

Environmental Impact Assessment for the Proposed Service Station, “Nambaza Service Station” at Onankali, situated on erf located on GPS Position: 18°11'17"S; 016° 22'41"E

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Project Details	
Project Title	The proposed development of the <i>Onankali Service Station</i> is planned for a parcel of land situated on <i>GPS Position: 18°11'17"S; 016° 22'41"E</i> . The envisioned project entails the construction of a standard service station with three dispensing pumps (petrol and diesel) with 3 double walled Underground Storage Tanks of 45 cubic metres with 4 compartments, a canopy covered forecourt, ablutions, tyre fitment & spares centre, convenience store and street upgrading in order to provide safe access to the proposed service station.
Environmental Clearance:	Environmental Clearance Certificate to be issued in the name of the Proponent and, a copy send to the Environmental Assessment Practitioner.
Report status:	Final Environmental Impact Assessment report
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Date:	05 February 2020
Approved by:	
Signature:	

Declaration of Independence: Environmental Assessment Practitioner

I, Julius Antonius declare that:

- I act as the independent environmental assessment practitioner in this application.
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favorable to the applicant.
- I declare that there are no circumstances that may compromise my objectivity in performing such work.
- I have expertise in conducting and reviewing environmental impact assessments, including knowledge of the Environmental Management Act No 7 of 2007, its associated Environmental Impact Assessment Regulations and any guidelines that have relevance to the proposed activity.
- I will comply with the Act, Regulations and all other applicable legislation.
- I have no, and will not engage in, conflicting interests in the undertaking of the activity.
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by the competent authority, and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application.
- I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report.
- I will keep a register of all interested and affected parties that participated in a public participation process; and
- I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not;
- I will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations and;
- I realise that a false declaration is an offence in terms of Regulation 30 (a) of the Regulations and is punishable in terms of Regulations 30 (2) of the Regulation and Section 43 (2) (a) and (b) of the Environmental Management Act No 7 of 2007.
- I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Regulations.

Signature (EAP)



Mr. Julius Antonius

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ABBREVIATIONS

ATM:	Automatic Teller Machine
EIA:	Environmental Impact Assessment
EAP:	Environmental Assessment Practitioner
EMP:	Environmental Management Plan
ESMP:	Environmental Scoping & Management Plan
ECC:	Environmental Clearance Certificate
ECO:	Environmental Control Officer
EO:	Environmental Officer
RA:	Roads Authority
NHC:	National Heritage Council
EMA:	Namibia Environmental Management Act (No. 7 of 2007)
MET:	Ministry of Environment and Tourism:
DEA:	Directorate of Environmental Affairs
MME:	Ministry of Mines and Energy
NEP:	National Energy Policy
OTA:	Ondonga Traditional Authority
OVC:	Onankali Village Council
IUCN:	International Union for Conservation of Nature
LNAPL:	Light Non-Aqueous Phase Liquids
MSDS:	Material Safety Data Sheet
NaCl:	Sodium chloride
PPE:	Personal Protective Equipment
PPM:	Parts per million
SANS:	South African National Standards
UNCCD:	United Nations Convention to Combat Desertification
WHO:	World Health Organization

GLOSSARY

Alternatives - A possible course of action, in place of another, that would meet the same purpose and need but which would avoid or minimize negative impacts or enhance project benefits. These can include alternative locations/sites, routes, layouts, processes, designs, schedules and/or inputs.

The “no-go” option constitutes the ‘without project’ option and provides a benchmark against which to evaluate changes; development should result in net benefit to society and should avoid undesirable negative impacts.

Assessment - The process of collecting, organising, analysing, interpreting and communicating information relevant to decision making.

Competent Authority - means a body or person empowered under the local authorities act or Environmental Management Act to enforce the rule of law.

Construction - means the building, erection or modification of a facility, structure or infrastructure that is necessary for the undertaking of an activity, including the modification, alteration, upgrading or decommissioning of such facility, structure or infrastructure.

Cumulative Impacts - in relation to an activity, means the impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.

Environment - As defined in the Environmental Assessment Policy and Environmental Management Act - “land, water and air; all organic and inorganic matter and living organisms as well as biological diversity; the interacting natural systems that include components referred to in sub-paragraphs, the human environment insofar as it represents archaeological, aesthetic, cultural, historic, economic, palaeontological or social values”.

Environmental Impact Assessment (EIA) - process of assessment of the effects of a development on the environment.

Environmental Management Plan (EMP) - A working document on environmental and socioeconomic mitigation measures, which must be implemented by several responsible parties during all the phases of the proposed project.

Environmental Management System (EMS) - An Environment Management System, or EMS, is a comprehensive approach to managing environmental issues, integrating environment-oriented thinking into every aspect of business management. An EMS ensures environmental considerations are a priority, along with other concerns such as costs, product quality, investments, PR productivity and strategic planning. An EMS generally makes a positive impact on a company’s bottom line. It increases efficiency and focuses on customer needs and marketplace conditions, improving both the company’s financial and environmental performance. By using an EMS to convert environmental problems into commercial opportunities, companies usually become more competitive.

Evaluation – means the process of ascertaining the relative importance or significance of information, the light of people’s values, preference and judgements in order to make a decision.

Hazard - Anything that has the potential to cause damage to life, property and/or the environment. The hazard of a particular material or installation is constant; that is, it would present the same hazard wherever it was present.

Interested and Affected Party (IAP) - any person, group of persons or organisation interested in, or affected by an activity; and any organ of state that may have jurisdiction over any aspect of the activity.

Mitigate - The implementation of practical measures to reduce adverse impacts.

Proponent (Applicant) - Any person who has submitted or intends to submit an application for an authorisation, as legislated by the Environmental Management Act no. 7 of 2007, to undertake an activity or activities identified as a listed activity or listed activities; or in any other notice published by the Minister or Ministry of Environment & Tourism.

Public - Citizens who have diverse cultural, educational, political and socio-economic characteristics. The public is not a homogeneous and unified group of people with a set of agreed common interests and aims. There is no single public. There are a number of publics, some of whom may emerge at any time during the process depending on their particular concerns and the issues involved.

Scoping Process - process of identifying: issues that will be relevant for consideration of the application; the potential environmental impacts of the proposed activity; and alternatives to the proposed activity that are feasible and reasonable.

Significant Effect/Impact - means an impact that by its magnitude, duration, intensity or probability of occurrence may have a notable effect on one or more aspects of the environment.

Stakeholder Engagement - The process of engagement between stakeholders (the proponent, authorities and IAPs) during the planning, assessment, implementation and/or management of proposals or activities. The level of stakeholder engagement varies depending on the nature of the proposal or activity as well as the level of commitment by stakeholders to the process. Stakeholder engagement can therefore be described by a spectrum or continuum of increasing levels of engagement in the decision-making process. The term is considered to be more appropriate than the term “public participation”.

Stakeholders - A sub-group of the public whose interests may be positively or negatively affected by a proposal or activity and/or who are concerned with a proposal or activity and its consequences. The term therefore includes the proponent, authorities (both the lead authority and other authorities) and all interested and affected parties (IAPs). The principle that environmental consultants and stakeholder engagement practitioners should be independent and unbiased excludes these groups from being considered stakeholders.

Sustainable Development - “Development that meets the needs of the current generation without compromising the ability of future generations to meet their own needs and aspirations” – the definition of the World Commission on Environment and Development (1987). “Improving the quality of human life while living within the carrying capacity of supporting ecosystems” – the definition given in a publication called “Caring for the Earth: A Strategy for Sustainable Living” by the International Union for Conservation of Nature (IUCN), the United Nations Environment Programme and the World Wide Fund for Nature (1991).

EXECUTIVE SUMMARY

The proponent, Namaza Investments cc (CC/2009/3926) is a wholly owned Namibian company which plans to develop a service station (the project) at *Onankali Village in the Oshikoto Region*. The construction of a service station is a listed activity in the Environmental Management Act of 2007 making it mandatory to conduct an Environmental Impact Assessment (EIA) and accordingly apply for an Environmental Clearance Certificate before implementing the project. Mr Julius Antonius, is the designated Environmental Assessment Practitioner (EAP) contracted to conduct the EIA process for Namaza Investments cc.

The project EIA presents an assessment of the potential environmental, occupational health and safety, social and community impacts, as well as risk mitigation measures and design enhancement for the Project. For this project, the EIA includes a scoping phase, during which interested and affected parties are given the opportunity to comment on the project, and the reporting phase, wherein the draft environmental scoping and management report is shared with stakeholders for their inputs.

The findings of the EIA reveal that the development of a service station poses no environmental risk. It further shows that the proposed activities pose limited occupational health and safety, social and traffic impacts risks; but in fact, have residual positive impacts on the community which of note include the creation of employment. The development will bring much needed services closer to the local and surrounding communities of Onankali.

Any potential environmental risks can be managed through the successful implementation of the proposed Environmental Management Plan (EMP).

1. INTRODUCTION

Namaza Investments cc plans to construct and operate of a service station in Onankali village (i.e. the project). Onankali is a village in the northern part of Namibia. It is situated in the Oshikoto Region, about 50 km South East of Ondangwa or 20 km North-West of Omuthiya. The project site is owned by Dr. Abisai Konstantinus, who is also the sole owner of Namaza Investments cc, the proponent for the project. The land has been approved by the Onankali Village council and the Ondonga Traditional Authority (OTA).

The construction, operations and decommissioning activities of the project (i.e. energy generation and distribution activities) requires compliance with the Environmental Impact Assessment (EIA) Regulations of 6 February 2012 (EIA Regulations) as promulgated in the Government Notice No 28, 29 and 30, circulated in terms of the Environmental Management Act (EMA), Act no. 7 of 2007.

The EIA regulations (under section 3), requires the proponent to “designate an environmental assessment practitioner to manage the assessment process.” In line with this requirement, Mr. Julius Antonius was appointed as an independent environmental consultant (Environmental Assessment Practitioner: EAP), to undertake the EIA required for the construction and operation of the proposed facility.

In terms of the EIA regulations, the proposed project requires an EMA EIA Scoping Process in terms of the EIA Regulations (GN no. R4878) as follow:

- Section 9.1: The manufacturing, storage, handling or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974.
- Section 9.4: The storage and handling of a dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location.
- Section 9.5: Construction of service stations or any other facility for the underground and aboveground storage of dangerous goods, including petrol, diesel, liquid, petroleum, gas or paraffin.

In line with the above, Environmental baseline information (EBI) must be carried out and prepared as part of an Environmental Impact Assessment (EIA) study of the site. Subsequently, the competent authority is required to undertake an assessment of this EIA and issue an Environmental Clearance Certificate if they are satisfied that all aspects and hazards are addressed, and proper and sufficient mitigation controls have been proposed.

On this backdrop, the objective of this report is to:

- Provide a project overview, a background on the operational guidelines, existing laws and regulations involved in operating the service station.
- Provide a baseline study of the original status of the environment in the project site before the development of the project. This included bio-physical environment and socio-economic conditions.
- Provide an analysis of the potential environmental impacts. This includes impact prediction and significance assessment.
- Present the preparation of an environmental management plan for the project.
- Finally, present the compiled EIA report.

The structure of this document is as follow: section 2 provides the project overview, section 3 provides Environmental characterization and baseline assessment of the project, Section 4 reference all relevant legislation, Section 5 provides the impact assessment report, and section 6 concludes the EIA report.

2. RELEVANT LEGISLATION AND PROCESSES

2.1 Applicable Legislation and Policies

The EIA is guided by the Namibian Environmental Impact Assessment Policy of 1994 and the Namibian Environmental Management Act of 2007, which stipulates activities that may have a significant impact on the environment. Furthermore, strong sustainable development is ensured by the review of policies and legislation which is employed as sound guiding tools for the entire EIA process. Table 1 below provides a review of the relevant Namibian legislation that has a bearing on the project development. The review is laid out to provide the proponent and Council of the requirements and expectation before and during the construction, operational and decommissioning phases of the project.

Table 1: Applicable legislation, Policies and/or Guidelines

Act/Regulation	Brief Description	Applicability to Project
Namibian Constitution First Amendment Act 34 of 1998	The State shall actively promote maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians" (Article 95(l)).	Ecological sustainability should inform and guide this EA and the proposed development
Environmental Management Act (7 of 2007)	Section 3 and 55 principles of environmental management	The principles should form the basis of key decisions in the project.
Environmental Impact Assessment Regulations (2012)	Provides guidelines for the EIA process.	The EIA consultants should adhere to the guidelines provided in these regulations.
Environmental Assessment Policy of Namibia (1995)	Seek to ensure that the environmental consequences of development projects and policies are considered, understood and incorporated into the planning process and that the term ENVIRONMENTAL is interpreted inclusive of biophysical, social economic, cultural, historical and political components.	All listed activities should be subjected to the EA procedures. The project requires authorisation from MET: DEA, which will be based on the findings of the detailed EIA study. This is EIA was done in accordance with the policy guidelines.
Forestry Act (12 of 2001)	The Act makes provision for the protection of various plant species	Harvesting permits are required from the Directorate of Forestry to clear protected vegetation species from the site.
Groundwater Protection Regulations	Regulations provides for the protection of the groundwater resource in a formally documented and legislated EIA (scoping process).	Onankali Village Council should be instituted to ensure decisions are taken regarding the potential impacts on the natural environment.
The Public Health Act 36 of 1919 and subsequent amendments	This Act prohibits the existence of a nuisance i.e. noise and odors.	The proponent should be familiar with the provisions of this act and control nuisances accordingly.

Hazardous Substances Ordinance (14 of 1974) as amended by the Atomic Energy Radiation Protection Act (2005)	The ordinance controls substances with potential to cause injury or ill-health or death of human beings because of their toxic, corrosive, irritant, strongly sensitizing or flammable nature. There are many products that are covered under this Act including petroleum fuels and lubricants.	Care should be taken throughout the product lifecycle: from receiving, storage, product use and disposal. In cases where special storage facilities are required the Proponent should provide as such.
Atmospheric Pollution Prevention Ordinance (Ordinance 11 of 1976)	This ordinance provides for the prevention of air pollution.	Measures are required to ensure that dust emanating from construction activities is kept at an acceptable levels and operations.
Soil Conservation Act (No. 76 of 1969)	The act provides for the prevention and combating of soil erosion, conservation, improvement and manner of use of soil and vegetation and protection of water resources.	The EAP should adhere to the guidelines provided in these regulations.
Draft Pollution Control and Waste Management Bill	This bill aims to prevent and regulate the discharge of pollutants to air, water, and land. It further aims to promote the establishment of a system of waste management and enable Namibia to meet its international obligations.	Waste management to be guided by 3R principle: Reduce, Reuse and Recycle. Only unrecyclable and unusable materials must be disposed of at a designated disposal site.
Labour Act 11 of 2007, No. 156 Labour Act, 1992 and associate Regulations relating to the health and safety Of Employees at work	The Act governs employer to employee relationship including issues pertaining to occupational health and safety, remuneration, provision of appropriate protective clothing, grant of leave etc.	To be compiled by the project proponent during the planning phase and implemented by the Contractor during construction, operation and decommissioning.
Petroleum Products and Energy Act 13 of 1990 and subsequent amendments	It gives control over the storage of refined petroleum products, and to provide for matters incidental thereto.	The handling and discharge of oil products must be conducted in line with this act.
Petroleum Regulations (1991 and 2000)	The regulations serve to regulate the purchase, sale, supply, acquisition, usage, possession, disposal, storage, transportation, recovery and refinement of used mineral oil are published under the Petroleum Products and Energy Act 13 of 1990	Environmental standards and avoidance of environmental harm caused by the keeping, handling, conveying, using and disposing of petroleum products must be done in line with these.
Road Traffic and Transport Act 22 of 1999; (as amended)	Obtain permission from Roads Authority to construct access route and to upgrade existing roads.	To be applied for from Roads Authority by the Contactor prior to commencement of Construction activities.
The Road Traffic and Transport Regulations, 2001	PART 4 of the regulations govern the transportation of dangerous goods.	The proponent must be guided by the provisions during the transport of any dangerous goods.

2.2 Key Industry Standard Requirements

The EIA process was also guided by the environmental best practices, engineering design controls and standards as Table 2 provides. These are required by Oil Companies and the Ministry of Mines and Energy (MME) in order to mitigate the risk that service stations pose.

Table 2: Applicable Industry Standard Requirements

Industry Standard	Brief Description
SANS 100131 (1977)	The storage and Handling of Liquid Fuel. Part 1: Small Consumer Installations.
SANS 100131 (1979)	The storage and Handling of Liquid Fuel. Part 11: Larger Consumer Installations
SANS 10400 (1990)	The application of the National Building Regulations
SANS 10089-1 (1999)	The petroleum industry Part 1: Storage and distribution of petroleum products in above-ground bulk installations
SABS 0131 (1999)	The petroleum industry Part 3: The installation, modification, and decommissioning of underground storage tanks, pumps/dispensers and pipework at service stations and consumer installations
SANS 10089-2 (2002)	The petroleum industry Part 2: Electrical installations in the distribution and marketing sector
SANS 1186-1 (2003)	Symbolic safety signs Part 1: Standard Signs and General Requirements
SANS 10142-1 (2003)	The wiring of the premises Part 1: Low-voltage installations
SANS 1535 (2003)	Glass-reinforced polyester-coated steel tanks for the underground storage of hydrocarbons and oxygenated solvents and intended for burial horizontally.
SANS 10131 2004	Above-ground storage tanks for petroleum products
SANS 10089-3 (2010)	The petroleum industry Part 3: The installation, modification, and decommissioning of underground storage tanks, pumps/dispensers and pipework at service stations and consumer installations.
SANS 1020 (2013):	Power-operated dispensing devices for flammable liquid fuels

2.3 Methodology and EIA Process

The EIA was conducted in chronological steps as summarised in Table 3. The methods employed were as follow: baseline information about the site and its surroundings was first obtained from existing secondary information as well as from a reconnaissance site visit. Subsequently, as part of the scoping process to determine potential environmental impacts, interested and affected parties (IAPs) were consulted for comments and opinions and these are put forward in this report. This process allowed assessment of the environmental impacts and subsequently the identification of the mitigation measures. These Mitigation measures were developed based on practical measures supported by research and scientific evidence. In addition to this, an environmental management plan (EMP) was prepared to give a guideline base to the project proponent on how the identified impacts can be mitigated and managed.

Table 3: The EIA Process

Phase	Brief Description
1. Clarifying terms of reference and levelling of	Leveling of expectations – an opening meeting was held between the consultancy team and the Proponent. The purpose of the meeting was to clarify the methodology, communication process between the Consultants and the Proponent, time frame and expected outcomes of the EIA study.
2. Literature review	Various related documents were reviewed to gather information on the potential impacts, the alternatives, how to mitigate the impacts, decommissioning and rehabilitation plan. The literature included maps, publications, and reports on topography, climate, land use, and socio-economic setup of the Village where the project site is located. The literature review helped in undertaking components and areas that would deserve attention during field assessment. The literature review which was mainly based on the desk study method included the following
3. Information search from internet, journals, books and stakeholders	The application of the National Building Regulations
4. Field work for making of detailed studies of the baseline situation.	This included bio-physical environment and socio-economic conditions.
5. Analysis of the potential environmental impacts.	This included impact prediction and significance assessment. The three major environmental compartments which are land, air and water were chosen to be observed and discussed in details. These compartments had been chosen because they are the main receiving environmental compartments that should be considered before implementing the project.
6. Public participation	The petroleum industry Part 2: Electrical installations in the distribution and marketing sector. A wide range of key stakeholders were invited to participate and express their views through various media communication. The consultations were done mainly to get a view of the affected parties as well as how they think the project should be carried out for minimum impacts on health, environment and the well-being of the people. Issues which were highlighted by stakeholders were incorporated into the EIA process, the project design and the proponents have committed the same during project implementation
7. Field surveys	Field surveys were carried out to verify some facts obtained from the literature review. A more informed assessment was however the main objective of the field studies. This was done to confirm the condition of the area in terms of climate, soils, land use, topography and socio-economic set up of the area. It also involved surveys to identify the different environmental components and their state to determine the most likely impacts.
8. Preparation of an environmental management plan for the project and finally and Compilation of the EIA report.	The completion of the various tasks assigned to the team members during the EIA study gave rise to separate individual reports. The reports were collated to come up with a complete environmental impact assessment report.

2.3 EIA Practitioner's details

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Mr. Julius Antonius was appointed by the proponent (Namaza Investments cc) as the Environmental Assessment Practitioner (EAP) to conduct the EIA for the application of the ECC for the construction of a service station at Onankali (Nambaza Service Station). Mr. Antonius is a private Environment, Health and Safety consultant. He has diverse experience in the industry spanning more than 10 years.

He has extensive experience and knowledge as a environment, health, and safety professional with leadership roles uranium mining operations of Rio Tinto, Dundee Minerals (Tsumeb). He is familiar with all required industrial safety procedures in OHSE & Wellness. He is prepared to service and facilitate effective HSE coordination through the organisation.

Mr. Antonius also has a history and a proven track record of accident & injury prevention, investigations and critical risk management integrated with Employee Wellness & Assistant Programs (EWP & EAP). A candidate who combines loyalty and dedication with strong attention to details and highly intellect in decision making, leadership and management.

His core areas of expertise include:

- Environmental Impact Assessment
- Health and Safety
- Strategic Environmental Assessment
- Environmental Investigations
- Research and Training
- Feasibility Studies
- Agronomy
- Monitoring and Evaluation

Mr. Antonius draws his expertise from diverse qualifications obtained from regional and international universities. Mr. Antonius declares that we have no interests in this project and is independent and will act as such during the EIA process as required by the EIA regulations (see page 3 for complete declaration).

3. PROJECT OVERVIEW

Namaza Investments cc intends to construct and operate a service station in Onankali village in the Onyaanya district, within the Oshana Region, Northern Namibia. The project is envisaged to be a standard service station, with three dispensing fuel pumps (petrol and diesel) equipped with 3 double wall underground storage tanks of 45 cubic meters.

3.1 Site Location

The project is located on a 4000 sqm communal parcel of land with GPS coordinates: 18°11'17"S; 016° 22'41"E on the east of the B1 road, adjacent to the ministry of agriculture offices in Onankali village. The project site is owned by Mr. Abisai Konstantinus, who is also the sole owner of Namaza Investments cc, the proponent for the project.

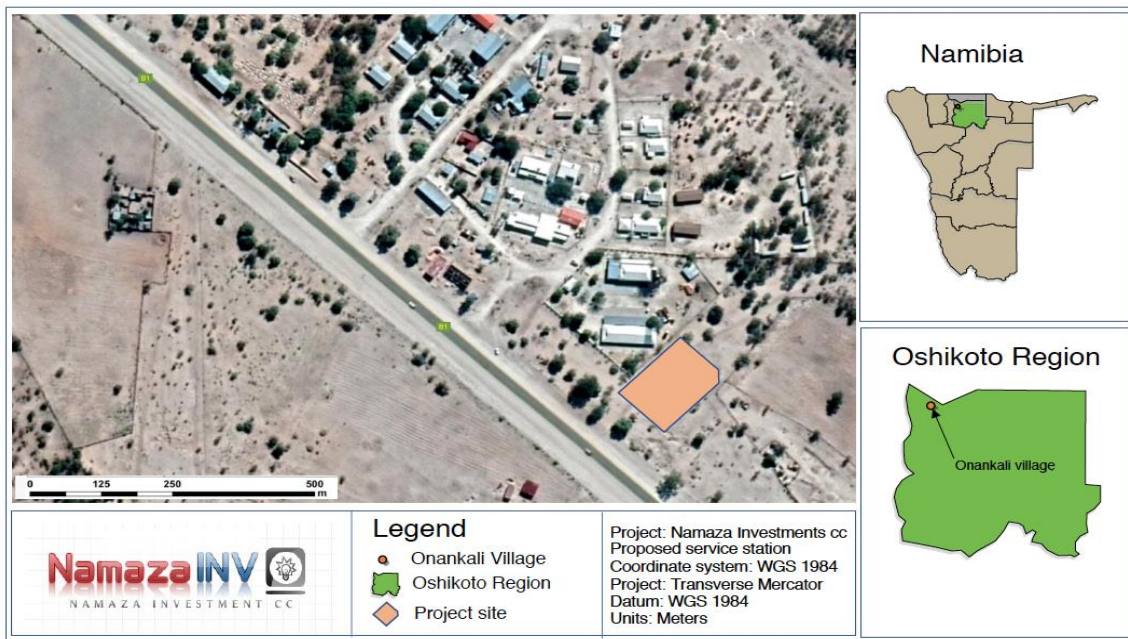


Figure 2: Site location



Figure 3: Project Location (satellite view)

3.2 Project Details

The proposed service station entails the construction and operation as well as associated infrastructure and services for the provision of fuel and related supplies. The proposed service station will have 4 partitions, namely: a canopy covered forecourt, ablutions, tyre fitment & spares shop, and a convenience store; completed with interlocked pavements to provide safe access to the proposed service station.

The project dimensions will be as follow:

- Total buildings (4 x shops, ablution facilities, tyre fitment, convenient store) with a total area measuring 820 sqm.
- Total site area measures 4000 sqm comprising a steel canopy, pedestrian walkway and duct, relaxation deck, cages, backyard paved area, pumps zone, driveways, parking's with shade net cover and landscaping.



Figure 4: Concept Design for Nambaza service station

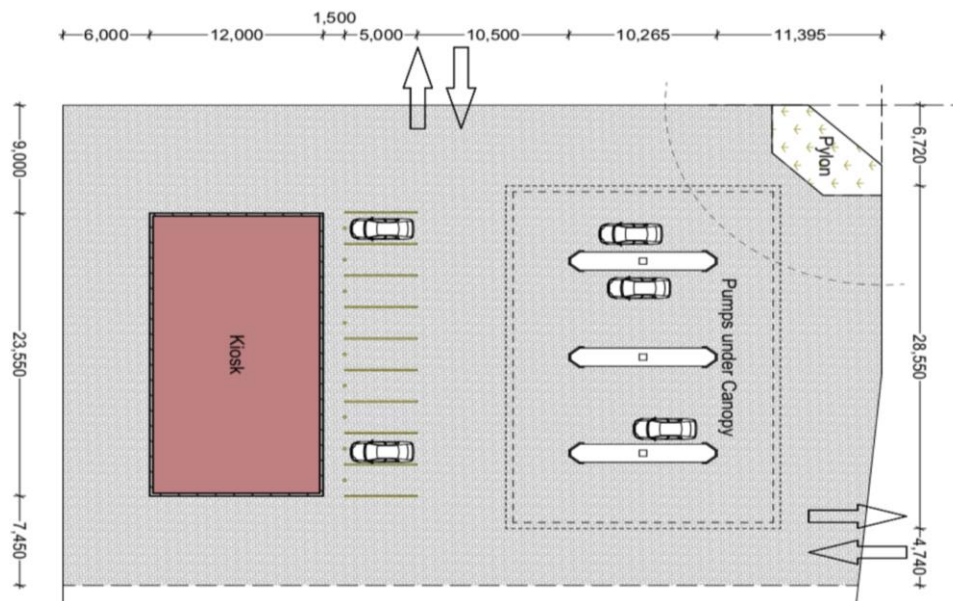


Figure 5: Plan layout for Nambaza Service station

3.3 Phases of the Project

The EIA study will specifically look at the activities in the following phases (limited to the immediate environment on and around the location of the project site): Planning and Design, Construction, Operational, and Decommissioning phases of the project.

3.3.1 Planning and Design Phase

This phase entails the planning, designing and documenting the project. It offers an ideal opportunity to consider and incorporate proactive environmental management measures with the goal of attaining sustainable development. While there is still the chance of accidental impacts taking place; however, through the incorporation of contingency plans (e.g. as proposed in the EMP) during the planning phase, the necessary corrective action can be taken to further limit potential impacts.

3.3.2 Construction phase

This phase entails the actual development of the project infrastructure. The activities during this phase include:

- Excavation of trenches and pits for services and infrastructure
- Installation of engineering services, underground storage tanks, oil separator, spill control infrastructure, submersibles, generator and dispensing pumps
- Electrical reticulation above and below ground
- Construction of buildings, paving, pump islands, storm water drainage, site access streets and related infrastructure.
- Transportation of equipment, components, machines and building material to site
- Site clean-up and housekeeping.

The bulk of the impacts during this phase will have immediate effects (e.g. noise, dust and water pollution). If the site is monitored on a continual basis during the construction phase, it is possible to identify these impacts as they occur. These impacts can then be mitigated through the contingency plans identified in the planning phase, together with a commitment to sound environmental management.

3.3.3 Operational phase

The operational phase entails the operation of the project for the intended purpose.

The activities during this phase include:

- Decanting fuel to the underground storage tanks from street tankers
- Fuel dispensing into vehicles and approved containers
- Tyre repair operations
- Operations of the kitchen and onsite shops
- Site clean-up and housekeeping

Similar to the construction phase, the bulk of impacts during this phase will be the additional traffic generated by vehicles have (e.g. noise, dust and light pollution). If the site is monitored on a continual basis during the construction phase, it is possible to identify these impacts as they occur. These impacts can then be mitigated through the contingency plans identified in the planning phase, together with a commitment to sound environmental management.

3.3.4 Decommissioning phase

- Demolition and removal of physical structure not to be reused for further land use.
- Site rehabilitation and clean-up.

3.4 Need and Desirability

The economy of Onankali Villages is largely driven by agriculture, pensioner income, retail activity, and public services. Onankali lies along a major arterial roadway (the B1 road) and is subsequently dominated by intra-urban transport (for both passenger and freight transport). Onankali is the largest village in a radius of 30 km, serving as a service center to roughly 20 surrounding villages for public services including the police, the hospital, the church, high school and government agriculture offices. Unofficial village records shows Onankali village to have a population of about 3243, and 111 traditional homesteads (omagumbo). There is a clinic, ELCIN church, mini markets, one combined school and several primary schools.

Nambaza service station in Onankali will supply local and long-distance taxis, heavy vehicle drivers and private commuters with a safe and controlled area to stop, park and fill their tanks. The village headman, Tate Nafuka said the project will be a blessing to the village seeing it will create employment opportunities to the village inhabitants. Nambaza service station is expected to provide 24 part time employment during construction and during operation expects to create 35 permanent jobs including 3 part time positions.

The service station also falls on a well-established route of a main national arterial roadway (B1 route) which is used for intra-village commuting and long-distance traveling. The additional services such as sanitation, water, storm water and ATMs will also be a benefit to the village as these services are already in planning but far from being developed.

Nambaza service station will offer essential services for the surrounding communities as it will help to get fuel and basic necessities at ease within their locations. The closest related practice is the Shell service station Omuthiya, situated about 30 km south of the proposed location. The distance is quite long and discouraging to the local inhabitants.

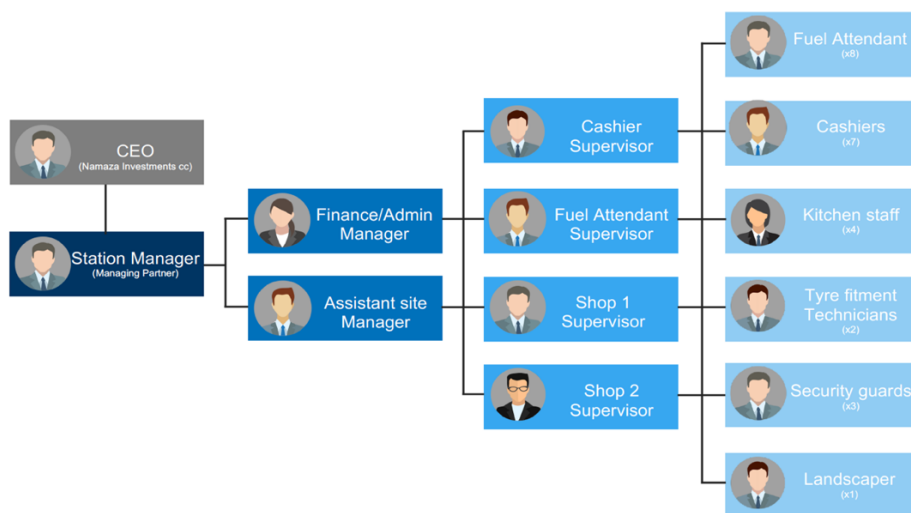


Figure 6: Organizational chart: Nambaza Service station

The operation of Nambaza service station will contribute to more economic activities resulting in increased trade and industrial activity contributing to the economic development of Onankali village.

4. PUBLIC PARTICIPATION PROCESS

Public consultation is an integral part of a comprehensive EIA and is done to ensure that issues are identified early during the process before major decisions are made. It is a requirement to carry out public consultations under the Namibia Environmental Assessment Policy of 1994 and also to achieve principles of best practice during the EIA process.

Effective public involvement is an essential component of many decision-making structures, and effective community involvement is the only way in which the power given to communities can be used efficiently. The Public Participation Process is designed to provide sufficient and accessible information to interested and affected parties (I&AP's) in an objective manner.

4.1 Purpose of the Public Participation Process

The purpose of the public participation process was to:

- provide information to IAPs and other stakeholders about the project background, proposed site, project concept and predicted potential impacts.
- Establish the public's interests, concerns and expectations regarding the proposed project.
- Obtain input from IAPs, the public and other key stakeholders.
- Finally, assist the IAPs to:
 - Verify that their issues have been captured;
 - Verify that their issues have been considered by the technical investigations; and
 - Comment on the findings of the Basic Assessment Report.

4.2 Identification of Key Stakeholders

The following key stakeholders were identified for consultation purposes:

- Ministry of Mines & Energy
- Onankali village council
- Onankali community members,
- Government offices in proximity
- Other members with interest or affected by the project.

4.3 Initiation of Environmental Scoping Process

The Background Information Document (BID) (attached Annex 3) was promulgated to the enumerated stakeholders (see section 4.2). The BID contained the relevant information about the proposed project and promoted stakeholders and public participation in the scoping process. A comment sheet was provided at the end of the BID report inviting comments on issues of interest and importance to the stakeholders. No comments were received from this invitation (see Annex 2).

The scoping process was also initiated by publicizing it through the *Confidante* and the Namibian newspapers (*Confidante* 23-September 2019 and 07 October 2019, *Namibian* 27 September, 30 September 2019). The publications announced the beginning of the scoping process and invited stakeholders and members of the public to register as IAPs so as to participate in the EIA for the construction of the service station. IAPs were to register with the Environmental Consultant and to submit their concerns or inputs at j88antonius@gmail.com. Additionally, they were informed of a public participation meeting on the 26 October 2019. The same information was passed to the village head who mobilised the meeting amongst the villagers. No-one officially registered as an I&AP and no comments were registered during this stage.

4.4 Public Consultation

Subsequent the promulgation of the BID to IAPs and advertisements in Newspapers, A public consultation meeting was held on the 31st October 2019. Annex 3 provides proof of this. The procedure followed in the public consultation was in line with the Environmental Management Act (EMA No 7 of 2007) and the Environmental Impact Assessment Regulations of 2012 as follows:

- Site notices were first erected (at prominent points in Onankali). This was done after the newspaper adverts.
- Even though no-one registered as an I&AP, the following institutions and organs of state and traditional authority were still identified as I&AP's and thus added to the register of the I&AP's:
 - Onankali Village Council
 - Ondonga Traditional Authority
 - Ministry of Mines and Energy
 - Ms Nangula Malulu (neighbour to East)
 - Ministry of Agriculture, Division of Rural water Development, Director Mr. Stevenson Tuukondjele.

The Public Consultation Meeting was attended by sixteen (16) I&AP's, all of which were villagers from Onankali. All the IAPs who participated during the consultation from the village were subsistence farmers doing integrated livestock and crop production. Each of them owned at least chickens, goats / sheep, pigs and cattle and grew millet (Mahangu) during the rainy season. They also complement their incomes with cash remittances from their relatives working in various urban areas.

4.4.1 Issues & Concerns Raised

The I&APs responded positively and participated in the consultation exercise with enthusiasm. Only one major issue of importance was observed recurrently. The community wanted to know whether they will get preference for employment opportunities given the highlighted risks of the service station. The following comments were also registered; however, they were considered secondary:

- How many jobs will be created?
- Where can we apply for jobs;
- Will there be a taxi rank at the service station?
- Will there be ATM's installed?
- Please realise the development, we need it.

The proponent was informed and requested to consider the community requests.

4.4.2 Response by Proponent on Issues & Concerns Raised

The proponent (Namaza Investments cc) respondent to the comments as follow:

- The service station will create about 28 permanent jobs, and these will be sourced from local surroundings.
- The owner will ask the contractor to consider giving unskilled and semi-skilled work to residents of Onankali and the surrounds and we will make this a tender contract requirement in order to give locals a chance of employment opportunities.
- When the project gets closer to completion the owner will advertise for positions and they will take CV's onsite.
- We will try to install ATMs.

4.4.3 Review of Draft Environmental Scoping and Management Plan Report

The draft report was compiled and shared with the Onankali village headman on the 15 January 2020. The same was also posted at the Ministry of Mines and Energy Resource Centre for public review and commenting for a minimum period of 2 weeks. A re-advertisement to that effect was also placed in the Confidante Newspaper of 23-29 January 2020 informing all Interested and Affect Parties that the EIA process was concluded. A detailed EIA report was available for their comments and that, an electronic copy could be mailed on request from j88antoni@ gmail.com.

4.4.4 Public Participation: Way Forward

No comments on the reports were received and as a result the draft was adopted as the final report before submission to the Competent Authority: MME and the decision regarding the EIA report will be published.

4.5 Identification of Alternatives

This section covers a discussion of alternatives to the proposed construction of the service station. The “do nothing” alternative was also considered.

4.5.1 Alternative sites

Two alternative sites were considered in the borders of Onankali village. Both these sites belong to the proponent and lie adjacent the B1 highway. Alternative 1 is a 8200 sqm plot located about 2 km north of the current site in GPS position: 18°10'35.4"S 16°21'55.6"E. Alternative 2 is located about 1 km north of the current site on GPS position: 18°11'01.1"S 16°22'20.2"E. The current project side was selected based on business sense only.

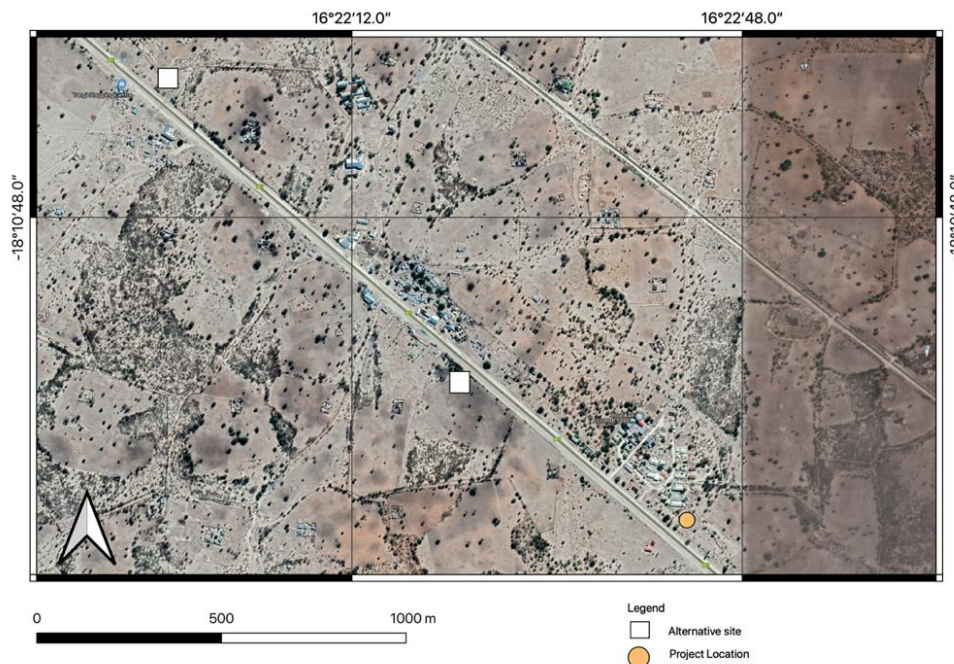


Figure 7: Alternative project sites

4.5.2 No-Go Option

The “no-go” option means maintaining the status quo were no service station will be constructed. This would be the best for the environment given that it remains untouched. However, that situation is not favoured as it means no development and lack of employment opportunities for the local people.

5. ENVIRONMENTAL CHARACTERIZATION OF SITE-BASELINE ASSESSMENT

5.1 Project Location

The project site is located on a 4000 sqm communal parcel of land with GPS coordinates: 22°18'48"S; 016° 37'48"E on the east of the B1 road, adjacent to the ministry of agriculture offices in Onankali village (see Figures 2 and 3).

5.2 Project Site Work

The site will be cleared and compacted to ready the site for construction.

Subsequently, the following critical work will be done:

- Construction of access road works, paving and parking
- Excavation of trenches for underground services, oil separator, storage tanks, office and ancillary buildings foundations
- Excavation for and Installation of 3 double walled Underground Storage Tanks of 45 000 cubic metres with 5 compartments
- Installation of oil separator
- Generator installation
- Electrical kiosk construction
- Internal Electrical reticulation
- Internal sewer reticulation
- Internal water reticulation
- Internal storm water reticulation and construction of drainages
- Construction of buildings
- Construction of steel canopy
- Installation of 3 double fuelling islands
- Installation of six dispensing pumps (petrol and diesel) on the islands
- Installation of submersibles and valves
- Installation of air gauges and compressor
- Installation of air-conditioning, data communication systems and signage
- Installation of electrical fence
- Landscaping

5.3 Project Site and Surrounding Land Use

The project site location sits east of the B1 road, adjacent and south of the ministry of agriculture offices in Onankali village (see Figures 2 and 3). This area of the village is an emerging commercial and social services office park. The major livestock kept in this area are cattle, sheep, donkeys and goats. A few households have free roaming pigs as well.

The land use of the site was taken out of vast land that is cleared and awaiting light industrial and residential development. The land used to belong to the Onankali Village Council but is now in private hands. To the immediate south of the project site is a traditional village homestead belonging to Mrs Nangula Malulu. To the immediate east is vacant land earmarked for residential development. To the north is the ministry of agriculture offices in Onankali. Lastly, to the west is the B1 national arterial roadway, beyond of which is the Telecom Namibia network tower. The police station is located about 147 meters to the west of the site and the Hospital is located 215 meters north of the site.



Figure 7: North view



Figure 8: East view



Figure 9: South view



Figure 10: West view

5.4 Geographical and Biophysical Information

5.4.1 Topography

The area is characterized by flat plains which covers plateaus of the Oshikoto and Oshana regions in northern Namibia. The general topography is defined by the cuvelai delta (oshanas) and the mopane tree savanna. The cuvelai delta which occurs between Ondangwa and Ruacana was formed by a varying regime of flooding, slow-flowing water, and the depositing of wind-blown sands from the east. The project site is generally flat and well drained but has pockets of holes from dug trenches that collect water during the rainy season.

5.4.2 Soil and Geology

Geographically, the soils of Onankali belong to the Kalahari group (arenosols). Rocks do not occur but precipitated calcareous concretes, 'white stones' are found in some sites. The soils are poor in humus and plant nutrients. The soil reaction varies from neutral to strongly alkaline, which together with high evaporation causes the danger of salinization. The soil is generally sensitive to erosion. Onankali falls on the Lishana sub basin of the Owambo basin which is characterized by roughly 400m of Kalahari deposits, formed by various deposits of sandstone and clay. The project site's general water-holding capacity is low and water generally drains quickly. This type of soil can support medium densities of livestock and wildlife and have relatively high soil fertility (Atlas of Namibia, 2002).

5.4.3 Climate and Meteorology

The rainfall in Onankali ranges between 350mm and 550mm. Usually most of the rain fall between November and April with the peak in February. Drought, a long period of low rainfall is common. It is highly predictable that drought will occur frequently, and thus not considered 'abnormal'.

Intense radiation and high temperatures often characterize Onankali's climate. Usually most high temperatures fall between August and December. The average annual temperature is between 18-20°C, with minimum annual temperatures of 4-6 °C and annual maximum temperatures of 34-37.5 °C. Between the driest and wettest months, the difference in precipitation is 114 mm. Throughout the year, temperatures vary by 9.2 °C.

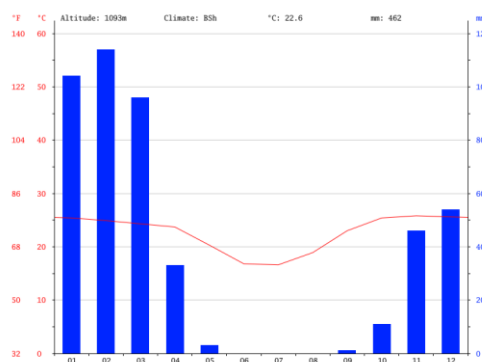


Figure 11: Onankali precipitation and temperature by month in 2018 (www.climate-data.org)

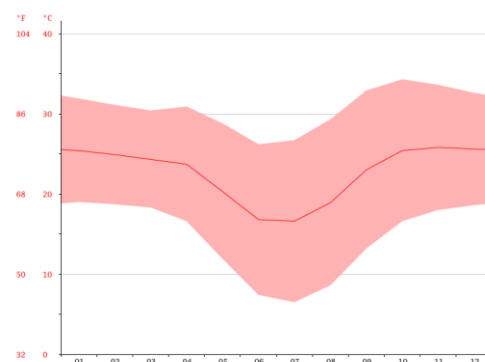


Figure 12: Onankali air temperature by month in 2018 (*ibid*)

5.4.4 Hydrology (Groundwater) and Geological stability of the site

The regional groundwater potential of Onankali falls under the Cuvelai-Etosha Basin. The Cuvelai-Etosha basin has high yield with a constant southwards flow towards the low lying Etosha pan. A smaller cuvelai system, which originates further north-east in Angola, drains central and eastern parts of the Oshana Region and the north-western Oshikoto Region to reach the Etosha Pan via the Oshigambo, Odila and Nipele rivers. Groundwater is hosted in the karstified and fractured marble bands, dolomite (secondary aquifers) of the Huttenberg Formation and Quaternary sediments surficial deposits (primary aquifers). Most rainwater in Onankali evaporates, drains away into the ground or is captured by plants. Generally, surface water in Namibia is sparse and therefore groundwater is a resource of key importance. According to the geological sheets, there were no definite faults identified in close proximity of the project site. Also, there are no abstraction boreholes on or near the site. The project site is however regarded by the geo-hydrologists as potentially sensitive for development from a geo-hydrological and geological point of view. Major geotechnical constraints include:

- Upper collapsible soil horizons;
- Perched water tables;
- High erosion potential; and
- Localised disturbed areas due to fill.

Furthermore, major geo-hydrological constraints include:

- The upper sandy and gravelly horizons are highly permeable, and pollutants will rapidly percolate through such horizons;
- Perched water conditions are expected in some areas; and
- The ground water table is expected to be fairly shallow.

Therefore, mitigation measures to address the soil and hydrological conditions and potential impacts must be taken into consideration during development and operational phases. The following minimum precautionary measures must be implemented:

- Sealing of the forecourt areas where fuel products are handled to prevent infiltration of petroleum products into the soil/rocks underlying the site;
- Storm water draining from the surfaces areas should be collected in a sealed sump to be treated or removed;
- Preventative measures should be installed to prevent the storm water or other liquids draining into the soil;
- Subsurface fuel tanks must be placed in concrete encasements with a sump system to prevent spilled fuel from entering the bedrock or aquifer;
- Fuel lines and dispensers should be rendered leak-proof and are recommended to be placed in encasements.

5.4.5 Atmosphere and air quality

The proposed site is located at an open area free from atmospheric pollution. Visual observation showed the atmosphere is clear. The street West from the main site access, east and South are not dusty because the streets are tarred. The Onankali township to the east of the site is electrified thus cooking is generally done with electricity. There are however a small population of squatters and a number of these use firewood and waste wood for cooking as well as residents of the informal settlements. During the evenings there is a distinct pungent smell of open fires especially when there is atmospheric inversion.

5.4.6 Vegetation

The project site falls on the “Saline Desert with Dwarf Shrub Fringe” of the Etosha pan, wherein there extends a tongue of “Mopane Savanna” Giess (1971). Giess describes this vegetation type as dominated by *Colophospermum mopane*, which occurs both as a shrubland or woodland (ibid).

5.4.7 Wild life and animal habitat

The project site is in the heart of a village where domestic animals such as cattle, sheep, goats and donkeys are common not wildlife. The project site environment has undergone massive clearing and compacting activities that have removed habitats for wildlife. This has altered the required natural environment for wildlife and animal habitats.

5.4.8 Utilities and Aesthetics

The site is accessible because is situated along the B1 arterial roadway. There are electricity poles on the left/south side of the site in the service exclusion zone running between the site and the B1 roadway. Services for telecommunications are also available, running east of the site. Water systems are all underground and installed in the project. Sewerage systems are not installed. The project plan is to develop aesthetic structures around the environment. Site entry and exit will be as follows:

- From the B1 road: Entry from the West and turn RIGHT (Red in Figure 13)
- From the Site: Exit to the B1 road to the new three way (Green in *ibid*)



Figure13: Project Site ‘Entry’ and ‘Exit’ (source: google maps)

5.4.9 Socio-economic Status

There is no permanent socio-economic activity that takes place on the site. Once the site is developed it will result in a positive socio-economic contributor through job creation during construction and operation as well as provide much needed services and spin off industries in the immediate vicinity.

5.4.10 Heritage, Cultural and Archaeological Aspects

There are no churches, mosques or related buildings in close proximity to the site. No known archaeological resources have been noted in the vicinity. No other structures, sites or spheres of heritage of cultural significance was determined to be in close proximity to the site.

6 IMPACT IDENTIFICATION AND ASSESSMENT

A key part of the EIA Scoping Process is the preliminary identification and consideration of issues and concerns that may impact (positively and/or negatively) with the biophysical and socio-economic environments. Issues identified as potentially significant during the Scoping Phase form the basis on which further studies were conducted in the EIA.

The potential impacts on environmental and social resources arising from the proposed development include direct and indirect impacts. Potential impacts were also linked to the different stages of the project which are identified as construction, operation and decommissioning phases. The following sections provides a brief description of the most important of these impacts.

6.1 Construction Phase

During the construction phase it is expected that, the main sources of impact will result due to the use of heavy-duty vehicles during construction. The predicted impacts cannot be quantified, primarily due to the lack of detailed information related to scheduling and positioning of construction related activities which will only come out in the feasibility study. Instead a qualitative description of the impacts is done which involves the identification of possible sources of emissions and the provision of details related to their impacts. The primary HSES impacts from the construction of service stations include air and noise quality impacts.

6.1.1 Air Quality impacts

The construction of a service station generally consists of a series of different operations, each which has a different duration and potential to impact air quality. The major impactor of air quality during the construction phase is dust emission. Dust emission will vary from day to day depending on the phase of construction, the level of activity, and the prevailing meteorological conditions. Dust will be generated significantly due to the dry conditions and the sandy texture of the soils in the project area. The following possible sources of dust generation have been identified as activities which could potentially generate dust during construction operations at the site:

- Transportation of materials
- Scraping;
- Debris handling;
- Land clearing for infrastructure

To avoid the generation of unnecessary dust, material drop height should be reduced and material storage piles should be protected from wind erosion. This can take the form of wind breaks, water sprays or vegetation of piles. All stockpiles should be damped down, especially during dry weather. It should be noted that emissions generated by wind are also dependent on the frequency of disturbance of the erodible surface. Dust created during the transportation can be limited by watering the road sections that are being used and by either wetting the material being transported or covering the back of the trucks, to limit the windblown dust from the load.

6.1.2 Noise Quality impacts

The major part of service station construction usually takes place with heavy duty earth moving machinery such as bulldozers and heavy industrial activity such as welding etc. Excessive noise is generated during this process, which often can lead to disgruntled community members. Noise can also be generated during the

transportation of the construction material, usually by truck, to and from the site. Noise impacts from the construction phase can be mitigated by restricting heavy duty work to hours of daylight.

6.2 Operational Phase

6.2.1 Soil and Groundwater Pollution

Groundwater and soil pollution from hydrocarbon products are risks associated with the storage and handling of petroleum products (hydrocarbons). When a release of hydrocarbon products takes place into the soil, infiltrates the soil in the form of Light Non-Aqueous Phase Liquids (LNAPL). When this happens LNAPL start to migrate vertically downwards. The shallow ground zone between the land surface and the top of the ground water table where fuel tanks are installed is called the vadose zone.

If LNAPL are released into the vadose zone they could flow through the central portion of the soil pores until residual saturation is reached. If this happens, a three-phase system consisting of water, LNAPL, and air is formed. Infiltrating water dissolves the components within the LNAPL and transports them to the water table. These dissolved contaminants form a contaminated plume radiating from the area of the residual product. As these vapours diffuse into adjoining soil areas, they may partition back into the water phase and transfer contamination over wider areas. If the soil surface is relatively impermeable, vapours will not diffuse across the surface boundary and concentrations of contaminants in the soil atmosphere may build up to equilibrium conditions. Dissolved components of the LNAPL may also precede the less soluble components and may change the wetting properties of the water, causing a reduction in the residual water content and a decrease in the height of the capillary fringe.

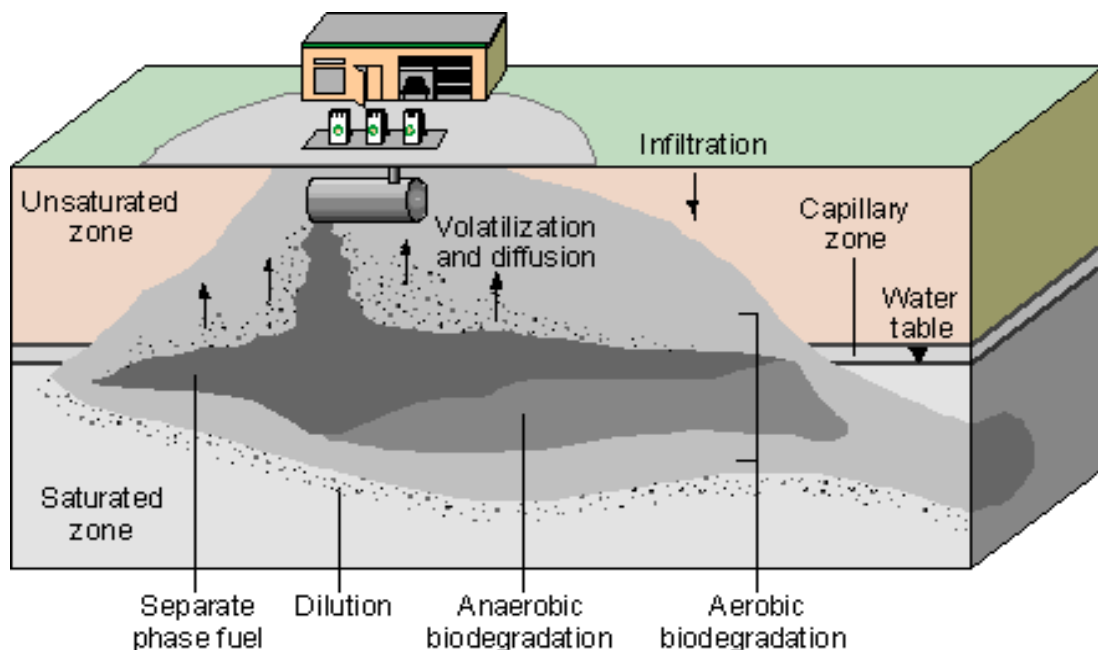


Figure 14. Conceptual LNAPL Release to the Vadose Zone from service stations

To mitigate the potential impact of the release of LNAPL into the atmosphere, the ground level surfaces of the project site must be covered with an impermeable material. This will reduce the diffusion of vapours into the atmosphere. Where the water table is high, cathodic protection should be used for single steel walled

tanks. Otherwise, secondary contained tanks, i.e., a double-walled steel tank, double walled fiberglass or jacketed steel tanks (with high density polythene or fiberglass outer wall) should be used. Suitable sand shall be used for both bedding and backfilling of steel tanks. Installed tank and pipe work shall be hydrostatically tested.

6.2.2 Health, Safety, Environmental and Socio-Economic (HSES) Impacts

The operation of service stations centrally involves the commercial transactions of hydrocarbon fuels (petrol, diesel, liquid, petroleum, gas or paraffin). Additionally, Namaza service station plans to provide additional services including bread baking, washing and polishing vehicles, and other retailing activities. With regard to these activities, Health, Safety, Environment and Socio-economic impacts assessment must take into consideration the relationship between operational activities and the social life. This relationship is interlinked by the dependence of social activities on economic activities and economic activities on social activities. In most instances the focus is on the social impacts due to economic changes which, could trigger a change in an entire society or small changes within the community. Thus, in addition to soil and ground pollution (see Section 6.1) as potential pollution hazards, there are other major health, safety and environmental issues associated with operating service stations. We have for simplicity's sake classified these into health impacts, safety impacts, environmental impacts, and socio-economic impacts. Table 4 below lists these activities, and a brief description is provided.

Table 4: HSES impacts from Operating service stations

HSES Impact	Brief description
Health Impact	
Noise Impacts	Some noise will exist due to heavy and light motor vehicles accessing the site for delivering and collecting fuel during operations.
Air Quality	Hydrocarbon vapours containing volatile organic compounds, which harm human health and contribute to ozone pollution. Running motor vehicles produce carbon monoxide and particulate matter.
Manual handling	Hydrocarbons are carcinogenic and dermal contact and inhalation of fumes should be prevented.
Safety Impacts	
Slips, trips and falls	Fuel, oil spills and water on the forecourt can put workers and others at risk of slip, trip or fall injuries.
Fire and explosion	Unleaded petrol is extremely flammable and if fuel is not handled according to Material Safety Data Sheet instructions and SANS requirements, a fire risk exist during the operational phase.
Compressed Air System	Compressed air is extremely forceful. Depending on its pressure, compressed air can dislodge particles. These particles are a danger since they can enter your eyes or abrade the skin.
Violence to staff	There are many causes of violent behaviour with customers. Some may be easy to identify, such as frustration, anger, misunderstanding, stress, communication problems, conflict with authority and theft/robbery.
Environmental Impacts	
Solid and Liquid Waste Generation	Integral containers of adequate design and capacity should be provided for solid waste, such as discarded cans, bottles, etc. Proper facilities for storage and disposal of used and waste oil and gas must also be provided. Waste water from the washing of motor vehicles and sewage must also be disposed of satisfactorily.
Groundwater,	Operations entail the storage and handling of various hydrocarbons

Surface Water and Soil Contamination	(such as fuels and lubricants) which present a contamination risk. Contamination may either result from failing storage facilities, or spills and leaks associated with fuel handling. The facility provides fuel to public vehicles which may further present contamination risks through overfills. Such material may contaminate surface water, soil and groundwater. Modern retail facilities are well designed to reduce leakages and spillages from contaminating soil and water.
Traffic Impacts	During operations some traffic impacts can be experienced in the vicinity of the fuel retail facility especially where vehicles gain access from and to the facility.
Socio-economic	
Economic benefits	Operations of the fuel retail facility provide employment opportunities to residents of Onankali. The operational phase creates permanent employment opportunities and some training and skills development takes place.
Increased land value and real estate	The addition of the service station will potentially improve the adjacent land as new industrial activities will want to be located near a filling station.

6.3 Decommissioning Phase

The decommissioning phase is associated with activities related to the demolition of infrastructure and the rehabilitation of disturbed areas. The total rehabilitation will ensure that the total area will be a free draining covered with topsoil and grassed. The following activities are associated with the decommissioning phase:

- Existing buildings and structures demolished, rubble removed, and the area levelled;
- Remaining exposed excavated areas filled and levelled using overburden recovered from stockpiles;
- Stockpiles and tailings impoundments to be smoothed and contoured;
- Topsoil replaced using topsoil recovered from stockpiles; and
- Land and permanent waste piles prepared for revegetation.

Possible sources of fugitive dust emission during the closure and post-closure phase include the following:

- Movements of stockpiles by bull dozers;
- Grading of the site;
- Transport and disposal of overburden for filling;
- Infrastructure demolition;
- Infrastructure rubble piles;
- Transport and disposal of infrastructure rubble;
- Transport and reuse of topsoil; and
- Soil preparation for revegetation

Exposed soil is often prone to erosion by water. The erodibility of soil depends on the amount of rainfall and its intensity, soil type and structure, slope of the terrain and the amount of vegetation cover (Brady, 1974). Revegetation of exposed areas for long-term dust and water erosion control is commonly used and is the most cost-effective option.

Typically the first stage of decommissioning involves demolishing the forecourt buildings and canopy. This gives clear access to the ground to remove the tanks and their associated pipe work. Next the site is checked for contamination before being backfilled and restored to a level surface.



Figure 14: Former service station decommissioning

6.4 Impacts Assessment

The impact assessment exercise allows the assignment of relative significance to predict HSES impacts associated with the project, and to determine the manner in which impacts are to be avoided, mitigated or managed. On this backdrop, in this section we assess the environmental impacts (identified in section 6.1, 6.2 and 6.3) that are expected from the construction, operational and decommissioning activities of the facility.

For each HSES impact, an Environmental Classification (Table 6) was determined based on an adapted version of the Rapid Impact Assessment Method (Pastakia, 1998). Impacts are assessed according to the categories as Tabled in Table 5: Importance of condition (A1); Magnitude of Change (A2); Permanence (B1); Reversibility (B2); and Cumulative Nature (B3). Ranking formulas are calculated as follow: Environmental Classification = $A1 \times A2 \times (B1 + B2 + B3)$.

The environmental classification of impacts is provided in Table 11. The probability ranking refers to the probability that a specific impact will happen following a risk event. These can be improbable (low likelihood); probable (distinct possibility); highly probable (most likely); and definite (impact will occur regardless of prevention measures).

Table 5: HSES Impact Assessment Criteria

Criteria	Score
Importance of condition (A1) – assessed against the spatial boundaries of human interest it will affect	
Importance to national/international interest	4
Important to regional/national interest	3
Important to areas immediately outside the local condition	2
Important only to the local condition	1
No importance	0
Magnitude of change/effect (A2) – measure of scale in terms of benefit / disbenefit of an impact or condition	

Major positive benefit	3
Significant improvement in status quo	2
Improvement in status quo	1
No change in status quo	0
Negative change in status quo	-1
Significant negative disbenefit or change	-2
Major disbenefit or change	-3
Permanence (B1) – defines whether the condition is permanent or temporary	
No change/Not applicable	1
Temporary	2
Permanent	3
Reversibility (B2) – defines whether the condition can be changed and is a measure of the control over the condition	
No change/Not applicable	1
Reversible	2
Irreversible	3
Cumulative (B3) – reflects whether the effect will be a single direct impact or will include cumulative impacts over time, or synergistic effect with other conditions. It is a means of judging the sustainability of the condition – not to be confused with the permanence criterion.	
Light or No Cumulative Character/Not applicable	1
Moderate Cumulative Character	2
Strong Cumulative Character	3

Table 6: HSES Environmental Classification

Environmental Classification	Class Value	Description of Class
72 to 108	5	Extremely positive impact
36 to 71	4	Significantly positive impact
19 to 35	3	Moderately positive impact
10 to 18	2	Less positive impact
1 to 9	1	Reduced positive impact
0	0	No alteration
-1 to -9	-1	Reduced negative impact
-10 to -18	-2	Less negative impact
-19 to -35	-3	Moderately negative impact
-36 to -71	-4	Significantly negative impact
-72 to -108	-5	Extremely Negative Impact

Table 7: HSES Impact Assessment

Impact	Project Activity /Resource	Nature (Status)	(A1) Importance	(A2) Magnitude	(B1) Permanence	(B2) Reversibility	(B3) Cumulative	Environmental Classification	Class Value	Probability
Visual Impact	Construction	Aesthetic appearance and integrity of the site	1	-1	2	2	2	-6	-1	Probable
	Operations	Aesthetic appearance and integrity of the site	1	1	2	2	2	6	-1	Probable
	Indirect Impacts	Perceived economic development	1	1	2	2	2	6	1	Probable
Economic benefits	Construction	Employment and contribution to local economy	2	1	2	2	2	12	2	Definite
	Operations	Employment and contribution to local economy	3	1	3	3	2	24	3	Definite
	Indirect Impacts	Decrease in unemployment, contribution to local economy	3	1	3	3	3	27	3	Definite
Skills development	Construction	Employment, technological development and transfer of skills	2	1	2	3	1	12	2	Probable
	Operations	Employment, technological development and transfer of skills	2	1	2	3	2	14	2	Definite
	Indirect Impacts	Transfer of skills and technological development	2	1	2	3	3	16	2	Definite
Traffic	Construction	Delivery of equipment and building supplies	1	-1	2	2	2	-6	-1	Probable
	Operations	Increase traffic, road wear and tear and accidents	1	-1	2	2	2	-6	-1	Probable
	Indirect Impacts	Increased economic activity due to traffic	1	1	2	2	2	6	1	Definite
Health and Safety	Construction	Slips, trips and falls	2	1	2	3	1	12	2	Probable
	Operations	Slips, trips and falls	2	1	2	3	2	14	2	Definite
	Indirect Impacts	Slips, trips and falls	2	1	2	3	3	16	2	Definite
Manual Handling	Construction	Chronic ills related to contact with hydrocarbon	2	-1	1	1	2	-8	-1	Probable
	Operations	Chronic ills related to contact with hydrocarbon	2	-1	1	2	2	-10	-2	Probable
	Indirect Impacts	Chronic ills related to contact with hydrocarbon	2	-1	2	2	2	-12	-2	Probable
Violence to staff	Construction	Frustration, misunderstanding, theft/robbery.	2	-1	1	1	2	-8	-1	Probable
	Operations	Frustration, misunderstanding, theft/robbery.	2	-1	1	2	2	-10	-2	Probable
	Indirect Impacts	Frustration, misunderstanding, theft/robbery.	2	-1	2	2	2	-12	-2	Probable

Compressed Air systems	Construction	Small particles dislodged by compressed air	1	-1	2	2	2	-6	-1	Probable
	Operations	Small particles dislodged by compressed air	1	-1	2	2	2	-6	-1	Probable
	Indirect Impacts	Damage or injury	1	-1	2	2	2	-6	-1	Improbable
Air Quality	Construction	Excessive dust generated from maintenance and upgrade activities	1	-1	2	2	2	-6	-1	Probable
	Operations	Fuel vapors, exhaust fumes from cars	1	-1	2	2	2	-5	-1	Probable
	Indirect Impacts	Air pollution from fuel vapors and exhaust fumes	1	-1	2	2	2	-5	-1	Improbable
Noise	Construction	Excessive noise generated from construction activities – nuisance and hearing loss	1	-1	2	2	1	-5	-1	Probable
	Operations	Noise generated from the operational activities – nuisance	1	-1	2	2	2	-6	-1	Improbable
	Indirect Impacts	Noise pollution from operational activities	1	-1	2	2	2	-6	-1	Probable
Waste production	Construction	Excessive waste production, littering, illegal dumping, contaminated materials	1	-2	2	2	2	-12	-2	Definite
	Operations	Excessive waste production, littering, contaminated materials	1	-2	2	2	2	-12	-2	Definite
	Indirect Impacts	Reduced cleanliness of Environment	1	-2	2	2	2	-12	-2	Probable
Ecosystem and Biodiversity	Construction	Impact on fauna and flora. Loss of biodiversity	1	-1	3	2	2	-7	-1	Improbable
	Operations	Impact on fauna and flora. Loss of biodiversity	1	-1	3	2	2	-7	-1	Improbable
	Indirect Impacts	Ecosystem change	1	-1	3	2	2	-7	-1	Improbable
Groundwater, Surface Water and Soil	Construction	Contamination from hazardous material spillages and hydrocarbon leakages	2	-1	2	2	1	-10	-2	Probable
	Operations	Contamination from hazardous material spillages and hydrocarbon leakages	2	-1	2	2	1	-10	-2	Probable
	Indirect Impacts	LANPL release into the vadose zone	2	-1	2	2	1	-10	-2	Improbable
Fire and explosion	Construction	Fire and explosion risk	1	-2	2	2	1	-10	-2	Probable
	Operations	Fire and explosion risk	1	-2	2	2	1	-10	-2	Probable
	Indirect Impacts	Fire and explosion risk	1	-2	2	2	1	-10	-2	Probable

Color coding for impact type	Health & Safety	Socio-Economic	Localized Long-term	Environmental
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6.5 Discussion

From the impact assessment conducted, we deduced that the proposed development of Nambaza Service Station is suitable for the site assessed. None of the adverse impacts that were identified are regarded as impacts that cannot be mitigated to acceptable levels. The benefits of the proposed development outweigh any negative impacts identified, therefore, the no-go option was also discounted and thus omitted from discussion. It is clear that most of the SHES impacts identified can be mitigated to acceptable standards.

A summary of the main SHES impacts may be summarised as follow:

- If the proposed development is managed appropriately the Nambaza Service Station could have a significant impact on the socio-economic environment and could even have a positive impacts on the socio-economic environment; including improved visual impacts, economic benefits, skills development and indirect economic impacts from additional traffic. If measured over the long term it is expected that the development will outweigh the negative socioeconomic aspects.
- The biophysical environment will mostly be affected by construction activities that could result in excessive noise and dust, however during operation, we expect waste and noise to be generated.
- The geotechnical and geo-hydrological aspects of the study area are regarded as the most sensitive. The soils of the study area are very permeable and the corrosiveness of the soil also contributes to such sensitivities that must be taken into consideration.
- In terms of safety and health, most impacts are associated with operations and employee safety. These impacts are however not major.
- The proposed development will have a positive impact on the economy due to temporary employment opportunities. It will also have a positive impact on the social environment as there will be visible investment from the private sector within this undeveloped area.

Moving on, the development should now be planned, constructed and operated in strict accordance with the mitigation measures and an Environmental Management Plan (EMP) which must adhere to any and all requirement of any authorizations issued for the proposed development. The EMP is developed in the next Chapter.

7 ENVIRONMENTAL MANAGEMENT

This section outlines how the HSES Impacts identified and assessed in Section 6 can be incorporated and managed in the planning and design phases of the proposed Nambaza service station at Onankali village. It forms part of the Environmental Management Plan (EMP) wherein the HSES impact mitigation measures are proposed and considered. The EMP is structured so as to provide its various intended recipients (Developer, ER, consulting engineers and contractors) with mitigation measures immediately applicable to their respective scopes of work. The management requirements for the various recipients carrying out work for this project are divided according to the main project phases.

7.1 Planning and Design

During the phases of planning for future operations, construction and decommissioning of the facility, it is the responsibility of proponent to ensure they are and remain compliant with all legal requirements. The proponent must also ensure that all required management measures are in place prior to and during all phases, to ensure potential impacts and risks are minimized.

The following actions are recommended for the planning phase and should continue during various other phases of the project:

- Ensure that all necessary permits from the various ministries, local authorities and any other bodies that governs the construction (maintenance) activities and operations of the project remains valid.
- Ensure all appointed contractors and employees enter into an agreement which includes the EMP.
- Ensure that the contents of the EMP are understood by the contractors, subcontractors, employees and all personnel present or who will be present on site.
- Make provisions to have a Health, Safety and Environmental Coordinator to implement the EMP and oversee occupational health and safety as well as general environmental related compliance at the site.
- Furthermore, have the following emergency plans, equipment and personnel on site where reasonable to deal with all potential emergencies:
 - Risk management / mitigation / EMP/ Emergency Response Plan and HSE Manuals
 - Adequate protection and indemnity insurance cover for incidents;
 - Comply with the provisions of all relevant safety standards; Procedures, equipment and materials required for emergencies.
 - If one has not already been established, establish and maintain a fund for future ecological restoration of the project site should project activities cease and the site is decommissioned, and environmental restoration or pollution remediation is required.
- Establish and / or maintain a reporting system to report on aspects of construction activities, operations and decommissioning as outlined in the EMP.
- Keep monitoring reports on file for submission with environmental clearance certificate renewal applications where needed.
- Appoint a specialist environmental consultant to update the EA and EMP and apply for renewal of the environmental clearance certificate prior to expiry.

7.1.1 HSES Impact mitigation strategies

The following general mitigation strategies are recommended for the planning and design phase to reduce identified HSES impacts:

- Locate access routes and other infrastructure to avoid the removal of bigger trees (i.e. *Colophospermum mopane*) as far as possible.
- Design boundary fencing in such a way that small burrowing animals do not enter the project site.
- The intersection of the access road to the service station site must be designed by a professional engineer and submitted to the Roads Authority (RA) for approval. The proponent is required to notify RA well in advance as to when the actual construction phase will begin.
- Buildings must be designed such as to minimise the transmission of noise from the inside to the outdoors. In doing so, ensure that the facility is designed to take into account the maximum allowable equivalent continuous day and night rating levels of the potentially impacted sites outside the project boundary.
- Fuel tanks and fuel dispensers should be designed and installed in line with SABS and the manufacturer's recommendations. Installation should be done with care as damage can occur during installation.
- Ensure landscaping designs prohibits the planting of potentially alien invasive plant species (e.g. *Tecoma stans*, *Pennisetum setaceum*, etc.) for decorative purposes (e.g. around offices, etc.) and incorporates indigenous vegetation (especially the protected species such as *A. Erioloba*, *Albizia anthelmintica*, *B. albitrunca*, *B. foetida*, *Faidherbia albida*, *Parkinsonia africana*, *Ziziphus mucronata*) into the developments as far as possible (e.g. around offices, etc.).

7.1.2 Strategies to optimize Socio-Economic Benefits

The following mitigation measures are recommended for the planning and design phase to reduce the impact on the socio-economic aspects.

- The contractor should be required to employ local labour (i.e. from Onankali and surrounding villages) where possible. The requirements for employing local people should be formalised within the contractor's contract. Should a position be offered to non-local person the contractor should be able to prove that no local person qualifies for such a position, through advertising.
- A provision stating that all unskilled labour should be sourced from local communities should be included within tenders concerning the construction and/or maintenance of services infrastructure.
- Provisions promoting gender equality pertaining to recruitment should be included within tender documents concerning the construction and/or maintenance of services infrastructure.
- Women should be given preference for certain unskilled jobs (e.g. flag bearers).
- It is crucial that the project procurement criteria include requirements for training and skills development of the contractor's workforce by the contractor. The training should be able to capacitate the employees to apply for permanent positions during the operations of the solar power facilities.
- The proponent must follow up to ensure that the contractor is indeed following the guidelines as prescribed in this EMP.

7.2 Responsibilities

The responsibility for the implementation of the EMP ultimately lies with Namaza Investments cc (the proponent), who is also responsible for the eventual operation of these developments. The implementation of the EMP requires the

involvement of several key individuals appointed by the proponent, each fulfilling a different but vital role to ensure sound environmental management during each phase of these developments. The following positions and their respective responsibilities are outlined below:

- Employer's Representative: to manage projects during different phases.
- Environmental Control Officer: to oversee the implementation of EMP
- SHES Officer: Construction and Operations and Maintenance).

7.2.1 Employer's Representative (ER)

The ER is appointed by the Developer to manage all contracts for work/services that are outsourced during all development phases. Any official communication regarding work agreements is delivered through this person. The ER should with the commencement of the project appoint a competent ECO who will represent the Developer on-site. He/she will have the responsibility regarding the implementation of this EMP to ensure the necessary legal authorisations have been obtained; and to develop, managing implementation of and maintaining all development.

7.2.2 Environmental Control Officer (ECO)

The ECO should be a competent person who is the Developer's on-site representative primarily responsible for the monitoring and review of on-site environmental management and implementation of the EMP by the Contractor. If no ECO is appointed the duties of the ECO fall upon the ER. The ECO's duties include the following:

- Assisting the ER in ensuring that the necessary legal authorisations have been obtained;
- Maintaining open and direct lines of communication between the ER, Developer, the Construction and/or Operations and Maintenance Contractor, and Interested and Affected Parties (I&APs) with regard to this EMP and matters incidental thereto;
- Monthly site inspection of all construction and/or infrastructure maintenance areas with regard to compliance with this EMP;
- Monitor and verify adherence to the EMP (audit the implementation of the EMP) and verify that environmental impacts are kept to a minimum;
- Be fully conversant with the Environmental Management Plan.

7.2.3 Safety Health and Environmental (SHES) Officer

The SHES Officer should be a competent person to oversee safety, health and environmental affairs. He/she has the following responsibilities:

- Convey the contents of this EMP to the contractor and undertake inspection of the site to monitor compliance with the EMP.
- Report any non-compliance or remedial measures that need to be applied to the appropriate environmental authorities, in line with the requirements of the EMP.
- Submitting a report at each site meeting which will document all incidents that have occurred during the period before the site meeting.
- Be fully conversant with the Environmental Management Programme.

7.3 Monitoring

A monitoring programme will be in place not only to ensure compliance with the EMP through the contract/work instruction specifications, but also to monitor any environmental issues and impacts which have not been accounted for in the EMP

that are, or could result in significant environmental impacts for which corrective action is required.

The following measures will be incorporated as part of the monitoring programme:

- A monitoring programme will be implemented for the duration of the construction phase of the project. This programme will include Monthly audits will be conducted by the ECO/s for the duration of the construction phase – the ECO shall undertake this environmental monitoring with the audits considering compliance with the EMP, the EIA conditions, as well as the conditions of any permits and/or licences.
- On-going monitoring is to be undertaken by the Contractors' Environmental Manager/Officer – this will include notification to the ECO and proponent EO should an incident take place.
- External auditing may take place at unspecified times by the authorities and/or other relevant authorities.
- An independent, suitably qualified, auditor will need to be contracted to conduct an audit once the construction phase of the project is completed according to the provisions of the EMP.
- The Contractor's Environmental Officer must undertake regular site inspections (at least twice weekly) to ensure all legislative requirements are adhered to. Proof of such inspections shall be kept on file for ease of reference or for audit purposes.

7.3.1 Contractor

The Contractor is responsible for the implementation of the EMP, on-site monitoring and evaluation of the EMP. It is envisaged that various contractors might be appointed at various periods for various tasks throughout the life cycle (construction through to decommissioning phase) of this project. In order to ensure sound environmental management, the relevant sections of this EMP should be included in all contracts of work outsourced thus legally binding all appointed contractors and sub-contractors.

Furthermore, all contractors shall ensure that adequate environmental awareness training of senior site personnel takes place and that all construction workers and newcomers are inducted on the environmental, health and safety issues related to the project as well as importance and implications of the proposed EMP. The induction process shall be conducted, as far as is possible, in the employees' language of choice. All environmental training sessions, including names, dates and the information presented should be recorded and be kept on site.

7.3.2 Environmental Specifications: Awareness, Training and Competence

It is important to ensure that all personnel have the appropriate level of environmental awareness and competence to ensure continued environmental due diligence and ongoing minimisation of environmental harm. To achieve effective environmental management, it is important that employees, Contractors and Subcontractors are aware of the responsibilities in terms of the relevant environmental legislation and the contents of this EMP. Environmental training may typically include the following:

- Employees must have a basic understanding of the key environmental features of the construction site and the surrounding environment;

- Employees will be familiar with the requirements of the EMP and the environmental specifications as they apply to the construction of the power station.
- Basic training in the identification of archaeological artefacts, and rare and endangered flora and fauna that may be encountered on the site.
- Awareness of any other environmental matters, which are deemed to be necessary by the ECO.

Records must be kept of those that have completed the relevant training. Training can be done both in a written or verbal format and in an appropriate language but will be in an appropriate format for the receiving audience. Where training has been done verbally, persons having received training must indicate in writing that they have indeed attended a training session. A regular form of written or verbal testing will have to be designed.

7.4 The Construction Phase and Construction Mitigation Details

All activities involved in the development phases of the service station have been identified together with all aspects that may have potential impacts. The construction phase of the EMP aims to address environmental and social risk pertaining to the construction phase.

The following table provides the Environmental Management Plan and the EMP Implementation Strategy a large scale overview of all the major environmental management themes pertaining to the project activities.

Table 8: Environmental Management Plan (EMP)

Aspect	Impact	Mitigation	Indicator	Responsible Party
Waste Management Plan	There is a potential environmental contamination and degradation from waste on site.	The Contractor should compile a Waste Management Plan which should address as a minimum the mitigation measures included below	Correct handling of waste	Contractor and ECO
Hazardous waste	Impact on soil and water.	<ul style="list-style-type: none"> All heavy construction vehicles and equipment on site should be provided with a drip tray. The drip trays should be cleaned daily and spillage handled, stored and disposed of as hazardous waste. Maintenance and washing of construction vehicles should be take place only at a designated workshop area. The workshop should have an oil-water separator for collected run-off from washing. Spilled cement and/or concrete (wet or dry) should be treated as hazardous waste and disposed of by the end of each day in the appropriate hazardous waste containers. All hazardous substances (e.g. fuel etc.) or chemicals should be stored in a specific location on an impermeable surface that is bunded. 	Correct handling, use and storage of materials, including hazardous material.	Contractor and ECO
General waste	The incorrect management of solid waste can result in the pollution of soil, groundwater and the general environment. Windblown litter can also contribute to a negative visual impact.	<ul style="list-style-type: none"> The construction site should be kept tidy at all times. All domestic and general construction waste produced on a daily basis should be cleaned and contained daily. No waste may be buried or burned. Waste containers (bins) should be emptied regularly and removed from site to a recognised (municipal) waste disposal site. All recyclable waste needs to be taken to the nearest recycling depot. A sufficient number of separate bins for hazardous and domestic/general waste must be provided on site. These should be clearly marked as such. Construction labourers should be sensitised to dispose of waste in a responsible manner and not to litter. No waste may remain on site after the completion of the project 	Complaints from neighbours. No windblown waste. Contamination of the ground and water resources	Contractor and ECO
Sewage and	Incorrect	<ul style="list-style-type: none"> Sewage should not be discharged directly onto open soil. 	No sewage spills	ECO

grey water.	management of sewage and grey waste may contaminate the soil, vegetation and underground water resources.	<ul style="list-style-type: none"> All sewage must be removed regularly and disposed of at a recognised (municipal) sewage treatment facility. Grey water that is not recycled should be removed along with sewage on a regular basis. Separate toilets should be available for men and women and should clearly be indicated as such. Portable toilets (i.e. easily transportable) should be available at the construction site: Sewage needs to be removed on a regular basis to an approved municipal) sewage disposal site. Alternatively, sewage may be pumped into sealable containers and stored until it can be removed. Workers responsible for cleaning the toilets should be provided with latex 	on site. No sewage and grey water pools on site.	
Open Fires	Fire outbreak on communal lands.	No open fires may be made anywhere on site.	No sign of burnt material on site.	Contractor and ECO
Environmental Training of workers	Without proper training the health and safety of workers will be at risk and preventable environmental impacts could occur.	<p>All construction workers are to undergo environmental induction (training) which should include as a minimum the following:</p> <ul style="list-style-type: none"> Discussion of the potential environmental impacts of construction activities. Employees' roles and responsibilities, including emergency preparedness. Explanation of the mitigation measures that must be implemented when particular work groups carry out their respective activities. 	All employees adhere to the mitigation measures provided in this document.	MET and proponent
Communication	Inability to communicate the Environmental obligations effectively to responsible parties can result in unnecessary environmental degradation.	<p>To ensure that the construction activities do not result in avoidable impacts on the environment by anticipating and managing the impacts.</p> <ul style="list-style-type: none"> All site instructions pertaining to environmental matters issued by the Contractor are to be copied to the ECO. All sub-contractors, employees, suppliers or agents etc. must be fully aware of the environmental management requirements detailed in this EMP. Have a copy of the EMP and ECC available on site at all times for reference purposes. 	The ECO is aware of decisions taken by the engineer and contractors. All relevant stakeholders are kept in the loop of all activity taking place on site.	ECO, Contractor and proponent
Socio-economic impact	The activity could benefit local Communities through	Adhere to the legal provisions in the Labour Act (see Table 1) for the recruitment of labour (target percentages for gender balance, optimal use of local labour and SME's, etc.) in the	Contribute to employment and capacity building	Contractor and ECO

	job creation, however negative impacts are also possible and must be controlled.	<p>Contract. The Contractor should compile a formal recruitment process including the following provisions as a minimum:</p> <ul style="list-style-type: none"> • Recruitment should not take place at construction sites. • Ensure that all sub-contractors are aware of recommended recruitment procedures and discourage any recruitment of labour outside the agreed upon process. • Contractors should give preference in terms of recruitment of sub-contractors and individual labourers to those who are qualified and from the project area and only then look to surrounding towns. • Clearly explain to all job-seekers the terms and conditions of their respective employment contracts (e.g. period of employment etc.) – make use of interpreters where necessary. 	in the local community. Creating awareness amongst employees and the public.	
Heritage Resources	Heritage resources can be impacted on during the site clearance, earthworks and the construction of the facility.	<p>Should a heritage site or archaeological site be uncovered or discovered during the construction phase of the project, a “chance find” procedure should be applied in the order they appear below:</p> <ul style="list-style-type: none"> • If operating machinery or equipment stop work; • Demarcate the site with danger tape; • Determine GPS position if possible; • Report findings to the construction foreman; • Report findings, site location and actions taken to superintendent; • Cease any works in immediate vicinity; • Visit site and determine whether work can proceed without damage to findings; • Determine and demarcate exclusion boundary; • Site location and details to be added to the project’s Geographic Information System (GIS) for field confirmation by archaeologist; • Inspect site and confirm addition to project GIS; • Advise the National Heritage Council (NHC) and request written permission to remove findings from work area; and • Recovery, packaging and labelling of findings for transfer to National Museum. • Should human remains be found, the following actions will be required: 	No heritage artefacts are disturbed or destroyed on site and the NHC is informed should any heritage artefacts be discovered on site.	ECO, Proponent and Contractor

		<ul style="list-style-type: none"> • Apply the chance find procedure as described above; • Schedule a field inspection with an archaeologist to confirm that remains are human; • Advise and liaise with the NHC and Police; and • Remains will be recovered and removed either to the National Museum or the • National Forensic Laboratory. 		
Ecological conservation	<p>Constructing the facility may have impacts on the fauna and flora. Additional pylon infrastructure to the substation areas is expected to be detrimental to larger avian species – i.e. potentially increase collision rates. Destruction of vertebrate fauna. Destruction of unique flora and special habitats</p>	<p>To prevent unnecessary disturbance to natural flora and fauna:</p> <ul style="list-style-type: none"> • Prevent and discourage the setting of snares (poaching), illegal collecting of veld foods (e.g. tortoises, etc.), indiscriminate killing of perceived dangerous species (e.g. snakes, etc.) and the collection of wood in and surrounding the project area. • Initiate a policy of capture, removal and relocation of fauna (e.g. slow moving species such as tortoises and chameleon) encountered serendipitously within the • Avoid off-road driving and unnecessary nocturnal driving in the area. • Prevent and discourage the setting of snares (poaching), illegal collecting of veld foods (e.g. tortoises, etc.), indiscriminate killing of perceived dangerous species (e.g. snakes, etc.) and the collection of wood in and surrounding the project area. • Initiate a policy of capture, removal and relocation of fauna (e.g. slow moving species such as tortoises and chameleon) encountered serendipitously within the Avoid the removal of bigger trees (especially protected species – i.e. <i>Clospherpemum mopani</i> [Forestry Ordinance No. 37 of 1952) – during the construction phase(s) – including the development of access routes and other infrastructure developments. • Prevent planting of potential alien species of plants. 	<p>No animals are injured. No setting of snares No employees enter the no-go areas. No alien vegetation establishment. Implement speed limits and temporary speed humps. No off-road driving No setting of fires Establish an appropriate refuse removal policy. No domestic pests on site</p>	ECO and Contractor
Topsoil	<p>Top soil may be removed during the site preparation and excavation process, which could lead to land degradation.</p>	<p>To minimise the erosion of topsoil:</p> <ul style="list-style-type: none"> • When excavating, topsoil should be stockpiled in a demarcated area. • Stockpiled topsoil should be used to rehabilitate the nearest borrow area (existing borrow pits), if such an area is located less than 20 km from the stockpile eg. Sand pits in the 	<p>All topsoil removed is rehabilitated to its natural state at the end of the construction</p>	ECO and Contractor

		Onankali area.	operations.	
Stormwater runoff, erosion, and pollution of surface water and groundwater resources	Contamination of stormwater runoff can impact on the surface and groundwater resources. The mismanagement of stormwater can furthermore result in erosion	<ul style="list-style-type: none"> Prevent storm water from eroding the land and becoming contaminated. Should construction activities for the proposed infrastructure need to take place within the drainage features (i.e. linear development including roads and transmission lines) this must transect the streams at right angles and be limited as far as possible to ensure minimum disturbance of such areas. Demarcate a 100 m no-go zone from ephemeral watercourses during construction to prevent construction activities from occurring near the ephemeral watercourses to prevent further loss of vegetation, erosion and watercourse sedimentation. Any disturbed areas must be rehabilitated as Rubble, sand and waste material resulting from the construction activities must be cleared up but not disposed in any stream or drainage channels as it will impede on the flow in these channels. The abstraction of groundwater must be properly controlled within a prescribed water demand management plan and as required by the licence conditions. A critical groundwater level must be determined and the groundwater table must be maintained above such critical levels during water abstraction periods. 	Stormwater not contaminated by construction activities. Stormwater control measures are effective at regulating runoff from the site and erosion channels do not develop. Freshwater ecosystems are not unduly disturbed by construction activities within the drainage channels.	Contractor and ECO
Traffic	During the construction phase, it is expected that there will be regular movement of vehicle to and from the site for transportation of workers and materials.	<p>To ensure that increased traffic volume is managed efficiently to minimise associated impacts:</p> <ul style="list-style-type: none"> Demarcate roads clearly. Off-road driving should not be allowed. All vehicles that transport materials to and from the site must be roadworthy. Drivers that transport materials should have a valid driver's license and should adhere to all traffic rules. Loads upon vehicles should be properly secured to avoid items falling off the vehicle. Access road entrances must be demarcated, both at their exit point from existing roads and the entry point to the site. Erect signage to warn motorists about construction activities 	Traffic is orderly, free flowing and controlled.	Contractor

		and heavy vehicle movement where appropriate.		
Dust	Dust generated from materials handling, roads and stockpiles can become a nuisance to neighbouring landowners.	To avoid nuisance impacts caused by dust as far as possible: <ul style="list-style-type: none"> • A watering truck should be used on gravel roads with the most heavy vehicle movement especially during dry and windy conditions. • However, due consideration should be given to water restrictions during times of drought. 	No complaints received from public and or site staff.	Contractor and ECO
Noise	The increase in traffic and operation of equipment such as welding and fixing of the racks may result in noise becoming a nuisance.	To ensure that noise from the construction activities do not exceed unacceptable levels: <ul style="list-style-type: none"> • Work hours should be restricted to between 08h00 and 17h00 where construction involving the use of heavy equipment, power tools and the movement of heavy vehicles is less than 500 m from residential areas. If an exception to this provision is required, all residents within the 500 m radius should be given 1 week's written notice. • Workers will be required to wear ear protecting devices whenever possible. • If the contractor needs to undertake activities outside the hours above, the residential and community receptors within audible range of the activity must be notified within 24 hours in advance of the planned activity. 	No noise complaints received.	Contractor and ECO

Table 9: Working Area Mobilization

<i>Aspect</i>	<i>Impact</i>	<i>Mitigation</i>	<i>Indicator</i>	<i>Responsibility</i>
Demarcate the construction site	Without proper demarcation, the public would be able to access the site and would be at risk.	It is of outmost importance to prevent the encroachment of construction areas into surrounding environments.	Proper fencing in place to demarcate the construction	<i>Contractor</i>
Stockpiling of equipment and	Incorrect storing of materials can result in water and soil contamination, dust	<ul style="list-style-type: none"> • Ensure that all materials and equipment handled and stored in a 	<ul style="list-style-type: none"> • No public complaints or water/ soil contamination 	<i>Contractor and ECO</i>

materials	and or erosion. Incorrect storage and handling of materials also pose a risk of environmental contamination and could jeopardise the safety of public / site staff.	<p>manner that environmental contamination and safety hazards are limited.</p> <ul style="list-style-type: none"> • The IPP Contractor shall be advised by the Contractor of the housekeeping arrangements including areas intended for the stockpiling of materials. • Implement General Specifications as presented in this document. 	<ul style="list-style-type: none"> • Correct handling, use and storage of materials, including hazardous materials. • No incidents of environmental contamination. • No accidents or incidents related to the handling of materials. 	
Ablution facility	The lack of adequate ablution facilities and recess areas can compromise the health of site staff and result in environmental degradation.	To minimise the potential environmental impacts associated with workers on the site: Implement General Specifications	Adequate ablution facilities are in place.	<i>Contractors and ECO</i>
Removal of vegetation	If the removal of vegetation is done incorrectly it may leave the site prone to erosion and compromise rehabilitation requirements post construction.	To ensure that the site is not prone to erosion and any disturbed areas can be rehabilitated as necessary post-construction: Implement General Specifications.	Topsoil conserved in stockpiles for later use if necessary.	Contractor and ECO
Excavations for bulk earthworks	Created embankments (cut and fill) and retaining walls are required to level and stabilise the site. Excavations are also required to accommodate bulk services which might impact on the environment.	To limit the impact to the environment caused by excavations: Implement General Specifications	No heaps of materials left on site after the construction phase.	Contractor and ECO
Removal of Equipment and temporary structures	If the construction site is not decommissioned it can result in environmental degradation	It is very imperative to leave the impacted area in an acceptable state: Implement General Specifications.	The area impacted by the construction activities pose no threat to the environment	Contractor and ECO



7.5 Operations and Maintenance

The following mitigation measures should be complied with and carried out during any maintenance works associated with the services infrastructure within the planned development areas.

Table 10: SHES Mitigation during operation and maintenance

Aspect	Mitigation measure
EMP Implementation	If any construction is to be conducted as part of maintenance works for the services infrastructure within the project area reference must be had to the construction mitigation measures of this EMP.
EMP and Procedures	To ensure the operation of the facility does not result in avoidable impacts on the environment, and that any impacts are anticipated and managed. The proponent must appoint a suitably qualified independent ECO to monitor compliance and compile and environmental audit report. This must be coupled to a compliance audit with the provisions contained within the EMP.
Socio-economic impacts	To ensure the operation of the facility maximises positive impacts on the socioeconomic environment, the following must be done: <ul style="list-style-type: none"> • Employ local labour for the operational phase, where possible, and particularly for day to day operations and maintenance. • Where possible encourage the use of local suppliers for procurement of goods, materials and services. • Implement training and capacity building programmes to enhance the ability of local community members to take advantage of available employment opportunities.
Protection of ecology	To prevent unnecessary disturbance to natural vegetation and fauna. <ul style="list-style-type: none"> • Any alien plants within the site footprint must be immediately controlled to avoid establishment of a soil seed bank. • Control measures must follow established norms and legal limitations in terms of the method to be used and the chemical substances used. • Ensure removal and control of existing invasive alien plant species (i.e. Prosopis sp.) onsite and within the surrounding 6 m wide fire break.
Stormwater runoff, erosion, and pollution of surface water and groundwater resources.	<ul style="list-style-type: none"> • Prevent stormwater from eroding the land and becoming contaminated. • The areas likely to contribute to contaminated runoff, such as the workshop must be designed to have hardened surfaces equipped with oil and grease traps to capture any contaminated runoff. These must be maintained during operation. • Should storm water infrastructure be required, a management plan must be in place to ensure as a minimum that the structures are visually monitored after large rainfall events to ensure that eroded areas do not develop. • Any refuse generated must be disposed of in suitable bins and removed from site at regular intervals. • Ensure proper groundwater abstraction Management strategies
Visual impact	To protect the sense of place: Keep access roads clear and keep all lighting minimal, within the requirements of safety and efficiency.
Noise impact	To ensure that noise from the operational activities does not exceed unacceptable levels. <ul style="list-style-type: none"> • All plant, equipment and vehicles must be kept in good repair. • When ordering plant and machinery, manufacturers must be requested to provide details of the sound power level. Where possible, those with the lowest sound power level (most quiet) must be selected.
Monitoring	The ECO should monitor the implementation of the Property Development EMP: before, during and after construction

7.6 Decommissioning

In terms of the Environmental Management Act, it is necessary to consider the environmental impacts of decommissioning of any development, however, Nambaza service station is expected to be operational for a period of 20 years or more. Thereafter, the service station facility could either be decommissioned or upgraded, depending on the feasibility.

According to Namibian Legislation, decommissioning is considered as a separate activity which should be dealt with on its own. This EMA requires the EIA to make recommendations that should be considered in the new EIA process prior to decommissioning. However, seeing the decommissioning phase is far in the future, these conditions are subject to change.

A decommission plan should address the removal of the main infrastructure associated with the service station such as fuel tanks and infrastructure. Such a plan must also address aspects such as monitoring and management of surface of surface water flows and erosion.

The following mitigation measures are recommended from an ecological point of view as part of the closure phase:

- Rehabilitate all areas impacted on by the infrastructure
- Remove all construction waste; rip temporary tracks, if feasible, and replace the topsoil.
- Re-introduce indigenous vegetation (especially protected species – i.e. Mopane) should form part of the rehabilitation process

In terms of socio-economic impacts, the following mitigation measures are recommended:

- Maximise the use of local labour on decommissioning activities;
- Provide adequate notification to staff and other stakeholders of the pending decommissioning;
- Provide staff with references so that they can pursue work with other companies;
- If feasible, assist staff in finding employment at other operations.

The proponent should develop a closure plan to be updated on an annual basis commencing at least 10 years prior to the envisaged decommissioning. The closure plan should identify the targets and objectives for closure, and will be important in allowing operations to work toward closure objectives. The proponent should commission specialist inputs from time to time to provide direction on the closure plan to ensure the end result is as closely aligned with prevailing best practice as is possible, thereby minimising the risk and potential costs associated with decommissioning phase. The various stakeholders should also be engaged as early on in the closure planning process to ensure their interests are known and catered for from the point of origin. The construction phase EMP could be used as a guideline to facilitate the detailed decommissioning phase EMP.

8 CONCLUSION AND RECOMMENDATIONS

8.1 Conclusion

The construction of Nambaza service station at Onankali village has positive residual environmental impacts. The EIA study findings showed negative environmental impacts to the environment to varying degrees depending on the nature of the activity and impacts arising thereof; and it also shows positive impacts especially in terms of socio-economic aspects. The management and corrective measures to address the negative SHES impacts were formulated and implementation timelines proposed depending on the gravity of threat to human life and the environment.

The identified impacts, mitigation and monitoring activities, indicators, responsible parties and monitoring frequency are indicated in the EMP. The EMP should now form the obligatory conditions upon which the EIA clearance certificates will be issued and non-compliance attracts prosecution. The EMP should be implemented throughout the project lifecycle and an Environmental Management System formulated and implemented based on the EIA study findings. Environmental monitoring and performance evaluations should be conducted and targets for environmental improvement set and monitored throughout the project lifespan. It is also our determination that the findings should be incorporated earlier and sound SHES policies and supportive programmes implemented.

8.2 Recommendations

Recommendations were developed to guide the Proponent on the key activities that should be done to effectively manage safety, health and environment: Develop SHES policies based on the study findings and use impacts evaluation to formulate the objectives.

- Develop and implement Environmental Management Systems.
- Develop an occupational health and safety plan
- Adhere to the environmental management obligations upon which the EIA clearance certificate will be issued by the MET: DEA.
- The EIA clearance will not exempt the Proponent from obtaining other relevant permits and should do as such:
 - Permit to remove Mopani trees on a portion of the project site.
 - Access roads etc.
- The SHES policies must also provide relevant training to capacitate the workers with knowledge and skills to manage safety, health and the environment.

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ANNEX 1: Background Information Document (BID)

**BACKGROUND INFORMATION DOCUMENT AND INVITATION TO COMMENT:
ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR THE CONSTRUCTION
OF NAMBAZA SERVICE STATION IN ONANKALI VILLAGE, OSHIKOTO
REGION.**

FOR

NAMAZA INVESTMENTS CC

PREPARED BY

JULIUS ANTONIUS



31 August 2019



PURPOSE OF THE DOCUMENT AND CONTENTS

The purpose of the Background Information Document (BID) is to provide stakeholders with the opportunity to register as Interested and Affected Parties (I&APs) in the scoping exercise for the Environmental Impact Assessment (EIA) Study for the construction of a proposed service station in Onankali, Oshikoto Region by Namaza Investments cc. We will share with you the process being followed and also obtain your initial comments. The document also gives you information on the benefits of the proposed project, potential impacts of the project and proposed environmental studies needed. Further to that we advise you on how you can become involved in the project, raise concerns which you may have or receive information which may be of interest to you. This is the core of public participation during the EIA process. Information sharing is the cornerstone of successful Public Participation and your input will help ensure that all potential issues are taken into consideration before critical decisions are made.

ELALAKANO LYEMBO NDIKA

Elalakano lyembo ndika “Background Information Document (BID)” oku pa aakwashigwana yopoomkunda nomudhingoloko gwa Nankali ompito yokulishangitha ongo ‘Interested and Affected Parties (I&APs)” meindilo lyepekapeko lyoomudhingoloko (ano Environmental Impact Assessment (EIA)) lyokutunga osevesa yomahooli (tayilukwa Nambaza service station) po Nankali kehangano Namaza Investment cc. Shika oshapumbiwa opo epitikilo lyokutunga omahooli gaye komeho ngaashi shuuthwa paveta. Embo ndika otali gandja wo uyelele kombinga yuwanawa nehumo komeho tali etwa kosevesa ndjika. Omauyelele taga zi maishangithi otaga kakwathela opo iinima ayihe yasimana yitulwe momulandu ngaashi shuuthwa pampango yoshilongo shetu sha Namibia. Otatumupandula noonkondo kelongelo kumwe.

1. PROJECT DESCRIPTION

The applicant, Namaza Investments cc is planning to set up a service station in Onankali village, Oshikoto Region. The proposed service station is to be named Nambaza service station. Nambaza is derived from the oshindonga word 'ombaza' meaning cow skin, a symbol of strength.

The construction of a service station is a listed activity that requires authorization and an environmental clearance certificate should be issued before construction begins. It is against this background that Mr. Julius Antonius was contracted by Namaza Investments cc to conduct the EIA study as required under the Environmental Management Act (2007).

1.1 Site Location

The project is located on a 6000 sqm communal parcel of land with GPS coordinates: 22°18'42"S; 016° 37'54"E on the east of the B1 road, adjacent to the ministry of agriculture offices in Onankali village. The project site is owned by Mr. Abisai Konstantinus, who is also the sole owner of Namaza Investments cc, the proponent for the project.

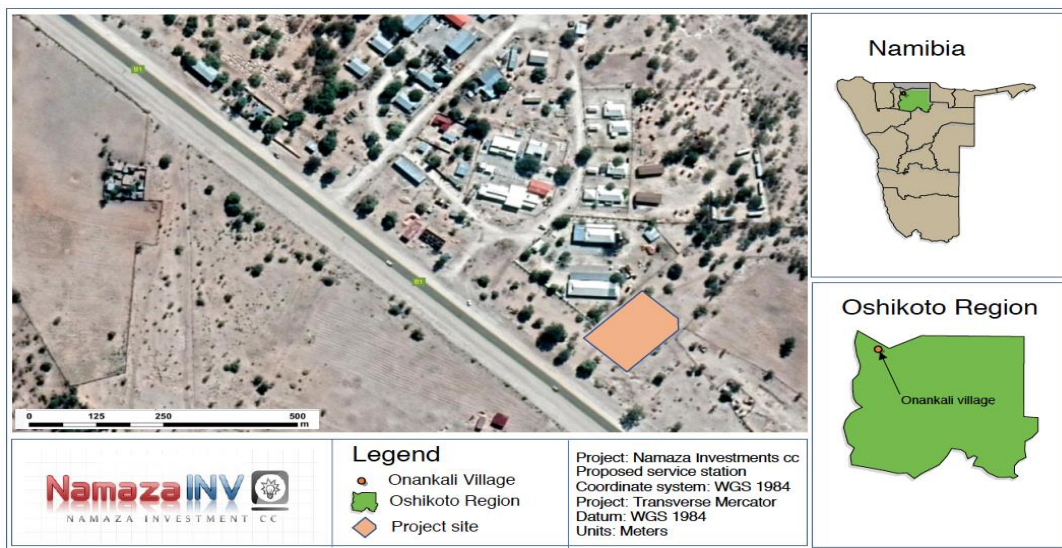


Figure 1: Site location

1.2 Proposed Technology

Nambaza service station is envisaged to be a standard service station, with three dispensing fuel pumps (petrol and diesel) equipped with 3 double wall underground storage tanks of 45 cubic meters. The project site is approximately 4000 square meters in size. The proposed service station will not utilize the entire area but will of course depend on the space requirements of the design layout. Provision will be made for landscaping and additional shops for a bakery, tyre fitment and other services to make the customer satisfied.

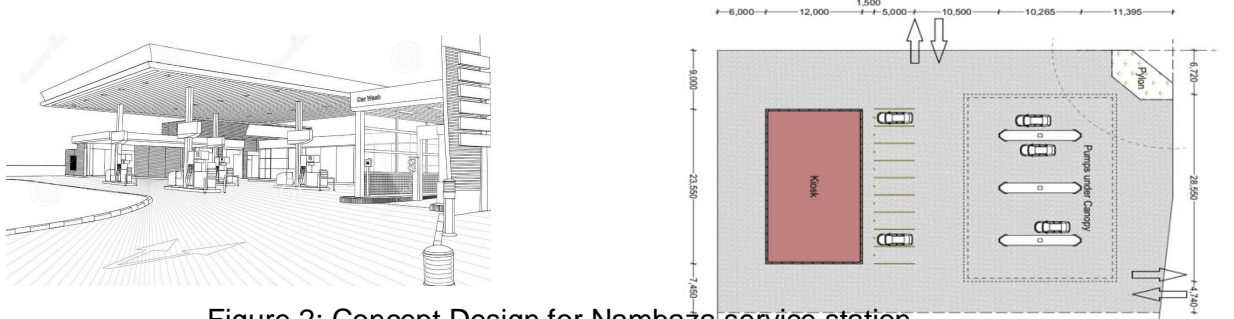


Figure 2: Concept Design for Nambaza service station

2. DESCRIPTION OF THE ENVIRONMENT

2.1. General Environmental Setting

The proposed site is located in the urban space of Onankali village. The area is characterized by small scale industrial and governments offices including the police station, the clinic and the ministry of agriculture offices. There is also some activities of subsistence farming dominated by the cultivation of omahangu and integrated with livestock production comprising cattle, goats, sheep and donkeys. There are a few mature Mopani trees bordering the site and also surrounding the nearby Mahangu fields.

2.1.1 Accessibility

The proposed project site is accessible using the B1 highway connecting Omuthiya and Ondangwa. The B1 highway from Windhoek ends in Ondangwa connecting to C46.

2.1.2 Potential Challenge

The EIA study will investigate the suitability of the proposed site in relation to the existing land-uses taking into consideration the environment. It is also important to explore the distance to the nearest service station and possible routes for connectivity.

2.2 The need for the project

The benefits of developing a service station in Onankali village include:

- Employment creation and thus improve the well-being of the local people.
- Employment preference will be afforded to previously disadvantaged Namibians during construction and operation of the facility.
- A service station will be an economic investment as the need for fuel increase with the population increase and associated daily commute of the community/residents.

3. PROPOSED STUDIES

A baseline environmental study will be done covering the following aspects:

3.1 Biodiversity Scoping study

There are mature Mopani trees on site and it is of interest to explore way to save them as much as possible. If not feasible then permit to cut them down should be applied for from the relevant authority in the Ministry of Agriculture, Water and Forestry (MAWF).

3.2 Culture and Heritage Scoping

A culture and heritage scoping will be done to investigate the occurrence and significance of historical heritage sites. There are a few graves that are visible on the site and a church which is operating presently.

3.3 Assessment of Alternatives

3.3.1 No-Go Option

The “no-go” option means maintaining the status quo. This option will be explored to assess the implications of not implementing the project.

3.3.2 Alternative Sites

Sites within the facility area with minimal impact on the environment will be chosen for making way for the various components of the plant. Similarly access

routes will be assessed and those with minimal environmental impacts chosen. The same will be done with the fencing of the solar plant area.

4. THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

An EIA is the process of identifying, predicting, evaluating and mitigating the biophysical, social, health and other relevant effects of development projects prior to major decisions being taken and commitments made. The objectives of the EIA will thus be to:

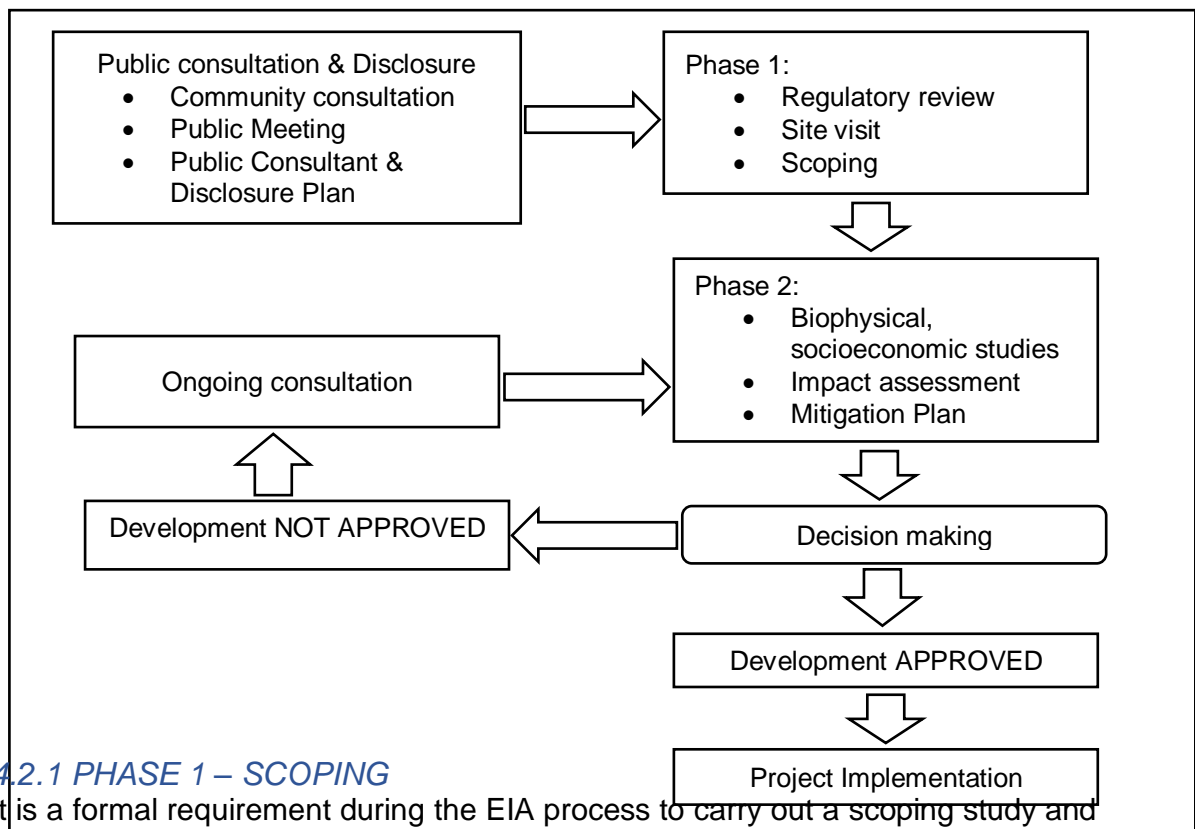
- Provide you with adequate information to understand the potential environmental and socio-economic impacts of the proposed project and opportunities to comment on the project and the process.
- Provide information that will assist the consultants to incorporate effective mitigatory measures into the design and implementation of the project.
- Provide the regulatory authorities with sufficient information to serve as a basis for sound decision making.

4.1 Project elements to be covered by the EMP

The EIA will cover the following elements: construction, operation and decommissioning of the service station.

4.2 Scope of Work

The Environmental Impact Assessment scope will focus on the issues related to flora with respect to land clearing, waste management (solid and liquid), operation and management of the solar facility, sites of cultural significance and policy and legislation review. The EIA will be done in 2 phases (See Figure 3 below).



4.2.1 PHASE 1 – SCOPING

It is a formal requirement during the EIA process to carry out a scoping study and this is in-line with the Namibian Environmental Management Act (2007). The purpose of this study is to direct the assessment on the key issues for

Figure 3: Project flow for EIA

assessment and at the same time eliminate those that do not require detailed intensive studies. The following scoping activities will be conducted:

- Consultations with key stakeholders, government departments etc.
- Advertising and carrying out public meetings.
- Distribution of project information to the public.
- Producing a draft scoping report.
- Gathering public comments on draft scoping report.
- Submission of final scoping report to Ministry of Environment & Tourism.

4.2.2 PHASE 2: SPECIALIST STUDIES

Issues raised during the scoping study will be used to develop terms of reference for specialist studies. Results from these will be incorporated in the EIA report.

4.4 Draft EIA Report

The draft EIA report will reflect all the identified issues, mitigation measures and the proposed environmental management plan. The draft EIA document will be made available to the public for comments on issues of interest and can also raise any concerns they may feel require further attention.

4.5 Legal Framework

The Namibian Government gazetted the Environmental Management Act in 2007. The EIA process will follow the EIA Policy and the Environmental Management Act & its regulations. The EIA will also take cognizance of applicable international standards and guidelines, conventions and treaties.

5. PUBLIC CONSULTATION AND DISCLOSURE PLAN

According to the Environmental Management Act (2007), public participation forms an integral part of the EIA process. Adequate public consultation is important to identify issues relevant to the project, evaluating their significance and deciding measures to mitigate these impacts. A public consultation plan has been developed in line with the Environmental Management Act (2007) and seeks to achieve the following objectives:

- To ensure all stakeholders are included in the consultation and disclosure process;
- To ensure initial information disclosure about the project is appropriate and understandable to the non-technical stakeholders and the local population;
- To ensure that adequate and timely information is provided to the public;
- To ensure that all stakeholders are given sufficient opportunity to express their issues, concerns and opinions;
- To ensure regular feedback is given to the public;
- To ensure that effective communication will continue during the construction and operational phases of the project.

Nambaza Investments cc and the Environmental consultant Mr. Julius Antonius are committed to active and ongoing communication and consultation of all members of the public with regards to the construction of a service station in Onankali village.

5.1. How you can be involved?

- Attend public meetings that will be advertised in the local media.
- Contact the EIA consultants for further information.
- Review the draft reports when you are invited (within the timeframes provided).

Please ensure that you are registered on the project database by providing your contact details to the EIA Consultants. Registration will ensure that you receive

on-going communication about the EIA process, meeting invitations, project updates and invitations to review the draft reports.

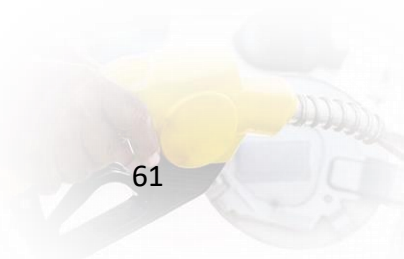
Annexure 2: List of Interested and Affected Parties

Notified Interested and Affected Parties

Designation/Subdivision	Contact Person
Notified Authorities	
MME – Executive Director	Simeon Negumbo
Village Head - Onankali	Tate Neshuku Mupupa
Traditional Authority - Ondonga	Tate Gerard Kambonde
Notified and Registered IAPs	
Neighbour North	Rural Water Development and Planning (Notified Mr. Stephenson Tuukondjele, DWSSC Oshikoto)
Neighbour East	Meme Nangula Malulu, Libandungila Lodge and Restaurant

Comments and Responses

NAME:	TELEPHONE:
ORGANIZATION:	FAX:
DESIGNATION:	E-MAIL:
ADDRESS:	
COMMENTS AND ISSUES OF CONCERNS	
<div style="border: 2px solid black; padding: 10px; transform: rotate(-15deg); display: inline-block;"> <p>No comments registered</p> </div>	
PLEASE SUBMIT REGISTRATION AND COMMENTS TO:	



Annexure 3: Public Participation

Invitation: Public Participation meeting

Tate. Julius Antonius
j88antonius@gmail.com
+264 (0) 81 877 8855

Ondjukithi 8857
Bachbrecht
Windhoek

Erf 2572
Peter Shaanika Street
Extension 4, Tsumeb

Okuya: **Aakwashigwana yopomudhingoloko**

Esiku: **20 September 2019**

Re: Etseyitho lyepekapeko lyoomudhingoloko yo Mahooli Nambaza Service Station po Onankali, mOshikoto.

Elalakano lyontumwafo ndjika oku pa aakwashigwana yopoomkunda nomudhingoloko gwa Nankali ompito yokulishangitha ongo 'Interested and Affected Parties (I&APs)' meindilo lyepekapeko lyoomudhingoloko (ano Environmental Impact Assessment (EIA)) lyokutunga osevesa yomahooli (tayilukwa Nambaza service station) po Nankali kehanganano Namaza Investment cc, mwene gwayo tate Abisai Konstantinus ngono wo mwene gwevi mpa tapukatungwa o sevesa.

Oshinima shika oshapumbiwa opo epitikilo lyokutunga omahooli gaye komeho ngaashi shuuthwa paveta. Otatukagongaleni wo moNankali, omasiku 30 October 2019, opo tukadholomote, tse tupaathaneni omayele kombinga yoshinima shi. Aakwashigwana otayakapewa ompito okugandja wo uuyebele kombinga yuuanawa nehumo komeho tali etwa kosevesa ndjika. Omauyelele taga zi maishangithi otaga kakwathela opo iinima ayihe yasimana yitulwe momulandu ngaashi shuuthwa pampango yoshilongo shetu sha Namibia.

Ehiyo ndika otaliningwa ku tate Julius Antonius, ngono eli omupekapeki omukulundu gwomudhingoloko. Otamonika ko email j88antonius@gmail.com, nenge ko kongodhi +264 (0) 81 877 8855.

Otatumupandula noonkondo kelongelo kumwe.

Nokupandu,



Julius Antonius
Environmental Assessment Practitioner



2019-09-20
Elenga G M Kambonde

Mr. Julius Antonius
j88antonius@gmail.com
+264 (0) 81 877 8855

P.O. Box 8857
Bachbrecht
Windhoek

Erf 2572
Peter Shaanika Street
Extension 4, Tsumeb

To: **Interested and Affected Parties**

Date: **20 September 2019**

Re: Environmental Scoping Assessment and Environmental Management Plan for Nambaza Service Station in Onankali village, Oshikoto Region.

Dear Sir/Madam

Namaza Investments cc plans to construct and operate of a service station in Onankali village (i.e. the project). The construction, operations and decommissioning activities of the project (i.e. energy generation and distribution activities) requires compliance with the Environmental Impact Assessment (EIA) Regulations of 6 February 2012 (EIA Regulations) as promulgated in the Government Notice No 28, 29 and 30, circulated in terms of the Environmental Management Act (EMA), Act no. 7 of 2007.

Mr. Julius Antonius was appointed as an independent environmental consultant (Environmental Assessment Practitioner: EAP), to undertake the EIA required for the construction and operation of the proposed facility.

Project: Environmental Scoping Assessment and Environmental Management Plan for the Operational Activities of Nambaza service station, Onankali.

Proponent: Namaza Investments cc

Environmental Assessment Practitioner: Mr. Julius Antonius

The project is located on a 4000 sqm communal parcel of land with GPS coordinates: 18°11'17"S; 016° 22'41"E on the east of the B1 road, adjacent to the ministry of agriculture offices in Onankali village. The project site is owned by Dr. Abisai Konstantinus, who is also the sole owner of Namaza Investments cc, the proponent for the project.

All Interested and/or Affected Parties (IAPs) are invited to register with the environmental consultant to receive further documentation and communication regarding the project. By registering, IAPs will be provided with an opportunity to provide input that will be considered in the drafting of the environmental assessment report and its associated management plan.

Please register as an IAP and provide comments by 30 October 2019. To register, please contact:

Email: j88antonius@gmail.com

Cell: +264 (0) 81 877 8855

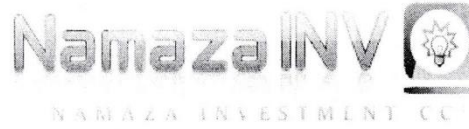
Should you require any additional information please contact Mr Julius Antonius.

Sincerely,



Julius Antonius
Environmental Assessment Practitioner





NAMAZA INVESTMENTS CC

LIST OF INTERESTED AND AFFECTED PARTIES

The following individuals registered as I&APs in the EIA for the development of Nambaza Service Station at Onankali village.

ATTENDANCE REGISTER

Name	Organization	Date of registration
Midjambi EVA-L	COMMUNITY	26 OCTOBER
Nelshuku mupupa	VILLAGE HEAD	- " -
TOMAS Amweelo	COMMUNITY	- " -
NIKANDOR Icanjelo	COMMUNITY	- " -
NAFTAL Amutenya	COMMUNITY	- " -
JOHANNES Nalcaamba	COMMUNITY	- " -
JASON E. NIILONGA	COMMUNITY	- " -
NIKANDOR mupupa	COMMUNITY	- " -
TOMAS LIANA	COMMUNITY	- " -
PETRUS SHIPANGA	COMMUNITY	- " -
NANGUKA LIMBANDU	LIMBANDUNGWA LODGE	- " -
KUUSA ANGUUKU	OMBILI YETU STORE	- " -
MATEUS NIINGO	COMMUNITY	- " -
MATEUS NKOTI	COMMUNITY	- " -
JOHANNES SHIPANGA	COMMUNITY	- " -
ALFEUS IMIBILI	COMMUNITY	- " -



Annexure 4: Advertisements

23 - 29 January 2020
CONFIDENTE | *lifting the lid*

Namaza INV
NAMAZA INVESTMENTS CC

ENVIRONMENTAL IMPACT ASSESSMENT

NOTICE FOR THE CONSTRUCTION OF A SERVICE STATION IN ONANKALI, OSHIKOTO REGION

MR JULIUS ANTONIUS HEREBY GIVES NOTICE OF THE AVAILABILITY OF THE DRAFT ENVIRONMENTAL IMPACT ASSESSMENT FOR THE CONSTRUCTION OF A SERVICE STATION IN ONANKALI. The EIA is being done as required under the Environmental Management Act No 7 of 2007 and the Environmental Impact Assessment Regulations of 2012. Interested and Affected Parties are hereby informed of the availability of the EIA report as detailed below.

PROPOSER: NAMAZA INVESTMENTS CC


PROJECT ACTIVITIES: SERVICE STATION WITH 3 FUEL DISPENSING PUMPS.

PROJECT LOCATION: ONANKALI VILLAGE, OSHIKOTO REGION

PUBLIC PARTICIPATION DEADLINE FOR COMMENTS is 04 FEBRUARY 2020 AND REPORT CAN BE OBTAINED FROM CONSULTANT.

CONSULTANT DETAILS: Julius Antonius
+264 (0) 81 877 8855
E-mail: j88antonius@gmail.com

YOLELI GUEST



WE DO DAILY VISIT OF THE SW

P.O Box 22401 Windhoek N
Tel/Fax: +264 (061) 402
Olaf Palm Str. 154, Eros Park
E-Mail: reception@yoleliguesthouse.com
beasal2002@yahoo.com
www.yoleliguesthouse.com

CALL FOR PUBLIC PARTICIPATION:

NOTICE OF ENVIRONMENT IMPACT ASSESSMENT FOR THE DEVELOPMENT OF A SERVICE STATION AT ONANKALI VILLAGE, OSHIKOTO REGION.

Notice is hereby given to all potential interested and Affected Parties (I & APs) that an application is made to the Environment Commissioner in terms of the Environmental Management Act (No.7 of 2007) and the Environmental Impact Assessment Regulations (GN 30 in GG 4879 of 6 February 2012) for the following:

Project Name: Nambaza Service Station

Project Location: Onankali village, Oshikoto Region

Project Description: A service/ fuel station with three dispensing pumps for petrol and diesel.

In this respect, interested and affected parties (I & Aps) are hereby invited to register and submit comments concerns issues regarding this project to consultants at j88antonius@gmail.com or call at 081 877 8855, on or before 31 October 2019 . All I & APs are also cordially invited to a public.

NOTICE FOR ENVIRONMENTAL IMPACT ASSESSMENT

Healthy Earth Environmental Consultants CC (HEEC) hereby gives notice to all potentially Interested and Affected Parties (I&APs) that an application will be made to the Environmental Commissioner in terms of the Environmental Management Act (No 7 of 2007) and Environmental Impact Assessment Regulations (GN 30 of 6 February 2012) for the following:

PROJECT NAMES:
(a) Environmental Impact Assessment (EIA) for the establishment and mining of dimension stones on mining claims, 70624, 70625 & 70630 at Karibib, Erongo Region.

(b) Environmental Impact Assessment (EIA) for the establishment and mining of dimension stones on mining claims 70627, 70628

PROJECTS LOCATION:
(a) The mining claim of Karibib, in Erongo Region.

(b) The mining claim of Karibib and about Karibib constituency

PROJECT DESCRIPTION:
The project involves

Assessments (EIAs) for the establishment of dimension stones on the above mining Erongo Region.

PROJECT INVOLVEMENT:
Proponent: BBA Dimension Stone Mining

Environmental Assessment Practitioner (EAP): Healthy Earth Environmental Consultants CC (HEEC)

REGISTRATION OF I&APs AND SUBMISSION OF COMMENTS: In line with Namibia's Environmental Management Act (No. 7 of 2007) and Environmental Impact Assessment Regulations (GN 30 of 6 February 2012).

Submit all your issues, comments and opinions to Solutions by 22 January 2020.

Contact person: Ms. Martha Dum

NOTICE FOR ENVIRONMENTAL IMPACT ASSESSMENT

Healthy Earth Environmental Consultants CC (HEEC) hereby gives notice to all potentially Interested and Affected Parties (I&APs) that an application will be made to the Environmental Commissioner in terms of the Environmental Management Act (No 7 of 2007) and Environmental Impact Assessment Regulations (GN 30 of 6 February 2012) for the following:

CALL FOR PUBLIC PARTICIPATION:

NOTICE OF ENVIRONMENT IMPACT ASSESSMENT FOR THE DEVELOPMENT OF A SERVICE STATION AT ONANKALI VILLAGE, OSHIKOTO REGION

Notice is hereby given to all potential interested and Affected Parties (I & APs) that an application is made to the Environment Commissioner in terms of the Environmental Management Act (No.7 of 2007) and the Environmental Impact Assessment Regulations (GN 30 in GG 4879 of 6 February 2012) for the following:

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Project Location: Onankali village, Oshikoto Region

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THE FREE PRESS OF NAMIBIA (PTY) LTD



42 JOHN MEINERT STREET - P O BOX 20783 - WINDHOEK - TEL: +264 61 279 600 - FAX: +264 61 229 206

BOOKING

CASH TRANSFERS NAMIBIA WINDHOEK NAMAZA INVESTMENT CC Attn.: PETRINA WANAMENE Category : GENERAL Caption : NOTICE	BOOKING ID: ADVO190005621 Receipt No. Customer No. CA23CAS23 Sales Person: ZACK SHEEHAMA Order No. ADVQ190006450 Key No.: Date: 25/09/2019 Ad Type : DISPLAY R.O No./Date : Ad Sub-Category : GENERAL
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PUBLICATION TYPE	ISSUE DATE	COLOR	SIZE	PAGE NO.	PRICE	AMOUNT
DISPLAY : MAIN BODY	27/09/2019; Friday	COLOR	7 x 3	0	90.44	1,899.19
DISPLAY : MAIN BODY	30/09/2019; Monday	COLOR	7 x 3	0	72.35	1,519.35
SUM						3,418.54
VAT (15%)						512.78
TO PAY (N\$)						3,931.32

Cancellation:After deadline subject to 100% penalty.
 The Namibian reserves the right to fill such space as it deems fit.
 The Namibian reserves the right to refuse the placement of any advertisement.

 SIGNATURE DATE
 Please sign to accept approval of advertisement

If paying directly into our bank account, please Fax the Tear off to the number below.

Account Name	The Free Press Of Namibia(Pty) Ltd	Booking ID	ADVO190005621
Bank	Standard Bank	Booking Date	25/09/2019
Branch	Windhoek	Tel. No.	
Account Number	041 427 688	Amount Due	3,931.32
Branch Code	08 2372 00	Amount Paid	0.00
Fax	26461 279601	Balance Amt.	3,931.32

Account Name	The Free Press Of Namibia(Pty) Ltd	Bank Name	NEDBANK
Account Code	11990028631	Branch	Business Center
Branch Code	461617	Swift	NEDSNANX

Account Name	The Free Press Of Namibia	Bank Name	FNB
Account Code	62258994526	Branch	FNB Business
Branch Code	281872	Swift	FIRNNANX

Annexure 4: Proponent Particulars & Project Details

Nambaza service station is 100% owned and operated by Namaza Investments cc.

Namaza Investments cc (shortly Namaza) is a Namibian SME that specializes in property development, energy development, and general retailing. “Namaza” is derived from the Oshiwambo word “Nambaza” or “ombaza” which means cowhide or leather in English. The symbolic meanings of a cowhide in many African cultures is strength, perseverance and commitment; values we strongly aspire to in our company.

Namaza is 100 percent Namibian; owned and operated by previously disadvantaged Namibians. Our vision is to contribute to the industrialization of Namibia and to help the realization of Vision 2030 in the respective sectors of our specialization.

Namaza was founded by Dr. Abisai Konstantinus, as a general works and construction contractor in 2009. Over the years, the group has taken on many challenging projects and accumulated skills; know-how and experiences in logistics, property development, design and build solutions, energy, maritime and project management.

Today, Namaza has expanded into the transport and retailing of fuel (both on land and at sea), with planned operations in Oshikoto and Erongo regions. The company has recently submitted intentions to go into the general retail industry, with planned operations in Swakopmund.

Our objective is to provide our clients with “I am assured” experience when we are chosen as business partners. Our emphasis on clear communication and follow-through procedures ensures that client’s objectives are top priority in our business conduct. We take particular pride in our delivery, thus our clients can always be assured that only the most qualified people are serving them, all the time.

In the communities we practice, we strive to return to society what we earn, to benefit the communities wherein we work, and to be socially and environmentally responsible.

Company Information: Namaza Investments cc

Registration No.: cc/2009/3926

Incorporation date: June 2009

Address: P.O. Box 7227, Swakopmund, Namibia

Tel: 064 400 550

Email: tatejappy@me.com

Principle Activities: construction, energy (solar and fossil fuels), property development.

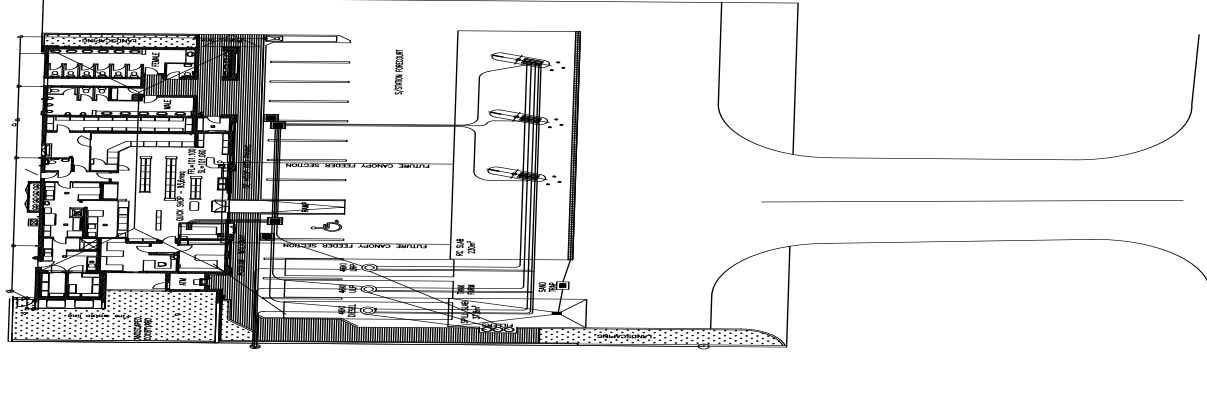
Directors: Abisai Konstantinus, Rudhi Wanamene, Julia Shipahu.

Logo:



HOMESTEAD


MINISTRY OF
AGRICULTURE



ONDANGWA DIRECTION B1 MAIN ROAD TSUMEB DIRECTION

FOR NAME & ADDRESS: NANA ENGINEERING CONSULTING WATERLOO ROAD, BOX 5 WINDHOLE, SWAZILAND TEL: +27 31 200 1000	PROJECT DATES: FROM: 20/11/2020 TO: 20/11/2020		REGION: ERZEBYTTEN		CLIENT DETAILS:		REFERENCE: ISSUED FOR PROPOSAL		SCALE: 1:1000 DRAWING NUMBER:		PROJECT NAME & VENUE: PROPOSED SERVICE STATION AT ONANKALI PROPOSED LAYOUT	
	DRAWN:	FOR NAME: 20/11/2020	DATE:	REGION:	CLIENT DETAILS:	REFERENCE:	SCALE:	DRAWING NUMBER:	DMS: No. OSH/OMA-2020-BEN REV. 0			



PROJ. NAME & ADDRESS  TBC ENGINEERING CONSULTING 10000 10th Street, Suite 100, Omaha, NE 68114 TEL: 402.426.1000 FAX: 402.426.1001 WWW.TBCENGINEERING.COM	PROPOSED SERVICE STATION AT ONANKALI PROPOSED POSITION		SCALE 1:1000	PROJECT NAME & REVIS
	ISSUED FOR PROPOSAL			
PROJ. NO. / DATE OSH/OMA-2020-GEN		REV. 0		

Nambaza service station – Onankali

Annexure 5: Credentials of Environmental Practitioner

Julius Antonius

Occupational, Health, Safety, Environment & Wellness (Grad IOSH)

Phone +264 (0) 81 877 8855

ID Number 88021400242

E-mail j88antonius@gmail.com

License Code B (50010000C6GX)

Date of birth 1988-02-14

Marital status Married



Experienced and knowledgeable health and safety professional in a current leadership role at a world renowned uranium mining operations of Rio Tinto, familiar with all required industrial safety procedures with nearly 10 years of working experience in OHSE & Wellness, is prepared to service and facilitate effective HSE coordination through the organisation. Has a history and a proven track record of accident & injury prevention, investigations and critical risk management integrated with Employee Wellness & Assistant Programs (EWP & EAP). A candidate who combines loyalty and dedication with strong attention to details and highly intellect in decision making, leadership and management.

Experience

2017-04 - present

HSE Advisor – Production and Asset Maintenance

Rio Tinto - Rossing Uranium Limited

» **Responsibilities:**

- Safety monitoring, analyzing and risk identification
- Incident Investigation
- Providing a specialized advisory role to Rossing employees & contractors
- Planning technical aspects of OHSAS 18001 and Rio Tinto Safety Standards
- Monitoring compliance and resolution of non-conformances as per the regulations
- Providing specialist guidance and advise to line management
- Ensuring incident dockets are filled in accurately and captured onto the system
- Performing HSE inspections and leadership interactions
- Coordinating development & maintenance of an integrated HSE hazard and risk register
- Conducting comprehensive HSE audits and circulate reports
- Reviewing HSE management systems
- Monitoring adequacy of codes of conduct in safety, health & environment
- Coordinating HSE information flow between respective departments
- Identifying HSE training needs
- Activity & Program budgeting and costing
- Developing and reviewing Safe Working Procedures
- Perform roles of management appointment HSE representative
- Performing post contract evaluations on contracts awarded to check for compliance

2012-07 - 2017-03

Section Head: Occupational Health, Environment, Safety & Wellness

NIP (Ltd) Namibia Institute of Pathology

» **Responsibilities:**

- Safety monitoring, analyzing and risk identification and provide corrective actions & mitigation measures
- Conducted Environmental Impact Assessment,
- Injury and emergency management on site
- Strategic and departmental budgeting,
- ISO 17025, 15189 accreditation systems with SANAS
- Performance Management System implementation (PMS)
- Training of Safety Officers and safety representatives
- Internal Safety compliance audits
- Hazard identification and risk profiling

- ISO 14001 & OHSAS 18001 management systems implementation
- Develops, implements and maintains NIP Ltd safety policies and manuals
- Ensures the appointment of functioning workplace Safety Representatives and committees at all branches and laboratories
- Provides assistance to all supervisors regarding legal requirements relating to Health and Safety and on the implementation of policies and procedures
- Ensures that compliance with requirements for a safe working environment is maintained to avoid or contain health risks.
- Ensures implementation of preventative or corrective action in case of non-compliance,
- Performs risk assessments by investigating all environmental health and safety factors in the laboratories,
- Provides guidance to supervisors to ensure accurate reporting of work related injuries and occupational diseases
- Ensures access to reliable emergency and health care service providers in case of occupational injuries or diseases.
- Develops and ensures the implementation of procedures to manage medical incapacity and unfitness for work
- Attends all relevant meetings, participates in decision making relevant to departmental issues and provides supervisor with regular feedback and reports on activities
- Refer employees to rehabilitation
- Develop Employee Assistance Program
- Facilitate annual medical screening & surveillance
- Give wellness and health talks
- Conduct peer educators training on HIV & Communicable diseases
- Liaise with medical aid for subsidized rates and members contribution
- Conduct workplace health weeks and monthly health topics
- Conduct wellness activities
- Approve and review alcohol & drug policy
- Develop both HSE & Wellness Policy

2010-11 - 2012-06

Practitioner: OSHE & Wellness

Roads Authority - Namibia

» **Responsibilities:**

- Health and safety inspections on regular basis
- Giving safety inductions to new employees and refresher trainings on safety
- Giving health and awareness sessions to employees
- Ensure a workplace is free from serious identified hazards and comply with standards, rules and regulations developed under the OHSAS 18001 and 18000.
- Examine workplace conditions to make sure they conform to applicable OHSAS 18001 and 18000 standards.
- Ensure that all the employees coming on board undergone medical examinations and safety inductions.
- Giving social welfare counseling to employees
- Facilitate annual medical screening & surveillance
- Give wellness and health talks
- Conduct peer educators training on HIV & Communicable diseases
- Liaise with medical aid for subsidized rates and members contribution
- Conduct workplace health weeks and monthly health topics
- Conduct wellness activities
- Conducting safety inspections
- Reviewing of companying OSHE Policy.
- Conduct elections for safety representatives for the workstations.
- Compile Health & Safety quarterly reports
- Co-ordinate fire and emergency drills
- Conduct accident and incident investigations.
- Developed Company's Environmental Policy Statement
- Ensuring that the contractors comply with the OSHE requirements.

