



BUSINESS SUCCESS CONSULTING

Environmental Sustainability

**EMP FOR THE PROPOSED CONSTRUCTION OF RESIDENTIAL FLATS AND A
SHOP FOR MR. STEFANUS SHIVUTE AT OSHALI VILLAGE, OLUKONDA
CONSTITUENCY OF OSHIKOTO REGION, NAMIBIA**

Prepared for:

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ACRONYMS

OTA	Ondonga Traditional Authority
MAWF DAPEES	Ministry of Agriculture, Water and Forestry Directorate of Agricultural Production, Extension and Engineering Services
MAWF	Ministry of Agriculture, Water and Forestry
MEFT	Ministry of Environment Forestry and Tourism
MME	Ministry of Mine and Energy
NamWater	Namibia Water Corporation
NBRI	National Botanical Research Institute
NORED	Northern Regional Electricity Distributors
OEC	Office of the Environmental Commissioner
PPE	Personal Protective Equipment
BSC	Business Success Consulting
DEA	Directorate of Environmental Affairs
DSR	Draft Scoping Report
DWA	Directorate of Water Affair
EA	Environmental Assessment
ECC	Environmental Clearance Certificate
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
F	Forestry Protected
GPS	Global Position Systems
Ha	Hectares
I & APs	Interested and Affected Parties

I. Preface

The proponent, Mr. Stefanus Shivute has commissioned Business Success Consulting cc (BSC), an independent EIA consultant to conduct an Environmental Impact Assessment (EIA) and prepare an Environmental Management Plan (EMP) Management for the proposed Construction of Residential Flats and a shop (saloon and restaurant) at Oshali Village in Olukonda Constituency of Oshikoto Region.

The primary purpose of this scoping report is therefore to ensure that the implementation of the construction project activities are permitted as provided for by the Environmental Management Act (EMA), Act No. 7 of 2007 and related regulations. This EIA exercise is assessing the fulfillment in terms of compliance with the Environmental Management Act as required by the Ministry of Environment, Forestry & Tourism (MEFT).

The proponent has the responsibility to oversee, supervise, monitor and control all activities at the proposed construction site thereby ensuring that the implementation is conducted in an orderly, safe manner and adhering to the Environmental Management Plan and consequently safeguarding the environment. The project can only commence when approval is granted by MEFT through the issuance of the ECC.

7. ENVIRONMENTAL MANAGEMENT PLAN

7.1 EMP Administration

This section of the report serves to prescribe mitigation measures to reduce, limit, eliminate or compensate for impacts, to acceptable or insignificant levels. In setting mitigation measures, the practical implications of executing these measures are considered. With early planning at all level of implementation, both the cost and the impacts can be effectively eliminated or minimized to insignificant levels.

This section also outlines the roles and responsibilities of all stakeholders to ensure that the EMP is fully implemented. Mr. Stefanus Shivute will ensure the successful implementation of the EMP and its administration.

7.1.1. Socio-economic impacts

TABLE 1: IMPACTS ASSOCIATED WITH THE SOCIO-ECONOMIC DEVELOPMENT MITIGATION MEASURES.

Description	This development will create employment to the local people. It will also offer capacity building programmes to local people.
Mitigation measures	<ul style="list-style-type: none"> • Procurement of materials, goods and services must be from local suppliers, where possible. • Employee local labour for the construction phase, where possible, and therefore the requirement to employ local labour must be incorporated in the contractor`s contract. • Implement training and capacity building programmes to enhance the ability of local community members to take advantage of available employment opportunities like internships.
Monitoring	Preform internal audits.
Responsible party	HR manager/ HSE officer

7.1.2. Loss of biodiversity

TABLE 2: IMPACTS ASSOCIATED WITH THE LOSS OF BIODIVERSITY MITIGATION MEASURES

Description	The clearing of land to make way for the construction of the facility will result in the loss of flora and fauna. There is no protected species in there vicinity of the construction site or endemic to the area.
Mitigation measures	<ul style="list-style-type: none"> • Avoid unnecessary clearing of vegetation • The <i>Acacia karroo</i> should not be removed as they are the only woody plant in the 1.2 ha plot. • Land rehabilitation and re-vegetation must commence immediately upon completion of construction. • Hire an Environmental Officer
Monitoring	<p>Monitor and count all marked plant species to ensure they are not removed without a valid permit.</p> <p>Appropriate punitive measures must be instituted against noncompliance.</p>
Responsible party	Environmental officer.

7.1.3. Increase in traffic volumes in the vicinity of the sites

TABLE 3: IMPACTS ASSOCIATED WITH THE INCREASE IN TRAFFIC VOLUMES TO THE SITE'S MITIGATION MEASURES.

Description	Increased volume of traffic both on and off site may be a hazard like; vehicle to vehicle collision or people been run over by vehicles.
Mitigation measures	<ul style="list-style-type: none"> • 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 and heavy vehicle movement where appropriate. • Construct a delivery parking for Trucks transporting materials and equipment's, for trucks to enter at night and this way avoid the morning rush hour and therefore reduce congestion.
Monitoring	Regular visual inspection

Responsible party	Site foremen
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7.1.4. Solid Waste Pollution and sewage

TABLE 4: IMPACTS ASSOCIATED WITH THE SOLID WASTE POLLUTION AND SEWAGE MITIGATION MEASURES.

Description	Both solid waste and sewage will be generated by the employees during the construction phase. It is therefore very important to construct appropriate infrastructure to management both waste types.
Mitigation measures	<ul style="list-style-type: none"> • Sewer drainage system should be constructed as part of the infrastructure and be connected to a septic tanks. • Septic tank should be constructed and all units should be connected to the sewer system. • The sewer lines should be regularly inspected for any leakages. • An appropriate/ registered contractor should be contracted to empty the septic tanks and dispose of at the waste water treatment plant. • Waste bins should be provided and should be clearly labelled for recycling proposes • Waste bins/ containers must be emptied on a regular basis and disposal of this solid waste should be done by a competent contractor dumped at an approved landfill. • Solid waste generated should minimised as far as practicable • Introduce cleanup program to ensure waste is removed from open areas or construction site
Monitoring	Develop a Solid Waste Management Plan with schedules inspection
Responsible party	Environmental officer

7.1.5. Health and safety

TABLE 5: IMPACTS ASSOCIATED WITH THE HEALTH AND SAFETY MITIGATION MEASURES.

Description	The health and safety of the employee is very important and appropriate PPE should be provided. Employee should go to medical test.
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Mitigation measures	<ul style="list-style-type: none"> • Potable water must be provided to workers to avoid dehydration. Portable toilets should be available at every construction and campsite in the following ratio: 2 toilets for females and one toilet for males clearly indicated as such. • People responsible for cleaning these toilets should be provided with latex gloves and masks. • An induction room should be constructed for new employees and every week the employees need to have a toolbox talk. • All employees entering the contraction site should be tested for alcohol. • All employees should be offered proper PPE (dusk masks, gloves hard hats, gumboots, etc). Employees should undergo medical test before commencing employment.
Monitoring	Regular visual inspection and records of safety equipment and material issued.
Responsible party	safety officer

7.1.6. Construction equipment and Materials

TABLE 6: IMPACTS ASSOCIATED WITH THE CONSTRUCTION EQUIPMENT AND MATERIALS MITIGATION MEASURES.

Description	Construction equipment and materials can pose danger to the employee and can pose irreversible environment damage.
Mitigation measures	<ul style="list-style-type: none"> • All employees shall be advised about good housekeeping arrangements including areas intended for the stockpiling of materials. • All stockpiling site must be clearly demarcated with fencing or orange construction barrier to prevent unauthorised entry and therefore prevent injuries. • Shelves should be constructed to prevent equipment from lying around at the construction site. • Hazards materials should be stored in appropriate contains or rooms.

Monitoring	Monitoring and measurement of noise and vibration impacts in the surrounding areas as per law or best available standards.
Responsible party	Safety officer

7.1.7. Noise pollution and vibration

TABLE 7: IMPACTS ASSOCIATED WITH THE NOISE POLLUTION AND VIBRATION MITIGATION MEASURES.

Description	Construction activities are associated with noise and vibrations generated by the construction machineries and vehicles.
Mitigation measures	<ul style="list-style-type: none"> • All workers on site must be equipped with ear plugs to be used when the noise becomes unbearable. Employees should only be exposed to noise levels of 85db for less the hours. • Switch off machines that are not in use. • Construction activities which are known to generate vibration should only be operated during the day time and not at night. • Duration of vibration should be kept as short as possible. • A servicing schedule for the all machineries and equipment's should be in place.
Monitoring	Monitoring and measurement of noise and vibration impacts in the surrounding areas as per law or best available standards.
Responsible party	Safety officer

7.1.8. Dust

TABLE 8: IMPACTS ASSOCIATED WITH THE DUST EMISSION'S MITIGATION MEASURES.

Description	Dust can result from construction activities that can have a negative impact to the employees and surrounding environment. This activities can range from levelling land, movement of construction vehicle resulting in the soil becoming loose and can easily be blown away by wind creating a dust atmosphere and if nothing is done about it reduces the air quality. This will especially be an issue during windy days.
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Mitigation measures	<ul style="list-style-type: none"> • All employee should be provided with dust masks to minimize exposure to dust • Spray the areas that are mostly affected with water to minimize dust. • Minimize activities that can generate dust during windy days. • Limit the speed within the whole construction area to a maximum of 40 km/h.
Monitoring	A combination of visual inspection, pm 10 machine and dust buckets should be used to monitor dust.
Responsible party	safety officer

8. DECOMMISSIONING

In terms of EMA it is necessary to consider the environmental impacts of decommissioning of any development. According to Namibian Legislation, decommissioning is considered as a separate activity which should be dealt with on its own. The decommissioning of the facility would therefore be addressed in a new EIA process to be conducted prior to the site being decommissioned. This section makes recommendations that should be considered in the new EIA process prior to decommissioning.

8.1. Recommended mitigation measures for the decommissioning phase

8.1.1. Ecology

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 and replace the topsoil.
- ❖ Re-introduce indigenous vegetation as part of the rehabilitation process.
- ❖ Monitor and manage invasive alien plants as well as erosion of the site after activities are completed.

8.1.2. Socio economic

The following mitigation measures are recommended from a socio-economic point of view as part of the closure phase:

- ✚ 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.

9, CONCLUSION AND RECOMMENDATIONS

9,1 Conclusion

The proposed Construction of Residential Flats and Shop is an important project to the development goals and aspirations of the receiving communities and the proponent, Mr. Stafanus Shivute as well as to Namibia as a whole.

Mr. Shivute has set his target on providing affordable housing units and shopping space to the rural community of Oshali Village in oshikoto Region. The area that will host the complex has very little in terms of fauna and flora, and only two woody plant were observed. The people of the Oshali Village and surrounding villages will be the ones to gain more from this project in terms of employment creation and youth empowerment through education. This project is in line with the HPP's pillar of housing and infrastructure development.

Overally, the economic benefits of the project outweigh the limited negative impacts on the natural environment. The project is expected to perform positively if all mitigation measures are adhered to.

9,2 Recommendations

It is recommended *that the project continues and that the Ministry of Environment, Forestry and Tourism should an Environmental Clearance Certificate to Mr. Stefanus Shivute in respect of the Construction of Residential Flats and a Shop at Oshali village in Oshikoto Region.*

Mr. Stefanus Shivute will oversee, supervise, monitor and control all activities at the construction site thereby ensuring that the extraction is conducted in an orderly and safe manner, hence safeguarding the environment in the interest of the current and future generations to come.

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