



APP 003922

**Environmental Social Management Plan for Community Brick Manufacturing Project
at Otshiku ShiIthilonde Community Forest, Oshana Region**



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ACRONYMS

CBNRM	Community Based Natural Resource Management
CCFN	Community Conservation Fund of Namibia
DEA	Department of Environmental Affairs
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
EIA	Environmental Impact Assessment
EMA	Environmental Management Act (No. 7 of 2007)
EMP	Environmental Management Plan
ES	Environmental Scoping
ESS	Environmental and Social Safeguard
FPIC	Free Prior Informed Consent
I&APs	Interested and Affected Parties
KfW	German Government Development Bank
MEFT	Ministry of Environment Forestry and Tourism
NAFOLA	Namibia's Forested Lands project
PPE	Personal Protective Equipment
RD	Red-Dune Consulting CC
ESMP	Social Environmental Management Plan
TORs	Terms of Reference

EXECUTIVE SUMMARY

This Environmental Social Management Plan (ESMP) is developed based on the environmental scoping report undertaken for the project.

Traditionally, people in the northern regions of Namibia use timber to building their houses. Practiced over centuries, it has caused severe deforestation in many parts of the north. In effort to combat deforestation, the Namibian Government established the programme of Community Forest. The programme aims to integrate plant resources with the conservation mandate of the Ministry of Environment Forestry and Tourism and has become an important part of the Community Based Natural Resource Management (CBNRM) concept.

The CBNRM concept is based on the understanding that if natural resources have sufficient value to rural communities, and allow for rights to use, benefit, and manage, then appropriate incentives for people to use natural resources in a sustainable way will be created through the establishment of a Community Forest.

To provide incentives and alternatives material for construction of houses, management of Otshiku ShiIthilonde Community Forest, supported by the Namibia's Forested Lands project (NAFOLA) initiated a community brick making project in 2014 under the theme “*Brick to Conserve*”.

Through a grant application, Otshiku ShiIthilonde Community Forest requested the Community Conservation Fund of Namibia (CCFN) to be supported with upgrading their existing community brick manufacturing project through a “*Brick to Conserve*” initiative. Overall, the aims to;

- Reduce pressure on the small existing Mopane woodland by providing alternative building material (Brick) on an affordable price.
- Improve livelihood of local community by creating employment and support community development programs.

(a) Statutory requirement

Section 27(2) of the Environmental Management Act (Act No 7 of 2007) has listed activities that cannot be undertaken without an Environmental Clearance Certificate (ECC). Brick manufacturing is NOT a listed activity. However, the primary inputs of production is sand acquired through ‘sand harvesting¹’. Although the scale of sand harvesting is small, it requires an ECC.

Consequently, Red-Dune Consulting was appointed to undertake an Environmental Scoping (ES) and develop an Environmental Management Plan (EMP) for the project.

(b) Environmental Impact Assessment

The project will not construct a new brick manufacturing area since it is already existing and functional. The sand is manually harvested in the nearby flood plain with glass cover and sparsely shrubs of acacia. Sand is harvested using shovels and collected with pick up cars. The disturbed areas, with depth less than a ruler (30cm), get filled with sand after every rainy season. Sand harvesting in this instance does not form sand pits and pose a threat for soil erosion.

Overall, there project does not have impact on biodiversity, land use in communal, mainly communal farming with domestic animals such as goats, cattle, and donkeys. There are no wild animals in the surrounding, perhaps small wild animal such as squirrel and crawling animals may be found in the area.

Nonetheless, with the intended upgrade of the brick project, demand for sand could rise. Hence its essential for the project to have a comprehensive EMP that will ensure environmental sustainability.

¹ Sand is collected manually; hence the scale would not qualify it to be called sand mining.

1 OVERVIEW

This Environmental Socio Management Plan (ESMP) is developed following a comprehensive scoping study that was undertaken for the brick making project of Otshiku ShiIthilonde Community Forest.

2 PURPOSE OF THE ESMP

This ESMP is a risk strategy that contains logical framework, monitoring programme, mitigation measures, and management control strategies to minimize environmental impacts. It further stipulates the roles and responsibility of persons involved in the project. These strategies are developed to reduce the levels of impacts for the project.

3 COMPLIANCE TO THE ESMP

This ESMP is a legally binding document under the provisions of the Environmental Management Act, 2007 (Act No. 7 of 2007) to the Proponent.

4 ROLES AND RESPONSIBILITY

4.1 Proponent

Management Otshiku ShiIthilonde Community Forest brick project is the Proponent. Hence it shall take overall responsibility for proper implementation of the ESMP. It remains the responsibility of the Proponent to appoint key personnel for the implementation of the ESMP such as Site Manager and ensure that all Workers are conversant with the ESMP.

4.2 Site Manager

The Site Manager (SM) represents the Proponent on site. He/she shall be responsible for daily activities in ensuring environmental protection. All communication regarding the implementation of ESMP must be channelled through the SM.

4.3 Workers

It shall be responsibility of Workers to always adhere to the provision of ESMP when on site.

4.4 Environmental Compliance Officer (ECO)

Compliance to EMP is enforced by the environmental inspector as provided for under Environmental Management Act (No. 7 of 2007) (EMA).

4.5 Disciplinary Action

This EMP is a legally binding document, non-compliance to the ESMP is punishable in accordance to the provision of EMA.

4.6 The ESMP table

The ESMP is divided into sections addressing issues of Socio-Economic, Bio-Physical Environment, and Pollution and Waste Generation.

Part I: Socio-Economic Consideration

Environmental / Social Impact	Objectives	Proposed Mitigation Measures	Monitoring Indicator	Party Responsible
Employment opportunities to the locals	Promote benefits to the local community	<ol style="list-style-type: none"> 1. Ensure local are recruited 2. Train and capacitate Workers to become experts in brick manufacturing 	Employee structure and proportion of local employment and training record	Management or Site Manager
Workers induction	To ensure that all Workers are familiar with the requirements of the ESMP	<ol style="list-style-type: none"> 1. All Workers must go through an induction course for the provision of the ESMP. 2. Ensure that a copy of the ESMP is kept on site and accessible 	Induction Minutes and Attendance Register, Signed each Workers, Physical verification of the ESMP on site	Management or Site Manager

Environmental / Social Impact	Objectives	Proposed Mitigation Measures	Monitoring Indicator	Party Responsible
Alcohol and Drug use	Prevent alcohol and drug use	<ol style="list-style-type: none"> 1. Ban the Workers against the use of alcohol and drug at work 2. Provide awareness on the dangers and health impacts of alcohol and drug use 3. All Workers must be screen with the breathalyser to avoid intoxicated personnel on site 4. Adopt a disciplinary system to discipline Workers for non-compliance 	<p>Monitor presence of alcohol at the construction site</p> <p>Breathalyser report</p>	Management or Site Manager
Working hours	Adhere to the Labour Act No. 11 of 2007	<ol style="list-style-type: none"> 1. Operate within the prescribed working days and hours as per the Namibian Labour laws and regulations 	Verification of working hours against the labour Act	Management or Site Manager

Environmental / Social Impact	Objectives	Proposed Mitigation Measures	Monitoring Indicator	Party Responsible
Workers Health and Safety	To ensure Worker's health and safety	<ol style="list-style-type: none"> 1. Adequate safety signs must be put at designated places. 2. Provide protective eyeglasses, dust masks and ear muffs to all Workers 3. Ensure adequate, hygienic (clean) and user-friendly ablution facilities for all Workers 4. Segregate Male and female toilets 5. Inspect ablution facilities regularly 6. Train Workers/Workers on personnel safety and how to handle equipment and machinery 7. Provide an adequate first aid kit to well-trained employee 	<p>Reports of working outside recommended working hours</p> <p>Physical verification of safe ware for Workers</p> <p>Physical verification of ablution facilities</p>	Management or Site Manager

Environmental / Social Impact	Objectives	Proposed Mitigation Measures	Monitoring Indicator	Party Responsible
Heritage and Archaeology	To ensure protection of artefacts, heritage, and archaeological materials	<ol style="list-style-type: none"> 1. Employee must be trained on the possible find of heritage and archaeological material in the area; 2. Implement a chance find and steps to be taken for heritage and archaeological material finding (Heritage (rock painting and drawings), human remains or artefacts) are unearthed by; <ol style="list-style-type: none"> i. Stopping the activity immediately ii. Informing the operational manager or supervisor iii. Cordoned of the area with a danger tape and manager to take appropriated pictures. 	Training records and attendance registers	Management or Site Manager

Environmental / Social Impact	Objectives	Proposed Mitigation Measures	Monitoring Indicator	Party Responsible
		8. Manager/supervisor must report the finding to the following competent authorities, National Heritage Council of Namibia (061 244 375) National Museum (+264 61 276800) or the National Forensic Laboratory (+264 61 240461).		
HIV / AIDS	Provide HIV / AIDS awareness to Workers	9. Provide HIV / AIDS awareness at induction 10. Avail Condoms at friendly areas on site	Availability of condoms at construction site	Management or Site Manager

Part II: Bio-Physical Environment

Aspect	Objective	Proposed Mitigation Measure	Monitoring Indicator	Party responsible
Land Degradation	To avoid soil erosion	1. Movement of machinery must be coordinated and restricted to be within the site and access roads	Physical Observation	Management or Site Manager
Visual Impact	To prevent eye shore	1. Ensure good housekeeping for material on site	Physical verification	Management or Site Manager
Biodiversity	To protect the flora and Fauna	1. Although the site does not have trees, encourage the planting of shade trees to improve eye sight 2. Crawling animals such as lizards may be spotted on site, they must not be killed	Planted trees Reports on animal killings.	Management or Site Manager
Dust Pollution	To prevent dust pollution	1. Provide personal protective equipment to Workers such as dust mask, ear muff, eye glasses. 2. Do load / offload sand during heavy winds. 3. Cement and concrete must be mixed with concrete mixers and not manually in the open. 4. Cement bags must be stored and disposed of properly and may not be shaken in the open. 5. Adhere to the Labour act, non-toxic human dust	Physical observation Complaints of dust pollution Physical observation of the boundary wall PPE	Management or Site Manager

Aspect	Objective	Proposed Mitigation Measure	Monitoring Indicator	Party responsible
		exposure levels may not exceed 5mg/m ³ for respiratory dust and 15mg/m ³ for total dust.		
Soil Pollution	To prevent surface and ground water pollution	<ol style="list-style-type: none"> 1. Fuelling of vehicle on site must be well coordinated at designated places 2. Stationary vehicles must be provided with drip tray to capture oil, lubricants, and hydraulic fluids leakages 3. All machinery must be well service to avoid leakages 	Physical observation of bunded fuelling areas Physical observation of drip trays	Management or Site Manager
Water Consumption	To prevent unsustainable high level of water consumption	<ol style="list-style-type: none"> 1. Do not waste water / use water sparingly 	Complaint of water interruption due to the project	Management or Site Manager

Part III: Pollution Control and Waste Management

Environmental / Social Impact	Objective	Proposed Mitigation Measures	Monitoring Indicator	Party Responsible
Oil Leakages	Manage fuels, oils and lubricants leakages from vehicles and machinery to prevent pollution	<ol style="list-style-type: none"> 1. Ensure all vehicle and machinery are well serviced 2. Provide drip trays to stationary vehicle / machinery 	Physical verification and routine monitoring	Management or Site Manager
General waste	To manage solid waste To prevent littering, pollution, contamination of water and general environmental health hazards	<ol style="list-style-type: none"> 1. Provide dust bins for domestic waste collection. 2. There must be ablution facility at the site for designated for males and female. 3. No onsite burying, dumping, or burning of waste material shall be permitted. 4. Used oil, grease and lubricants cans must be collected in appropriate drums and disposed of at an approved site 	Scattered waste, Littering and any other unsightly waste at the site (eyesore)	Management or Site Manager

Environmental / Social Impact	Objective	Proposed Mitigation Measures	Monitoring Indicator	Party Responsible
		5. Ensure appropriate waste collection and removal from the site and dispose at appropriate waste disposal site.		

5 DECOMMISSIONING PHASE

To ensure human safety and the environment, the following must be undertaken at the end of the project life cycle or demolition.

1. Develop a decommissioning and rehabilitation plan
2. There must be clear signs to the public about the closure of the project
3. Ensure that all contaminated equipment's are properly cleaned before their disposal
4. The work must be supervised by a qualified and competed person.
5. Workers must be provided with all necessary PPE
6. All wasted generated must be disposed of approved sites

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The magnitude of this project is small, and all possible impacts were found to be negligible and low. In anticipation for the project growth, adequate mitigation measures were developed. This is a community project, a great initiative to enhance conservation and limit deforestation.

6.2 Recommendations

It is recommended for the project to be issued with the ECC.