

ENVIRONMENTAL MANAGEMENT PROGRAMME

PROJECT:

**PROPOSED STORAGE FACILITY FOR
THE STORAGE AND HANDLING OF
DANGEROUS GOODS ON ERF 1597
CLAYVILLE EXTENSION 22, CITY OF
EKURHULENI METROPOLITAN
MUNICIPALITY AREA**

Applicant:

Dollis Hill Eiendomme (Pty) Ltd

Date:

March 2022

Compiled by:

TEKPLAN

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DEFINITIONS

Construction:

Construction means the building, erection or establishment of a facility, structure or infrastructure that is necessary for the undertaking of a listed or specified activity but excludes any modification, alteration or expansion of such a facility, structure or infrastructure and excluding the reconstruction of the same facility in the same location, with the same capacity and footprint.

Dangerous Goods:

Means goods containing any of the substances as contemplated in South African National Standard No. 10234, supplement 2008 1.00: designated "List of classification and labelling of chemicals in accordance with the Globally Harmonized Systems (GHS)" published by Standards South Africa, and where the presence of such goods, regardless of quantity, in a blend or mixture, causes such blend or mixture to have one or more of the characteristics listed in the Hazard Statements in section 4.2.3, namely physical hazards, health hazards or environmental hazards

Disturbance:

Any event or series of events that disrupts ecosystem, community, or population structure and changes resources, substrate availability, or the physical environment.

Earth Works:

This involves construction machinery, dampening and general preparation of the site for construction purposes.

Environmental Incident:

- Any action undertaken (or omitted) by the proponent or his duly appointed representatives (e.g. contractors) that results in overly/unnecessary disturbance or damage to the environment.
- Any action undertaken (or omitted) by the proponent or his duly appointed representatives (e.g. contractors) that could lead to (has potential for) overly/unnecessary disturbance or damage to the environment.
- Non adherence to environmental legal requirements/laws (including the stipulations of authorisations issued in respect of a proposed activity e.g. those contained in an Environmental Authorization).

Environmental Management Programme:

A guideline document/directive outlining the mitigation, monitoring and institutional measures to be taken during project implementation and operation to avoid or control adverse environmental impacts, as well as the actions needed to implement these measures (World Bank, 1999:1).

Environmental Officer:

Person/party appointed to monitor compliance with the Environmental Management Programme.

Filling Station/Depot

A filling station, also known as a garage or a petrol station is a facility which sells fuel and lubricants for motor vehicles. A depot stores fuel at the facility from where it is distributed to clients (normally filling stations).

Interested & Affected party:

A person, group of people, an organisation (public or private), a business, or other party that has an interest or is affected in terms of their health, property rights, or economy by a proposed activity.

Impact:

A description of the potential effect or consequence of an aspect of the development on a specified component of the biophysical, social or economic environment within a defined time and space.

GDARD

Gauteng Department of Agriculture and Rural Development

Mitigation measures:

Mitigation measures encompass all actions taken to eliminate, offset or reduce potentially adverse environmental impacts to acceptable levels (World Bank, 1999:1).

Project (life) cycle:

Represents the various stages of which a project/activity consists including project identification, design, construction, operation as well as decommissioning.

ENVIRONMENTAL MANAGEMENT PROGRAMME

PROPOSED STORAGE FACILITY FOR THE STORAGE AND HANDLING OF DANGEROUS GOODS ON ERF 1597 CLAYVILLE EXTENSION 22, CITY OF EKURHULENI METROPOLITAN MUNICIPALITY AREA

1. BACKGROUND

1.1 Introduction

Messrs. Dollis Hill Eiendomme (Pty) Ltd is of the intention to develop a storage facility for the storage and handling of dangerous goods. The storage will occur in containers with a combined capacity of 300 cubic metres and will consist of the following:

- 100 000 litre diesel
- 100 000 litre petrol
- 100 000 litre LP gas

The site is located on Erf 1597 Clayville Extension 22 (30 Axle Drive, Olifantsfontein) in the City of Ekurhuleni Metropolitan Municipality, Gauteng Province.

EMPr's provide a link between the impacts predicted and mitigation measures specified and the implementation and operational activities of the project.

This EMPr was compiled for the installation of storage tanks (and associated infrastructure) on Erf 1597 Clayville Extension 22 (30 Axle Drive, Olifantsfontein) in the City of Ekurhuleni Metropolitan Municipality, Gauteng Province.

The co-ordinates of the site is as follows: S25° 58' 23.1" E28° 13' 39.9"

1.2 Project Description

The project entails the proposed development a storage facility for the storage and handling of dangerous goods. The storage will occur in containers with a combined capacity of 300 cubic metres and will consist of the following:

- 100 000 litre diesel
- 100 000 litre petrol
- 100 000 litre LP gas

1.3 Environmental Impact Assessment

Tekplan Environmental is currently busy with the Basic Assessment Study in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2014.

1.4 Dangerous Goods

1.4.1 Petroleum

Petroleum or crude oil is a naturally occurring, flammable liquid consisting of a complex mixture of hydrocarbons of various molecular weights and other liquid organic compounds, that are found in geologic formations beneath the earth's surface. A fossil fuel is formed when large quantities of dead organisms, usually zooplankton and algae, are buried underneath sedimentary rock and undergo intense heat and pressure. Petroleum is recovered mostly through oil drilling. This latter stage comes after the studies of structural geology (at the reservoir scale), sedimentary basin analysis, reservoir characterization (mainly in terms of porosity and permeable structures). It is refined and separated, most easily by boiling point, into a large number of consumer products, from petrol and kerosene to asphalt and chemical reagents used to make plastics and pharmaceuticals. Petroleum is used in manufacturing a wide variety of materials, and it is estimated that the world consumes about 88 million barrels each day. The use of fossil fuels such as petroleum can have a negative impact on Earth's biosphere, releasing pollutants and greenhouse gases into the air and damaging ecosystems through events such as oil spills.

Why is petrol dangerous?

- Petrol is a highly flammable liquid.
- Petrol gives off a flammable vapour at low temperatures. Flammable vapour will be present immediately after any petrol has been spilt within a tent or on a workshop floor.
- There is always a risk of fire or explosion if there is a source of ignition, e.g. someone smoking, having a barbecue or welding, in the presence of petrol or petrol vapour.
- A flammable atmosphere exists when the proportion of petrol vapour in the air is as little as 1%; it only needs a minute quantity, e.g. a teaspoonful, of petrol to create a flammable atmosphere.
- Petrol floats on the surface of water and may, therefore, increase the risk of fire or explosion well away from where it escapes by travelling long distances along a water course e.g. a drain.
- The presence of petrol vapour increases the risk of fire or explosion in places where there is little movement of air, e.g. within tents, inspection pits or enclosed spaces, as it does not disperse easily and tends to sink to the lowest possible level.
- Petrol vapour may increase the risk of fire or explosion well away from where it escapes by travelling long distances, e.g. between tanks or across a workshop floor.
- A flammable atmosphere may be present in any empty vessel, e.g. a fuel tank or a jerry can, in which petrol has been kept.
- Petrol or petrol vapour may flash back over long distances to where it has escaped from, e.g. between tanks or across a workshop floor.
- Contaminating clothing or anything else that is absorbent with petrol, e.g. rags, a towel or sand, increases the risk of fire or explosion.

1.4.2 Diesel

Petroleum diesel, also called petrodiesel or fossil diesel is produced from the fractional distillation of crude oil between 200°C and 350°C at atmospheric pressure, resulting in a mixture of carbon chains that typically contain between 8 and 21 carbon atoms per molecule.

Environment hazards of sulfur:

High levels of sulfur in diesel are harmful for the environment because they prevent the use of catalytic diesel particulate filters to control diesel particulate emissions, as well as more advanced technologies, such as nitrogen oxide (NO_x) adsorbers (still under development), to reduce emissions. Moreover, sulfur in the fuel is oxidized during combustion, producing sulfur dioxide and sulfur trioxide, that in presence of water rapidly convert to sulfuric acid, one of the chemical processes that results in acid rain. However, the process for lowering sulfur also reduces the lubricity of the fuel, meaning that additives must be put into the fuel to help lubricate engines. Biodiesel and biodiesel/petrodiesel blends, with their higher lubricity levels, are increasingly being utilized as an alternative.

Diesel and petrol are both produced from mineral oil, but using different refining methods. While diesel is in principle easier to refine than gasoline, it needs to be cleaned from more pollutants to ensure that tailpipe emissions remain as low as possible. However, diesel contains more energy than petrol and the vehicle's engine combustion process is more efficient, adding up to higher fuel efficiency and lower CO₂ emissions when using diesel.

1.4.3 Liquefied Petroleum Gas

Liquefied petroleum gas (also called LPG, GPL, LP Gas, autogas, or liquid propane gas) is a flammable mixture of hydrocarbon gases and is used as a fuel in heating appliances as well as in vehicles. It is increasingly used as an aerosol propellant and a refrigerant (replacing chlorofluorocarbons – thus reducing damage to the ozone layer).

Liquefied Petroleum Gas is versatile, fast, clean, powerful, portable and safe. It is used in a wide range of applications, which include cooking, heating, refrigeration and lighting.

The varieties of LPG on the market include propane (C₃H₈), butane (C₄H₁₀) and, most commonly, mixes including both propane and butane, depending on the season — in winter more propane, in summer more butane. Propylene and butylenes are usually also present in small concentrations. A powerful odorant, ethanethiol, is added so that leaks can be detected easily.

The name “liquefied gas” found its origin in the possibility to obtain gaseous propane and butane at a normal temperature and atmospheric pressure. Only moderate pressure or refrigeration is required to convert these into a liquid state. LPG occupies 274 times less volume as a liquid than as a gas. As a consequence, LPG is easy to transport and store, making it a multi-purpose fuel.

LPG will evaporate at normal temperatures and pressures and is supplied in pressurised steel cylinders. The cylinders are typically filled to between 80% and 85% of their capacity to allow for thermal expansion of the contained liquid. The ratio between the volumes of the vaporized gas and the liquefied gas varies, depending on composition, pressure, and temperature, but is typically around 250:1. The pressure at which LPG becomes liquid, called its vapour pressure, likewise varies depending on composition and temperature, for example, it is approximately 220 kilopascals (2.2 bar) for pure butane at 20°C, and approximately 2.2 megapascals (22 bar) for pure propane at 55°C. LPG is heavier than air, and thus flows along floors and tends to settle in low spots, such as basements. This can cause ignition or suffocation hazards if not dealt with.

Large amounts of LPG can be stored in bulk cylinders and can be buried underground (if needed).

1.5 Fuel Retailers

The Fuel Retailer Association of Southern Africa (FRA) is a registered employer's organization under the provisions of the Labour Relations Act, 66 of 1995.

The FRA is a financially independent and fully autonomous association that ensures the survival and success for all its members who are fuel service station owners in the retailing of fuel in South Africa. The Association monitors and becomes involved wherever necessary with all aspects of retail fuel governance, distribution and sales in South Africa in order to protect and enhance fuel retailer's interest. The Association's income base is through membership fees.

Vision

To create a robust, sustainable environment that provides a reasonable return on investment for all efficient fuel retailers. The primary objective of the FRA is to promote and protect the best interests of fuel retailers and its members in particular.

1.6 Key Role Players

Environmental Consultant who compiled this EMP:

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See Company Profile (Annexure E).

Applicant (owner):

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1.7 EMPr Objectives

WHAT IS AN EMPr?

An Environmental Management Programme (EMPr) can be defined as *“an environmental management tool used to ensure that undue or reasonably avoidable adverse impacts of the construction, operation and decommissioning of a project are prevented; and that the positive benefits of the projects are enhanced”*.

EMPr's provide an essential tool for ensuring that the mitigation of negative impacts and enhancement of positive impacts is carried out effectively during the project life-cycle.

It is essential to develop measures to eliminate, offset or reduce impacts on the environment, to acceptable levels before the operational phases of a project commence. The integration of such measures to protect the environment during the operational phase of a project can be done by clearly defining environmental requirements within an Environmental Management Programme (or EMPr) (World Bank, 1999:1).

EMPr's provide a link between 1) the predicted environmental impacts (that will be induced by a certain development/project), and 2) implementation and operational activities.

Generally an EMPr performs the following functions:

- it outlines the anticipated environmental impacts of a project,
- it outlines the measures to be taken to mitigate these impacts,
- it outlines responsibilities for mitigation of impacts.

Definition of an “Environmental Management Programme” (EMPr):

An EMPr is a guideline document/directive outlining the mitigation, monitoring and institutional measures to be taken during project implementation, construction and operation to avoid or control adverse environmental impacts, as well as the actions needed to implement these measures.

The key to the success of an EMPr lies in its effective implementation. Compliance monitoring is therefore crucial. Monitoring ensures that the environmental requirements stipulated in the EMPr are being complied with.

This EMPr addresses the management of environmental impacts related to the installation of storage tanks (and associated infrastructure) on Erf 1597 Clayville Extension 22 (30 Axle Drive, Olifantsfontein) in the City of Ekurhuleni Metropolitan Municipality, Gauteng Province. The document should be used as a basis for managing, mitigating and monitoring the environmental impacts associated with the pre-construction (design), construction and operational phases.

Definition of “mitigation measures”:

Mitigation measures encompass all actions taken to eliminate, offset or reduce potentially adverse environmental impacts to acceptable levels (World Bank, 1999:1).

1.8 Mitigation

Mitigation seeks to find better ways of doing things, minimise or eliminate negative impacts, enhance project benefits and protect public and individual rights. The applicant/proponent has a responsibility to avoid or minimise impacts, and plan for managing impacts.

This section of the report serves to prescribe measures to reduce, limit, eliminate or compensate for impacts, to acceptable/insignificant levels. The term ‘mitigate’ means to ‘allay, moderate, palliate, temper and intensify’. In environmental terminology this term is used as follows:

- mitigation of a negative impact;
- to reduce the significance of an impact;
- mitigation/optimisation of a positive impact;

Hereunder the potential to mitigate identified negative impacts will be discussed. Certain mitigation measures will be proposed and an indication will be given of how these proposed mitigation measures will influence the significance and status of each identified impact. Recommendations are arranged in order of sequence i.e. Planning/construction and Operational phases.

Mitigation should permeate through all stages of the development process. It is essential that the mitigation plan be monitored during the operational phase, so as to ensure compliance.

The site exhibits a risk that hazardous Petrol/Diesel and Petrol/Diesel vapour and gas can leak from the tanks. The following precautionary measures are recommended to prevent any leakage effects at the diesel storage facility:

- Conduct scheduled periodic checks of all tanks and pipes for any leakages,
- No open fires to be permitted on site,
- Mandatory training of new personnel, and
- Ensure qualified / certified people conduct maintenance on equipment.

Several negative impacts will occur during the construction period - these are relatively well known and easy to predict. Also, mitigation actions to prevent or reduce impacts are well known. Most of the mitigation actions are likely to be applied during the construction period - site supervision and monitoring are key criteria to ensure the successful implementation of mitigatory measures.

The stipulations of this EMPr should be conveyed to contractors prior to the commencement of construction. During the project planning and design stage the proponents should take into account the recommendations of this EMPr, so that it is positively utilised on a pro-active basis to aid in the mitigation of impacts.

It is also deemed essential that contract documents be audited to ensure compliance with conditions and that this is monitored and reviewed on a continual basis.

1.9 Implementation of the EMPr

1.9.1 Training and Environmental Awareness

Training is essential for ensuring that the EMPr provisions are implemented efficiently and effectively. Training needs should be identified based on the available and existing capacity of site and project personnel (including the Project Proponent, Contractors and Sub-contractors) to undertake the required EMPr management actions and monitoring activities. It is vital that all personnel are adequately trained to perform their designated tasks to an acceptable standard.

In addition to training, general environmental awareness must be fostered among the project's workforce to encourage the implementation of environmentally sound practices throughout its duration. This ensures that environmental accidents are minimized and environmental compliance maximized. The onus is on the different parties involved in the various stages of the life-cycle of the project to be environmentally conscious. Contractors should forward internal environmental awareness and training procedures to the Project Manager and Environmental Control Officer (ECO) for comment prior to the commencement of the project.

Environmental awareness could be fostered in the following manner:

- Induction course for all workers on site, before commencing work on site.
- Refresher courses as and when required.
- Daily toolbox talks at the start of each day with all workers coming on site, where workers might be alerted to particular environmental concerns associated with their tasks for that day or the area/habitat in which they are working.
- Courses must be given by suitably qualified personnel and in a language and medium understood by workers/employees.

2. MONITORING, REPORTING & CORRECTIVE ACTION

The proponent (or duly appointed ECO) shall monitor compliance with this EMP and shall conduct monthly inspections of the facility and shall document the findings of his monitoring actions in an environmental *monitoring report*.

The proponent shall keep a documented complaints register (See Annexure A - Complaints Register). The nature of complaints that are received shall be brought to the attention of the owner. The owner shall give a suitable written response, to complainants, where required. The reader is referred to Annexure B - Register of Responses to Complainants.

The proponent contractor shall document "environmental incidents" on an "Environmental Incident Report Sheet" (EIRS) within 1 day (24 hours) from the time that the incident has occurred (see Annexure C - "Environmental Incident Report Sheet").

Definition: Environmental incident

- Any action undertaken (or omitted) by the owner or his duly appointed representatives (e.g. contractors) that results in overly/unnecessary disturbance or damage to the environment.
- Any action undertaken (or omitted) by the owner or his duly appointed representatives (e.g. contractors) that could lead to (has potential for) overly/unnecessary disturbance or damage to the environment.
- Non adherence to environmental legal requirements/laws.

In an instance where an "environmental incident" is recorded, the owner shall take appropriate action to correct the "environmental incident". Such action shall be in accordance with the nature and scale of the recorded incident. Such corrective action shall be implemented as soon as possible after the occurrence of the incident. "Corrective action" that is undertaken shall also include the rehabilitation of secondary environmental disturbance/damage resulting from undertaking corrective action. The re-occurrence of an environmental incident shall be avoided through the implementing of suitable precautionary measures to prevent the recurrence of such. During maintenance and/or upgrading activities, external contractors shall report environmental incidents to the owner on a daily basis. A course of action shall then be decided upon jointly (as a precautionary measure to avoid the re-occurrence of these types of incidents).

2.1 Documentation and Record Keeping

A document handling system must be established to ensure accurate updating of EMP documents, and availability of all documents required for the effective functioning of the EMP. The document handling system must be devised by the Project Proponent and/or Contractor, and agreed upon by all key parties. Responsibilities must be assigned to relevant personnel for ensuring that the EMP documentation system is maintained and that document control is ensured through access by, and distribution to, identified personnel. Where an adequate document management system already exists, then the environmental documentation should be integrated into this system rather than creating a new system.

Supplementary EMPr documentation could include:

- EMPr implementation activity specifications (including Method Statements);
- site instructions;
- emergency preparedness and response procedures;
- incident reports;
- training records;
- site inspection reports;
- monitoring reports; and
- auditing reports.

The Environmental Control Officer is usually responsible for ensuring that the registration and updating of all relevant EMPr documentation is carried out. It is usually the responsibility of the Project Manager to ensure that all personnel are performing according to the requirements of this procedure and to initiate the revision of controlled documents, when required by changes in process, operating procedures, legislation, specifications, audit findings or any other circumstances, by informing the Environmental Control Officer of the changes. A controlled document is official only if the issue/revision has been approved.

The EMPr documents must be numbered and only distributed according to a distribution list compiled by the Environmental Control Officer. These documents should be marked “controlled copy”. Holders of controlled documents should sign the distribution list when they receive a new or revised document and must destroy the old version. Copies of all EMPr documentation should be kept on site or at the nearest project office. The documents should be kept as hardcopies as well as in electronic format.

Documents must be revised as required by changing circumstances. Clear procedures must be specified in the EMPr for making changes to EMPr documents, circulating updated documents, and destroying obsolete versions. Distribution lists and document change control sheets must be kept for all documents. Records must be kept for at least five years.

2.2 Reporting Procedures

Reporting procedures for conveying information from the monitoring activities must be developed in order to ensure that management is able to take rapid corrective action should certain thresholds be exceeded.

This EMPr should include the following reporting procedures:

- Inspections;
- Accidents and emergencies;
- Measuring performance indicators and interpreting and acting on the indicators;
- Records of monitoring activities to test the effectiveness of mitigation measures and impact controls, as well as for compliance auditing purposes; and
- Training programmes and evidence of appropriate levels/amount of skills/capacities created.

3. ENVIRONMENTAL MANAGEMENT

3.1 Environmental Management Structure and Responsibility

Site owner/Applicant:

Dollis Hill Eiendomme (Pty) Ltd
Mr. Jacques Pennells

P.O. Box 638
Fauna Park
Polokwane
0787

Cell: 082 653 7956

E-mail: pennells@ffgroup.co.za

The person/party responsible for overall management (as well as ongoing implementation of this EMPr) is Mr. Jacques Pennells. It is also Mr. Jacques Pennells's duty to ensure that this EMPr is implemented.

The site owner/manager shall annually train all personnel employed the contents of this EMPr, so as to ensure effective ongoing implementation.

3.2 Emergency Plan

1. An emergency plan should be available for major / minor spills and fire fighting at the facility during construction activities (with consideration of air, groundwater, soil and surface water).
2. All pollution incidents must be reported to the Department of Water & Sanitation (DWS) and other relevant authorities within 24 hours of occurrence. Record(s) of environmental related incidents should be maintained and communicated.
3. An emergency plan should be available for major / minor spills at the facility during operation activities (with consideration of air, groundwater, soil and surface water) and during the transportation of the product(s) to the facility, and appropriate training must be provided therein.

3.3 Fire Prevention and Control

1. Smoking must be prohibited in the vicinity of flammable substances.
2. The availability of sufficient firewater tie-in points, fire extinguishers and requirements of Local Authorities must be ensured.

3. Any welding or other sources of heating of materials should be done in a controlled environment and under appropriate supervision, in such a manner as to minimise the risk of fires and/or injury to staff.
4. Training should be provided to the staff members in the use of the appropriate firefighting equipment.
5. There should be close co-operation with the local fire authority to ensure that they know the layout of the facility, what equipment and facilities are available, where they are located, and how they are used.

3.4.1 Fire risk and mitigation (LP Gas)

Since LPG turns gaseous under ambient temperature and pressure, it must be stored in special pressure vessels. If the containers are cylindrical and horizontal, they are referred to as "cigars" or "bullets", whereas circular vessels are called "spheres".

LPG containers that are subjected to fire of sufficient duration and intensity, can undergo a boiling liquid expanding vapour explosion (BLEVE). Due to the destructive nature of LPG explosions, the substance is classified as a dangerous good. This is typically a concern for large refineries and petrochemical plants that maintain very large containers. The remedy is to equip such containers with a measure to provide a fire-resistance rating. Large, spherical LPG containers may have up to a 15cm steel wall thickness. Ordinarily, they are equipped with an approved pressure relief valve at the top, in the centre. One of the main dangers is that accidental spills of hydrocarbons may ignite and heat a LPG container (which increases its temperature and pressure) following the basic gas laws. The relief valve at the top is designed to vent off excess pressure in order to prevent rupturing of the container itself. Given a fire of sufficient duration and intensity, the pressure being generated by the boiling and expanding gas can exceed the ability of the valve to vent the excess. When that occurs, an overexposed container may rupture, launching pieces of the container at high velocity into the air. The released product can ignite as well, potentially causing damage to anything nearby, including other containers. In the case of "cigars", a midway rupture may send two "rockets" going off each way.

Accepted mitigation measures include separating LPG containers from potential sources of fire.

Care must be taken with LPG containers, as mechanical damage can occur to the primers, which can result in (hazardous) corrosion of the containers. Parts need to be treated with approved fireproofing materials, such as intumescent and or endothermic coatings, or even fireproofing plasters. LPG containers are subject to significant motion due to expansion, contraction, filling and emptying; even with very thick steel walls.

3.4.2 Liquefied Petroleum Gas Safety Association

The Liquefied Petroleum Gas Safety Association (LPGSA) promotes safety in the industry and presents a variety of training courses to cover all training needs. As from August 1997 in terms of the OHS Act, only Registered LP Gas Installers can install and maintain LP Gas installations. The LPGSA is involved with related training at various levels.

The LPGSA is recognised by the Department of Labour as the Verifying Authority for LP Gas appliances tested for conformance with the SANS 1539 specification. In addition, the LPGSA of Southern Africa is

mandated to undertake a similar process for hoses manufactured to SANS 1156-2 and LP Gas regulators to SANS 1237.

It is mandatory for appliances, hoses and regulators falling within the scope of these South African national standards to be tested for compliance and for the manufacturers / importers of such products to obtain a Verification Permit from the LPGSA of Southern Africa. Failure to do so can lead to prosecution.

The LPG Cylinder Verification System was introduced in the first quarter of 2006, following a consultation process between the LPGSASA and the Department of Labour. The purpose is to ensure that LPG cylinders, whether locally manufactured or imported, are:

- 1) verified for compliance with approved cylinder standards as listed in SANS 10019 or as otherwise accepted by the Department of Labour and,
- 2) have been manufactured under the supervisory inspection of a recognised independent third party inspectorate.

Included in the verification process undertaken by the LPGSA of Southern Africa is a check to ensure that cylinder valves are certified as compliant with the requirements of SANS 199. Proven compliance will enable a Cylinder Verification Permit to be issued by the LPGSA of Southern Africa without which, such cylinders may not be utilized in South Africa.

3.4.3 Emergency contacts and response

Queries – Liquefied Petroleum Gas Safety Association of Southern Africa:

Contact:	Mr. Ted Parrett
Tel:	(011) 476 5242
Cell:	082 420 2251

Queries – Natural Gas Industries Equipment or LP Gas Industrial Equipment:

Contact:	The South African Pipeline Gas Association
Tel:	(011) 431 2016
Fax:	086 525 3415

The actions and procedures to handle these emergencies are detailed in the Emergency Response Plan in Annexure D attached to this report.

4. ENVIRONMENTAL MANAGEMENT ACTIVITIES AND CONTROLS

Environmental impacts are associated with air quality, water quality, soil conditions, biodiversity, and safety & security. The aspects that cause the environmental impacts, the specific impacts as well as a set of mitigation measures to apply during the construction and operational phase were identified.

4.1 Construction Phase Impacts

A. Impact Description:

Erosion of cleared areas.

When will the impact occur and when should it be addressed?

During construction phase.

Where should mitigation measures be implemented?

On the site.

Mitigation Measures/Interventions:

- The development site is located in a built up area (Olifantsfontein Industrial area)
- When soil is cleared, management techniques to prevent water and wind erosion should be employed e.g. paving of area (to reduce water velocity and divert surface water runoff downslope).
- Care should be taken to prevent an increase in stream flow velocity in localised areas (i.e.: along access roads or next to paved areas), as this may lead to limited surface erosion.
- It is recommended that the soil surface (for work areas i.e. re-fuelling/loading areas and access roads) be paved and that an *efficient surface drainage system* be installed to prevent surface erosion.

Responsible Party:

Proponent (site owner/manager), appointed contactor and site engineer.

Notes:

This impact is not deemed significant - effective mitigation thereof is possible due to the small size of the area that is to be developed and the fact that no surface water courses are not located close to the site.

B. Impact Description:

Heavy (construction) vehicles moving into and from site onto public roads, thereby causing congestion, poor flow of traffic, reduced accessibility to the area, etc.

When will the impact occur and when should it be addressed?

Entire construction period.

Where should mitigation measures be implemented?

Construction site - during site preparation & undertaking of earthworks.

Mitigation Measures/Interventions:

- Contracts to stipulate that no construction vehicles be parked on public roads.
- Points men to be used to regulate traffic flow to and from the site.
- Work instructions to be issued to drivers of construction/delivery vehicles.
- Dedicated access routes to be identified and communicated to drivers of construction/delivery vehicles.
- Movement of construction vehicles potentially impacting on urban infrastructure should be mitigated through the use of appropriate warning signs, and not entering or leaving the site during peak traffic hours.

Responsible Party:

Proponent (site owner/manager), appointed contactor and site engineer.

Notes:

This impact can easily be mitigated. A possible secondary impact that could arise is that motorists could start using other routes to avoid the construction area, thus causing heavier traffic in other normally quieter areas. Due to the limited extent of the construction site and time this impact is of low significance.

C. Impact Description:

Construction activities might lead to increased noise levels.

When will the impact occur and when should it be addressed?

Construction period.

Where should mitigation measures be implemented?

Construction site.

Mitigation Measures/Interventions:

- Maintenance of construction vehicles.
- Fit construction vehicles and equipment with noise suppression equipment.
- Dedicated access routes to be identified and communicated to drivers of construction/delivery vehicles.
- Adjacent residents to be informed of unusually noisy activities that will be undertaken.
- Construction to be restricted to limited working hours (07h00 to 18h00). No work to be conducted on Sundays.
- Works instructions to be issued regarding minimisation of noise to all workers (especially those using noisy equipment).

Responsible Party:

Proponent (site owner/manager), appointed contactor and site engineer.

Notes:

This impact can be mitigated through effective site management. Noise levels decrease at approximately 1 decibel per 13 meters. The surrounding area consists of an industrial area.

D. Impact Description:

Increased traffic volumes due to delivery activities (i.e. more vehicles, and different types of vehicles, using the road network).

When will the impact occur and when should it be addressed?

Construction period.

Where should mitigation measures be implemented?

Construction Site and all roads to be used.

Mitigation Measures/Interventions:

- Dedicated access routes to be identified for delivery vehicles.
- All drivers of vehicles involved in delivery activities should adhere to traffic regulations.
- Local authority to determine where existing adjacent roads will need to be extended/upgraded.

Responsible Party:

Suppliers and contractors (and local authority).

Notes:

The site engineer can mitigate this impact through effective management. Construction will necessitate frequent delivery of material and delivery and removal of equipment & machinery - thus resulting in an impact on existing patterns of circulation. Due to the limited extent of the construction site and time this impact is of low significance.

E. Impact Description:

Destruction/removal of vegetation.

When will the impact occur and when should it be addressed?

During construction.

Where should mitigation measures be implemented?

On the site.

Mitigation Measures/Interventions:

- The development site has no/limited natural vegetation on it.
- Weeds shooting up on disturbed areas of site can be a fire threat if it is not controlled. It is recommended that it such plants should be kept short or be removed.

Responsible Party:

Proponent (site owner/manager)

Notes:

The weeds & grass should be kept short or it should be removed.

F. Impact Description:

Construction activities could create larger amounts of atmospheric dust, thus causing a nuisance to adjacent properties. Operational activities could also create air pollution.

When will the impact occur and when should it be addressed?

During construction phase (clearing of site and earthworks).

Where should mitigation measures be implemented?

On the site.

Mitigation Measures/Interventions:

- The development should not cause dust fall-out (deposition) to exceed *Slight fall-out (i. e. less than 0, 25g/sq. m./day)*.
- Control measures such as wet-suppression (watering) should be implemented to reduce dust arising from construction activities. Such requirements should be included into the contracts of the individual contractors that will be performing construction activities.
- Where excessive dust is created due to excavations, stripping of topsoils, etc. continual wetting down of surfaces shall be undertaken. Suitable water sources shall be identified and designated, prior to the commencement of construction.

Responsible Party:

Proponent (site owner/manager), appointed contactor and site engineer.

Notes:

Air quality can be impacted upon through dust blow-off, especially during the construction phase. The development should not cause the ambient PM-10 to exceed: *24 hour average: 980microgram/cubic metre*.

G. Impact Description:

Construction activities could create larger amounts of solid waste, thus causing a nuisance to adjacent properties.

When will the impact occur and when should it be addressed?

During construction phase.

Where should mitigation measures be implemented?

On the site.

Mitigation Measures/Interventions:

- In general, no littering, discarding or burying of any materials are allowed on site and roadways and sidewalks shall be left clear of waste materials.
- All waste material must be contained and disposed of according to the relevant legal requirements.
- Waste must be stored in such a manner that no pollution of the environment occurs at any time.
- All domestic waste generated must be disposed of in a proper manner at the Local Authorities Municipal Landfill site (i.e. no burial on site).
- All accumulated and surplus material must be disposed of in a suitable place and manner to prevent translocation of invasive plant species, modification of drainage and contamination of surface water.
- Hydrocarbon (oil, diesel, petrol) waste as well as all hydrocarbon contaminated material must be regarded as hazardous waste and separated from general waste. It must be removed from site and disposed of at a suitably registered disposal site.
- Spill cleanup kits and absorbent material must be kept on site to assist in immediate cleanup of any hazardous material spills.
- All building rubble must be either:
 - removed from site and disposed of at the Local Authorities Municipal Landfill site, subject to all relevant regulations and approval by the Managing contractor; or
 - temporarily stored in a clearly demarcated area on site for future use.

Responsible Party:

Proponent (site owner/manager), appointed contractor and site engineer.

H. Impact Description:

Effluent handling.

When will the impact occur and when should it be addressed?

During construction phase.

Where should mitigation measures be implemented?

On the site.

Mitigation Measures/Interventions:

- Dirty water areas must be lined by an impermeable material such as concrete to prevent infiltration and contamination of the soils within these areas.
- All waste material must be contained and disposed of according to the relevant legal requirements.
- The site must be serviced by properly managed and maintained toilet facilities. One toilet should be provided per 1-15 staff members (male/female) on site. The contractor is to ensure that permanent on-site toilet facilities are properly maintained and are in working order. No disposal, or leakage, of sewage should occur. The managing contractor should verify if the necessary services are available for the operational phase.

Responsible Party:

Proponent (site owner/manager), appointed contractor and site engineer.

4.2 Operational Phase Impacts

A. Impact Description:

Increased traffic volumes due to delivery activities (i.e. more vehicles, and different types of vehicles, using the road network).

When will the impact occur and when should it be addressed?

Operational period.

Where should mitigation measures be implemented?

The site and all roads used.

Mitigation Measures/Interventions:

- Dedicated access routes to be identified for delivery vehicles.
- All drivers of vehicles involved in delivery activities should adhere to traffic regulations.
- Local authority to determine where existing adjacent roads will need to be extended/upgraded.

Responsible Party:

Suppliers and contractors (and local authority).

Notes:

The owner can mitigate this impact through effective management. Periodic delivery of fuel will have in a minimal impact on existing patterns of circulation.

B. Impact Description:

Operational activities could create larger amounts of air pollution (also dust).

When will the impact occur and when should it be addressed?

During operational phase.

Where should mitigation measures be implemented?

On the site.

Mitigation Measures/Interventions:

- Always check caps, flanges and sealed connections for any leakages.
- Check the vent pipes are not blocked.
- The impact of vent gases from vent pipes and the interceptor chamber is minimised through positioning of the vent pipes at a point remote from all buildings and neighbouring property boundaries.
- Supervise fuel deliveries.
- The site (work areas i.e. re-fueling/loading and access roads) must be paved to prevent dust pollution.

Responsible Party:

Proponent (site owner/manager)

Notes:

Air quality can be impacted during the storage of fuel on site.

C. Impact Description:

Operational activities might lead to increased noise levels.

When will the impact occur and when should it be addressed?

Operational period.

Where should mitigation measures be implemented?

On site.

Mitigation Measures/Interventions:

- Excessive noise from the labour force and truck delivery drivers should be avoided.
- Dedicated access routes to be identified and communicated to drivers of delivery vehicles.
- Adjacent residents to be informed of unusually noisy activities that will be undertaken.
- Works instructions to be issued regarding minimisation of noise to all workers (especially those using noisy equipment).

Responsible Party:

Proponent (site owner/manager)

Notes:

This impact can be mitigated through effective site management. Noise levels decrease at approximately 1 decibel per 13 meters.

D. Impact Description:

Operational activities could create larger amounts of solid waste, thus causing a nuisance to adjacent properties.

When will the impact occur and when should it be addressed?

During operational phase.

Where should mitigation measures be implemented?

On site.

Mitigation Measures/Interventions:

- All waste material must be contained and disposed off according to the relevant legal requirements.
- Waste must be stored in such a manner that no pollution of the environment occurs at any time.
- All domestic waste generated must be disposed of in a proper manner at the Local Authorities Municipal Landfill site (i.e. no burial on site). The Ekurhuleni municipality is responsible for removal of domestic waste from proclaimed township areas.
- All accumulated and surplus material must be disposed of in a suitable place and manner to prevent translocation of invasive plant species, modification of drainage and contamination of surface water.
- Hydrocarbon (oil & diesel) waste as well as all hydrocarbon contaminated material must be regarded as hazardous waste and separated from general waste. It must be removed from site and disposed of at a suitably registered disposal facility (it should not be disposed of at the Local Municipal Landfill site).
- Spill cleanup kits and absorbent material must be kept on site to assist in immediate cleanup of any hazardous material spills.

Responsible Party:

Proponent (site owner/manager)

E. Impact Description:

Storage tanks and equipment could have negative impacts on the underground water quality.

When will the impact occur and when should it be addressed?

During operational phase.

Where should mitigation measures be implemented?

On the site.

Mitigation Measures/Interventions:

- Check the fuel in underground fuel tanks and report suspected leaks immediately.
- Check if water has entered underground tanks.
- Regular monitoring (as per monitoring schedule) of the monitoring wells must be undertaken to prevent pollution. Records of monitoring must be kept and made available to the DWS on request. Should contamination be detected, monitoring must be extended to the monitoring boreholes as identified during the hydro census. If contamination is detected in the extended borehole survey, a rehabilitation plan must be compiled and executed.
- The leak detectors must be regularly tested and records kept.
- All machinery must be maintained in good working order as to prevent soil or water pollution from oil, fuel or other leaks.
- The installation of USTs must be according to SANS 10089-3:2010.
- Spills and leaks may occur, and minimising impacts requires rapid detection and response. To minimise the risk of a spill or leak the following are required:

1. Spill and leak prevention

The following minimum precautionary measures are recommended:

- Sealing of the forecourt area and other areas where fuel products are handled to prevent infiltration of petroleum products into the soil/rock underlying the site;
- Storm water draining from the surfaced areas should be collected in a sealed sump to be treated and/or removed;
- Preventative measures should be installed to prevent the storm water or other liquids draining into the natural soil.
- Subsurface fuel tanks should be placed in concrete or PVC encasements with a sump system to prevent spilled fuel from entering the bedrock or aquifer.
- Fuel lines and dispensers should be rendered leak-proof and are recommended to be placed in encasements.
- Leak detectors are a preferred design alternative. In best practice tank and infrastructure design, leak detectors are installed which immediately switch off the submersible pump contained within the tank should a leak be detected.
- Overfill protection in the tank filling pipe work to prevent tank overfills during filling operations, preventing surface spillage.

2. Spill and Leak Response

Spill response includes procedure to limit the spill, contain the spill, remove as much as possible of the spilled product, and a clean-up and soil and groundwater rehabilitation. Containing the spill localises the problem and minimises the extent of pollution. The clean-up process is determined by the volume of spill, whether it occurs on surface over paving, over soil, or is a leak from USTs.

Minor spills of less than 200 litres can be soaked up with fibres and a spill soaked into soil can be ploughed up to allow aeration to remediate the pollution.

Major spills can be contained by stopping the flow of product through control valves, turning off pumps, containing the spill with absorbing fibres, sandbags, sand, or soil, preventing a spill from entering drains and storm water systems and creating a barrier to migration to water courses and flowing over permeable surfaces. Spills over soil require ploughing up of soil and the application of oxidising chemicals to increase oxidation.

Responsible Party:

Proponent (site owner/manager) and site engineer.

Notes:

Regular monitoring must take place to prevent leakage from the tanks.

F. Impact Description:

Effluent handling.

When will the impact occur and when should it be addressed?

During operational phase.

Where should mitigation measures be implemented?

On the site.

Mitigation Measures/Interventions:

- Clean and dirty water systems must be separated to prevent contaminated run-off from entering the surface and groundwater and soil.
- The effluent from the driveway area around the diesel dispensers / dispensing pumps must not flow to the street, or into watercourses or into storm water systems without first passing through a gravity-separator.
- All waste oils, greases, fuels etc. must be collected and disposed of in an appropriate manner at a suitably registered disposal facility (it should not be disposed of at the Local Municipal Landfill site) off site.
- The contents of grease traps or other waste oil, grease and/or fuel disposal/storage containers must under no circumstances be voided to the surrounding area.
- Provide clean-up equipment specifically designed to deal with regular, small spills that occur.
- Develop a step-by-step clean-up guide to using the spill kit.
- Train all staff in the emergency response procedure. Make sure all staff know where the written procedure is kept. Train all staff in the emergency response procedure. Make sure all staff know where the written procedure is kept.
- All waste from the workshop must be disposed of in a suitable manner at a suitably registered disposal site.
- Should an accidental spill event occur, the effluent must be contained as far as possible in the separator pit. If there is a risk that the sump could overflow (such as in a storm event) then the spilled material must be stored in a tanker or other appropriate container until it can be treated and disposed of.

Responsible Party:

Proponent (site owner/manager) and site engineer.

4.3 The Decommissioning Phase Environmental Management Programme

As the final phase in the project cycle, decommissioning may present positive environmental opportunities associated with the return of the land for alternative use and the cessation of impacts associated with operational activity, the need to manage risks and potential residual impacts may remain well after operations have ceased. Examples of potential residual impacts and risks include contamination of soil and groundwater, stock that has been abandoned (e.g. scrap equipment, old chemicals) and old (unserviceable) structures. All structures must be removed, and the site must be rehabilitated as it was prior the development.

- Contaminated metal must be steam-cleaned prior to disposal. Routing of effluent dependant on contaminants.
- If any metal, including piping, have future value it may be moved, after cleaning, to a storage area for redundant materials.
- Reference to the existing procedure for the disposal of metal to the scrap metal dealer.
- On the day of excavation, the site engineer, contractor and environmental consultant (contamination expert) must be present either as the tank is being removed or immediately afterwards.
- The area to be excavated must be cordoned off with red danger tape/safety netting and no smoking signs displayed around the site.
- All fuel inside the tank must be removed and the tank degassed, with the site then excavated to expose the tank. In order to ensure the tank is not damaged during excavation especially in areas of limited space, a small back-actor must be used or the area must be manually excavated, with the removed soil stockpiled in a demarcated area on site.
- All other electrical, storm water or water pipelines must be located prior to excavation to ensure they are not damaged in the excavation process. All pipes and vents connected to the tank must be disconnected and sealed before the tank is removed.
- If there are no suspected leaks or contamination, the new tank can be installed.
- If a leak is suspected, soil samples must be taken from a number of points in the excavation as well as from the stockpiled soil. Water samples must also be taken if there are free-standing pools in the excavated pit. Background soil and water samples must also be taken off-site.
- The pit must be left open while the samples are sent to an appropriate laboratory for analysis. Should the analysis indicate the soil to be contaminated, soil must be removed from the pit until all of the contaminated material has been removed. Contaminated water must be pumped out, collected and disposed of in an appropriate manner. Further soil samples must be taken and sent for analysis with the process repeated until analysis shows contamination to be within acceptable levels.
- The contaminated soil must be stockpiled separately and remediated on site or removed to an appropriately registered landfill site.
- The new tank can then be placed in the existing hole.
- The removed tank will be loaded onto a flat-bed trailer and taken to the contractor's storage yard. The tank will be flushed to remove any remaining residues with the flushed water either stored for future flushing or processed to remove the fuel.

5. CONCLUDING REMARKS

The purpose of this Environmental Management Programme is to describe how potential negative environmental impacts/effects resulting from activities undertaken at/by the installation of storage tanks (and associated infrastructure) on Erf 1597 Clayville Extension 22 can be managed, eliminated, offset or reduced.

This document has attempt to organise and coordinate the required mitigation measures into a single structured plan that will guide the management of the facility in such a way as to minimize the impact of the facility on the environment.

This document should be viewed as a dynamic document and additions should be made to it as other impacts/issues are identified during the operation of the facility. Where additions or alterations are made, the parties responsible for upgrading, decommissioning, maintenance etc. should be informed of this in writing – such parties should acknowledge receipt of such additions/amendments in writing.

In conclusion it can be stated that several negative and positive impacts/effects can potentially arise from the proposed facility. These can however be mitigated through the implementation of a number of mitigation measures (as contained in this Environmental Management Programme).

Annexure A

Complaints Register

COMPLAINTS REGISTER NAME OF PROJECT: DATE AND TIME OF RECORDING:	
DESCRIPTION OF COMPLAINT RECEIVED: (attach additional information where necessary)	
Complaint number:	Date of complaint: Time of complaint:
Complaint received from:	Name: Address: Tel no.:
Cause(s) of complaint	
DESCRIPTION OF CORRECTIVE & PREVENTIVE ACTIONS TAKEN:	
Materials and methods used for mitigation to prevent re-occurrence	
Signature of contractor's representative:	I hereby certify that the above is a true and accurate account of the complaint that was received and the corrective and preventive actions taken <div style="display: flex; justify-content: space-between;"> Signed: Date: </div>
Signature of environmental officer:	I hereby certify that the above is a true and accurate account of the complaint that was received and the corrective and preventive actions taken <div style="display: flex; justify-content: space-between;"> Signed: Date: </div>

Annexure B

Register of Responses to Complainants

REGISTER OF RESPONSE TO COMPLAINT(S)

NAME OF PROJECT:

DATE AND TIME OF RECORDING:

DESCRIPTION OF COMPLAINT RECEIVED: (attach additional information where necessary)

.....

.....

.....

Complaint number:

Complaint received from:

Name:

Address:

Tel no.:

DESCRIPTION OF RESPONSE PROVIDED TO THE COMPLAINANT (INCLUDING CORRECTIVE AND PREVENTIVE ACTION TAKEN):

.....

.....

.....

Signature of contractor's
representative:

I hereby certify that the above is a true and accurate account of the complaint
that was received and the response given

Signed:

Date:

Signature of environmental
officer:

I hereby certify that the above is a true and accurate account of the complaint
that was received and the response given

Signed:

Date:

Annexure C

Environmental Incident Report Sheet

ENVIRONMENTAL INCIDENT REPORT SHEET	
NAME OF PROJECT:	
DATE AND TIME OF RECORDING:	
INCIDENT DESCRIPTION: (attach additional documentation e.g. photos or sketches where necessary)	
Incident number:	Date of incident: Time of incident:
1. Location of incident	
2. Volume of material involved (e.g. litres or m3) or number of features damaged	
3. Cause(s) of incident	
DESCRIPTION OF CORRECTIVE & PREVENTIVE ACTIONS TAKEN:	
4. Materials and methods used for mitigation of the incident during and immediately after its occurrence	
5. Disposal methods followed with contaminated material (where relevant)	
6. Steps taken to prevent a re-occurrence of the incident	
7. Additional actions required by environmental officer	
Signature of contractor's representative:	I hereby certify that the above is a true and accurate account of the incident and the corrective and preventive actions taken <div style="display: flex; justify-content: space-between;"> Signed: _____ Date: _____ </div>
Signature of environmental officer:	I hereby certify that the above is a true and accurate account of the incident and the corrective and preventive actions taken <div style="display: flex; justify-content: space-between;"> Signed: _____ Date: _____ </div>

Annexure D

Emergency Response Plan

EMERGENCY RESPONSE PLAN

PROPOSED STORAGE FACILITY FOR THE STORAGE AND HANDLING OF DANGEROUS GOODS ON ERF 1597 CLAYVILLE EXTENSION 22, CITY OF EKURHULENI METROPOLITAN MUNICIPALITY AREA

It is very important that every fuel service station/fuel storage facility must have a fully documented Emergency Response Plan (ERP) in place. This is also required in terms of the Occupational Health and Safety Act for the Major Hazard Installation regulations.

The ERP involves the following main process:

1. The Retailer/site operator must conduct a risk assessment of the filling station/fuel storage facility to establish the likelihood of any identified risks occurring.
 - The following are typical risks that could be identified at every service station/fuel storage facility:
 - fire
 - physical injury (gunshot wounds, broken limbs, lacerations, burns, electric shocks, etc.)
 - medical emergencies (heart attacks, loss of consciousness, etc.)
 - riots or demonstrations
 - fuel spillage
 - robbery
 - bomb threats
 - Less common risks identified at some sites could involve the following incidents:
 - flood (proximity to rivers)
 - insect /snake bites
 - threat of wild animals
2. The retailer/site operator must draw up an ERP to deal with each identified risk once it has occurred in order to minimize the negative impact and to prevent it from escalating or re-occurring.
3. An ERP must be tested at least twice per year for different scenarios.

4. It is the responsibility of each site manager to assess all the particular risks that could occur on site and must plan to deal with each one.
5. The ERP must be easily available on site for reference and a copy must be filed in a safe place.
6. Document control details and review dates for the ERP should be listed in this document.
7. A site map needs to be drawn up and displayed at visible points detailing the
 - firefighting equipment
 - escape routes
 - public assembly points
8. A training program for handling all the emergency related actions must be drawn up and training must be done for all related staff.

Explanation is given below how each risk should be identified and the action to be taken.

Fire Emergency Response Plan

- Switch off all pumps – use the emergency switch
- Attempt to extinguish the blaze as soon as possible if it is not already too large
- Use the fire extinguishers and sand for petrol fires
- Use the fire-hose for fires in the building (do not use water on electrical fires or petrol fires)
- Evacuate the entire building
- Summon the fire brigade as soon as possible if the blaze cannot be immediately extinguished
- Keep onlookers away from the site
- Report incident to Fuel supply Company field force member as soon as possible

Product spills and leaks

If there is a large spill, the following should be done:

- Switch off all the pumps – use the emergency switch
- Ensure there is no smoking, fire or welding in the vicinity
- Do not switch on vehicle engines

- Ask customers to get out of their vehicles
- Keep fire extinguishers approximately 5 meters away, ready for action
- Call the fire brigade and advise Fuel Supply Company
- Soak up the product spill with sand or sawdust or spill kit and remove to a safe place
- Do not use water as this will spread the product faster and carry it into the drains
- Form a dam to prevent the product from reaching any drains or streams

Physical injury

In the event of physical injury the following should be done:

- Apply first aid technique
- Phone doctor and / or hospital
- Take injured party to doctor or hospital or contact an ambulance service

Medical emergency

In the event of a medical emergency the following should be done:

- Apply first aid technique
- Phone doctor and / or hospital
- Take injured party to doctor or hospital or contact an ambulance service

Riot /Demonstration

When you see a group of protesters moving in on your site, you should take the following precautions:

- Telephone your local police station
- Telephone your field force member or Fuel supplier Call Centre
- Ask customers to complete their transactions and quickly leave the service station/facility in a direction away from the approaching /gathering crowd
- Lock all the pumps and dispensers
- Switch off the power to the forecourt pumps
- Switch off all electricity including the lights
- Remove all loose forecourt equipment into the building or the rear section of the property.
This would include fire extinguishers and sand buckets
- Lock all gates and doors and assemble all staff in a back room out of view
- Unlock your first aid cabinet
- Keep fire extinguishers ready

- Cancel any imminent fuel deliveries
- Ask your staff to remain calm and quiet
- Your service station/facility should appear to be closed and so hopefully deflect the crowd.
The circumstances of each incident will differ, however retailers should use their discretion when making operational decisions, whether all or some forecourt staff should be sent home or if it is safe for them to leave the site.
- In all instances adopt a non – confrontational approach with the protesters or the media.

Practice these measures beforehand to ensure that you are properly prepared.

Robbery

If a robbery does take place, your staff should do the following:

- Give the robber what he demands
- Be calm, alert and observant
- Obey the robber and move slowly
- Remember his height, skin color, his voice, his weapon, his vehicle and the registration
- Write down the details of the robber as soon as possible as soon as he has gone
- Figures in the Safety at Service Station Operational Standards Manual shows sketches that will assist in recording the details of a robber
- Telephone the police and do not touch anything that might carry the robber's fingerprints
- Ask witnesses to remain on the premises until the police arrive, or take their names and addresses
- Report the incident to the Fuel Supply Company field force member immediately

Bomb Threats

- Those inclined to plant bombs will carefully search for a target that will best serve their objective at the lowest risk to themselves.
- If they search for a target, a poorly illuminated or unattended Service Station/facility will receive preference to a busy, illuminated site.
- Ensure therefore that your site is properly illuminated, also at the sides and back of the building. If you do not offer 24 hours service, consider employing a night watchman with no fire-arm.
- Train forecourt attendants to keep the pump islands clear of rubbish. This will ensure that unattended parcels that might contain a bomb will be spotted immediately.

- If someone should see a suspicious object, telephone the police.
- Do not handle suspicious objects, but remove people away from it to a safe area.

All sites are required to openly display at a number of locations the telephone numbers of the Emergency service providers such as:

SERVICE PROVIDER	TELEPHONE NUMBER
Police	
Hospital	
Fire Department	
Site Manager	
Fuel Supply Company Customer Line	
Fuel Supply Company Representative	
Armed Response	
ATM Helpline	

Documented copy of the ERP

Date: _____ Retailers signature: _____ Field force signature: _____

Review ERP Date: _____ Retailers signature: _____ Field force signature: _____

Review ERP Date: _____ Retailers signature: _____ Field force signature: _____

Annexure E

Company Profile (CV)



Company Profile

TEKPLAN

TECOPLAN ENVIRONMENTAL CC

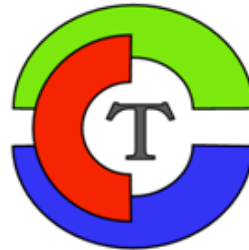
(Reg. No. 2000/019116/23) trading as

P.O. Box 55714, Polokwane, 0700

Tel: 015 291 4177 Fax: 086 218 3267

tecoplan@mweb.co.za

VAT REGISTRATION NR. 4440206771



Environmental Consultants

THE AREAS IN WHICH TECOPLAN RENDERS SERVICES

TEKPLAN (TECOPLAN) has offices in Polokwane. TEKPLAN acts as Environmental consultants to various agents/agencies involved in development.

BEE PROFILE

TEKPLAN has a level 4 BEE classification.

SERVICES

The company specialises in the following work:

- a) CONDUCTING OF APPLICATIONS FOR AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT 107 OF 1998)**
- b) WATER USE LICENSING TERMS OF SECTION 21 OF THE WATER ACT 1998**
- c) WASTE LICENSE APPLICATIONS - LICENCES IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (NO. 59 OF 2008)**

- d) AIR QUALITY - REGISTRATION CERTIFICATES IN TERMS OF THE RELEVANT SECTIONS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: AIR QUALITY ACT (ACT 39 OF 2004) - ACTIVITIES LISTED IN SECTION 21 OF THE NEM: AQUA (GAZETTE 33064, GN248 OF 31 MARCH 2010)**
- e) ENVIRONMENTAL COMPLIANCE MONITORING (ACTING AS ENVIRONMENTAL CONTROL OFFICER DURING CONSTRUCTION PHASES)**
- f) MINING PERMIT APPLICATIONS (SPECIALIZING IN BORROW PITS)**
- g) FORESTRY LICENCE APPLICATIONS (PERMITS FOR REMOVAL/CUTTING OF PROTECTED TREES)**

ESTABLISHMENT

TECOPLAN is a company established in 2000 and specialises in all aspects related to the fields of Environmental Management and Urban planning.

POLICY OF THE COMPANY

- ❖ Serving the community of which we are members.**
- ❖ Believing in community participation, capacitating the beneficiary communities and assisting communities to manage their own resources (natural, social, human, technological and economic).**
- ❖ Pro-actively promoting a free and just South Africa, rectifying the imbalances created by the previous policies – fully embracing the principles of “affirmative action”.**

- ❖ **Adapting our approach to services delivery in order to provide in the needs and aspirations of the local communities.**
- ❖ **Supporting a multi-disciplinary approach to Environmental Analysis and Management in order to ensure sustainability of all developmental actions.**
- ❖ **Using all available regulatory, self-regulatory and market-based tools in appropriate combinations to effect desired outcomes.**

EXPERTISE EMPLOYED BY TECOPLAN

TECOPLAN consist of various individuals who are suitably qualified. TECOPLAN has several professionally qualified persons as well as supporting technical personnel in its service.

CURRICULUM VITAE

THEO KOTZE	DIRECTOR
POSITION:	PLANNER & ENVIRONMENTAL CONSULTANT
COUNTRY & DATE OF BIRTH:	RSA, 3 APRIL 1970
SPECIALISATION:	Urban and Regional Planning AND Environmental Management & Analysis
ACADEMIC QUALIFICATIONS:	Masters Degree in Environmental Management & Analysis Potchefstroom University for Christian Higher Education. B.Art et Scientae (Planning) Potchefstroom University for Christian Higher Education, 1992.
PROFESSIONAL AFFILIATIONS:	Certified Environmental Assessment Practitioner, ICB for EIA's. Registered Professional Town and Regional Planner: Council for Town and Regional Planners. Member: South African Planning Institute Member: International Association for Impact Assessment South Africa Registered Environmental Assessment Practitioner EAPASA Registration no: 2020/1349
HOME LANGUAGE:	Afrikaans
OTHER LANGUAGES:	English

NICOLE VAN ZYL	ASSISTANT
-----------------------	------------------

POSITION: ASSISTANT

COUNTRY & DATE OF BIRTH: RSA, 5 January 1996

SPECIALISATION: General office assistance
Technical assistance

ACADEMIC QUALIFICATIONS: Senior Certificate 2014, Tom Naude Technical High School

HOME LANGUAGE: Afrikaans
OTHER LANGUAGES: English

REECE VAN DER MERWE	DRAUGHTSMAN / GIS SPECIALIST
----------------------------	-------------------------------------

POSITION: Draughtsman/ GIS Specialist

COUNTRY & DATE OF BIRTH: RSA, 11 April 1996

SPECIALISATION: Draughting Building Plans / GIS Maps

ACADEMIC QUALIFICATIONS: Senior Certificate 2014, Tom Naude Technical High School, FET Certificate(Merit Award)
International Certificate Autodesk AutoCad Certified User. International Certificate Autodesk Revit Certified User. International Certificate Autodesk Inventor Certified User.

HOME LANGUAGE: Afrikaans
OTHER LANGUAGES: English

DANIE COMBRINK

**ENVIRONMENTAL ASSESSMENT
PRACTITIONER**

POSITION:

ENVIRONMENTAL CONSULTANT

**COUNTRY &
DATE OF BIRTH:**

RSA, 10 October 1982

SPECIALISATION:

Environmental Management & Analysis

**ACADEMIC
QUALIFICATIONS:**

**B.Sc. in Geography,
University of Pretoria, 2003.
B.Sc. (HONS) in Geography (specialising
in Environmental Management),
University of Pretoria, 2004.**

**PROFESSIONAL
AFFILIATIONS:**

- **Registered Environmental Assessment Practitioner
(EAPASA Registration no: 2019/933)**
- **Member of International Association of Impact Assessment, South Africa
(IAIAsa membership Number: 6558)**

**HOME LANGUAGE:
OTHER LANGUAGES:**

**Afrikaans
English**

Qualifications



Universiteit van Pretoria

Die Raad en die Senaat verklaar hiermee dat die graad

Baccalaureus Scientiae

met spesialisering in
Geografie

met al die regte en voorregte daaraan verbonde by geleentheid
van 'n kongregasie van die Universiteit toegeken is aan

DANIEL JACOBUS ELARIUS COMBRINK

kragtens die Wet op Hoër Onderwys en die Statuut van die Universiteit

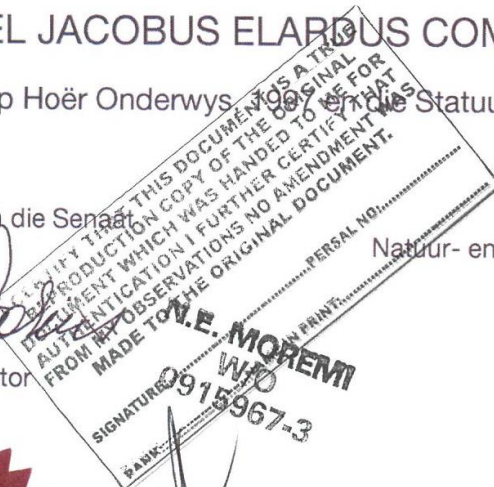
Namens die Raad en die Senaat

Visekanselier en Rektor



Namens die Fakulteit
Natuur- en Landbouwetenskappe

Dekaan



Registrateur

2004-04-20



Universiteit van Pretoria

Die Raad en die Senaat verklaar hiermee dat die graad

Baccalaureus Scientiae Honores

(met lof)

met spesialisering in
Geografie

met al die regte en voorregte daaraan verbonde by geleentheid
van 'n kongregasie van die Universiteit toegeken is aan

DANIEL JACOBUS ELARDUS COMBRINK

volgens die Wet op Hoër Onderwys, 1997 en die Statuut van die Universiteit

Namens die Raad en die Senaat

[Handwritten signature]
Visekanselier en Rektor

Namens die Fakulteit
Natuur- en Landbouwetenskappe

[Handwritten signature]
Dekaan



[Handwritten signature]
Registrateur

2005-04-19

EAPASA Registration

EAPASA

Unit 19 Oxford Office Park
3 Bauhinia Street
Highveld Techno Park
Centurion
0157
Tel. (+27) 12 880 2154

Environmental Assessment Practitioners Association of South Africa

Advancing environmental assessment practice in South Africa



Email: registrar@eapasa.org / Website: www.eapasa.org

Mr Daniël Combrink
125 Bendor Drive
Bendor Park
Polokwane
0699

Sent by email to: daniecombrink@yahoo.com

Dear Mr Combrink

Registered Environmental Assessment Practitioner: Number 2019/933

Daniël Jacobus Elardus Combrink : South African ID 8210105100082

The Environmental Assessment Practitioners Association of South Africa (EAPASA) herewith certifies that Daniël Jacobus Elardus Combrink is a Registered Environmental Assessment Practitioner (EAP) in accordance with the prescribed criteria of Regulation 15.(1) of the Section 24H Registration Authority Regulations (Regulation No. 849, Gazette No. 40154 of 22 July 2016, of the National Environmental Management Act (NEMA), Act No. 107 of 1998, as amended).

Your registration is duly authorised by EAPASA as the single Registration Authority for EAPs in South Africa (appointed as per Regulation No. 104, Gazette No. 41434 of 8 February 2018, in terms of section 24H(3)(a) of the NEMA). Your status as a Registered EAP is displayed in the 'EAP Register' - please find your name and contact email address at

<https://registration.eapasa.org/registered-practitioners>

Your registration is effective for a period of five years from 30 November 2019, and expires on 30 November 2024. The renewal of your registration in 2024 will be contingent on you having met the requirements of EAPASA's Continuing Professional Development (CPD) policy during each year of registration.

As a Registered EAP you are required to uphold the EAPASA Code of Ethical Conduct and Practice in your professional endeavours, towards the goal of quality assurance in environmental assessment practice.

Please accept my congratulations on your registration.

Best regards

Dr Richard Hill
Registrar
Date: 30 November 2019

Board Members: Ms Snowy Makhudu (Chairperson), Mr Khangwelo Desmond Musetsho (Vice-Chairperson),
Mr Ntsako Baloyi, Mr Zama Dlamini, Mr Siyabonga Gqalangi, Ms Jacqui Hex, Ms Sibusisiwe Hlela,
Mr Malcolm Moses, Mr Phumudzo Nethwadi, Mr Danie Neumann, Ms Keshni Rughoobeer.
Registrar: Dr Richard Hill
NPO Reg. No. 122-986

Member of International Association of Impact Assessment



IAIASa Secretariat
Tel +27(0)11 655 7183
Fax 086 662 9849

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43 Birchwood Court, Montrose
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PO Box 11666, Vorna Valley,
1686
Email: operations@iaiasa.co.za
Website: www.iaiasa.co.za

IAIASa Confirmation of Membership: 2021/2022
Danie Combrink Membership Number: 6558

12 Apr 2021

TO WHOM IT MAY CONCERN

Mr Danie Combrink, TEKPLAN Environmental (IAIASa membership Number **6558**) is a paid-up Full Member in good standing of International Association for Impact Assessment, South Africa and has been a member of IAIAsa since 05 Oct 2020.

Membership has been continuous from 05 Oct 2020 to date.

This membership is valid from 01 Mar 2021 to 28 Feb 2022.

IAIASa is a voluntary organisation and is not a statutory body regulating the profession. Its members are however expected to abide by the organisation's code of ethics which is available on our website.

IAIASa is an Affiliate of IAIA which is an international body through a memorandum of understanding. IAIA is not responsible or liable for the actions or activities of the Affiliates. Membership of one does not imply membership of the other.

Any enquiries regarding this membership may be directed to the Secretariat at the above contact details.

Yours sincerely

Abulele Adams
President 2020/2021

President: A. Adams, Past President: S. Nkosi, President Elect: R. Mbokodi, Treasurer: T. Bokwe, Secretary: M. Sham.
Members: F. Fortune, D. Neumann, P. Sithole. Branch Chairs: M. Groenink, S. Nkomonde, R. Mbokodi, P. Radford, C. Roos.