



OMURAMBA ROADHOUSE SERVICE STATION

Construction and Operation of a New Truckport Integrated with a Service Station at the Corner of B1 Highway and District Road, D2404, Otjiwarongo District, Otjozondjupa Region

Scoping EIA Report

Prepared for:
Omuramba Roadhouse Service Station

APP-002446



PROJECT TITLE

Construction and Operation of a New Truckport Integrated with a Service Station at the Corner of B1 Highway & D2404, Otjiwarongo District, Otjozondjupa Region

Scoping EIA Report

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EXECUTIVE SUMMARY

The B1 highway between the towns of Okahandja and Otjiwarongo is 180 km and therefore one of the longest highways in Namibia. There is no single service station and or public restroom facilities along the B1, between the two destinations, and, motorists with the need to use a restroom have to do so behind the bushes in the road reserve.

Omuramba Roadhouse Service Station (Omuramba) is planning to develop a truckport integrated with a modern service station at the intersection of B1 and the district road, D2404. This location is on Farm Wewelsburg, exactly halfway between the two destinations. The truckport and service station will serve as a safe place where truck operators and the general public using B1 can stop and refresh with the convenience of decent sanitation at their disposal.

A number of farms around the project site are producing charcoal, which is exported by road to South Africa. Such charcoal is often loaded onto interlink trucks from farm gates with such trucks travelling on gravel dirt roads that are not designed for such purpose. The truckport envisaged by Omuramba will double up as a charcoal loading facility where charcoal producers within a certain radius of the truckport can bring their charcoal for storage and loading onto interlink road trucks.

The truckport will be developed on 5 ha of land which Omuramba leases from the landlord of Farm Wewelsburg. The construction and operation of the facility will be associated with negative impacts to the receiving environment, however, if the mitigation measures as proposed in the EMP are complied with, such impacts could be minimised, reduced if not completely eliminated. The project derives its name from the Omatako (Omuramba) ephemeral river which runs northwest of the site. Measures have been proposed in the EMP to avoid potential contamination of this natural water stream.

The EMP should be used as an on-site reference document during the construction and operational phases of the truckport. In the event of the facility having to close down due to unforeseen circumstances, e.g. sabotage or economic meltdown, provision has been made in the EMP to deal with impacts induced by decommissioning activities.

The economic benefits which will be derived from the project, both at the district, and regional levels are much more than the construction and operational induced negative impacts. It is expected of Omuramba to monitor the environmental parameters proposed in the EMP on a regular basis, so that the truckport and related facilities are managed in such a way that the business becomes commercially profitable, technically sound, socially acceptable and environmentally sustainable.

It is recommended that an ECC be granted to Omuramba Roadhouse Service Station for its proposed project.

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LIST OF ACRONYMS

Acronym	Expansion
BAT	Best Available Technology
BID	Background Information Document
COVID-19	'CO' stands for corona, 'VI' for virus, and 'D' for disease. Formerly, this disease was referred to as '2019 novel coronavirus' or '2019-nCoV.'
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
FRL	Fuel Retail Licence
GRN	Government of the Republic of Namibia
ha	hectare
HPP	The Harambee Prosperity Plan
IAPs	Interested and Affected Parties
ISO	International Organization for Standardization
IWRM	Integrated Water Resource Management
LOI	Letter of Intent issued by MME to a promoter prior to carrying out an EIA for a filing station
m ²	square meters (10 000 m ² = 1 ha)
MAWLR	Ministry of Agriculture, Water & Land Reform
MEFT	Ministry of Environment, Forestry and Tourism
MME	Ministry of Mines and Energy
Nampower	Namibia Power Corporation Ltd
Namwater	Namibia Water Corporation Ltd
NHC	National Heritage Council
NO ₂	Nitrogen Dioxide
NSI	Namibia Standards Institute
OOWR	Okavango-Omatako Water Resource
PM	Particulate Matter
PPE	Personal Protective Equipment
PPP	Public Participation Process
SABS	South African Bureau of Standards
SHE	Safety, Health & Environment
SME	Small and Medium Enterprises

DEFINITION OF TERMS

Term	Expansion
Activity	In terms of the Environmental Management Act, an activity means a physical work that a proponent proposes to construct, operate, modify, decommission or abandon or an activity that a proponent proposes to undertake.
Anthropogenic Impact:	Anthropogenic Impact: Human impacts on the environment which include changes to the biophysical environments, ecosystems, biodiversity and natural resources caused directly or indirectly by human activities including global warming and environmental degradation.
Assessment:	An assessment means the process of identifying, predicting and evaluating: <ul style="list-style-type: none"> the significant effects of activities on the environment; the risks and consequences of activities and their alternatives and options for mitigation with a view to minimise the effects of activities on the environment and to maximise the benefits and to promote compliance with the principles set out in section 3 of EMA;
Environmental Commissioner	Means the Environmental Commissioner appointed in terms of section 16 of the Environmental Management Act, Act No. 7 of 2007.
Listed activity	In terms of EMA, a listed activity means an activity listed in terms of section 27(1) or 29 of the EMA for which an Environmental Clearance Certificate is mandatory.
Environmental Clearance Certificate	Means an Environmental Clearance Certificate issued in terms of section 34 or 37 of the Environmental Management Act, authorising a listed activity to be undertaken.
Biodiversity:	The variability among living organisms from all sources including terrestrial marine and other aquatic ecosystem and ecological complexes which they are part of
Authorisation	Means an approval, licence, permit or other authorisation by a competent authority in respect of a listed activity.
Biological diversity	Means the variability among living organisms from all sources, including amongst others, terrestrial and aquatic ecosystems and the ecological complexes of which they are part, and this includes diversity within species, between species and of ecosystems;
Competent Authority	A competent authority” means - <ul style="list-style-type: none"> an organ of state which is responsible, under any law, for granting or refusing an authorisation; or the competent authority identified in terms of section 30 of the Environmental Management Act ;
Environment	The ‘environment’ is defined in EMA ‘ as the complex of nature and anthropogenic factors and elements that are mutually interrelated and affect the ecological equilibrium and the quality of life, including: <ul style="list-style-type: none"> The natural environment that is the land, water and air, all organic and inorganic material and all living organisms, and The human environment that is the landscape and natural, cultural, historical, aesthetic, economic and social heritage and values.
Environmental Impact:	Environmental impact is any change to the environment whether adverse or beneficial, wholly or partially, resulting from an organization activities, products or services
Environmental Management Plan (EMP):	A working document on environmental and socioeconomic mitigation measures which must be implemented by several responsible parties during all phases of a proposed development.
Hydrocarbon	Any class of organic chemical compounds composed only of the elements of carbon (C) and hydrogen (H) which are the principal constituents of petroleum and natural gas. The carbon atoms join together to form the framework of the compound, and the hydrogen atoms attach to them in many different configurations. They serve as fuels and lubricants as well as raw materials for the production of plastics, fibres, rubbers, solvents, explosives, and industrial chemicals.
Sensitive Area	A sensitive area or environment is described as an area or environment where a unique ecosystem, habitat for plant and animal life, wetlands or conservation activity exists or where there is high potential for ecotourism
Sustainable Development	In the context of EMA, sustainable development means human use of a natural resource, whether renewable or non-renewable, or the environment in such a manner that it may equitably yield the greatest benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations.

1.0 BACKGROUND INFORMATION

1.1 Introduction

Omuramba Roadhouse Service Station CC (henceforth, **Omuramba**), a 100% owned and managed Namibia company, is planning to develop and to operate a truckport integrated with a service station. In terms of the EMA (Environmental Management Act) (Act No. 7 of 2007), the development proposed by Omuramba is a list of activities, which may not be undertaken without an Environmental Clearance Certificate (ECC) having been granted by the Environmental Commissioner (EC) in the Ministry of Environment, Forestry and Tourism (MEFT).

The specific activity contemplated by Omuramba is listed under section 9.5 of the Annexure of listed activities, Government Gazette No. 4878, dated as 7 February 2012.

To this end, Omuramba has appointed Ekwaio Consulting (**Ekwaio**) to handle its ECC authorisation process with MEFT.

1.2 Terms of References

The terms for this EIA as agreed between the promoter, Omuramba and Ekwaio, the EIA Practitioner were:

- To provide a detailed description of the baseline information and to list the national environmental legislative and regulatory frameworks which have bearings on the envisaged development.
- To provide a description, evaluation and analysis of the potential environmental impacts which the proposed development will bring to bear on the bio-physical and socio-economic conditions.
- To conduct a Public Participation Process (PPP) during which the views, concerns, inputs and attitudes of the community, particularly the neighbouring residents, if any, are assessed and evaluated towards the proposed development.
- To prepare an Environmental Management Plan (EMP), in which management measures are proposed that should be taken to eliminate and to minimize adverse impacts on the environment during the construction and operational phases of the development.

1.2 Scope of the EIA

A Background Information Document (BID) on the development envisaged by Omuramba was prepared and submitted to the office of the EC which allocated the application, this number **APP-002446**.

Given the scope and footprint of the development, the EC has requested the scope of the EIA to cover the following aspects:

- EIA scoping
- EMP, and
- Public consultation process

This report represents as far as possible the outcome of the EIA scoping conducted with respect to the proposed development.

1.3 Approach

In conducting this EIA, Ekwaio has adopted an investigative approach which took into account the existing environment and the possible impacts which the proposed development will have on the biophysical and socio-economic environments. The proposed site was assessed by way of:

- physical observations;
- visual surveying;
- taking of photographic images;
- discussions with the promotor (Omuramba); and
- the residents in the immediate vicinity of the proposed site.

A description of the property (land) and its location were critically assessed and considered for suitability to the proposed development. All national legislations, policies and guidelines that are applicable to the planned activity are also listed and highlighted. Mechanism for monitoring and evaluation of compliance were proposed and are included in the EMP. Finally, a Public Participation Process (PPP) as required by the Environmental Management Act was conducted within the restrictions imposed by GRN to deal with the Covid-19 pandemic

1.4 Moratorium by MME

Soon after the EIA for the truckport was advertised in the media, MME announced a further extension to the moratorium on applications for Fuel Retail Licenses (FRL). Amongst the new conditions announced by MME, were that a promoter aspiring to develop of service station was required, to first conduct a site viability study, and to submit a bankable business plan to MME for review and assessment.

Only a promotor who has been granted a letter of intent (LOI) by the Minister of MME may proceed to conduct an EIA for the site and to have designs made for the facility. The business plan of Omuramba was submitted to MME in August 2021 and the LOI was only granted six months later, on 28 February 2022. (**Annexure: A**).

1.5 Activities Associated with the Development

There are two phases involved in this development – construction and operation. Each phase will induce several environmental impacts. Decommissioning has been considered only in the event of the development ceasing as a result of unforeseen circumstances such as sabotage or economic factors.

TABLE 1: ACTIVITIES ASSOCIATED WITH THE PROJECT

Construction	Operation	Decommissioning
<ul style="list-style-type: none"> • Pre-construction activities <ul style="list-style-type: none"> ○ site fencing ○ site camp establishment • Construction activities: <ul style="list-style-type: none"> ○ Land clearing ○ Excavations for foundations; ○ Delivery to site of construction material; ○ Installation of sewage and water reticulations; ○ Building of internal routes; ○ Installation of fuel tanks, ○ Installation of oil/water separators & fat traps; • Post construction activities: <ul style="list-style-type: none"> ○ Removal of building rubbles ○ Removal of site camp 	<ul style="list-style-type: none"> • Day-to-day activities: <ul style="list-style-type: none"> ○ Fuel delivery & offloading ○ Fuel dispensing ○ Yard cleaning ○ Cleaning of ablution facilities • Maintenance of infrastructure • Charcoal handling • Waste generation • Movements of people including those hitch-hiking • Transport of waste from site • Possible poaching 	<ul style="list-style-type: none"> • Retrenchment of personnel. • Dismantling of infrastructure including fuel tanks. • Demolishing of building structures. • Removal of rubbles and scrap metals from site • Rehabilitation of the site.

2.0 DESCRIPTION OF THE ACTIVITY

2.1 Site Context

The development proposed by Omuramba lies at the intersection of B1 highway and D2404 which forms part of Farm Wewelsburg in the Otjiwarongo district, Otjozondjupa Region (**Figures 1 & 2**). In essence, B1 cuts and runs the entire length of Farm Wewelsburg, a distance of approximately 11 km (**Figure 2**). D2404 is to the north end of the farm. More details of the land are provided in **Table 1** below. The proprietor of Farm Wewelsburg and the sole member of Omuramba Roadhouse Service Station CC are family relatives.

TABLE 2: SITE LOCATION

Land	Farm Wewelsburg No. 191
Site Area	50 ha is leased by Omuramba but the truckport and filling station will be constructed on 5 ha of the 50 ha leased land.
Current Zoning	Agricultural with core activity being cattle farming.
Future Zoning	The 5 ha will be zoned for business.
Current usage	Grazing
GPS Coordinates	Latitude: -25.63417 & Longitude: 16.820882
Expected Opening	During the third quarter of 2022
Access	Access will be developed from D2404.
Available Services	Electricity is available, water is also available form a borehole.
Location	Intersection B1 & D2404, Otjozondjupa Region

Omuramba is leasing 50 ha of Farm Wewelsburg as per the lease agreement annexed hereto (**Annexure: C**). The footprint of the envisaged development will be confined to 5 ha of the 50 ha leased land.

When approaching the intersection from Otjiwarongo, the development will be built on the left hand side of B1 and to the immediate north of D2404. Accessed to the development will be from D2404. The 5 ha of land will be fenced in.

Taking the post office in each town as a reference point, the distance from the project site to Otjiwarongo is 84 km and 93 km to Okahandja (**Figure 4**). Omuramba is planning to carry out the development in phases.

2.2 The Development

The plan of Omuramba is to carry out the development in a phased in approach. The first phase will comprise of earthworks or civil works and the construction of the truckport with ample parking and ablution facility. This phase will be followed by the second phase during which the filling station with a convenience shop and a charcoal handling facility will be constructed.

In **Figure 3**, a site plan which indicates the layout of the proposed development has been provided. From D2404, access to the three sections of the facility (the truckport, filling station and express shop as well as to the charcoal loading section) is provided via a roundabout. Out of the 5 ha, about 2 ha will be reserved for the truckport, 1.3 h for charcoal handling and the balance for the filling station and express shop. Total Namibia has expressed interest to partner with Omuramba for the development (**Annexure: B**).

In general the envisaged filling station will consist of the following:

- Underground tanks/tank farm (for unleaded petrol and 50ppm diesel)
- Pump island (above-ground fuel pumps and hose dispensers)
- Associate pump and tank infrastructure (e.g. delivery pipes, fillers, suction pump, etc.)

- An express shop
- Ablution facility

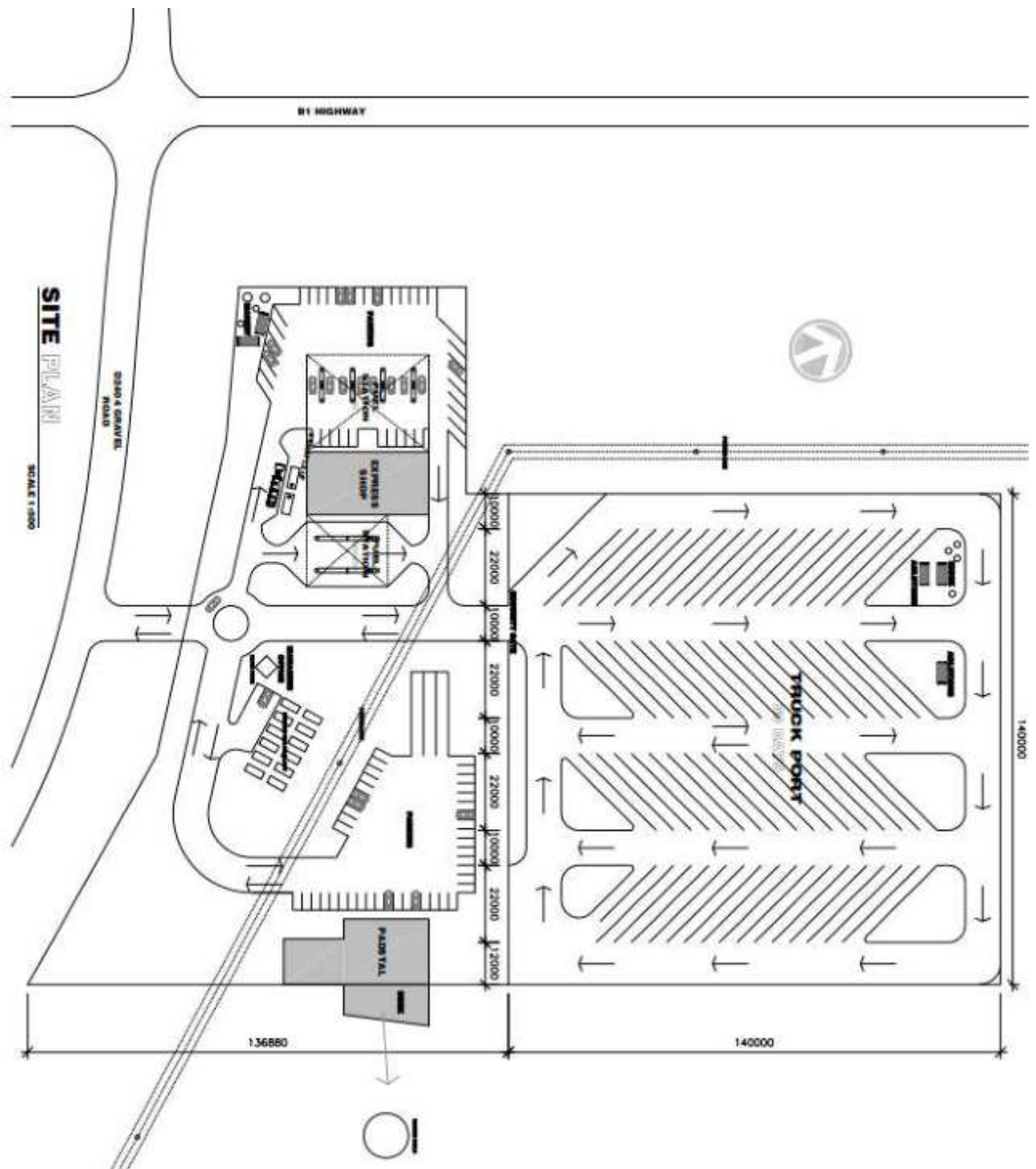


Figure 3: Layout of the Proposed Development

2.3 The Tank Farm

The tank farm will comprise of 4 (perhaps 5) 23 000 litres underground tanks and associated infrastructures. Two tanks will be installed for 50ppm diesel and two for 95 unleaded petrol. Based on this installation of four tanks, approximately 92 m³ of fuel can be stored on site for sale. The tank farm should be located at least 3 m clear of any surface structures. The following dimensions would be applicable for tank installation:

- Length: 1 m in excess of overall length of tank
- Breadth: 1 m in excess of tank diameter

Depth: the top of the tank must be a minimum depth of 1 250 mm below the finished ground level.

2.4 Fuel Dispersion and Forecourt Area

In general, the underground tanks would be refuelled through fillers located a few meters from the tanks. Fuel is then be pumped from the underground tanks to the above-ground pump island (fuel pumps) via delivery pipes by using either suction pumps or submersible turbine pumps.

Concrete islands (with crash barriers) would be provided on which the fuel pumps (with hose dispensers) and air supply are constructed.

In order to prevent soil and water pollution as a result of accidental spills, the forecourt has to be located on top of a concrete containment slab. A stormwater channel with a catch pit should be installed along the boundary of the forecourt to capture any polluted runoff water. A canopy should also be installed to divert clean rainwater away from the forecourt area.

2.5 Fuel Leak Monitoring Wells

Fuel leak monitoring wells are normally installed at the filling station to monitor possible tank leakage and to act as future observation wells.

Usually, high density polyethylene slotted/perforated pipes (160 mm) wrapped in a porous geotextile or ABS single-walled wedge-slot tabular screens are installed on the centre line of the tanks. The bottom ends are plugged and the top ends finished off with a suitable plumber plug. The wells are taken down to 500 mm – 1 m below the floor of the excavation depending on the nature of the soils.

2.6 Backfilling

Backfill material is placed in 130 mm layers up to the top of the tank and is well compacted at the optimum moisture content (maximum 90% Mod AASHTO). If necessary the tanks should be half-filled with water to prevent floatation caused by the compaction of the backfill material. Once the excavations around the tanks have been backfilled, the manhole, concrete slab (saddle) and pipe work is installed. Finally, the tank farm is backfilled with wet soilcrete (8:1 river sand: cement mix up to the pavement formation level.



Figure 4: Road Distance from the Project Site to Okahandja and Otjiwarongo Nampost



Figure 5: Looking South in the Direction of Okahandja



Figure 6: Looking North in the Direction of Otjiwarongo



Figure 7: Looking East of B1 & D2404 Intersection



Figure 8: Looking West of B1 & D2402 Intersection

2.6 Filling Station Construction Standards

Since Namibia is still in the process of developing its own filling station construction standards, the underground tanks and related infrastructure will be installed in accordance with the various Health, Safety and Environment Policies of South Africa and standard specifications of the appointed oil company. In this regard all work at the filling station will be done in accordance to the following SANS standards:

SANS 10089 PART 3 (2010): *The Petroleum Industry Part 3: The installation, modification and decommissioning of underground storage tanks, pump/dispensers and pipework at service stations and consumer installations.*

SANS 10089 Part 2 (2007): *The Petroleum Industry Part 2: Electrical and other installations in the distribution and marketing sector.*

SANS 1535 (2207): *Glass-reinforced polyester-coated steel tanks for the underground storage for hydrocarbons and oxygenated solvents and intended for burial horizontally.*



Figure 9: Powerline around the Site



Figure 10: Omuramba Drainage at the Site



Figure 11: Accessories at the Site



Figure 12: Typical Vegetation around the Site

3.0 EXISTING INFRASTRUCTURE

3.1 Access to the Site

From B1, access to the truckport will be provided from D2404 as seen in **Figure 7**, a district road starting from C30 in the vicinity of Osire up to D2414 in the vicinity of Mount Otjo.

3.2 Water Supply

Water for the truckport and filling station will be sourced from a borehole located about 800 m south of the development site. The yield from the borehole is about 18 m³ per hour and therefore adequate to meet the water demand of the truckport. The quality of the water is also good such that purification and or treatment before consumption is not required. From the borehole the water is pumped into two water tanks installed on a steel stand of about 10 m high. At the time of conducting the EIA civil work was underway and the stand was already erected (**Figures 11 & 14**).

3.3 Electricity Supply

A 33kV powerline is running across the property (**Fig.9**) and this where the development will source its electricity supply from. The promoter has also the option to run the development on solar power through the installation of a matched photovoltaic system. This will reduce the energy bill of the service station considerably. A wise idea would also be to procure electrical appliances such as geysers that could be operated on solar hybrid system.

3.4 Sewage System

A gravity sewerage system will be constructed to serve the property. Sewage from the truckport section and filling station section service ablution facilities, will flow under gravity to a collective double chamber screened septic tank. Oil filters and fat traps will be installed to ensure that oil and fats do not enter the sewage system. The volume of the fat trap system is expected to be small.

Once the sewage collects in the septic tank, heavy solids would normally settle to the bottom where bacteria breaks them down to form a sludge layer. The liquid portion of the wastewater then moves through the middle or clear zone of the tank and flows out of the outlet pipe into a drainfield.

3.5 Site Drainage

The landscape is relatively flat but has a gentle slope to the west towards the Omuramba/Omatako River (a dry river which runs passed the development). Site drainage is therefore towards this section of the property.

3.6 Waste Handling

During the construction and operational phases, waste (solid and liquid) has to be taken care of, as provided for in the Environmental Management Plan (EMP) prepared for the development. Suitable waste skips have to be provided and waste disposed of at an offsite landfill.

4.0 PROJECT NEEDS AND ALTERNATIVES

4.1 Introduction

In this section the development is briefly described in terms of needs and desirability including possible justification for viability. Alternatives to the proposed development have been also considered and investigated in terms of four scenarios, the proposed site, the alternative site, the 'no-action' alternative and site comparisons.

4.2 Need for the Development

At 180 km, the stretch of the B1 highway between the towns of Okahandja and Otjiwarongo is longest in the country without any filling station. Whilst there are several resting places or picnic spots erected along B1, there are no ablution facilities at such resting places. Motorists who happen to need a toilet while driving on that section of the road will have to resort to using 'bush toilet' – a practice which is inconvenient, unhygienic and perhaps uncivilised.

The truckport and filling station promoted by Omuramba at the intersection of B1 and D2404, will, amongst other things, provide ablution such facilities to motorists on both B1 and D2404.

Large quantities of charcoal are produced from several farms surrounding Farm Wewelsburg and exported by road to end-users in South Africa. Such charcoal is often collected from farms by interlink trucks using district and farm gravel roads which are not suitable for such trucks. As an added benefit to the charcoal producers in the surroundings, the promotor of Omuramba would construct a charcoal handling facility at the truckport. Farmers would then transport charcoal produced from their farms to the charcoal handling facility for storage and onward loading to interlink trucks. This would avoid interlink trucks travelling on gravel farm roads to load charcoal from farms.

A weighbridge will be also be constructed to ensure correct weighing of charcoal and to avoid overloading.

4.3 Viability for the Development

The assessment to determine the economic feasibility of the proposed filling station is outside the scope of the EIA study and is not considered here. However, there are two factors supporting the viability of the development.

Firstly, the Ministry of Mines and Energy (MME) has granted a Letter of Intent (LOI) to Omuramba for the envisaged development (**Annexure: A**). An LOI is granted after the promoter has carried out a bankable site feasibility study and submitted such feasibility study to MME for review by the economic committee in the energy department of MME.

The economic committee will only make a recommendation to the Minister to award an LOI when the committee is convinced that the site is strategically located for the development of a filling station.

Secondly, Total Namibia is willing and desirable to partner with Omuramba for the development of the truckport at B1/D2404 intersection (**Annexure: B**). Total Namibia has a fully-fledged marketing department which undertakes comprehensive market research for potential sites.

The willingness of Total Namibia to team up with Omuramba should therefore underscore the viability of the development.

4.4 Alternative Scenarios

Alternatives to the proposed development have been considered and investigated in terms of the following aspects:

- Proposed Site Scenario
- Alternative Site Scenario

- No Action Alternative/Scenario, and
- Comparisons of Alternatives

4.5 Proposed Site Scenario

The promotor grew up on Farm Wewelsburg where a camping site has been established and successfully operated for a number of years (**Fig.13**). Over the years, the promotor has observed, how guests to the camping site and several motorists, have been assisted with some fuel from the farm storage, because they did not have enough fuel in their cars to reach the next refuel point. The proposed site at B1/D2404 intersection has therefore been identified based on personal experience spanning over many years.



Figure 13: Camping Site on the Farm

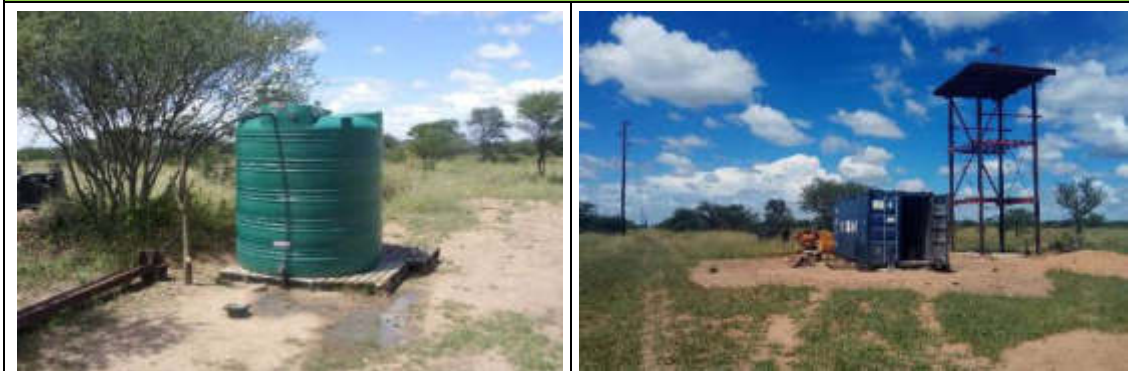


Figure 14: Civil works underway at the Site

The relocation option to a different site is an option available to the promotor, however the selection of a site intended for use as a truckport and fuel retail service station is made based on evaluations of a number of factors such as land, traffic volumes, site accessibilities and availability of services such as water and electricity.

4.6 Alternative Site Scenario

It is common knowledge that, land both communal and commercial is a scarce commodity in the country. This site is strategically located, halfway between Otjiwarongo and Okahandja. For the promotor to look for an alternative site along the B1 highway will be a cumbersome process and there is no guarantee that any such site will be successfully secured.

The promotor has already made substantial initial investments in civil works as depicted in **Figures 11 & 14**, designs for the development, etc. An alternative site would therefore result in the loss for the funds already expended to the professional service providers.

In consideration of the above concerns and assessment of the current site, the option for an alternative site is not a feasible proposition at this stage. In fact, no alternative site was assessed because there is no alternative site. A lease agreement has already been concluded between the parties – landowner and Omuramba.

4.7 The 'No Action' Alternative

The 'No-action Alternative' in respect to the proposed development implies that the status quo is maintained. From an extreme environmental perspective, this option is the most suitable alternative, because it ensures non-interference with the existing conditions. However, the need for such a development is high and the anticipated insignificant environmental impacts resulting from the construction phase can be successfully mitigated.

The 'no project' option is the least preferred option from the socio-economic and partly environmental perspective because, if the project is not done:

- The economic benefits likely to accrue to the community especially during the construction phase, i.e. provision of jobs for skilled and non-skilled workers will not be realised.
- The social-economic status of Namibia and the local people would remain unchanged.
- The available local skills would remain underutilised.
- No employment opportunities will be created for Namibians who will otherwise work at the fuel retail service station after the construction has been successfully completed.
- The scenario of no-action clearly sends out a negative vibe and discourages potential local investors to invest in the local oil industry

From the above explanations, it is obvious that the 'No Project Alternative' is not a desirable alternative from the socio-economic perspectives since no benefits will accrue to anyone including the promoter, the local authority, the youths roaming around the streets looking for employment and GRN (no taxes, etc.).

However, from the environment conservation perspective, the 'No Action Alternative' will be beneficial in that any potential negative impacts associated with the project implementation will be avoided.

The "No Action Alternative" should not be adopted, as there is a fundamental need to encourage sustainable development as long as such developments are conducted in line with the provisions of EMA and abiding by the provisions outlined in the EMP for such a development.

4.8 Comparing of Alternatives

Under the 'Development Alternative/Scenario' the proposed development would provide direct and indirect employment to the local people. During the construction phase, jobs will be provided to the construction workers in trades such as bricklayers, plasters, joiners, electricians, pavers, carpenters, plumbers, etc.

The construction phase will be followed by the operational phase (business phase) in which jobs in the form of fuel jockeys, shop attendants, cleaners, security/guards, cashiers, etc. will be provided. Employees will be drawn from the local community, hence combating the scourge of unemployment.

In the event of a 'No Action Alternative/Scenario' development will not take place. There would be no benefit derived from the site and nor would there be the insignificant environmental impacts.

Provided the environmental impact mitigation measures as proposed for in the EMP are adhered to, the development will have minimal negative to insignificant impacts to the environment. The decision to develop this specific site is due to the following:

5.0 THE LEGAL FRAMEWORKS

To protect the environment and achieve sustainable development, all projects, programs and policies deemed to have adverse impacts on the environment are required to have an EIA conducted according to the Namibian legislation. The following legislations are applicable to the proposed developed:

TABLE 3: NATIONAL LEGISLATIONS

<i>The Environmental Management Act, Act No. 7 of 2007</i>	The Environmental Impact Assessments (EIA) is regulated by the Ministry of Environment and Tourism (MET) in terms of the Environmental Management Act, (Act No. 7 of 2007). This Act was gazetted in December 2007 (Government Gazette No. 3966) and the Environmental Impact Assessment Regulations: Environmental Management Act, 2007 (Government Gazette No. 4878) were promulgated in February 2012.
<i>Environmental Management Regulations of 2012</i>	Provides details of projects which may not be implemented without an EIA having been conducted. Requirements for public consultation within a given environmental assessment process. This project is listed under such activities which may not be implemented without an ECC.
<i>The Local Authority Act, (Act No.23 of 1992)</i>	The Act provides for the establishment of local authorities which run formal establishments such as towns, villages and settlements. The Opuwo Town Council was established under the Local Authority Act.
<i>Water Resource Management Act (Act No. 11 of 2013)</i>	The line ministry is the Ministry of Agriculture, Water and Forestry. This Act provides for the management, protection, development, use and conservation of water resources; to provide for the regulation and monitoring of water services and to provide for incidental matters.
<i>Road Fund Administration Act</i>	Regulates traffic and use of public roads in Namibia including aspects related to road safety, vehicle licensing, roadworthiness, Mass Distance Charges, abnormal loads, etc.
<i>Atmospheric Pollution Prevention Act (Act No. 45 of 1965)</i>	This Act was enacted in 1965 is still being applied in independent Namibia today and resorts under the Ministry of Health and Social Services. The Act attempts to guard against the pollution of the atmosphere. A number of sections of this Act relate to 'Air Pollution Control Certification', dust control, closure certificate, etc. At present, the Ministry does not grant any certificates as no procedures or guidelines exist. The best practice would be to notify the Ministry of the anticipated emissions.
<i>Forest Act (2001)</i>	Section 23 (1) states that unless approval has been given by the Director, no person shall (b) clear the vegetation on more than 15 ha on any piece of land or several pieces of land situated in the same locality which has predominantly woody vegetation, or (c) cut or remove more than 500 m3 of forest produce from any piece of land in a period of one year. This development will be developed on 5 ha of land.
<i>The Soil Conservation Act 76 of 1969</i>	The act makes provision for combating and prevention of soil erosion and promotes the conservation, protection and movement of soil, vegetation, sources and resources of the Republic of Namibia. Service stations are mostly associated with spillages which could end up contaminating the soil.
<i>National Heritage Council Act (Act No. 27 of 2004)</i>	The line ministry is Ministry of Youth, Sport and Culture. The National Heritage Council Act provides for the protection and conservation of places and objects of heritage significance and the registration of such places and objects. It also makes provision for archaeological 'impact assessments'. Part V: Permits, paragraphs 51 and 52). If applicable, the relevant permits must be obtained before disturbing or destroying a heritage site as set out in the Act.
<i>Atomic Energy and radiation Protection Act (Act No. 5 of 2005)</i>	The Hazardous Substance Ordinance No. 14 of 1974 was repealed and amended by the Atomic Energy and Radiation Protection Act. The Act provides for the control of substances which may cause injury or ill-health or death of human beings by reason of their toxic, corrosive, irritant, strongly sensitising or flammable nature. Whilst the environmental aspects are not really explicitly stated, the Act provides guidelines with respect to importing, handling and storage, etc. of hazardous substances. The line ministry is the Ministry of Police, Safety and Security (the Drag Law Enforcement Unit).
<i>Regional Council Act (Act No. 23 of 1992)</i>	The Act resorts under the Ministry of Urban and Rural Development and was enacted to promote the planning and coordination of policies at the regional. Under Article 28, the powers, duties, functions, rights and obligations of regional councils include overseeing the general implementation of regional development activities.
<i>The Labour Reform Act (Act No. 11 of 2007)</i>	Overseen by the Ministry of Labour, the Labour Act as amended aims to "promote and maintain the welfare of the people and ... to further a policy of labour relations conducive to economic growth, stability and productivity". It details basic conditions of employment, and health, safety and welfare requirements of employers.

The Petroleum Products & Energy Act (Act No.13 of 1990)	The Act makes provision for the procurement, handling and storage of petroleum products. The line ministry is the Ministry of Mines and Energy.
SOUTH AFRICAN NATIONAL STANDARDS (SANS OF 10089-3)	The installation of underground storage tanks, pumps or dispensers and pipe work at a service station and consumer installation must comply with SANS 10089-3

TABLE 4: NATIONAL POLICIES AND RELATED PROGRAMME

The Environmental Policy of Namibia	The Environmental Assessment Policy requires that all projects initiated by both the government and private sector that have a detrimental effect on the environment must be accompanied by an EIA. It further provides a guideline list of all activities that require an impact assessment. The proposed activity is listed as an operation requiring an impact assessment.
Vision 2030 and National Development Plans (NDPs)	Vision 2030 states that: "The nation shall develop its natural capital for the benefit of its social, economic and ecological well-being by adopting strategies that: promote the sustainable, equitable and efficient use of natural resources; maximize Namibia's comparative advantages; and reduce all inappropriate use of resources. However, natural resources alone cannot sustain Namibia's long-term development, and the nation must diversify its economy and livelihood strategies.
The Harambee Prosperity plan (HPP)	The HPP was launched by President Geingob in March 2015 as a targeted Action Plan to accelerate development in key defined priority areas, which lay the basis for attaining prosperity for all in Namibia. The Plan does not replace, but complements the long-term goal of the National Development Plans [NDPs] and Vision 2030. HPP introduces an element of flexibility in the Namibian planning system by fast tracking development in areas where progress is insufficient. It also incorporates new development opportunities and aims to address challenges that have emerged after the formulation of NDPs.
COVID-19 Guidelines and Regulations	In the wake of the deadly Covid-19 pandemic, the Government of the Republic of Namibia has put in place measures to contain the spread of the virus. Such measures have included lockdowns of certain regions/towns, shut down of schools, banning of religious gathering, limiting numbers of people attending weddings & funerals and or meetings and restrictions of movements of people. The borders have also remained closed for tourists.

6.0 THE RECEIVING ENVIRONMENT

6.1 Introduction

With respect to the receiving environment, the environmental impacts which the proposed development is likely to pose have been evaluated as described in this section. The study information was gathered through a number of sources such as:

- visual investigation of the site
- discussions with the proponent
- taking of photographs
- observation of the current environmental status of the immediate surrounds

Only those elements of the environment that have a direct bearing on the impact assessment process of the proposed development are discussed. The severity of the potential impacts is largely determined by the state of the receiving environment.

6.2 Land Use

The predominant land use is farming more specifically cattle rearing. Depending on the level of bush clearing, the grazing capacity is estimated at 8 ha per large livestock (cattle) and approximately 1.5 ha per small livestock (goat and sheep). The 50 ha leased to Omuramba can therefore support about 6 cattle and about 33 goats or sheep. The development will be confined to 5 ha which cannot support one livestock but up to four goats can be reared on 5 ha of the land. From a commercial perspective, the economic benefits that would be derived from the development built on 5 ha is far more than what is perhaps derived from entire farm where over 400 cattle is reared.

6.3 Topography and Drainage

The terrain of the study area is typically flat with a gentle slope towards the Omuramba /Omatako drainage system which runs northwest flowing in the western direction. At 2287 m amsl, the two Omatako Mountains to the west are the predominant natural features. The mountains are 10 km away as the crow flies. Viewed from the direction of B1 relief is quite moderate ranging from a low of 1 370 m amsl to 2 287 m to the Omatako mountains (**Fig. 15**).



Figure 15: Top & Below – View along B1 and from the Site to Omatako Mountains

6.4 Climatic Conditions

The project site is in an area which receives between 350 and 400 mm of rainfall per year with a variation of 40-50%. Precipitation is received between the months of November and April often peaking in February. During the months of November and January, highest temperatures would average between 35 °C and 38 °C, mostly felt in the afternoons. Minimum temperatures are encountered between June and July when the mercury could drop as low 3 °C at night.

Humidity is relatively low, rarely exceeding 20% in winter but could reach 85% in summer before or after thunderstorm build-up. Prevailing wind over the study area is expected to be east to northeast with occasional airflow from the southeast to southwest (Mendelsohn et al., 2002)

6.5 Geological Aspects

This brief geological explanation is summarized from the work done by Mendelsohn et al., 2002.

Geologically, Namibia can be split into two broader geological sectors, the western and eastern sectors. Of the two geological sectors, the western sector presents a fascinating geological history. It consists of a variety of geological formations of different ages and compositions. Some formations occurred under diverse environmental conditions, some occurred at depths of ancient oceans, others occurred as a result of the movement of the earth's crust or because of collisions or volcanic eruptions. Most of such formations are encountered in the west as rugged landscapes of mountains, hills, valleys and plains with sparse vegetation. The Omatako Mountains about 10 m southwest of the project site is a result of such geological events.

On the contrary, the east sector does not present a broader geological history. Most of the geological formations are covered with deposits of more recent past consisting of loose, aeolian of origin, sandy and unconsolidated. On the surface, the east sector appears rather monotonous and uniform, covered with dense vegetation in the north and decreasing to the south. Most of the geological information is derived from boreholes and outcrops which are rare as well as from underlying formations exposed along drainage lines and around isolated pans.

The project site is located where the Karoo Supergroup bears evidence of transition to the more recent Kalahari deposit which occurred about 70 million years ago. During the Karoo age (300 – 180 million years ago), braided rivers discharged their flow into a huge basin which become known as Omingonde Sequence of the Waterberg Basin. Dinosaurs lived in the area during that wet period, but become extinct when the entire landscape dried up, about 180 million years ago, resulting in the accumulation of sand which solidified as the Etjo sandstone. Within these sediments, traces of dinosaurs remains have been encountered. (Mendelsohn et al., 2002)

6.6 Hydrology (Surface and Underground Water)

In terms of the Integrated Water Resource Management (IWRM) of Namibia, the project site would fall under the Okavango-Omatako River Basin (OORB). The Omatako River which lies northwest of the project site (**Fig. 10**) is one of the longest and most vital ephemeral tributaries which originates in the Otjozondjupa region. The river has a flat longitudinal gradient of about 800 m and transcends the Kalahari landscape for over a distance of 600 km discharging into the Kavango River. It is one of the few rivers flowing eastwards.

With regards to underground water, the project site would fall under the Okahandja Groundwater Basin and the general direction of the water flow is east following the pattern of the Omatako River. (*Christelis and Struckmeier, 2001*). Water depth is believed to vary between 60 m down to 140 m. The development will be served by an existing borehole located about 800 m.

6.7 Waste Management

The development will generate waste both liquid and solid including hydrocarbon waste, which have to be properly managed in accordance with the provisions of the EMP. Waste skips for solid

wastes generated by the truckport and filling station have to be provided and a waste management procedure developed and strictly enforced.

6.8 Dust Impacts

Dust is only expected to be generated during the construction phase and or decommissioning, in the event that the development has to close prematurely, i.e. due to unforeseen circumstances such as economic factors or sabotage. Most working areas are expected to be paved and therefore minimal dust will be expected during the operational phase. D2404 is a gravel road and use of the road is associated with dust generation. The traffic flow on D2404 is how minimal and no significant traffic increase is expected as a result of the development.

6.9 Air Quality

Construction activities are likely to be associated with generation of noxious gases emissions from increased numbers of construction vehicles and equipment (concrete mixers, etc.) used during that time. These have the potential to negatively impact the ambient air quality. The impact is however of a short duration (construction) and not expected during the operational phase of the service station. Overall, the impact on the air quality should be viewed against the background that the development is along the B1 highway, one of the busiest roads in the country.

6.10 Noise Impacts

The site is located at the intersection of B1 highway and D2404 where noise is already generated by the traffics using such roads. During the construction, the general noise level around the site is expected to increase, but this will be confined to working hours only. Also, there are no sensitive noise receptors within a radius of 5 km of the project site. The mitigation measures recommendation in the EMP should be implemented.

6.11 Visual Impacts

By their nature, truckport and service stations are usually lit at night which could be a nuisance to sensitive receptors; but there are no such receptors in close proximity to the facility. It is understood that the design and execution of the project will be carried out in a manner that makes the truckport to appear as an extension of the natural landscape itself, rather than as an imposition on the existing beautiful landscape. A sense of place will be maintained throughout by curving lines and muted natural colours, and where applicable, use of naturally occurring materials such as wood, sand and stones will be made.

Generally, the visual aspects of the area has also been altered by several man-made structures in the form of overhead powerlines, telephone lines and MTC towers.

The development is therefore expected to blend in well with the existing structures and infrastructures in the surrounds without compromising the general visual character of the area.

6.12 Archaeological & Cultural Heritages

Desk studies, physical observations of the project site and its surrounds and discussions held with neighbouring property owners did not reveal any items of archaeological interest or of cultural heritages. In the unlikely event of such sites (artifacts, stone tools, pottery vessels, metal objects, weapons, human bones etc.) being unearthed during the construction activities, work must be stopped and officials from the National Heritage Council summoned to the site. Work should only proceed once an 'all clear' has been granted by NHC. The guidelines provided in the EMP should be followed.

6.13 Biodiversity

The site is on a commercial farm on which livestock (cattle, goats and sheep) is reared. Wildlife is also freely roaming around on the property. The development will be confined to a 5 ha land which will be fenced in and properly secured.

During the construction phase, workers will be staying at the site and it is possible that poaching and or illegal killing of wildlife could occur.

The excavation for building foundations will be accompanied by clearing of vegetation and plants. The impacts of such activities is loss of habitats, grazing and disruptions to macro and microorganisms. The footprint is however small and of a short duration. The recommendations proposed in the EMP should be implemented.

6.14 The Socio-Economic Environment

Unemployment is a serious problem in Namibia particularly amongst the youth. There are limited economic opportunities in many parts of the country, with high number of young people migrating from the rural areas to urban centers in search of employment and better living conditions. The proposed development will create employment opportunities during its construction and operational phases.

It is projected that a minimum of 30 people will be employed during the construction phase which will take about eight (8) months. The number of employment opportunities created during the operational phase of the development is projected to peak at 20 once all related commercial activities have been established and operational.

7.0 IMPACT ASSESSMENT METHODOLOGY

The objective for the assessment of impacts, is to identify and to assess all those possible impacts that are likely to arise from the development (construction) and operation (business phase) of the proposed truckport and filling station. Such impacts and the management measures are presented to MEFT so as to allow the EC to make an informed decision on whether the proposed activity should be:

- authorized;
- authorized with conditions; and or
- entirely rejected and refused.

In this sense, impacts are defined as changes in an environmental parameter that results from undertaking an activity. These changes are the difference between effects on an environmental parameter where the activity is undertaken compared to where the activity is not undertaken, and occur over a specific period and within a defined area (*EMA 2007*).

7.1 Types of Impacts

Different types of impacts could occur from the proposed development, which could be positive or negative, and can be categorized as being direct (primary), indirect (*secondary*) or cumulative impacts.

Direct impacts are those caused directly by the activity and generally occur at the same time and at the place of the activity (for example, dust generated as a result of excavation for building foundations).

In the case of a truckport and filling station, such impacts are associated with the construction and maintenance of the facility or activity and are therefore obvious and quantifiable. However, indirect impacts are induced changes that may occur as a result of the activity (development). Cumulative impacts can occur from the collective impacts of individual minor actions over a period of time and can include both direct and indirect impacts.

7.2 Identification of Impacts

The identification of potential impacts associated with an activity on the environment should include impacts that may occur during the Construction, Operational and Decommissioning Phases of such an activity. Included in the process of identification and assessment of impacts are, inter alia, the following:

- Determining current environmental conditions in sufficient detail so that there is a baseline against which impacts are identified and measured.
- Determining future changes to the environment that will occur if the proposed activity does indeed take place.
- Understanding the activity in great details so as to understand all consequences associated with such an activity.

7.3 Mitigation of Impacts

Once impacts have been identified or predicted for a particular activity, appropriate mitigation measures have to be established. Mitigation measures are the modification of certain activities in such a way so as to reduce the impacts on the environment. The objectives of mitigation measures are:

- To find more environmentally sound ways of doing things.
- To enhance the environmental benefits of a proposed activity.
- To avoid, minimize or remedy negative impacts associated with the activity.
- To ensure that residual negative impacts are within acceptable levels.

When mitigation measures are considered for certain impacts, they have to be organized in a hierarchy of actions, namely:

- Avoid negative impacts through the use of preventatives.
- Minimize or reduce negative impacts to 'as low a level as practicable'.
- Remedy or compensate for negative residual impacts that are unavoidable, and cannot be reduced further.

The methodology used to assess identified impacts is as follows:

TABLE 5: IMPACT EVALUATION METHODOLOGIES

The <u>Status</u> of the Impact	
Status	Description
Positive:	A benefit on the environment
Neutral:	No impact on the environment
Negative:	A cost on the environment

The <u>Duration</u> of the Impact		
Duration	Description	Score
Short term	Less than 2 years	2
Medium term	3 to 5 years	3
Long term	6 to 10 years	4
Permanent	10 years and longer	5

The <u>Extent</u> of the Impact		
Extent	Description	Score
Site specific	Within the site boundary	1
Local	Affects immediate surrounds	2
Constituency	Extend beyond site boundary	3
Regional	Extend beyond local jurisdiction	4
National	Affects countrywide	5

The <u>Reversibility</u> of the Impact		
Reversibility	Description	Score
Completely Reversible	Reverses with minimal rehabilitation	1
Reversible	Requires mitigation and rehabilitation to ensure reversibility	3
Irreversible	Cannot be rehabilitated completely/ rehabilitation not viable	5

The <u>Affect (Severity or Beneficiary) of the Impact</u>		
Severe/Beneficiary Affect	Description	Score
Slight	Little effect/negligible disturbance	1
Slight to Moderate	Effects observable – environmental impacts reversible with time	2
Moderate	Effects observable – environmental impacts reversible with rehabilitation	3
Moderate to High	Extensive effects – irreversible alterations to the environment	4
High	Extensive permanent effects with irreversible alterations	5

The <u>Probability of the Impact occurring</u>		
Rating	Description	Score
Unlikely	≤15% sure of an impact occurring	1
Possible	≥15% ≤ 40% sure of an impact occurring	2
Probable	≥40% ≤60% sure that an impact will occur	3
Highly Probable	≥60% ≤85% sure that an impact will occur	4
Definite	≥85% sure that an impact will occur	5

The Consequence
= Duration + Extent + Reversibility + Severity

The Significance Rating (S)
= Consequence x Probability

The <u>Significance Rating</u>	
Rating	Description
S ≤ 25 - Low Impact	The impact will not have a direct influence on the decision to the development
S ≥ 25 ≤ 50 - Medium Impact	The impact will influence the decision to the development unless it is effectively mitigated
S ≥ 50 – High Impact	The impact will have an influence on the decision process to the development irrespective of the mitigation measures proposed

8.0 IMPACTS AND MITIGATION MEASURES

In the section below, all possible impacts associated with the proposed development are discussed in details while possible mitigation measures are described in the EMP section of the EIA document.

8.1 Positive Impacts

8.1.1 Employment Creation

The truckport and filling station proposed by Omuramba will help to combat unemployment as new job opportunities will be created during both phases of the development – construction and operational. It is projected that a minimum of thirty (30) employment opportunities will be created during the construction phase followed by another twenty (20) during the operational phase.

8.1.2 Boost to the Local Economy

It is expected that, people from within the towns of Okahandja and Otjiwarongo and the neighbouring farms will be hired to work at the truckport and related business activities. This will contribute to the local economy in that employees will be spending their disposable incomes in their towns through payment of water, electricity and rates & taxes to local council coffers and buying groceries and clothing from local shops hence boosting the local economy.

During the construction phase, the successful contractor hired to develop the truckport will procure construction materials (cement, stones, bricks, brickforce, steel products, roofing, plumbing, tiling, electrical goods, etc.) required in the development from local suppliers.

As noted in the previous section of this report, energy plays a pivotal role in economic growth and development. The development of a filling station at the intersection of B1 and D2404 will help to improve accessibility of petroleum products to the surrounding farmers including the hundreds of motorists travelling on the busiest B1 highway essentially, 24/7 hence boosting the local economy.

8.1.3 Imparting of New Skills

New employees will be hired, especially from the youth section of the population. Those employees without previous working experiences have to be couched and given on-the-job training and therefore helping them to acquire useful skills and knowledge to help them throughout their working life.

8.1.4 Contribution to the Local and National Economy

As local company, Omuramba is expected to source its petroleum products from fuel suppliers and distributors (in this case from Total Namibia) which pay taxes to the State. In addition, the promoter will also be sourcing merchandise for its convenience shop from other traders and as such, liable for tax payments (PAYE, company income tax, VAT, etc.) and other levies (social security commission, workmen's compensation, etc.) and therefore contributing to the national coffer and to the local economy (transport of fuel to site).

8.1.5 Training of Employees

It is imperative that all employees who will be hired to work on this development undergo induction training on the EMP and on all aspects related to the environment, with emphasis placed on how their activities, the materials or products that they use and handle can harm the environment.

All impacts as identified in the scoping assessment and recommended mitigation measures proposed in the EMP section of EIA should be conveyed to the workers during such training session.

The provisions of the EMP should be explained to all workers and any sub-contractors (electricians, artisans, plumbers, bricklayers, etc.) who may be hired by the main contractor. Where possible, translation should be provided for the benefit of those employees with limited understanding of the official language.

All employees who have undergone an environmental awareness induction are expected at the end of such training to be able:

- To define the terms associated with the environment.
- To understand the potential impacts that the project is likely to cause.
- To recognize what waste does to the environment.
- To demonstrate what can be done to help prevent harmful impacts to the environment.

The developer (Omuramba) has to ensure that training has been offered prior to the workers starting with construction activities. A copy of the EMP should be provided to the Site Agent/Site Manager and that the content is well understood and conveyed to all employees.

The same training as described above should be offered to all those employees who will be hired and recruited by the promoter for the Operational Phase of the facility.

The nature of the impact is POSITIVE and significance rating is VERY HIGH.

Mitigation

- Employment should be provided to deserving employees without discrimination on the basis of race, origin, gender or political affiliation.
- People from marginalised communities such as the OvaHimba and the Sun people should also be considered for employment.
- Disabled people should also be considered for suitable vacancies.

8.2 Socio and Economic Impacts

Unemployment is a serious problem in Namibia particularly among the youths especially in the rural areas where economic activities are rather limited. The proposed development will create employment opportunities during its construction phase and the operational phase. It has been projected that a minimum of 25 people will be employed during the operational phase while the construction period is expected to provide employment opportunities to anything between 30 and 40 people.

The disadvantage which comes with this type of development is that, once the construction activities are observed on site, a large number of jobseekers will flock to the site in search of employment. This has an added disadvantage in that too many unemployed people will:

- Resort to the project site often resulting in the creation of informal accommodation facilities.
- Resort to drinking alcohol and to partake in illicit activities such as crimes, drugs, etc.

8.3 Negative Impacts and Mitigation Measures

8.3.1 Traffic Congestion

The proposed site is at the intersection of B1 and D2404 and is not expected to cause any traffic congestion on B1. There is already an intersection with traffic signs (stop signs) for those traffic approaching B1 from either side of D2404. Vehicles travelling on B1 that are slowing down in order to enter truckport are also not expected to cause any congestion. The impact is local with little effect and of low significance rating.

Mitigation:

- Enhance and protect amenity values by ensuring that traffic regulations are maintained at the site and on the surrounds.
- Provide adequate parking for both light and heavy duty vehicles within the facility.

8.3.2 Sedimentation and Drainage

Construction activities will disturb and loosen the soil structures and this will wash away during intense rainstorms and with storm water runoff. Silt could be deposited on truckport internal routes. Measures have to be taken to limit the extent of storm water runoff. Topsoil that has been removed from the construction sites should be stored up slope so that it is not washed away. The cumulative impact is considered local, definite, low intensity and low impact.

The bulk of completed truckport site is expected to have an impervious surface to avoid water infiltration into the ground. Surface water from the paved areas is likely to contain amounts of oils and greases, the design should therefore ensure that used water from sections of the filling station where spills are anticipated, is directed to pass through a properly constructed oil interceptors. This will reduce surface runoff from impacting on the natural environment around the service station.

Lack of a proper site surface drainage will result in water clogging up and accumulating making movements of traffic and people cumbersome. The potential impact associated with surface runoff can be effectively mitigated.

Mitigation:

- Ensure an adequate and efficient drainage system is provided in the design and constructed.
- Provide adequate oil interceptors.
- Consideration should be given to harvest rainwater from the rooftops for cleaning purposes.

8.3.3 Soil Disturbances

The construction will include digging of foundations and levelling off of certain areas. This, unfortunately, will involve some disturbances of the soil profile and associated microbial communities. The flat slope of the land implies that minimal levelling will be needed and thus reduced soil disturbances. The underground tanks will require excavation of pits and the remaining materials not used in backfilling of the pits could be used for levelling and landscaping of the fuel retail station. The impact is NEGATIVE but the footprint is comparatively small.

Mitigation:

- Limit excavation activities to construction areas that are clearly demarcated.
- All foundation to be excavated should be clearly demarcated and the work carefully executed.

8.3.4 Waste Generation and Management

Various types of waste are expected to be generated during the construction and operational phases. Waste management has to include the management of both solid and liquid wastes. Suitable waste skips must be provided in which different types of wastes are stored.

Litter blown from the project site may accumulate in the surrounding areas resulting in visual nuisance. Sources of waste, anticipated volumes and recommended disposal/mitigation measures are as given in the table below.

TABLE 6: WASTE GENERATION AND MANAGEMENT

Nature of Waste	Volume	Disposal & Mitigation Measures
Construction Phase		
Excavated soil	Moderate	<ul style="list-style-type: none"> • Ensure topsoil is stockpiled aside for future rehabilitation. • Use excavated soil for levelling & landscaping. • Comply with the EMP.
Cement bags, paint containers, steel scraps, broken bricks, nails, building rubble	Moderate	<ul style="list-style-type: none"> • Consider for re-use. • Offer for sale to waste papers and scarp dealers. • Dispose of at an offsite landfill, i.e. Okahandja. • Separate waste and place in designated bins. • Comply with the EMP
Timber/wood (uprooted trees, broken scaffolding, etc.)	Low	<ul style="list-style-type: none"> • Offer for sale as firewood. • Consider re-use or recycle. • Use in landscaping of the site. • Dispose of at a designated site. • Do not bury onsite. • Comply with the EMP.
Hazardous waste (asbestos, lead, paint, thinners, sealants, fuel & oil from construction equipment, etc.)	Low	<ul style="list-style-type: none"> • Store in leak-proof containers. • Dispose at an approved offsite landfill site. • Do not dispose hazardous waste on site. • Do not dispose hazardous waste by burning or burying on site. • Any spill must be scooped out with soil and stored in a leak-proof container until disposed of in a responsible manner. • Only trained personnel may handle hazardous products. • Store hazardous products in a secure place. • Comply with the EMP.
Building rubble (wires, nails, bricks, spoiled concrete, ceramics, stones, sand, etc.)	Moderate	<ul style="list-style-type: none"> • Sort rubble for possible re-use and re-cycling. • Dispose rubbles at a safe and secure offsite location. • Do not dispose building rubble in watercourses or dry rivers around the site. • Do not leave rubble lying around for longer periods so that they become breeding habitats for rodents, snakes, etc. • Do not bury building rubble on site. • Do not mix rubble with hazardous waste. • Comply with the EMP.
Operational Phase		
Solid waste : papers, bottles, cans, plastics, etc.	Moderate	<ul style="list-style-type: none"> • Procure adequate waste skips. • Discourage littering by employees, guests and patrons. • Display prominently 'no waste signs' • Keep premises tidy and clean at all times. • Comply with the EMP.
Liquid waste (stormwater, water from vehicle wash bays, etc.)	Moderate	<ul style="list-style-type: none"> • Ensure suitable stormwater drainage is constructed. • Water from vehicle wash bays should run through oil interceptors. • Under no circumstances may contaminated water be allowed to enter natural waterstreams around the project site. • Monitor quality of effluent discharged frequently. • Comply with the EMP.
Hazardous waste (spilled oil, fuel, contaminated soil, grease, etc.)	Moderate	<ul style="list-style-type: none"> • Supply leak-free waste skips for storage of fuel waste. • Any fuel waste on paved floor surface must be properly cleaned up, using suitable spill absorbents. • Any fuel waste on soil must be cleaned up by scooping out the contaminated soil. • Store fuel soaked soil in a secure leak-proof container for disposal at an approved offsite landfill location. • Ensure a standard procedure is developed and applied for fuel waste handling at the site.

Nature of Waste	Volume	Disposal & Mitigation Measures
		<ul style="list-style-type: none"> • Ensure personnel is properly trained on how to handle waste fuel. • Under no circumstances may waste fuel or fuel soaked soil be disposed of in waterstreams around the site. • Comply with the EMP
Emission from vehicles	Low	<ul style="list-style-type: none"> • Emitted directly into the air. • Ensure vehicles are switched off at the facility when not being used. • Dissuade long idling of trucks especially in the morning hours. • Comply with the EMP
Decommissioning Phase		
Steel metals: (broken pipes, scraps, redundant tools, wheels, etc.)	Low	<ul style="list-style-type: none"> • Offer for sale to scrap dealers. • Store safely for future re-use. • Redundant fuel pumps must be cleaned of all fuel residues before removal from the site. • Only trained personnel may handle redundant fuel equipment. • Comply with the EMP
Equipment	Low	<ul style="list-style-type: none"> • Sort and pack separately. • Offer for sale to third parties (scrap dealers, etc.) • Store safely for re-use elsewhere. • Offer for recycling. • Comply with the EMP
Unused concrete	Low	<ul style="list-style-type: none"> • Use for rehabilitation. • Use for landscaping • Fuel soaked concrete must be separated from non-contaminated concrete. • Recycle for re-use • Comply with the EMP
Soil	Low	<ul style="list-style-type: none"> • Use in the rehabilitation of the site. • No contaminated soil may be used in the rehabilitation of the site. • Fuel soaked soil must be scooped out and stored in leak-proof containers until disposed of. • Do not cover fuel soaked soil by spreading clean soil over it. • Comply with the EMP

8.3.5 Environmental Pollution

Possible environmental pollutions associated with this type of development are listed in Table 7 below which includes proposed mitigation measures.

TABLE 7: SOURCES OF ENVIRONMENTAL POLLUTION

Possible Sources	Mitigation Measures
Vehicular emissions	<ul style="list-style-type: none"> • Develop rules and procedures for the truckport. • Vehicles to be switched off when stationary. • The facility must be spacious and well aerated. • Rules at the facility must be strictly applied and enforced. • Comply with the provisions of the EMP.
Fuel & oil spills	<ul style="list-style-type: none"> • Develop fuel spill procedures for the facility. • Ensure employees are well trained. • Fit hoses with quick-acting leak-proof cocks or with approved nozzles. • Ensure proper waste collection, handling and disposal.
Lubricant containers and packaging materials	<ul style="list-style-type: none"> • Ensure suitable & adequate waste skips are provided. • Encourage proper waste collection, handling & disposal. • Ensure employees are well-trained. • Comply with the EMP.
Office & shop wastes	<ul style="list-style-type: none"> • Ensure adequate skips for different types of wastes are provided. • Ensure proper handling, collection and disposal of waste from the facility. • Maintain a high standard of housekeeping. • Ensure employees are well trained on the EMP.
Waste water	<ul style="list-style-type: none"> • Construct a proper drainage water system. • Treat water from vehicle wash areas through oil interceptors before discharging into the environment. • Install adequate oil intercepts to handle wastewater. • Ensure employees are properly trained. • Maintain a high standard of housekeeping.
Leakages	<ul style="list-style-type: none"> • All underground fuel tanks should satisfy local and international standards. • Use only approved fuel tanks and monitor volumes to detect any possible leaks timeously. • To prevent any fuel leaks from getting into the environment, the tanks should be properly treated. • A layer of clay should be used to encase the tanks during installation. • Follow the recommendation provided by the supplier. • Ensure adequate training is provided to employees.

8.3.6 Noise Impacts

Noise is unwanted/undesirable sound that can affect job performance, safety and health of humans. Psychological effects of noise include annoyance and disruption of concentration. Physical effects include loss of hearing, pain, nausea and interference with communications when the exposure is severe.

The construction activities will involve the use of construction equipment and other miscellaneous sources of noise for construction site (concrete mixers, trucks delivering construction materials such as bricks, sand, aggregate, etc.). This equipment will generate noise but it is localized and of low significance. The noise generated will be within the project site and, therefore, it is only the workers who are likely to be the immediate receptors of the noise impacts. With suitable PPE, the noise exposure to the workers is not expected to exceed the levels recommended by ISO 18001 standards.

In addition, the noise levels produced at the site are unlikely to exceed the background noise levels emanating from the traffic flow on the adjacent B1 highway.

Mitigation

- Construction activities must be limited to daylight hours only.
- Avoid unnecessary long idle, hooting & revving of construction vehicles.
- Construction vehicles should be well maintained to avoid excessive noise levels.
- Provide suitable PPE to the workers.

8.3.7 Impacts on the Biodiversity

The proposed development is confined to a piece of land measuring 5 ha which forms part of a big commercial farm where cattle is reared and wildlife is roaming around freely. Loss of habitat and vegetation will occur during the construction phase as result of clearing and excavations for building foundations, but the footprint is relatively small.

The project site will be completely fenced in and, therefore, the natural movement of livestock and wildlife is not expected to be negatively impacted. The noise generated during the construction and operational phases is also not expected to exceed the ambient noise level around the busy B1 highway where the project is located. The nature of the impact is localized and of low intensity.

Mitigation

- Give due regard to the protection of the ecosystem.
- Comply with the provisions of the EMP

8.3.8 Visual Impacts

Man-made structures observed during the site visit included electrical powerline, an MTC communication tower and a 10 m water tank stand. During the construction phase for this specific project, visual intrusion will take the form of overhead cranes, scaffolding and the construction equipment at the construction site.

After the construction phase, a tall canopied forecourt structure will remain as a permanent feature intruding on the open view of the horizon. If littering and illegal dumping on the site are not controlled, this could increase the visual impact of the proposed development.

Mitigation

- Train employees on good housekeeping.
- Protect amenity values.

8.3.9 Archaeological and Cultural Heritage

Desk studies and site observation did not reveal any items of known archaeological or areas of heritage and cultural interests on the project site itself or in the vicinity of the development. In the unlikely event of any such items being unearthed during the construction phase, work must be stopped and officials from the National Heritage Council and the Namibia Police summoned to the site. Work should only proceed once an all 'Ok' has been granted by NHC.

Mitigation

- give due respect to issues of cultural heritage
- comply with the EMP

8.3.10 Fire Risk and Control

Petroleum products or hydrocarbons, are by their very nature highly flammable and the danger of fire breaking out is ever present. Therefore, adequate measures must be put in place to prevent and to control possible fire explosions. It is also important to keep in mind that, farms in Namibia

are generally prone to fire eruptions especially during the dry season. One way to mitigate against such fire to construct a 10 m firebreak around the perimeter of the site. The nature of impact is NEGATIVE and the significance rating is MEDIUM with mitigation.

Mitigation

- Ensure the facility is kept clean and free from fire hazards and litters.
- Naked fire should be avoided – place notice signs prohibiting smoking within the fuel retail service station boundaries.
- All electrical installation on the premises should be carried out by qualified and certificated artisans.
- Install fire control appliances (portable fire extinguisher, both CO₂, dry powder and water types and sand buckets).
- Ensure employees are adequately trained in the use of firefighting devices and conduct regular fire drills at least once a year.
- Ensure that all equipment and tools are regularly serviced and well maintained.
- Implement leakage detection mechanism.
- Observe safety measures (no use of cellphone, avoid smoking, etc. when on the fuel service station).
- Comply with the EMP.

8.3.11 Health and Safety

Safety is of paramount importance in the execution of any project activity. During the Construction and Operational Phases, access to the project site has to be secured and restricted so as to ensure that the health & safety of employees, members of the general public who may visit the premises are protected and safeguarded.

This would include risks associated with operating construction machinery on site, excavating trenches and the installation and/or connection of services (water, sewer & electricity). Neglect to apply applicable industry safety standards could lead to incidents and accidents which are undesirable and often associated with costly consequences.

During the Operational Phase, exhaust emissions from fuel combustion is another safety hazard. Depending on the efficiency of the refinery process, combustion of petrol produces mainly CO₂ ($\pm 13\%$), water ($\pm 13\%$) and Nitrogen ($\pm 73\%$). A very small portion of N is converted to Nitrogen Oxide (NO_x) and some to Nitrate Hydrocarbons.

Incomplete combustion leads to the production of Carbon Monoxide (CO), Volatile Organic Compounds (VOCs) fuel, Nitrogen Oxides and Lead in thousands of compounds both in gas and particulate phases. VOCs are hazardous to human health, for instances, long exposure to Benzene could lead to cancer (EHC, 2003). NO_x cause irritation of respiratory track and may exacerbate asthma and may damage blood vessels. Extended exposure to Lead (Pb), could lead to several physiological disorders in man with the most sensitive parts being kidney, blood and the nervous system. The emissions may also contaminate the environment including soil and water.

Mitigation

CONSTRUCTION PHASE

- Enforce strict safety precautions during the construction phase. These should include provision of PPEs (overalls, helmets, dust masks, welding shielding/goggles, earmuffs, safety boots, etc.)

- Ensure supervision of works is carried out by competent staff that sees to it that correct materials are procured and used, that proper mixing of elements is adhered to and that a high standard of workmanship is maintained throughout the construction.
- Construction site should be sealed off from non-construction workers and the general public.
- Provide for first aid facilities and emergence response plan
- Provide toilet facilities and suitable change rooms for workers.

OPERATIONAL PHASE

- Ensure that employees undergo regular medical check-ups (at least twice a year).
- When not being operated, vehicles should be switched off to minimise emissions.
- Ensure proper aeration within the premises.
- PPEs should be provided to employees and wearing thereof enforced.
- Supply first aid kits and ensure that they are adequately stocked.
- Develop a fire emergence response plan
- Develop an accident response plan
- Provide washroom facilities for the workers

8.3.12 Covid-19 Control and Prevention

This EIA is conducted during the time when the whole world is battling to contain the spread of the deadly SARS CoV-2, the virus that causes Coronavirus Disease 2019 (Covid-19). Depending on the type of work being performed and exposure risk, it is incumbent upon the employers to provide a safe and corona-free working environment and for the employees to comply with the control and prevention measures as stipulated by the Covid-19 provided by the Ministry of Health & Social Services.

Mitigation

The Covid-19 general guidelines recommended to be applied by the employers, employees and patrons during the two phases of the filling station are:

- Wash your hands frequently with soap and clean water for at least 20 seconds.
- Avoiding touching your eyes, nose and mouth with unwashed hands
- Practice social distancing by staying a distance of at least 2 meters from the next person when queuing at the filling station or any other place
- Avoid close contact with people who are sick with Covid-19
- Wear face mask which covers the mouth and nose
- Comply with laws and regulations as announced by the authority from time to time
- Observe and comply with symbols in the figure below:



Figure 16: Covid-19 Safety Signs and Symbols

8.3.13 Site Security

Construction sites are known to attract people from different places who come with different aims and intentions. Some people would come genuinely looking for jobs while others would come with malicious intentions such as to steal and to get involved in all sorts of ills: drugs, alcohol or even prostitution. While this specific site is remote, its close proximity to a major highway calls for strict security measures to be put in place to safeguard assets such as equipment and tools.

During the construction, the site should be fenced in with a single access which is security manned during the day and padlocked at night.

During the operation phase, there is a danger of robbery especially if the facility accepts cash payments and does not make use of an armed security guards to handle its bank services.

Mitigation measures

- Equipment kept on site must safely secured and should not encourage criminal activities.
- No unauthorized persons should be allowed near or around the construction site.
- Safety signs should be clearly displayed.
- Ensure that adequate emergency facilities are available
- It is advisable to invest in a CCTV camera system for monitoring.

TABLE 8: SUMMARY OF IMPACTS

POTENTIAL IMPACTS	NATURE OF IMPACT	IMPACT SIGNIFICANCE	
		UNMITIGATED	MITIGATED
Potential Construction Induced Impacts			
Socio-economic impacts:			
• Creation of employment	Positive	Low	Medium
• Imparting of new skills	Positive	Low	Medium
• Training in various disciplines	Positive	Low	Medium
• Social ills: drugs, alcohol, theft, poaching)	Negative	Medium	Low
• Health & Safety	Negative	Medium	Low
Roads & Access to the Site	Negative	Low	Very Low
Traffic Congestion on B1 and D2404	Negative	Low	Very Low
Topography and Drainage	Positive	Medium	Low
Impact from Waste	Negative	Medium	Low
Environmental Pollution	Negative	Medium	Low
Noise Impacts	Negative	Low	Very Low
Dust Impacts	Negative	Low	Very Low
Flora	Negative	Low	Very Low
Fauna	Negative	Low	Very
Visual Intrusion	Negative	Medium	Low
Archaeological, Heritage & Cultural Aspects	Negative	Low	Very Low
Impact from Fire Risk	Negative	Medium	Low
Potential Operational Induced Impacts			
Socio-economic impacts:			
• Creation of employment	Positive	Low	Medium
• Acquiring of new skills	Positive	Low	Medium
• Revenue for local and GRN (taxes, etc.)	Positive	Low	Medium
• Improvement of general welfare	Positive	Low	Medium
• Facilitation of fuel accessibility	Positive	Medium	High
• Convenience to motorists on B1 (toilets, etc.)	Positive	High	High
• Social ills: drugs, alcohol, theft, poaching)	Negative	Medium	Low
Health & Safety			
• With effective management measures	Positive	Medium	High
• With poor management measures	Negative	High	Low
• With proper sanitation provided	Positive	Medium	High
• With risk & emergency plans implemented	Positive	Medium	High
• Without risk & emergency plans implemented	Negative	High	Low
• With a waste management plan	Positive	Medium	High
• Without a waste management plan	Negative	High	Medium
• With suitable PPE provided	Positive	Medium	Low
• Without suitable PPE provided	Negative	Low	Very Low
• With training provided	Positive	Medium	High

POTENTIAL IMPACTS	NATURE OF IMPACT	IMPACT SIGNIFICANCE	
		UNMITIGATED	MITIGATED
• Without training provided	Negative	High	Low
Traffic Congestion on B1 and D2404	Negative	Low	Very Low
Sedimentation & Soil Erosion	Negative	Medium	Low
Impact from Waste	Negative	Medium	Low
Environmental Pollution	Negative	Medium	Low
Noise Impacts	Negative	Medium	Low
Impacts from dust & noxious emissions	Negative	Medium	Low
Flora	Negative	Low	Very Low
Fauna	Negative	Medium	Low
Visual Intrusion	Negative	Medium	Low
Potential Impacts from Decommissioning			
Socio-economic impacts			
• Loss of employment	Negative	Medium	Low
• Loss of revenue to the State	Negative	Medium	Low
• Loss of business to local businesses	Negative	Medium	Low
Waste	Negative	Medium	Low
Dust	Negative	Medium	Low
Noise	Negative	Medium	Low
Surface & Underground	Negative	Low	Very Low
Ecological impacts	Negative	Medium	Low
Health & Safety	Negative	Low	Very Low
Impacts from Fire and or explosion	Negative	Medium	Very Low

9.0 CONCLUSION

Overall, the economic benefits that would accrue from the proposed project developed on a 5 ha of farmland will by far outweigh the limited negative impacts on the biological, natural and socio-economic environments. The development comprising of a truckport, filling station and related services is expected to perform positively in relation to the efficiency, equity and sustainability criteria.

If the promoter implements the measures proposed in the EMP, the negative environmental impacts that are associated with the development will be developed while the positive measures will be enhanced. Where impacts occur, prompt action should be taken to prevent the escalation of effects associated with such impacts.

Omuramba and its associates should use the EMP as an onsite protocol tool to measure its performances during all phases of the development. Audits should be carried out to ascertain compliance with the EMP for the development proposed by Omuramba. Parties responsible for any transgression of the EMP should be held accountable for any rehabilitation that may be required to repair the effects of impacts caused by the action of such a party.

10.0 RECOMMENDATION

Omuramba Roadhouse Service Station should take all the necessary measures recommended in the EMP during all phases of the project.

It is recommended that an Environmental Clearance Certificate (ECC) be granted to Omuramba Roadhouse Service Station CC for its proposed development at the intersection of B1 and D2404.

ANNEXURE A: LETTER OF INTENT



REPUBLIC OF NAMIBIA

MINISTRY OF MINES AND ENERGY

Tel: +264 61 284-8111
Fax: +264 61 238643 / 220386
E-mail: info@mme.gov.na
Website: www.mme.gov.na

6 Aviation Road
Private Bag 13297
WINDHOEK

Enquiries: J. Morris
Ref. 11/9/5

28 February 2022

Mr. Gernot Bahr
Omuramba Roadhouse Service Station
P.O Box 1837
Windhoek

Dear Mr. Bahr

RE: LETTER OF INTENT TO DEVELOP AND OPERATE A SERVICE STATION AT THE INTERSECTION OF B1 HIGHWAY AND D2404, OTJIWARONGO DISTRICT

We hereby acknowledge receipt of your letter of intent and business plan dated the 7 September 2021 in relation to the above-subject matter.

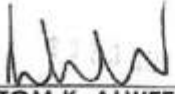
The Ministry has assessed and evaluated your letter of intent and business plan for constructing a new fuel site in the Otjiwarongo district.

We request that you submit, for our approval, three (3) sets of approved technical drawings for the proposed site. We also request that you submit for our endorsement, the application for Environmental Clearance Certificate (ECC).

The viability of the site is valid for **six (6) calendar months** from the date of this letter. You are, therefore, advised to apply for a fuel retail license in accordance with the Petroleum Products and Energy Regulations, 2000 and the published fuel retail guidelines and requirements, within the validity period.

Kindly take note, that this letter does not guarantee that you will be issued with the fuel retail license necessary to operate the site.

Sincerely yours,



TOM K. ALWEENDO, MP
MINISTER

ANNEXURE B: EXPRESSION OF INTEREST BY TOTAL NAMIBIA



TOTAL NAMIBIA (PTY) LTD
5 Otto Nitzsche St
Klein Windhoek
Windhoek
P.O. Box 4223
Windhoek
Namibia
Tel: +264 61-374 900
Fax: +264 61-374 911

03 June 2021

To Whom it May Concern

APPLICATION FOR A RETAIL LICENCE - CONFIRMATION BY SUPPLIER/WHOLESALER

Ref.: PETROLEUM PRODUCTS AND ENERGY ACT, 1990
PETROLEUM PRODUCTS REGULATIONS (2000)
APPLICATION FOR RETAIL LICENCE
(Regulation 4 (1))

TOTAL NAMIBIA (PTY) LTD hereby confirm that we intend to supply Mr Gernot Bahr, P O Box 1837 Windhoek, who will be trading as OMURAMBA ROADHOUSE SERVICE STATION CC, with fuels & lubricants products in the event of a successful application for a new retail outlet on the B1/D2404 intersection between Windhoek and Otjiwarongo.

We intend to provide the following items as assistance to the potential retailer:

1. Supply Fuel and lubricants products
2. Render Technical support on pumps and tanks
3. Render Marketing support

Signed for and on behalf of TOTAL NAMIBIA (PTY) LTD

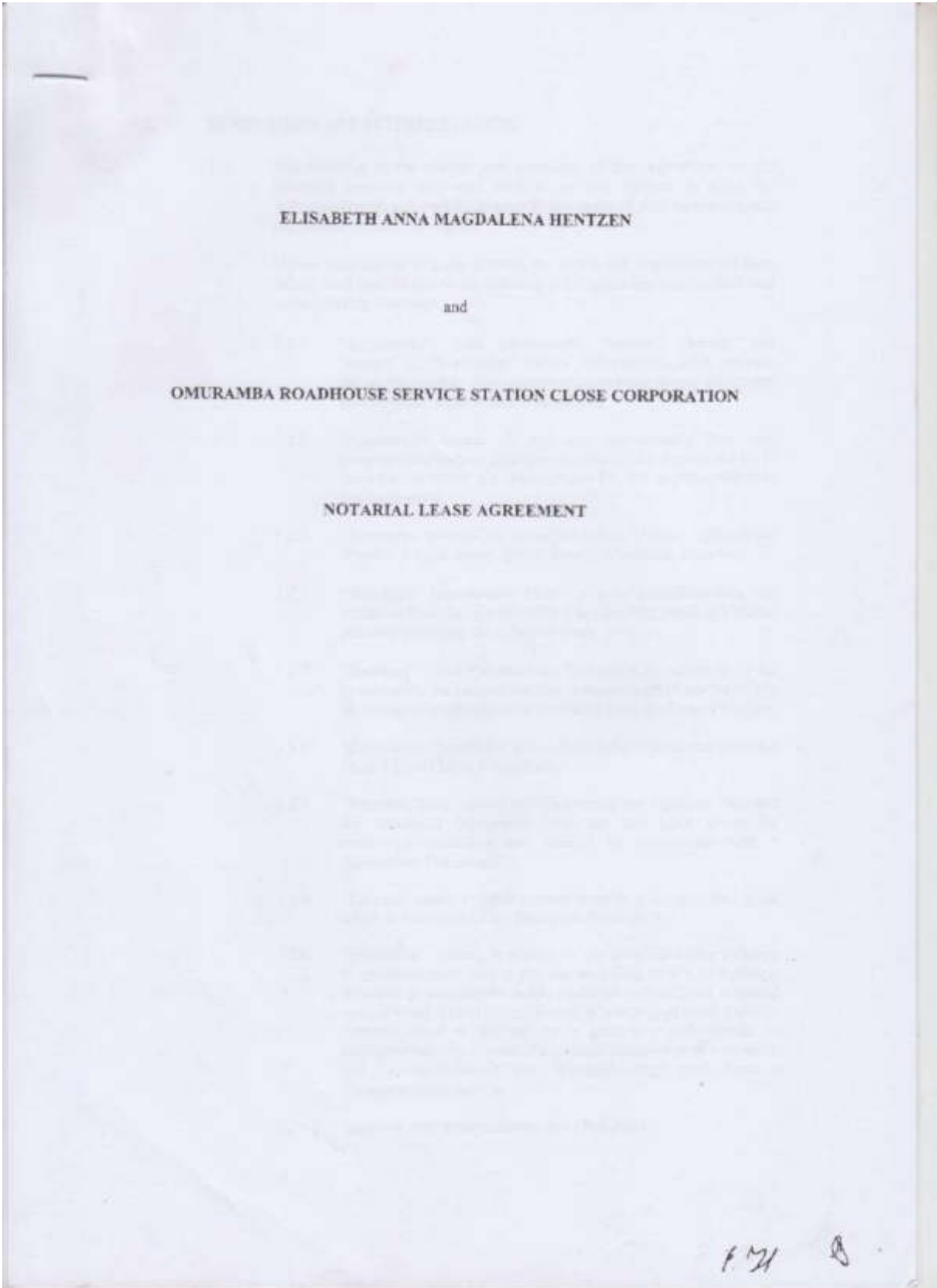
A handwritten signature in black ink, appearing to read "Willem de Witt".

Willem de Witt
Key Accounts Manager: Total Namibia (Pty) Ltd

Total Namibia (Pty) Ltd
5, Otto Nitzsche Strasse
Klein Windhoek
P.O. Box 4223
Tel: 374900 Fax: 374911 / 374912
Windhoek

Co Reg. No: 770107607

ANNEXURE C: LEASE AGREEMENT



1. DEFINITIONS AND INTERPRETATION

- 1.1. The headings to the clauses and annexures to this Agreement are for reference purposes only and shall in no way govern or affect the interpretation of, nor modify or amplify the terms of this Agreement, nor any clause or annexure hereof.
- 1.2. Unless inconsistent with the context, the words and expressions set forth below, shall bear the following meanings and cognate expressions shall bear corresponding meanings.
 - 1.2.1. "Agreement", "this Agreement", "herein", "hereto" and "hereof" and "hereunder" may be used interchangeably and each means the notarial lease agreement contained in this document, including any annexures and schedules;
 - 1.2.2. "Approvals" means all and any authorisation from any governmental body or otherwise in terms of this Agreement for or related to, or which is a pre-condition for, the implementation of this Agreement;
 - 1.2.3. "Attorneys" means Ellis Shilengudwa Inc., 1st floor, 1@Steps, o/o Grove & Chasie Street, Kleine Kuppe, Windhoek, Namibia;
 - 1.2.4. "Beneficial Occupation Date" means, notwithstanding the Signature Date and the Effective Date, the date which is 3 (three) business days after the Effective Date;
 - 1.2.5. "Business" means the petroleum business to be carried on by the Lessee under the License and involving amongst others the selling of petroleum products, to be conducted from the Lease Premises;
 - 1.2.6. "Conditions Precedent" means the condition precedent provided for in 3 (*Conditions Precedent*);
 - 1.2.7. "Effective Date" means notwithstanding the Signature Date and the Beneficial Occupation Date, the date upon which the conditions precedent are fulfilled in accordance with 3 (*Conditions Precedent*);
 - 1.2.8. "License" means a license granted (or to be granted) to the Lessee under and in terms of the Petroleum Products Act;
 - 1.2.9. "Encumber" means, in relation to any asset (including a share), to encumber such asset in any way including by way of a pledge, a cession *in securitatem debiti*, a general notarial bond, a special notarial bond, a deed of hypothecation, a mortgage bond, a charge (whether fixed or floating) or to grant any other similar or analogous security interest of any nature whatever over such asset, and "Encumbrance" and "Encumbering" shall have a corresponding meaning;
 - 1.2.10. "Labour Act" means Labour Act 11 of 2007;

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- 1.2.11. "Lease" means the lease of the Lease Premises as contained in this Agreement;
- 1.2.12. "Lease Period" means the period commencing on the Signature Date ("Lease Commencement Date") and terminating 9 (nine) years and 11 (eleven) months after the Lease Commencement Date;
- 1.2.13. "Lease Premises" means a portion of land measuring approximately 50 (fifty) hectares in extent, as per the provisional diagram annexed hereto, and situated on the following immovable property, namely:
- | | |
|------------------|--|
| CERTAIN: | Farm Wewelsburg No. 191 |
| SITUATE: | in the Registration Division "D", Otjozondjupa Region |
| MEASURING | 5078,3458 (five thousand and seventy-eight comma three four five eight) hectares |
| HELD BY | Deed of Transfer T 3253/2007; |
- 1.2.14. "Lessee" means Omurumba Roadhouse Service Station CC, a close corporation, duly registered and incorporated as such in accordance with the applicable laws of Namibia, with registration number CC/2010/0039;
- 1.2.15. "Lessor" means Elisabeth Anna Magdalena Hentzen, Namibian citizen with identity number 301116 0021 9;
- 1.2.16. "Parties" means, collectively:
- 1.2.16.1. Lessor; and
- 1.2.16.2. Lessee,
- and "Party" means either of them;
- 1.2.17. "Petroleum Products Act" collectively means Petroleum Products and Energy Act 13 of 1990 and the regulations issued in terms thereof;
- 1.2.18. "Rent" has the meaning ascribed thereto in 6.1;
- 1.2.19. "Signature Date" means, subject to 25 (*Signature*), the date upon which this Agreement is signed by the Party signing same last in time, provided that all Parties to the Agreement have then signed and executed this Agreement in the presence of a notary public;
- 1.2.20. "Term" means the duration of the Lease being 9 (nine) years and 11 (eleven) months from Lease Commencement Date; and

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1.2.21. "VAT" means Value Added Tax or any tax similar or equivalent to Value Added Tax imposed by or in accordance with the Value Added Tax Act 10 of 2000.

1.3. Any reference in this Agreement to –

1.3.1. "affiliate" means in relation to any person, a subsidiary of that person or a holding company of that person or any other subsidiary of the holding company;

1.3.2. "assets" means any one or more asset, whether moveable or immovable, corporeal or incorporeal and includes present and future properties, undertakings, revenues, rights and benefits of every description;

1.3.3. "authorisation" includes an approval, authorisation, consent, exemption, filing, licence, notarisation, registration, waiver, opinion and resolution;

1.3.4. "best endeavours" in relation to an action or omission, means that Party shall do all such things as are or may be necessary or desirable so as to achieve that action or omission and, to the extent that the action or omission is frustrated, hindered or otherwise difficult to attain, each of the Parties shall consult and co-operate with each other and continue to take action so as to achieve that action or omission until each of the Parties agree that it is not reasonable to take the action or is reasonable to omit taking an action, provided that any actions or omissions required to be undertaken:

1.3.4.1. shall at all times be commercially reasonable as regards all Parties; and

1.3.4.2. shall not be such as to result in a breach of fiduciary duty or contravention of any law;

1.3.5. "business hours" shall be construed as being the hours between 08h30 and 17h00 on any business day. Any reference to time shall be based upon Namibian Standard Time;

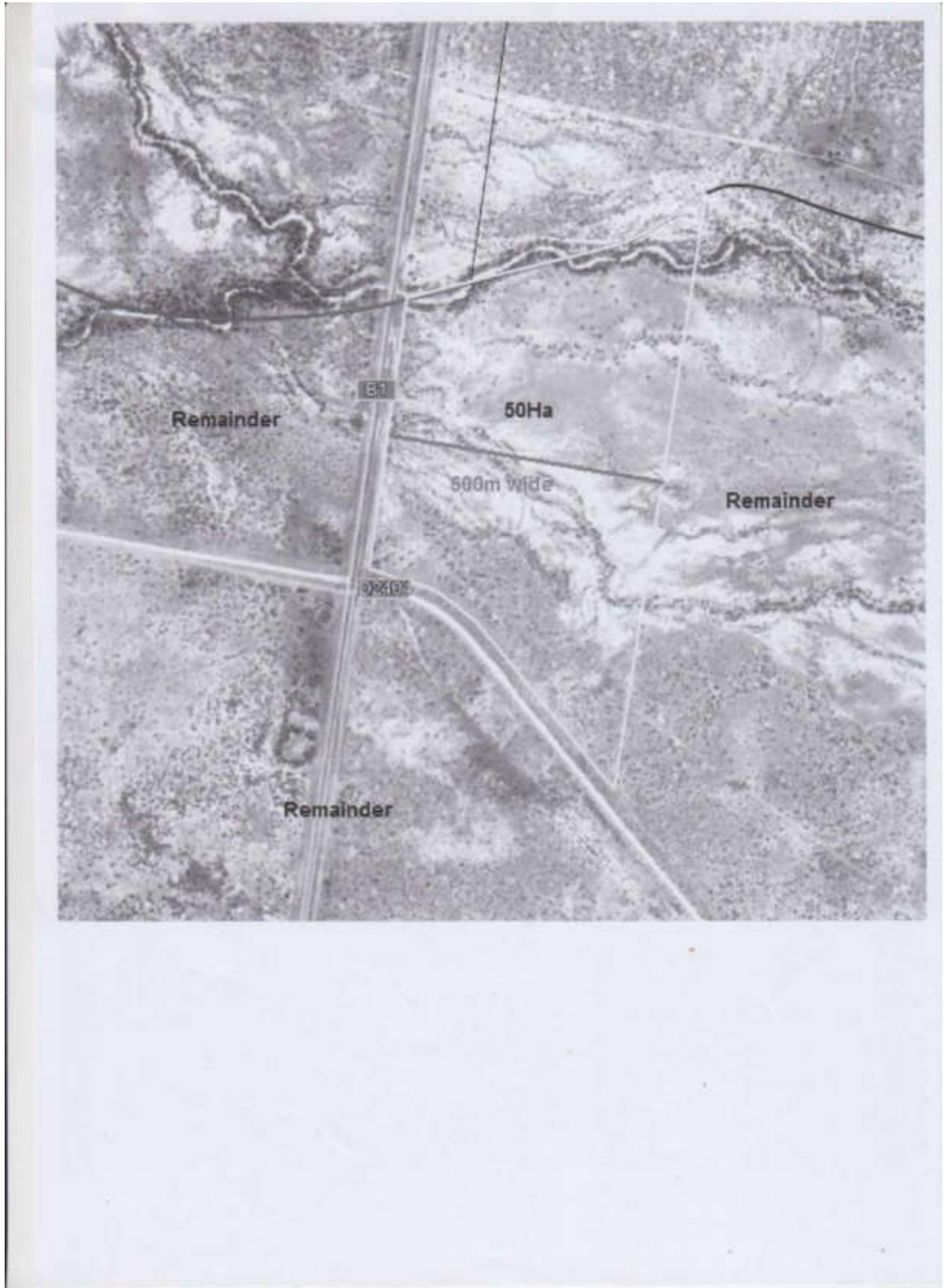
1.3.6. "days" shall be construed as calendar days unless qualified by the word "business", in which instance a "business day" will be any day other than a Saturday, Sunday or a recognised public holiday in Namibia;

1.3.7. "month" means a period starting on one day in a calendar month and ending on the numerically corresponding day in the next calendar month, except that:

1.3.7.1. if the numerically corresponding day is not a business day, that period shall end on the next business day in that calendar month in which that period is to end if there is one, or if there is not, on the immediately preceding business day; and

3

F 21 B



REFERENCES:

- ✓ **Linning K**, Economic Geology Series. Open File Report EG 070, Geological Report on the Cape Cross Salt Pan, 1965, Geological Survey of Namibia, Ministry of Mines and Energy
- ✓ **Lac Business Group Inc.** Salt Technology & Engineering, RR 3-79 Marple Road, Dalton
<http://www.lacsolarsalt.com/Brochure-08.pdf>
- ✓ **Veld Management Principles and Practices**
Fritz Van Oudetschoorn
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