




***RENEWAL OF THE ENVIRONMENTAL  
IMPACT ASSESSMENT FOR THE PROPOSED  
CONSTRUCTION OF FACILITIES AND  
STORAGE AND HANDLING OF OIL AND  
PETROLEUM PRODUCTS IN ARIAMSVLEI,  
//KHARAS DISTRICT***

***October 2023***

***App - 231004002218***

<b>Project Name:</b>	<p style="text-align: center;"><b><i>RENEWAL OF THE ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PROPOSED CONSTRUCTION OF FACILITIES AND STORAGE AND HANDLING OF OIL AND PETROLEUM PRODUCTS IN ARIAMSVLEI, //KHARAS DISTRICT</i></b></p>
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<b>Release Date:</b>	<p style="text-align: center;">October 2023</p>
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## EXECUTIVE SUMMARY

**Green Earth Environmental Consultants** have been appointed by XBFS (Extreme Bulk Fuel Services) to attend to and complete an Environmental Impact Assessment (EIA) Renewal and Environmental Management Plan (EMP) Renewal to renew the Environmental Clearance Certificate (ECC) for the proposed construction of facilities and storage and handling of oil and petroleum products on Portion 1 of the Remainder of Portion 36 of the Farm Ukumas No. 69, located in the Village of Ariamsvlei, //Kharas District as per the requirements of the Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (GN 30 in GG 4878 of 6 February 2012).

It is required to renew the Environmental Clearance (EC) as the old EC which was issued on 1 July 2020 expired on 1 July 2023. The new EC is required for the existing and ongoing operations of XBFS (Extreme Bulk Fuel Services).

The activities listed below, which forms part of the proposed operations, may not be undertaken without an Environmental Clearance Renewal:

### **ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES**

- *The construction of facilities for the refining of gas, oil and petroleum products;*

### **HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE**

- *The storage and handling of dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location.*
- *Construction of filling stations or any other facility for the underground and aboveground storage of dangerous goods, including petrol, diesel, liquid, petroleum, gas or paraffin.*

The type of activities that will be carried out on the site will not negatively affect the amenity of the locality and the activities will not adversely affect the environmental quality of the area. None of the potential impacts identified are regarded as having a significant impact to the extent that the proposed project should not be allowed. However, the operational activities further on need to be controlled and monitored by the assigned managers and the proponent. Mitigation measures will be provided that can control the extent, intensity, and frequency of these named impacts in order not to have substantial negative effects or results. It is believed that the overall cumulative impact on the biophysical environment will be low and there will be a positive impact on the socio-economic environment.

The Environmental Impact Assessment Renewal which follows upon this paragraph was conducted in accordance with the guidelines and stipulations of the Environmental Management Act (No 7 of 2007) meaning that all possible impacts have been considered and the details are presented in the report.

Based upon the conclusions and recommendations of the Renewed Environmental Impact Assessment Report and the Renewed Environmental Management Plan, the

Environmental Commissioner of the Ministry of Environment, Forestry and Tourism is herewith requested to:

1. Accept and approve the Renewed Environmental Impact Assessment.
2. Accept and approve the Renewed Environmental Management Plan.
3. Issue a Renewed Environmental Clearance for the proposed construction of facilities and storage and handling of oil and petroleum products on Portion 1 of the Remainder of Portion 36 of the Farm Ukumas No. 69, located in the Village of Ariamsvlei, //Kharas District for XBFS (Extreme Bulk Fuel Services) and for the following listed activities:

***ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES***

- *The construction of facilities for the refining of gas, oil and petroleum products;*

***HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE***

- *The storage and handling of dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location.*
- *Construction of filling stations or any other facility for the underground and aboveground storage of dangerous goods, including petrol, diesel, liquid, petroleum, gas or paraffin.*

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## **LIST OF ABBREVIATIONS**

EC	Environmental Clearance
ECO	Environment Control Officer
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
I&APs	Interested and Affected Parties
MAWLR	Ministry of Agriculture, Water and Land Reform
MEFT	Ministry of Environment, Forestry and Tourism



# 1. INTRODUCTION

**Green Earth Environmental Consultants** have been appointed by XBFS (Extreme Bulk Fuel Services) to attend to and complete a Renewed Environmental Impact Assessment (EIA) and a Renewed Environmental Management Plan (EMP) **to renew the Environmental Clearance Certificate (ECC) for the proposed construction of facilities and storage and handling of oil and petroleum products on Portion 1 of the Remainder of Portion 36 of the Farm Ukumas No. 69, located in the Village of Ariamsvlei, //Kharas District** as per the requirements of the Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (GN 30 in GG 4878 of 6 February 2012). It is required to renew the Environmental Clearance (EC) as the old EC which was issued on 1 July 2020 expired on 1 July 2023. The new EC is required for the existing and ongoing operations of XBFS (Extreme Bulk Fuel Services).

The activities listed below, which forms part of the proposed operations, may not be undertaken without an Environmental Clearance Renewal:

## **ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES**

- *The construction of facilities for the refining of gas, oil and petroleum products;*

## **HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE**

- *The storage and handling of dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location.*
- *Construction of filling stations or any other facility for the underground and aboveground storage of dangerous goods, including petrol, diesel, liquid, petroleum, gas or paraffin.*

The following Environmental Impact Assessment Renewal contains information on the project and the surrounding areas and activities.

# 2. TERMS OF REFERENCE

To be able to implement the project, an Environmental Impact Assessment Renewal and Environmental Clearance Renewal is required. For this environmental impact exercise, *Green Earth Environmental Consultants* followed the terms of reference as stipulated under the Environmental Management Act.

The aim of the environmental impact assessment is:

- To comply with Namibia's Environmental Management Act (2007) and its regulations (2012).
- To ascertain existing environmental conditions on the site to determine its environmental sensitivity.
- To inform I&APs and relevant authorities of the details of the proposed activities and to provide them with an opportunity to raise issues and concerns.

- To assess the significance of issues and concerns raised.
- To compile a report detailing all identified issues and possible impacts, stipulating the way forward and identify specialist investigations required.
- To adhere to the National Solid Waste Management Strategy of the Ministry of Environment, Forestry and Tourism
- To outline management guidelines in an Environmental Management Plan (EMP) to minimize and/or mitigate potentially negative impacts.

The tasks that will be undertaken for the Environmental Impact Assessment Renewal include the evaluation of the following: climate, water (hydrology), vegetation, geology, soils, social, cultural heritage, groundwater, sedimentation, erosion, biodiversity, sense of place, socio-economic environment, health, safety and traffic.

The renewed EIA and EMP from the assessment will be submitted to the Environmental Commissioner for consideration. A renewed Environmental Clearance will only be obtained (from the DEA) once the renewed EIA and EMP has been examined and approved for the listed activities.

The public consultation process as per the guidelines of the Act has been followed. The methods that were used to assess the environmental issues and alternatives included the collection of data on the project site and area from the proponent and identified stakeholders. All other permits, licenses or certificates that are further on required for the operation of the proposed project still needs to be applied for by the proponent.

### **3. PROJECT DESCRIPTION/SITE INFORMATION**

#### **3.1. LOCALITY OF PROJECT SITE**

It is the intension of XBFS to construct and operate a fuel station on Portion 1 of the Remainder of Portion 36 of the Farm Ukumas No. 69, located in the Village of Ariamsvlei, //Kharas District. The project site is located next to the B3 Road leading from Karasburg to Upington. The project site is ±3.1 hectares in extent. See below locality of project site:



Figure 1: Location of Ariamsvlei

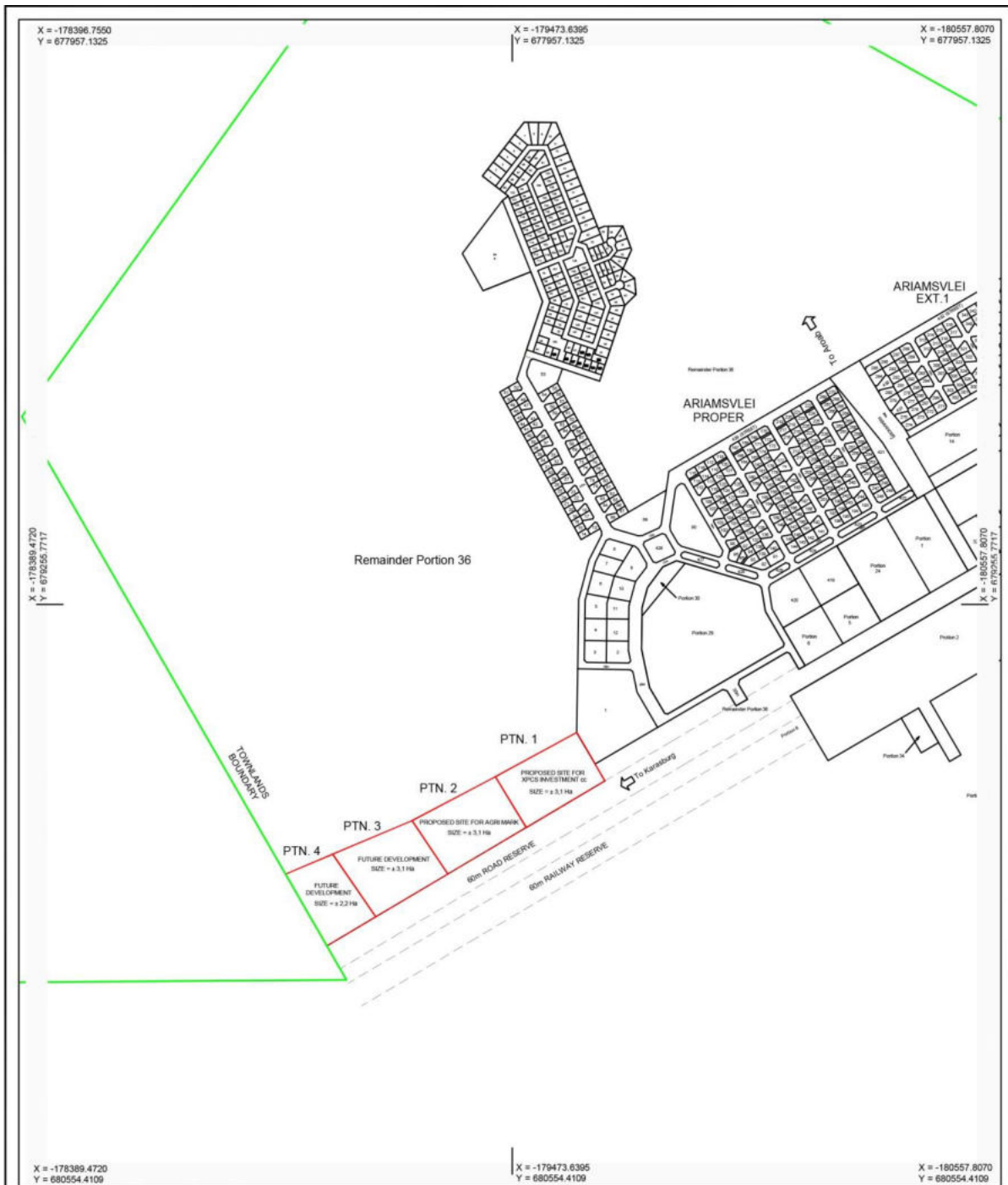


Figure 2: Locality Plan of Project Site



Figure 3: Locality Plan of Project Site on Photo

See *Plan* and *Photo* below showing the locality of the Portion (Portion 1) allocated to the Proponent:

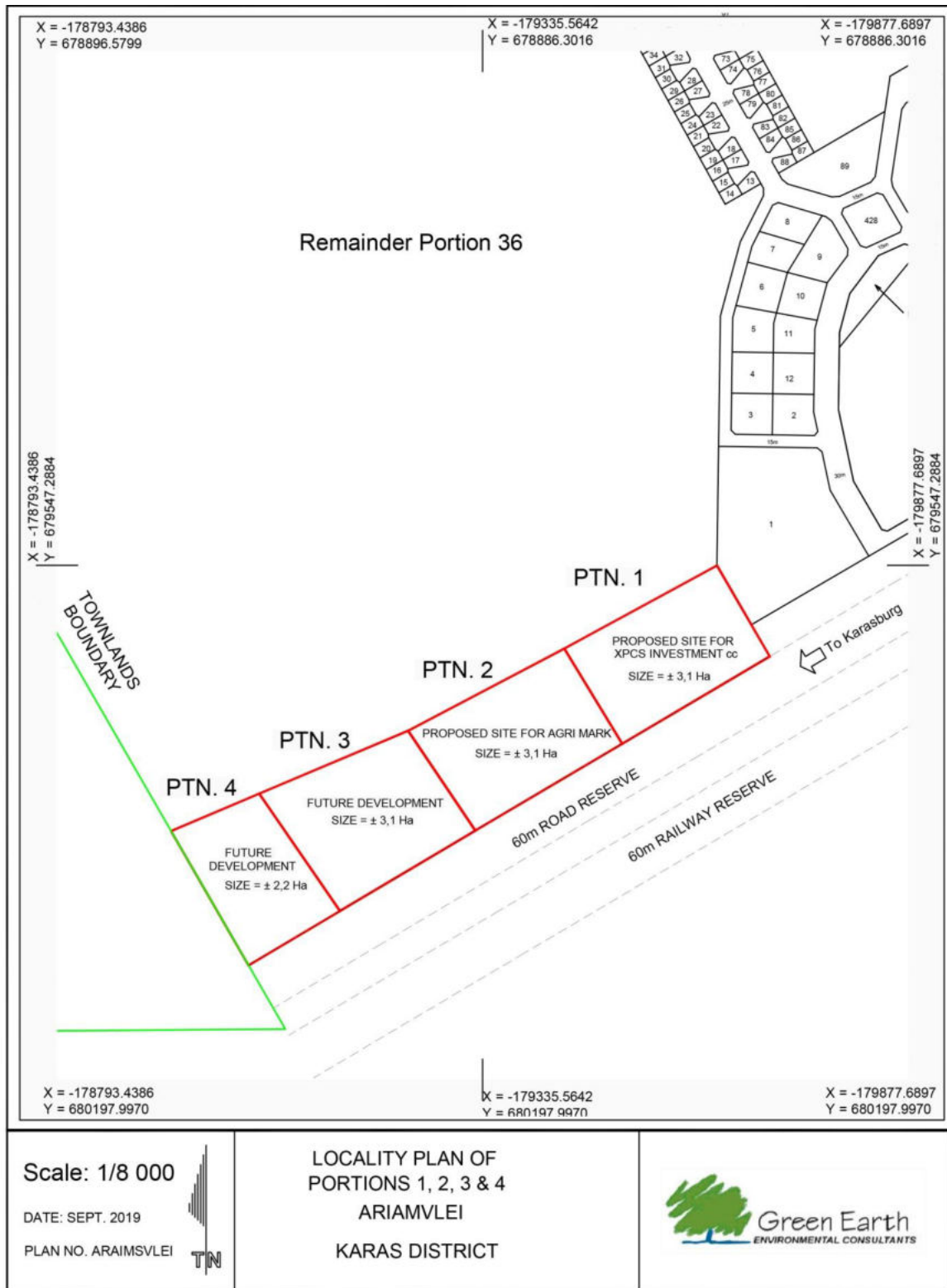


Figure 4: Project Site Map

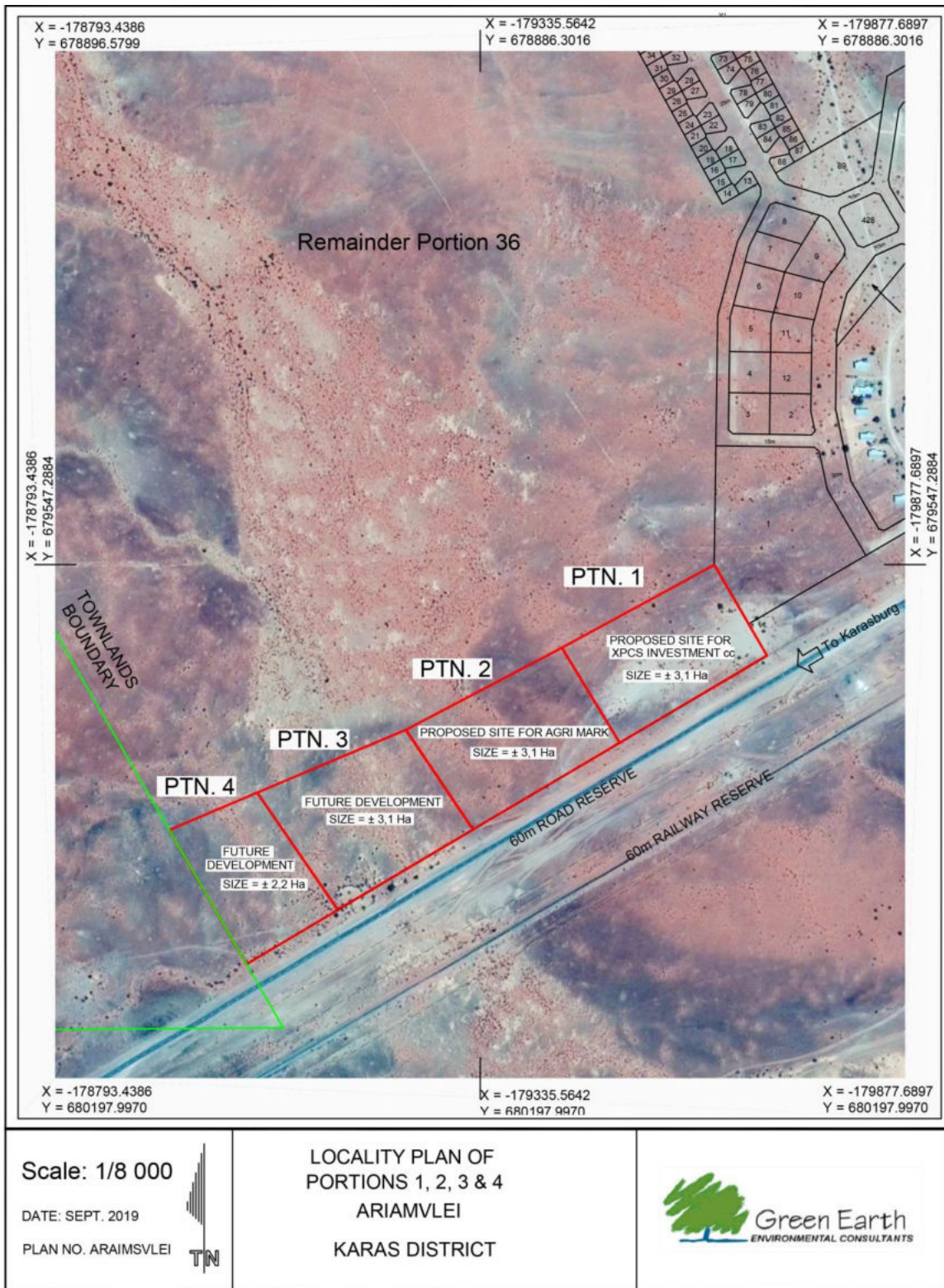


Figure 5: Project Site Map on Photo



*Figure 6: Project Site area (1)*



*Figure 7: Project Site area (2)*



### 3.2. PROJECT PROPOSAL

A fuel outlet will be constructed on the project site. The project site is 3.1 hectares in extent. To be able to store and sell fuel from the site, XBFS must install the facilities required for the handling and storage of the fuel. The construction of the site will only commence once an environmental clearance is obtained and the necessary permits have been issued by the Ministry of Mines and Energy (MME). The site will be constructed in accordance with the requirements of the MME.

The proposed Service Station will dispense petrol as well as diesel for vehicles and trucks traveling through or visiting the Village. The Service Station will also incorporate a “convenience shop” which will provide off the shelf consumables and take-away foods. A kiosk and male and female ablution facilities will be provided. A large well lighted parking area will be provided to allow long distance truckdrivers safe parking for resting and refreshing themselves. Fuels will be stored in composite, underground storage tanks, with related infrastructure. Each of these tanks will be linked via underground pipes to the relevant fuel dispenser points on the Service Station forecourts. The tanks will be supplied with fuel by road tankers, operated by duly licensed and specialized transport companies, which will discharge via filler points. Filling of the tanks will be carried out on an “as and when required” basis, but it is envisaged that tanks will require filling on average once a week. The proposed fuel retail/wholesale facility will consist of the following:

- Facilities for the storage, handling and selling of Unleaded Petrol (ULP) and Diesel 50ppm;
- The total tank capacity proposed for the site is ±96000 L;
- Underground tanks with the following capacities will be installed:
  - 1 X 43 000 Diesel
  - 1 X 43 000 L ULP
- There will be 2 – 6 dispensing points;
- The facility will operate on a 24-hour basis;
- Double wall Tanks with 2 or 3 compartments 47 m<sup>3</sup> (max capacity) (30+10+7) EN12285 standards;
- Spill containment infrastructure, with an oil/water separator will be installed to protect against spillages in accordance with the Ministry of Mines and Energy’s Requirements;
- The proposed facility will include bund walls and floors with traps to contain spillages which might happen during the handling of the fuel;
- The tanks will be linked via underground pipes to the relevant fuel dispenser points (curbside pump);
- The curbside pump will be installed over a spill slab with a trap to prevent any spilled diesel from leaching into the soil. The trap sump will be linked to a 3-chamber separator which will collect any spilled diesel for proper disposal;
- The driveway areas will be paved. The tanks will be supplied with fuel by road tankers (operated by properly licensed operators and drivers) which will discharge

via filler points. Filling of the tanks will be carried out on an “as and when required” basis, but it is envisaged that tanks will require filling on average two times per month;

- A concrete slab will be constructed around the island, under the canopy (around pumps), over the tank and around the filler point;
- The refuelling area is covered by an overhead canopy;
- The entire driveway area, the area surrounding the dispensing points and area below the canopy will be raised by land infill and sloped and landscaped and provided with proper drainage in order not to be subject to storm water damage/flooding.

Below is a summary of the typical operational activities on this site:

- Entrance and exit of heavy and light vehicles to and from the service station;
- Circulation and parking of vehicles on the site, at the filling points, shop, yard and offices;
- Movement of people on the site, including pedestrians visiting the shop, yard and offices;
- Filling of vehicles with fuel (both light and heavy-duty vehicles);
- Filling of fuel into the aboveground tanks by direct closed transfer;
- Delivery of supplies for the shop, yard and offices;
- Administrative activities related to the businesses.

## **4. APPROVALS OBTAINED**

The following approvals have been obtained to allow the implementation of this project:

### **4.1. //KHARAS REGIONAL COUNCIL**

The Proponent in consultation with the //Kharas Regional Council, identified and applied for a Portion of land for the construction of a new service station. The //Kharas Regional Council, at their Ordinary Council Meeting held on 26<sup>th</sup> July 2019, approved that the Proponent can obtain 3.1ha of land for the construction of a fuel station in Ariamsvlei. See below a copy of Council’s approval letter dated 30 July 2019:



# //KHARAS REGIONAL COUNCIL



TEL: +264-63-221900  
FAX: +264-63-223538

PRIVATE BAG 2184  
KERTMANSHOOP

**XBFS  
EXTREME BULK FUEL SERVICES  
MRS. J. JULIUS  
P.O.BOX 4152  
WALVISBAY**

**30 July 2019**

**Dear Madam**

**SUBJECT: LAND ALLOCATION: ARIAMSVLET**

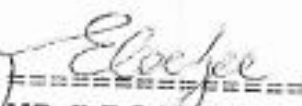
The above-mentioned serves as a reference to the presentation made on the **5<sup>th</sup> of April 2019** to the //Kharas Regional Council.

In the Ordinary Council meeting held on **26<sup>th</sup> July 2019**, Council deliberated on your application; requesting land measuring 3.1 hectares, earmarked for the purpose of constructing a fuel station in Ariamsvlet.

Council hereby informs you that your application has been approved as per Council resolution //KRC-OCM-005/26/07/19/10.1

Kindly consult the Planning Directorate for a meeting in order to discuss the Terms and Conditions of the Lease Agreement.

Regards,

  
=====  
**MR. B.E.O KASETE  
CHIEF REGIONAL OFFICER**



*All official correspondences to be addressed to the Chief Regional Officer*

Figure 8: //Kharas Regional Council Letter

## 4.2. ENVIRONMENTAL CLEARANCE CERTIFICATE

The current Environmental Clearance Certificate was issued by the Ministry of Environment, Forestry and Tourism on 1 July 2020 which expired on 1 July 2023. See below a copy of the current Certificate:



Figure 9: Current Clearance Certificate

The purpose of this submission is to renew the Environmental Clearance for a further 3 (three) years to allow the Proponent to continue with the implementation of the project.

## **5. BULK SERVICES AND INFRASTRUCTURE PROVISION**

The site has been allocated to the Proponent by the //Kharas Regional Council to be used for a fuel station. The site forms part of the Ariamsvlei Village Townlands and can be connected to the bulk services provided the Village Council. The land is generally flat consisting of a few scattered shrubs and the surface area is covered with loose stones. The site has the following bulk services:

### **5.1. ACCESS AND INTERNAL ROADS**

Portion 1 of the Remainder of Portion 36 of Farm Ukumas No. 69 in the Village of Ariamsvlei, //Kharas District is located next to the B3 Road leading from Karasburg to Upington. The project site will obtain access from the south eastern side of the site. Access will be obtained from the B3 Road.

### **5.2. WATER SUPPLY**

The project site will obtain water from the existing water reticulation system in the Village. The area has an average rainfall of 0-99 mm. Water should therefore be used sparingly in the construction and operational phase.

### **5.3. ELECTRICITY RETICULATION**

The project will obtain electricity from the NamPower network servicing the Village of Ariamsvlei. The Proponent will also install a silent backup generator to provide electricity in case of power failures on the local network.

### **5.4. SEWAGE TREATMENT AND DISPOSAL**

Only household sewer will be generated on site from the toilet facilities for the staff and clients. This sewer will be connected to the sewer system of the Ariamsvlei Village.

### **5.5. SOLID WASTE DISPOSAL/REFUSE REMOVAL**

The solid waste generated on the site will be collected by the proponent and be disposed of at an approved landfill site of the Village Council. Hazardous Waste which might be generated on the site will be dealt with in accordance with the municipal waste procedures for hazardous waste.

### **5.6. STORMWATER MANAGEMENT**

The stormwater management system will be accommodated in the building plans.

## **5.7. FIRE PROTECTION**

The Proponent will put in the necessary fire protection infrastructure / extinguishers as per requirements. It is advised that a specialist Fire Protection Specialist is contracted to introduce a proper fire protection plan with the required infrastructure and to oversee the annual auditing and maintenance of the infrastructure.

## **6. THE CURRENT STATUS OF THE PROJECT.**

The implementation of the project has been delayed as //Kharas Regional Council is still busy finalising the creation of the site and with the installation of the bulk municipal services (sewer, electricity, water and fire protection services). The Proponent will start with the implementation of the project as soon as confirmation is received from the //Kharas Regional Council that the site has been serviced and that the facility can be connected to their municipal services.

## **7. ASSUMPTIONS AND LIMITATIONS**

It is assumed that the information provided by the proponent (XBFS (Extreme Bulk Fuel Services)) and other relevant parties are accurate. Alternative sites were not evaluated as the proposed site is the site owned by the proponent. The site was visited several times and any happenings after this are not mentioned in this report. (The assessment was based on the prevailing environmental conditions and not on future happenings on the site.) However, it is assumed that there will be no significant changes to the proposed project, and the environment will not adversely be affected between the compilation of the assessment and the implementation of the proposed activities.

## **8. ADMINISTRATIVE, LEGAL AND POLICY REQUIREMENTS**

To protect the environment and achieve sustainable development, all projects, plans, programs and policies deemed to have adverse impacts on the environment require an EIA according to Namibian legislation. The administrative, legal and policy requirements to be considered during the Environmental Assessment for the proposed project are the following:

- **THE NAMIBIAN CONSTITUTION**
- **THE ENVIRONMENTAL MANAGEMENT ACT (NO. 7 OF 2007)**
- **THE TITLE CONDITIONS**
- **OTHER LAWS, ACTS, REGULATIONS AND POLICIES**

## THE NAMIBIAN CONSTITUTION

Article 95 of Namibia's constitution provides that:

"The State shall actively promote and maintain the welfare of the people by adopting, inter alia, policies aimed at the following:

Management of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future; in particular, the Government shall provide measures against the dumping or recycling of foreign nuclear and toxic waste on Namibian territory." This article recommends that a relatively high level of environmental protection is called for in respect of pollution control and waste management.

Article 144 of the Namibian Constitution deals with environmental law and it states:

"Unless otherwise provided by this Constitution or Act of Parliament, the general rules of public international agreements binding upon Namibia under this Constitution shall form part of the law of Namibia". This article incorporates international law, if it conforms to the Constitution, automatically as "law of the land". These include international agreements, conventions, protocols, covenants, charters, statutes, acts, declarations, concords, exchanges of notes, agreed minutes, memoranda of understanding, and agreements (*Ruppel & Ruppel-Schlichting, 2013*).

### CONCLUSION AND IMPACT

In considering the environmental rights, XBFS (Extreme Bulk Fuel Services) should consider the following in devising an action plan in response to the articles:

- Implement a "zero-harm" policy that would guide decisions.
- Ensure that no management practice or decision result in the degradation of future natural resources.
- Take a decision on how this part of the Constitution will be implemented as part of XBFS (Extreme Bulk Fuel Services)'s Environmental Control System (ECS).

## ENVIRONMENTAL MANAGEMENT ACT (NO. 7 OF 2007)

The Environmental Impact Assessment Regulations (GN 30 in GG 4878 of 6 February 2012) of the Environmental Management Act (No. 7 of 2007) that came into effect in 2012 requires/recommends that an Environmental Impact Assessment Renewal and an Environmental Management Plan Renewal be conducted for the following listed activities in order to obtain an Environmental Clearance Certificate:

### **ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES**

- *The construction of facilities for the refining of gas, oil and petroleum products;*

## **HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE**

- *The storage and handling of dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location.*
- *Construction of filling stations or any other facility for the underground and aboveground storage of dangerous goods, including petrol, diesel, liquid, petroleum, gas or paraffin.*

Cumulative impacts associated with the development must be included as well as public consultation. The Act further requires all major industries to prepare waste management plans and present these to the local authorities for approval.

The Act, Regulations, Procedures and Guidelines have integrated the following sustainability principles. They need to be given due consideration, particularly to achieve proper waste management and pollution control:

### **Cradle to Grave Responsibility**

This principle provides that those who handle or manufacture potentially harmful products must be liable for their safe production, use and disposal and that those who initiate potentially polluting activities must be liable for their commissioning, operation and decommissioning.

### **Precautionary Principle**

If there is any doubt about the effects of a potentially polluting activity, a cautious approach must be adopted.

### **The Polluter Pays Principle**

A person who generates waste or causes pollution must, in theory, pay the full costs of its treatment or of the harm, which it causes to the environment.

### **Public Participation and Access to Information**

Public notices informing the general public of the proposed project and inviting Interested and Affected Parties to provide comments on the proposed project, appeared in the Namibian of 17 and 24 October and New Era of 16 and 23 October 2019.

Various notices were displayed in Ariamsvlei. The closing date for any questions, comments, inputs or information on the proposed project was 12 November 2019. The closing date for any questions, comments, inputs or information on the Background Information Document was 15 November 2019.

In the context of environmental management, citizens must have access to information and the right to participate in decisions making.



## CONCLUSION AND IMPACT

The proposed project site has been assessed in terms of the Environmental Management Act (No. 7 of 2007) and the Regulations (2012). From the assessment, it can be concluded that the activities will have impacts on the prevailing environment but that the negative impacts can be sufficiently mitigated and managed by following the Environmental Management Plan which is part of this document.

## TITLE CONDITIONS AND LEASE AGREEMENT BETWEEN COUNCIL AND THE PROPONENT

The site is registered under Title Deed No 1427/1977. There is no condition registered against this site preventing it from being used for a service station. The proposed site will be leased by the //Kharas Regional Council to the Proponent. According to Council's Letter of 30 July 2019, the Terms and Conditions of the Lease Agreement still must be finalised between the Planning Directorate of Council and the Proponent. Council should include the conditions of the use of the site in the agreement. Conditions on the decommissioning of the site should also be included in the agreement.

## CONCLUSION AND IMPACT

There is no condition registered against this site preventing it from being used for a service station.

Table 1: Other laws, acts, regulations and policies

<b>Laws, Acts, Regulations &amp; Policies consulted:</b>		
<b>Electricity Act (No. 4 of 2007)</b>	In accordance with the Electricity Act (No. 4 of 2007) which provides for the establishment of the Electricity Control Board and provide for its powers and functions; to provide for the requirements and conditions for obtaining licenses for the provision of electricity; to provide for the powers and obligations of licenses; and to provide for incidental matters: the necessary permits and licenses will be obtained.	The Proponent must abide to the Electricity Act.
<b>Pollution Control and Waste Management Bill (guideline only)</b>	The <b>Pollution Control and Waste Management Bill</b> is currently in preparation and is therefore included as a guideline only. Of reference to the mining, Parts 2, 7 and 8 apply. Part 2 provides that	The Proponent must adhere to the Pollution Control and Waste Management Bill.

	<p>no person shall discharge or cause to be discharged, any pollutant to the air from a process except under and in accordance with the provisions of an air pollution license issued under section 23. Part 2 also further provides for procedures to be followed in license application, fees to be paid and required terms of conditions for air pollution licenses. Part 7 states that any person who sells, stores, transports or uses any hazardous substances or products containing hazardous substances shall notify the competent authority, in accordance with subsection (2), of the presence and quantity of those substances. The competent authority for the purposes of section 74 shall maintain a register of substances notified in accordance with that section and the register shall be maintained in accordance with the provisions. Part 8 provides for emergency preparedness by the person handling hazardous substances, through emergency response plans.</p>	
<p><b>Water Resources Management Act</b></p>	<p>The <b>Water Resources Management Act (No. 11 of 2013)</b> stipulates conditions that ensure effluent that is produced to be of a certain standard. There should also be controls on the disposal of sewage, the purification of effluent, measures should be taken to ensure the prevention of surface and groundwater pollution and water resources should be used in a sustainable manner.</p>	<p>The Act must be consulted. Fresh water abstraction and waste-water discharge permits should be obtained when required.</p>
<p><b>Solid and Hazardous Waste Management Regulations: Local</b></p>	<p>Provides for management and handling of industrial, business and domestic waste.</p>	<p>The Proponent must abide to the solid waste management provisions.</p>

<b>Authorities 1992</b>		
<b>Hazardous Substances Ordinance (No. 14 of 1974)</b>	The <b>Ordinance</b> applies to the manufacture, sale, use, disposal and dumping of hazardous substances, as well as their import and export and is administered by the Minister of Health and Social Welfare. Its primary purpose is to prevent hazardous substances from causing injury, ill-health or the death of human beings.	The Proponent must abide to the Ordinance's provisions.
<b>Atmospheric Pollution Prevention Ordinance of Namibia (No. 11 of 1976)</b>	Part 2 of the <b>Ordinance</b> governs the control of noxious or offensive gases. The Ordinance prohibits anyone from carrying on a scheduled process without a registration certificate in a controlled area. The registration certificate must be issued if it can be demonstrated that the best practical means are being adopted for preventing or reducing the escape into the atmosphere of noxious or offensive gases produced by the scheduled process.	The proponent should adhere to the stipulations of the Atmospheric Pollution Prevention Ordinance.
<b>Nature Conservation Ordinance</b>	The <b>Nature Conservation Ordinance (No. 4 of 1975)</b> covers game parks and nature reserves, the hunting and protection of wild animals, problem animals, fish and indigenous plant species. The Ministry of Environment, Forestry and Tourism (MEFT) administer it and provides for the establishment of the Nature Conservation Board.	The proposed project implementation is not located in a demarcated conservation area, national park or unique environments.
<b>Forestry Act</b>	The <b>Forestry Act (No. 12 of 2001)</b> specifies that there be a general protection of the receiving and surrounding environment. The protection of natural vegetation is of great importance, the Forestry Act especially stipulates that no living tree, bush, shrub or indigenous plants within 100m from any river, stream or watercourse,	No removal of protected tree species or removal of mature trees should happen. The Ministry of Environment, Forestry and Tourism should be consulted when required.

	may be removed without the necessary license.	
<b>EU Timber Regulation: FSC (2013)</b>	Forest Stewardship Council (FSC) came into effect in March 2013, with the aim of preventing sales of illegal timber and timber products in the EU market. Now, any actor who places timber or timber products on the market for the first time must ensure that the timber used has been legally harvested and, where applicable, exported legally from the country of harvest.	The Proponent is advised to adhere to the regulation.
<b>Labour Act</b>	The <b>Labour Act (No. 11 of 2007)</b> contains regulations relating to the Health, Safety and Welfare of employees at work. These regulations are prescribed for among others safety relating to hazardous substances, exposure limits and physical hazards. Regulations relating to the Health and Safety of Employees at Work are promulgated in terms of the Labour Act 6 of 1992 (GN156, GG1617 of 1 August 1997).	The proponent and contractor should adhere to the Labour Act.
<b>Communal Land Rights</b>	Communal land is land that belongs to the State and is held in trust for the benefit of the traditional communities living in those areas. Communal land cannot be bought or sold, but one can be given a customary land right or right of leasehold to a part of communal land in accordance with the provisions of the <b>Communal Land Reform Act (No. 5 of 2002)</b> and <b>Communal Land Reform Amendment Act (No. 13 of 2013)</b> . The Communal Land Reform Act provide for the allocation of rights in respect of communal land to establish Communal Land Boards to provide for the powers of Chiefs and Traditional Authorities and boards in relation to communal land and to make provision for incidental	Consent should be obtained from Traditional Authorities, Communal Boards, Chiefs, Kings, Queens etc. if required.

	<p>matters. Consent and access to land for the proposed project should be requested from the relevant traditional authority through the Regional Council and Regional Communal Land Boards.</p>	
<p><b>Traditional Authorities Act (No. 17 of 1995)</b></p>	<p>The <b>Traditional Authorities Act (No. 17 of 1995)</b> provide for the establishment of traditional authorities, the designation and recognition of traditional leaders; to define their functions, duties and powers; and to provide for matters incidental thereto.</p>	<p>Traditional Authorities should be consulted when required.</p>
<p><b>Public and Environmental Health Act</b></p>	<p>The Public and Environmental Health Act (No. 1 of 2015) provides with respect to matters of public health in Namibia. The objects of this Act are to: (a) promote public health and wellbeing; (b) prevent injuries, diseases and disabilities; (c) protect individuals and communities from public health risks; (d) encourage community participation in order to create a healthy environment; and (e) provide for early detection of diseases and public health risks.</p>	<p>The proponent and contractor should adhere to the Public and Environmental Health Act.</p>
<p><b>Coronavirus (Covid-19) Pandemic</b></p>	<p>The current global <b>Coronavirus (Covid-19)</b> pandemic and the associated State of Emergency and health restrictions globally may result in some delays and logistic disruptions. The pandemic might have an impact on obtaining equipment, specialist workforce mobilisation and implementation of the project. The health restrictions may have an impact on campsite set-up, traveling of personal/workers and building of the infrastructure. The proponent, contractor and subcontractors should adhere to all the international, regional and local Covid-19 health restrictions and protocols.</p>	<p>The proponent, contractor and workforce should adhere to the restrictions and regulations.</p>

<p><b>National Heritage Act (No. 27 of 2004)</b></p>	<p>All protected heritage resources discovered need to be reported immediately to the National Heritage Council (NHC) and require a permit from the NHC before it may be relocated. This should be applied from the NHC.</p>	<p>The National Heritage Council should be consulted when required.</p>
<p><b>National Monuments Act of Namibia (No. 28 of 1969) as amended until 1979</b></p>	<p>No person shall destroy, damage, excavate, alter, remove from its original site or export from Namibia:</p> <p>(a) any meteorite or fossil; or</p> <p>(b) any drawing or painting on stone or a petroglyph known or commonly believed to have been executed by any people who inhabited or visited Namibia before the year 1900 AD; or</p> <p>(c) any implement, ornament or structure known or commonly believed to have been used as a mace, used or erected by people referred to in paragraph; or</p> <p>(d) the anthropological or archaeological contents of graves, caves, rock shelters, middens, shell mounds or other sites used by such people; or</p> <p>(e) any other archaeological or palaeontological finds, material or object; except under the authority of and in accordance with a permit issued under this section.</p>	<p>The proposed site for development is not within any known monument site both movable or immovable as specified in the Act, however in such an instance that any material or sites or archeologic importance are identified, it will be the responsibility of the developer to take the required route and notify the relevant commission.</p>
<p><b>Public Health Act (No. 36 of 1919)</b></p>	<p>Under this act, in section 119: “No person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health.”</p>	<p>The proponent will ensure that all legal requirements of the project in relation to protection of the health of their employees and surrounding residents is protected and will be included in the EMP. Relevant protective equipment shall be provided for employees in construction. The development shall follow requirements and specifications in relation to water supply and sewerage handling and solid waste</p>

		management so as not to threaten public health of future residents on this piece of land.
<b>Soil Conservation Act (No. 76 of 1969)</b>	The objectives of this Act are to: Make provisions for the combating and prevention of soil erosion; Promote the conservation, protection and improvement of the soil, vegetation, sources and resources of the Republic;	Only the area required for the operations should be cleared from vegetation to ensure the minimum impact on the soil through clearance for construction.
<b>Air Quality Act (No. 39 of 2004)</b>	The <b>Air Quality Act (No. 39 of 2004)</b> intends to provide for national norms and standards regulating air quality monitoring, management and control by all spheres of government; for specific air quality measures; and for matters incidental thereto.	The proponent and contractor should adhere to the Air Quality Act.
<b>Vision 2030 and National Development Plans</b>	Namibia's overall development ambitions are articulated in the Nation's Vision 2030. At the operational level, five-yearly national development plans (NDP's) are prepared in extensive consultations led by the National Planning Commission in the Office of the President. Currently the Government has so far launched a 4th NDP which pursues three overarching goals for the Namibian nation: high and sustained economic growth; increased income equality; and employment creation.	The proposed project is an important element in employment creation.

## **CONCLUSION AND IMPACT**

It is believed the above administrative, legal and policy requirements which specifically guide and governs development will be followed and complied with in the planning, implementation and operations of the activity.

A flowchart indicating the entire EIA process is shown in the *Figure* below:

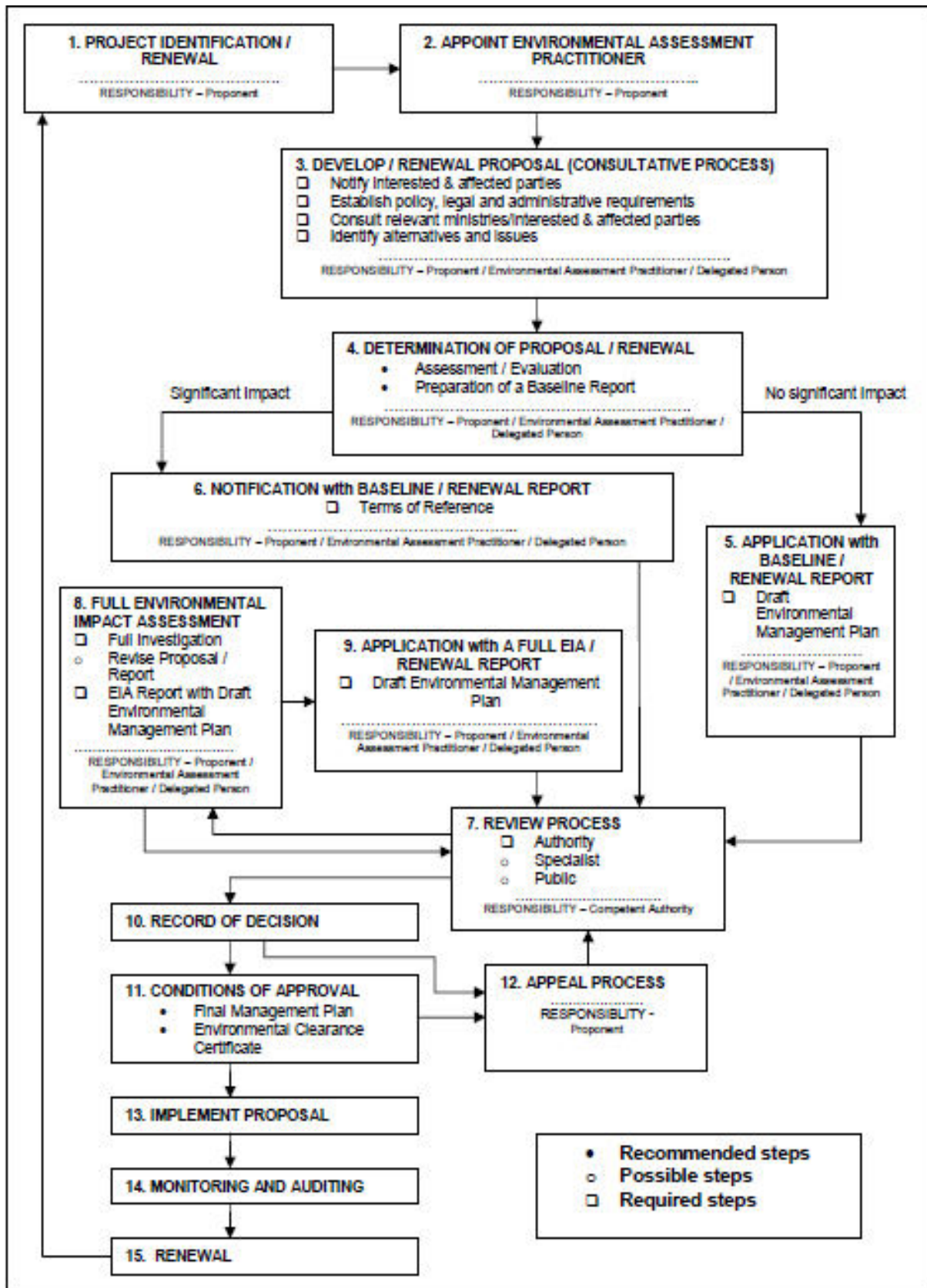


Figure 10: Flowchart of the assessment Process



## 9. AFFECTED NATURAL AND SOCIAL ENVIRONMENT

### 9.1. CLIMATE

No specific climate data is available for the project site in Ariamsvlei however in general the area is characterized with a semi-arid highland savannah climate typified as very hot in summer and moderate dry in winter. The highest temperatures are measured in December with an average daily temperature of maximum 31°C and a minimum of 17°C. The coldest temperatures, conversely, are measured in July with an average daily maximum of 20°C and minimum 6°C (*Weather - the Climate in Namibia, 1998 – 2012*). The area therefore has low frost potential.

Rainfall in the form of thunderstorms is experienced in the area during the summer months between October and April. The annual average rainfall for Ariamsvlei and surroundings is 0mm to 90mm (*Weather - the Climate in Namibia, 1998 – 2012*). Rainfall in the area is typically sporadic and unpredictable.

The prevailing wind direction is expected to prevent the spread of any nuisance namely noise and smell. The predominant wind in the region is easterly with westerly winds from September to December (*Weather - the Climate in Namibia, 1998 – 2012*). Extreme winds are experienced in the months of August and September and thus significant wind erosion on disturbed areas is visible.

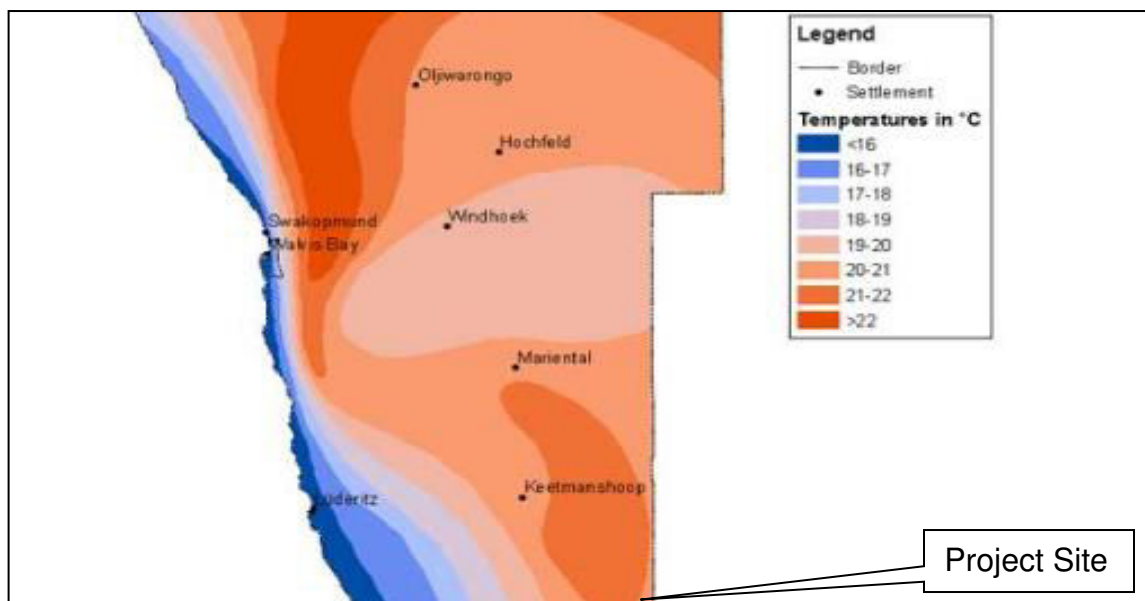


Figure 11: Average temperatures

Strong winds during certain times of the year may aggravate dust impacts during the construction phase. The fuel storage and handling facilities as well as the supporting structures to be constructed must meet all prescribed requirements and therefore should not pose any environmental threat due to climatic conditions.





Figure 13: Characteristics of the site

#### **CONCLUSION AND IMPACT**

The development will not impact on the geology, soils and geohydrology of the area. The surface drainage canals will be kept open in order that water can flow through.

### **9.3. SURFACE AND GROUNDWATER POLLUTION**

Prevention of potential leakages that could lead to surface water and groundwater pollution is crucial. Proper containment mechanisms must be installed to contain any release that might take place from spillages during loading/offloading of vehicles. These mechanisms include the following:

- All loading and offloading should be done on surfaces with adequate spillage control.
- Spillage control procedures must be in place according to SANS 10089 (1) standards.
- These include bunding around the loading areas with appropriate slopes (1:100), as well as the construction of bund walls and floors that are liquid tight and that are not prone to deterioration under the effects of any petroleum product.
- The bunded areas must be sealed using industry approved methods (SANS).
- The procedures followed to prevent environmental damage during service and maintenance, and compliance with these procedures, including the correct use of sumps and regular reporting of spillages, must be audited and corrections made where necessary.
- The condition of the fuel reticulation system, both existing and new, will have to be checked regularly and repaired if necessary, to prevent leakages.
- Proper training of operators must be conducted on a regular basis.

- Any spillage of more than 200l must be reported to the relevant authorities and remediation implemented.
- Spill clean-up equipment must be available on site.

## CONCLUSION AND IMPACT

The project will not have an impact on the surface and groundwater if mitigated.

## 9.4. BIODIVERSITY AND VEGETATION

The area in general is classified as Nama Karoo. See *map* below:

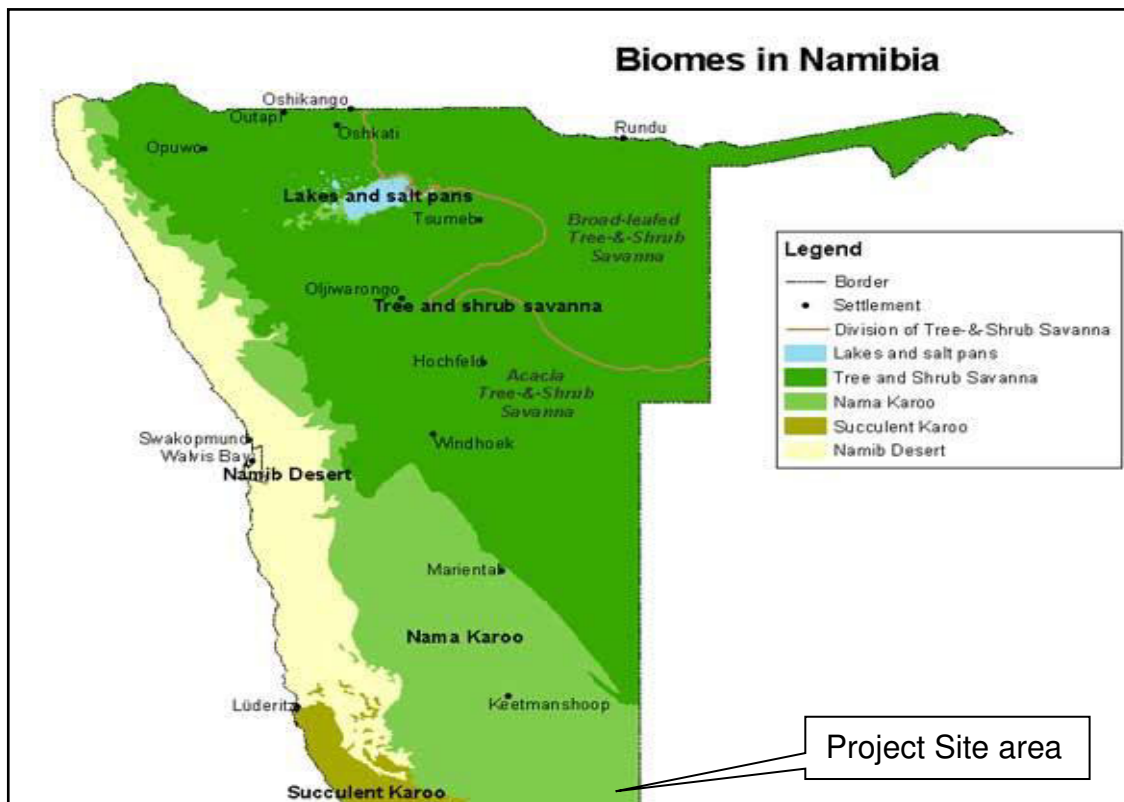


Figure 14: Biomes

Ariamsvlei is located within a natural dry farming area. The project site is not yet fenced in. Limited vegetation and grass are present on the site. No trees are located on the site. See *Photo* of the project site below:



*Figure 15: Small bush on the Project Site*

The natural characteristics of the project site namely the vegetation clearance and the destruction of habitats is expected to further on have a low impact on the environment before the mitigation measures are taken and after the mitigation measures are taken, the impact will be very low.

#### **CONCLUSION AND IMPACT**

The development will have a low impact on vegetation, shrubs and trees.

### **9.5. SOCIAL-ECONOMIC COMPONENT**

Ariamsvlei will benefit from employment opportunities, skills and technology transfer during construction and operation of the service station. The spending power of locals is likely to increase because of employment during the construction and operational phase. The proposed service station will not have a negative impact on the social environment as it will not be close to any neighbouring activities. It will thus have a positive impact on the social environment since a service station will be provided. The socio-economic characteristics of the area are continuously changing as more economic activities are established.

## CONCLUSION AND IMPACT

The activities will have a positive impact on the community since employment will be created.

## 9.6. CULTURAL HERITAGE

The proposed project site is not known to have any historical significance prior to or after Independence in 1990. The specific area does not have any National Monuments and the specific site has no record of any cultural or historical importance or on-site resemblance of any nature. No graveyard or related article was found in the area. However, the Namibian National Heritage Act (No. 27 of 2004) provides for the protection and conservation of places and objects of heritage significance and the registration of such places and objects and to provide for incidental matters.

## CONCLUSION AND IMPACT

No heritage resources or graveyards were observed on the site and in the area.

## 9.7. SENSE OF PLACE

It is the intention of the proponent to construct and operate a service station in Ariamsvlei. The proposed service station will not have a large/negative impact on the sense of place in the area. An untidy or badly managed site can detract from the ecological well-being and individuality of the area. Unnecessary disturbance to the surroundings could be caused by poorly planned or poorly managed operational activities. The project site should be kept neat and clean where possible. Vegetation should not be removed or harmed if not necessary since it covers topsoil which prevents erosion. Noise and dust should be limited in the construction phase because of the neighbouring activities and tourists driving past the site.



Figure 16: Buildings next to the Project Site

## CONCLUSION AND IMPACT

The impact on the sense of place will be low.

## 9.8. HEALTH

The safety, security and health of the labour force, employees and neighbours are of great importance, workers should be orientated with the maintenance of safety and health procedures and they should be provided with PPE (Personal Protective Equipment). A health and safety officer should be employed to manage, coordinate and monitor risk and hazard and report all health and safety related issues in the workplace. The introduction of external workers into the area is sometimes accompanied with criminal activities posing security risks for neighbours. However, the proponent will take certain measures to prevent any activity of this sort. The welfare and quality of life of the neighbours and workforce needs to be considered for the project to be a success on its environmental performance. Conversely, the process should not affect the overall health of persons related to the project including the neighbours.

## CONCLUSION AND IMPACT

The activity will have a low impact on the health of the affected community.

## 10. IMPACT ASSESSMENT AND EVALUATION

The Environmental Impact Assessment Renewal sets out potential positive and negative environmental impacts associated with the project site. The following assessment methodology will be used to examine each impact identified, see *Table* below:

*Table 2: Impact Evaluation Criterion (DEAT 2006)*

Criteria	Rating (Severity)	
Impact Type	+	Positive
	O	No Impact
	-	Negative
Significance of impact being either	L	Low (Little or no impact)
	M	Medium (Manageable impacts)
	H	High (Adverse impact)

<b>Probability:</b>	<b>Duration:</b>
5 – Definite/don't know	5 - Permanent
4 – Highly probable	4 – Long-term (impact ceases)
3 – Medium probability	3 – Medium term (5 – 15 years)
2 – Low probability	2 – Short-term (0 – 5 years)
1 – Improbable	1 - Immediate
0 - None	
<b>Scale:</b>	<b>Magnitude:</b>
5 – International	10 – Very high/don't know
4 – National	8 - High
3 – Regional	6 - Moderate
2 – Local	4 - Low
1 – Site only	2 - Minor
	0 - None

The impacts on the receiving environment are discussed in the paragraphs below:

## 10.1. IMPACTS DURING THE OPERATIONAL PHASE

### 10.1.1. ECOLOGICAL IMPACTS

Staff and visitors should only make use of walkways and existing roads to minimise the impact on vegetation. Minimise the area of disturbance by restricting movement to the designated working areas during maintenance and drives.

#### Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Ecology Impacts	-	1	2	4	2	M	L

### 10.1.2. DUST POLLUTION AND AIR QUALITY

Vehicles transporting goods and staff will contribute to the release of hydrocarbon vapours, carbon monoxide and sulphur oxides into the air. Possible release of sewer



odour, due to sewer system failure of maintenance might also occur. All maintenance of bulk services and infrastructure at the project site has to be designed to enable environmental protection.

#### Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Dust & Air Quality	-	2	2	4	4	M	L

### 10.1.3. CONTAMINATION OF GROUNDWATER

Spillages might also occur during maintenance of the sewer system. This could have impacts on groundwater especially in cases of large sewer spills. Proper containment should be used in cases of sewerage system maintenance to avoid any possible leakages. Oil and chemical spillages may have a health impact on groundwater users. Potential impact on the natural environment from possible polluted groundwater also exists.

#### Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Groundwater contamination	-	2	2	4	2	M	L

### 10.1.4. GENERATION OF WASTE

Household waste from the activities at the site and from the staff working at the site will be generated. This waste will be collected, sorted to be recycled and stored in on site for transportation and disposal at an approved landfill site.

#### Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Waste Generation	-	1	2	2	2	M	L

### 10.1.5. FAILURE IN RETICULATION PIPELINES

There may be a potential release of sewage, stormwater or water into the environment due to pipeline/system failure. As a result, the spillage could be released into the environment and could potentially be health hazard to surface and groundwater. Proper reticulation pipelines and drainage systems should be installed. Regular bulk services infrastructure and system inspection should be conducted.

## Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Failure of Reticulation Pipeline	-	1	1	4	2	M	L

### 10.1.6. FIRES AND EXPLOSIONS

There should be sufficient water available for firefighting purposes. Ensure that all firefighting devices are in good working order and are serviced. All personnel have to be trained about responsible fire protection measures and good housekeeping such as the removal of flammable materials on site. Regular inspections should be carried out to inspect and test firefighting equipment by the contractor.

## Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Fires and Explosions	-	2	1	4	2	M	L

### 10.1.7. HEALTH, SAFETY AND SECURITY

The safety, security and health of the labour force, employees and neighbours are of great importance, workers should be orientated with the maintenance of safety and health procedures and they should be provided with PPE (Personal Protective Equipment). Workers should be warned not to approach or chase any wild animals occurring on the site. No open flames, smoking or any potential sources of ignition should be allowed at the project location. Signs such as 'NO SMOKING' must be prominently displayed in parts where inflammable materials are stored on the premises.

## Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Safety & Security	-	1	2	4	2	M	L

## 10.2.CUMULATIVE IMPACTS

These are impacts on the environment, which results from the incremental impacts of the construction and operation of the development when added to other past, present, and reasonably foreseeable future actions regardless of which person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. In relation to an activity, it means the impact of

an activity that in it may not become significant when added to the existing and potential impacts resulting from similar or diverse activities or undertakings in the area.

Possible cumulative impacts associated with the proposed construction include: sewer damages/maintenance, uncontrolled traffic and destruction of the vegetation or the environment. These impacts could become significant especially if it is not properly supervised and controlled. This could collectively impact on the environmental conditions in the area. Cumulative impacts could occur in both the operational and the construction phase.

### Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Cumulative Impacts	-	2	3	4	2	M	L

## 11. CONCLUSION

In line with the Environmental Management Act (No 7 of 2007), *Green Earth Environmental Consultants* have been appointed to conduct an Environmental Impact Assessment Renewal for the proposed construction of facilities and storage and handling of oil and petroleum products on Portion 1 of the Remainder of Portion 36 of the Farm Ukumas No. 69, located in the Village of Ariamsvlei, //Kharas District.

Negative impacts that can be associated with the development are most likely to include: production of solid waste, dust emissions, atmospheric emissions, noise pollution, movement of soils, increased wastewater generation, the disruption of groundwater from the foundation or other structures, can result in an increase in traffic on the nearby roads and there can be an impact on the occupational health and safety of workers. However, this project is believed to be an asset to this area. Facilities and employment will be made available for which there is a need.

After assessing all information available on this project, *Green Earth Environmental Consultants* believe that the development is required.

## 12. RECOMMENDATION

It is therefore recommended that the Ministry of Environment, Forestry and Tourism through the Environmental Commissioner support and approve the Environmental Clearance Renewal for the proposed construction of facilities and storage and handling of oil and petroleum products on Portion 1 of the Remainder of Portion 36 of the Farm Ukumas No. 69, located in the Village of Ariamsvlei, //Kharas District and for the following listed activities:

**ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES**

- *The construction of facilities for the refining of gas, oil and petroleum products;*

**HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE**

- *The storage and handling of dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location.*
- *Construction of filling stations or any other facility for the underground and aboveground storage of dangerous goods, including petrol, diesel, liquid, petroleum, gas or paraffin.*

## LIST OF REFERENCES

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Water Resource Management Act, 2004. *Office of the Prime Minister*. Windhoek. Namibia, pp. 6 – 67.

## APPENDIX A: CURRICULUM VITAE OF CHARLIE DU TOIT

1. **Position:** Environmental Practitioner
2. **Name/Surname:** Charl du Toit
3. **Date of Birth:** 29 October 1960
4. **Nationality:** Namibian
  
5. **Education:**

Name of Institution	University of Stellenbosch, South Africa		
Degree/Qualification	Hons B (B + A) in Business Administration and Management		
Date Obtained	1985-1987		
Name of Institution	University of Stellenbosch, South Africa		
Degree/Qualification	BSc Agric Hons (Chemistry, Agronomy and Soil Science)		
Date Obtained	1979-1982		
Name of Institution	Boland Agricultural High School, Paarl, South Africa		
Degree/Qualification	Grade 12		
Date Obtained	1974-1978		
  
6. **Membership of Professional Association:** EAPAN Member (Membership Number: 112)
  
7. **Languages:**

	<u>Speaking</u>	<u>Reading</u>	<u>Writing</u>
English	Good	Good	Good
Afrikaans	Good	Good	Good
  
8. **Employment Record:**

<u>From</u>	<u>To</u>	<u>Employer</u>	<u>Position(s) held</u>
2009	Present	Green Earth Environmental Consultants	Environmental Practitioner
2005	2008	Elmarie Du Toit Town Planning Consultants	Manager
2003	2005	Pupkewitz Megabuild	General Manager
1995	2003	Agra Cooperative Limited	Manager Trade
1989	1995		Chief Agricultural Consultant

		Namibia	
		Development	Agricultural
1985	1988	Corporation	Researcher
		Ministry of	
		Agriculture	

**Certification:**

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.



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**Charl du Toit**

## APPENDIX B: CURRICULUM VITAE OF CARIEN VAN DER WALT

1. **Position:** Environmental Consultant
2. **Name/Surname:** Carien van der Walt
3. **Date of Birth:** 6 August 1990
4. **Nationality:** Namibian

5. **Education:**

Institution	Degree/Diploma	Years
University of Stellenbosch	B.A. (Degree) Environment and Development	2009 to 2011
University of South Africa	B.A. (Honours) Environmental Management	2012 to 2013

6. **Membership of Professional Associations:**

EAPAN Member (Membership Number: 113)

7. **Languages:**

Language	Speaking	Reading	Writing
English	Good	Good	Good
Afrikaans	Good	Good	Good

8. **Employment Record:**

From	To	Employer	Positions Held
07/2013	Present	Green Earth Environmental Consultants	Environmental Consultant
06/2012	03/2013	Enviro Management Consultants Namibia	Environmental Consultant
12/2011	05/2012	Green Earth Environmental Consultants	Environmental Consultant

9. **Detailed Tasks Assigned:**

Conducting the Environmental Impact Assessment, Environmental Management Plan, Public Participation, Environmental Compliance and Environmental Control Officer

**Certification:**

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engage.

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Carien van der Walt



## APPENDIX C: ENVIRONMENTAL MANAGEMENT PLAN