - Should any objects or archaeological or palaeontological remains be found during construction activities, work must immediately stop in that area and the ECO must be informed.
 - The ECO must inform SAHRA and contact an archaeologist and / or palaeontologist, depending on the nature of the find, to assess the importance and rescue them if necessary (with the relevant SAHRA permit). No work may resume in the area without the permission from the ECO and SAHRA.
 - If the newly discovered heritage resource is considered significant, a Phase 2 assessment may be required. A permit from the responsible heritage authority will be required.
 - A Chance Finds Procedures must be developed for the project to ensure that standard protocols and steps are followed should any heritage and / or fossil resources be uncovered during all phases of the project. These procedures should outline the steps and reporting structure to be followed in the instance that heritage resources are found. This must be included in the Environmental Awareness Plan.
 - Should the project be granted EA, SAHRA should be notified and all relevant documents be submitted to the case file.

Response:

- The Scoping Reports and EIA Reports were uploaded to the SAHRIS website.
- The conditions stipulated by SAHRA will be included in the EMPr.

b) DWS

Comments:

- Bund wall of fuel tanks should be within the capacity to be able to contain spillages
- All effluent from the wash bay should be disposed of in a properly constructed drain and must be situated as far as possible away from a watercourse
- Only domestic wash water may be allowed to enter the drain and any effluent containing oil and grease or other industrial substances must be collected in a suitable receptacle and removed from site.
- The name of the Hazardous Waste Company to be used for the removal of hazardous material should be provided to DWS. A written agreement between the applicant and the said company should also be forwarded to DWS.
- The applicant should ensure that the septic tank is approved and is sited in such a way that it does not cause water or other pollution. Mitigation measures must be in place to prevent contamination of local groundwater and surface water.
- The applicant should indicate where the effluent will be discharged after it is drained from the septic tank. The applicant should clearly indicate how the septic tanks will be handled and Authorisation for Section 21 (g) of the National Water Act (Act 36 of 1998) should be obtained if required.
- It is important that any spillages of chemicals are reported to DWS and relevant authorities.
- The applicant should ensure that no unacceptable impact on the quality of both surface and groundwater is associated with the proposed project. If pollution of any surface or groundwater occurs, it must be immediately reported to DWS and appropriate mitigation measures must be implemented.
- Ensure that all specialist studies form part of the EIA and must be submitted to DWS before construction commences.
- All relevant sections and regulation of the National Water Act, 1998 (Act 36 of 1998) regarding water use must be adhered to.

Response:

- The conditions stipulated by DWS are noted.
- The applicant is currently in the process of acquiring an agreement with a hazardous waste removal company for the removal of

hazardous waste. More information on the above will be provided in the EIA (current document).

- Due to faulty flow of municipal sewerage lines, a 23m³ underground septic tank was installed in 2009. The applicant currently makes use from a sewerage removal company to remove sewerage on a monthly basis.
- The Scoping Reports and EIA Reports were provided to all registered IAPs.

c) CAA

Comments:

- Initially commented that an application should be forwarded to CAA.
 - After CAA reviewed the application, the following comments were received:
 - After evaluating the site position to the obstacle application form dated 20 May 2020, in principle the SACAA has no objection, the following conditions and restrictions applies:
 - Any exterior lighting is restricted to full cut-off lighting 0° above the horizontal plane.
 - Non-reflecting painting and Materials should be applied to reduce glare and prevent blinding pilots.
 - Kindly note that approval for the construction of cranes, if used, must be obtained 6 weeks prior to construction from this department.
 - This conditional approval is valid for 5 years from the date of this letter.

Response:

- An application was submitted to CAA.
- The Scoping Reports and EIA Reports were provided to all registered IAPs.

d) Margaung Metropolitan Municipality

Comments:

- An EMPr must be compiled and submitted to MMM.
- Should any fuel be stored underground in future, the following should be undertaken:
 - A geohydrological study must be conducted.
 - Stormwater management plan must be compiled.
 - All other relevant authorities must be consulted.
- An ECO must be appointed
- A waste management plan must be compiled and also provide guidance to ensure that domestic, industrial and hazardous wastes are managed at the proposed site in a way that is protective of health, safety and environmental.
- Material Safety Data Sheets shall be available on site for all chemicals and hazardous substances to be used on site. It should additionally include (where available) information on measures to minimize negative environmental impacts during accidental releases or escapes.
- Site and Employees are to be managed in strict accordance with the OHS Act and National building Regulations. A health and safety representative should be appointed if more than 20 employees are employed.
- Facility must register with the local Fire Fighters Organization and periodically conducts drill in conjunction with the local fire fighter's unit.
- Proposed development must comply with other environmental legislation and requirements that are related to issues such as noise and light pollution, air quality, water use and management, solid waste management and storm water management.

Response:

- An EMPr will be attached to the EIA document (current document).
- Please note that a geohydrological study will be required in future, should the applicant decide to construct underground fuel tanks in future.
- The EMPr will form part of the Environmental Impact Assessment Report.
- It is not anticipated that any fuel will be stored underground. However, should any fuel be stored underground in future, the necessary specialists will assess the site.

- And ECO and Health and Safety Officer will be appointed by the contractor during the construction phase of the project.
- The necessary environmental legislations and requirements regarding issues such as noise, light, air and water pollution will be adhered to. Solid Waste – and Storm Water Management will also be undertaken according to Best Practices.
- The proposed facility will register with the Local Fire Fighters Organization.
- The Scoping Reports and EIA Reports were provided to all registered IAPs.

e) Department of Police, Roads and Transport

Comments:

- The provincial tertiary road T4730 will be affected by the proposed project
- The Department will formulate comments subsequent to obtaining a site development plan and information on the expected traffic to determine the impact on the provincial road network

Response:

- A proposed layout map (attached as Appendix C of the dScoping Report) was forwarded to the said Department
- A Traffic Impact Assessment will be undertaken and the findings thereof will be included in the Environmental Impact Assessment Report (the current document). The said report will be forwarded to all registered IAPs.
- The Scoping Reports and EIA Reports were provided to all registered IAPs.

APPENDIX D₆

Proof of submission of the Draft Scoping Report to Registered Parties



The proposed construction of a diesel depot on Portion 1 of Plot 42, Estoire, Bloemfontein
dScoping: 40813

| Organization | Contact person and contact detail | Proof of postage / delivery |
|---|---|---|
| DESTEA | DESTEA Private Bag X20801 Bloemfontein 9300 | D. MASOEN 31/10/2019 RECEIVED 31-10-2019 |
| The Municipal Ward Councillor: Ward 47 | Ward Councillor, Ward 47 Clr John Matthews De Bruin 0603461410 | Environment and Management Directorate |
| Mangaung Metro Municipality: Environmental Division | Me. Mpolokeng Kolobe MMM P.O. Box 3704 Bloemfontein 9300 | T.G. Debus 31/10/2019 |
| Mangaung Metro Municipality: Planning Division | Collin Dihemo MMM P.O. Box 3704 Bloemfontein 9300 | T.G. Debus 31/10/2019 |
| FSHRA | Ntando PZ Mbatha FSHRA Office 204 Bloemfontein 9301 | N.G. MATSIDISO 31/10/2019 |
| Department of Police, Roads and Transport | Hannes Maree Department of Police, Roads and Transport P.O. Box 119 Bloemfontein 9300 | S.A POST OFFICE 31/10/2019 2019 -10- 31 |
| Department of Water and Sanitation | Mr Masia Mgwambani The Director: Water Regulation in the Free State Mr. W Grobler Private Bag X528 Bloemfontein 9300 | 051-405 9090 |
| Mangaung Metro Municipality City Manager | The City Manager Mangaung Metro Municipality P.O. Box 3704 Bloemfontein 9300 | ORDINARY PARCEL PE 905 069 923 Z.A CUSTOMER COPY 301016 |

A copy of the Draft Scoping Report was made available to SAHRIS via their online system.

From: Hanlie Stander <hanlie.stander@mda.ca>
To: Leaf Davis
Cc:
Subject: K0113-1401 - Petition

Message: [Appendix A EAF Description.pdf \(215 KB\)](#) [Appendix B AAR Report.pdf \(94 KB\)](#) [Appendix C Map.pdf \(24 KB\)](#) [Appendix D Prologue.pdf \(17 KB\)](#)
[Appendix C Family Participation.pdf \(16 KB\)](#) [Appendix D Public Participation.pdf \(20 KB\)](#) [Appendix E Profile Map.pdf \(101 KB\)](#) [Appendix F Proof of Notification.pdf \(6 KB\)](#)
[Appendix G List of Registered Parties.pdf \(334 KB\)](#) [Appendix H Comments Received.pdf \(1 MB\)](#) [Appendix I Responses to Comments Received.pdf \(10 KB\)](#) [Appendix M Proof of Submission of Scoping.pdf \(11 KB\)](#)

Leaf,

Please see a copy of the Draft Scoping Report regarding the above mentioned project as the following link, as discussed:

<https://www.dtopba.com/ah/balegg3u5e1bdf/AADA/h/cyLONM3yf/p1qg85a9d-0>

Kind regards,

Hanlie Stander
Environmental Assessment Practitioner for MDA

 **mda** Town & Regional Planners,
Environmental & Development
Consultants

9 Barnes Street | Westdene | Bloemfontein | 9301
P.O. Box 100982 | Braamhof | 9324
Tel: 051 447 1883 | Fax: 051 448 9839

APPENDIX D₇

Proof of submission of the Final Scoping Report to Registered Parties



The proposed construction of a diesel depot on Portion 1 of Plot 42, Estoire, Bloemfontein

fScoping: 40813

| | | |
|---|---|--|
| DESTEA | DESTEA Private Bag X20801 Bloemfontein 9300 | LISEBO MASOENA <i>[Signature]</i> 28/01/2020 |
| The Municipal Ward Councillor: Ward 47 | Ward Councillor, Ward 47 Clr John Matthews De Bruin 0603461410 | Mokgadi Kyanakga 083 286 9194 <i>[Signature]</i> 29/01/2020 |
| Mangaung Metro Municipality: Environmental Division | Me. Mpolokeng Kalobe MMM P.O. Box 3704 Bloemfontein 9300 | Mpolokeng Ramangala <i>[Signature]</i> 29/01/2020 |
| Mangaung Metro Municipality: Planning Division | Collin Dihemo MMM P.O. Box 3704 Bloemfontein 9300 | Tshdofelo Wildbees <i>[Signature]</i> 29/01/2020 |
| FSHRA | Ntando PZ Mbatha FSHRA Office 204 Bloemfontein 9301 | <i>[Signature]</i> 29/01/2020 |
| Department of Police, Roads and Transport | Hannes Maree Department of Police, Roads and Transport P.O. Box 119 Bloemfontein 9300 | ORDINARY PARCEL Service 080 711 552 www.mpa.co.za PX 935 766 185 ZA CUSTOMER COPY 30106 |
| Department of Water and Sanitation | Mr Masia Mgwambani The Director: Water Regulation in the Free State Mr. W Grobler Private Bag X528 Bloemfontein 9300 | TEBOTHU(MESSENGER) DNS <i>[Signature]</i> 28/01/2020 |
| Mangaung Metro Municipality City Manager | The City Manager Mangaung Metro Municipality P.O. Box 3704 Bloemfontein 9300 | ORDINARY PARCEL Service 080 711 552 www.mpa.co.za PX 935 766 208 ZA CUSTOMER COPY 30106 |

A copy of the FScoping Report was made available to SAHRIS via their online system.

APPENDIX D₈

Proof of submission of the Draft EIA to Registered Parties

40813: Draft EIA: The proposed construction of a Diesel Depot, Portion 1 of Plot 42, Estoire, Bloemfontein

| Organization | Contact person and contact detail | Proof of Delivery |
|---|--|--|
| The Municipal Ward Councillor: Ward 47 | Ward Councillor, Ward 47 Clr John Matthews De Bruin 0603461410 johndebruin38@gmail.com Delivered by hand at the DA Offices | Received by: <u>Setri</u> Date: <u>6/11/2020</u> |
| Mangaung Metro Municipality City Manager | The City Manager P.O. Box 3704 Bloemfontein 9300 | Received by: <u>Piso/Magashub</u> Date: <u>06/11/2020</u> |
| Mangaung Metro Municipality: Environmental Division | Me. Mpolokeng Kolobe P.O. Box 3704 Bloemfontein 9300 | Received by: <u>[Signature]</u> Date: <u>6/11/2020</u> |
| Mangaung Metro Municipality: Planning Division | Collin Dihemo P.O. Box 3704 Bloemfontein 9300 | Received by: <u>[Signature]</u> Date: <u>6/11/2020</u> |
| SAHRA | South African Heritage Resources Agency (SAHRA) Head Office | Online submission on: <u>6 Nov 2020</u> |
| FSHRA | Ntando PZ Mbatha Heritage Coordinator Corner Henry and East Burger Street | Received by: <u>NPZ Mbatha</u> Date: <u>05/11/2020</u> |
| Department of Police, Roads and Transport | Hannes Maree Room 106, Medfontein Building, 155 St Andrew Street P.O. Box 119, Bloemfontein, 9300 MareeH@freetrans.gov.za | Received by: <u>Mokhebe OE</u> Date: <u>05/11/2020</u> |
| Department of Water and Sanitation | Mr. W Grobler Private Bag X528 Bloemfontein 9300 | Received by: <u>Rose</u> Date: <u>5/11/2020</u> |



Town & Regional Planners,
Environmental & Development
Consultants

Makecha Development Associates trading as MDA, CC 1995/030752/23

PO Box 100982 Brandhof 9324
Tel: 051 447 1583
Fax: 051 448 9838
e-mail: admin@mdagroup.co.za
9 Barnes Street, Westdene
BLOEMFONTEIN

Proj. Ref: 40813

Contact Person: Hanlie Stander

Date: 4 November 2020

ATTENTION: REGISTERED INTERESTED AND / OR AFFECTED PARTY
THE PROPOSED CONSTRUCTION OF A DIESEL DEPOT ON PORTION 1 OF PLOT 42,
ESTOIRE, BLOEMFONTEIN

Notice is given in terms of Regulation 41(2)(a) of the Environmental Impact Assessment Regulations of 2014, No. 326 published in Government Notice No. 40772 (as amended 2017) under the National Environmental Management Act, 1998 (Act No. 107 of 1998) that an application for environmental authorization was submitted to DESTEA for the above mentioned project.

The proponent is Mack's Petroleum (PTY) LTD.

Find attached hereto a CD containing a copy of the Draft EIA, for your perusal.

Kindly submit your name, contact information and interest / comments regarding the environmental impact of the proposed project to Hanlie Stander at MDA (P.O. Box 100982, Brandhof, Bloemfontein, 9324 / Tel: 051 447 1583 / Fax: 051 448 9839/ e-mail: hanlie@mdagroup.co.za) within 30 days of this notice.

We trust that you will find the above in order.

Please do not hesitate to contact us should you require additional information on the said project.

Kind regards,
MDA

NEIL DEVENISH Pr. Pin A/1133/1999
Manager: Town Planning/Environmental



JISEBO MASOERIN
[Signature]

Managing Member:
N. Devenish, Pr. Pin (A/1133/1999), B.A., M.TR.P. (UFS)

Assisted by:
H.F. Prinsloo, Pr. Pin (A/765/1994), B.Sc., M.TR.P. (UFS)
A.C. Rohrbeck, Pr. Pin (A/153/2009), B.Soc.Sc., M.TR.P. (UFS)
H. Stander, B.Sc. Zoology, B.Sc. Hons. Zoology, M.Sc. Zoology (UFS)
L. Dreyer, B.Sc. TR.P. (NWU), MLEM (UFS)

A copy of the Draft EIA Report was made available to SAHRIS via their online system.

RE: 4883: Mack's Petroleum - Message (HTML)

From: Lisa Stroh <lstroh@caa.ca>
 To: Harlie Stander
 Cc:
 Subject: RE: 4883: Mack's Petroleum

Hi Harlie please submit, there are environmental regulations on the CAA website if you would like to take note of it.

From: Harlie Stander <hstander@mda.ca>
 Sent: Tuesday, 05 January 2020 16:18
 To: Lisa Stroh <lstroh@caa.ca>
 Subject: 4883: Mack's Petroleum

Hi Lisa,


With reference to our telephonic conversation earlier today, the following:

- CAA has no comments on the Draft EA document.
- MDA may continue with the submission of the Final EA document.

We trust that you will find the above in order.

Please do not hesitate to contact us should you require additional information on the said project.


Kind regards,
 Harlie Stander
 Environmental Assessment Practitioner for MDA

 Town & Regional Planners,
 Environmental & Development
 Consultants
 9 Barnes Street | Westdene | Bloemfontein | 9301
 P.O. Box 100982 | Braamhof | 9324
 Tel: 051 447 1583 | Fax: 051 448 9839

From: Lisa Stroh <lstroh@caa.ca>
 Sent: 08 December 2019 09:26 AM
 To: Evelyn Stegale
 Cc: Harlie Stander@mda.ca
 Subject: FW: 4883: Mack's Petroleum

Good day Evelyn, not sure if you would require to give your Environmental input on this project please.

Kind regards



Lisa Stroh
 Director in Charge
 PANS OPS Section
 Air Navigation Services Department
 Tel: +27 11 545 1232 (Mobile: +27 81 491 8889)
 Email: lstroh@caa.co.za www.caa.co.za
 Fax: 051 447 1583

The SACAA moving with the times!

In the 21st century, the SACAA is implementing a new automated tracking system, with the aim of lowering, streamlining and ensuring safety and security information.

This system is in the interest of public transport safety and will be available online 24 hours a day, 7 days a week, from any device.

Stay watching the latest and visit our website whenever requiring to see the training materials and to stay informed.


www.sacaa.co.za @SACAA @SACAA #SACAA South African Civil Aviation Authority - SACAA

From: Harlie Stander <hstander@mda.ca>
 Sent: Friday, 04 December 2020 15:41
 To: Lisa Stroh <lstroh@caa.ca>
 Subject: 4883: Mack's Petroleum

Hi Lisa,

People see the following link:
<https://sahvs.sahya.org.za/files/default/files/additionaldocs/Craft%20EA.pdf>

Kind regards,
 Harlie Stander
 Environmental Assessment Practitioner for MDA

 Town & Regional Planners,
 Environmental & Development
 Consultants
 9 Barnes Street | Westdene | Bloemfontein | 9301
 P.O. Box 100982 | Braamhof | 9324
 Tel: 051 447 1583 | Fax: 051 448 9839

APPENDIX E

Comments on Heritage Sensitivity

Exemption from Phase 1 Heritage Impact Assessment: Proposed new aboveground Diesel Depot on Plot 1/42 Estoire, Bloemfontein Free State Province.

Report prepared by
Paleo Field Services, PO Box 38806, Langenhovenpark, 9330

Site: Plot 1/42 Estoire, Bloemfontein

District: Bloemfontein

Map Ref.: 2926AB Maselspoort

Proposed development calls for an aboveground diesel depot on Plot 1/42, Estoire in Bloemfontein (**Fig. 1 & 2; Table 1**).

The site is located in Sand du Plessis Avenue (**Fig. 3**). The Estoire residential smallholdings have been established more than sixty years ago, but many of the original residential structures have been replaced by commercial and industrial properties (**Fig. 4**). The affected area covers 2ha of degraded land, containing several modern commercial building structures (**Fig. 5**). No historically significant building structure older than 60 years of age is present at the site. Existing roads already provide access to the site.

The proposed development will take place on land formerly altered by modern industrial / commercial activities. Potential archaeological impact at each of the proposed site is considered to be non-existent.

Underlying geology at the site consists of potentially fossil-bearing Karoo Supergroup strata (Beaufort Group, Adelaide Subgroup, *K3l*) (**Fig. 6**). Superficial sediments are made up of residual soils of varying depth that are not considered to be palaeontologically significant in this case. The likelihood of palaeontological impact on bedrock sediments underneath the degraded overburden is considered to be extremely low given latter's overall depth, the low topography terrain and the fact that no subsurface development is planned for this project.

It is recommended that the proposed development is exempt from a Phase 1 Heritage Impact Assessment.

References

Johnson *et al.* 2006. Sedimentary rocks of the Karoo Supergroup. In: M.R. Johnson, *et al.* (eds). The Geology of South Africa. Geological Society of South Africa, pp. 461 – 499.

Table 1. Site coordinates.

| | Coordinates | |
|---|--------------------|---------------|
| A | 29° 6'40.13"S | 26°16'7.53"E |
| B | 29° 6'38.50"S | 26°16'15.62"E |
| C | 29° 6'41.49"S | 26°16'16.45"E |
| D | 29° 6'43.18"S | 26°16'8.34"E |

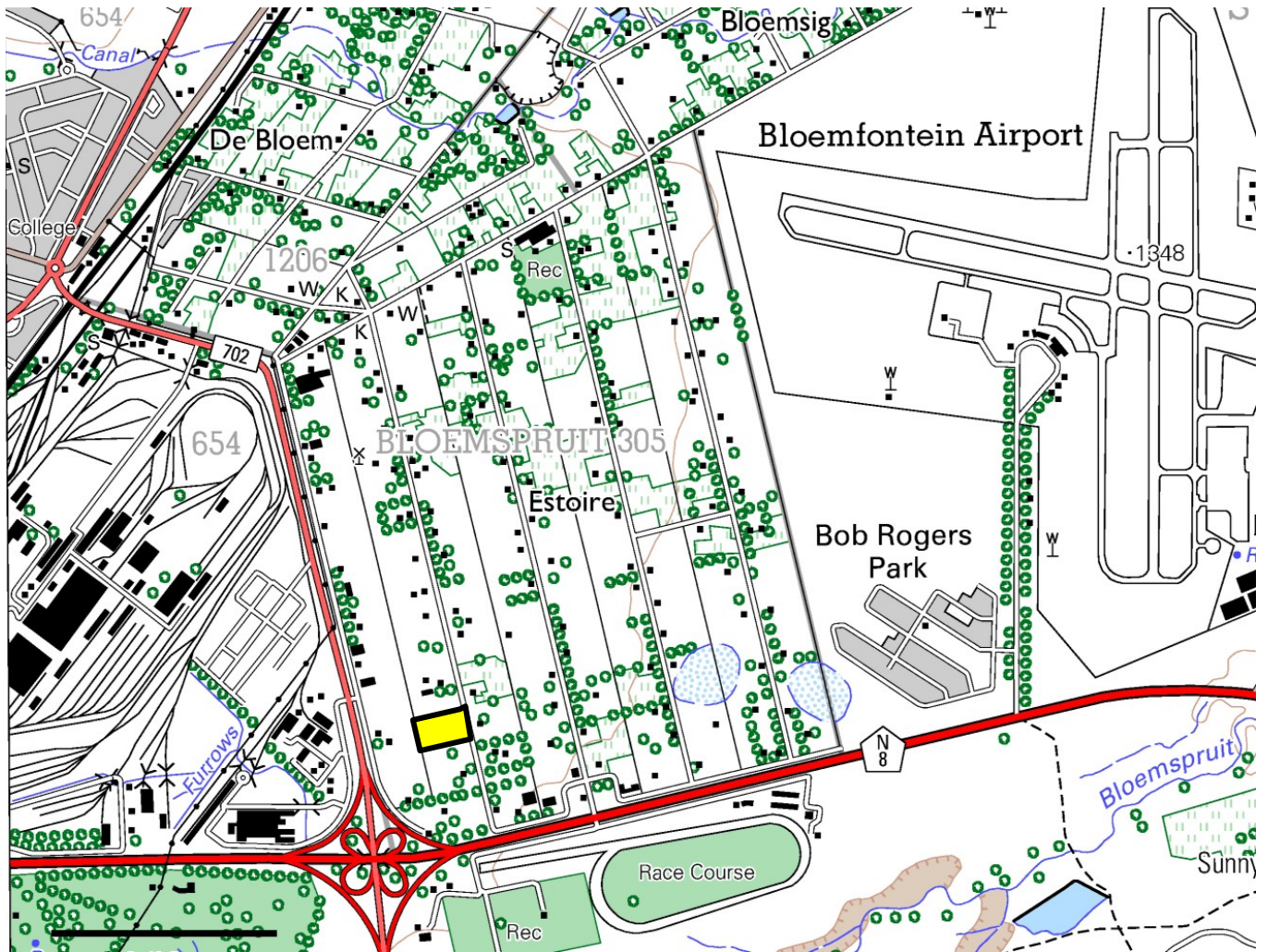


Figure 1. Map of the study area (yellow rectangle) marked on portion of 1:50 000 scale topographic map 2926AB Maselspoort).



Figure 2. Aerial view of the locality.



Figure 3. Aerial view and layout of the study area.

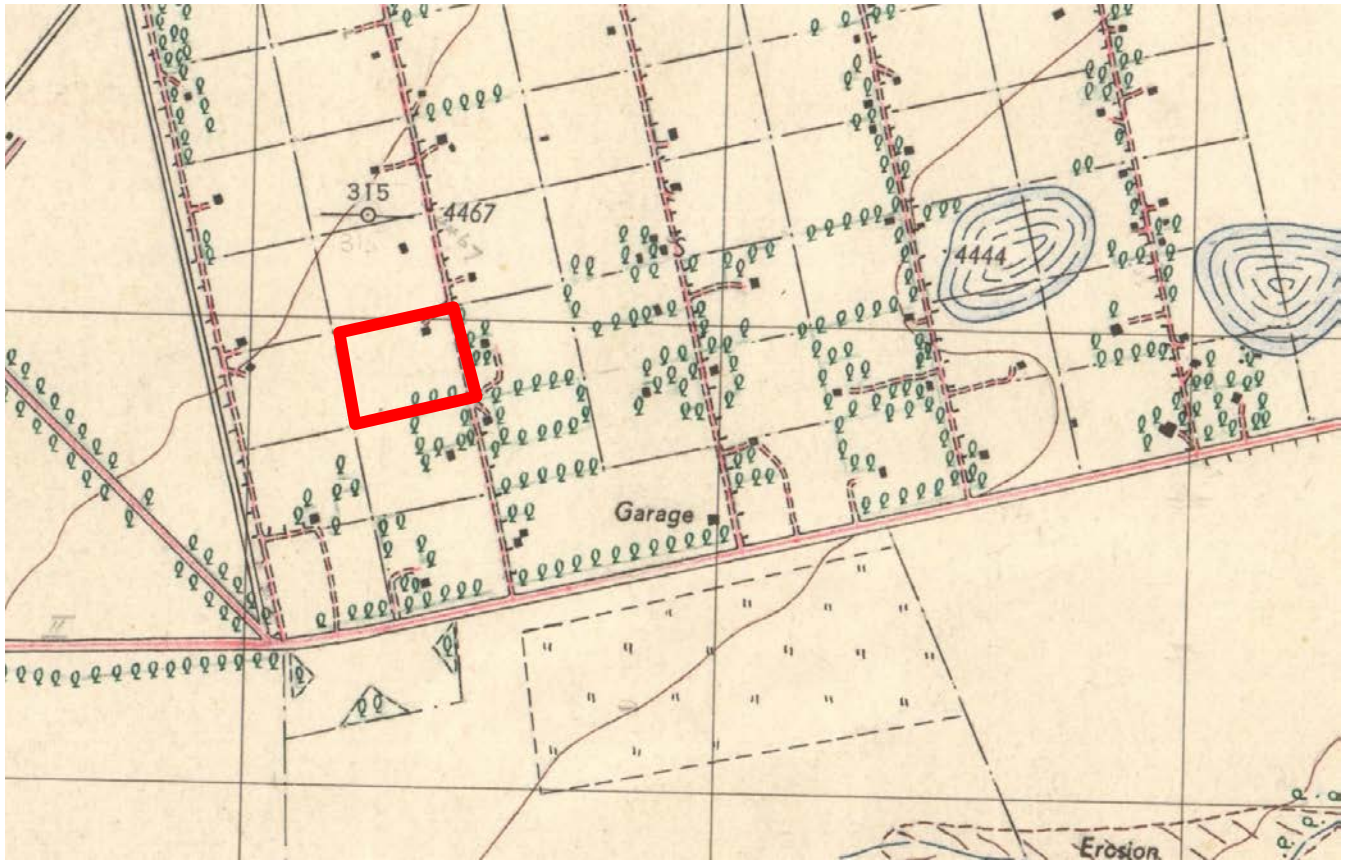
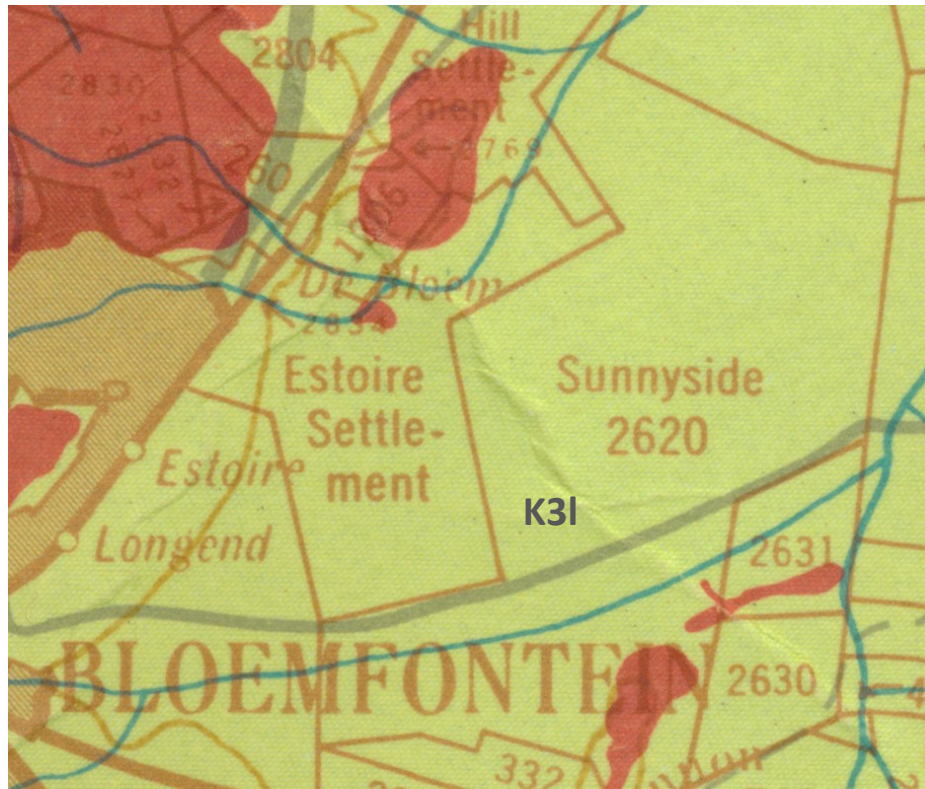


Figure 4. Historical map showing study area marked on portion of 1:18 000 scale topographic map ca. 1941.



Figure 5. General view of the site.



GEOLOGIESE LEGENDE


| | | | | |
|---|---|---|-------------------------------------|--------------------------------|
| Qc | Surface-limestone Oppervlakkalksteen | | | Recent Resent |
| ◆ Kb | Kimberlite dyke Kimberlietgang | | | Cretaceous? Krvt? |
| ▼ | Diatreme Diatrema | | | Post-Karoo Na-Karoo |
| ▽ | Volcanic neck Vulkaniese pyp | | | |
|  | Dolerite, overprinted on geological formations Doleriet, oorgedruk op geologiese formasies | | | |
| K4d | Basaltic lava Basaltiese lawa | Drakensberg Stage Étage Drakensberg | Stormberg Series Serie Stormberg | KARROO SYSTEM SISTEEM KAROO |
| K4c | Massive sandstone, thin shale Massiewe sandsteen, dun skalie | Cave Sandstone Stage Étage Holkranssandsteen | | |
| K4r | Purple shale and mudstone; thin sandstone Pers skalie en moddersteen; dun sandsteen | Red Beds Stage Étage Rooilae | | |
| K4m | Feldspathic sandstone and grit, green shale Veldspatiese sand- en grinsteen, groen skalie | Molteno Stage Étage Molteno | | |
| K3u | Purple and green shale, thick sandstone beds Pers en groen skalie, dik sandsteentae | Upper Stage Boonste Étage | Beaufort Series Serie Beaufort | |
| K3m | Sandstone, shale and mudstone Sandsteen, skalie en moddersteen | Middle Stage Middelste Étage | | |
| K3l | Sandstone, shale and mudstone Sandsteen, skalie en moddersteen | Lower Stage Onderste Étage | | |
| K2u | Mudstone, shale Moddersteen, skalie | Upper Stage Boonste Étage | Ecca Series Serie Ecca | |

Figure 6. Underlying geology at the site consist of potentially fossil-bearing Beaufort Group (Adelaide Subgroup) strata (K3I)

APPENDIX F

Traffic Impact Assessment

PLOT 1/42 ESTOIRE SMALLHOLDINGS, BLOEMFONTEIN

REZONING

TRAFFIC IMPACT ASSESSMENT


MAY 2019



Project: 7317

PO Box 25054, Langenhoven Park, 9330, 12 AG Visser Street, Langenhoven Park, Bloemfontein
Tel & Fax: 051 446 2647, Cell: 083 381 5884, E-mail: kma@telkomsa.net

REPORT SHEET

| | |
|------------------------------|--|
| Property Description: | <i>Plot 1/42 Estoire Small Holdings, Bloemfontein</i> |
| Municipal Area: | <i>Mangaung Metro Municipality</i> |
| Application: | <i>Rezoning</i> |
| Type of Report: | <i>Traffic Impact Assessment</i> |
| Project Number: | <i>7317</i> |
| Compiled by: | <i>Koot Marais Pr Eng</i> |
| Declaration | <i>I, Koot Marais, author of this traffic impact study, hereby certify that I am a professional traffic engineer (registration No 920023) and that I have the required experience and training in the field of traffic and transportation engineering as required by the Engineering Council of South Africa (ECSA), to compile this traffic impact study and I take full responsibility for the content, including all calculations, conclusions and recommendations made herein.</i> |
| Signed: |  920023 |
| Date: | <i>May 2019</i> |

Prepared by:



PO Box 25054, Langenhoven Park, 9330, 12 AG Visser Street, Langenhoven Park, Bloemfontein
Tel & Fax: 051 446 2647, Cell: 083 381 5884, E-mail: kma@telkomsa.net

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1 INTRODUCTION

1.1 Aim of the Study

The aim of this study was to determine and report on the traffic impact of a planned **Rezoning of Plot 1/42 Estoire Small Holdings, Bloemfontein to establish a Diesel Depot.**

1.2 Background

It is the intention to rezone the property to a Special Use to make provision for a diesel depot and this document reports on the traffic implications of the application.

Plot 42 was rezoned from Holdings to Special Business 2 and subdivided. A Traffic Impact Study in support of this application was undertaken in 2007. One of the conditions of approval (Reference Plot 42 Estoire (178463) dated 19 March 2008) was that the development should be restricted in the title deed to a maximum size of 18000m² GLA, and that business buildings (which would have allowed the development of shops) and nurseries will be excluded from the allowed land uses. Based on the current title deed and zoning certificate, this was however not done. This has a bearing on this study and is further dealt in the report.

The developer is as follows: Mack's Petroleum (Pty) Ltd
PO Box 338
Vryburg

1.3 Site Location

The site is situated to the west of Sand du Plessis Avenue in Estoire.

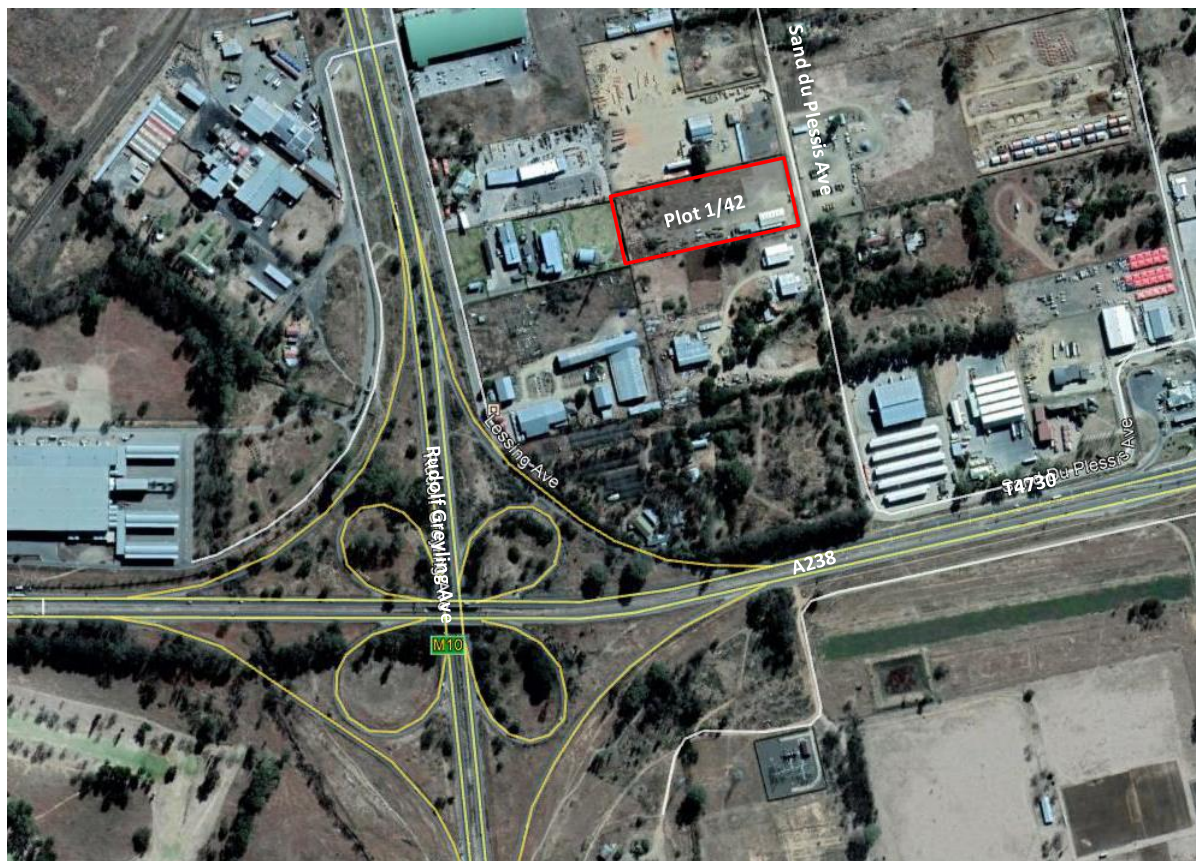


Figure 1.1: Locality Plan

1.4 Development

Detail regarding the zoning is as follows:

- Some of the infrastructure is already developed on the property and is in line with the current zoning namely “Special Business Type 2”. See Appendix A for the permissible uses in terms the existing “Special Business Type 2” zoning. The proposed Special Use zoning will allow for the existing permissible uses as well as the proposed diesel depot.
- A Special Use zoning will be used that define the diesel depot and also allow for the following uses:
 - Diesel Depot,
 - Workshop;
 - Overnight facilities (5 persons);
 - Guard house;
- The diesel depot will only serve the developers own fleet of trucks. The site licence from the Department of Mineral Resources will only allow for wholesale and no retail. (Given the relatively inaccessible location of the development it is in any event highly unlikely to attract other trips)

From a practical point of view the Special Business 2 according to the Bloemspruit Town Planning Scheme will be retained with the addition of the diesel depot and 5 residential units. (Overnight facilities for 5 people will not necessarily imply 5 residential units but as a worst case, this is assumed). See Section 1.2 Background as well as Chapter 3.

The planned diesel depot development is shown in the concept layout in Chapter 5.

1.5 Scope of Analysis

The change in land use is not expected to generate sufficient trips to warrant a formal Traffic Impact Statement (see Chapters 3 and 4), with the result that a formal Traffic Impact Statement with capacity analyses was not undertaken. Basic information regarding the possible impact is however provided in this report as the National Land Transport Act (Act 5 of 2009), prescribes that authorities should have sufficient information for the authority to assess and determine the impact of an application for a change in land use.

2 BACKGROUND INFORMATION

2.1 Existing Road Network

The most important roads in the area are the following:

| Street / Road | Road No | Route No | Description | Geometry | Classification | Functional Classification | Jurisdiction |
|---|--------------------------|----------|--|--|----------------|---------------------------|--|
| Thaba Nchu Road | A238 | N8 | This road links Bloemfontein with the Thaba Nchu – Botshabelo area. | Four-lane divided rural road in the area. The road does not allow direct access in the area, but does provide access in the area to the east where the road becomes a two lane road with passing lanes | Arterial | Arterial | Free State Province (previously SANRAL). Further to the east the road falls under SANRAL |
| Kruger Avenue | T4731 (southern portion) | | Serves properties and smallholdings and links with the P5/1. | Two-lane rural road providing direct access to properties. Relatively narrow | Collector | Collector | Free State Province / Mangaung Metro Municipality |
| Tibbie Visser Street | | | Provides access for the Estoire area from Rudolph Greyling Avenue | Two-lane rural road providing direct access to properties. Relatively narrow. | Collector | Collector | Mangaung Metro Municipality |
| Service Road | T4730 | | This road serves as a service road to the A238 and serves properties | Rural gravel road providing access to properties | Local Street | Commercial Local Street | Free State Province |
| Rudolf Greyling Avenue | P6/1 | M10 | This road is part of the Inner Ring Road and links the N8 with the R30 | Two-lane urban road without paved shoulders. Becoming a four-lane divided rural road near N8. The road does not provided direct access to properties | Arterial | Arterial | Mangaung Metro Municipality / Free State Province |
| Sand du Plessis Avenue | | | Links Tibbie Visser Street with the T4370. | Two-lane rural road providing direct access to properties. | Local Street | Commercial Local Street | Mangaung Metro Municipality |
| | | | | | | | |
| Unless otherwise clarified, | | | | | | | |
| <i>A rural geometry implies a road without kerbs and raised sidewalks</i> | | | | | | | |
| <i>An urban geometry implies a road with kerbs and raised sidewalks</i> | | | | | | | |

2.2 Existing Land Use

The site is already partly used as per the current zoning and is surrounded by small holdings and industrial- type developments on some of the properties. Numerous sites in the area are currently under application.

2.3 Road Planning

In anticipation of the expected development in the Estoire area, the Transport Planning Division has compiled a road master plan for the area. It must however be taken into consideration that this plan has no official status and is only an envisaged/concept layout still to be approved by the relevant authorities. The intention of the plan is more to guide possible future development in the area by ensuring that specific road reserves are retained, or established, as it is expected that the roads will be developed as part of possible future township establishments.

The concept master plan is shown below.

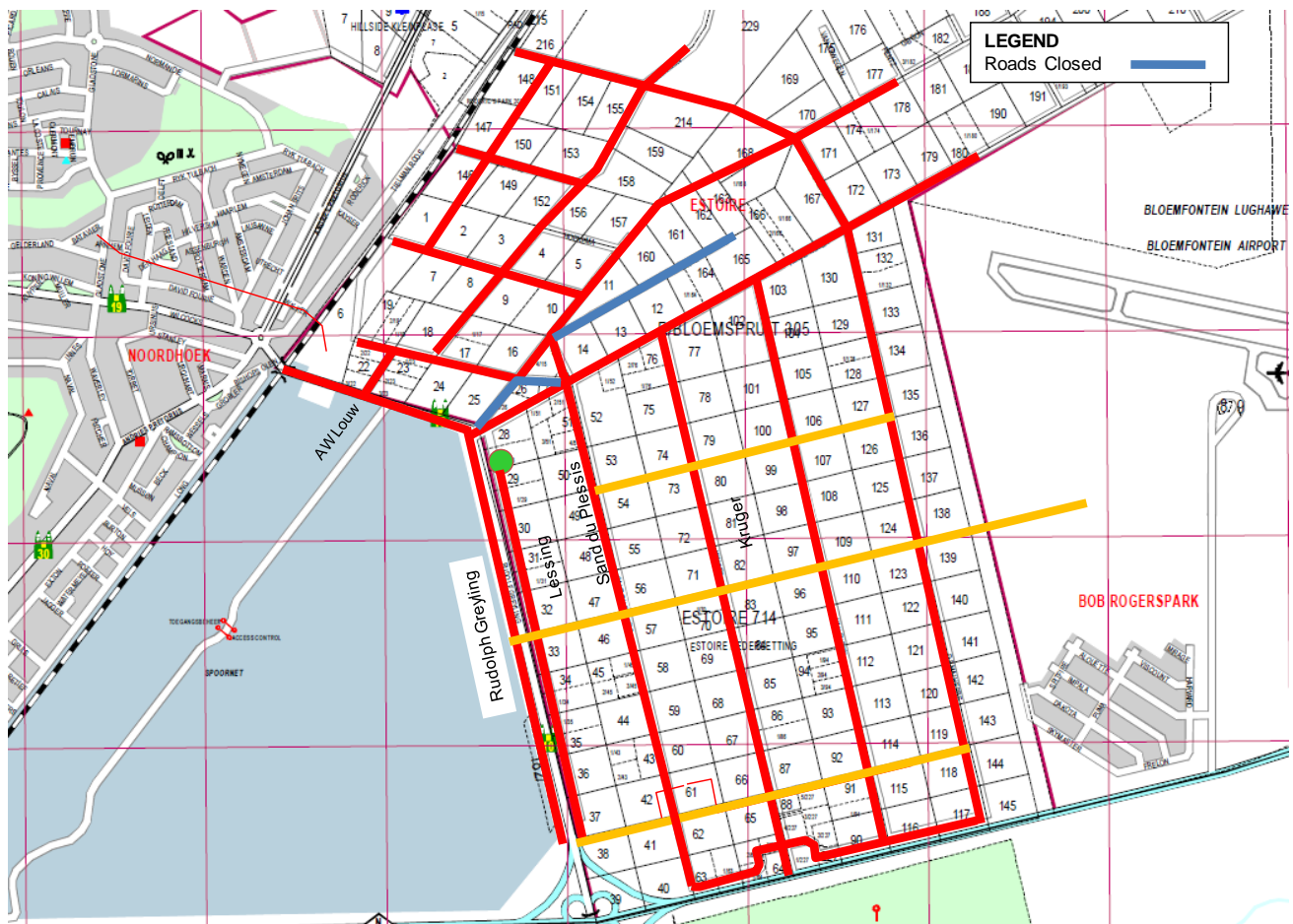


Figure 2.1 Possible Future Road Network

As can be seen in the above figure, it is the intention to establish a road on the southern boundary of the property and also to widen Sand du Plessis Avenue. As a result, the following conditions were set in the mentioned approval of the rezoning of Plot 42:

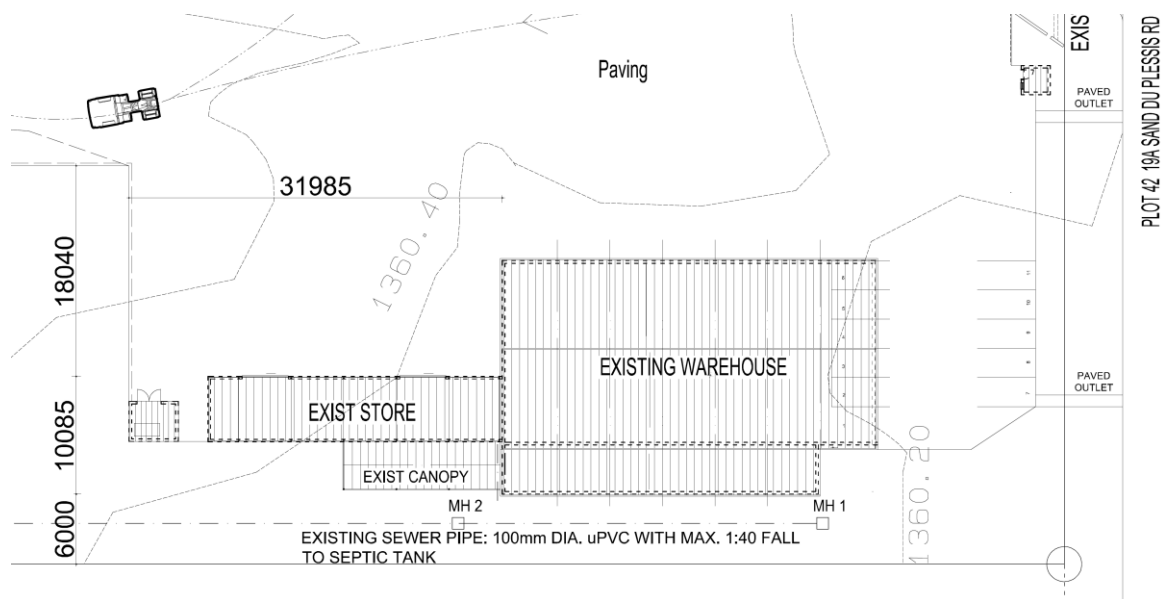
- An 8m wide road reserve should be established along the eastern boundary of the site, and
- A 9.5m wide road reserve should be established along the southern boundary of the site.

A subdivision diagram showing these reserves was submitted, but based on the available information these reserves were not registered. As can be seen in the figure below, although the roads have not yet been established, the reserves were created over Plots 43 and 67, but not over Plot 42.



Figure 2.2 Status of Road Reserves Possible Future Road Network

As can be seen in the concept site layout plan, of which an excerpt is shown below, (recently constructed) buildings are located at a distance of approximately 14m from the eastern boundary and 6m from the southern boundary.



It would thus still theoretically be possible to establish the reserve along the eastern boundary although this will affect parking and throat lengths, but it would not be possible to establish the reserve along the southern boundary due to the location of the building.

This is an important aspect and a decision should be taken on how the future network can still be accommodated and whether some aspects can be addressed during this application process.

Consideration can be given to change the road network as follows, namely that the new east west road terminates in Sand du Plessis Avenue and does not link with Lessing Avenue. It is however important that provision is still made for the widening of Sand du Plessis Avenue.

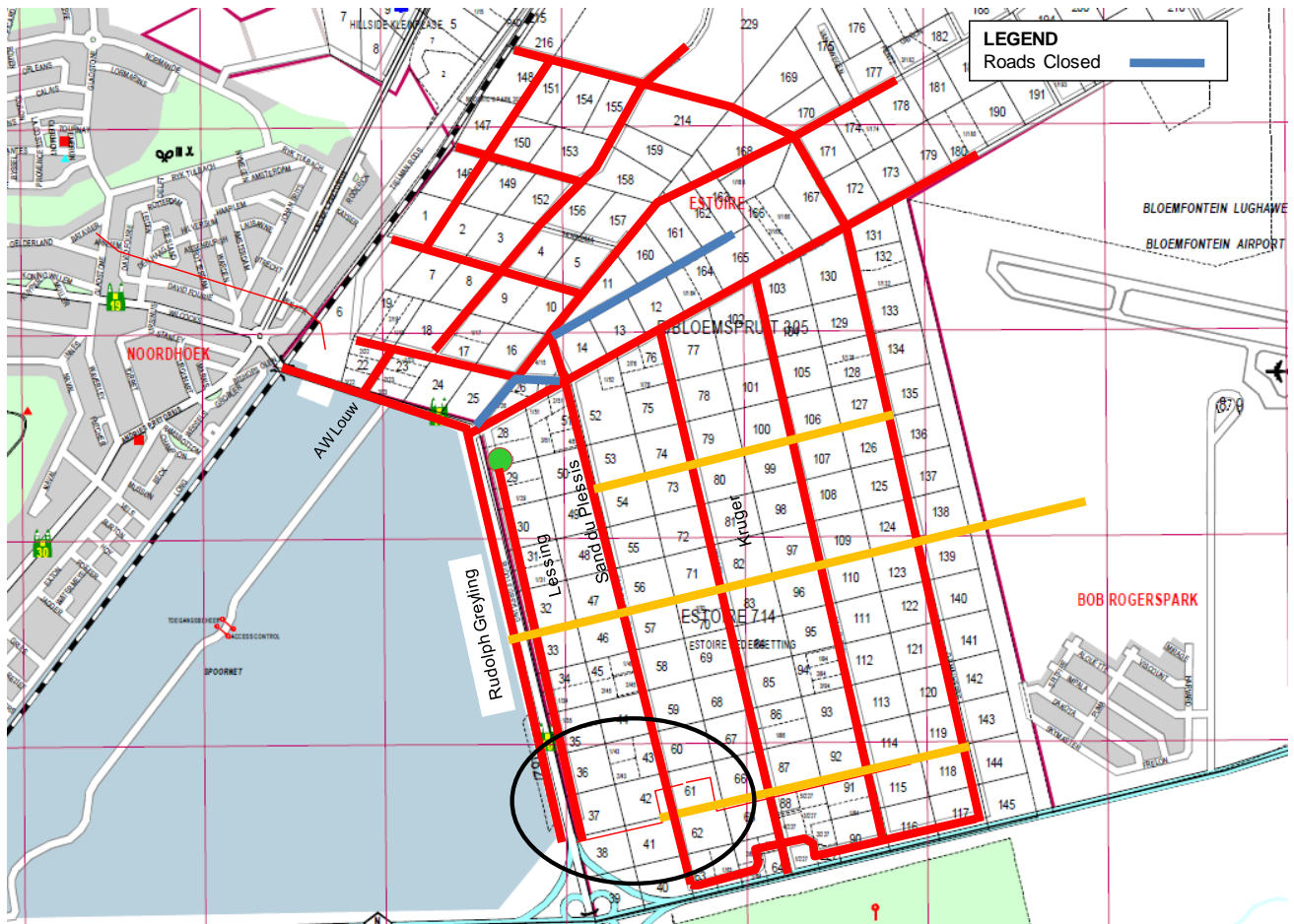


Figure 2.3 Possible Changes to Future Road Network

3 TRIP GENERATION

To determine the actual impact of the change in land use, the potential of the current zoning should be considered.

The site is zoned Special Business 2 with the uses as set out in Appendix A. With the zoning allowing Business Buildings, which allows shops, any other use such as the diesel depot and the overnight facilities will result in a reduction in the development potential, and thus a reduction in the potential trip generation.

Due to the following, the expected trip generation of the applied for facilities will be limited:

:

- The diesel depot will only serve the developers own fleet of trucks;
- The site licence from the Department of Mineral Resources will only allow for wholesale fuel sales and no retail; and
- The site is relatively inaccessible from higher order roads.
- The overnight facilities will be used by employees

Considering the above, the change in land use will reduce the potential trip generation of the development and is not expected to generate in excess of 50 peak hour trips, with a result that capacity analyses are not required.

Due to the new application and the fact that the full potential according to the zoning is not practical achievable, it might be possible to address the development potential as discussed in Section 1.2. The current planned Special Use zoning however does not include such restrictions.

4 TRAFFIC IMPACT

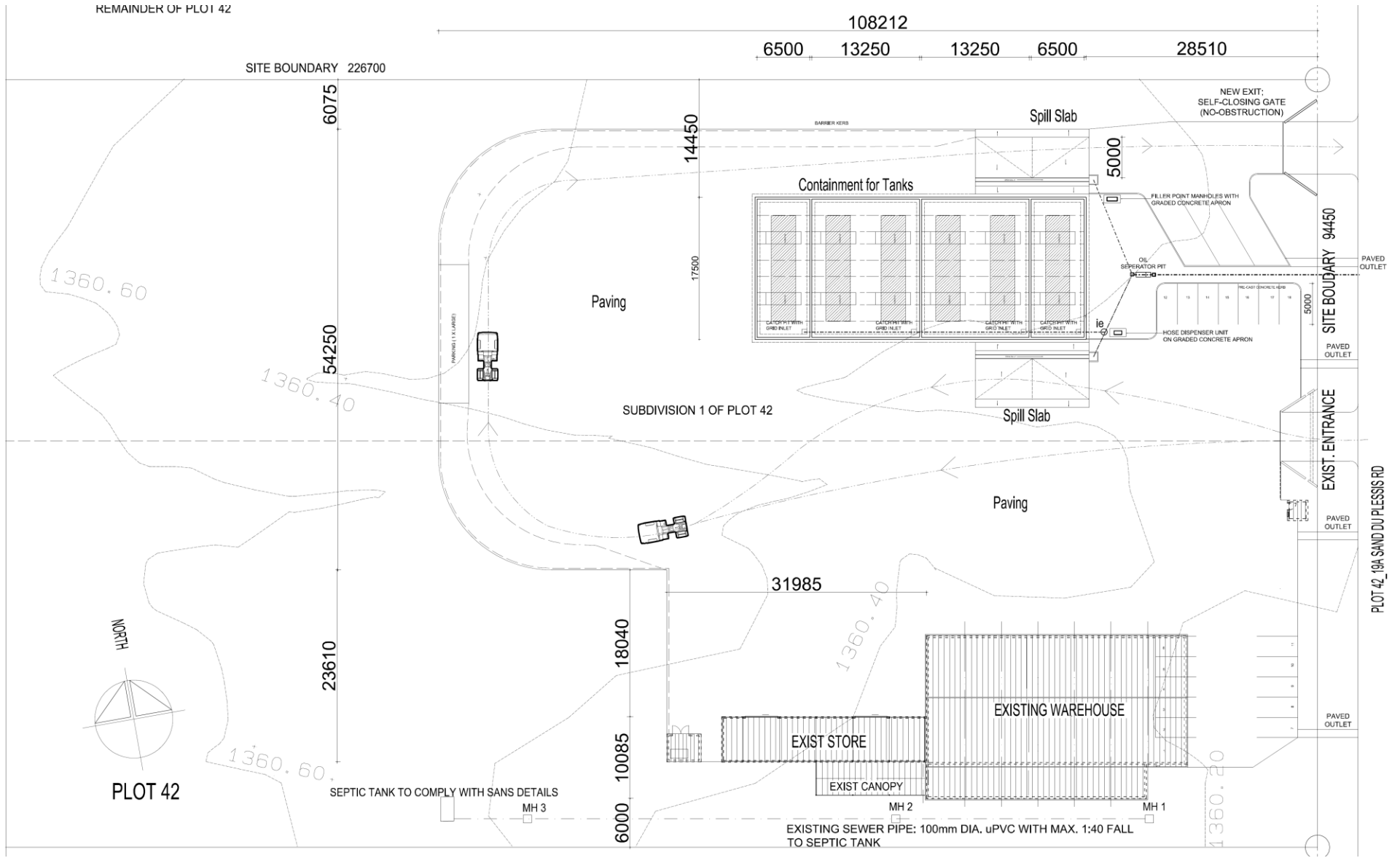
4.1 Need for Formal Analysis

As shown in Chapter 3 the change in land use is not expected to generate in excess of 50 peak hour trips during any peak period and in fact trip generation will be quite low. A formal Traffic Impact Statement with Capacity Analyses is thus not warranted.

4.2 General Impact

Considering the expected trip generation of the development, rezoning of the property as per the zoning application will not have a notable impact on traffic volumes in the area.

5 SITE DEVELOPMENT PLAN



As the application is for rezoning, the site development plan does not yet have any formal status but as it seems to be relatively planned in detail, it needs to be considered. The plan will however be formally considered as part of building plans.

| No | Basic Aspects |
|----------|--|
| | |
| 1 | Access |
| | <i>Discussion:</i> |
| a | Number of Accesses |
| | <p>The layout makes provision for two accesses consisting of an entrance and a separate exit. This is contrary to what is prescribed by TRH 26, namely:</p> <p><i>Normally only one access per erf is allowed. However, developments such as shopping centres should preferably have separate accesses for private vehicles and for large delivery vehicles. A separate access may also be desirable for use by public transport.</i></p> <p><i>The spacing and separation requirements of this manual, however, are applicable to each individual access and may not be relaxed to accommodate the additional accesses.</i></p> <p>In an industrial area with access from a lower classification road, two accesses can possibly be considered, although considering the available space there is no obvious reason why two accesses should be provided.</p> |
| b | Proposed Location of Access & Spacing |
| | <p>Given the fact that provision is made for a separate entrance and exit, and considering the zoning of the site, the entrance and exit will be high volume accesses and will thus as per TRH 26 have to comply with the appropriate access spacing.</p> <p>The access spacing as per the plan is approximately 35m centreline to centreline.</p> <p>If assumed as low volume truck accesses as per UTG10 for a commercial local street, the access separation should be 20m, but considering the zoning of the site, the entrance and exit could be high volume motor car and mixed driveways. In the latter case the access spacing should be 50m centreline to centreline based on UTG10.</p> <p>Considering the above, it is thus recommended that only one access be provided, but if there are sufficient motivation why a separate entrance and exit should be provided, these will have to be spaced at 50m centreline to centreline.</p> |
| c | Provision of Deceleration Lanes and Median Openings |
| | Not required considering the nature of the street. |
| d | Sight Distances |
| | Sight distances should be acceptable |
| e | Impact on Street Parking Etc. |
| | Not relevant |
| 2 | Parking |
| | <i>Discussion:</i> |
| | Sufficient space should be available on the site to provide the required parking; this can be addressed as part of building plans. |
| 3 | Delivery Facilities |
| | <i>Discussion:</i> |
| | This aspect can be addressed as part of the building plans. |
| 4 | Legal Aspects |
| | <i>Discussion:</i> |
| | See Section 2.3 |

6 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions can be made from the study:

- a) The original rezoning conditions of Plot 42 were not implemented and the site has significant development potential. The planned rezoning will reduce the development potential and is not expected to generate in excess of 50 peak hour trips.
- b) As part of the original rezoning and subdivision of Plot 42, certain road reserves should have been registered on the property. These were not registered and due to construction of buildings, the originally planned road network in the area is no longer possible. As a result, the future road network alignments will have to be reviewed.
- c) An acceptable site layout is possible, although the position of accesses as indicated in the concept layout plan will have to be reconsidered.

Considering the findings and recommendations of the study, it is recommended that the development be approved from a traffic point of view.

7 REFERENCES

1. **Manual for Traffic Impact Studies**, Department of Transport, Pretoria, 1995
2. **South African Trip Generation Rates**, Department of Transport, Pretoria, 1995
3. **ITE Trip Generation Rates, 6th Edition**, Institute of Transportation Engineers, Washington, 1998
4. **Transportation and Land Development**, Institute of Transportation Engineers, Washington, 1988
5. **UTG 1, Guidelines for the Geometric Design of Urban Arterial Roads**, CSIR, Pretoria, 1986
6. **National Guidelines for Road Management in South Africa**, COTO
7. **Spacing of Accesses on Major Arterials**, Department of Transport, Pretoria, 1993
8. **TMH 17 Volume 1**, The South African National Roads Agency Limited, Pretoria, 2012
9. **UTG 5: Geometric Design of Urban Collector Roads**, CUTA, Pretoria, 1988
10. **UTG 7: Geometric Design of Urban Local Residential Streets**, CUTA, Pretoria, 1986

SCHEDULE 3

Special Business buildings

TYPE 1

Local business complex with a maximum total floor area of 500m².

TYPE 2

Business building

Display and sales facilities for large vehicles, farming implements and other vehicles including, combine harvester, tractors and caravans. (If any reparation is to be done it must be done in buildings approved by the Local Board).

Seed, vegetables or fruit packing in approved buildings.

Warehouses and display rooms for uses approved by the Local Board within appropriate buildings (with the exception of warehouses for obnoxious or unacceptable industries).

Driving school

Nurseries

Animal hospitals

Transport undertakings (including repairs and maintenance of own vehicles)

Service industries as proclaimed.

Building contractors (including storage of building materials)
Caravanparks
Cement products

TYPE 3

Drill contractors (including repairs to own vehicles and machinery)

Kennels

Auction pens

Storage of raw materials for and products of monumental masons

Storage of coal

Service industries as proclaimed.

Table E

Coverage permitted

| | |
|---|---|
| Manufactured houses | 30 % |
| Dwelling houses | 50 % |
| Blocks of flats and intermediate residential buildings | 33,33 % |
| Nursery Schools | 40 % |
| Business buildings | 80 % except in the case of blocks of flats where it shall be 33,33 %. |
| Industrial buildings, light industrial buildings and special business buildings | 80 % |

APPENDIX G

Impact Assessment

IMPACT ASSESSMENT

The proposed construction of a diesel depot on Portion 1 of Plot 42, Estoire, Bloemfontein

| | |
|-----------------------------|---|
| Location: | Portion 1 of Plot 42, Estoire, Bloemfontein, Free State |
| Applicant: | Mack's Petroleum (PTY) LTD |
| Competent Authority: | The Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs (DESTEA) |
| MDA Ref No: | 40813 |
| DESTEA Ref No: | EMS/4/20/02 |
| NEAS Ref No: | FSP/EIA/0000324/2020 |
| Report Date: | November 2020 |



Town & Regional Planners,
Environmental & Development
Consultants

Physical Address: 9 Barnes Street,
Westdene, Bloemfontein, 9301
Postal Address: PO Box 100982,
Brandhof, 9324
Tel: 051 4471583, Fax: 051 448 9839
E-mail: admin@mdagroup.co.za

Assessment

The main objective of the EIA process is to assess and quantify the potential impacts that were identified by the project team, specialists and IAPs during the Scoping Phase.

All specialist studies are included in the current document (i.e. the Draft EIA Report). Through the results and outcomes of the specialist studies, an accurate and comprehensive Impact Assessment was compiled through the concept of significance.

The concept of significance is at the core of impact identification, evaluation and decision-making during the EIA process and can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. intensity, duration and likelihood), while impact significance is the value placed on the change by different affected parties (i.e. level of acceptability) (DEAT, 2002).

The significance is rated from Low to High as indicated in the tables below with an explanation of the impact magnitude and a guide that reflects the extent of the proposed mitigatory measures deemed necessary.

Concluding Consequence

Consequence analysis is a mixture of quantitative and qualitative information and the outcome can be positive or negative. Several factors can be used to determine consequence. For the purpose of determining the environmental significance in terms of consequence, the following factors were chosen: Severity / Intensity, Duration and Extent / Spatial Scale. Each factor is assigned a rating of 1 to 5, as described below.

Determination of Severity

Severity relates to the nature of the event, aspect or impact to the environment and describes how severe the aspects impact on the biophysical and socio-economic environment. **TABLE 1** indicates the severity rating on a quantitative and qualitative level.

| TABLE 1. SEVERITY RATING | | | | | |
|---|---|--|--|--|---|
| Type of Criteria | Rating Score | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| Quantitative | 0-20% | 21-40% | 41-60% | 61-80% | 81-100% |
| Qualitative | Insignificant / Non-harmful | Small / Potentially Harmful | Significant / Harmful | Great / Very harmful | Disastrous / Extremely harmful |
| Social/ Community response | Acceptable / IAP satisfied | Slightly tolerable / Possible objections | Intolerable/ Sporadic complaints | Unacceptable / Widespread complaints | Totally unacceptable / Possible legal action |
| Irreversibility | Very low cost to mitigate / High potential to mitigate impacts to level of insignificance / Easily reversible | Low cost to mitigate | Substantial cost to mitigate / Potential to mitigate impacts / Potential to reverse impact | High cost to mitigate | Prohibitive cost to mitigate / Little or no mechanism to mitigate impact / Irreversible |
| Biophysical (Air quality, water quantity and quality, waste production, fauna and flora) | Insignificant change / deterioration or disturbance | Moderate change / deterioration or disturbance | Significant change / deterioration or disturbance | Very significant change / deterioration or disturbance | Disastrous change / deterioration or disturbance |

Determination of Duration

Duration refers to the amount of time that the environment will be affected by the event, risk or impact, if no intervention (e.g. remedial action) takes place. **TABLE 2** indicates the rating of duration according to a measure of the life span of the possible impact.

| TABLE 2. DURATION RATING | |
|--------------------------|----------------------------|
| Rating | Description |
| 1: Low | One month |
| 2: Low-Medium | Between 1 and three months |
| 3: Medium | 3 months to 1 year |
| 4: Medium-High | 1 to 10 years |
| 5: High | More than 10 years |

Determination of Extent / Geographical Extent

Extent refers to the spatial influence related to an impact (thus immediate area / surrounding area / regional/ national / international).

| TABLE 3. EXTENT RATING AND DESCRIPTION | | |
|--|--------------------------|--|
| Rating | Exposure | Description |
| 1: Low | Very limited | Immediate site / limited to site and immediate areas |
| 2: Low-Medium | Limited | Surrounding areas |
| 3: Medium | Municipal area | Municipal area |
| 4: Medium-High | Province / Region | Province |
| 5: High | National / international | National / International |

Determination of Overall Consequence

Overall consequence is determined by adding the factors determined above (severity, duration and extent) as summarised in the example below, and then dividing the sum by 3 (3 factors; severity, duration and extent).

| TABLE 4. EXAMPLE OF OVERALL CONSEQUENCE CALCULATION | |
|---|--------|
| Consequence | Rating |
| Severity | 3 |
| Duration | 2 |
| Extent | 4 |
| Subtotal: 9 | |
| Total Consequence : 3 | |

Likelihood

The determination of likelihood is a combination of Frequency and Probability. Each factor is assigned a rating of 1 to 5, as described below and in **TABLE 5** and **TABLE 6**.

Determination of Frequency

Frequency refers to how often the specific activity, related to the event, aspect or impact, is undertaken.

| TABLE 5. RATING AND DESCRIPTION OF FREQUENCY | |
|--|---------------------------------|
| Rating | Description |
| 1: Low | Once / twice a year |
| 2: Low-Medium | Once or more every 6 months |
| 3: Medium | Once or more on a monthly basis |
| 4: Medium-High | Once or more on a weekly basis |
| 5: High | On a daily basis |

Determination of probability

Probability refers to how often the activity/event or aspect has an impact on the environment.

| TABLE 6. RATING AND DESCRIPTION OF PROBABILITY | |
|--|---------------------------------------|
| Rating | Description |
| 1: Low | Almost never / almost impossible |
| 2: Low-Medium | Very seldom / highly unlikely |
| 3: Medium | Infrequent / unlikely / seldom |
| 4: Medium-High | Often / regularly / likely / possible |
| 5: High | Daily / highly likely / definitely |

Overall likelihood

Overall likelihood is calculated by adding the factors determined above and summarised below, and then dividing the sum by 2.

| TABLE 7. EXAMPLE CALCULATING OVERALL LIKELIHOOD | |
|---|--------|
| Overall Likelihood | Rating |
| Frequency | 3 |
| Probability | 2 |
| Subtotal: 5 | |

TABLE 7. EXAMPLE CALCULATING OVERALL LIKELIHOOD

| Overall Likelihood | Rating |
|------------------------------|--------|
| Total Likelihood: 2.5 | |

Determination of Overall Environmental Significance

The multiplication of overall consequence with overall likelihood will provide the environmental significance, which is a number that will then fall into a range of LOW, LOW-MEDIUM, MEDIUM, MEDIUM-HIGH or HIGH, as shown in **TABLE 8.**

TABLE 8. DETERMINATION OF OVERALL ENVIRONMENTAL SIGNIFICANCE AND DESCRIPTION

| Significance / risk | Low | Low-Medium | Medium | Medium-High | High |
|--|---------|------------|-----------|-------------|---------|
| Overall Consequence Multiplied (x) by Overall Likelihood | 1 – 4.9 | 5 – 9.9 | 10 – 14.9 | 15 – 19.9 | 20 - 25 |

Qualitative Description of Environmental Significance

The qualitative description relating to environmental significance is used to supply us with an indication of the nature of the significance of a risk or potential impact.

This can be used as a valuable tool to guide the decision making process relating to a particular event, impact or aspect.

| TABLE 9. QUALITATIVE DESCRIPTION & RATING OF SIGNIFICANCE | | | | | |
|---|---|---|---|---|---|
| Significance | Low | Low-Medium | Medium | Medium-High | High |
| Impact Magnitude | <ul style="list-style-type: none"> Impact is of very low order and therefore likely to have very little real effect. | <ul style="list-style-type: none"> Impact is of very low order and therefore likely to have very little real effect. Acceptable | <ul style="list-style-type: none"> Impact is real, and potentially substantial in relation to other impacts. Can pose a risk | <ul style="list-style-type: none"> Impact is real and substantial in relation to other impacts. Pose a risk to the company. | <ul style="list-style-type: none"> Impact is of the highest order possible. Unacceptable. Fatal flaw. |
| Action Required | <ul style="list-style-type: none"> Maintain current management measures. Where possible improve. | <ul style="list-style-type: none"> Maintain current management measures. Implement monitoring and evaluate to determine potential increase in risk. Where possible improve. | <ul style="list-style-type: none"> Implement monitoring. Investigate mitigation measures and improve management measures to reduce risk, where possible. | <ul style="list-style-type: none"> Improve management measures to reduce risk. | <ul style="list-style-type: none"> Implement significant mitigation measures or implement alternatives |

Should any fatal flaws be identified during the EIA process which will be indicated by a “high” significance rating, the activity related with the potential impact will undergo the “no-go” alternative (i.e. be excluded from the proposed project) if the impact cannot not be managed and / or mitigated to acceptable levels.

ENVIRONMENTAL IMPACT ASSESSMENT

Geology and Soil

The following geology and soil related impacts have been identified and may occur as a result of the construction and operation phase of the proposed development;

- Potential loss of topsoil.
- Alteration of soil characteristics due to possible spillages / disturbances.
- Contamination of soil as a result of chemical / hazardous substances / pollution / sewage leaks.

| TABLE 10. GEOLOGY AND SOIL ASSESSMENT | | | | |
|---------------------------------------|--|-----------------------------|---|-----------------------------|
| Assessed aspect | Without Mitigation | | With Mitigation | |
| | Value | Description | Value | Description |
| Severity | 2 | Small / Potentially Harmful | 1 | Insignificant / Non-harmful |
| Duration | 5 | High | 2 | Low-Medium |
| Extent | 2 | Low-Medium | 1 | Low |
| Consequence | 3 | | 1 | |
| Frequency | 2 | Low-Medium | 1 | Low |
| Probability | 3 | Medium | 2 | Low-Medium |
| Likelihood | 2.5 | | 1.5 | |
| Significance | 7.5 | Low-Medium | 1.5 | Low |
| Impact Magnitude | Impact is of low order and therefore likely to have very little real effect. | | Impact is of very low order and therefore likely to have very little real effect. | |
| Status | Negative | | Negative | |

As depicted in **TABLE 10** the environmental significance of the geology and soil impacts related to the proposed development can qualitatively be described as LOW-MEDIUM. The possible impact is of low order and therefore likely to have little real effect. The implementation of monitoring, mitigation and management measures are necessary in order to reduce risk where

possible. This can be motivated by the mitigated environmental significance depicted – LOW.

Proposed Mitigation measures

- Remove topsoil prior to construction.
- Topsoil stockpiling in such a manner as to avoid / prevent the loss thereof.
- No topsoil should be used for construction purposes.
- Topsoil should only be used post construction for rehabilitation, landscaping, storm water system construction and levelling purposes.
- All new sewage pipes should be sealed during the construction phase.
- The upgrading / installation of an adequate sewage system should be constructed / implemented in order to prevent leakages / spillage during the operation phase. This must also include a maintenance and monitoring plan for the sewer system.
- Sewer infrastructure must be equipped with all necessary access chambers in order to prevent / facilitate repairs of blockages in the lines which may lead to overflowing (where necessary).
- During the construction phase all equipment must be maintained. The necessary precautionary measures must be taken for example
 - drip trays must be used to protect soil against spillages of hazardous chemicals.
 - all hazardous substances must be stored in a demarcated area lined with an impermeable floor and walls with sufficient capacity in terms of storage.
- Any leakage / spillage events must be reported immediately and the contaminated / affected soil must be removed and disposed of as hazardous waste.
- Fuel storage tanks should be installed in an area with a buffer wall that has the capacity of 110% of the fuel storage tanks.

Climate

It is not expected that the proposed development will have any impact on the climate of the area.

Air Quality and Noise

The following air quality and noise related impacts have been identified and may occur as a result of the construction and operation phase of the proposed development;

- The majority of air quality and noise impacts will occur during the construction phase of the proposed development.
- Air quality impacts will be due to the operation of construction vehicles, the clearance of vegetation and other related construction activities.
- Noise impacts will be elevated during the construction phase due to construction activities.
- The impact is expected to be medium during the construction activities. However with the implementation of management tools such as the limiting of construction activities where possible to normal working hours, the significance of noise can be made bearable to surrounding land owners.
- The existing land uses in the area ranges from residential, agricultural and light industrial. It is therefore not foreseen that the proposed activities will have a potential increase in the ambient noise levels of the area during the operational phase.

| TABLE 11. AIR QUALITY AND NOISE ASSESSMENT | | | | |
|---|---|-----------------------------|---|-----------------------------|
| Assessed aspect | Without Mitigation | | With Mitigation | |
| | Value | Description | Value | Description |
| Severity | 2 | Small / Potentially Harmful | 1 | Insignificant / Non-harmful |
| Duration | 3 | Medium | 2 | Low-Medium |
| Extent | 2 | Low-Medium | 1 | Low |
| Consequence | 2.3 | | 1.3 | |
| Frequency | 5 | High | 2 | Low-Medium |
| Probability | 2 | Medium | 1 | Low-Medium |
| Likelihood | 3.5 | | 1.5 | |
| Significance | 8.2 | Low-Medium | 2 | Low |
| Impact Magnitude | Impact is of very low order and therefore likely to have very little real effect. | | Impact is of very low order and therefore likely to have very little real effect. | |
| Status | Negative | | Negative | |

As depicted in **TABLE 11** the environmental significance of the air quality and noise impacts related to the proposed development can qualitatively be described as LOW-MEDIUM. The possible impact is of a very low order without mitigation and therefore likely to have very little real effect. Mitigation measures should be investigated and management measures should be implemented in order to reduce risk where possible.

Proposed Mitigation Measures

- In order to reduce dust emissions on the site during the construction phase of the proposed development dust suppression should be implemented.
- Strict adherence to speed limits on site can ensure minimum travel speeds of vehicles as well as minimum noise and dust levels.
- Construction activities should be avoided during very windy conditions, where possible.
- Vehicles and construction equipment should be serviced on a regular basis in order to reduce emissions during operation.
- No open fires or waste burning should be allowed on site.
- Noise levels can be kept to an acceptable minimum by restricting the use of construction vehicles and noisy activities to normal working hours.

Ground and Surface Water

The following ground and surface water related impacts have been identified and may occur as a result of the construction and operation phase of the proposed development;

- Contamination due to spillages of hazardous chemicals or substances during the construction phase.
- Surface water resources downstream of the proposed development could be contaminated / silted due to surface water runoff during rain events.
- Contamination of ground and downstream surface water during the construction phase by waste as a result of incorrect or inappropriate storage practices.
- Contamination of ground and downstream surface water due to sewage leaks during construction and operation.
- Contamination of ground and downstream surface water during the operational phase by fuel spillages (from the fuel storage tanks on site).

| TABLE 12. GROUND AND SURFACE WATER ASSESSMENT | | | | |
|---|--------------------|-----------------------------|-----------------|-----------------------------|
| Assessed aspect | Without Mitigation | | With Mitigation | |
| | Value | Description | Value | Description |
| Severity | 2 | Small / Potentially Harmful | 1 | Insignificant / Non-harmful |
| Duration | 4 | Medium-High | 2 | Low-Medium |
| Extent | 3 | Medium | 2 | Low-Medium |
| Consequence | 2.3 | | 1.3 | |
| Frequency | 3 | Medium | 2 | Low-Medium |
| Probability | 2 | Medium | 1 | Low-Medium |
| Likelihood | 3.5 | | 1.5 | |
| Significance | 7.5 | Low-Medium | 2 | Low |

| | | |
|-------------------------|---|---|
| Impact Magnitude | Impact is of very low order and therefore likely to have very little real effect. | Impact is of very low order and therefore likely to have very little real effect. |
| Status | Negative | Negative |

As depicted in **TABLE 12** the environmental significance of the ground and surface water impacts related to the proposed development can qualitatively be described as LOW-MEDIUM. The possible impact is of a very low order without mitigation and therefore likely to have very little real effect. Mitigation measures should be investigated and management measures should be implemented in order to reduce risk where possible. A monitoring system can also be implemented to further reduce risk.

Proposed Mitigation Measures

- Potentially hazardous substances must be stored on an impermeable surface inside a bunded area to prevent seepage of the substance and pollution of the groundwater.
- In the event of spillages of any potentially hazardous substances the area should be cleaned immediately by removing the spill and the contaminated soil and disposing thereof as hazardous waste.
- Proper engineering and maintenance and management of the sewage systems must be conducted / implemented. Sewer systems should be inspected and cleaned regularly.
- Adequate storm water management measures and systems must be implemented and maintained before and during construction as well as the operational phase of the proposed development.
- Good housekeeping measures should be implemented to prevent general waste and littering from occurring in downstream surface water resources.

Land Use

The following land use impacts have been identified and may occur as a result of the construction and operation phase of the proposed development;

- The land-use is currently zoned as Special Business: Type 2. Land Use for purposes of Special Business: Type 2 will be lost on the development property.
- The impact will be low as similar types of land-uses occur on nearby properties.

TABLE 13. LAND USE

| Assessed aspect | Without Mitigation | | With Mitigation | |
|-------------------------|---|-----------------------------|---|-----------------------------|
| | Value | Description | Value | Description |
| Severity | 1 | Insignificant / Non-harmful | 1 | Insignificant / Non-harmful |
| Duration | 5 | High | 5 | High |
| Extent | 1 | Low | 1 | Low |
| Consequence | 2.3 | | 2.3 | |
| Frequency | 5 | High | 5 | Low-Medium |
| Probability | 1 | Medium | 1 | Low-Medium |
| Likelihood | 3 | | 3 | |
| Significance | 7 | Low-Medium | 7 | Low-Medium |
| Impact Magnitude | Impact is of very low order and therefore likely to have very little real effect. | | Impact is of very low order and therefore likely to have very little real effect. | |
| Status | Negative | | Negative | |

As depicted in **TABLE 13** the environmental significance of the Land Use impacts related to the proposed development can qualitatively be described as LOW-MEDIUM. The possible impact is of a very low order without mitigation and therefore likely to have very little real effect. Mitigation measures should be investigated and management measures should be implemented in order to reduce risk where possible. A monitoring system can also be implemented to further reduce risk.

Proposed Mitigation Measures

- The sense of place should be protected during all phases of the proposed development by limiting the construction activities to a minimum area.
- Good housekeeping should be ensured during the construction phase in order to keep the area clean.
- Refuse removal should be conducted on a regular basis.

Vegetation and Animal Life

The following impacts on the vegetation and animal life of the proposed site have been identified and may occur as a result of the construction and operation phase of the proposed development;

- Due to the existing land use, the site is in a degraded condition and the natural vegetation composition has been transformed to a large degree.
- The entire proposed development site is highly disturbed and transformed by past and present human activities and is entirely surrounded by urban sprawl.
- It was identified that no suitable habitat, on and surrounding the proposed development site for any Red Data faunal species and no rupicolous (living among, inhabiting, or growing on rocks), arboreal (pertaining to moving about, living in or among trees) or wetland habitats are present.
- The site was found to be disturbed and that the proposed development would not have a negative effect in on any Red Data faunal species or any other faunal species found on site.
- No natural / indigenous vegetation is located on site.
- During the construction phase, less than 1 ha of vegetation will be removed.
- Transformation of the land will occur.
- Vegetation growth as well as the habitats of certain species will be disturbed.
- Destruction of habitat and loss of animal life may occur.
- The growth and distribution of alien plant species may occur.
- Loss of vegetation due to fires made on-site during the construction phase may occur.

| TABLE 14. VEGETATION | | | | |
|-----------------------------|---------------------------|-----------------------------|------------------------|-----------------------------|
| Assessed aspect | Without Mitigation | | With Mitigation | |
| | Value | Description | Value | Description |
| Severity | 2 | Small / Potentially Harmful | 1 | Insignificant / Non-harmful |
| Duration | 3 | Medium | 2 | Low-Medium |
| Extent | 2 | Low-Medium | 1 | Low |
| Consequence | 2.3 | | 1.3 | |
| Frequency | 5 | High | 2 | Low-Medium |
| Probability | 2 | Medium | 1 | Low-Medium |

| | | | | |
|-------------------------|---|-------------------|---|------------|
| Likelihood | 3.5 | | 1.5 | |
| Significance | 8.2 | Low-Medium | 2 | Low |
| Impact Magnitude | Impact is of very low order and therefore likely to have very little real effect. | | Impact is of very low order and therefore likely to have very little real effect. | |
| Status | Negative | | Negative | |

As depicted in **TABLE 14** the environmental significance of impacts on the vegetation related to the proposed development can qualitatively be described as LOW-MEDIUM. The possible impact is of a very low order without mitigation and therefore likely to have very little real effect. Mitigation measures should be investigated and management measures should be implemented in order to reduce risk where possible. A monitoring system can also be implemented to further reduce risk.

Proposed Mitigation Measures

- Indigenous vegetation will not re-establish on the site when construction activities has come to an end. Only if the site is rehabilitated (which is not foreseen) will the indigenous vegetation re-establish.
- It should be noted that the site is already disturbed due to the existing activities being undertaken on the property.
- The loss of vegetation will be localised (to the construction site).
- Due to the current operational activities on site, it is not believed that a large number of animal species use the site for feeding / sleeping activities.
- Some animal habitats will be disturbed. However, this will be localised.
- The growth of the population, increasing urbanisation and expansion of cities will result of the relocation of many animals and the loss of habitats in these areas on the outer boundaries of towns and cities as they expand.
- Alien plant species will be removed before seeding to prevent the spread of these plants to the surrounding environment. Alien vegetation should be controlled throughout the lifetime of the project.
- No open fires will be allowed on the site.
- The hunting, capturing and trapping of fauna should be prevented by making this a punishable offense during the construction phase and inhabitation of the development (capturing and removal is only to be undertaken by a suitable, qualified person).

Cultural Heritage

The proposed site and surrounding areas are not known for elements of archeological or paleontological value. As far as the palaeontological heritage is concerned, the proposed development may proceed with no additional heritage assessments necessary; however it is strongly recommended that all excavation activities are restricted within the boundaries of the development footprint. Furthermore in the event of archaeological findings (if any), these findings should be recorded and reported to SAHRA. No construction activities in the area (where archaeological or palaeontological findings were observed) may proceed without the authorisation from SAHRA.

Aesthetics

The following impacts on the aesthetics of the proposed site have been identified and may occur as a result of the construction and operation phase of the proposed development;

- The land-use is currently zoned as Special Business: Type 2.
- The existing land uses in the area ranges from residential, agricultural and light industrial.
- The proposed fuel depot will not have a large impact on the aesthetics of the surrounding areas, due to the current activities being undertaken in the nearby area.
- During the construction phase of the proposed development there will be a negative impact on the aesthetics of the surrounding land owners.
- During the construction phase there may also be a negative visual impact on surround land and road users.

| Assessed aspect | Without Mitigation | | With Mitigation | |
|--------------------|--------------------|-----------------------------|-----------------|-----------------------------|
| | Value | Description | Value | Description |
| Severity | 2 | Small / Potentially Harmful | 1 | Insignificant / Non-harmful |
| Duration | 3 | Medium | 2 | Low-Medium |
| Extent | 2 | Low-Medium | 1 | Low |
| Consequence | 2.3 | | 1.3 | |
| Frequency | 4 | High | 2 | Low-Medium |

| | | | | |
|-------------------------|---|-------------------|---|------------|
| Probability | 2 | Medium | 1 | Low-Medium |
| Likelihood | 3.5 | | 1.5 | |
| Significance | 7 | Low-Medium | 2 | Low |
| Impact Magnitude | Impact is of very low order and therefore likely to have very little real effect. | | Impact is of very low order and therefore likely to have very little real effect. | |
| Status | Negative | | Negative | |

As depicted in **TABLE 15** the environmental significance of impacts on the aesthetics related to the proposed development can qualitatively be described as LOW-MEDIUM. The possible impact is of a very low order without mitigation and therefore likely to have very little real effect. Mitigation measures should be investigated and management measures should be implemented in order to reduce risk where possible. A monitoring system can also be implemented to further reduce risk.

Proposed Mitigation Measures

- During the construction phase of the proposed development the site should be kept clean at all times and solid and building waste must be removed on a regular basis.
- Contractors should strictly adhere to the EMP and also make sure that they implement best practices throughout the construction phase.

Traffic

The following traffic impacts have been identified and may occur as a result of the construction and operation phase of the proposed development;

- The site is zoned Special Business 2. With the zoning allowing Business Buildings, which allows shops, any other use such as the fuel depot and the overnight facilities will result in a reduction in the development potential, and thus a reduction in the potential trip generation.
- Due to the following, the expected trip generation of the applied for facilities will be limited:
 - The fuel depot will only serve the developers own fleet of trucks;
 - The site licence from the Department of Mineral Resources will only allow for wholesale fuel sales and no retail; and
 - The site is relatively inaccessible from higher order roads.
 - The overnight facilities will be used by employees

- Considering the above, the change in land use will reduce the potential trip generation of the development and is not expected to generate in excess of 50 peak hour trips, with a result that capacity analyses are not required.
- The layout makes provision for two accesses consisting of an entrance and a separate exit. This is contrary to what is prescribed by TRH 26, namely:
 - Normally only one access per erf is allowed. However, developments such as shopping centres should preferably have separate accesses for private vehicles and for large delivery vehicles. A separate access may also be desirable for use by public transport.
 - The spacing and separation requirements of this manual, however, are applicable to each individual access and may not be relaxed to accommodate the additional accesses.
 - In an industrial area with access from a lower classification road, two accesses can possibly be considered, although considering the available space there is no obvious reason why two accesses should be provided.
- Given the fact that provision is made for a separate entrance and exit, and considering the zoning of the site, the entrance and exit will be high volume accesses and will thus as per TRH 26 have to comply with the appropriate access spacing.
- The access spacing as per the plan is approximately 35m centreline to centreline.
- If assumed as low volume truck accesses as per UTG10 for a commercial local street, the access separation should be 20m, but considering the zoning of the site, the entrance and exit could be high volume motor car and mixed driveways. In the latter case the access spacing should be 50m centreline to centreline based on UTG10.
- Considering the above, it is thus recommended that only one access be provided, but if there is sufficient motivation why a separate entrance and exit should be provided, these will have to be spaced at 50m centreline to centreline.
- Sight distances should be acceptable.
- Sufficient space should be available on the site to provide the required parking; this can be addressed as part of building plans.

TABLE 16. TRAFFIC

| Assessed aspect | Without Mitigation | | With Mitigation | |
|-----------------|--------------------|-------------|-----------------|-------------|
| | Value | Description | Value | Description |

| | | | | |
|-------------------------|---|-----------------------------|---|-----------------------------|
| Severity | 2 | Small / Potentially Harmful | 1 | Insignificant / Non-harmful |
| Duration | 3 | Medium | 2 | Low-Medium |
| Extent | 2 | Low-Medium | 1 | Low |
| Consequence | 2.3 | | 1.3 | |
| Frequency | 5 | High | 5 | Low-Medium |
| Probability | 3 | Medium | 1 | Low-Medium |
| Likelihood | 3.5 | | 1.5 | |
| Significance | 9.3 | Low-Medium | 4 | Low |
| Impact Magnitude | Impact is of very low order and therefore likely to have very little real effect. | | Impact is of very low order and therefore likely to have very little real effect. | |
| Status | Negative | | Negative | |

As depicted in **TABLE 16** the environmental significance of impacts on the aesthetics related to the proposed development can qualitatively be described as LOW-MEDIUM. The possible impact is of a very low order without mitigation and therefore likely to have very little real effect. Mitigation measures should be investigated and management measures should be implemented in order to reduce risk where possible. A monitoring system can also be implemented to further reduce risk.

Proposed Mitigation Measures

- During the construction phase construction vehicles should limit / schedule their transport activities outside of peak traffic hours, where possible.
- The change in land use is not expected to generate in excess of 50 peak hour trips during any peak period and in fact trip generation will be quite low. A formal Traffic Impact Statement with Capacity Analyses was thus not warranted.
- Considering the expected trip generation of the development, rezoning of the property as per the zoning application will not have a notable impact on traffic volumes in the area.
- The original rezoning conditions of Plot 42 were not implemented and the site has significant development potential. The planned rezoning will reduce the development potential and is not expected to generate in excess of 50 peak hour trips.

- As part of the original rezoning and subdivision of Plot 42, certain road reserves should have been registered on the property. These were not registered and due to construction of buildings, the originally planned road network in the area is no longer possible. As a result, the future road network alignments will have to be reviewed.

ASSUMPTIONS, UNCERTAINTIES OR GAPS IN KNOWLEDGE

Assumptions:

- The scope is limited to assessing the potential impacts associated with the proposed development; therefore the effect on the surrounding environment is based on the current land use.
- All information provided by MDA and specialists involved is deemed valid and correct at the time it was provided.
- During the public participation process, no indigenous local information surfaced, it is assumed that there are no sensitive cultural sites on the proposed site.
- The EAP does not accept any responsibility in the event that additional information comes to light at a later stage of the process.

Limitations / Uncertainties:

- None at this stage.

ENVIRONMENTAL MANAGEMENT PROGRAMME

The EMPr (**Annexure L**) has been included in the EIA phase of the proposed development.

Objectives of the EMPr

The EMPr aims to fulfil the requirements in terms of the National Environmental Management Act (Act 107 of 1998), with the following objectives:

- To identify, predict and evaluate actual and potential impacts on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimizing negative impacts, maximizing benefits and promoting compliance with the principles of environmental management;
- To identify and employ the modes of environmental management best suited to ensuring that the activity is pursued in accordance with best environmental management practices;

- To be able to respond to unforeseen events; and
- To provide feedback on compliance.

Implementation of the EMPr

The applicant, namely Mack's Petroleum (PTY) LTD is responsible for the implementation of the EMPr. All contractors should be supplied with a copy of the EMPr and should ensure that construction staff adheres to the mitigation measures.

ENVIRONMENTAL AWARENESS PLAN

Objectives of the Environmental Awareness Plan

It is important that the employees understand how each action of the project may influence the environment. It is just as important that each person understand the management strategies as it ensures that the impact on the environment is kept to a minimum.

The Environmental Awareness Plan should be sufficient to make all those involved in the proposed project aware of the risks that may occur as well as the necessary mitigation required to minimise the risks involved. Please refer to **Annexure M** for the Environmental Awareness Plan.

ENVIRONMENTAL IMPACT STATEMENT

Unfortunately during any development it is impossible to entirely avoid negative environmental impacts. Therefore it is of utmost importance that these negative environmental impacts should be minimised and limited by using appropriate mitigation and management measures.

Following the Scoping Phase of the EIA process a number of environmental impacts, concerns and issues were identified. These impacts, issues and concerns were found to most certainly occur during the construction and operational phases of the proposed development.

The identified impacts, concerns and issues are shortly listed below;

- Loss of topsoil,
- Possible changes in soil characteristics,
- Surface flooding,
- Air quality impacts,

- Elevated noise impacts,
- Ground and downstream surface water contamination,
- Flooding and erosion,
- Habitat disturbances affecting fauna and flora species,
- Aesthetic impacts,
- Traffic impacts,
- Possible damage / destruction to unfound heritage sites.

Following the assessment process of the identified impacts it was found that the majority of the identified impacts can be reduced in terms of environmental significance ratings to Low or Low-Medium. This can be done by implementing certain mitigation and management tools along with very strict adherence to the final EMPr. Thus impact occurrence due to the proposed development can be minimised to a great extent and furthermore also be limited to site specific and local extents.

Inputs from the required specialists were obtained as part of the compilation of the current document.

The applicant provides road transportation of bulk fuel products and operates its own fleet of tankers. Thus, the main purpose of the project is to construct fuel tanks for the storage of fuel. The stored fuel will mainly be used by the applicant to fill the tanks of its own fuel transportation trucks.

Due to the current land use, the site is in a degraded condition and the natural vegetation composition has been transformed to a large degree. The proposed layout will result in the lowest environmental impact as long as the mitigation measures as stipulated in the current document as well as the EMPr are implemented.

The proposed fuel depot area covers an area of degraded land, containing several modern commercial building structures. No historically significant building structure older than 60 years of age is present at the site. Existing roads already provide access to the site. The proposed development will take place on land formerly altered by modern industrial / commercial activities. Potential archaeological impact at the proposed site is considered to be non-existent. Underlying geology at the site consist of potentially fossil-bearing Beaufort Group (Adelaide Subgroup) strata. Superficial sediments are made up of residual soils of varying depth that are not considered to be palaeontologically significant. The likelihood of palaeontological impact on bedrock sediments underneath the degraded overburden is considered to be extremely low given latter's overall depth, the low topography terrain and

the fact that no subsurface development is planned for this project. Thus, as far as the palaeontological heritage is concerned, the proposed development may proceed with no additional heritage assessments necessary, provided that all excavation activities are restricted to within the boundaries of the development footprint.

The change in land use is not expected to generate in excess of 50 peak hour trips during any peak period and in fact trip generation will be quite low. Considering the expected trip generation of the development, rezoning of the property as per the zoning application will not have a notable impact on traffic volumes in the area. An acceptable site layout is possible, in terms of a Traffic Impact point of view.

The proposed site in light of all the above is suitable for the proposed development. This can mainly be attributed to the compatibility of the proposed development with the surrounding area.

The applicant identified the need to construct fuel tanks for the storage of fuel. The stored fuel will mainly be used by the applicant to fill the tanks of its own fuel transportation trucks.

The site is extremely well located for this type of development given numerous favourable locality aspects such as;

a) Access

Easy access to the site can be obtained from Sand du Plessis Avenue.

b) Surrounding land uses

The proposed development site is surrounded by housing, agricultural and light industrial land uses. This makes the proposed development suitable to the area.

During the PPP no objections against the proposed development were received. The issues and concerns raised by IAPs have been included in this report as well as the Environmental Impact Assessment.

Should the described project not be authorised by the competent authority, the proposed fuel depot will not be constructed. The applicant will then have to buy fuel from other companies (at a higher price) and this will have cost implications to the applicant as well as the fuel companies that the applicant are to be serving.

EAP RECOMMENDATION

It is the opinion of MDA that the development is environmentally feasible due to the fact that the majority of environmental impacts can be mitigated to a satisfactory level.

However it should be noted that the following recommendations along with the recommendations raised by the various appointed specialists as well as Registered IAPs should be deemed important and considered;

- The loss of topsoil during the construction phase should be avoided as far as possible by implementing the mitigation measures as set out in the EMPr.
- Dust suppression and noise management measures must be implemented as per the EMPr.
- No open fires or waste burning should take place on site.
- Potentially hazardous substances should be stored on an impermeable surface and inside a bunded area. In the event of hazardous substance spillage the area must be cleaned immediately and authorities should be notified.
- Adequate storm water management measures and systems must be implemented and maintained before during and after construction activities.
- Good housekeeping measures should be implemented at all times during the construction phase.
- No endangered or protected plant species are to be harmed / removed from the site without a valid permit. In the event that such plants are encountered they should be transplanted from the site.
- Alien plant species will be removed before seeding to prevent the spread of these plants to the surrounding environment. Alien vegetation should be controlled throughout the lifetime of the project.
- The hunting, capturing and trapping of fauna should be prevented by making this a punishable offense during the construction phase and the operational phase of the development (capturing and removal is only to be undertaken by a suitable qualified person).
- In the event that during the construction phase of the proposed development any archaeological discoveries are made construction works should stop, the findings must be recorded and reported to SAHRA immediately. No construction activities at the area where archaeological discoveries were made, may proceed without authorization from SAHRA.
- Bund wall of fuel tanks should be within the capacity to be able to contain spillages

- All effluent from the wash bay should be disposed of in a properly constructed drain and must be situated as far as possible away from a watercourse
- Only domestic wash water may be allowed to enter the drain and any effluent containing oil and grease or other industrial substances must be collected in a suitable receptacle and removed from site.
- The name of the Hazardous Waste Company to be used for the removal of hazardous material should be provided to DWS. A written agreement between the applicant and the said company should also be forwarded to DWS.
- The applicant should ensure that the septic tank is approved and is sited in such a way that it does not cause water or other pollution. Mitigation measures must be in place to prevent contamination of local groundwater and surface water.
- The applicant should indicate where the effluent will be discharged after it is drained from the septic tank. The applicant should clearly indicate how the septic tanks will be handled and Authorisation for Section 21(g) of the National Water Act (Act 36 of 1998) should be obtained if required.
- It is important that any spillages of chemicals are reported to DWS and relevant authorities.
- The applicant should ensure that no unacceptable impact on the quality of both surface and groundwater is associated with the proposed project. If pollution of any surface or groundwater occurs, it must be immediately reported to DWS and appropriate mitigation measures must be implemented.
- Ensure that all specialist studies form part of the EIA and must be submitted to DWS before construction commences.
- All relevant sections and regulation of the National Water Act, 1998 (Act 36 of 1998) regarding water use must be adhered to.
- An EMP must be compiled and submitted to MMM.
- Should any fuel be stored underground in future, the following should be undertaken:
 - A geohydrological study must be conducted.
 - Stormwater management plan must be compiled.
 - All other relevant authorities must be consulted.
- An ECO must be appointed
- A waste management plan must be compiled and also provide guidance to ensure that domestic, industrial and hazardous wastes are managed at the proposed site in a way that is protective of health, safety and environmental.

- Material Safety Data Sheets shall be available on site for all chemicals and hazardous substances to be used on site. It should additionally include (where available) information on measures to minimize negative environmental impacts during accidental releases or escapes.
- Site and Employees are to be managed in strict accordance with the OHS Act and National building Regulations. A health and safety representative should be appointed if more than 20 employees are employed.
- Facility must register with the local Fire Fighters Organization and periodically conducts drill in conjunction with the local fire fighter's unit.
- Proposed development must comply with other environmental legislation and requirements that are related to issues such as noise and light pollution, air quality, water use and management, solid waste management and storm water management.
- The provincial tertiary road T4730 will be affected by the proposed project
- The Department will formulate comments subsequent to obtaining a site development plan and information on the expected traffic to determine the impact on the provincial road network

APPENDIX H

Environmental Awareness Plan

ENVIRONMENTAL AWARENESS PLAN

The proposed construction of a diesel depot on Portion 1 of Plot 42, Estoire, Bloemfontein

| | |
|-----------------------------|---|
| Location: | Portion 1 of Plot 42, Estoire, Bloemfontein, Free State |
| Applicant: | Mack's Petroleum (PTY) LTD |
| Competent Authority: | The Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs (DESTEA) |
| MDA Ref No: | 40813 |
| DESTEA Ref No: | EMS/4/20/02 |
| NEAS Ref No: | FSP/EIA/0000324/2020 |
| Report Date: | November 2020 |



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1. Background

The aim of the current document is to make all employees, contractors, visitors, etc. aware of specific issues related to their surroundings, including biotic and abiotic elements, such as land, soil, plants, animals, air, water, as well as awareness of the built, social and economic surroundings as well as the impacts that the proposed project have on the mentioned elements.

2. Objectives for Environmental Awareness

It is important that the employees understand how each action of the project may influence the environment. It is just as important that each person understand the management strategies as it ensures that the impact on the environment is kept to a minimum.

The Environmental Awareness Plan should be sufficient to make all those involved in the proposed project aware of the risks that may occur as well as the necessary mitigation required to minimise the risks involved.

2.1. Target Groups

The target groups can be summarised as the management, administrative and general employees, as well as contractors.

2.2. Roles and Responsibility

2.2.1. Top Management

- Provide resources to ensure that the environmental awareness plan is implemented.

2.2.2. Environmental Team

- Approve all environmental awareness activities.
- Accountable for ensuring adequate resources are allocated for the effective implementation of the environmental awareness plan.
- Responsible for providing strategic direction for effective implementation of the environmental awareness plan.
- Responsible for overall establishment and implementation of environmental awareness plan.

- Ensure that environmental activities and information is communicated to the employees and contractors.
- Implement and drive the environmental awareness plan.

2.2.3. Employees and Contractors

- Adhere to and co-operate with management strategies as set out in the environmental awareness plan.

3. Implementation

The induction workshop will be conducted in order to inform all personnel (as well as contractors) that will be working on site of the Environmental Awareness Plan. During the induction, the risks for all aspects will be explained and the appropriate management options will be discussed. Monitoring programmes will also be discussed in order to identify and monitor the proposed project's impact on the environment and to discuss various remediation actions, should any deterioration be observed.

All employees will attend an induction workshop prior to the construction phase in order to ensure that all risks and mitigation measures are discussed prior to the occurrence of potential impacts. The workshop should be repeated to all new employees / contractors on site.

3.1. Induction

The Environmental Awareness Program must be implemented to:

- Develop and implement environmental education activities for all employees
- Organise environmental awareness activities on site
- Participate in environmental education

The constitution of the Republic of South Africa (1996) gives everyone the right to:

- (a) An environment that is not harmful to their health or well-being

- (b) Have the environment protected for the benefits of present and future generations through reasonable legislation in order to:
 - (i) Prevent pollution and ecological degradation
 - (ii) Promote conservation
 - (iii) Promote justifiable economic and social development while protecting our environment.

Therefore, those who may cause pollution or other environmental degradations must take reasonable preventative measures to:

- (a) Investigate, assess and evaluate the impacts
- (b) Inform and educate employees about environmental risks associated with their work and the manner in which their tasks must be performed in order to avoid causing pollution or environmental degradation.

The induction workshop will focus on activities that carry an environmental risk, actions to be taken to reduce these risks and procedures to be followed in the event of an incident.

Environmental goals & objectives and the benefit of achieving such goals will be discussed as part of the induction workshop.

3.2. In-house training

In-house training events will be organised with relevant employees. The points to be discussed at these events will be determined by the relevant department. In addition, employees will participate in determining what environmental issues and / or concerns are relevant to their specific occupation.

The environmental incident report will also be discussed at these sessions.

3.3. Training during construction phase

3.3.1. HoD Meetings

The General Manager communicates information to senior management on environmental issues and the information is minuted.

3.3.2. SHEQ Meetings

Environmental issues are to be discussed at each of the SHEQ meetings. The responsible person for each of the environmental issues should also be appointed.

3.4. On the Job Training

Expected environmental issues and concerns specifically related to their occupation will be discussed with employees throughout the construction phase. Employees will be trained on how to respond to such environmental impacts.

3.5. General training & skills development

Training in basic environmental and pollution control skills will be given to employees working on site.

3.6. General Aspects

- i) The contractors should ensure that all employees and any third party are adequately trained with regard to the implementation of the EMP, before any of the contractor's obligations are carried out by the above mentioned parties. This includes training regarding any environmental legal requirements as well as any other obligations. The appointed ECO (or external specialists) should conduct the required training.
- ii) The management (including the executive as well as middle) as well as general labour levels should be targeted during the training sessions.
- iii) Environmental Awareness Training Programmes should include, but not limited to, the following:
 - Names, positions and responsibilities of personnel to be trained in various training sessions
 - Schedules indication dates for various training sessions
 - Framework for various training sessions
 - Summarised content of training sessions
 - Importance of conformance with environmental regulations and policies

- Impacts that various work activities may have on various environmental aspects
- Roles and responsibilities of employees to ensure conformance with the EMPr, best practices as well as other environmental policies
- The potential consequences should the specified operating procedures not be adhered to
- Implementation of various mitigation measures
- Information on the protected / species of concern that may be observed on / near the construction site
- Information on the possible occurrence of archaeological and/or historical findings on site
- Importance of:
 - not littering
 - using supplied toilet facilities
 - using water sparingly
 - minimising the occurrence of pollution (air, soil, surface water or groundwater resources)
 - re-use of material where possible (limit the generation of waste)

iv) All records of all training sessions should be available on site. An induction presentation on environmental awareness as well as the EMPr shall be given to all employees, in a language that is understood by the employees.

v) The on-site ECO as well as the contractor should monitor the performance of employees to ensure that the above is adhered to.

4. Evaluation of the Environmental Awareness Plan

The ECO will evaluate the Environmental Awareness Plan throughout the construction, operation and closure phase.

| Environmental Awareness Plan | |
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| Objective / Environmental parameter: General measures to consider | |
| Risks | Mitigation measures |
| <ul style="list-style-type: none"> • Negative impact on Environment, such as pollution, degradation, loss of vegetation, etc. • Surface and groundwater pollution. | <ul style="list-style-type: none"> • Any construction is disruptive and the environment must be given consideration with every activity undertaken • All relevant standards relating to legislation should be adhered to (including waste emissions, waste disposal, noise regulations, etc.) • According to Section 28 of the NEMA Act 107, every person who cause, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring and if it can't be avoided or stopped, to minimize and rectify such pollution or degradation of the environment. • The pollution control provision in Section 19(1) of the National Water Act (Act 36 of 1998) should be adhered to at all times. |

| Environmental Awareness Plan | |
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| Objective / Environmental parameter: Planning phase | |
| Risks | Mitigation measures |
| <ul style="list-style-type: none"> • Loss of protected fauna and / or flora. • Loss of natural occurring vegetation • Contamination of soil / water resources No drinking water available to employees • Occurrence of veld fires Loss of artefacts / heritage material • Damage to nearby infrastructure • Startle domestic and wild animals • Damage to nearby infrastructure • Undertaking unauthorised activities | <ul style="list-style-type: none"> • Permits will be obtained for the removal / transplantation of protected species (if any) that are located within the construction area where no alternatives are possible. • Care will be taken to prevent unnecessary damage to vegetation near to construction activities. • A monitoring system should be implemented to determine the occurrence (if any) of any fuel / oil spillages from the fuel tanks / wash-bay during the operational phase. • The necessary Environmental Authorisation will be obtained before any activities listed in the relevant NEMA Regulations are undertaken. • In addition, the necessary DWS registrations will be obtained, before any construction activities are undertaken. • The necessary precautions with regard to road safety will be implemented for construction work to be undertaken within road crossings (if any). • Proper sanitation, potable water and waste facilities will be in place before construction activities are undertaken. • A blasting permit will be obtained before blasting activities is undertaken (if any). |

| Environmental Awareness Plan | |
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| Objective / Environmental parameter: Construction phase - general | |
| Risks | Mitigation measures |
| <ul style="list-style-type: none"> • Loss of natural occurring vegetation • Contamination of soil / water resources • No drinking water available to employees • Occurrence of veld fires • Loss of artefacts / heritage material • Damage to nearby infrastructure • Startle domestic and wild animals • Damage to nearby infrastructure | <ul style="list-style-type: none"> • Care will be taken to prevent unnecessary damage to vegetation near to construction activities. • The necessary Water Use Authorisations will be available on site. • The necessary precautions with regard to road safety will be implemented for construction work within road crossings (if any). • Proper sanitation, water and waste facilities will be in place for construction workers throughout the construction phase. • Chemical toilets will be cleaned and serviced regularly and proof thereof will be available on site. • Potable water will be made available daily to workers on site. • Fire-fighting equipment will be available on site, where applicable. • If artefacts or graves are uncovered during construction activities, work in the immediate vicinity will be stopped until the project Archaeologist and SAHRA has been consulted. • Adjacent landowners will be notified of proposed blasting, 24 hours prior to blasting activities. |

| Environmental Awareness Plan | |
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| Objective / Environmental parameter: Water resources | |
| Risks | Mitigation measures |
| <ul style="list-style-type: none"> • Erosion • Undertaking of unauthorised activities • Contamination of stormwater • Contamination of soil • Contamination of surface and / or groundwater resources • Ponding of stormwater | <ul style="list-style-type: none"> • No activities will be undertaken within 32 m of a watercourse / within the 1:100 year floodline, without the necessary authorisations (for example from DESTEA and DWS). • Caution will be taken to ensure that construction materials are not dumped or stored within storm water management systems. • Emergency plans will be in place in case of fuel spillages (to limit the occurrence of soil as well as groundwater pollution). • A monitoring system should be implemented to determine the occurrence (if any) of any fuel / oil spillages from the fuel tanks / wash-bay during the operational phase. • The necessary mitigation measures should be implemented immediately, should any leakages / spills be detected. • Weather forecasts from the South African Weather Bureau of up to three days in advance will be monitored on a daily basis to avoid exposing soil or construction works or materials during a storm event and appropriate action will be taken in advance to protect construction works should a storm event be forecasted. • Construction activities in the storm water infrastructure will be limited through proper demarcation and appropriate environmental awareness training. • The Contractor is responsible to inform all staff of the need to be vigilant against any practice that will have a harmful effect on waterways. • All no-go areas will be demarcated under guidance of the Environmental Control Officer (ECO). • Infilling, excavation, drainage and hardening of surfaces will not occur unnecessarily in storm water infrastructure. • The design of drainage systems will ensure there is no contamination, eutrophication or |

| Environmental Awareness Plan | |
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| Objective / Environmental parameter: Water resources | |
| Risks | Mitigation measures |
| | <p>increased erosion.</p> <ul style="list-style-type: none"> • Drainage systems will be maintained regularly in order to minimize the runoff of harmful chemical substances into the waterway(s). • It will be ensured that the construction activities have minimal effects on the flow of water through the storm water infrastructure. |

| Environmental Awareness Plan | |
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| Objective / Environmental parameter: Handling and Storage of materials | |
| Risks | Mitigation measures |
| <ul style="list-style-type: none"> • Contamination of stormwater, surface and / or groundwater • Contamination of soil • Occurrence of veld fires | <ul style="list-style-type: none"> • All chemicals used during the development, including fuel, will be stored in a proper storeroom or protected area to prevent pollution. • Vehicles will be serviced at designated areas. No oil, diesel or other chemicals may be spilled or discharged anywhere. • Where applicable, the contractors will ensure that all relevant national, regional and local legislation regarding storage, transport, use and disposal of petroleum, chemical, harmful or hazardous substances and materials are adhered to, where necessary. • Cement and concrete mixing, if applicable, will only take place within the construction site. No concrete will be mixed directly on the ground. • All environmental problems occurring on the site such as chemical spillage, wasteful water disposal, etc. will be reported to the ECO. The ECO should implement best practices to rectify the impacts thereof on the environment. • Spill response equipment must be available during the handling and loading of hazardous waste (if any) • Hazardous substances (including the above ground fuel tanks) to be stored in bunded area. Bund walls will have a capacity of at least 110% of the total capacity of the stored volume. • No oil, diesel or other chemicals may be spilled or discharged anywhere and contact with bare soil should be avoided at all cost. • Drip trays will be used during the servicing of vehicles as well as the transfer of chemicals / substances from transportation vehicles. • All environmental problems occurring on the site such as chemical spillage, wasteful water disposal, etc. will be reported to the ECO. The ECO should implement best practices to rectify the impacts thereof on |

| Environmental Awareness Plan | |
|---|---|
| Objective / Environmental parameter: Handling and Storage of materials | |
| Risks | Mitigation measures |
| | <p>the environment.</p> <ul style="list-style-type: none"> • A monitoring system should be implemented to determine the occurrence (if any) of any fuel / oil spillages from the fuel tanks / wash-bay during the operational phase. • The necessary mitigation measures should be implemented immediately, should any leakages / spills be detected. |

| Environmental Awareness Plan | |
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| Objective / Environmental parameter: Waste Management (Note that waste refers to all construction debris and domestic waste generated due to construction activities.) | |
| Risks | Mitigation measures |
| <ul style="list-style-type: none"> • Contamination of stormwater, surface and or groundwater • Contamination of soil • Occurrence of veld fires • Air pollution | <ul style="list-style-type: none"> • The contractor is responsible for the removal of construction waste. • Suitable containers will be placed on site to collect all solid waste. These will be emptied regularly. • No littering is permitted. During the construction period the site will be maintained in a neat and tidy condition. • All solid waste produced will be disposed of at an authorized landfill site. • All hazardous waste will be disposed of at an authorized hazardous landfill site. • Recyclable waste will be sold / re-used, where possible. • No dumping, burning or burying of waste will be undertaken on site. • A waste management plan will be compiled and designed to ensure adequate waste management activities. • Areas used for waste storage and loading of materials should be lined and bund walls have to be erected to contain any spills that might occur. |

| Environmental Awareness Plan | |
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| Objective / Environmental parameter: Soil, erosion and vegetation management | |
| Risks | Mitigation measures |
| <ul style="list-style-type: none"> • Contamination of surface and groundwater resources • Contamination of soil • Loss of topsoil • Loss of natural occurring vegetation • Erosion • Unsafe road • Occurrence of veld fires • Harm to animals • Slow regrowth of natural occurring vegetation • Establishment of alien vegetation | <ul style="list-style-type: none"> • Construction activities will be limited to designated construction areas to prevent peripheral impacts on surrounding natural habitats. • Construction vehicles will keep to constructed roads where possible, so that natural vegetation is not destroyed unnecessarily. • Access roads or temporary crossings must be non-erosive, structurally stable and not induce flooding / safety hazard. • If any access road or temporary crossing is impaired, it will be repaired immediately to prevent any future / further damage. • All human movement and activities will be contained within designated construction areas in order to prevent peripheral impacts on surrounding natural habitat. • Erosion management is important. Rehabilitation of disturbed areas will be undertaken to help the recovery of the vegetation. • Stockpiled material will be stockpiled in an area where it will not be disturbed by vehicles. • Stockpiled material will be protected from washing away during rainstorms. For example, one layer of bricks or stones can be placed around the stockpiled topsoil. • Stockpiled material will be placed on the cleared areas once construction is completed. Re-spreading of topsoil (to its natural depth / as stipulated by the ecologist) is to be undertaken. • An alien control and monitoring programme will be developed starting during the construction phase and will be carried over into the operational phase. • Any proclaimed weed or alien species that germinates during the contract period will be cleared by hand / approved chemicals before flowering thereof. • Imported fill material will be monitored |

| Environmental Awareness Plan | |
|---|---|
| Objective / Environmental parameter: Soil, erosion and vegetation management | |
| Risks | Mitigation measures |
| | <p>during and after construction for the presence of any alien species. Any such species will be removed immediately.</p> <ul style="list-style-type: none"> • No open fires allowed. Provision will be made to limit the occurrence of accidental fires. • No firewood will be collected on site or in surrounding areas, without written approval from the landowner. • Fire fighting equipment will be available on site. • Species, especially grasses, trees and shrubs occurring in the region will be used to rehabilitate disturbed areas. • No animals may be harmed / captured / trapped and / or hunted. This must be strictly enforced. • Animals found at the construction site will be removed and relocated to a suitable area, by a suitable person. • Compacted soils (such as dirt tracks not to be utilised during the operational phase) must be ripped to ensure the establishment of natural occurring vegetation. |

| Environmental Awareness Plan | |
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| Objective / Environmental parameter: Noise and dust control | |
| Risks | Mitigation measures |
| <ul style="list-style-type: none"> • Generation of nuisance noise • Generation of nuisance dust | <ul style="list-style-type: none"> • Construction activities will be limited to normal daytime hours. • Noise levels will be kept as low as possible during the construction phase in order not to disturb adjacent landowners. • Proper mitigation measures will be implemented to limit noise (e.g. the installation of silencers, where required). • Proper mitigation measures will be implemented to limit the formation of dust (e.g. wetting of construction area, when required). • The speed of the construction vehicles will be limited to avoid dangerous conditions, the formation of dust and the excessive deterioration of roads being used. |

| Environmental Awareness Plan | |
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| Objective / Environmental parameter: Safety and Security | |
| Risks | Mitigation measures |
| <ul style="list-style-type: none"> • Health risks • Safety risks • Unsafe Road • Occurrence of veld fires | <ul style="list-style-type: none"> • The contractors will comply with the Occupational Health and Safety Act, National Building Regulations and any other national, regional or local regulations with regard to safety on site. Construction contracts will include safety and security measures for staff. • Fire extinguishers will be available on site and in the construction camp (if any). • Precautions to ensure that construction staff and sites are visible and proper PPE will be provided to all employees. • Construction work within road reserves will accommodate road users as far as possible. This includes the following: <ul style="list-style-type: none"> - Roads will be crossed in half widths at a time to minimise the impact on vehicular traffic, where possible. - Construction along and across existing roads will be executed in such a manner that both pedestrian and vehicular traffic is accommodated at all times. - The contractor will be required to maintain adequate access to all public and private property at all times. - Contractor will supply, erect and maintain road signs for all work areas conforming to the prescribed layout and requirement of the South African Road Traffic Signs Manual and other relevant notices. - The contractor will be required to maintain adequate access to all public and private property at all times. |

| Environmental Awareness Plan | |
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| Objective / Environmental parameter: Heritage Management | |
| Risks | Mitigation measures |
| <ul style="list-style-type: none"> Loss of heritage / archaeological / palaeontological artifacts | <ul style="list-style-type: none"> In the case of the discovery of any heritage, archaeological or palaeontological significance, the work in the area will be stopped and reported to the archaeologist and SAHRA. Any construction activities in the nearby vicinity may only commence after approval is obtained from SAHRA as well as the ECO. Should any fossils be uncovered within intact sedimentary rocks during the development or if excavations exceed more than 1 m into sedimentary rock, a suitably qualified Palaeontologist must evaluate the finds or monitor the exposed areas as soon as possible. Known heritage resources (if any) must be avoided as far as possible. Employees should be encouraged and informed of the need to be on the look-out for potential fossils / buried archaeological material. In the case of the discovery of any stone tools or other archaeological or palaeontological material, the work in the immediate vicinity should temporarily cease and reported to the archaeologist and SAHRA. Should any human remains be exposed, the archaeologist as well as the local SAPS should also be notified. If any evidence of archaeological sites or remains (e.g. remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, charcoal and ash concentrations), fossils or other categories of heritage resources are found during the proposed development, SAHRA APM Unit (Tel: 021 462 5402) must be alerted. If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves (BGG) Unit (Tel: 012 320 8490), must be alerted immediately. A professional archaeologist or palaeontologist, depending on the nature of the finds, must |

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| | <p>be contracted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required subject to permits issued by SAHRA.</p> <ul style="list-style-type: none">• Appropriate measures should be undertaken by the ECO until the archaeologist / SAPS visits the site. This should include the following:<ul style="list-style-type: none">- Site should be fenced with 'danger tape'- Position of finding should be recorded- Depth of finding should be recorded- Digital image of the finding should be taken• No information on the findings may be made public without the consent of the archaeologist / SAPS.• Construction activities in the area may only continue after approval from the archaeologist and SAHRA. |
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| Environmental Awareness Plan | |
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| Objective / Environmental parameter: Site Clean-up and Rehabilitation | |
| Risks | Mitigation measures |
| <ul style="list-style-type: none"> • Contamination of surface and groundwater resources • Contamination of soil • Loss of topsoil • Loss of natural occurring vegetation • Erosion • Unsafe road • Occurrence of veld fires • Harm to animals • Slow regrowth of natural occurring vegetation • Establishment of alien vegetation | <ul style="list-style-type: none"> • Temporary structures and office sites (if any) will be dismantled and removed after completion of the construction phase of the project. • All waste, equipment, materials, etc. used during construction will be cleared from the site. The contractors will ensure that the site is cleared and rehabilitated to the satisfaction of the ECO. • An alien plant control and monitoring programme will be implemented. • Re-vegetation of disturbed areas will be undertaken with site indigenous species. Hydro-seeding will be implemented if the establishment of natural occurring vegetation does not occur within reasonable time. • After completion of the construction phase, a waterway monitoring program will be initiated that ensure that all are adequately rehabilitated. |

| Environmental Awareness Plan | |
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| Objective / Environmental parameter: Operational Phase | |
| Risks | Mitigation measures |
| <ul style="list-style-type: none"> • Contamination of surface and groundwater resources • Contamination of soil • Loss of topsoil • Loss of natural occurring vegetation • Erosion • Unsafe road • Occurrence of veld fires • Harm to animals • Slow regrowth of natural occurring vegetation • Establishment of alien vegetation | <ul style="list-style-type: none"> • Regular inspections of the construction area, as well as the fuel tanks will be done to identify leakages. These will be attended to immediately in order to limit the occurrence of soil / groundwater pollution. • Soil erosion occurrences will be attended to immediately. • A monitoring system should be implemented to determine the occurrence of any fuel / oil spillages from the fuel tanks / wash-bay during the operational phase in order to ensure that no soil / groundwater pollution occur. • The necessary mitigation measures should be implemented immediately, should any leakages / spills be detected. • Measures will be implemented to minimise the loss of water at any section (including activities associated with the wash-bays) • Regular monitoring will be undertaken to ensure that no soil / groundwater pollution occur due to the activities associated with the operational phase. • An action plan will be available and implemented immediately, in case pollution of soil / groundwater occurs to ensure that it is rectified as soon as possible. |

| Environmental Awareness Plan | |
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| Objective / Environmental parameter: Decommissioning / Closure | |
| Risks | Mitigation measures |
| <ul style="list-style-type: none"> • Contamination of surface and groundwater resources • Contamination of soil • Loss of topsoil • Loss of natural occurring vegetation • Erosion • Unsafe road • Occurrence of veld fires • Harm to animals • Slow regrowth of natural occurring vegetation • Establishment of alien vegetation | <ul style="list-style-type: none"> • It is not anticipated that the proposed project will cease in the nearby future. However, if decommissioning is decided upon, a rehabilitation plan will be developed and submitted for approval. The end-use of the area will be kept in mind during the compilation of the rehabilitation plan. • Decommissioning of the storage tanks and associated infrastructure will involve sampling the soil at the locations and analysing it for potential contamination, remediation of the soils if required and the rehabilitation of areas that have been disturbed. |

| Environmental Awareness Plan | |
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| Objective / Environmental parameter: Compliance and Monitoring | |
| Risks | Mitigation measures |
| <ul style="list-style-type: none"> • Contamination of surface and groundwater resources • Contamination of soil • Loss of topsoil • Loss of natural occurring vegetation • Erosion • Unsafe road • Occurrence of veld fires • Harm to animals • Slow regrowth of natural occurring vegetation • Establishment of alien vegetation • Undertaking of unauthorised activities • Non-compliance to EMPr / EA / DWS Authorisation | <ul style="list-style-type: none"> • The applicant will ensure that the contractors adhere to the recommendations of the EMPr and conditions of the Environmental Authorisation during construction. • An Environmental Control Officer (ECO) will be appointed to monitor the construction phase. Note that the ECO may be appointed separately or can be part of the contractor's team. • Regular monitoring and / or spot inspections at least every fortnight during the construction phase is recommended. • Inspections should be documented and any shortcomings addressed immediately. • An independent ECO will be appointed to monitor the construction phase. A report will be provided to the contractor upon completion thereof. The findings thereof should be made available to DESTEA, should it be requested. • Any emergency or unforeseen impact will be reported to the relevant environmental department within 24 hours after identification for telephonic approval and will be confirmed in writing. • During the operational phase the fuel tanks and associated infrastructure must be routinely audited and maintenance schedule adjusted accordingly in order to prevent leaking. • Material Safety Data Sheets (MSDS) should be available on site. Where possible and available, MSDS should include information on ecological impacts and measures to minimize negative environmental impacts during accidental releases or escapes. |

Appendix I

Stormwater Management Plan

STORMWATER MANAGEMENT PLAN

The proposed construction of a diesel depot on Portion 1 of Plot 42, Estoire, Bloemfontein

Location: Portion 1 of Plot 42, Estoire, Bloemfontein, Free State
Applicant: Mack's Petroleum (PTY) LTD
Competent Authority: The Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs (DESTEA)
MDA Ref No: 40813
DESTEA Ref No: EMS/27,4/20/02
NEAS Ref No: FSP/EIA/0000324/2020
Report Date: September 2020



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1. Project description

The proposed project entails the construction / development of a fuel depot with ancillary amenities, including a wash bay on Portion 1 of Plot 42, Sand du Plessis Avenue, Estoire Small Holdings, Bloemfontein.

The storage tanks will be above ground of nature. The above ground tanks will be bunded to carry at least 110% of the total volume of fuel to be kept in the tanks. It is proposed that the following above ground tanks be installed during various phases:

Phase 1: 1 x 79 000ℓ (existing)

Phase 2: 5 x 83 000 ℓ

Phase 3: 5+ x 83 000 ℓ

Please refer to the map in Appendix A of the Environmental Impact Assessment Report for an indication on the locality of the proposed activities.

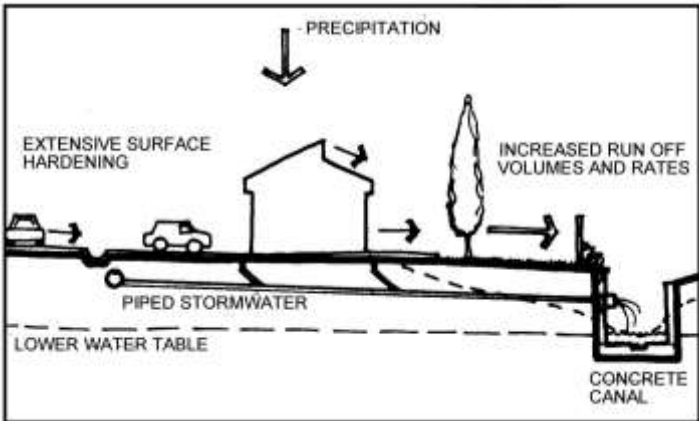
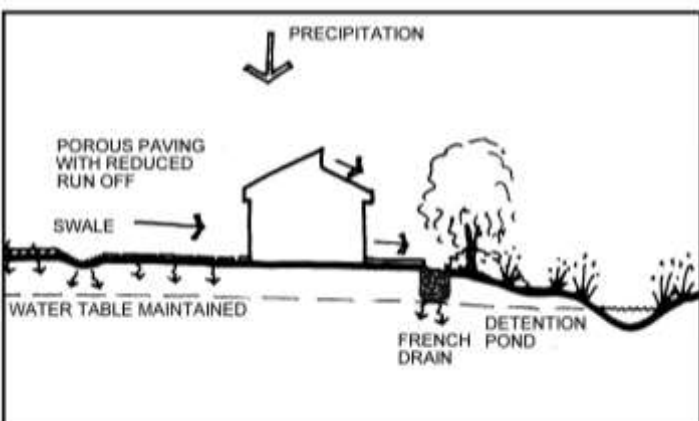
2. Stormwater Management Objectives

The main objective of the stormwater management plan is to minimise the effect of the proposed project on the environment. This objective can be divided into the following sections:

2.1 Minimising effect of proposed project on environment

The aim of the stormwater management plan is to minimise the effect of the proposed project on the environment (Figure 1).

| Figure 1: Indication of effect of stormwater management in a developed area | | |
|---|---------------------|---------|
| Nr | Description | Drawing |
| 1 | Natural Environment | |

| | | |
|---|---|---|
| 2 | Developed Area, without sufficient stormwater mitigation measures being implemented |  |
| 3 | Developed Area, with sufficient stormwater mitigation measures being implemented |  |

2.2 Minimize the possibility of flooding

The minimisation of the possibility of flooding remains a key objective of any stormwater management system. However the challenge when contemplating design of stormwater management systems is to consider the following:

- To mimic pre-development responses to storms.
- To reduce the volume of runoff by promoting infiltration.
- To reduce the peak flows and increase the time-to-peak through detaining the runoff and releasing it at a gradual rate.
- Where necessary, to construct means to contain flood waters and safely convey them out of the urban area.

2.3 Protection of Receiving Water Bodies

The receiving water body is not necessarily the system into which stormwater is discharged directly, but can also be a natural system located further downstream in the catchment. Every endeavour should be made to achieve the following as far as possible:

- Maintain natural flow regimes and seasonality
- Prevent deterioration in water quality
- Prevent erosion or sedimentation of natural wetlands or rivers.
- Preserve natural river channels, wetlands and vegetation, and preclude engineering interventions that may alter their physical and ecological characteristics.

The need to design appropriate stormwater management systems for new developments should be seen as an opportunity to preserve or, if possible, improve natural freshwater ecosystems that have suffered degradation as a result of past activities, and in some cases to create additional freshwater habitats that will contribute to the availability of appropriate, high quality river and wetland habitat that mimics the natural condition.

2.4 Promote Multi-Functional Use of Stormwater Management Systems

Resources such as land and water are becoming increasingly scarce and multiple uses of these must be strived for. Stormwater systems provide a wide range of opportunities for multi-functionality. These can have significant implications on:

- The initial and long term costs of development (e.g. Instead of constructing a detention pond and a sports field, these uses could be combined)
- The quality of the natural and urban environment [e.g. the pressure of private development requirements on land for public land use, conservation, etc. can be alleviated by combining compatible land uses such as conservation, recreation and stormwater systems (including wetlands, marshes, dams and rivers) enabling an improved natural and urban environment]
- Maintenance efficiency (e.g. instead of meeting the maintenance requirements of stormwater systems and public open space separately, they could be combined and could include walking/bicycle trails and parks).

2.5 Development of Sustainable Environments

The long-term involvement with the project and consideration of the sustainability of the stormwater management system that is to be implemented should be kept in mind. All relevant factors that will impact on

future operation and maintenance should be taken into account. Environmental policies such as promoting the use of locally indigenous vegetation in planting programmes will also reduce the long-term maintenance requirements of the development.

3. Stormwater Planning Regarding the Proposed Project

Adequate planning is crucial to the success of the project as a whole.

3.1. Need for Multi-disciplinary Expertise

To maximise opportunities to manage stormwater, the input from various design teams are necessary (Table 1).

| No | Team member | Role |
|----|-------------------------------------|---|
| 1 | Civil Engineer | An engineer skilled in the design of stormwater systems should determine runoff flows for the required recurrence intervals and proposed land uses and design appropriate measures to attenuate peak flows and safely convey the runoff. |
| 2 | Environmental Consultant | Alert the engineer at the conceptual stage of the development to crucial aspects of the environment, which are fulfilling an important role with respect to stormwater and should be taken into consideration, as well as opportunities for enhancement or rehabilitation of existing natural features. |
| 3 | If required Freshwater Ecologist | Provide insight regarding the functioning of natural rivers, streams and wetlands and advice regarding the ecological aspects of the design of the components of the system, including water quality enhancement and the land needed for the system to function. |
| | Landscape Architect | Provide a holistic site analysis of the existing natural and man-made landscape and advice on the opportunities, constraints and implications of the site on the development planning and design. |

3.2. Incorporation of Existing Information into Planning Stage

The following information (where relevant) should be investigated, during the planning stage and used to feed into more detailed site assessment:

- Catchment area in which the site is located
- Catchment or river management plans (overall management objectives and recommended key management actions with respect to runoff quantity, quality and other associated environmental and social issues, where such plans exist for the catchment in question, must be met in the design stage)
- Stormwater management master plan (identifies bulk infrastructure, including stormwater flow routes, required within developing areas and may identify particular issues such as pollution which must be addressed at a local level. The existence of a stormwater management master plan which covers the area to be developed should be established and its recommendations applied to the design.
- Existing reports relating to the sensitivity of known wetlands / rivers / other natural ecosystems on or associated with the study area.

Interdependencies exist between the various water related services such as water supply, sanitation and stormwater management. Thus, consideration of the impact of effluent discharges into or water abstraction from stormwater management systems should be taken into account.

3.3. Site Analysis

The physical characteristics of the site reflect the existing course of runoff and stormwater. Working with the natural environment and environmental processes has been found to be safer, more sustainable and easier to maintain in the long term, than more traditional engineering approaches aimed at controlling these processes.

On sites that have been substantially disturbed, consideration should be made of what the natural drainage and runoff conditions would have been, as well as the existing situation. This will enable potential problems, and opportunities, to be identified.

3.3.1. Topography

The consideration of various topographical factors is important for the compilation of a stormwater management plan, due to the following:

- Gradients dictate the direction of flow and runoff/drainage routes can be plotted over land, identifying areas of ponding and concentration of loads
- In some areas which are very flat, earthworks may be required to provide sufficient grade for drainage
- Topography influences the potential for erosion to occur
- Topography informs the feasibility of different locations for stormwater routes, outlets and treatment areas; the main stormwater routes should be located along natural drainage routes
- In ecological terms, different habitats, some of higher conservation value than others, are frequently associated with changes in topography
- From an environmental and stormwater management perspective, as the slope increases, erf sizes should also increase to prevent excessive run-off and potential erosion
- Road and planning layouts should also reflect the topography of an area, to enable integrated stormwater design and management
- The commercial (and aesthetic) value of different sections of a development area is also frequently derived from different topographical characteristics.

3.3.2. Geology, Soils and Groundwater

The infiltration potential of the site is mostly determined by the geology, soil and groundwater conditions of the area. The following factors should be considered, where possible:

- Soil types affect surface permeability and hence rate of runoff
- The mapping of geology and soils will indicate areas of potential groundwater recharge
- Geology and soils influence the potential for erosion to occur
- Soil types should be identified, along with the characteristics of the different soils, such as levels of infiltration, permeability and their water-bearing capacity
- The presence of contaminated soils, which may pose a threat to surface and groundwater quality should be identified and plotted
- Areas of high groundwater levels can limit the possibilities and/or desirability of groundwater recharge and filtration methods.
- It should be noted that large-scale removal of certain vegetation types, such as Port Jackson (*Acacia saligna*) and Bluegums (*Eucalyptus* sp.), that consume large volumes of water, might significantly raise groundwater levels

- Need to determine seasonal and longer term trends in groundwater level fluctuation
- Soil types indicate the likely occurrence of particular plant communities, some of which may play a role in the stormwater management plan
- Assessing soils can also indicate the presence of both existing and even historic wetlands
- Seasonal variation of groundwater levels should be taken into account
- The geology and soils of a site will inform the feasibility of different locations for stormwater treatment areas and the potential for groundwater recharge
- Different habitats (some with high conservation value) are associated with specific geological features and soils

3.3.3. Climate

The following climatic factors should be considered, where necessary:

- Storm rainfall parameters are major design factors and must be carefully determined
- The general climatic characteristics of an area will also impact on the site and stormwater systems implemented, i.e. whether the site is generally waterlogged or dry and if evaporation levels are high or low
- Microclimate conditions can inform the spatial layout of water treatment and attenuation, particularly those associated with specific planting and multifunctional uses

3.3.4. Hydrology

It is essential, for successful, sustainable and integrated stormwater management, that the existing and/or natural hydrological response and functions of the site are understood. The following factors should be considered:

- The natural drainage that was characteristic of the development area, to the extent that this is possible, should be determined and both the irreversible as well as less permanent changes that have taken place should be identified
- The hydrology of the development area is a function of much of the other data, which is described under the Site Analysis section.

3.3.5. Cultural and Historical Landscapes and Archaeological Sites

Areas, routes, vegetation and landmarks that have a cultural and/or historical use or significance should be identified. Development and stormwater planning should avoid disturbing these areas where possible. Where possible they should generally be incorporated within the public open space of a development. This contributes a further function to the public open space system, and should be integrated into a network of public open space.

3.4. Development Requirements

The public open space and pedestrian access requirements of a development should be incorporated into the stormwater management planning of the site. The integration of public open space and access requirements with the spatial requirements of stormwater management not only reduces the conflict of pressure on land, but also enables the amalgamation of maintenance requirements, and maximises the use of resources. The following factors should be considered (where necessary):

- Land use planning should be done in relation to the natural context and characteristics of the site. The appropriate placement of land uses will enhance the multi-functionality of the stormwater systems and their use as an amenity by residents in the area.
- Innovative opportunities exist for future stormwater management systems to link-up and add value to educational initiatives (outdoor classroom), ownership (friends groups adopting the system), and water saving (re-use of stormwater/treated effluent for irrigation).
- These opportunities are also area specific and need to be identified up front, rather than as a nice-to-have-after-thought
- The need for a safe environment must be taken into account (e.g. avoid of potential hiding places for criminal elements; do not create unnecessary hazards in the selection of stormwater management options).
- The cost of stormwater implementation, management and maintenance, as well as flood risk, can be greatly reduced by identifying, retaining and enhancing the natural areas along which runoff and natural habitat retain ecological integrity. The advantages of this approach are not limited to stormwater, but can increase the visual, amenity and ecological value of a development.

3.5. Site Planning

3.5.1. Analysis

The developer should take the information stipulated in Section 2.3 into consideration during the Site Analysis Process.

3.5.2. Conceptual Layout

A general concept plan for the site layout should be developed, taking into account the legal and physical aspects of the site as developed through the site analysis process.

3.6. Design Phase

3.6.1. Appropriate Stormwater Management Facilities and Techniques associated with the project

Various stormwater management facilities and techniques were evaluated in terms of engineering, ecological, health, safety, aesthetic, social, construction and maintenance design objectives.

Various facilities and techniques may be utilised to manage stormwater runoff from the development.

3.6.2. Conveyance

Conveyance can be summarised as the use of natural or artificial channels, natural or artificial wetlands or pipes and culverts for stormwater conveyance as well as the prevention of erosion.

In general terms, the developer should consider the following aspects when selecting designs for stormwater conveyance:

- The slopes of the development area – stormwater design on steep slopes will need to incorporate methods for reducing erosion.
- Soil type and stability in the development area – the former will affect infiltration rates, as well as the potential for establishment of different kinds of plant communities in unlined conveyance structures; the latter will affect the degree of stabilisation that may be necessary.

- Seasonal changes in water table height – groundwater should not be exposed by unlined conveyance structures during summer, as this will promote drainage of the groundwater resource; infiltration capacity will be reduced if the water table is above an unlined channel base during winter.
- The cost of land – where land is at a premium, use of large areas for stormwater conveyance may be prohibitively expensive. Nevertheless, the increase in aesthetic and other forms of amenity value that may be gained from sensitive and imaginative stormwater designs may make the use of such space more economically feasible.
- The anticipated quality of stormwater runoff – severely polluted water may constitute a health hazard to downstream residents and an ecological hazard to downstream aquatic ecosystems. Consideration should be given to the conveyance of such water off-site, and directly to water purification works, at least during low-flow periods when water quality is likely to be most impacted.
- Presence of natural water bodies that would lend themselves to the conveyance of stormwater
 - Habitat integrity, priority ranking and/or ecological importance and sensitivity of the system should be considered
 - Sensitive systems should be protected from, rather than incorporated into stormwater conveyance design.
- The volume of expected stormwater runoff, during within-year flood events, and during larger storm events.
- The availability of open space for stormwater conveyance – large areas of open public or private space often lend themselves to the creation of wide, artificial waterways, which may also have ecological, recreational and aesthetic value in addition to providing a stormwater function.
- The presence of litter and sediment which would result in blockages.

Erosion is unfortunately often associated with development as areas become disturbed or as stormwater runoff is concentrated at outlets. In order to avoid these problems, options such as stabilisation, energy dissipation and the design of stormwater management systems, which do not concentrate flows, are recommended. A number of structures incorporated into stormwater design play a role in the dissipation of energy required to prevent erosion at outlet and inlet points, and at various points in different conveyance structures. This section provides brief commentary on the ecological, engineering and aesthetic function of each of these.

Soil which has been disturbed or from which the vegetation has been removed, should be stabilised to prevent erosion due to wind or runoff. Such erosion could cause the stormwater system to block, thereby resulting in the flooding of properties. Stabilisation would be short term, for the duration of the construction phase, followed by long term on completion of construction. Particular care should be taken of areas where development will not take place immediately on completion of the construction phase, e.g. wide verges in the road reserve which have been acquired to accommodate future road widening, or even reserved for unspecified local authority use.

3.7. Construction

3.7.1. Civil Engineering Specifications

All materials and workmanship should comply with the SABS Specifications.

3.7.2. Environmental Management Programme

Please refer to Appendix G of the Environmental Impact Assessment Report for a copy of the EMPr.

3.7.3. Protection of Stormwater Systems during the Construction Phase

The proposed construction activities will be undertaken in the dry season (winter months), where possible in order to limit impacts on the flow of stormwater. The above will also be included in the documentation to the contractor.

3.7.4. Vegetation and Stabilisation

Structures that rely on infiltration for their efficacy should not come into operation until their runoff areas have been stabilised, following construction. This will prevent the need for early and costly maintenance of structures.

If stabilisation by planting is envisaged, plants should be established before the onset of the winter rains. A phased approach to construction should be considered, where the extent of the water course is such that planting of the whole area will take too long for stabilisation to be effective, or where construction activities are likely to take longer than the period between the end of the wet season and the end of the dry season, when planting should take place.

In some cases, delays in the design or tender stages of a project result in delaying construction such that plants are unlikely to be established before the start of the rainy season. Planting during the rainy season is likely to result in the costly loss of plants, due to washout, as well as the erosion of banks, often resulting in the destruction of careful landscaping of bank slopes and profiles. In such cases, it is suggested that planting be delayed until after the end of the rainy season – either until spring, or until the following autumn. Planting in late spring would allow a longer period for the establishment of plants before the next rainy season. However, for all zones except for permanently wetted zones, frequent irrigation would be necessary to ensure the survival of the plants over summer.

Delays in planting are likely to have cost implications for the project as a whole: survival of pre-ordered, potted plants is often not good over a whole year; in addition, regarding and shaping of eroded banks may be necessary. Nevertheless, it should also be noted that there are advantages to such delays in planting – for one thing, it allows water levels and rates of flow to be observed over one year, and these observations can be used to guide plant zonation.

It is strongly recommended that any planting programmes carried out in stormwater management systems make use of locally indigenous plant species. Indigenous species tend to require less costly nurturing than do exotics. Moreover, they are often less prone to disease and, from an ecological perspective, can also provide areas of indigenous habitat, potentially linking areas of natural indigenous habitat, across the development area.

4. Stormwater Management Plan (Construction phase)

Given the project and site information as listed in the sections above it is possible to compile a Storm Water Management Plan in order to manage and limit possible environmental, surface and groundwater impacts associated with stormwater runoff.

4.1. Potential Pollution sources

The areas and activities that require particular attention with regard to the potential negative impacts of uncontrolled stormwater runoff need to be

identified. The potential pollution sources related to the proposed project can be listed as follows:

- Construction base camp
- Stockpile area
- Trench excavation
- Concrete mixing

4.2. Preventative measures and stormwater management tools

The following preventative measures and Management tools can be implemented in order to minimise and prevent the negative effects of storm water impacts for the identified pollution sources as well as other project related activities.

4.3. General preventative measures and stormwater management tools during the construction phase

- The applicant will ensure that the contractors adhere to the recommendations of the of the EMP as well as conditions set out in the Environmental Authorisation during construction
- An Environmental Control Officer (ECO) will be appointed to monitor the entire construction phase. Note that the ECO can be appointed independently or as part of the contractor's team.
- Regular monitoring and / or spot inspections must be conducted. It is recommended that the above mentioned monitoring / spot inspections occur at least every fortnight during the construction phase.
- Inspections must be documented and any shortcomings must be addressed immediately.
- An independent ECO will be appointed to monitor the construction phase. A report will be provided to the contractor upon completion thereof. This report and its findings should be made available to the environmental department if requested.

4.4. Construction base camp

- Proper sanitation, portable water and waste facilities must be in place before construction activities commence.
- Care must be taken to prevent any unnecessary damage to vegetation near construction base camp and any other construction activities.
- Potable water must be made available to workers on a daily basis.

- Caution must be taken to ensure that no construction materials are stored or dumped within 32 meters of a watercourse or buffer zones.
- Emergency plans must be available in case of any spillages into or near water resources.
- All chemicals used during the development, including fuel for the construction vehicles, will be stored in a proper storeroom or protected area to prevent pollution.
- Vehicles will be serviced at designated areas. No oil, diesel or other chemicals may be spilled or discharged anywhere.
- Where applicable, the contractors will ensure that all relevant national, regional and local legislation regarding storage, transport, use and disposal of petroleum, chemical, harmful or hazardous substances and materials are adhered to, where necessary.
- Cement and concrete mixing, if applicable, will only take place within the construction site. No concrete will be mixed directly on the ground.
- All environmental problems occurring on the site such will be reported to the ECO. The ECO should implement best practices to rectify the impacts thereof on the environment.
- The contractor is responsible for the removal of construction waste.
- Construction activities will be limited to designated construction areas to prevent peripheral impacts on surrounding natural habitats. Construction vehicles will also keep to constructed roads where possible, so that natural vegetation is not destroyed unnecessarily.
- All human movement and activities will be contained within designated construction areas in order to prevent peripheral impacts on surrounding natural habitat.
- The area where the construction base camp will be set out should be flat in terms of surface and not situated within 32meters from existing water courses.
- A temporary impervious surface should be provided where equipment and/or any hazardous materials (cement, lime, oil and fuel) can be stored, handled and used.
- In the event of any spillage incident the spillage should be cleaned, removed and discarded at the nearest authorised disposal facility.
- Chemical toilets must be serviced and cleaned regularly by the contracted entity.
- All and any waste generated by the construction workers must be disposed of in bins provided, these bins should be emptied and taken to the nearest applicable disposal facility on a regular basis.

4.5. Stockpile area

- Removed topsoil will be stockpiled in an area where it will not be disturbed by vehicles.
- Stockpiled material will be protected from washing away during rainstorms. For example, one layer of bricks or stones can be placed around the stockpiled material.
- On-site contractors are responsible for maintaining stockpiles.
- Weather forecasts from the South African Weather Bureau of up to three days in advance must be monitored on a daily basis in order to avoid exposure of soil, construction works or other harmful materials during a possible storm event.
- Weather forecasts must also be used as a tool to ensure that appropriate actions are taken to avoid the runoff/ erosion of topsoil or other stockpiled materials.
- The temporary stockpiling of soils or any other material should preferably be stored on flat surfaces, in flat topped mounds with side slopes not exceeding a 1:2 slope.
- The stockpiling of soils or other materials should occur more than 32meters from a water course on a relative flat surface.
- In the event of a surplus material or material unsuitable for backfilling however designated to remain onsite for landscaping, shall as early as possible be placed in its permanent position, be covered with top soil and vegetated.
- Stockpiled material will be placed on the cleared areas once construction is completed. Re-spreading of topsoil is preferably to be done to a maximum of 10 cm, depending on the natural depth.
- An alien control and monitoring programme will be developed starting during the construction phase and will be carried over into the operational phase.
- Any proclaimed weed or alien species that germinates during the contract period will be cleared by hand / approved chemicals before flowering thereof.
- Imported fill material will be monitored during and after construction for the presence of any alien species. Any such species will be removed immediately.

4.6. Trench Excavation

- Infilling, excavation, drainage and hardening of surfaces will not occur unnecessarily in water ways (i.e. permanent, seasonal or temporary) water courses or within 32 meters of them. The 32 meter buffer zone

should be extended in cases where slope in combination with rainfall can potentially provide conditions for the transportation and deposition of materials within the applicable water resource.

- The total depth of excavation will be kept to a minimum, where possible.
- All trenches should be backfilled as soon as possible.
- Trenching shall not proceed unreasonably far ahead of pipe laying (if any) - especially in cases where a steep gradient exists.
- The time period for the construction or associated activities within and close proximity of streams should be kept to a minimum.
- Temporary mounds or sandbags shall be placed along the route of all backfilled trenches in order to prevent washout.

4.7. Mixing of concrete

- Cement mixing should take place on impermeable liners.
- The cleaning of cement mixing and related equipment will be conducted using proper cleaning trays.

4.8. Other activities related to the project

- Site clearance:
 - Vegetation should not be stripped for the entire construction site at project commencement.
 - Phased vegetation clearance as the project continues is advised.
- Topsoil strip:
 - Should only commence on areas where immediate work will commence.
 - The extent of these areas should be limited to a minimum and only commence as work progresses to new areas.
 - The period of time between completion of topsoil removal and the commencement of earthworks should be kept at a minimum.
 - The topsoil and seedbank should be stripped, and stockpiled separately and protected against weed infestation and erosion
 - Topsoil should be replaced on top of the soil surface from which it was removed as soon as possible.

5. Stormwater Management Plan (Operational phase)

It is not anticipated that the project should pose further negative potential stormwater impacts after construction, however the following Preventative

measures and stormwater management tools should be implemented after the construction phase:

- After the completion of the construction phase a water way monitoring programme will be initiated to ensure the entire area is adequately rehabilitated.
- Following the completion of construction of all infrastructures, the area might be susceptible to erosion due to certain disturbances, areas should be evaluated post construction and determined.
- The areas found to be susceptible to erosion should be equipped with gabions or other geotextiles in order to prevent extensive erosion.
- Following the cessation of construction activities that took place in streams, streams should be inspected regularly for erosion and the necessary mitigation should be applied in order to rectify the situation and prevent further erosion.
- Any and/ all areas that have been compacted due to construction activities must be ripped and rehabilitated to its original state.
- After the cessation of construction related activities the area must be rehabilitated and transformed to its original state.
- The re-establishment of natural occurring vegetation should be monitored. Hydro- seeding should be implemented if natural re-establishment methods fail.
- After construction has ceased all construction materials should be removed from site.
- Regular inspections of the site should be conducted to identify leakages, poor vegetation regrowth and or any erosion occurrences. Soil erosion occurrences will be attended to immediately.

6. Summary of stormwater mitigation measures to be implemented

- Prevent concentration of stormwater flow at any point where the ground is susceptible to erosion.
- Reduce stormwater flows as far as possible by the effective use of attenuating devices (such as swales, berms, silt fences). As construction progresses, the stormwater control measures are to be monitored and adjusted to ensure complete erosion and pollution control at all times.
- Minimise the area of exposure of bare soils to minimise the erosive forces of wind, water and all forms of traffic.
- Ensure that development does not increase the rate of stormwater flow above that which the natural ground can safely accommodate.
- Ensure that all stormwater control works are constructed in a safe and aesthetic manner in keeping with the overall development.

- Design culvert inlet structures to ensure that the capacity of the culvert does not exceed the pre-development stormwater flow at that point.
- Design outlet culvert structures to dissipate flow energy. Any unlined downstream channel must be adequately protected against soil erosion.
- Permits will be obtained for the removal / transplantation of protected species (if any) that are located within the proposed road route where no alternatives are possible. Care will be taken to prevent unnecessary damage to vegetation near to construction activities.
- The necessary Environmental Authorisation will be obtained before any activities listed in the Regulations (Regulations 982, 983, 984 and / or 985 of 2014) are undertaken.
- Proper sanitation, potable water and waste facilities will be in place before construction activities are undertaken.
- Care will be taken to prevent unnecessary damage to vegetation near to construction activities.
- Potable water will be made available daily to workers on site.
- No activities will be undertaken within 32 m of a watercourse / within the 1:100 year floodline, without the necessary authorisations (for example from DESTEA and DWS).
- Emergency plans will be in place in case of spillages into the water resource(s).
- All no-go areas will be demarcated under guidance of the Environmental Control Officer (ECO).
- All chemicals used during the development, including fuel for the construction vehicles, will be stored in a proper storeroom or protected area to prevent pollution.
- Vehicles will be serviced at designated areas. No oil, diesel or other chemicals may be spilled or discharged anywhere.
- Where applicable, the contractors will ensure that all relevant national, regional and local legislation regarding storage, transport, use and disposal of petroleum, chemical, harmful or hazardous substances and materials are adhered to, where necessary.
- Cement and concrete mixing, if applicable, will only take place within the construction site. No concrete will be mixed directly on the ground.
- All environmental problems occurring on the site such will be reported to the ECO. The ECO should implement best practices to rectify the impacts thereof on the environment.
- The contractor is responsible for the removal of construction waste.
- Construction activities will be limited to designated construction areas to prevent peripheral impacts on surrounding natural habitats. Construction

vehicles will also keep to constructed roads where possible, so that natural vegetation is not destroyed unnecessarily.

- All human movement and activities will be contained within designated construction areas in order to prevent peripheral impacts on surrounding natural habitat.
- Erosion management is important. Rehabilitation of disturbed areas will be undertaken to help the recovery of the vegetation.
- Removed topsoil will be stockpiled in an area where it will not be disturbed by vehicles.
- Stockpiled material will be protected from washing away during rainstorms. For example, one layer of bricks or stones can be placed around the stockpiled material.
- Stockpiled material will be placed on the cleared areas once construction is completed. Re-spreading of topsoil is preferably to be done to a maximum of 10 cm, depending on the natural depth.
- An alien control and monitoring programme will be developed starting during the construction phase and will be carried over into the operational phase.
- Any proclaimed weed or alien species that germinates during the contract period will be cleared by hand / approved chemicals before flowering thereof.
- Imported fill material will be monitored during and after construction for the presence of any alien species. Any such species will be removed immediately.
- The total depth of excavation will be kept to a minimum, where possible.
- Species, especially grasses, trees and shrubs occurring in the region will be used to rehabilitate disturbed areas.
- An alien plant control and monitoring programme will be implemented.
- Re-vegetation of disturbed areas will be undertaken with site indigenous species.
- Soil erosion occurrences will be attended to immediately.
- The applicant will ensure that the contractors adhere to the recommendations of the EMPr and conditions of the Environmental Authorisation during construction.
- An Environmental Control Officer (ECO) will be appointed to monitor the construction phase. Note that the ECO may be appointed separately or can be part of the contractor's team.
- Regular monitoring and / or spot inspections at least every two weeks during the construction phase is recommended.
- Inspections should be documented and any shortcomings addressed immediately.

- An independent ECO will be appointed to monitor the construction phase. A report will be provided to the contractor upon completion thereof. The findings thereof should be made available to DESTEA, should it be requested.
- The drainage system for the site should be designed to specifications that can adequately deal with a 1:50 year intensity rainfall event or more to ensure sufficient capacity for carrying storm waters around and away from infrastructure.
- Procedures for storm water flow through a project site need to take into consideration both normal operating practice and special circumstances. Special circumstances in this case typically include severe rainfall events.

APPENDIX J

Environmental Management Programme (EMPr)

ENVIRONMENTAL MANAGEMENT PROGRAMME

The proposed construction of a diesel depot on Portion 1 of Plot 42, Estoire, Bloemfontein

| | |
|-----------------------------|---|
| Location: | Portion 1 of Plot 42, Estoire, Bloemfontein, Free State |
| Applicant: | Mack's Petroleum (PTY) LTD |
| Competent Authority: | The Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs (DESTEA) |
| MDA Ref No: | 40813 |
| DESTEA Ref No: | EMS/4/20/02 |
| NEAS Ref No: | FSP/EIA/0000324/2020 |
| Report Date: | November 2020 |



Town & Regional Planners,
Environmental & Development
Consultants

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1. INTRODUCTION

1.1 Project and associated construction activities

The proposed project entails the construction / development of a fuel depot with ancillary amenities, including a wash bay on Portion 1 of Plot 42, Sand du Plessis Avenue, Estoire Small Holdings, Bloemfontein.

The storage tanks will be above ground of nature. The above ground tanks will be bunded to carry at least 110% of the total volume of fuel to be kept in the tanks. It is proposed that the following above ground tanks be installed during various phases:

- Phase 1: 1 x 79 000ℓ (existing)
- Phase 2: 5 x 83 000 ℓ
- Phase 3: 5+ x 83 000 ℓ

Please refer to the map in Appendix A of the EIA Report for an indication on the locality of the proposed activities.

1.2 Objectives of the EMPr

The EMPr aims to fulfil the requirements in terms of the National Environmental Management Act (Act 107 of 1998), with the following objectives:

- To identify, predict and evaluate actual and potential impacts on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimizing negative impacts, maximizing benefits and promoting compliance with the principles of environmental management;
- To identify and employ the modes of environmental management best suited to ensuring that the activity is pursued in accordance with best environmental management practices;
- To be able to respond to unforeseen events; and
- To provide feedback on compliance.

1.3 Implementation of the EMPr

The proponent, namely Sky Mack's Petroleum (PTY) LTD is responsible for the implementation of the EMPr. All contractors should be supplied with a copy of the EMPr and should ensure that construction staff adheres to the mitigation measures.

2. PREPARATION OF THE EMPr

2.1 Person(s) who prepared the EMPr

- i) Mr Neil Devenish
- ii) Me Hanlie Stander

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2.2 Expertise of the person(s) who prepared the EMPr

- i) Mr Neil Devenish

Key qualifications:

- Key competencies and experience include development control applications (applications and appeals pertaining to rezoning, consolidations, subdivisions etc.) township establishment applications, environmental management and control applications.

Education:

- B. A. (Sociology, Geography) University of the Free State, SA, 1994
- Master of Town and Regional Planning, University of the Free State, SA, 1996
- Managing the Environmental Impact Assessment Process, Environmental Management Unit, PU for CHE, 2000

- Environmental Management Consulting, South African Institute of Ecologists & Environmental Scientists, 2001
- Water Law of South Africa, The South African Institution of Civil Engineers (SAICE), 2006

ii) Me Hanlie Stander

Key qualifications:

- Key competencies and experience include environmental management and research in zoology and environmental management.

Education:

- B.Sc. (Zoology), University of the Free State, South Africa, 2005
- B.Sc. Honours (Zoology), University of the Free State, South Africa, 2006
- M.Sc. (Zoology), University of the Free State, South Africa, 2012

3. RECOMMENDED MANAGEMENT AND MITIGATION MEASURES

ECO - Environmental Control Officer / IECO - Independent Environmental Control Officer / SO - Safety Officer

| Compliance and Monitoring | | | | | |
|---|---|------------------------|------------------------------|-----------|--|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| Record keeping of compliance and monitoring reports | 1. The applicant will ensure that the contractors adhere to the recommendations of the EMPr and conditions of the Environmental Authorisation during construction. | Applicant / Contractor | Contractor / ECO / Applicant | On-going | During planning, construction and rehabilitation phase |
| | 2. An Environmental Control Officer (ECO) will be appointed to monitor the construction phase. Note that the ECO may be appointed separately or can be part of the contractor's team. | ECO / Contractor | IECO | On-going | During construction and rehabilitation phase |
| | 3. Regular monitoring and / or spot inspections at least every fortnight during the construction phase is recommended. | ECO / Contractor | ECO/ IECO | On-going | During construction and rehabilitation phase |
| | 4. Inspections should be documented and any shortcomings addressed immediately. | ECO / Contractor | ECO/ IECO | On-going | At all phases |

| Compliance and Monitoring | | | | | |
|---------------------------|--|-------------------|--------------------------|---|--------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 5. A report will be provided by the independent ECO to the contractor upon completion thereof. The findings thereof should be made available to the competent authority (for example DESTEA, DWS), should it be requested. | IECO / Contractor | ECO/ DESTEA / DWS | Monthly during construction period, or as stipulated in the EA, and on completion of the construction activities. | Construction Phase. |
| | 6. Any emergency or unforeseen impact will be reported to the relevant environmental department within 24 hours after identification for telephonic approval and will be confirmed in writing. | ECO / Contractor | ECO/ IECO / DWS / DESTEA | On-going | At all phases |
| | 7. During the operational phase the fuel tanks, wash bay and associated infrastructure must be routinely audited and maintenance schedule adjusted accordingly in order to prevent leakage / pollution. | Applicant | DWS / DESTEA | On-going | During operational phase |

| Compliance and Monitoring | | | | | |
|---------------------------|--|------------------|---------------------------|-----------|--|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 8. Material Safety Data Sheets (MSDS) should be available on site. Where possible and available, MSDS should include information on ecological impacts and measures to minimize negative environmental impacts during accidental releases or escapes. | ECO / Contractor | ECO/ IECO / DWS / DESTE A | On-going | During construction and rehabilitation phase |
| | 9. Procedures in the MSDS should be implemented in case of an emergency | ECO / Contractor | ECO/ IECO / DWS / DESTE A | On-going | During construction and rehabilitation phase |
| | 10. The following documents should be available on site, and made available to the competent authority on request (if applicable): <ul style="list-style-type: none"> - Complaints Register - Environmental Incident Register - Disposal Certificates of waste generated during the construction / operational phase - Disposal Certificates of waste generated as a result of the construction activities - Environmental Monitoring (Audit) Reports - Written Corrective Action Instructions | ECO / Contractor | ECO/ IECO / DWS / DESTE A | On-going | During construction and rehabilitation phase |

| Compliance and Monitoring | | | | | |
|---------------------------|---|-----------------|------------------|-----------|---------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | <ul style="list-style-type: none">- Environmental Authorisation- DWS Permit / License (if required)- Blasting Permit (if required)- EMPr | | | | |

| Planning and Design phase | | | | | |
|---|--|--|------------------|-----------|----------------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| Planning and design NOTE: Should the following aspects not be taken into consideration during the Planning and Design Phase, the environmental impacts associated with the construction and operation phase will be of high significance as the environment | 1. No environmental mitigation measures are required during the planning phase on the proposed site, as no mitigation measures are to be implemented on site during the planning phase. | Applicant / Engineers / Environmental Consultant / Contractor | Applicant | On-going | During planning and design phase |
| | 2. The design and layout of the proposed project will take the possibility of flooding, erosion and pollution into consideration | Applicant / Engineers / Environmental Consultant / Contractor | Applicant | On-going | During planning and design phase |
| | 3. The applicant, engineers, environmental consultants and specialists should take the following steps during the planning phase: - Permits will be obtained for the removal / transplantation of protected species (if any) that are located within the construction area where no alternatives are possible. - A monitoring system should be implemented to determine the occurrence (if any) of any fuel / oil spillages during the construction phase. | Applicant / Engineers / Environmental Consultant / Contractor | Applicant | On-going | During planning and design phase |

| Planning and Design phase | | | | | |
|------------------------------|--|-----------------|------------------|-----------|---------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| will be negatively affected. | <ul style="list-style-type: none"> - The necessary Environmental Authorisation will be obtained before any activities listed in the Regulations are undertaken. - In addition, the necessary DWS registrations will be obtained, before any construction activities near watercourses are undertaken. - The necessary precautions with regard to road safety will be implemented for construction work to be undertaken within road crossings (if any). - Proper sanitation, potable water and waste facilities will be in place before construction activities are undertaken. - A blasting permit will be obtained before blasting activities is undertaken (if any). | | | | |

| Construction phase | | | | | |
|------------------------------|---|-----------------|------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| General measures to consider | 1. Any construction is disruptive and the environment must be given consideration with every activity undertaken | Contractor | ECO / IECO | On-going | During construction phase |
| | 2. All relevant standards relating to legislation should be adhered to (including waste emissions, waste disposal, noise regulations, etc.) | Contractor | ECO / IECO | On-going | During construction phase |
| | 3. According to Section 28 of the NEMA Act 107, every person who cause, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring and if it can't be avoided or stopped, to minimize and rectify such pollution or degradation of the environment. | Contractor | ECO / IECO | On-going | During construction phase |
| | 4. The pollution control provision in Section 19(1) of the National Water Act (Act 36 of 1998) should be adhered to at all times. | Contractor | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|--------------------|---|------------------|------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 5. ECO should be provided with a layout of the site, indicating the position of the following prior to the site establishment, for acceptance: <ul style="list-style-type: none"> - Ablution Facilities - Storage Areas - Ready-mix Areas - Stockpile Areas - Waste Disposal Facilities - Hazardous Substances Storage Area - Etc. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 6. Designate the boundaries of the active construction start-up site, by erecting fencing / danger tape (where applicable) | Contractor | ECO / IECO | On-going | During construction phase |
| | 7. Fence off operational footprint area (if possible) to ensure all operational activities are contained within the designated area. | Contractor | ECO / IECO | On-going | During construction phase |
| | 8. All construction and operational activities must be contained within the demarcated servitude determined in consultation with the ECO. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 9. Care will be taken to prevent unnecessary damage to vegetation near to construction activities. | Contractor | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|--------------------|---|-----------------|------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 10. The necessary precautions with regard to road safety will be implemented for construction work within road crossings (if any). | Contractor | ECO / IECO | On-going | During construction phase |
| | 11. Proper sanitation, water and waste facilities will be in place for construction workers throughout the construction phase. | Contractor | ECO / IECO | On-going | During construction phase |
| | 12. Chemical toilets (if any) will be cleaned and serviced regularly and proof thereof will be available on site. | Contractor | ECO / IECO | On-going | During construction phase |
| | 13. Potable water will be made available daily to workers on site. | Contractor | ECO / IECO | On-going | During construction phase |
| | 14. Fire-fighting equipment will be available on site, where applicable. | Contractor | ECO / IECO | On-going | During construction phase |
| | 15. If artefacts or graves are uncovered during construction activities, work in the immediate vicinity will be stopped until the project Archaeologist and SAHRA has been consulted. | Contractor | ECO / IECO | On-going | During construction phase |
| | 16. Adjacent landowners will be notified of proposed blasting, 24 hours prior to blasting activities. | Contractor | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|--------------------------|---|------------------------|------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| Site access | 1. Necessary drawings for the upgrading of intersections (if any) are to be submitted to the relevant authority (SANRAL / Provincial Department of Roads / Municipality's Department of Roads) for approval, and the upgrades are to be implemented | Applicant / Contractor | ECO / IECO | On-going | During construction phase |
| | 2. The current access road should be improved, when required | Contractor | ECO / IECO | On-going | During construction phase |
| | 3. Proper storm water measures are to be implemented to avoid run-off of water and washing of sand / soil onto the road | Contractor | ECO / IECO | On-going | During construction phase |
| | 4. Erosion measures will be implemented | Contractor | ECO / IECO | On-going | During construction phase |
| | 5. Removal of vegetation will be kept to the required area | Contractor | ECO / IECO | On-going | During construction phase |
| | 6. No animals will be hunted / captured on site (only to be undertaken by a relevant specialist) | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| Employee conduct on site | 1. No animals may be harmed / captured / trapped and / or hunted. This must be strictly enforced. | Contractor / ECO | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|---|---|------------------|------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 2. Animals found at the construction site will be removed and relocated to an appropriate area, by a suitable, qualified person | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 3. No open fires allowed. Provision will be made to limit the occurrence of accidental fires. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 4. No firewood will be collected on site or in surrounding areas, without written approval from the landowner. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 5. No smoking or open fires will be allowed near storage facilities | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 6. No waste may be dumped on site | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 7. Employees should make use of the ablution facilities provided | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| Soil, erosion and vegetation management | 1. Construction activities will be limited to designated construction areas to prevent peripheral impacts on surrounding natural habitats. Construction vehicles will also keep to constructed roads where possible, so that natural vegetation is not destroyed unnecessarily. | Contractor / ECO | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
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| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 2. Access roads or temporary crossings must be non-erosive, structurally stable and not induce flooding / safety hazard. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 3. If any access road or temporary crossing is impaired, it will be repaired immediately to prevent any future / further damage. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 4. All no-go areas must be demarcated under guidance of the Environmental Control Officer (ECO). All human movement and activities will be contained within designated construction areas in order to prevent peripheral impacts on surrounding natural habitat. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 5. Erosion management is important. Rehabilitation measures must be monitored to ensure that no erosion has occurred and the disturbed areas have been adequately re-vegetated. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 6. Concurrent rehabilitation of disturbed areas will be undertaken to help the recovery of the vegetation. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 7. Stockpiled soil will be stockpiled in an area where it will not be disturbed by vehicles. | Contractor / ECO | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
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| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 8. Stockpiled soil will be protected from washing away during rainstorms. For example: <ul style="list-style-type: none"> - One layer of bricks or stones can be placed around the stockpiled topsoil. - Bricks may be placed around the stockpiles, to limit the loss thereof due to rainy events. - Stockpiles should not be higher than 1.5 m. - The gradient of stockpiles should not be greater than 1:1.5. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 9. Stockpiles should be located away from drainage lines, watercourses and areas of temporary flood | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 10. All soil excavated is to be separated into top- and subsoil. Subsoil must be used for backfilling and topsoil for landscaping and rehabilitation of disturbed areas | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 11. Stockpiled material will be placed on the cleared areas once construction is completed. Re-spreading of topsoil is to be done to its original depth. | Contractor / ECO | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
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| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 12. Fertilisers should be used where topsoil and subsoil was mixed or where the topsoil is not up to original standard | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 13. Indigenous tree species in the vicinity of the operational site (if any) should be marked with danger tape. Disturbance to such species should be avoided, where possible. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 14. A permit for the removal of protected plant species will be obtained before the removal of these species (if any). | Applicant / Contractor | ECO / IECO | On-going | During construction phase |
| | 15. An alien control and monitoring programme will be developed starting during the construction phase and will be carried over into the operational phase. | Contractor / ECO | ECO / IECO | On-going | During construction and operational phase |
| | 16. Any proclaimed weed or alien species that germinates on site will be cleared by hand / approved chemicals before flowering thereof. | Contractor / ECO | ECO / IECO | On-going | During construction and operational phase |
| | 17. Imported fill material will be monitored during and after construction for the presence of any alien species. Any such species will be removed immediately. | Contractor / ECO | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|--------------------|---|------------------|------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 18. Fire fighting equipment will be available on site. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 19. Species, especially grasses, trees and shrubs occurring in the region will be used to rehabilitate disturbed areas. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 20. Compacted soils (such as dirt tracks not to be utilised during the operational phase) must be ripped to ensure the establishment of natural occurring vegetation. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 21. Should natural re-growth not be sufficient, the area should be hydro-seeded. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 22. Concurrent rehabilitation should be undertaken, where possible. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 23. Vegetation clearance will be limited to the required area. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 24. Speed limit will be enforced on the construction vehicles and these vehicles will only make use of designated roads / pathways. | Contractor / ECO | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
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| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 25. Dust control measures will be implemented if nuisance dust generation occurs during the construction period. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 26. All archaeological findings (if any) should be recorded and reported to SAHRA. No construction activities in the area may proceed without the authorisation from SAHRA. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 27. Storm water measures will be implemented in order to manage storm water and this will also prevent erosion. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 28. The site will have to be properly sloped in order to allow the storm water to drain sufficiently. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 29. Visual inspections for the occurrence of erosion should be undertaken on a weekly basis. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 30. No animals may be captured / harmed / killed on site. The removal of animals may only be undertaken by a suitable person. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 31. Any occurrences of harmed animals should be reported to the ECO and recorded as such. | Contractor / ECO | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|---|---|------------------|------------------|-----------|---|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| Minimise contamination and sterilisation of soil | 1. Use of potentially polluting and hazardous substances should be strictly controlled | Contractor / ECO | ECO / IECO | On-going | During construction and operational phase |
| | 2. If soil is significantly contaminated by hazardous substances, then this soil is considered as hazardous and should be disposed of according to best practices | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 3. Repair / maintenance will be conducted on site, and impacts like oil spills should be appropriately mitigated. Spill response procedures must be clearly defined and well known by all staff. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 4. All threatened or protected plant species as specified by the NEM: Biodiversity Act (2004) will be identified on site. Permits are required for the removal / transplantation of these plants. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| Trenching, placing of pipeline and covering of pipeline | 1. Site will be kept neat and tidy. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 2. Appropriate area will be identified as a stockpiling area. | Contractor / ECO | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
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| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 3. Speed limit will be enforced on the construction vehicles and these vehicles will only make use of designated roads / pathways. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 4. Dust control measures will be implemented if nuisance dust generation occurs during the construction period. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 5. Stockpiled material will be stored in such a way to limit the loss thereof. For example: - Bricks may be placed around the stockpiles, to limit the loss thereof due to rainy events. - Stockpiles should not be higher than 1.5 m. - The gradient of stockpiles should not be greater than 1:1.5. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 6. Noise control measures will be implemented. | Contractor | ECO / IECO | On-going | During construction phase |
| | 7. All employees will be provided with the correct PPE. | Contractor | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
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| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 8. Establishment of alien / invader vegetation will be monitored and these species will be removed by hand or by an approved chemical before gestation thereof. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 9. All archaeological findings (if any) should be recorded and reported to SAHRA. No construction activities in the area may proceed without authorisation from SAHRA. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 10. Storm water measures will be implemented in order to manage storm water and this will also prevent erosion. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 11. Visual inspections for the occurrence of erosion should be undertaken on a weekly basis. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 12. No animals may be captured / harmed / killed on site. The removal of animals may only be undertaken by a suitable person. | Contractor | ECO / IECO | On-going | During construction phase |
| | 13. Any occurrences of harmed animals should be reported to the ECO and recorded as such. | Contractor | ECO / IECO | On-going | During construction phase |
| Ablution Facilities | 1. No open areas or the surrounding vegetation may be used as 'toilet facilities'. | Contractor | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|---------------------------|---|------------------|---------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 2. Toilets should be available for all employees. Where waterborne sewerage is not available, the ECO must designate an area within the boundaries of the site for the erection of portable chemical toilets. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 3. Toilet facilities shall occur at a minimum ration of 1 toilet per 15 employees. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 4. Toilets shall be maintained in a hygienic state and serviced when required. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 5. Temporary toilets (if any) should be serviced regularly and the contents be removed to a licensed disposal facility. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| Safeguard water resources | 1. No activities will be undertaken within 32 m of a watercourse / within the 1:100 year floodline / 500m of a wetland, without the necessary authorisations (for example from DESTEA and DWS). | Contractor / ECO | IECO / DWS / DESTEA | On-going | During construction phase |
| | 2. Caution will be taken to ensure that construction materials are not dumped or stored within storm water management systems. | Contractor / ECO | IECO / DWS / DESTEA | On-going | During construction phase |
| | 3. Construction activities in the storm water infrastructure will be limited through proper demarcation and appropriate | Contractor / ECO | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
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| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | environmental awareness training. | | | | |
| | 4. The Contractor is responsible to inform all staff of the need to be vigilant against any practice that will have a harmful effect on waterways. | Contractor | ECO / IECO | On-going | During construction phase |
| | 5. Infilling, excavation, drainage and hardening of surfaces will not occur unnecessarily in storm water infrastructure. | Contractor | ECO / IECO | On-going | During construction phase |
| | 6. Emergency plans will be in place in case of fuel spillages (to limit the occurrence of soil as well as groundwater pollution). | Contractor | ECO / IECO | On-going | During construction phase |
| | 7. A monitoring system should be implemented to determine the occurrence (if any) of any fuel / oil spillages during the construction or operational phase. | Contractor | ECO / IECO | On-going | During construction phase |
| | 8. Occurrence of erosion will be monitored. Repairs will be undertaken as soon as possible. | Contractor | ECO / IECO | On-going | During construction phase |
| | 9. The necessary mitigation measures should be implemented immediately, should any leakages / spills be detected. | Contractor | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
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| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 10. Weather forecasts from the South African Weather Bureau of up to three days in advance will be monitored on a daily basis to avoid exposing soil or construction works or materials during a storm event and appropriate action will be taken in advance to protect construction works should a storm event be forecasted. | Contractor | ECO / IECO | On-going | During construction phase |
| | 11. All no-go areas will be demarcated under guidance of the Environmental Control Officer (ECO). | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 12. The design of drainage systems will ensure that there is no contamination or eutrophication. Drainage systems will be maintained regularly in order to minimize the runoff of harmful chemical substances into the waterway(s). | Contractor | ECO / IECO | On-going | During construction phase |
| | 13. It will be ensured that the construction activities have minimal effects on the flow of water through the storm water infrastructure. | Contractor | ECO / IECO | On-going | During construction phase |
| | 14. No erosion or siltation may occur due to any construction or operational activities. | Contractor | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|---|---|------------------|------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 15. Construction and operational activities should take the wetland boundaries and associated buffer zones into consideration (if any). | Contractor | ECO / IECO | On-going | During construction phase |
| Workings within / near to watercourses | 1. Storm water measures will be implemented in order to manage storm water and this will also prevent erosion. | Contractor | ECO / IECO | On-going | During construction phase |
| | 2. Construction activities in waterways should be undertaken in such a manner that no containment of water is required, where possible. 2/3 of the waterways may be diverted at a time, where required. | Contractor | ECO / IECO | On-going | During construction phase |
| | 3. The necessary authorisations should be obtained from DWS, should the containment of water be required. | Contractor | ECO / IECO / DWS | On-going | During construction phase |
| | 4. Visual inspections for the occurrence of erosion should be undertaken on a weekly basis. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| Handling of waste / Waste Management (Note that waste refers to all | 1. The contractor is responsible for the removal of construction waste. | Contractor | ECO / IECO | On-going | During construction phase |
| | 2. Suitable containers (weather and vermin proof) will be placed on site to collect all solid waste. These will be emptied regularly. | Contractor | ECO / IECO | On-going | |

| Construction phase | | | | | |
|---|--|-----------------|------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| construction debris and domestic waste generated due to construction activities.) | 3. No littering is permitted. During the construction and operational phase the site will be maintained in a neat and tidy condition. | Contractor | ECO / IECO | On-going | During construction phase |
| | 4. All solid waste produced will be disposed of at an authorized landfill site. Recyclable waste may also be sold to recycling contractors. | Contractor | ECO / IECO | On-going | During construction phase |
| | 5. No dumping, burning or burying of waste will be undertaken on site. | Contractor | ECO / IECO | On-going | During construction phase |
| | 6. All hazardous waste will be disposed of at an authorized hazardous landfill site. | Contractor | ECO / IECO | On-going | During construction phase |
| | 7. Recyclable hazardous waste will be re-used or sold to recycling contractors, where possible | Contractor | ECO / IECO | On-going | During construction phase |
| | 8. A waste management plan will be compiled and designed to ensure that adequate waste management activities are undertaken. | Contractor | ECO / IECO | On-going | During construction phase |
| | 9. Areas used for waste storage and loading of materials should be lined and bund walls have to be erected to contain any spills that might occur. | Contractor | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|-----------------------------|--|------------------|------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 10. Waybills providing evidence of correct disposal procedure must be provided for the ECO's inspection. | Contractor | ECO / IECO | On-going | During construction phase |
| | 11. Waste classification should be undertaken. | Contractor | ECO / IECO | On-going | During construction phase |
| | 12. Visual inspections for the occurrence of pollution should be undertaken daily. | Contractor | ECO / IECO | On-going | During construction phase |
| | 13. Spills should be cleaned up immediately according to best practices | Contractor | ECO / IECO | On-going | During construction phase |
| | 14. DWS should be notified of any spillage / pollution of water sources (groundwater and / or surface water) within 24 hours of occurrence | Contractor | ECO / IECO / DWS | On-going | During construction phase |
| | 15. Record should be kept on site to indicate date of visual inspection, any spillages observed, and manner in which spill was treated. | Contractor / ECO | ECO / IECO / DWS | On-going | During construction phase |
| Health, safety and security | 1. Site should be fenced / marked with danger tape, where possible. | Contractor | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|--------------------|---|-----------------|------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 2. The contractors will comply with the Occupational Health and Safety Act, National Building Regulations and any other national, regional or local regulations with regard to safety on site. | Contractor | ECO / IECO | On-going | During construction phase |
| | 3. Construction contracts will include safety and security measures for staff. | Contractor | ECO / IECO | On-going | During construction phase |
| | 4. Precautions to ensure that construction staff and sites are visible and proper PPE will be provided to all employees. | Contractor | ECO / IECO | On-going | During construction phase |
| | 5. Suitable warning and information signage should be available at the storage facilities. In addition, telephone numbers of emergency services (including local firefighting services) must be posted conspicuously on site. | Contractor | ECO / IECO | On-going | During construction phase |
| | 6. Employees should be made aware of the health risks associated with any hazardous substances / dangerous goods used or stored on site. This includes soil that was contaminated with oil or diesel, etc. | Contractor | ECO / IECO | On-going | During construction phase |
| | 7. Employees should receive relevant safety training in handling of hazardous substances / dangerous goods associated with the proposed project. | Contractor | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|--------------------|--|-----------------|------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 8. Proper PPE should be provided to the employees and used correctly by employees. | Contractor | ECO / IECO | On-going | During construction phase |
| | 9. Construction work within road reserves will accommodate road users as far as possible. This includes the following: <ul style="list-style-type: none"> - Roads will be crossed in half widths at a time to minimise the impact on vehicular traffic, where possible. - Construction along and across existing roads will be executed in such a manner that both pedestrian and vehicular traffic is accommodated at all times. - The contractor will be required to maintain adequate access to all public and private property at all times. - Contractor will supply, erect and maintain road signs for all work areas conforming to the prescribed layout and requirement of the South African Road Traffic Signs Manual and other relevant notices. | Contractor | ECO / IECO | On-going | During construction phase |
| | 10. Fire extinguishers will be available on site and in the construction camp (if any). | Contractor | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|--------------------|---|-----------------|--------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 11. The contractor will be required to maintain adequate access to all public and private property at all times. | Contractor | ECO / IECO | On-going | During construction phase |
| | 12. Speed limits of 20km/h will be enforced. | Contractor | ECO / IECO | On-going | During construction phase |
| | 13. All relevant IAPs will be notified 24 hours prior to any known potential risks associated with the site and the activities to be undertaken on site. (For example, prior to any blasting to be undertaken.) | Contractor | ECO / IECO | On-going | During construction phase |
| | 14. The necessary precautions with regard to road safety will be implemented for construction work within road crossings. | Contractor | ECO / IECO | On-going | During construction phase |
| | 15. All injuries should be recorded. | Contractor | ECO / IECO | On-going | During construction phase |
| Heritage | 1. In the case of the discovery of any heritage, archaeological or palaeontological significance, the work in the area will be stopped and reported to the ECO, archaeologist and SAHRA. Any construction activities in the nearby vicinity may only commence after approval is obtained from SAHRA as well as the ECO. | Contractor | ECO / IECO / SAHRA | On-going | During construction phase |

| Construction phase | | | | | |
|--------------------|---|------------------------|--------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 2. Should any fossils be uncovered within intact sedimentary rocks during the development or if excavations exceed more than 1 m into sedimentary rock, a suitably qualified Palaeontologist must evaluate the finds or monitor the exposed areas as soon as possible. | Contractor | ECO / IECO / SAHRA | On-going | During construction phase |
| | 3. Known heritage resources (if any) must be avoided as far as possible. | Contractor | ECO / IECO / SAHRA | On-going | During construction phase |
| | 4. Employees should be encouraged and informed of the need to be on the look-out for potential fossils / buried archaeological material. | Contractor | ECO / IECO / SAHRA | On-going | During construction phase |
| | 5. In the case of the discovery of any stone tools or other archaeological or palaeontological material, the work in the immediate vicinity should temporarily cease and reported to the archaeologist and SAHRA. Should any human remains be exposed, the archaeologist as well as the local SAPS should also be notified. | Applicant / Contractor | ECO / IECO / SAHRA | On-going | During construction phase |
| | 6. If any evidence of archaeological sites or remains (e.g. remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, charcoal and ash | Applicant / Contractor | ECO / IECO / SAHRA | On-going | During construction phase |

| Construction phase | | | | | |
|--------------------|--|------------------------|--------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | <p>concentrations), fossils or other categories of heritage resources are found during the proposed development, SAHRA APM Unit (Tel: 021 462 5402) must be alerted. If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves (BGG) Unit (Tel: 012 320 8490), must be alerted immediately. A professional archaeologist or paleontologist, depending on the nature of the finds, must be contracted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required subject to permits issued by SAHRA.</p> | | | | |
| | <p>7. Appropriate measures should be undertaken by the ECO until the archaeologist / SAPS visits the site. This should include the following:</p> <ul style="list-style-type: none"> - Site should be fenced with 'danger tape' - Position of finding should be recorded - Depth of finding should be recorded - Digital image of the finding should be | Applicant / Contractor | ECO / IECO / SAHRA | On-going | During construction phase |

| Construction phase | | | | | |
|------------------------|---|------------------------------|--------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | taken - No information on the findings may be made public without the consent of the archaeologist / SAPS. | | | | |
| | 8. Construction activities in the area may only continue after approval from the archaeologist and SAHRA. | Applicant / Contractor / ECO | ECO / IECO / SAHRA | On-going | During construction phase |
| Noise and dust control | 1. Construction activities will be limited to normal daytime hours, where possible in order not to disturb adjacent landowners unnecessarily. | Contractor | ECO / IECO | On-going | During construction phase |
| | 2. The noise levels will be kept to an acceptable level and comply with the standards as per legislation. | Contractor | ECO / IECO | On-going | |
| | 3. Proper mitigation measures will be implemented to limit noise (e.g. the installation of silencers, where required). | Contractor | ECO / IECO | On-going | During construction phase |
| | 4. Proper mitigation measures will be implemented to limit the formation of dust (e.g. wetting of construction area, when required). | Contractor | ECO / IECO | On-going | During construction phase |
| | 5. The speed of the construction vehicles will be limited to avoid dangerous conditions, the formation of dust and the excessive deterioration of roads being used. | Contractor | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|--|---|-----------------|------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| Handling and Storage of materials NOTE: The main operation of the facilities will be the offloading of dangerous goods from tankers into storage tanks and the transportation of materials via pipes or manually. | 1. All chemicals used during the development, including fuel, will be stored in a proper storeroom or protected area to prevent pollution. | Contractor | ECO / IECO | On-going | During construction phase |
| | 2. Vehicles will be serviced at designated areas. No oil, diesel or other chemicals may be spilled or discharged anywhere. | Contractor | ECO / IECO | On-going | During construction phase |
| | 3. Where applicable, the contractors will ensure that all relevant national, regional and local legislation regarding storage, transport, use and disposal of petroleum, chemical, harmful or hazardous substances and materials are adhered to, where necessary. | Contractor | ECO / IECO | On-going | During construction phase |
| | 4. Cement and concrete mixing, if applicable, will only take place within the construction site. No concrete will be mixed directly on the ground. | Contractor | ECO / IECO | On-going | During construction phase |
| | 5. All environmental problems occurring on the site such as chemical spillage, wasteful water disposal, etc. will be reported to the ECO. The ECO should implement best practices to rectify the impacts thereof on the environment. | Contractor | ECO / IECO | On-going | During construction phase |
| | 6. Spill response equipment as well as fire extinguishers must be available during the handling and loading of hazardous | Contractor | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|--------------------|---|-----------------|------------------|-----------|---|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | waste (if any). | | | | |
| | 7. Large quantities of hazardous substances (such as fuel to be stored within the proposed above ground fuel tanks) are to be stored in bunded areas. | Contractor | ECO / IECO | On-going | During construction and operational phase |
| | 8. Bund walls will have a capacity of at least 110% of the total capacity of the stored volume. | Contractor | ECO / IECO | On-going | During construction and operational phase |
| | 9. No oil, diesel or other chemicals may be spilled or discharged anywhere and contact with bare soil should be avoided at all cost. | Contractor | ECO / IECO | On-going | During construction phase |
| | 10. Oil leakages from vehicles, equipment, etc. can contribute to soil and groundwater contamination. To prevent the contamination, machinery, vehicles and materials must only be stored at demarcated areas. Vehicles and equipment must only be parked in designated areas. No servicing of vehicles may be allowed on site. | Contractor | ECO / IECO | On-going | During construction and operational phase |

| Construction phase | | | | | |
|--------------------|--|-----------------|------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 11. A monitoring system should be implemented to determine the occurrence (if any) of any fuel / oil spillages / untreated sewer. | Contractor | ECO / IECO | On-going | During construction phase |
| | 12. Storage tanks and associated infrastructure such as bund walls, pipes and connections will be maintained and repaired throughout the operational phase. | Contractor | ECO / IECO | On-going | During construction phase |
| | 13. Potential spillages or contaminated materials must be managed according to best practices and the contaminated material must be disposal of at a landfill site registered to accept hazardous waste. | Contractor | ECO / IECO | On-going | During construction phase |
| | 14. The necessary mitigation measures should be implemented immediately, should any leakages / spills be detected. | Contractor | ECO / IECO | On-going | During construction phase |
| | 15. Material stockpiles, such as bricks and pipes, must be stable and well secured to avoid collapse and possible injury | Contractor | ECO / IECO | On-going | During construction phase |
| | 16. Material and Safety Data Sheets (MSDSs) should be readily available on site for all hazardous materials. MSDSs should additionally include information on ecological impacts and measures to minimise negative environmental | Contractor | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|----------------------------|--|-----------------|------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | impacts during accidental releases or escapes. | | | | |
| | 17. Storage areas should be kept clean and free from any accumulation of combustible matter (such as paper) and any possible source of ignition should be removed. | Contractor | ECO / IECO | On-going | During construction phase |
| | 18. It is recommended that the area used to fill the trucks should be covered with a non-permeable structure in order to prevent the occurrence of spillages / soil contamination. | Contractor | ECO / IECO | On-going | During construction phase |
| Hazardous waste management | 1. Hazardous wastes must be separated from general wastes, stored within secondary containment in appropriate containers. | Contractor | ECO / IECO | On-going | During construction phase |
| | 2. Proper storage facilities for the storage of hazardous / dangerous goods must be provided to prevent the migration of spillage into the soil and or groundwater. | Contractor | ECO / IECO | On-going | During construction phase |
| | 3. Certificates / waybills of hazardous waste disposals are to be available on request as well as auditing purposes. This includes the removal of soil contaminated with hydrocarbons. | Contractor | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|---|---|-----------------|------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 4. Storage of hazardous substances and refuelling areas are to be bunded with an impermeable liner to protect groundwater quality and must comply with the relevant SANS codes. | Contractor | ECO / IECO | On-going | During construction phase |
| | 5. Areas used for the storage of hazardous materials are to be clearly indicated as such. | Contractor | ECO / IECO | On-going | During construction phase |
| Hazardous and Flammable materials: Delivery | 1. All deliveries (especially of hazardous nature) must be supervised. | Contractor | ECO / IECO | On-going | During construction phase |
| | 2. Subcontractors and delivery companies should be informed of the delivery procedures and made aware of restrictions as to where materials may be stored. | Contractor | ECO / IECO | On-going | During construction phase |
| | 3. Loads must be secured to prevent spillage during transportation thereof. | Contractor | ECO / IECO | On-going | During construction phase |
| | 4. Hazardous substances are to be transported in sealed drums or bags | Contractor | ECO / IECO | On-going | During construction phase |
| Hazardous and Flammable | 1. Limit cement and concrete mixing to single sites, where possible. | Contractor | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|---|--|------------------|------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| materials: Cement and / or concrete mixing | 2. No mixing allowed directly onto the ground. | Contractor | ECO / IECO | On-going | During construction phase |
| | 3. All visible remains of excess material will be treated as hazardous waste. | Contractor | ECO / IECO | On-going | During construction phase |
| | 4. Solid concrete waste may be treated as inert construction rubble. However, wet cement and liquid slurry and cement powder must be treated as hazardous waste | Contractor | ECO / IECO | On-going | During construction phase |
| Hazardous and Flammable materials: Gas Storage | 1. All combustible materials are to be store at least 3 m from any gas storage areas. In case of any flammable or any other gas storage areas, open flames, welding and cutting operations, smoking, etc. shall be prohibited in or near the storage area. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 2. No gas will be delivered until the site is registered with local Fire Safety. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 3. Cylinders should always be stored in a well-ventilated area away from spark, flames or any source of heat or ignition. | Contractor / ECO | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|--|--|------------------|------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 4. Cylinders should always be handled, stored, used and transported in an upright position. It should not be dropped, dragged or rolled on their sides or allowed to skid. Cylinders that are too large to be carried shall be tilted and rolled on the rims of their foot rings or bases. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 5. Valves should be kept properly closed. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| Hazardous and Flammable materials: Chemicals, Grease and Oil Storage | 1. Storage areas must be bunded and hard surfaced in order to protect groundwater quality. | Contractor | ECO / IECO | On-going | During construction phase |
| | 2. Compliance with SANS codes and hazardous substances bylaws should be adhered to. | Contractor | ECO / IECO | On-going | During construction phase |
| | 3. All lids must be properly sealed / closed to prevent Volatile Organic Compounds (VOCs) and other potentially harmful gaseous compounds from escaping. | Contractor | ECO / IECO | On-going | During construction phase |
| Hazardous and Flammable materials: Hydrocarbon | 1. Spill kits are to be made permanently available at areas which have the potential to be subjected to spillage of hazardous substances and dangerous goods. | Contractor | ECO / IECO | On-going | During construction phase |

| Construction phase | | | | | |
|--------------------|--|-----------------|---------------------------|-----------|---------------------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| spillages | 2. Remediation of spillages must be conducted immediately and closed out within 24 hours. | Contractor | ECO / IECO / DWS / DESTEA | On-going | During construction phase |
| | 3. No waste water or waste will be disposed of into the surrounding environment at any time. Water collected in bunded areas must be collected in containers and disposed of as hazardous waste. | Contractor | ECO / IECO | On-going | During construction phase |
| | 4. Machinery will be kept maintained in line with manufactures specifications to minimise the risk of hydrocarbon spillages. | Contractor | ECO / IECO | On-going | During construction phase |
| | 5. An incident reporting system will be implemented in order to ensure incidents, where spillages has occurred, are closed out and appropriate measures are taken to prevent further incidents. | Contractor | ECO / IECO | On-going | During construction phase |
| | 6. Incidents must be reported to DWS within 24 hours. | Contractor | ECO / IECO / DWS | On-going | During construction phase |
| | 7. Contaminated soil must be disposed of in a hazardous materials skip and removed to a licensed hazardous landfill facility by a licensed contractor. | Contractor | ECO / IECO | On-going | During construction phase |

| Operational Phase | | | | | |
|---|--|-----------------|------------------|--|--------------------------|
| This phase consists of the use of the fuel depot and associated infrastructure. Maintenance and repair will be undertaken on the infrastructure when necessary. | | | | | |
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| Operational activities | 1. Measures will be implemented to minimise the loss of water at any section (including activities associated with the wash-bays) | Applicant | DESTE / DWS | On-going | During operational phase |
| | 2. An action plan will be available and implemented immediately, in case pollution of soil / groundwater occurs to ensure that it is rectified as soon as possible. This includes the occurrence of leakages / spills. | Applicant | DESTE / DWS | On-going | During operational phase |
| | 3. Maintenance and repair will be undertaken on the infrastructure when necessary. | Applicant | DESTE / DWS | On-going | During operational phase |
| | 4. Establishment of alien vegetation will be monitored and alien species will be removed by hand or by an approved chemical before gestation thereof. | Applicant | DESTE / DWS | On-going | During operational phase |
| | 5. Regular visual inspections of the construction area, as well as the fuel tanks will be done to identify leakages. These will be attended to immediately in order to limit the occurrence of soil / groundwater pollution. | Applicant | DESTE / DWS | Maintenance inspections should be undertaken every six months. | During operation |

| Operational Phase | | | | | |
|---|---|-----------------|------------------|--|------------------|
| This phase consists of the use of the fuel depot and associated infrastructure. Maintenance and repair will be undertaken on the infrastructure when necessary. | | | | | |
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | 6. A monitoring system should be implemented to determine the occurrence of any fuel / oil spillages from the fuel tanks / wash-bay during the operational phase in order to ensure that no soil / groundwater pollution occur. | Applicant | DESTEA / DWS | Visual inspections at the fuel storage tanks should be undertaken daily. Repairs / cleaning of spills should be undertaken immediately. Maintenance inspections should be undertaken every six months. | During operation |
| | 7. Proper mitigation measures should be implemented to limit the occurrence of fire outbreaks / spreading for veld fires to adjacent properties. | Applicant | DESTEA / DWS | Maintenance inspections should be undertaken every six months. | During operation |

| Decommissioning Phase | | | | | |
|---|---|------------------|------------------|-----------|---------------------------|
| It is not anticipated that the proposed project will cease in the nearby future. However, if decommissioning is decided upon, a rehabilitation plan will be developed and submitted for approval. The end-use of the area will be kept in mind during the compilation of the rehabilitation plan. Activities associated with the decommissioning phase will be limited to the rehabilitation of areas disturbed during the construction phase. All disturbed areas will be rehabilitated according to best practices. A rehabilitation plan will be developed, if it is decided to decommission the project before the cessation of the operation aspects of the proposed project. The rehabilitation plan will include management and mitigation measures to be implemented during the decommissioning of the project. | | | | | |
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| Rehabilitation | 1. Temporary structures and office sites (if any) will be dismantled and removed after completion of the construction phase of the project. | Contractor | ECO / IECO | On-going | During construction phase |
| | 2. All waste, equipment, materials, etc. used during construction will be cleared from the site. The contractors will ensure that the site is cleared and rehabilitated to the satisfaction of the ECO. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 3. An alien plant control and monitoring programme will be implemented. | Contractor | ECO / IECO | On-going | During construction phase |
| | 4. The establishment of natural occurring vegetation will be encouraged at disturbed areas. | Contractor | ECO / IECO | On-going | During construction phase |
| | 5. Re-vegetation of disturbed areas will be undertaken with site indigenous species. | Contractor | ECO / IECO | On-going | During construction |

| Decommissioning Phase | | | | | |
|---|---|------------------|------------------|-----------|---------------------------|
| It is not anticipated that the proposed project will cease in the nearby future. However, if decommissioning is decided upon, a rehabilitation plan will be developed and submitted for approval. The end-use of the area will be kept in mind during the compilation of the rehabilitation plan. Activities associated with the decommissioning phase will be limited to the rehabilitation of areas disturbed during the construction phase. All disturbed areas will be rehabilitated according to best practices. A rehabilitation plan will be developed, if it is decided to decommission the project before the cessation of the operation aspects of the proposed project. The rehabilitation plan will include management and mitigation measures to be implemented during the decommissioning of the project. | | | | | |
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| | | | | | phase |
| | 6. Hydro-seeding will be implemented if the establishment of natural occurring vegetation does not occur within reasonable time. | Contractor / ECO | ECO / IECO | On-going | During construction phase |
| | 7. After completion of the construction phase, a waterway monitoring program will be initiated that ensure that all are adequately rehabilitated. | Contractor | ECO / IECO | On-going | During construction phase |
| | 8. Temporary concrete surfaces (if any) will be removed and compacted areas ripped. | Contractor | ECO / IECO | On-going | During construction phase |
| | 9. Establishment of extensive alien species will be monitored. | Contractor | ECO / IECO | On-going | During construction phase |

| No-Go Option | | | | | |
|---|--|------------------------------|------------------|-----------|---------------|
| Objective | Mitigation Measure | Executing Party | Monitoring Party | Timeframe | Project Stage |
| Keeping the status quo - Not construct the fuel depot. | 1. The applicant / other developers to construct a fuel depot at a nearby locality in order to accommodate the need of a fuel depot in the area. | Applicant / Other Developers | DESTEA / DWS | On-going | N/A |

APPENDIX K

Details of Specialists and
Specialist Declarations

**destea**department of
economic, small business development,
tourism and environmental affairs
FREE STATE PROVINCE**DETAILS OF SPECIALIST AND DECLARATION OF INTEREST**

| | (For official use only) |
|------------------------|-------------------------|
| File Reference Number: | |
| NEAS Reference Number: | |
| Date Received: | |

Application for environmental authorisation, integrated environmental authorisation and waste management licence in terms of the-

- (1) National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2014; and
- (2) National Environmental Management Act: Waste Act, 2008 (Act No. 59 of 2008) and Government Notice 921, 2013

PROJECT TITLE

Proposed Construction of a diesel depot on Portion 1 of Plot 42, Estone

| | | | |
|--------------------------------------|---|-------|------------|
| Specialist: | Heritage Specialist (Dr Lloyd Rossouw) | | |
| Contact person: | L. Rossouw | | |
| Postal address: | P.O. Box 38806, Langenhovenpark, Bloemfontein | | |
| Postal code: | 9330 | Cell: | 0842505992 |
| Telephone: | 051 447 9609 | Fax: | |
| E-mail: | Lloyd.rossouw@gmail.com | | |
| Professional affiliation(s) (if any) | ASAPA PSSA | | |

| | | | |
|---------------------|---|-------|--------------|
| Project Consultant: | MDA | | |
| Contact person: | Neil Devenish | | |
| Postal address: | P.O. Box 100982, Brandhof, Bloemfontein | | |
| Postal code: | 9324 | Cell: | |
| Telephone: | 051 447 1583 | Fax: | 086 455 2568 |
| E-mail: | neil@mdagroup.co.za | | |

ENVIRONMENTAL MANAGEMENT

Private Bag X20801 Tel: 051-400 4817/19
Bloemfontein Fax: 051-400 4842/11
9300 E-mail: sellom@destea.fs.gov.za



destea

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

4.2 The specialist appointed in terms of the Regulations_

I, LLOYD ROSSOUW, declare that --

General declaration:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 48

Signature of the specialist:

Paleo Field Services

Name of company (if applicable):

2020/03/12

Date:

ENVIRONMENTAL MANAGEMENT
Private Bag X20801 Tel: 051-400 4817/19
Bloemfontein Fax: 051-400 4842/11
9300 E-mail: sellom@dttea.fs.gov.za

www.detea.fs.gov.za

APPENDIX L

Details of EAP and
EAP Declaration



The EAP

I, **Neil Devenish**, declare that:

General declaration:

- I act as the independent environmental practitioner in this application
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting environmental impact assessments, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in regulation 8 of the Regulations when preparing the application and any report relating to the application;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;
- I will keep a register of all interested and affected parties that participated in a public participation process; and
- I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not
- all the particulars furnished by me in this form are true and correct;
- I will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and
- I realise that a false declaration is an offence in terms of regulation 48 of the Regulations and is punishable in terms of section 24F of the Act.

9 Disclosure of Vested Interest (delete whichever is not applicable)

- I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Regulations;


Signature of the environmental assessment practitioner:

MDA

Name of company:

29 August 2019

Date:

APPENDIX M

Title Deed Information

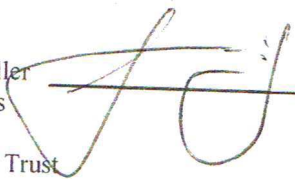
WGM TRUST
Reg nr. TMP 3611

PO Box 13701
Noordstad
Bloemfontein
9302

TO WHOM THIS MAY CONCERN

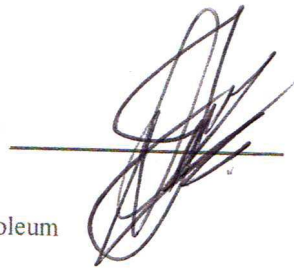
This writing serves to confirm the selling of the property, Portion 1/42, small holding, Estoire, Bloemfontein.
The purchaser is MACK'S PETROLEUM and the purchase agreement is currently in the drafting process with the attorneys of the WGM Trust, namely Gous Vertue & Ass. Inc.

Signed Seller
WG Myers
For WGM Trust



Signed Purchaser
J vd Merwe

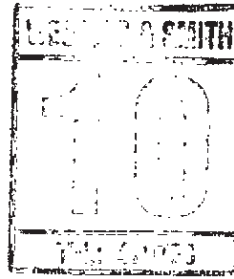
For Mack's Petroleum



10 261

| |
|-------------------|
| SEELREG |
| STAMP DUTY R..... |
| FOOI |
| FEES R. 900-00 |

Fourie Attorneys
 123 Pres.Reitz Avenue
 Westdene
 Bloemfontein
 9301



Prepared by me

[Signature]
 CONVEYANCER
 ARINA DEBRA MERRY

| | |
|--|--|
| VERBIND MORTGAGED | |
| VIR FOR R. 1 000 000,00 | |
| B 000004779 / 2016 2016 -09- 23 | <i>[Signature]</i> REGISTRATEUR/REGISTRAR |

Denise
 Micro
 Scanning

VIR ENDOSSEMENTE KYK BLADSY
 FOR ENDORSEMENTS SEE PAGE..... 4

| | |
|----------|------------------|
| T | 000007979 / 2014 |
|----------|------------------|

DEED OF TRANSFER

Nasreen
 Micro
 Verify

NASREEN
 Micro
 Verify

BE IT HEREBY MADE KNOWN THAT

ARINA DEBRA MERRY / AMANDA FOURIE

NASREEN
 Micro
 Scanning

[Signature]

appeared before me, REGISTRAR OF DEEDS at Bloemfontein, the said appearer being duly authorised thereto by a Power of Attorney which said Power of Attorney was signed at BLOEMFONTEIN on 27 MAY 2014 granted to him by

**THE TRUSTEES OF THE
 M & J TRUST
 REGISTRATION NUMBER IT730/2010**

PULANE
 DATA
 NASIEN

NASREEN
 DATA
 NASIEN

Ver
 Micro
 Scanning

2014-07-28

28 JUL 2014

[Handwritten mark]

Handwritten scribbles in the top right corner.

Handwritten scribbles in the upper left quadrant.

Handwritten scribbles in the center of the page.

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Handwritten scribbles in the lower left quadrant.

Handwritten scribbles in the lower middle section.

Handwritten scribbles in the bottom left quadrant.

Handwritten scribbles in the lower left quadrant.

And the appearer declared that the abovementioned Transferor purchased on 16 November 2012 from the hereinafter mentioned Transferee certain REMAINING EXTENT OF PLOT 42 ESTOIRE SETTLEMENT DISTRICT BLOEMFONTEIN PROVINCE FREE STATE, but had erroneously received Transfer of the hereinafter mentioned property, and whereas the TRANSFEROR and TRANSFEE agreed on 27 May 2014, per rectification agreement, that the error be rectified, now they therefore cede and transfer, the state however reserving the rights, to and on behalf of:

**THE TRUSTEES OF THE
WGM TRUST
REGISTRATION NUMBER TMP3611**

its Successors in Office or assigns, in full and free property

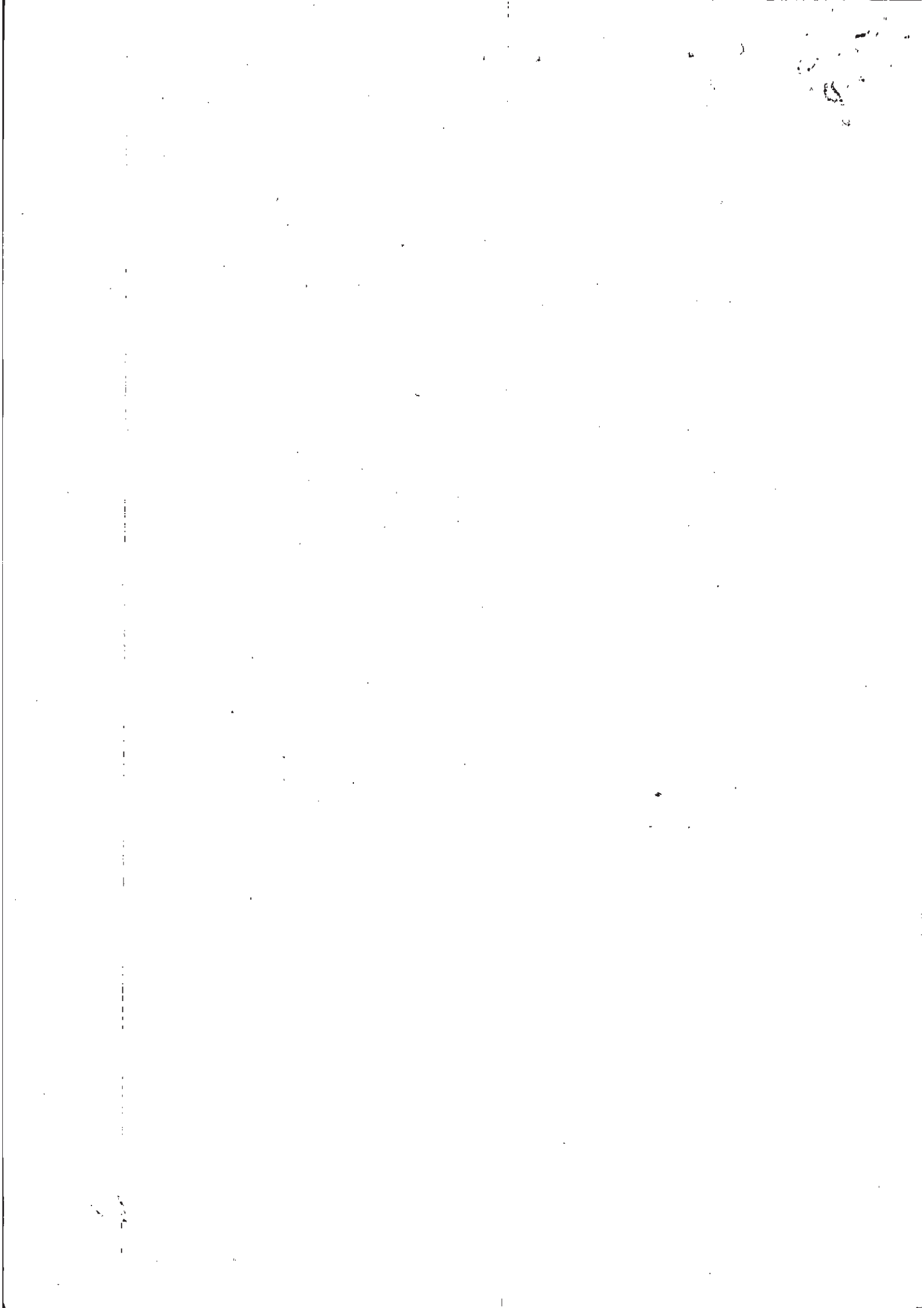
**PORTION 1 OF PLOT 42 ESTOIRE SETTLEMENT DISTRICT
BLOEMFONTEIN PROVINCE FREE STATE**

IN EXTENT 2,1411 (TWO COMMA ONE FOUR ONE ONE) hectares

**FIRST registered by Certificate of Registered Title T1694/2012 with
Diagram LG No 111/2011 relating thereto and held by Deed of
Transfer T5019/2013**

ONDERWORPE aan 'n voorwaarde soos geskep in Sertifikaat van Geregistreeerde Deeltitel T1694/2012:

ONDERHEWIG aan 'n serwituuat van reg van weg, 15,74 (vyftien komma sewe vier) meter wyd, langs sy BC soos aangetoon op die onderverdelingskaart LG No. 111/2011 hierby aangeheg ten gunste van die algemene publiek.



WHEREFORE the said Appearer, renouncing all right and title which the said

**THE TRUSTEES OF THE
M & J TRUST
REGISTRATION NUMBER IT730/2010**

heretofore had to the premises, did in consequence also acknowledge them to be entirely dispossessed of, and disentitled to the same, and that by virtue of these presents, the said

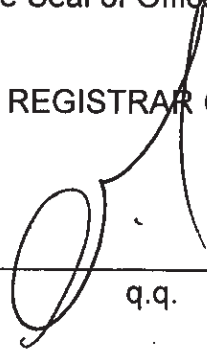
**THE TRUSTEES OF THE
WGM TRUST
REGISTRATION NUMBER TMP3611**

its Successors in Office or assigns, now is and henceforth shall be entitled thereto, conformably to local custom, the State, however reserving its rights, and finally acknowledging the value of the property is the sum of R1 750 000,00 (ONE MILLION SEVEN HUNDRED AND FIFTY THOUSAND RAND).

IN WITNESS WHEREOF, I the said Registrar, together with the Appearer, have subscribed to these presents, and have caused the Seal of Office to be affixed thereto.

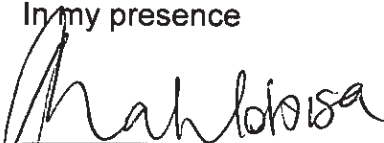
THUS DONE and EXECUTED at the Office of the REGISTRAR OF DEEDS at Bloemfontein on

2014 -07- 25.



q.q.

In my presence




REGISTRAR OF DEEDS





21-6-77

BLADSY/PAGE 4
AKTE No./DEED No. 17979/2014

| | | | |
|----------------------------------|--|--|--|
| VERBIND | | MORTGAGED | |
| VIR FOR R <u>1 000 000,00</u> | | | |
| B 000004201 / 2017 | |  REGISTRATEUR/REGISTRAR | |
| 2017-09-04 | | | |

STRAßE

STRAßE

APPENDIX N

Existing Tank Capacity

Diameter = 2,900 mm Length = 12,000 mm Total Tank Capacity = 79,262 litres

| Capacity (litres) | Depth (cm) | Capacity (litres) | Depth (cm) | Capacity (litres) | Depth (cm) |
|-------------------|------------|-------------------|------------|-------------------|------------|
| 72.421 | 249.00 | 59.263 | 203.00 | 43.802 | 157.00 |
| 72.662 | 250.00 | 59.582 | 204.00 | 44.149 | 158.00 |
| 72.901 | 251.00 | 59.899 | 205.00 | 44.496 | 159.00 |
| 73.137 | 252.00 | 60.215 | 206.00 | 44.842 | 160.00 |
| 73.370 | 253.00 | 60.530 | 207.00 | 45.188 | 161.00 |
| 73.601 | 254.00 | 60.844 | 208.00 | 45.534 | 162.00 |
| 73.829 | 255.00 | 61.157 | 209.00 | 45.879 | 163.00 |
| 74.055 | 256.00 | 61.469 | 210.00 | 46.224 | 164.00 |
| 74.277 | 257.00 | 61.779 | 211.00 | 46.569 | 165.00 |
| 74.497 | 258.00 | 62.089 | 212.00 | 46.914 | 166.00 |
| 74.713 | 259.00 | 62.397 | 213.00 | 47.258 | 167.00 |
| 74.927 | 260.00 | 62.703 | 214.00 | 47.601 | 168.00 |
| 75.137 | 261.00 | 63.009 | 215.00 | 47.945 | 169.00 |
| 75.344 | 262.00 | 63.313 | 216.00 | 48.288 | 170.00 |
| 75.548 | 263.00 | 63.616 | 217.00 | 48.630 | 171.00 |
| 75.749 | 264.00 | 63.917 | 218.00 | 48.973 | 172.00 |
| 75.946 | 265.00 | 64.217 | 219.00 | 49.314 | 173.00 |
| 76.140 | 266.00 | 64.516 | 220.00 | 49.656 | 174.00 |
| 76.329 | 267.00 | 64.813 | 221.00 | 49.996 | 175.00 |
| 76.516 | 268.00 | 65.108 | 222.00 | 50.336 | 176.00 |
| 76.698 | 269.00 | 65.402 | 223.00 | 50.676 | 177.00 |
| 76.876 | 270.00 | 65.695 | 224.00 | 51.015 | 178.00 |
| 77.051 | 271.00 | 65.986 | 225.00 | 51.354 | 179.00 |
| 77.221 | 272.00 | 66.275 | 226.00 | 51.692 | 180.00 |
| 77.387 | 273.00 | 66.563 | 227.00 | 52.029 | 181.00 |
| 77.548 | 274.00 | 66.849 | 228.00 | 52.366 | 182.00 |
| 77.704 | 275.00 | 67.134 | 229.00 | 52.702 | 183.00 |
| 77.856 | 276.00 | 67.417 | 230.00 | 53.038 | 184.00 |
| 78.003 | 277.00 | 67.698 | 231.00 | 53.373 | 185.00 |
| 78.144 | 278.00 | 67.977 | 232.00 | 53.707 | 186.00 |
| 78.280 | 279.00 | 68.255 | 233.00 | 54.040 | 187.00 |
| 78.410 | 280.00 | 68.530 | 234.00 | 54.373 | 188.00 |
| 78.534 | 281.00 | 68.804 | 235.00 | 54.705 | 189.00 |
| 78.651 | 282.00 | 69.076 | 236.00 | 55.036 | 190.00 |
| 78.761 | 283.00 | 69.346 | 237.00 | 55.366 | 191.00 |
| 78.864 | 284.00 | 69.614 | 238.00 | 55.696 | 192.00 |
| 78.959 | 285.00 | 69.880 | 239.00 | 56.025 | 193.00 |
| 79.045 | 286.00 | 70.144 | 240.00 | 56.353 | 194.00 |
| 79.121 | 287.00 | 70.406 | 241.00 | 56.680 | 195.00 |
| 79.185 | 288.00 | 70.665 | 242.00 | 57.006 | 196.00 |
| 79.235 | 289.00 | 70.923 | 243.00 | 57.331 | 197.00 |
| 79.262 | 290.00 | 71.178 | 244.00 | 57.656 | 198.00 |
| | | 71.432 | 245.00 | 57.979 | 199.00 |
| | | 71.682 | 246.00 | 58.302 | 200.00 |
| | | 71.931 | 247.00 | 58.623 | 201.00 |
| | | 72.177 | 248.00 | 58.944 | 202.00 |

TANK CALIBRATION CHART

Dipstick Man



Piet Smit Construction

Horizontal tank with flat heads

Diameter = 2,900 mm Length = 12,000 mm Total Tank Capacity = 79,262 litres

| Depth (cm) | Capacity (litres) | Depth (cm) | Capacity (litres) | Depth (cm) | Capacity (litres) | Depth (cm) | Capacity (litres) |
|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|
| 1.00 | 27 | 79.00 | 17,483 | 117.00 | 29,948 | 156.00 | 43,456 |
| 2.00 | 77 | 80.00 | 17,793 | 118.00 | 30,290 | 157.00 | 43,792 |
| 3.00 | 141 | 81.00 | 18,105 | 119.00 | 30,632 | 158.00 | 44,128 |
| 4.00 | 217 | 82.00 | 18,418 | 120.00 | 30,974 | 159.00 | 44,464 |
| 5.00 | 303 | 83.00 | 18,732 | 121.00 | 31,317 | 160.00 | 44,800 |
| 6.00 | 398 | 84.00 | 19,047 | 122.00 | 31,661 | 161.00 | 45,136 |
| 7.00 | 501 | 85.00 | 19,363 | 123.00 | 32,005 | 162.00 | 45,472 |
| 8.00 | 611 | 86.00 | 19,681 | 124.00 | 32,349 | 163.00 | 45,808 |
| 9.00 | 729 | 87.00 | 19,999 | 125.00 | 32,693 | 164.00 | 46,144 |
| 10.00 | 853 | 88.00 | 20,319 | 126.00 | 33,038 | 165.00 | 46,480 |
| 11.00 | 983 | 89.00 | 20,639 | 127.00 | 33,383 | 166.00 | 46,816 |
| 12.00 | 1,118 | 90.00 | 20,961 | 128.00 | 33,729 | 167.00 | 47,152 |
| 13.00 | 1,260 | 91.00 | 21,283 | 129.00 | 34,075 | 168.00 | 47,488 |
| 14.00 | 1,406 | 92.00 | 21,607 | 130.00 | 34,421 | 169.00 | 47,824 |
| 15.00 | 1,558 | 93.00 | 21,931 | 131.00 | 34,767 | 170.00 | 48,160 |
| 16.00 | 1,715 | 94.00 | 22,256 | 132.00 | 35,113 | 171.00 | 48,496 |
| 17.00 | 1,876 | 95.00 | 22,582 | 133.00 | 35,460 | 172.00 | 48,832 |
| 18.00 | 2,042 | 96.00 | 22,910 | 134.00 | 35,807 | 173.00 | 49,168 |
| 19.00 | 2,212 | 97.00 | 23,237 | 135.00 | 36,154 | 174.00 | 49,504 |
| 20.00 | 2,386 | 98.00 | 23,566 | 136.00 | 36,501 | 175.00 | 49,840 |
| 21.00 | 2,564 | 99.00 | 23,896 | 137.00 | 36,849 | 176.00 | 50,176 |
| 22.00 | 2,747 | 100.00 | 24,226 | 138.00 | 37,196 | 177.00 | 50,512 |
| 23.00 | 2,933 | 101.00 | 24,558 | 139.00 | 37,544 | 178.00 | 50,848 |
| 24.00 | 3,123 | 102.00 | 24,890 | 140.00 | 37,892 | 179.00 | 51,184 |
| 25.00 | 3,316 | 103.00 | 25,222 | 141.00 | 38,239 | 180.00 | 51,520 |
| 26.00 | 3,513 | 104.00 | 25,556 | 142.00 | 38,587 | 181.00 | 51,856 |
| 27.00 | 3,714 | 105.00 | 25,890 | 143.00 | 38,935 | 182.00 | 52,192 |
| 28.00 | 3,918 | 106.00 | 26,225 | 144.00 | 39,283 | 183.00 | 52,528 |
| 29.00 | 4,125 | 107.00 | 26,560 | 145.00 | 39,631 | 184.00 | 52,864 |
| 30.00 | 4,336 | 108.00 | 26,896 | 146.00 | 39,979 | 185.00 | 53,200 |
| 31.00 | 4,549 | 109.00 | 27,233 | 147.00 | 40,327 | 186.00 | 53,536 |
| 32.00 | 4,766 | 110.00 | 27,571 | 148.00 | 40,675 | 187.00 | 53,872 |
| 33.00 | 4,985 | 111.00 | 27,909 | 149.00 | 41,023 | 188.00 | 54,208 |
| 34.00 | 5,208 | 112.00 | 28,247 | 150.00 | 41,371 | 189.00 | 54,544 |
| 35.00 | 5,433 | 113.00 | 28,586 | 151.00 | 41,719 | 190.00 | 54,880 |
| 36.00 | 5,661 | 114.00 | 28,926 | 152.00 | 42,066 | 191.00 | 55,216 |
| 37.00 | 5,892 | 115.00 | 29,266 | 153.00 | 42,414 | 192.00 | 55,552 |
| 38.00 | 6,125 | 116.00 | 29,607 | 154.00 | 42,761 | 193.00 | 55,888 |
| 39.00 | 6,362 | 117.00 | 29,948 | 155.00 | 43,108 | 194.00 | 56,224 |
| | | | | 156.00 | 43,456 | | |

PM Smit

25 Houkopp Road, Duncanville, Vereeniging, Gauteng, Suid Afrika

Pieter 082 775 1106

Office: 063 308 3027

Email: pmsmitkonstruksie@gmail.com

Website: www.pmsmitconstruction.co.za

MANUFACTURING CERTIFICATE

| | | | | | |
|----------|--------------------|----------|---------|--------|---------|
| Customer | Mega Tank Supplier | Order Nr | J19/655 | Job Nr | J19/655 |
|----------|--------------------|----------|---------|--------|---------|

Tank Description

| | | | | | |
|--------------------|------------|----------|--------|-----------|---------|
| Thickness of steel | 6mm | Capacity | 79900L | Serial Nr | J19/655 |
| Manufacturing Date | 27/02/2019 | | | | |

Cylinder Type

| | | | | | | |
|-------------|-------------------------------------|---------------|-------------------------------------|--------------|--------------------------|-------|
| Hydraulic | <input checked="" type="checkbox"/> | Double Acting | <input checked="" type="checkbox"/> | Air | <input type="checkbox"/> | 35KPA |
| Multi Stage | <input checked="" type="checkbox"/> | Single Acting | <input checked="" type="checkbox"/> | Displacement | <input type="checkbox"/> | YES |

Front Clevis NO

Fear Clevis NO

Rod Threads NO

Pressure 35 KPA in 35KPA out

Internal Leaking NO

External Leaking NO

Bore x Stroke x Shaft OD x

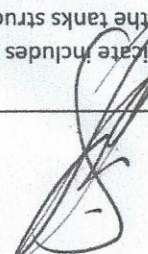
Seal Type x Piston x Gland x

Remarks Yes

Tested By: Brandon van der Berg

Approved By: Pieter Smit

PM Smit



*This Certificate includes a 1 year guarantee on the tank. Please note that any changes made by yourself to the tanks structure after delivery forfeit this guarantee.

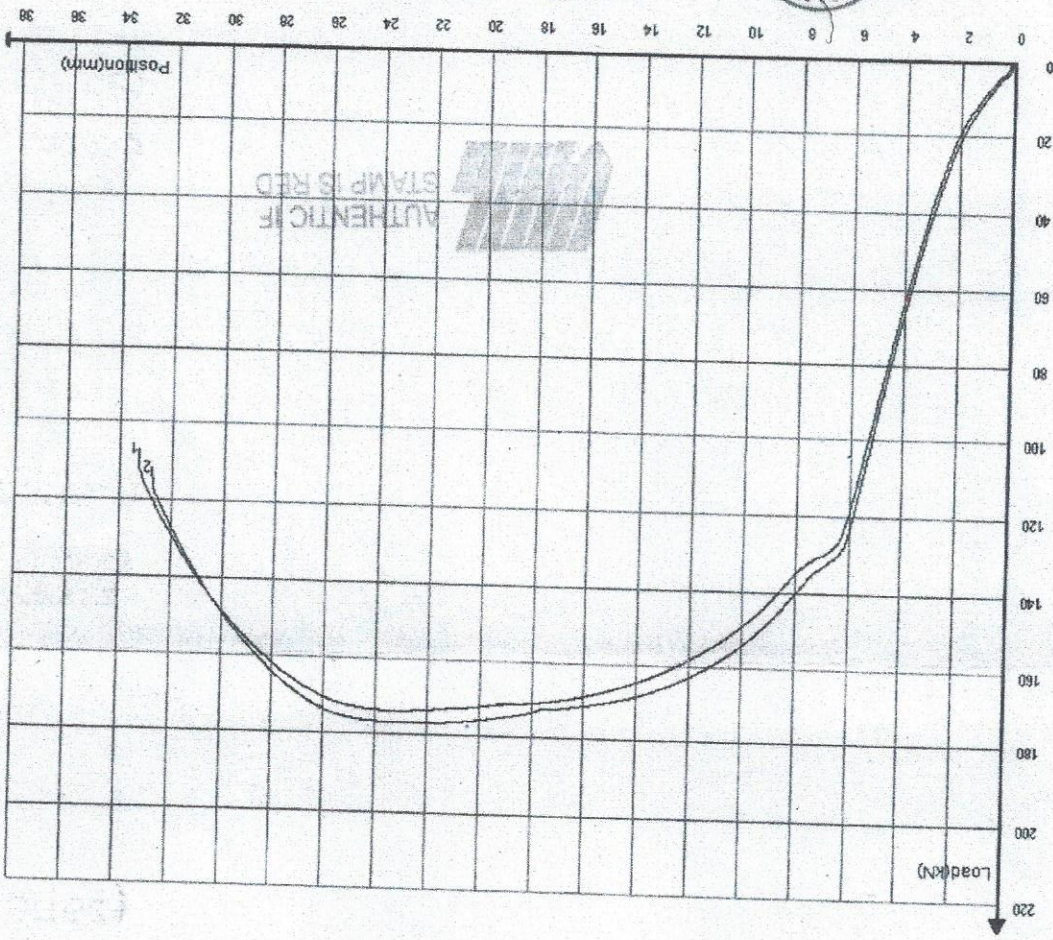
VML TENSILE TEST REPORT



Customer: VML No

MJ NEL
WTR302/15

| Sample No. | (b) | a | du | Lo | Lu | F _{el} | F _m | S _o | Rel | R _m | A | Z |
|------------|-----------------|-------|-------|-------|----|-----------------|----------------|----------------|--------|----------------|-----|-----|
| NO.1 | PQR: PMS 001/15 | 20.01 | 15.61 | 11.14 | 50 | 69.48 | 128.1 | 173.5 | 312.36 | 410 | 555 | 39 |
| NO.2 | PQR: PMS 001/15 | 20.10 | 15.59 | 9.15 | 50 | 67.76 | 130.7 | 176.7 | 313.36 | 417 | 564 | 36 |
| | | | | | | | | | | | | 64 |
| | | | | | | | | | | | | 68 |
| | | | | | | | | | | | | PMD |
| | | | | | | | | | | | | PMD |



STAMP IS RED
AUTHENTIC

LABORATORY
SAIW 5107
MD NET CC
LRY THINKS



Auditing:

Tester:



**VAAL METALLURGIESE
LABORATORIUMS (PTY)
LTD**

7 Brett's Lane, 21 Telford Street,
Duncanville, Vereeniging, 1939.
PO Box 4533, Vereeniging, 1930.
Tel: 016 455 2000/1 Fax: 016 422 1964.
E-mail: info@vml.co.za

TEST REPORT IN ACCORDANCE WITH EN 10204 3.1 OF SAMPLE AS SUPPLIED

| | | | |
|------------------------|----------------------------|--------------------------------|--|
| CUSTOMER: | M.J. NELC.C | REPORT NUMBER: | 8302/15/C |
| ADDRESS: | PO Box 958, MEYERTON, 1960 | DATE TESTED: | 18/01/2019 |
| TELEPHONE: | 011-902 1623 | MATERIAL SPECIFICATION: | BS EN 10028-3 P355NL1 BS EN 10025-2 S355JO+N |
| FAX NUMBER: | 011-902-1653 | SAMPLE IDENTIFICATION: | REF : PMS 001/15 WQR : Q. Vd BERG 7801125066088 GMAW - (16mm) |
| E-MAIL: | admin@minel.co.za | | |
| CONTACT PERSON: | THINUS | | |

| BEND TEST | | TEST SPECIFICATION: | VML-QTY-MTD-0006 & ASME IX:2013 |
|------------------|------------------------------|----------------------------|--|
| Bend Type | Mandrel Diameter (mm) | Bend Angle (Deg.) | Requirements - Comments: |
| SIDE (4T) | 40 | 180° | ACCEPTABLE |
| SIDE (4T) | 40 | 180° | ACCEPTABLE |
| | | | |
| | | | |
| | | | |



| | | |
|---|--|----------------------------|
| | Tests requested, in accordance with spec. provided | X |
| | Tests requested, NOT in accordance with spec. provided | |
| No requirements provided - (FOR INFORMATION ONLY) | | |
| REMARKS: | HEAT TREATMENT: AS WELDED | |
| WITNESSED BY: | | TECHNICAL SIGNATORY |
| LRY THICKS SAM 5107 MJ NelcC | | |

Testing was done according to the following VML procedures (Supporting international procedures) VML-QTY-MTD-0001 to 0023. (ASTM E8, BS EN ISO 6892-1, BS EN ISO 10002-1, BS 18, ASTM E23, ISO 148-1 & 10045-1, ASTM E92, EN ISO 6507-1, ASTM E18, EN ISO 6508-1, ASTM E10, EN ISO 6506-1, ASTM A450/450M, BS EN 10233, BS EN 10234, ASME IX, AWS D1.1, BS EN 16614, API 1104, ASTM A262, ASTM A923, ASTM E45, ASTM E384-11, BS EN ISO 5173, EN1321. *s* - This symbol indicates a non SANAS accredited test.

Whilst making every effort to ensure the accuracy of our results, they are without guarantee or warranty. The test results relate only to the items tested. This test report or part thereof may not be reproduced without written approval of VML management. Samples will be discarded after 30 days. Ambient temperature controlled at 23°C ± 5°C.

APPENDIX O

Waste Removal Agreements

Service Level Agreement

entered into and between

Mack's Petroleum

("the Client")

and

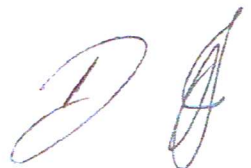


ENVIRO-TECH SA

("the Contractor")

TABLE OF CONTENTS

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1. PARTIES

The Parties to this Agreement are -

- 1.1. **Mack's Petroleum**, registration number 2015/394838/07 a private company duly incorporated in accordance with the company laws of South Africa, with its registered address at 19A Sand du Plessis Avenue, Estoire, Bloemfontein, 9302 and herein represented by Mack van der Merwe ("the Client"); and
- 1.2. **ENVIRO-TECH SA (PTY) LTD**, registration number 2012/041638/07, a private company duly incorporated in accordance with the company laws of South Africa, with its registered address at 22 Union Avenue, Parksig, Flat 6, Navalsig, Bloemfontein, 9330 and herein represented by Duane de Lange (the "Contractor")

who warrant that they are duly authorised thereto.

2. RECORDAL

It is recorded that -

- 2.1. the Client is a Fuel Depot (Fuel Whole Seller)
- 2.2. the Contractor's business entails various services in the field of environmental waste management, 24H Spill response, safe disposal of hazardous waste, distribution of various cleaning and environmental products.
- 2.3. the Client is desirous to utilise the services contemplated in clause 3.1 offered by the Contractor and the Contractor is desirous to provide these services to the Client; and
- 2.4. the Parties agree as set out herein.

3. DEFINITIONS AND INTERPRETATION

3.1. Definitions

In this Agreement, unless the context otherwise requires, the following capitalised terms shall have the meanings assigned to them below and cognate expressions shall have corresponding meanings:

| | |
|--------------------------|---|
| "Annexure" | means any annexure attached to this agreement and which forms part of this agreement |
| "Effective Date" | 30 th of May 2020 |
| "Default Interest Rate" | The prime lending rate at which the Contractor's Bank lends on unsecured overdraft to its most favoured customers in the corporate sector |
| "Good Industry Practice" | applying, in relation to the manner in which the Services are rendered, the standards, practices, methods and procedures conforming to applicable law, and exercising that degree of skill, care, diligence, prudence and foresight that would reasonably and ordinarily be expected from a skilled and experienced person engaged in a similar type of undertaking under similar circumstances |
| "Parties" | the Client and the Contractor, and any reference to "a Party" shall refer to one of the relevant Parties as required by the context |

| | |
|-------------------------------|---|
| "Services" | the services to be provided by the Contractor to the Client as set out in Annexure A to this Agreement and as may be subsequently amended in accordance with this Agreement |
| "Site address" | 19A Sand du Plessis Avenue, Estoire, Bloemfontein, 9302, at which the Contractor is required to provide the Services |
| "Termination Date" | 29 th of May 2022, (24) months after the Effective Date; and |
| "the/ <i>this Agreement</i> " | this service level agreement between the Parties together with the Annexures thereto |

3.2. Interpretation

This Agreement shall be interpreted according to the following provisions, unless the context requires otherwise:

- 3.2.10. References to the provisions of any law shall include such provisions as amended, re-enacted or consolidated from time to time in so far as such amendment, re-enactment or consolidation applies or is capable of applying to any transaction entered into under this Agreement.
- 3.2.11. References to "Parties" shall include the Parties' respective successors-in-title and, if permitted in this Agreement, their respective cessionaires and assignees.
- 3.2.12. References to a "person" shall include an individual, firm, company, corporation, juristic person, Responsible Authority, and any trust, organisation, association or partnership, whether or not having separate legal personality.
- 3.2.13. References to "clauses", "sub-clauses" and "Annexures" are references to the clauses,
- 3.2.14. References to any other contract or document shall include (subject to all approvals required to be given pursuant to this Agreement for any amendment or variation to or novation or substitution of such contract or document) a reference to that contract or document as amended, varied, novated or substituted from time to time.
- 3.2.15. Words in parentheses and italics appearing after a clause reference or a reference to a Schedule are inserted for ease of reference only. If there is any discrepancy between the clause reference and the words in parentheses and italics, the latter shall prevail.
- 3.2.16. The headings of clauses, sub-clauses and Annexures are included for convenience only and shall not affect the interpretation of this Agreement.
- 3.2.17. The Annexures to this Agreement are an integral part of this Agreement and references to this Agreement shall include the Annexures.
- 3.2.18. The Parties acknowledge that each of them has had the opportunity to take legal advice concerning this Agreement, and agree that no provision or word used in this Agreement shall be interpreted to the disadvantage of either Party because that Party was responsible for or participated in the preparation or drafting of this Agreement or any part of it.

- 3.2.19. Words importing the singular number shall include the plural and vice versa, and words importing either gender or the neuter shall include both genders and the neuter.
- 3.2.20. References to "this Agreement" shall include this Agreement as amended, varied, novated or substituted in writing from time to time.
- 3.2.21. The number of days indicated to commit an act or indicated for any other purpose, is calculated by excluding the first day and including the last day.
- 3.2.22. If any definition in clause 3.1 (*Definitions*) contains a substantive provision conferring rights or imposing obligations on any Party, effect shall be given to such provision as if it was a substantive provision in the body of this Agreement.

4. APPOINTMENT

The Client appoints the Contractor, which appointment the Contractor accepts, to provide the Services to the Client in accordance with the terms and conditions of this Agreement.

5. CO-OPERATION

Each Party shall co-operate with the other in the exercise and performance of their respective rights and obligations under this Agreement.

6. DURATION

This Agreement and the rights and obligations of the Parties under this Agreement shall take effect from the Effective Date and will terminate after 29th of May 2022, (24) months or the Termination Date.

7. GENERAL OBLIGATIONS OF THE CONTRACTOR

- 7.1. The Contractor shall in the provision of the Services, avoid undue hindrance, interruption or interference with the operations of the Client or otherwise hinder the activities of the Client and its employees, save to the extent entitled to do so in terms of this Agreement or as may be reasonably necessary for the performance of the Services under this Agreement.
- 7.2. The Contractor shall not be relieved of any obligation, responsibility or liability under this Agreement by the appointment of any subcontractor to carry out any part of the Services. As between the Contractor and the Client, the Contractor shall be responsible for the payment, performance, acts, defaults, omissions, breaches and negligence of all subcontractors. All references in this Agreement to any performance, payment, act, default, omission, breach or negligence of the Contractor shall be deemed to include any of the same by a subcontractor.
- 7.3. The Client shall at all reasonable times and with prior written notice have access to (including the right to reproduce) all records and documentation required by the Contractor to be kept in relation to the Services for purposes of auditing, quality control and monitoring of the Services.

8. GENERAL RIGHTS AND OBLIGATIONS OF THE CLIENT

The Client -

- 8.1. shall grant the Contractor reasonable access to the Site(s) to enable it to properly perform the Services in terms of this Agreement;
- 8.2. shall compensate the Contractor for the performance of the Services in accordance with clause 11 (*Payment*);
- 8.3. shall, without prejudice to the obligation of the Contractor to provide the Services, provide reasonable assistance to the Contractor in its performance of the Services, and specifically, to ensure as far as it may be reasonably possible from its end, a smooth integration and synchronization process to synchronize and integrate the activities of the Contractor and the Client;
- 8.4. shall inform the Contractor of the policies, procedures, protocols and directives of the Client as may be applicable to the Services and shall timeously inform the Contractor of any amendments thereto;
- 8.5. shall not appoint a third party to provide the same Services as that offered by the Contractor before acquiring prior written consent from it; and
- 8.6. reserves the right to refuse access to, or to order the removal from, the Site(s) of any person employed by or acting on behalf of the Contractor, whose presence or continued presence, in the reasonable opinion of the Client, is likely to have a material adverse effect on the performance of the Client of its functions and duties or is deemed not to be a fit and proper person to be present in or on the Site(s).

9. SERVICES

9.1 Provision of the Services

The Contractor shall provide the Services in accordance with this Agreement with effect from the Effective Date for the duration of the Agreement and shall be entitled to payment for the Services provided by it in accordance with clause 11 (*Payment*) as from the Effective Date.

9.2 Service Standards

The Contractor shall carry out the Services (each as a separate and distinct obligation) –

- 9.2.10. in accordance with Annexure A;
- 9.2.11. at its own cost, risk and expense and in accordance with Good Industry Practice;
- 9.2.12. in a manner that complies with and meets the requirements of all applicable law and specifically the legislation as set out below in clause 9.3;
- 9.2.13. in compliance with the reasonable policies, procedures, protocols and directives of the Client (as may be amended from time to time) as indicated; and

9.2.14. so that all aspects of the Services may be supervised by persons having adequate knowledge of such matters for the satisfactory and safe performance of the Services having regard to the activities which are carried on at the Site(s); and

9.2.15. in accordance with the provisions of this Agreement,

and shall upon receipt of a request by the Client within 10 (TEN) days supply to him evidence substantiating its compliance with this clause 9.2 (*Services Standards*).

9.3. **Legislation and Registration**

9.3.10. The Contractor, its employees and agents shall at all times in rendering the Services to the Client adhere to the requirements of the -

9.3.10.1. Occupational Health and Safety Act 85 of 1993 (as amended) and its regulations;

9.3.10.2. Environment Conservation Act 73 of 1989 (as amended) and its regulations;

9.3.10.3. National Environmental Management: Waste Act, No.59 of 2008; and

10. **PERFORMANCE MONITORING**

10.1. **The Contractor monitoring**

The Contractor shall be responsible to monitor its performance in the delivery of the Services, and shall implement appropriate monitoring, quality control and management procedures in accordance with Good Industry Practice in respect of the Services, including such monitoring procedures as the Parties may from time-to-time agree

11. **PAYMENT**

11.1. **Entitlement to payment**

Subject to the provisions of this Agreement, the Client shall as of the Effective Date remunerate the Contractor in accordance with the provisions below.

11.2. **Service fees**

11.2.1. The service fees in relation to the Services to be rendered by the Contractor to the Client as set out in Annexure A entails the following amounts:

11.2.1.1. Any monthly/weekly fees

11.2.1.2. Any per service fees

11.2.1.3. Any once- off fees

11.2.1.4. Any increases yearly etc.

11.3. **Invoicing and payment arrangements**

- 11.3.1. Prior to the 25th (TWENTY-FIFTH) day of each month, the Contractor shall submit to the Client an invoice ("Monthly Invoice") detailing and aggregating the following:
- 11.3.1.1. The net monthly payment for the preceding month indicating –
 - 11.3.1.1.1. the monthly payment in respect of all the service fees as contemplated in clause 11.2 above payable for the preceding month;
 - 11.3.1.1.2. any other amounts agreed or determined to be due and payable under the Agreement by the Client to the Contractor;
 - 11.3.1.1.3. any interest due in accordance with clause 11.3.3; and
 - 11.3.1.1.4. any VAT payable (if applicable).
 - 11.3.2. The Client shall pay the amount of a valid Monthly Invoice within 14 (FOURTEEN) days of its submission and delivery to the Client of a valid invoice in respect thereof.
 - 11.3.3. Save where expressly provided otherwise, where any payment or sum of money due from the Client to the Contractor in terms of the Agreement is not paid within 14 (FOURTEEN) days of the due date it shall bear interest thereon at the Default Interest Rate from the due date (whether before or after any judgement) until actual payment.

11. CONFIDENTIALITY

The Contractor undertakes, for the duration of this Agreement as well as after the termination hereof, not to directly or indirectly, utilize, disclose or make public to any third party any confidential information of the Client and to keep any confidential information secret and confidential at all times, unless such disclosure takes place in the ordinary course of the carrying out by a Party of its obligations in terms of this Agreement.

12. TERMINATION

12.1. Non-default termination

- 12.1.1. This Agreement shall automatically be terminated on the Expiry Date, unless it has been terminated earlier in accordance with the provisions of this Agreement.
- 12.1.2. Without prejudice to clause 12.2 (Breach), either Party shall be entitled to and after good cause has been shown voluntarily terminate this Agreement at any time on 3 (THREE) months written notice to the other indicating such termination.
- 12.1.3. To avoid doubt it is recorded that upon such early termination as contemplated in clause 12.1.2 above the Contractor shall be entitled to claim an early termination penalty, as set out in Annexure B hereto, from the Client.

12.2. Breach

Should any Party (the "guilty party") commit a breach of this agreement and fail or refuse to rectify that breach within 14 (FOURTEEN) days after receipt of a written notice from the other Party (the "aggrieved party"), calling upon the guilty party to rectify that breach, the aggrieved party shall be entitled, without prejudice to any other of his rights, to forthwith cancel this Agreement by written notice to the guilty party.

13. WARRANTIES

13.1. Contractor warranties

The Contractor warrants that -

- 13.1.1. the obligations of the Contractor under this Agreement are legal, valid and binding and enforceable against it in accordance with the terms of the Agreement;
- 13.1.2. it has satisfied itself as to the nature and extent of the Services to be provided in terms of the Agreement.

13.2. Client warranties

The Client warrants that -

- 13.2.1. it has taken all necessary actions to authorise the execution of this Agreement; and
- 13.2.2. it has not knowingly omitted to disclose any material information in its possession or under its control relating to the Services or Sites.

14. INDEMNITIES

Each Party indemnifies and shall keep the other Party indemnified at all times against all direct losses sustained by either Party in consequence of -

- 14.1. any –
 - 14.1.1. loss of or damage to property;
 - 14.1.2. breach of a statutory duty arising under any applicable Law;
 - 14.1.3. claim for or in respect of the death or personal injury of any individual; or
 - 14.1.4. other claim, action, charge, cost, demand or expense,

(including, without limitation, any legal fees or costs) arising in connection with the performance or non-performance of any of the Services, save to the extent caused by the gross negligence or wilful misconduct of either Party or by a breach of an express provision of this Agreement; or

- 14.2. any breach by either Party of any warranties given by them in this Agreement.

15. DISPUTE RESOLUTION

- 15.1. The dispute resolution procedure contained in this clause 15 ("Dispute Resolution Procedure") shall apply to any dispute, claim or difference between the Parties arising out of or relating to this Agreement ("a dispute").
- 15.2. A dispute will not be deemed to be a dispute until one of the Parties has provided a written notice conveying the nature and scope of the dispute to the other Party.
- 15.3. All disputes shall first be referred to a mediation committee consisting of the Contract Managers of the Parties ("Mediation Committee") for resolution. An agreement reached by the Mediation Committee shall be reduced to writing and shall be binding on the Parties.
- 15.4. If the Parties have been unable to resolve any dispute within 10 (TEN) working days of referral to the Mediation Committee, either Party may refer the matter to arbitration.
- 15.5. The arbitration shall be conducted in accordance with the provisions of the Arbitration Act, 1965 (Act No 42 of 1965, as amended from time to time), provided that –
- 15.6. a single arbitrator shall be appointed;
- 15.7. the arbitrator shall be a practicing counsel or attorney of not less than 10 (TEN) years standing agreed upon by the parties within 10 (TEN) days after the date on which the arbitration is called for.
- 15.8. If the parties fail to reach agreement within 10 (TEN) days after arbitration has been called for on the arbitrator to be appointed, such arbitrator shall be appointed by the President for the time-being of the Law Society of the Free State.
- 15.9. The arbitration proceedings shall take place in Bloemfontein at a venue and time to be determined by the arbitrator.
- 15.10. The arbitration proceedings shall be held informally and in a summary manner, and all procedural requirements and formalities shall be determined by the arbitrator. In determining such formalities and procedure, the arbitrator does not need to observe the normal strict rules of evidence or usual formalities of procedure.
- 15.11. The decision of the arbitrator shall be final and binding on the Parties.
- 15.12. The cost of the arbitration proceedings shall be borne by the Parties as decided by the arbitrator.
- 15.13. Notwithstanding the provisions of this clause 15, any Party shall be entitled to approach a competent court of law having jurisdiction to obtain any urgent relief which may be required by such Party.

16. MISCELLANEOUS

- 16.1. Save as expressly permitted hereunder, a Party shall not, without the prior written approval of the other Party, which shall not be unreasonably withheld, assign, cede, delegate, transfer or otherwise dispose of any right or obligation under this Agreement to any other person.

- 16.2. The Contractor shall not subcontract with any person for the carrying out of any of its obligations under this Agreement, without, in each case, the prior written consent of the Client, which consent shall not be unreasonably withheld or delayed.
- 16.3. This Agreement shall be governed by and construed in accordance with the laws of the Republic of South Africa. Subject to the provisions of clause 15 (*Dispute Resolution*), each Party agrees that the Free State Provincial Division of the High Court of South Africa shall have exclusive jurisdiction to hear and decide any application, action, suit, proceeding or dispute in connection with this Agreement, and irrevocably submits to the jurisdiction of the Free State Provincial Division of the High Court of South Africa.
- 16.4. No provision of this Agreement (including, without limitation, the provisions of this clause) may be amended, substituted or otherwise varied, and no provision may be added to or incorporated in this Agreement, except (in any such case) by an agreement in writing signed by the duly authorised representatives of the Parties.
- 16.5. Any relaxation, indulgence or delay (together "Indulgence") by either Party in exercising, or any failure by either Party to exercise, any right under this Agreement shall not be construed as a waiver of that right and shall not affect the ability of that Party subsequently to exercise that right or to pursue any remedy, nor shall any Indulgence constitute a waiver of any other right (whether against that Party or any other person).
- 16.6. Except where expressly provided to the contrary in this Agreement, this Agreement constitutes the entire agreement between the Parties in connection with its subject matter and supersedes all prior representations, communications, negotiations and understandings concerning the subject matter of this Agreement.
- 16.7. This Agreement may be executed in any number of identical counterparts, all of which when taken together shall constitute one agreement. Any single counterpart or a set of counterparts taken together which, in either case, are executed by the Parties shall constitute a full original of this Agreement for all purposes.
- 16.8. All notices and any other communications whatsoever (including, without limitation, any approval, consent, demand, query or request) by either Party in terms of this Agreement or relating to it shall be given in writing and sent by registered post, or delivered by hand, or transmitted by facsimile or electronic mail to the recipient Party at its relevant address set out below:
- 16.8.1. if to the Client, at:
- Address: 19A Sand du Plessis Avenue, Estoire, Bloemfontein, 9302
- Electronic mail address: mack@macksp.co.za
- Marked for the attention of: M van der Merwe
- 16.8.2. if to the Contractor, at:
- Address: 3 Frikkie van Kraayenburg street, New East End, Bloemfontein 9301
- Electronic mail address: jo-ann@enviro-techsa.co.za
- Marked for the attention of: J Meyer


- 16.9. Either Party may, by written notice to the other Party, change any of the addresses at which, or the designated person for whose attention those notices or other communications are to be given.
- 16.10. Any notice or other communication given by any Party to the other Party which –
- 16.10.1. is sent by registered post to the addressee at its specified address shall be rebuttably presumed to have been received by the addressee on the 7th (SEVENTH) day after the date of posting; or
 - 16.10.2. is delivered by hand during the normal Client hours of the addressee at its specified address shall be rebuttably presumed to have been received by the addressee at the time of delivery; or
 - 16.10.3. is transmitted by facsimile copier to the addressee at the addressee's specified facsimile number shall be rebuttably presumed to have been received by the addressee on the date of transmission as indicated on the sender's facsimile transmission report; or
 - 16.10.4. is transmitted by electronic mail to the addressee at the addressee's specified electronic mail address shall be rebuttably presumed to have received by the addressee on the date of transmission as reflected on the sender's electronic mail records.
- 16.11. The Parties choose their respective physical addresses in clause 16.8 as their respective *domicilia citandi et executandi* at which all documents relating to any legal proceedings to which they are a party may be served. If that address is changed to another address which is not a physical address in the Republic of South Africa, then the original address shall remain the *domicilium citandi et executandi* of the relevant Party until it nominates a new physical address within the Republic of South Africa in writing, to be its new *domicilium citandi et executandi*.
- 16.12. Each Party shall be responsible for paying its own costs and expenses incurred in connection with the negotiation, preparation and execution of this Agreement.

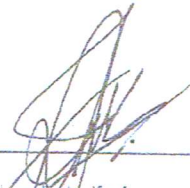
Nothing in this Agreement shall be construed as creating a partnership or a contract of employment between the Contractor and the Client. Save as expressly provided for in this Agreement, the Contractor will not be, or deemed to be, an agent of the Client and the Contractor shall not hold itself out as having authority or power to bind the Client in any way.

Thus done and signed at Hler mans on this 6 day of 7 2020

As witnesses:








by
for and on behalf of
MACKS PETROLUM

who warrants that he/she is duly authorised thereto

Thus done and signed at Blenfontein on this 07 day of July 2020

As witnesses:



By DUANEZE LANGE
for and on behalf of

ENVIRO-TECH SA (PTY) LTD


who warrants that he is duly authorised thereto



ANNEXURE A: SERVICES

The Contractor shall provide services as listed below:

- Dispose of Hazardous Waste on a as and when needed basis from the clients premises
- Dispose of General Waste on a as and when needed basis from the client's premises
- Assist with hydrocarbons spills/leaks on a as and when needed basis from the client's premises
- Supply of Oil/Diesel Spill Kits to the client as and when needed



APPENDIX P

Civil Services
Water and Sewer

Existing Services and Connection Points:

Developer's consultants must please indicate on the plan (diagram) where they are planning to connect. Where a new line(s) will have to be provided, the proposed position of the line(s) must be indicated. If more than one option is available, it must be indicated. For that purpose consultants will have to indicate the position of existing services as obtained from MMM's Drawing Office.

| DEVELOPMENT SPECIFICS (Current Single Serviced Stands) | | |
|---|--|--|
| Maximum Floor Area Allowed on Site (m²): | | |
| Current Property Information: | Stand Size (m²): | |
| | No. of Bathrooms / Showers: | |
| | No. of Toilets: | |
| Future Development Information: | Total No. of Bathrooms / Showers: | |
| | Total No. of Toilets: | |
| | Total Roof Area (m²): | |
| WATER CONTRIBUTION | | |
| Water Demand | | |
| Annual Average Daily Demand⁽¹⁾: | (kℓ/day) | |
| Peak Flow Factor for Type of Development⁽¹⁾: | | |
| Peak Demand⁽¹⁾: | (ℓ/s) | |
| Fire Flow | | |
| Current Fire Risk Category of Property⁽²⁾: | | |
| Proposed Fire Risk Category after Development⁽²⁾: | | |
| Fire Flow⁽²⁾: | (ℓ/s) | |

*All numerical values must be in accordance with the SI system.

Planned on-site bulk water storage (Yes / No):

If Yes, indicate volume:

(kℓ)

| |
|--|
| |
| |

Notes on Water Demand Information:

- 1) Water demands calculated could be based on the recommended demand information as per the Guidelines for Human Settlement, Planning and Design (2005)
- 2) Fire flow demand should be based on SANS 10090: Community Protection against Fire (2003)

| SEWER CONTRIBUTION | | |
|---|-----------------|--|
| Sewer Yield | | |
| Average Dry Weather Flow (ADWF): | (kℓ/day) | |
| Peak Factor for Type of Development: | | |
| Peak Dry Weather Flow (PDWF) | (ℓ/s) | |

*All numerical values must be in accordance with the SI system.

Notes on Sewer Yield information:

Sewerage effluent flows calculated should be based on the recommended effluent information as per the Guidelines for Human Settlement, Planning and Design (2005).

Requested by:

On behalf of:

Signed (Pr. Eng):

Date:

| |
|---|
| |
| |
| Leon Laubscher Digitally signed by Leon Laubscher Date: 2019.05.28 10:39:50 +02'00' |
| |

For Office Use Only

Approved by:

On behalf of:

Signed:

Date:

| |
|------------|
| |
| MMM |
| |
| |

IMPORTANT NOTICE: Incomplete or unsigned forms will cause delays for which the Developer will ultimately be held accountable for.

**REZONING OF
PLOT 1/42, ESTOIRE
BLOEMFONTEIN, FREE STATE**

Civil Services Report

28 MAY 2019

Compiled by: Ms. A Stevens
Approved competent person: Mr. L Laubscher

Ivoyo Project Development Consultants
PO Box 12620
Brandhof
9324

Tel: 051 – 436 0357
Fax: 051 – 436 5938

Report no: 9001-82-03 ESTOIRE PLOT 1/42 SR



**REZONING OF
PLOT 1/42, ESTOIRE
BLOEMFONTEIN, FREE STATE**

Civil Services Report

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ANNEXURES

Annexure A – Drawings

**REZONING OF
PLOT 1/42, ESTOIRE
BLOEMFONTEIN, FREE STATE**

Civil Services Report

1. Introduction

Ivoyo Project Development Consultants were requested to compile a civil services report, to investigate the effect that the rezoning of Plot 1/42 will have on the existing infrastructure.

The site was visited by us and as built information was collected from Mangaung Metro Municipality in order to review the capacity of the existing infrastructure and to verify if spare capacity exist.

This report reflects the findings of this investigation and makes recommendations regarding the possibility of rezoning of the above mentioned erven in terms of the water, sanitation and stormwater.

2. Current Conditions

As indicated by the Town and Regional Planners, the property is currently registered as Special Business type 2.

The properties is situated in Sand Du Plessis Avenue in the suburb Estoire as indicated on the locality image below.



The terrain slopes in a South Eastern direction towards the municipal servitude, Sand Du Plessis Avenue.

3. Proposed New Development

It is proposed that Plot 1/42 be rezoned to special use that will allow for the current uses as well as the proposed diesel depot.

4. Sanitation

4.1 Design Criteria

The design criteria are based on the "Guidelines for Human Settlement Planning and Design" or the Red Book as it is commonly known as well as the criteria as set out by the Mangaung Metro Municipality.

The run-offs from the proposed development are based on the following criteria:

- Business and commercial will be taken as 5000 l/ha/day as per the design standards set out by Mangaung Metro Municipality.
- Guest house sewer flow will be taken as 140 l/person/day. Assuming one person will be accommodated per room. (Mangaung design standards).
- A recommended peak factor of 2.5 (Pf) will be used for peak flows.
- A 15% will be allowed for rainwater / stormwater infiltration for peak wet weather flows.

4.2 Results of Analysis

Table 1.1: Estimated Sewage Flow

| Description | Unit | Number of units (No.) | Average Flow (l/day) | Average Dry Weather Flow (l/day) | Peak Wet Weather Flow (l/s) |
|-----------------------|--------|-----------------------|----------------------|----------------------------------|-----------------------------|
| Business | ha | 1.9 | 5000 | 9500 | 0.316 |
| Guest house / Hostels | People | 5 | 140 | 700 | 0.023 |
| Total PWWF | | | | | 0.339 |

Due to the lack of sanitation services in the area the erven under discussion is currently making use of a septic tank system to accommodate sanitation runoff. According to the information at hand the estimated sewer runoff calculated to 0.339 l/s (PWWF).

Should the existing septic tank be of insufficient capacity an additional septic tank might be required to control the sewer runoff generated from the proposed extensions. The sizing of the tank should be conducted in the design phase.

Due to the nature of the proposed development an oil separator pit should be constructed to separate oil from the water. The water must be directed to the septic tank and the oil should be removed and disposed of in an acceptable manner. Proper maintenance must be conducted to ensure the system functions efficiently.

5. Water

5.1 Design Criteria

The design criteria are based on the "Guidelines for Human Settlement Planning and Design" or the Red Book as it is commonly known, as well as the criteria as set out by the Mangaung Metro Municipality.

The demands from the proposed development are based on the following criteria:

- The annual average water demand for Hostels will be 150 l/resident/day as per The Red Book, Table 9.14.
- The annual average water demand (AAWD) for erven zoned as "Business" an average daily flow of 11 000 l/ha/day (Mangaung Metro Municipality).
- The recommended peak factor of 4 (Pf) will be used for instantaneous peak flows.
- The peak daily demand will be taken as 2.6
- The minimum water pressure under instantaneous peak demand will be taken as 24m.

5.2 Water Reticulation

Table 5.1: Estimated Water Demands

| Description | Unit | Number of units (No.) | Average Demand (l/day) | Total Average water Demand (l/day) | Total Daily peak Demand Pf 2.6(l/s) |
|--------------------------|------|-----------------------|------------------------|------------------------------------|-------------------------------------|
| Current Water Demand (A) | | | | | |
| Business | ha | 1.9 | 11000 | 20900 | 0.63 |
| Guest house / Hostels | No. | 5.00 | 150 | 750 | 0.02 |
| Total: | | | | 21650.0 | 0.65 |

The main pipeline currently supplying water to the erven is a 350mm diameter pipe, which should be able to supply sufficient water to the relevant erven.

The total water demand including extensions on the property calculated to 21.65 kl/day.

Average Water Demand (from table 2.1): = 21 650 l/day

$$21\ 650 / 86400 = 0.251\ \text{l/s}$$

Peak Daily demand $0.251 \times 2.6 = 0.653\ \text{l/s}$

Instantaneous peak demand $0.251 \times 4 = 1.004\ \text{l/s}$

Thus a 50mm erf connection should be sufficient to provide the development with water as it can deliver approximately 2.356 l/s @ 1.2m/s and 1.178 @ 0.6m/s. The erf connection size will also be dependent on the fire flow required for the erf and might require a larger pipe diameter. The size of the connection needs to be confirmed by a competent person in the design stage.

A pressure reading was taken in the area which indicated 8.5 Bar (85m) of pressure (10:30 to 11:00) thus sufficient pressure should be available during the morning and afternoon peak.

Currently the development is serviced from a 350mm Ø water connection in Sand Du Plessis Avenue that is fed by a 350mm water line. The estimated water demand required calculated to 21 650 l/day. It must just be noted that business and residential erven do not peak at the same time.

The development is classified as a "High risk" for firefighting. Due to the nature of the type of development reference must be made to specific standards or regulations governing the fire-service requirements.

Refer to Annexure A drawing no 9001-82-03-100 existing water reticulation.

6. Stormwater

The proposed rezoning of the erven will have no adverse effects on natural stormwater runoff. According to the information at hand there is no municipal stormwater infrastructure in the area and should the water be controlled overland. Take note that the natural flow rule apply and that the terrain may not be altered to divert runoff that would not naturally have drained into a watercourse.

7. Access Road

A Traffic Impact Assessment (TIA) does not form part of this investigation and should be compiled by a registered traffic engineer.

8. Conclusion and Recommendation

Due to lack of municipal sewer connection to the property alternatives should be utilize to control the sanitation runoff. A septic tank system is currently being used to control the sanitation runoff. We propose that a competent person check the capacity of the system at the design stage to ensure the additional runoff can be controlled.

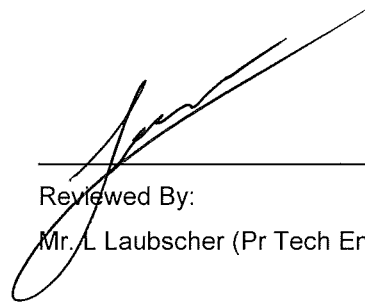
The residual pressure and the pipe sizes in die area appears to be adequate to supply water to the proposed property.

The natural stormwater drainage from the erven under discussion needs to be controlled overland.

It is therefore our recommendation that the rezoning of the applicable erven can proceed as planned.



Compiled By:
Ms. A Stevens (Reg Eng Tech)



Reviewed By:
Mr. L Laubscher (Pr Tech Eng, Pr CPM)

28/5/2019
Date:

ANNEXURE: A



LEDGEND

| | |
|--|--|
| | PROPOSE NEW DEVELOPMENT |
| | PROPOSE NEW ROAD AND STORMWATER INFRASTRUCTURE |
| | EXISTING WATER LINE |

VERSION/AMENDMENTS

| DATE | DESCRIPTION | AUTHORIZED BY |
|-------------|----------------------------|---------------|
| A MAY 19 | FOR INFORMATIONAL PURPOSES | LL |
| | | |
| | | |
| | | |
| | | |

IYOYO
project development consultants

75B DAN PIENAAR DRIVE TEL: 051 436 0357
DAN PIENAAR FAX: 051 436 5938
BLOEMFONTEIN

| | |
|-----------|----------|
| DESIGN BY | DRAWN BY |
| AS | AS |

CLIENT

PROJECT TITLE
PROPOSED REZONING OF PLOT 1/42, ESTOIRE, BLOEMFONTEIN, FREE STATE

DRAWING TITLE
ROADS, STORMWATER AND WATER LAYOUT

| | |
|---------------------|-------------|
| DRAWING NO | REVISION NO |
| 9001-82-03-100 | A |
| SCALE 1 : 2500 (A1) | DATE |
| | MAY 19 |

L. LAUBSCHER
(PR TECH ENG)200170127

WATER AND SEWER INFRASTRUCTURE CAPACITY ANALYSIS REQUEST

Request No (For Office Use Only):

Application By (Developer's Civil Engineer):

Developer:

Development Name:

Date:

Street Address of Development:

Please include the preliminary existing services report as part of this request.

Erf/Holding/Farm Number:

Current Zoning of Property:

Type of Development (New or Re-Zoning):

Future Zoning of Property:

Planned Construction Commencement Date:

Date of Development's Connection to Municipal Network:

If Residential, Number of Units:

| |
|---|
| |
| Ivoyo PDC |
| |
| Plot 1 / 42 Estoire |
| 28 May 2019 |
| Plot 1 / 42 Sand du Plessis Ave Estoire Bloemfontein Free State |
| 1/42 |
| Other |
| Re-Zoning of Existing Development |
| Other |
| TBC |
| TBC |
| n/a |

Short Description of the Type and Extent of Development (Please attach full rights and uses of existing and new developments.)

It is proposed that Plot 1/42 be rezoned to special use that will allow for the current uses as well as the proposed diesel depot.

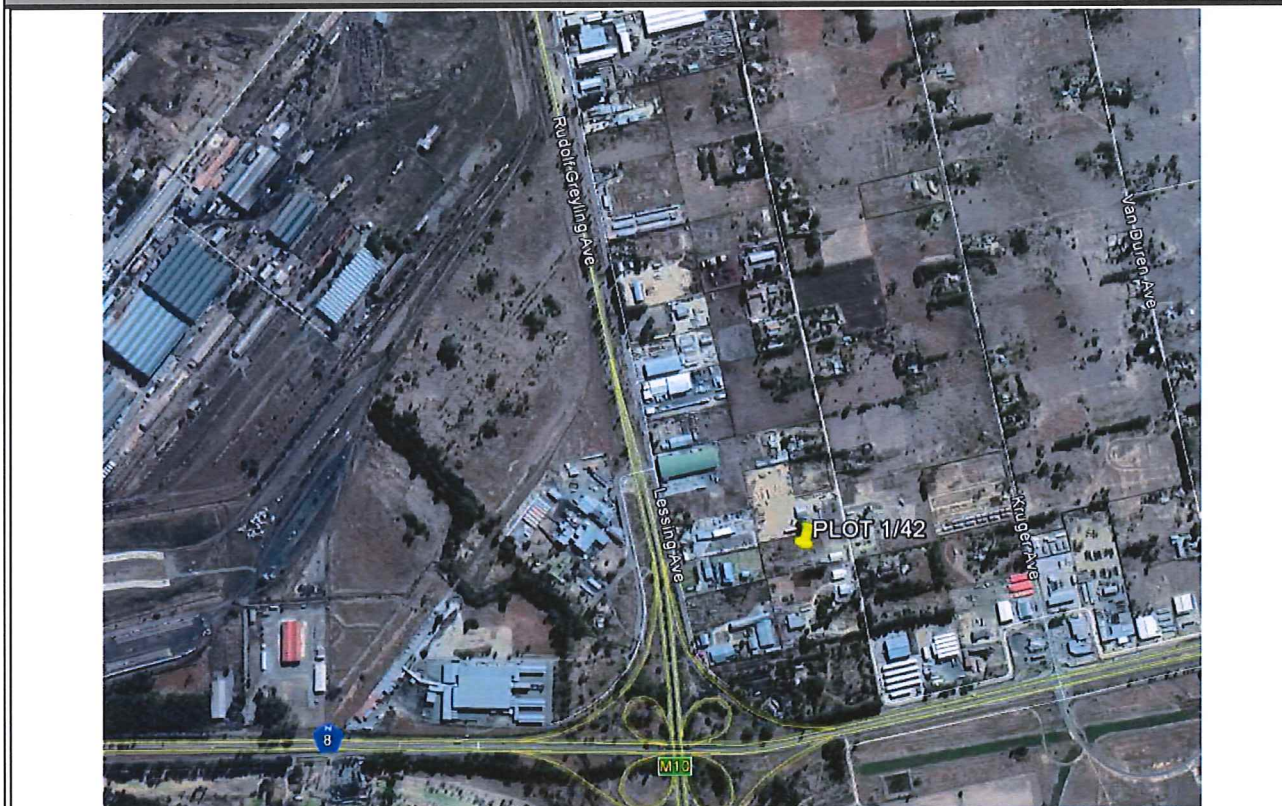
Is the development in accordance with the Mangaung Metropolitan Municipality's latest Spatial Development Framework (SDF)?

Yes

Does the development fall within the latest Urban Edge of Bloemfontein?

Yes

Development Location:



Existing Services and Connection Points:



| DEVELOPMENT SPECIFICS (Current Single Serviced Stands) | | |
|--|------------------------------------|--------------------------------|
| Maximum Floor Area Allowed on Site (m ²): | | |
| Current Property Information: | Stand Size (m ²): | |
| | No. of Bathrooms / Showers: | |
| | No. of Toilets: | |
| Future Development Information: | Total No. of Bathrooms / Showers: | |
| | Total No. of Toilets: | |
| | Total Roof Area (m ²): | |
| WATER CONTRIBUTION | | |
| Water Demand | | |
| Annual Average Daily Demand ⁽¹⁾ : | (kℓ/day) | 21.650 |
| Peak Flow Factor for Type of Development ⁽¹⁾ : | | 2.6 |
| Peak Demand ⁽¹⁾ : | (ℓ/s) | 0.652 |
| Fire Flow | | |
| Current Fire Risk Category of Property ⁽²⁾ : | | E: As Determined by Assessment |
| Proposed Fire Risk Category after Development ⁽²⁾ : | | E: As Determined by Assessment |
| Fire Flow ⁽²⁾ : | (ℓ/s) | |

*All numerical values must be in accordance with the SI system.

Planned on-site bulk water storage (Yes / No):

| |
|----|
| No |
| |

If Yes, indicate volume:

(kℓ)

Notes on Water Demand Information:

- 1) Water demands calculated could be based on the recommended demand information as per the Guidelines for Human Settlement, Planning and Design (2005)
- 2) Fire flow demand should be based on SANS 10090: Community Protection against Fire (2003)

| SEWER CONTRIBUTION | | |
|--------------------------------------|----------|-----|
| Sewer Yield | | |
| Average Dry Weather Flow (ADWF): | (kℓ/day) | n/a |
| Peak Factor for Type of Development: | | n/a |
| Peak Dry Weather Flow (PDWF) | (ℓ/s) | n/a |

*All numerical values must be in accordance with the SI system.

Notes on Sewer Yield information:

Sewerage effluent flows calculated should be based on the recommended effluent information as per the Guidelines for Human Settlement, Planning and Design (2005).

Requested by:

On behalf of:

Signed (Pr. Eng):

Date:

| | |
|----------------|---|
| | |
| | |
| Leon Laubscher | Digitally signed by Leon Laubscher Date: 2019.05.28 10:39:50 +02'00' |
| | |

For Office Use Only

| | |
|---------------|-----|
| Approved by: | |
| On behalf of: | MMM |
| Signed: | |
| Date: | |

IMPORTANT NOTICE: Incomplete or unsigned forms will cause delays for which the Developer will ultimately be held accountable for.

| |
|--|
| |
|--|

APPENDIX Q

Electrical Report



FCE CONSULTING ENGINEERS

T +27 51 403 8596 | F +27 51 430 1776
www.fceconsultingengineers.co.za
39 Brebner Street | Westdene 9301

DATE: 17/04/2019

CENTLEC
DESIGN & DEVELOPMENT DEPARTMENT
PRIVATE BAG X14
BRANDHOF
9324

ATTENTION: THE GENERAL MANAGER - PLANNING

AVAILABILITY OF ELECTRICAL CAPACITY FOR PROPOSED DEVELOPMENT

We hereby require CENTLEC to confirm if capacity is available for this proposed development.

| | |
|--|----------------------------|
| 1. PROJECT REFERENCE NUMBER: | EE1175 - 168 |
| 2. LOCATION OF THE SITE: | PLOT 1/42 ESTOIRE |
| 3. STREET NAME: | SAND DU PLESSIS AVENUE |
| 4. CURRENT ZONING OF SITE: | SPECIAL BUSINESS TYPE 2 |
| 5. PROPOSED ZONING OF SITE: | SPECIAL USE (DIESEL DEPOT) |
| 6. NUMBER OF STANDS: | 1 |
| 7. ADMD CONNECTION PER STAND: | N/A |
| 8. CONNECTION REQUIRED: | 150KVA LV CONNECTION |
| 9. TYPE OF CONNECTION: | LV CONNECTION |
| 10. INFORMATION REQUIRED BY WHEN: | 26/04/2019 |

REQUEST FOR INFORMATION:

Could you please confirm if you support this application and confirm if sufficient capacity is available for this development?

YOURS FAITHFULLY

STEFAN ESTERHUYSEN Pr Tech Eng
DIRECTOR
FCE CONSULTING ENGINEERS

APPLICATION FOR THE REZONING OF PLOT 1/42 IN SAND DU PLESSIS AVENUE, ESTOIRE, BLOEMFONTEIN

ELECTRICITY SUPPLY AND NETWORK SERVICES REPORT



FCE CONSULTING ENGINEERS

T +27 51 403 8596 | F +27 51 430 1776

www.fceconsultingengineers.co.za

39 Brebner Street | Westdene 9301

1. INTRODUCTION

- 1.1 The purpose of an electrical services report is to discuss the availability and/or capacity of electricity from the local supply authority and in this case the supply authority is Centlec.

2. BACKGROUND

- 2.1 This area falls within the electricity supply area of CENTLEC. The developer applied for the rezoning of this stand for special use as a diesel depot.
- 2.2 The estimated connection size required is a 150kVA three phase low voltage connection.

3. EXISTING SERVICES

- 3.1 This plot does not have an electrical service connection.

4. FUTURE ELECTRICAL DEVELOPMENT

- 4.1 CENTLEC confirms that sufficient capacity is available on the existing network which feed from Estoire Distribution Centre.
- 4.2 The developer shall bear the full cost of any relocation of any electrical infrastructure or electrical services.

5. GENERAL INFORMATION AND CONDITIONS APPLICABLE FOR THE PROVISION OF ELECTRICAL CONNECTIONS

- 5.1 Only one electrical connection is allowed per erf, connections below 500kVA will be supplied at low voltage with one electrical isolating point with multiple meters points and connections above 500kVA supplied at 11kV.
- 5.2 Consumers are not allowed to supply electricity over stand boundaries to adjacent stands.
- 5.3 Proof of the registration of the different erven is required from the Deeds Office before the permanent supply will be energised.
- 5.4 Building plans for the development shall only be approved by CENTLEC when the following have been adhered to:
- Prove of subdivision and/or consolidation has been submitted if applicable.
 - When applicable, an application has been received and a quotation being provided for the provision of electricity to the development.

6. SERVICES TO BE PROVIDED

- 6.1 The developer shall obtain all the required way leaves and permissions from all land owners and other service institutions and requirements as set out in the service agreement between the developer, MMM, Telkom and CENTLEC.

7. REQUIREMENTS

The following general conditions and requirements will apply to the application for the provision of electricity to the proposed development.

- 7.1 Without prejudice to CENTLEC's rights, the developer will be required to use an average ADMD not less than 1.5kVA for low cost consumer classification, 3.5kVA for middle cost consumer classification and 5.5kVA for high cost consumer classification per single residential stand, and not less than 50kVA per commercial stand. However, written load calculations for each development must accompany every application.
- 7.2 The developer shall assign a professional engineer to certify the load requirements for the proposed development.

- 7.3 The developer will be required to contribute towards the cost of extending and strengthening CENTLEC's external electrical supply network, on a "pro-rata» basis at the ruling rate per kVA, based on the calculated ADMD (after diversity maximum demand) for each development. Written load calculations done by the electrical engineers for each development must accompany every application.
- 7.4 All material and equipment used for the development shall comply with the applicable SANS regulations.
- 7.5 The developer shall bear the cost in order to make an adequate electricity supply and connection points available on the erf boundaries of each subdivision according to its designated use, and/or the cost that result from the moving or altering of existing electrical infrastructure.
- 7.6 Costs for the installation of metering equipment at the connection point of each part of the development shall be for the account of the developer/owner of the stand.
- 7.7 Although the responsibility of CENTLEC stops at the metering points on the erf boundaries of the proposed different subdivisions; it is still required from CENTLEC to approve all building plans within the boundaries of the development with reference to electrical provision to each building. Building plans for individual developments within the boundaries of the development shall only be approved by CENTLEC when the following have been adhered to:
- When applicable, an application has been received and a quotation being provided for the provision of electricity to the development.
 - Detailed voltage drop calculations for the internal reticulation of the different stands as well as the internal electrical supplies to the different buildings on a specific stand according to the building plans of that stand accompanies the building plans at the time of submission for approval of building plans.

8 SUMMARY

- 8.1 CENTLEC confirms that sufficient capacity is available as mentioned above.
- 8.2 The estimated network contribution is R297 000.00 (Excluding 15% VAT) for a 150kVA electrical connection, but this could only be confirmed with a formal application to CENTLEC.
- 8.3 With the fulfillment of the foregoing requirements and conditions, CENTLEC has no objection to provide a 150kVA low voltage connection for this plot.

We trust that you will find the above in order. We are available should there be any queries.

Yours faithfully



**STEFAN ESTERHUYSEN (PR TECH ENG)
DIRECTOR
FCE CONSULTING ENGINEERS**

ENGINEERING & WIRES

PLANNING

| | |
|---|--|
| Contact Person: Lesenyeho Khiba | Date: 15 May 2019 |
| E-mail: lesenyeho.khiba@centlec.co.za | Tel: 051 409 2448 Fax: 051 xxxxxxxx |
| Our Ref.: 18/2/8/4 Estoire | Your Ref.: com 287 |

FCE Consulting Engineers
39 Brebner Street
Westdene
Bloemfontein
9301

Attention: Mr. Stefan Esterhuysen

Dear Sir

CONFIRMATION OF THE AVAILABILITY OF ELECTRICAL CAPACITY FOR THE SPECIAL USE (DIESEL DEPOT) SITUATED AT PLOT 1/42 IN SAND DU PLESSIS AVENUE, ESTOIRE, MANGAUNG METROPOLITAN MUNICIPALITY, FREE STATE PROVINCE: COMMENTS

1. INTRODUCTION

- 1.1. The proposed special use (diesel depot) falls within Peri-urban edge of the Mangaung Metropolitan Municipality.
- 1.2. The provision of electricity to the proposed special use (diesel depot) shall be made possible from the adjacent Estoire DC.
- 1.3. CENTLEC (SOC) Ltd connection policy allows for only one electrical isolation point with multiple meter points that are below 500kVA, supplied at 400V three phase and one meter for connections above 500kVA supplied at 11kV three phase.
- 1.1. A detailed comment will be done when CENTLEC (SOC) Ltd receives a detailed application for the supply of the required 150 kVA low voltage connection.

2. EXISTING SERVICES

- 2.1. The existing network is currently supplied by Estoire DC.
- 2.2. The proposed special use (diesel depot) situated at plot 1/42 does not have service connection.

3. REQUIREMENTS

- 3.1. The developer is required to appoint an electrical engineering consultant that will be responsible for the internal reticulation of the developments. And also liaise with CENTLEC (SOC) Ltd personnel for the design of the internal reticulation of the proposed development.
- 3.2. The applicant is required to contribute towards the cost of extending and strengthening CENTLEC (SOC) Ltd.'s external electrical supply network, on a "pro-rata" basis at the ruling

rate per kVA, based on the total of the calculated ADMD (after diversity maximum demand).

- 3.3. It is the responsibility of the developer to apply for all the necessary wayleave services from all the relevant departments, before any trenching work can be done.
- 3.4. Without prejudice to CENTLEC (SOC) Ltd.'s rights, the developers will be required to use an average ADMD not less than 2.5kVA for low cost consumer classification, 3.5kVA for middle cost consumer classification and 5.5kVA for high cost consumer classification per single residential stand, and not less than 50kVA per commercial stand. However, written load calculations for each development must accompany every application.
- 3.5. The developer will bear the cost of any relocation of electrical services within the proposed development.
- 3.6. The developer is required to submit a formal application form at CENTLEC (SOC) Ltd. Customer Care department in order for CENTLEC (SOC) Ltd. to respond with an official cost payment form which will reflect all the amounts which are payable for the required connection. The application form should include detailed electrical designs and the estimated electrical load requirements.

4. CONCLUSION

With the fulfilment of the above mentioned requirements and conditions, CENTLEC (SOC) Ltd has no objection to the proposed development, as well as for the electrical supply of **150kVA** low voltage to the proposed special use (diesel depot) situated in Sand Du Plessis Avenue, Estoire.

We trust you find it in order.



M Mpholo
ACTING GENERAL MANAGER: PLANNING