BOTSWANA EMERGENCY WATER SECURITY AND EFFICIENCY PROJECT (BEWSEP)

Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP) for the Bere Settlement Water Supply Sub-Project

APRIL 2020
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<th>Full Form</th>
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<tbody>
<tr>
<td>AIA</td>
<td>Archaeological Impact Assessment</td>
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<td>ARVs</td>
<td>Anti-Retrovirals</td>
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<tr>
<td>BEAPA</td>
<td>Botswana Environmental Assessment Practitioners Association</td>
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<td>BH</td>
<td>Borehole</td>
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<td>BOS</td>
<td>Botswana Bureau of Standards</td>
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<td>BPC</td>
<td>Botswana Power Corporation</td>
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<td>CBO</td>
<td>Community Based Organization</td>
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<td>C-ESMP</td>
<td>Contractor’s Environmental and Social Management Plan</td>
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<td>CSO</td>
<td>Central Statistical Office</td>
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<td>DDP</td>
<td>District Development Plan</td>
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<td>DEA</td>
<td>Department of Environmental Affairs</td>
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<td>DNMM</td>
<td>Department of National Museum and Monuments</td>
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<td>DWMPC</td>
<td>Department of Waste Management and Pollution Control</td>
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<td>DWNP</td>
<td>Department of Wildlife and National Parks</td>
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<td>EA</td>
<td>Environmental Assessment</td>
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<td>EHS</td>
<td>Environmental, Health and Safety</td>
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<td>WBG EHS</td>
<td>Environmental, Health and Safety Guidelines</td>
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<td>ESIA</td>
<td>Environmental and Social Impact Assessment</td>
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<td>EIS</td>
<td>Environmental Impact Statement</td>
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<td>ESMP</td>
<td>Environmental and Social Management Plan</td>
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<td>FIDIC</td>
<td>Fédération Internationale Des Ingénieurs-Conseils</td>
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<tr>
<td>GBV</td>
<td>Gender-Based Violence</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>IAPs</td>
<td>Interested and Affected Parties</td>
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<td>ISO</td>
<td>International Standard Organization</td>
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<td>IWGIA</td>
<td>International Work Group for Indigenous Affairs</td>
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<td>MFDP</td>
<td>Ministry of Finance and Development Planning</td>
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<td>MLH</td>
<td>Ministry of Lands and Housing</td>
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<td>NEPA</td>
<td>National Environmental Protection Agency</td>
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<td>NSP</td>
<td>National Settlement Policy</td>
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<td>OAP</td>
<td>Old Age Pension</td>
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<td>OP</td>
<td>Operational Policy</td>
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<td>PAP</td>
<td>Project Affected Persons</td>
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<td>PDL</td>
<td>Poverty Datum Line</td>
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<td>PM</td>
<td>Particulate Matter</td>
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<td>PMTC</td>
<td>Prevention from Mother to Child.</td>
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<td>RAP</td>
<td>Resettlement Action Plan</td>
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<td>RADP</td>
<td>Rural Administration Development Programme</td>
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<td>RPF</td>
<td>Resettlement Policy Framework.</td>
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<td>SADC</td>
<td>Southern Africa Development Community</td>
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<td>S&amp;CD</td>
<td>Social and Community Development</td>
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<td>SHEA</td>
<td>Sexual Harassment Exploitation and Abuse</td>
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<td>STI</td>
<td>Sexual Transmitted Infections</td>
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<tr>
<td>ToR</td>
<td>Terms of Reference</td>
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<td>VAC</td>
<td>Violence Against Children</td>
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<td>VCP</td>
<td>Vulnerable Communities Plan</td>
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<td>VDC</td>
<td>Village Development Committee</td>
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<td>WB</td>
<td>World Bank</td>
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<td>WUC</td>
<td>Water Utilities Corporation</td>
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<td>WHO</td>
<td>World Health Organisation</td>
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GLOSSARY

Air pollutant: Any substances in air that could, in high enough concentration, harm human beings, other animals, vegetation, or material. Pollutants may include almost any natural or artificial composition of matter capable of being airborne.

Air pollution: The presence of contaminating or pollutant substances in the air that do not disperse properly and interfere with human health or welfare or produce other harmful environmental effects.

Beneficiaries: Individual, communities, or organizations expected to benefit from the project or program.

Capillary action: The ability of a liquid to rise through narrow spaces within a medium, such as soil.

Compensation: Payment in cash or in kind for an assets or resource that is acquired or Affected by a project at the time the asset needs to be replaced.

Destitute: An individual who, due to disabilities or chronic health condition, is unable to engage in sustainable economic activities and has insufficient assets and income sources., or An individual who due to: Old age, Mental or physical disability, Emotional or psychological disability or Being a terminally ill patient, and having no means of support, is incapable of engaging in an sustainable economic activity and has unreliable and limited sources of income.

Dump: A site used to dispose of solid wastes without environmental controls.

Emission: Pollution discharged into the atmosphere from smokestacks, other vents, and surface areas of commercial or industrial facilities, from residential chimneys; and from motor vehicle, locomotive, or aircraft exhausts.

Environmental and Social Assessment (ESIA): An instrument to identify and assess the potential environmental and social impacts of a proposed project, evaluate alternatives, and design appropriate mitigation, management, and monitoring measures.

Exposure: A potential health threat to the living organisms in the environment due to the amount of radiation or pollutant present in the environment.

Empowerment: Is the expansion of assets and capabilities of vulnerable and marginalized individuals and groups to participate in, negotiate with, influence, control, and hold accountable institutions that affect their lives. In its broadest sense, empowerment is the expansion of freedom of choice and action. It is a participatory process which places or transfers decision-making responsibility and the resources to act into the hands of those who will benefit. This can include (i) capacity building for stakeholder organizations; (ii) strengthening legal status of stakeholder organizations; (iii) stakeholder authority to manage funds, hire and fire workers, supervise work, and procure materials; (iv) stakeholder authority to certify satisfactory completion of project and establish monitoring and evaluation indicators and (v) support for new and spontaneous initiatives by stakeholders.

Environmental and Social Impact: Any change, potential or actual, to: (i) the physical, natural, or cultural environment, and (ii) impacts on surrounding community and workers, resulting from the project activity to be supported.

Gender: Refers to the socially constructed roles ascribed to males and females and the resulting socially determined relations. These roles are learned, change over time, and vary widely within and across cultures. Gender is one of the key entry points for social analysis/ assessment. It is important to understand the social, economic, political, and cultural forces that determine how men and women participate in, benefit from, and control project resources and activities. A good analysis would highlight gender specific constraints, risks and opportunities.
Grievance Procedures: The processes established under law, local regulations, or administrative decision to enable property owners and other displaced persons to redress issues related to acquisition, compensation, or other aspects of resettlement.

Groundwater. The supply of fresh water found beneath the Earth’s surface (usually in aquifers), which is often used for supplying wells and springs. Because groundwater is a major source of drinking water, there is growing concern about areas where leaching agricultural or industrial pollutants or substances from leaking underground storage tanks are contaminating it.

Ipeleeng: One of Government of Botswana’s safety net programmes where vulnerable people are registered to undertake labour–based works and are paid at the end of the month. The workers are also given food daily.

Kgosì: Traditional leader or chief of a ward/village (Plural is DiKgosì).

Kgotla or Customary Court: Name given to the place for community meetings and customary court hearings in a ward/village (Plural is Dìkgotla).

Kgotla Meeting: A public meeting held at the Kgotla, in the presence of a Kgosi or his representative. All individuals are encouraged to speak freely and openly as it upholds the idea of equality.

Land: The surface of the earth consisting of soil and things permanently attached to surface, including land-based natural resources such as forests. The extent of ‘land’ differs from country to country. In this context, land refers to agricultural and/or non-agricultural land and any structures thereon whether temporary or permanent and which may be required for the Project.

Land acquisition: The process of acquiring land under the legally mandated procedures of eminent domain. This includes all methods of obtaining land for project purposes, which may include outright purchase, expropriation of property and acquisition of access rights, such as easements or rights of way. Land acquisition may also include: (a) acquisition of unoccupied or unutilized land whether or not the landholder relies upon such land for income or livelihood purpose; (b) repossession of public land that is used or occupied by individual households; and (c) project impacts that result in land being submerged or otherwise rendered unusable or inaccessible.

Land expropriation: The compulsory taking of land by the state, in exercise of its power of eminent domain. The process whereby a person is compelled by a public agency to alienate all or part of the land and fixed assets s/he owns or possesses, to the ownership and possession of that agency, for a public purpose, in return with compensation at replacement value.

Monitoring: The process of repeated observations and measurements of environmental and social quality parameters to assess and enable changes over time.

Project Affected Person (PAP): Any person who, as a result of the implementation of a project loses their right to own, use, or otherwise benefit from a built structure, land (residential. Agricultural, or pasture) annual or perennial crops and trees, or any other fixed or moveable asset, either in full or in part, permanently or temporarily.

Permeability: The rate at which liquids pass through soil or other materials in a specific direction.

Permit: An authorization, license, or equivalent control document issued by an approved agency to implement the requirements of an environmental regulation; e.g., a permit to operate a wastewater treatment plant or to operate a facility that may generate harmful emissions.

Potable water: Water that is safe for drinking and cooking.

Public Consultation: The process of engaging affected people and other interested parties in open dialogue through which a range of views and concerns can be expressed in order to inform decision-making and help build consensus. To be meaningful, consultation should be carried out in a culturally appropriate manner, with information in local languages distributed in advance.
Recycle/reuse: The process of minimizing the generation of waste by recovering usable products that might otherwise become wastes. Examples are the recycling of aluminium cans, wastepaper, and bottles.

Resettlement Action Plan (RAP): An instrument to be prepared when subproject locations are identified and the project will result in physical and/or economic displacement and livelihood impacts. It specifies the procedures that it will follow and the actions that it will take to mitigate adverse effects, compensate losses, and provide development benefits to persons and communities affected by an investment project.

Rehabilitation or Livelihood Assistance: A term often used to describe the process of re-establishing lifestyles and livelihoods following resettlement.

Run-off: That part of precipitation, snowmelt, or irrigation water that runs off the land into streams.

Smoke: Particles suspended in air after incomplete combustion of materials.

Solid wastes: No liquid, non-soluble materials, ranging from municipal garbage to industrial wastes that contain complex, and sometimes hazardous, substances. Solid wastes include sewage sludge, agricultural refuse, demolition wastes, and mining residues. Technically, solid wastes also refer to liquids and gases in containers.

Socioeconomic Survey (SES): A complete and accurate survey of the project-affected population. The survey focuses on income-earning activities and other socioeconomic indicators.

Social impact: An effect (both positive and negative) on a social issue resulting from development projects.

Stakeholders: Include all individuals and/or groups who are affected by, or can affect, a given operation. Stakeholders can be individuals, interest groups, corporate organizations.

Vulnerable Individuals or Groups: Those who by gender, ethnicity, age, physical or mental disability, economic disadvantage, religious affiliation, social status or other characteristics may be more adversely affected by project impacts including. Vulnerability denotes a condition characterized by higher risk and reduced ability to cope with shock or negative impacts. It may be based on socio-economic condition, gender, age, disability, ethnicity, or other criteria that influence people's ability to access resources and development opportunities.

Indigenous Peoples Plans (or Vulnerable Communities Plans): As a compliance measure with OP 4.10 on Indigenous Peoples, a Vulnerable Community Plan (VCP) is prepared for any investment project which affects Indigenous Peoples. In this project, the term vulnerable communities will be used to mean those communities who meet the criteria of Indigenous Peoples under OP 4.10. The Plan is designed to reflect culturally appropriate benefits and processes and is based on the full consideration of the options preferred by Indigenous Peoples affected by the project in a consultation process that respects the principles of free, prior and informed consultation leading to broad community support. The Plan also includes provisions which ensure that institutions responsible for government interaction with Indigenous Peoples should possess the social, technical and legal skills needed to carry out proposed development activities. Elements of a VCP include an assessment of the legal framework, collection of baseline data, examination of land tenure, strategy for local participation, design of mitigation measures and activities, assessment of institutional capacity, an implementation schedule and a system for monitoring and evaluation.

Ward: A division of a settlement, village or town, for administrative and representative purposes.

Water pollution: Water pollution is the contamination of water bodies, usually as a result of human activities. Water bodies include for example lakes, rivers, oceans, aquifers and groundwater. Water pollution results when contaminants are introduced into the natural environment. For example, releasing inadequately treated wastewater into natural water bodies can lead to degradation of aquatic ecosystems. In turn, this can lead to public health problems for people living downstream. They may use the same polluted river water for drinking or bathing or irrigation. Water pollution is the leading worldwide cause of death and disease, e.g. due to waterborne diseases.
A. Background

The Government of Botswana through Water Utilities Corporation (WUC) is undertaking the Botswana Emergency Water Security and Efficiency Project (BEWSEP) with funding from the World Bank. The Bere Settlement Water Supply Sub-Project is a sub-project under this project. The environmental and social policies of the World Bank (WB) require the project to conduct an Environmental and Social Impact Assessment (ESIA) with an Environmental and Social Management Plan (ESMP) in line with World Bank’s operational policy procedures and standards.

B. BEWSEP Description and Development Objective

The Proposed Development Objective (PDO) of the project is to improve availability of water supply in drought vulnerable areas, increase the efficiency of Water Utilities Corporation (WUC) and strengthen wastewater management in selected systems. The project is organized under three components:

Component 1: To improve availability of water supply and efficiency
Component 2: To improve wastewater and sludge management
Component 3: Sector reforms and institutional strengthening

The BEWSEP has been classified by the World Bank as Category ‘A’ because one of the sub-projects is likely to have significant adverse environmental and social impacts which are sensitive, diverse and unprecedented. The key risk is potential environmental impacts likely to be generated from rehabilitation and expansion works at the Mambo Wastewater Treatment Plant (WWTP). However, Bere Settlement Water Supply Sub-Project is classified as a Category B because it is expected that most of the infrastructure development will be in-situ construction within an already degraded site and laying new pipelines within existing rights of way.

Project Description of Bere Water Augmentation Scheme

The Bere sub-project involves the construction of:
- A new reservoir tank with a holding capacity of 75 m$^3$
- About 3.7 km long underground 90 mm PVC pipes from borehole to the new tank, to be located within the land area at the existing fenced site
- Equipping of an existing but currently unused borehole (BH 9135).
- Ancillary facilities including a pumping station

The sub-project will augment the water supply in Bere settlement by increasing total water abstraction capacity from 84 m$^3$/day to 180 m$^3$/day on a 12hr/day operation. This is expected to meet the current water demand of 170 m$^3$/day as well as projected demand of 321 m$^3$/day (by 2040) in the settlement.

The proposed sub-project will cost P7 million (US$ 700,000) and will take about six months to complete. Construction is anticipated to start in 2020 after social, environmental and procurement due diligence. Fifty construction personnel are estimated to be employed during the construction phase of which about 30 skilled workers are anticipated to be migrants. Depending on the country of origin of the Contractor there is probability of external migrants. No new employment opportunities are anticipated in the operation and maintenance phase. The design horizon of the project is 20 years. The Water Utilities Corporation (WUC) presently has no intention of decommissioning the project but
will upgrade and maintain it or put the water from the borehole to other uses if alternative sources are established. There is no intention to remove the underground pipelines.

C. Justification/Rationale of Sub-Project

The project will supply enough quantities of water to the population of Bere in the long term for the next 20 years (i.e. up to 2040). The settlement currently faces water shortage problem and at times, the community has gone without a water supply for days. This project will supply water on a sustainable basis to improve the quality of life of the community.

D. Sub-Project Location

The sub-project is in Bere settlement in the Ghanzi District. The Map below shows the location of Bere.

![Map showing Bere settlement](image)

E. Sub-Project Activities

a) Pre- Construction Phase
- Preparation of detailed design
- Preparation of ESIA/ESMP and VCP reports
- Tendering and award of contract for a Contractor
- Establishment of contractor’s and labourers’ camp sites
- Preparation of access roads and alternative routes
- Consultations with all relevant authorities and beneficiary community.
b) **Construction**
   - Laying of water pipelines
   - Equipping borehole
   - Water tank construction
   - Fencing
   - Pump-station
   - Consultations with all relevant authorities and beneficiary community.

c) **Decommissioning after Construction**
   - Dismantling of installations and Contractor’s Camp
   - Cleaning up and removal from site all waste materials
   - Rehabilitation of site to nearly its original state.
   - Transportation of materials away from site
   - Consultations with all relevant authorities and beneficiary community.

d) **Operation and Maintenance**
   - Management of the water supply augmentation
   - Monitoring of water quality and pressure
   - Maintenance of reservoirs, tanks and their fences

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**F. Sub-Project Beneficiaries**

The beneficiaries of this subproject are the community of Bere settlement, of which approximately 80 percent are members of Vulnerable Communities who meet the criteria of OP4.10.

**G. Sub-Project Commencement and Estimated Cost**

Civil works are expected to begin in 2020 following due diligence to procurement and it will take six months to construct at a cost of about P 7 million (US$700,000). The defects liability period after construction is twelve months. The estimated budget for the implementation of the ESMP is P 3,989,005.00 (US$ 398,900.50).

**H. Sub-Project Alternatives**

The “No Project” Alternative

The two options assessed are:
(a) no project alternative and
(b) the alternative to go ahead with the project.

The ‘no project’ alternative was rejected because the intended project objective of providing improved water supply to the present and future beneficiaries of Bere settlement would not occur. A ‘no project’ scenario would not address the problem of inadequate or no water supply and would not improve access to potable water. This would compromise human health and well-being. There will be continuous long queues and conflicts at public water standpipes. As such, this alternative was rejected.

**Project Alternative/Choice of Design Options**

The decision to go ahead with the sub-project was chosen to provide improved water supply to the people of Bere settlement which includes vulnerable communities. This will address the problem of
inadequate or no water supply and would improve access to adequate bulk potable water. Queues at the public water standpipes will curtail or reduce drastically. This alternative was therefore accepted.

Under the chosen design alternative there exists choice of design options being pipeline corridor routes from the new borehole to the water tank and for the accommodation of labour. These were considered and assessed. Conclusions and recommendations of the assessment are as follows:

**Pipeline Corridor Route from the New Borehole to the Water Tank**

**Alternative 1**: The pipeline would be laid along the earth road which leads from the borehole to the tank. This alternative will not require land acquisition, but the pipeline length increases by 30m.

**Alternative 2**: The pipeline would be routed through a passage where there is an existing pipeline to the water tank. The second alternative has only 3–4 m wide of land or area to work on for the civil works. This does not provide the required working space of 5m width. To obtain enough working space, portions of six residential plots would be needed to be acquired. These portions would be 120m in length and 2 m wide (refer to Figure below).

![Pipeline Corridor Route from the New Borehole to the Water Tank](image)

After discussion by safeguards team and WUC project engineers of the advantages and disadvantages of each alternative it was resolved that the pipeline should be routed along the existing earth road to the water tank (i.e. pipeline corridor Alternative 1) to avoid land acquisition and associated impacts.

2. **Accommodation of Labourers**

The alternatives to address labour influx are either to establish a Camp near the Bere settlement (Alternative 1) or workers would commute daily from outside the settlement (Alternative 2), over 150 km away either from Ghanzi town or Kang village.

Due to the remoteness of the beneficiary community, it is recommended that a labour camp be established at no less than 10 km from Bere settlement. This recommendation assumes there will be strict implementation of mitigation measures to prevent or minimise anticipated adverse social and environmental impacts. Some of these potential adverse impacts include Sexual Harassment, Exploitation and Abuse (SHEA), Gender-Based Violence (GBV) and Violence Against Children (VAC), increases in sexually transmitted diseases and infections, criminal offences such as theft and affray, increase in alcohol and drugs abuse, social conflict and teenage pregnancies.
I. Rationale for the Environmental and Social Impact Assessment and Environmental and Social Management Plan (ESIA/ESMP)

The purpose of this ESIA/ESMP is to evaluate and mitigate potential environmental and social risks and impacts at the sub-project sites. The process will examine ways to prevent, minimize, mitigate, or compensate for adverse environmental and social impacts, and to enhance positive impacts throughout project implementation. It supports environmental and social sustainability throughout the lifecycle of project implementation and beyond. The ESMP will address potential project impacts, including those to vulnerable and marginalized groups and propose mitigation measures, costs, and responsibilities for mitigation and monitoring. It is a requirement of the World Bank that for any project they are financing, a comprehensive ESIA with an ESMP study should be carried out before they can commence. It is also a requirement under the Botswana Environmental Assessment Act, 2011.

J. Methodology

The following methodology was used in preparing the ESIA/ESMP:

- **Site Visits:** Three site visits to Bere settlement were undertaken by the Environmental and Social Team with representatives from WUC PIU. These were carried out on the 17 October 2017, 6 March 2018 and from the 4-7 April 2018. The purpose of the visits was to assess the existing biophysical and socio-economic environment of the project site and its surroundings. As well as to consult the community, the Village Development Committee and the leadership of the settlement and all other relevant institutions, key stakeholders in Bere settlement as well a Ghanzi District Council.

- **Consultations:** As part of the preparation of the ESIA, a community meeting (known as a Kgotla) was held on the 6 March 2018. A focus group discussion with leaders of the settlement were held in Bere on the 5 April 2018. Another Kgotla meeting was held on the 4 June 2019 and attended by a representative from the World Bank to observe the consultations process. Letters and questionnaire were sent to all relevant stakeholders and affected parties. The consultations were undertaken in compliance with Section 7 (2) of the Environmental Assessment Act (2011) of Botswana and the Environmental Assessment Regulations of 2012. The consultations were undertaken to obtain the views, opinions, and experiences of VC’s and all relevant stakeholders, as well as the general public. It also served to inform them of the proposed design and positive and adverse impacts of the project and these discussions were considered in the ESIA/ESMP.

- **Vulnerable Communities Social Assessment:** As part of the study, a social assessment of Bere settlement was undertaken in line World Bank Policy on Indigenous Peoples (OP 4.10) with the principles Free, Prior and Informed Consultation (leading to broad community support). The settlement is registered as being vulnerable and it is listed as a remote area settlement by the Government of Botswana. Approximately 80 percent of the population in the settlement are the San (Basarwa) people, who meet the criteria of Vulnerable Communities (under the World Bank’s Indigenous Peoples Policy, OP4.10). However, in this project, the term Vulnerable Communities will be used in its place as per the Project Appraisal Document (PAD). The objective of the social assessment was to assess the socio-economic and cultural baseline of Vulnerable Community within the project area and to ensure they receive culturally appropriate benefits and that they are not adversely impacted by the project. The social assessment is summarized in the Vulnerable Community Plan (VCP) in fulfilment of OP 4.10.
• **Literature Review:** Review of existing literature on the socio-economic and biophysical characteristics of the Bere settlement was undertaken. As part of the literature review, existing relevant World Bank safeguard policies and Botswana legislation, policies and programmes related to the implementation of the project and anthropological literature on Bere settlement were also assessed.

• **Preparation of the Environmental and Social Impact Assessment and Environmental and Social Management Plan:** The preparation of the ESMP was based on the ESIA to mitigate the identified environmental and social risks and impacts. These were guided by the World Bank Safeguard Policies including the World Bank Group Environment, Health and Safety guidelines and Part II Form 5 of the Environmental Assessment Regulations (2012) of Botswana.

• **Rapid Social Assessment of Bere:** The project area is remote and 150 km - South East of Ghanzi town on the way to Kang, the nearest major settlement. Bere settlement is a typical rural area with major economic activities being subsistence pastoral and arable farming (crops produced include maize, sorghum and beans) and the Ipelegeng Programme (Government provision of basic income though a labour-based public works programme). The settlement is a major beneficiary of the Government of Botswana Safety Nets Programmes such as those for destitute persons given the high poverty rate in Bere settlement.

K. **Environmental and Social Safeguards Laws and Policies Relevant to the Sub-Project**

**World Bank Policies Triggered for the Entire Project**

<table>
<thead>
<tr>
<th>World Bank Safeguards Operational Policy (OP)</th>
<th>Triggered by the Project</th>
<th>Relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP 4.01 Environmental Assessment</td>
<td>Yes (applicable to this subproject)</td>
<td>Initial evaluation has identified potential negative environmental and social impacts, thus, there is a need for an environmental and social assessment to ensure appropriate mitigation measures are in place during all stages of the sub-project.</td>
</tr>
<tr>
<td>OP 4.37 Dam Safety</td>
<td>Yes (not applicable to this subproject)</td>
<td>While this policy is triggered at project level provisions under OP 4.37 are not be applicable to this sub-project as the water source is groundwater.</td>
</tr>
<tr>
<td>OP 7.50 Projects on International Waterways</td>
<td>Yes (not applicable to this subproject)</td>
<td>This policy is triggered at project level but is not applicable for this sub-project.</td>
</tr>
<tr>
<td>OP 4.11 Physical Cultural Resources</td>
<td>Yes (applicable to this subproject in case there are Chance Finds)</td>
<td>No sites of cultural or historical significance will be affected by the sub-project. However, there could be Chance Finds. Procedures are therefore described in Annex 11 in case of any discovery.</td>
</tr>
<tr>
<td>OP 4.10 Indigenous Peoples</td>
<td>Yes (applicable to this project)</td>
<td>Basarwa (San) are present in the sub-project area.</td>
</tr>
<tr>
<td>OP 4.12 Involuntary Resettlement</td>
<td>Yes (not applicable to this subproject)</td>
<td>This policy was triggered for the entire project, but it does not apply to this sub-project. There is no land acquisition related to sub-project activities (pipeline, borehole, and worker’s Camp and Contractor’s site). The pipeline from the new borehole will follow the existing right of way of the road.</td>
</tr>
</tbody>
</table>
Borehole will be constructed on land for which WUC has acquired land rights from the Ghanzi land board. For the land to be used for the Labour Camp and Contractor’s site will follow the established guideline for site location at least 10 kms from the community and will acquire temporary land use rights by the land board.

No economic displacement is expected in this sub-project.

### Botswana Environmental and Social Safeguards Policies Relevant to the Project

<table>
<thead>
<tr>
<th>Legislation/Policy</th>
<th>Relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Assessment Act, 2011</td>
<td>Guides the preparation of the ESIA and ESMP to meet the requirement of Botswana. Also guides the consultation process for all stakeholders and affected parties (public participation).</td>
</tr>
<tr>
<td>Tribal Land Act (1968) and Tribal Land (Amendment) Act (1993)</td>
<td>Provides legal management of tribal/communal land in Botswana and indicates that land management in tribal areas is transferred to the Land Board</td>
</tr>
<tr>
<td>Domestic Violence Act, 2008</td>
<td>Seeks to prevent and protect survivors of violence especially GBV survivors.</td>
</tr>
<tr>
<td>Factories Act, 1979</td>
<td>Seeks to ensure that the welfare, health and safety of workers and the beneficiary community members. It also seeks to ensure the safety of machinery used in the workplace.</td>
</tr>
<tr>
<td>Monuments and Relics Act, 2001</td>
<td>Protects archaeological and cultural sites within the project area.</td>
</tr>
<tr>
<td>Affirmative Action Framework for Remote Area Communities</td>
<td>Aims at promoting equity in the remote area communities (RACs). Support the protection of indigenous knowledge, promotes social inclusion of people living in recognized remote area settlements, both individually and/ or as a family in the development of the country. Ensures that there is development infrastructure in the recognized remote area settlements for the RACs to be able to participate meaningfully in the economic and social activities of the country.</td>
</tr>
<tr>
<td>Revised National Policy on Destitute Persons (2002)</td>
<td>National Policy on Destitute Persons aids poor and vulnerable households by ensuring that they are food secure, that their children attend school and have all the educational necessities as well as ensuring that they have decent shelter and are economically secure through the additional cash transfer.</td>
</tr>
<tr>
<td>Botswana National Settlement Policy (1998)</td>
<td>Establishes a settlement hierarchy, based on the population and the size of its catchment area. Bere settlement falls under Tertiary III within the hierarchy, the category includes; a population range of 500-999.</td>
</tr>
<tr>
<td>Children’s Act, 2009</td>
<td>Provides for the promotion and protection of the rights of children, including promoting their physical, emotional intellectual and social development wellbeing as well as their protection from all forms of abuse.</td>
</tr>
<tr>
<td>Revised Guidelines for Implementation of Ipelegeng Programme (2012) (Labour Based Public Works Programme)</td>
<td>It is a poverty eradication strategy spearheaded by the State President. This programme provides temporary employment of working in community project to members of the community in various villages throughout Botswana projects through temporary supplement to rural incomes through wages.</td>
</tr>
<tr>
<td>Botswana Vision 2036</td>
<td>The theme for Vision 2036 is “Achieving Prosperity for All”. It has four pillars which have been aligned with global agenda goals for sustainable development and Africa’s Agenda 2063. The four Pillars are: i) Sustainable Economic Development by 2036, Botswana will be a high-income country, with an export-led economy underpinned by diversified, inclusive and sustainable growth driven by high levels of productivity; ii) Human and Social Development - will be a moral, tolerant and inclusive society that provides opportunities for all; iii) Sustainable Environment -</td>
</tr>
</tbody>
</table>
sustainable and optimal use of our natural resources will have transformed our economy and uplifted our people’s livelihoods and iv) Governance, Peace, and Security – good governance, peace and security will continue to be at the centre of Botswana’s good governance.

### International Treaties and Conventions on Indigenous Peoples

<table>
<thead>
<tr>
<th>Convention</th>
<th>Description</th>
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</table>
| ILO Convention on Indigenous and Tribal Peoples | 1. The Convention spells out that self-identification as indigenous or tribal peoples shall be regarded as a fundamental criterion for determining the groups to which the provisions of this Convention apply.  
2. Governments shall have the responsibility for developing, with the participation of the peoples concerned; protect the rights of these peoples and to guarantee respect for their integrity. |
| African Commission on Human and Peoples Rights Working Group on Indigenous Peoples Report on Indigenous Peoples in Africa (2005) | This report defines and helps elucidate the understanding of Indigenous Peoples in the African context, which does not mean ‘primordially’ (those who were here first) but those who have persistent marginalization and disadvantage to perpetuate their livelihoods, distinct cultures and languages within the mainstream of society, and whose livelihoods, identity and cultural survival depend on access to ancestral lands, territories and natural resources. |
| UN Declaration on Rights of Indigenous Peoples (2007) | The UN Declaration affirms the minimum standards for the survival, dignity, security and well-being of Indigenous Peoples. It delineates and defines the individual and collective rights of Indigenous Peoples, including rights to cultural and ceremonial expression, identity, language, employment, health, education and other issues. It “emphasizes the rights of Indigenous peoples to maintain and strengthen their own institutions, cultures and traditions, and to pursue their development in keeping with their own needs and aspirations”. It “prohibits discrimination against indigenous peoples”, and it “promotes their full and effective participation in all matters that concern them and their right to remain distinct and to pursue their own visions of economic and social development”. |
| African Union Agenda 2063 | This is Africa’s strategic framework that aims to deliver on its goal for inclusive and sustainable development and is a concrete manifestation of the pan-African drive for unity, self-determination, freedom, progress and collective prosperity pursued under Pan-Africanism and African Renaissance. The goal is to prioritize inclusive social and economic development, continental and regional integration, democratic governance and peace and security amongst other issues aimed at repositioning Africa to becoming a dominant player in the global arena. |
| Sustainable Development Goals (SDGs) | The Sustainable Development Goals (SDGs) (or the Global Goals), are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. These 17 Goals build on the successes of the Millennium Development Goals (MDGs) and includes new areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice, among other priorities. The goals are interconnected – often the key to success on one will involve tackling issues more commonly associated with another. |
L. **Archaeology (Physical Cultural Resources)**
An Archaeological Impact Assessment (AIA) was undertaken for the project to determine whether there are any significant potential negative impacts on archaeological or cultural resources. The study established that there are no archaeological resources within or around the project site. An AIA Report detailing this finding was submitted to and approved by the Botswana Department of National Museum and Monuments and cleared by the department (See Annex 61).

M. **Social Assessment of Vulnerable Communities of the Project**

**Assessment Criteria for OP 4.10**
Considering the criteria of Vulnerable Communities and screening following the World Bank OP 4.10 policy, Bere settlement is the first settlement in Botswana comprising mostly residents of the San (or Basarwa). They possess the following characteristics:

a) Self-identification as members of a distinct cultural group and the recognition of the Basarwa as a distinct cultural group goes beyond national, regional and international borders. This is because they identify themselves as Basarwa and others recognize them as such.

b) Collective attachment to geographically distinct habitats or ancestral territories which encompass Bere settlement. Basarwa are believed to be the first inhabitants of Southern Africa for some 200,000 and settled in Botswana after they were driven out of the Cape area, about a thousand years ago. As hunter gatherers, they moved from one place to the other in search for water and food (hunting and gathering).

c) Customary cultural, economic, social, or political institutions that is separate from those of the mainstream society or culture. They still practice hunting at a small scale by applying for a permit to hunt (for example guinea fowls) and they still gather wild fruits and tubers for their consumption, and they sell surplus. They still practice their ancestral dance of ‘tsutsube’ (traditional dance) and they still teach their children this dance. They still practice ‘botsetsi’ (rites of passage ceremony for girls at first menstruation), as well as rites of passage for boys who are maturing into manhood. Some Basarwa still practice traditional medicine that has been passed down from elders.

d) Basarwa speak their distinct language, Sesarwa, a click-based language that differs from other languages in the country. Other language spoken in the community is Setswana which is the official language.

In view of the above, the Basarwa are included in the project preparation, implementation and monitoring. They are consulted extensively and appropriately over issues that affect them and any potential adverse impacts emanating from the project are identified and adequately mitigated meeting local and international requirements and best practice. The social assessment of the Basarwa is discussed in Chapter 4.

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1 Annex 6 Archaeological Clearance Data from Meteorological Department.
History of San in Bere settlement

According to the University of Botswana, Okavango Research Institute (1978), and corroborated by the Kgosi of Bere, the settlement\(^2\) started as a small hamlet where some Basarwa were staying. It later developed to a settlement upon the arrival in 1961 of, Dr. Hans-Joachim Heinz\(^3\) from the University of Witwatersrand, South Africa. He was an anthropologist and a parasitology. He came to study the culture and lifestyle of the San and other communities in the Kalahari in Botswana. He settled at the location now called Bere. Gradually (and without controversy) he introduced the Basarwa to subsistence farming and animal rearing, and thus, adversely impacted their traditional livelihoods and culture. Dr. Heinz’s aim was to “help” the San “adapt to modern society” and as more Basarwa came to this location, Bere was established. It is the first Basarwa recognised settlement in the country by the Government. Upon recognition as a settlement, the residents received Government Assistance under the RADP Programme for primary school, a clinic and water services. The Tsswana way of governance system, (Kgosi, Kgotla, codified land rights, etc.) was introduced. As time went on, other Basarwa’s were relocated to Bere settlement from other villages.

Population Characteristics

The population of Bere settlement was 778 in 2011 (53.5 percent women, 46.5 percent males). The Tribal Administration and the Village Development Committee (VDC) estimated the population size to be 1,412 as at March 2018. Population increase was due in part to Basarwa (and others) who were relocated into Bere settlement from Ranyane village in Ghanzi District in 2013\(^4\).

Ethnicity and Language

The population of Bere settlement is made up mostly of Basarwa (80 percent of the residents), followed by Bakgalagadi (13 percent), and the Baherero (7 percent). The main languages spoken in the community are Sesarwa (comprising Naro, Sekaukau, Qgoo Dxana and Deui dialects) spoken mainly by the Basarwa, Sekgalagadi, Seherero, Setswana and English.

Housing

The site visit to Bere settlement revealed that most housing is made from natural materials (houses are built using dried trees stems from the local tress, cow dung and mud).

Poverty

The income of the residents of Bere is extremely low. Most do not have productive work that generates income. The average income of the households was estimated at P92.00 (US$ 9.2) per month, which is far below the Poverty Datum Line of Botswana of P1, 371.00 (US$ 137.10) per household level (World Bank, 2015).

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\(^2\) A settlement is a recognized geographical location of people in an area for economic and social purposes. A settlement has a minimum population of 150 people, Settlements are classified into a hierarchy of 4 according to the population. These are primary (20,000 + people), Secondary (10,000-19,999), Tertiary I-IV (5,000-499) and other settlements (498-150).

\(^3\) Dr Heinz, while controversial in his research methods, was an anthropologist and came to Botswana in 1961 to study the biology of the San (Basarwa) in the Okwa Valley, Takatshwane and Bere settlements. His work, which is depicted mostly in photographic collection, focuses on documenting the culture and indigenous knowledge of the San in Okavango Delta and Ghanzi region. See also: BBC (1975): Bushman of the Kalahari : the story of Dr. Hans-Joachim Heinz and the Bushmen of Bere. At the very least, the work of Dr. Heinz demonstrates that as of mid-1960s, the Basarwa have been traditionally occupying and living in Bere.

Due to the poverty status of the settlement, the residents benefit from Government’s safety nets programmes which are targeted for vulnerable groups such as: Old Age Pension Scheme, Destitute Persons Programme and Remote Areas Development Programme as described in Chapter 2.

**Employment and Livelihoods**

According to Statistics Botswana (2015) unemployment in the settlement was 3.6 percent which is lower than that of Ghanzi district’s which is 14.9 percent. Unemployment was highest amongst women at 4.4 percent (district was 20.0 percent) and for men it was 3.2 percent (14.9 percent in the District). This could be attributable to that most residents in Bere settlement are enrolled in the Ipelegeng programme, whose main objective is to provide short term employment support and relief whilst at the same time carrying out essential development projects (such as maintaining public facilities like schools and health facilities and vegetation control). It targets unskilled and semi-skilled labour for short term assistance.

Most of the able-bodied residents in Bere settlement are employed in Ipelegeng, because of the high prevalence of poverty and lack of employment opportunities. Employment is for 20 days (six hours a day) and it is not on a permanent basis. Current wage rates are P400.00 (US $37) per month for casual labour and P534.00 (US $49) per month for supervisors.

Members of the community still depend on gathering and hunting for subsistence livelihoods. Community hunting licences can be issued for those who wish to hunt during the hunting season (between June and September) and it is subject to wildlife included in the hunting quota as reflected on Schedule 7 of the Wildlife and National Parks Act (1992).

To supplement livelihoods, the Government of Botswana has numerous poverty alleviation programmes such as the Integrated Support Programme for Arable Agriculture Development (ISPAAD). This programme provides vulnerable people a few domestic animals such as goats and chicken for subsistence keeping.

While Bere settlement has no surface water, it is endowed with ground water which provides a source for domestic water as well as for livestock watering.

The Government has also encouraged the formation of syndicates and groups to create employment and generate income. The syndicates and groups in the settlement include; bakery, bricklaying, leatherworks, textile, beadwork and beekeeping. Some of these groups like bakeries supplies bread to the primary school, and the textiles supply the school children with school uniform. The uniforms are paid for by the Government. Bead workers sell their products in in Ghanzi.

**Education**

Bere settlement has one primary school for children of ages between 6 to 12 years. Primary school participation rate is about 95 percent and completion rate of about 90 percent as some pupils drop out of school due to pregnancy or working on the fields/farms with their parents.

According to Statistics Botswana (2015), the literacy rate in the settlement in 2011 was 66.8 percent for females and 65.1 percent for males. These figures are lower than the district average of 76.7 and 74.7 for females and males respectively, indicating a lower base of education in the settlement.
**Health Services**
The settlement has one health post. HIV/AIDS continues to pose a threat to the socio-economic development of the settlement. The most vulnerable and affected population ranges between 20 – 34 years of age, mostly women.

The predominant diseases in the settlement include diarrhoea, scabies, and ringworms due to poor hygiene practices, and HIV/AIDS. For HIV/AIDS the most affected population ranges from 20 – 34 years of age and are mostly women.

Traditional medicine as an alternative to modern medicine is also practiced in the village. There is one traditional healer in the settlement.

**Waste Management**
Bere settlement does not have a waste dumpsite or a landfill. The system used in the settlement is that waste is collected on a periodic basis from households by use of a donkey cart and stored temporarily at a transfer station. Ghanzi District Council then collects the waste/refuse which is disposed at the Ghanzi landfill site. The waste is to be collected weekly, but it is not collected regularly.

**Water and Sanitation**
The water supply service in the settlement is through piped water supply from borehole that feeds into a reservoir tank located in the village. According to Statistics Botswana, (2011), about 7.4 percent of the population has piped water outdoors and 52.8 percent draw water from communal water standpipes. The settlement has five communal water standpipes, but one was not working as at March 2018.

The water quality data as given by WUC shows that the water has high levels of sodium. Although the settlement has no surface water, it is endowed with ground water, which provides them a source for domestic water as well as for livestock watering.

Sanitation is not well organized as only a few households have sanitation facility limited only to pit latrines. According to Statistics Botswana, (2011), out of the 216 households only 12 have access to improved sanitation and the rest of the population use open defecation.

**Telecommunication**
The only means for telecommunication in Bere settlement is through the Botswana Telecommunication Corporation (BTC) and Be Mobile cell phone network.

**Power Supply**
Bere settlement is not connected to the national electricity grid. Electricity is derived from solar. The power is used in primary school, VDC houses, and the health post. The Government through Ghanzi District Council has installed solar powered streetlights. Households are not connected to the power supply. Most residents use batteries to power their electrical appliances such as radios.

**Land Tenure and Use**
The land in Bere settlement is tribal land under the jurisdiction of the Ghanzi Land Board. The land uses in the settlement are mainly residential, civic and community (school and a community centre, Kgotsa), commercial (two drinking bars, a general dealer store and 10 shebeens (a place of sale and drinking of locally brewed beer) and grazing fields.
The community has a syndicate borehole on a communal grazing land about 5 km south of the settlement.

Cultural Practices and Customs
Many customs have fallen into disuse with the impact of sedentarization and development policies. Some practices have endured such as rituals related to reaching puberty among Basarwa girls.

Tribal Administration
Bere settlement is led by a Kgosi (tribal chief) who has five assistants from each ward of the settlement. It has a Village Development Committee (VDC) with elected members. The committee comprises 7 members of which 5 are females. The VDC is responsible for initiating development projects for the villages and seek funding for it. They also aid in implementing projects in the settlement. The Kgosi and the VDC members are paid allowance from the Central Government. However, the traditional form of governance among the Basarwa was organized around an egalitarian system of elders and clan members but this changed with the introduction of the Chieftainship Act of 1933 and its replacement, the Bogosi Act of 1987.5

Traditional Ecological Knowledge
From anthropological documents and discussions held with Bere residents, it was found that particularly the elderly of the community has a profound knowledge of nature that has been acquired over time and passed down from previous generations. Elders know which plants are medicinal, palatable and toxic. They also can determine the lifecycle of insects and can tell which are edible.

Religion
The predominate religion is Christianity at 87.2 percent. African tradition follows at 4.1 percent, and 8.7 percent stated that they practice no religion.

N. ESIA Core Findings
1. The project was welcomed by the beneficiary communities as they are experiencing a water deficit over many years.

The key findings of the environmental assessment that informs the ESMP are:

Biophysical Environment
- The project area is well-drained and very sandy.
- High temperatures of over 35°C are common.
- The project area is generally quiet. Using a handheld sound level metre (SL 4014) noise levels recorded in front of the primary school was between 30 to 69 dB during the day.
- There was no dust pollution during the site visits. Dust recorded in front of the primary school using a HT-9600 Particle Counter was zero (0) for PM$_{10}$ and PM$_{2.5}$.

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5 The Bogosi Act is a piece of legislation in Botswana that defines the office of bogosi or “chieftainship” among Botswana’s various tribes. The tribal leader and has the following functions: to exercise his or her powers under this Act to promote the welfare of the members of his or her tribe; to carry out any lawful instructions given to him or her by the Minister; to convene kgotla meetings to obtain advice as to the exercise of his or her functions under this Act; to arrange tribal ceremonies; to preside over cases in terms of the warrant of his or her court issued under the Customary Courts Act; and to perform such other functions as may be conferred on him or her by or under this Act or any other enactment.
• Wildlife sometimes roams at the outskirts of Bere settlement near where the borehole is located. The borehole is located 7 km away from the built-up environment.
• The foundations of the existing water tank were found to be exposed due to soil erosion.

Socio-Economic Environment
• Bere settlement is made up of the Basarwa (San) who constitute 80 percent of the residents, followed by Bakgalagadi who constitute 13 percent and Baherero who make up the remaining 7 percent the population.
• Bere is a recipient of Government Social Safety Nets Programmes such as Remote Area Development Programme (RADP), and Destitute Programmes. The community receives housing, monthly cash transfers and food baskets since most of the residents are classified as vulnerable and poor according to the Destitute Policy.
• There is evidence of vandalism of the WUC properties around the reservoir tanks in the form of damage of fences.
• There is inadequate distribution of water standpipes within the settlement. This has resulted in conflicts among the residents. There are six public water standpipes of which one was not working in Mokala ward at the time of visit in March 2018. One water standpipe is also required at Khumbulakhaya ward, where there are currently no water standpipes.
• The settlement has no dumping site. Refuse is collected and dumped at a transfer station where Ghanzi District Council collects and disposes it at the Ghanzi landfill site.
• In 2013, about 100 people were resettled in Bere settlement from Ranyane village. The aim was to enable them the use of social amenities such as water and health services which were not available in Ranyane and this resulted in an increase in the population of Bere which now stands at 1,412 as at March 2018.
• Records from the Botswana Police Service in Ghanzi indicate that theft, fighting and defilement are common in district, including Bere settlement.
• Accommodation facilities are limited in the settlement due to its remoteness. This will impact the project as a Labour Camp will need to be established during works execution to accommodate the influx of workers.

O. Potential Environmental and Social Adverse Impacts and Proposed Mitigation Measures

The project will result in several negative and positive impacts/risks on the receiving environment and society. From the assessment undertaken, the moderate and highly significant impacts are detailed below.

Potential Positive Impacts
• Improved aesthetics of water tank and reservoir sites
• Creation of temporary employment for semi-skilled and unskilled labour
• Boost to local economy (increased livelihood opportunities)
• Sustainable supply of good quality water at a stable water pressure
• Improved hygiene and health
### Potential Negative Impacts

The potential negative impacts and their proposed mitigation measures are presented in the **Table below**:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Potential Negative Impacts</th>
<th>Proposed Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRE-CONSTRUCTION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identification of a site for a contractor’s and labour camp and establishment</td>
<td>- Ensure mitigation measures in Contractor’s ESMP to address GBV/VAC and other measures to prevent exacerbation of social issues such as alcoholism and substance abuse and teenage pregnancy are put in place (such as Codes of Conduct see Annex 10). - Location of the labour Camp at least 10 km outside the village.</td>
<td></td>
</tr>
<tr>
<td><strong>CONSTRUCTION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All construction activities: Land clearing for servitude, Excavation (trenching), laying of pipes and backfilling, Building of tanks and reservoirs, Transportation of various project materials</td>
<td>Noise pollution - All project machinery and vehicles should be properly serviced - Fit machinery and heavy-duty equipment with silencers to minimize noise generation. - Workers should be provided with noise protection gear including ear plugs. - Works shall only be carried out during daytime to limit noise nuisance</td>
<td>Dust pollution - Construction machinery and equipment should be switched off when not in use to avoid unnecessary idling of the engines - All haul trucks for transporting earth materials and spoils should be covered as per directive from Department of Waste Management and Pollution Control to prevent the emission of dust during transportation of materials. Covering of material in transportation by tarpaulin is highly recommended.</td>
</tr>
<tr>
<td>Potential trench collapse (Cave ins)</td>
<td>- Employ person with relevant expertise to inspect trenching daily - Train workers on working in trenches and keeping safe and detecting collapse of trenches. - Keep heavy equipment away from trench edges - Identify locations of underground utilities - Provide safe access and ingress to all excavations. This should be ladders and steps ramps provided at intervals of 8 m. - Stockpiles of excavated materials should be put at minimal a safe distance of 1m from the edge of the trench. - Protect workers and trenches by use of shoring or shielding.</td>
<td>Land pollution (both solid and liquid waste) - Avail waste bags or containers to move with the construction team along the pipeline. - All non-hazardous solid waste generated must be disposed of appropriately at the nearest landfill or refuse dump site. - Where spoil is contaminated, this should be collected for remediation at the soil hospital within the Contractor’s Camp. - Following successful remediation, this should be collected and disposed of by a licensed and registered company that deals with hazardous waste collection and disposal. - All waste materials should be sorted out first such as contaminated rubble, metal, wood and other waste materials so that they are disposed of appropriately.</td>
</tr>
<tr>
<td>Risk of igniting bush fires</td>
<td>- Burning of waste should be prohibited. No fire should be ignited at any point at the project site. - A designated and controlled area should be demarcated for smoking - Workers should be trained on fire prevention and fighting.</td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td>Potential Negative Impacts</td>
<td>Proposed Mitigation Measures</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>- All Construction Activities</td>
<td>Conflicts and grievances</td>
<td>- There should be a fire extinguisher at all working places</td>
</tr>
<tr>
<td>- Land clearing for servitude</td>
<td></td>
<td>- Promote active community participation and provide adequate information to prevent misunderstanding; implement awareness sessions on presence of and how to use the GRM</td>
</tr>
<tr>
<td>- Excavation (trenching), laying of Pipes and Backfilling</td>
<td></td>
<td>- Implement the Grievance Redress Mechanism</td>
</tr>
<tr>
<td>- Building of tanks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase in new infections of HIV/AIDs and STDs</td>
<td></td>
<td>- The Contractor and WUC will provide continuous education and awareness on HIV/ AIDs, STIs and preventing Gender Based Violence (GBV) and Violence Against Children (VAC) in all the beneficiary villages by engaging a social specialist. The awareness should include behavioural change on alcoholism and substance abuse,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- No alcohol should be sold, consumed or otherwise brought on the project site.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- There will be regular awareness and education sessions for all workers, including new workers as they come in.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- All workers will sign codes of conduct: Codes of Conduct and Action Plan for Implementing ESHS and OHS Standards, and Preventing Gender Based Violence (GBV) and Violence Against Children (VAC). See Annex 10 for full Codes of Conduct.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Include Codes of Conduct in the Contractor ESMP and a requirement in bidding documents with periodic awareness and sensitization training.</td>
</tr>
<tr>
<td>Potential for GBV and Sexual Exploitation and Abuse (SEA)</td>
<td>- Contractor to engage a GBV service provider to conduct an awareness talk periodically (monthly) on GBV, and their prevention and to provide counselling services to GBV survivors</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Train project-related staff and beneficiary villages on behaviour obligations. To make this effective, all workers will be required to sign an individual Code of Conduct as presented in the Codes of Conduct in Annex 11.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Ensure women have equal opportunity to be hired as this could help address the problem of younger women getting into relationships for financial support and being abused in that process.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- A Gender-Based Violence (GBV) and Violence Against Children (VAC) compliance team to be formed as per World Bank’s guidelines as presented in Annex 10.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- The contractor and sub-contractors and all workers are to be sensitized on Codes of Conduct and Action Plan for preventing Gender Based Violence (GBV), Sexual Harassment Exploitation and Abuse (SHEA) and Violence Against Children (VAC) throughout the implementation of the project.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Inform and sensitize the community about the GRM and specific procedures for reporting instances of GBV, SHEA and VAC.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Engage police in sensitization and awareness on GBV/SHEA/VAC to ensure they are aware of procedures in place and need for survivor-centered procedures and to participate in community and worker training.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Engage Ministry of Youth Empowerment Sports and Cultural Development and the Gender Affairs Department for feedback on procedures and to participate in community and worker training and awareness programs.</td>
</tr>
<tr>
<td>Potential accidents and injuries (Occupational Health)</td>
<td>- Provide workers with relevant personal protective equipment.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Training of workers on health and safety protocols, the use of safety gear, etc.</td>
</tr>
<tr>
<td>Activity</td>
<td>Potential Negative Impacts</td>
<td>Proposed Mitigation Measures</td>
</tr>
<tr>
<td>----------</td>
<td>---------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Exposure of workers to excessive heat</td>
<td>On extremely hot days, with temperature more than 35°C, there should be work/rest cycles, and drinking water often. Through training toolbox or awareness talks. Workers should be trained to look out for the symptoms of heat-related illness in themselves and others. Drinking water in dispensable containers should be provided to workers at all working fronts (sites).</td>
<td></td>
</tr>
<tr>
<td>Accidents involving humans and livestock</td>
<td>Works Ahead signs should be placed at least 100m on either approach along roads running parallel to the pipeline routes. Ensure all scaffolding is inspected by competent person(s) before use. Appropriate PPE including safety harnesses, safety nets and helmets should be provided and the use of these should be enforced. Implement good housekeeping practices, such as the sorting and placing loose construction materials or demolition debris in established areas away from footpaths.</td>
<td></td>
</tr>
<tr>
<td>Damage to public utility services</td>
<td>Map out all utilities within the road to avoid damage. Area for excavations should be marked on the ground for direction of the operator.</td>
<td></td>
</tr>
<tr>
<td>Blockage of access to properties</td>
<td>Community members should be informed at least a day before possible blockage of access. The period of blockage should also be communicated. No access should be blocked for more than a day.</td>
<td></td>
</tr>
<tr>
<td>Potential archaeological (Physical Cultural Resources) finds</td>
<td>Institute Chance Finds Procedures in the case of cultural property is found. Inform relevant parties of the any archaeological material using Chance Finds Procedures (Annex 11).</td>
<td></td>
</tr>
<tr>
<td>Truck accidents that include children and community members Noise and dust by trucks</td>
<td>Build an access road that does not pass through the settlement Consultant to identify other alternative routes around the settlement Access road to be used when fetching water for the Contractor’s Labourer Camp (Annex 15)</td>
<td></td>
</tr>
</tbody>
</table>

**DECOMMISSIONING: POST CONSTRUCTION**

- Dismantling and transportation of materials and equipment cleaning up. - During decommissioning, all potential impacts on public and occupational health are likely to occur during construction, are also significant. Waste generation will be higher. - As per the construction phase

**DURING OPERATION AND MAINTENANCE**

- Management of the water supply augmentation - Monitoring of water quality and pressure - Maintenance of water pumps, water storage tanks and the palisade fences. - Water Quality - Water pressure - Palisade Fences - Water Storage tanks - Reservoirs - Pump stations - Prompt repair of pipe burst or leakages - Constant monitoring of water quality and pressure - Residents should be educated on water conservation techniques through water education Campaigns - Monthly checks and maintenance of Palisade fences, pumps, reservoirs, and water storage tank tanks - Creation of employment opportunities - Household connection of water should be encouraged to provide opportunities for other livelihoods. Creation of employment with water as an input material. Provide fair and transparent processes for opportunities.
P. Estimated Budget for Implementation of ESMP

It is estimated that the mitigation measures at the pre and construction stages will cost a total of P 3,989,005.00 (US$ 398,900.50) which is about 40% of the total Project cost.

<table>
<thead>
<tr>
<th>No.</th>
<th>Activity</th>
<th>Time Frame</th>
<th>Budget (Pula)</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>CAPACITY BUILDING</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Capacity building of WUC officers in Environmental and Social Safeguards</td>
<td>Throughout Project</td>
<td>50,000.00</td>
<td>WUC</td>
</tr>
<tr>
<td></td>
<td>Capacity building of Stakeholders involved in ESMP and GRM implementation</td>
<td>Within first 3 months of project implementation</td>
<td>100,000.00 (Hiring of venues, stationary, resources for GRM, food, sitting allowances for GRC and CLO stipend etc.)</td>
<td>WUC</td>
</tr>
<tr>
<td>2.</td>
<td>ESMP IMPLEMENTATION, MONITORING, EVALUATION AND REPORTING</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Regular monitoring of Project site and activities and sitting allowance for GRM</td>
<td>Entire project period, of 6 months and defect liability of 12 months – monthly</td>
<td>720,000.00 (Monitoring by (Project Liaison Officers))</td>
<td>WUC (part pre-funded by engagement of environmental/social consultants)</td>
</tr>
<tr>
<td></td>
<td>ESMP implementation of Mitigation Measures including VCP and GRM Implementation Costs (See Table 12)</td>
<td>Before and during construction</td>
<td>2,267,500.00</td>
<td>To be borne by the appointed Contractor.</td>
</tr>
<tr>
<td></td>
<td>GRM Implementation Costs</td>
<td>Pre-construction, Construction and Decommissioning</td>
<td>331,200.00 (see Table.15)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ESMP implementation of mitigation measures</td>
<td>During operations and maintenance annually</td>
<td>From WUC’s regular operational costs</td>
<td>WUC</td>
</tr>
<tr>
<td></td>
<td>Sub Total</td>
<td></td>
<td>P 3,468,700.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15 percent contingency</td>
<td></td>
<td>P 520,305.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td></td>
<td>P 3,989,005.00 (US$ 398,900.50)</td>
<td></td>
</tr>
</tbody>
</table>

Q. Roles and Responsibilities for ESMP

The implementation of this ESMP will be the overall responsibility of WUC, and more specifically, the Project Implementation Unit (PIU). The Contractor to be appointed will implement most of the mitigation measures proposed in the ESMP. Some institutions have also been recommended in the ESMP to administer the project to achieve its objectives and minimise adverse impacts.
These include the communities, Tribal Administration of all the beneficiary communities, the safeguards monitoring team (Earthtec Consultancy (Pty) Ltd), and the Ghanzi District Councils under whose jurisdiction works will be undertaken.

Other Government institutions to implement specific monitoring and implementation roles according to their mandate include the Ministry of Youth, Empowerment, Sports and Culture for the engagement of the youth in the development process of especially the vulnerable communities and the Ministry of Health and Wellness through their District Health Management Teams who are responsible for educating communities on all health issues including, communicable and non-communicable diseases. The World Bank will provide a supervisory role and assist with technical capacity building. In addition, WUC will provide technical support and participate in training and sensitization of stakeholders to enhance understanding of the national and the Bank’s environmental and social safeguard instruments.

R. Grievance Redress Mechanism

A Grievance Redress Mechanism is necessary for addressing the concerns of Project Affected People and other stakeholders. It is anticipated that some of these concerns may include eligibility criteria, compensation entitlements for loss of livelihood and use of land.

The mechanism for grievance redress includes:

- Provision for the establishment of a Grievance Redress Committee (see GRC members below)
- Multiple grievance uptake locations and multiple channels for receiving grievances
- Fixed service standards for grievance resolution, include adjudication process and process of handling situations related to gender-based violence/sexual exploitation and abuse
- Prompt and clear processing guidelines (including reviewing procedures and monitoring system)
- A time frame for responding to grievances
- A reliable and effective reporting and recording system
- Procedure for assessing the grievance
- Grievance escalation process

The grievance redress mechanism is designed with the objective of solving disputes at the earliest possible time before they escalate. In addition, World Bank OP4.12 emphasizes that the PAPs should be heard and as such, they must have access to a fair, transparent and accessible means to address their concerns and views related to the project. Furthermore, the mechanism should be effective in addressing projects at project-level so that grievances are not referred through the court system for resolution, especially since the court system may not be financially accessible to all and may add cost and time burdens.

During the implementation phase of the Project, the mechanism for grievance redress shall include:

- Provision for the establishment of a grievance redresses committee with a sitting allowance budgeted for the Grievance Redress Committee (GRC) members.
- Multiple grievance uptake locations and multiple channels for receiving grievances (project hotline, project website, Facebook page, WhatsApp blasts, WUC PIU office, Kgosi and VDC, grievance box at the Kgotla).
- Fixed service standards for grievance resolution which include adjudication process.
- Prompt and clear processing guidelines: including reviewing procedures and monitoring system (see flow chart)
- A time frame for responding to grievances (see flow chart on GRM chapter)
• A reliable and effective reporting and recording system (grievance register, complaints logbook – hard copy)
• Procedure for assessing and responding to the grievance

A Grievance Resolution Committee will be established with a clear term of reference. Membership would comprise of:

- Project Contractor
- Land Board Representative
- Water Utilities Corporation Representative
- Two Local Representatives (One man and one woman. In Vulnerable Communities, at least one representative of VC)
- Project Liaison Officer 1 (Safeguards Social Development Consultant)
- Project Liaison Officer 2 (Safeguards Environmental Consultant)
- Community Liaison Officer (Secretary)
- NGO representing Basarwa (e.g. Khwedom Council, San Youth Network)

The WUC PIU Safeguards Team Members will attend meetings when there is a matter that requires their urgent attention.

A Grievance Redress Mechanism for conflict prevention and resolution has been devised in consultation with the affected communities. The table below shows the GRM Process.

<table>
<thead>
<tr>
<th>Step</th>
<th>Process</th>
<th>Description/Required Action</th>
<th>Completion Timeframe</th>
<th>Responsible Agency/Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Receipt of complaint</td>
<td>Document date of receipt, name of complainant, nature of complaint and means of complaint</td>
<td>1 day</td>
<td>PCU (Community Liaison Officer)</td>
</tr>
<tr>
<td>2.</td>
<td>Acknowledgement of grievance</td>
<td>By letter, email, phone, WhatsApp Facebook</td>
<td>1-5 days</td>
<td>PCU (Community Liaison Officer)</td>
</tr>
<tr>
<td>3.</td>
<td>Screen and establish the foundation / merit of</td>
<td>Visit the site; listen to the complainant/community; assess the merit</td>
<td>7-14 days</td>
<td>GRC members including the Project Community Liaison</td>
</tr>
<tr>
<td></td>
<td>the grievance</td>
<td>If it is a minor complaint, then will decide a resolution and communicate this to the complainant and seek from the complainant if this is acceptable. If not move to next stage.</td>
<td></td>
<td>Officer, complainant or his/her representative</td>
</tr>
<tr>
<td>4.</td>
<td>Implement and monitor a redress action</td>
<td>Where complaint is justified, identify and carry out the redress</td>
<td>21-30 days or at a time specified in writing to the complainant</td>
<td>Community Liaison Officer, Social and Environmental Safeguard Specialists to coordinate the implementation of redress action</td>
</tr>
<tr>
<td>5.</td>
<td>Inform complainant and community (use of community boards, newspaper, radio, what’s app group, Facebook page)</td>
<td>Where complainant is not satisfied, inform complainant of escalation process. If satisfied or not, ensure grievance logbook is updated.</td>
<td>1-2 days after deciding on a grievance by the GRC</td>
<td>Community Liaison Officer</td>
</tr>
<tr>
<td>Step</td>
<td>Process</td>
<td>Description/Required Action</td>
<td>Completion Timeframe</td>
<td>Responsible Agency/Person</td>
</tr>
<tr>
<td>------</td>
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</tr>
<tr>
<td>6.</td>
<td>Extra intervention for a dissatisfied scenario</td>
<td>Review the redress steps and conclusions, provide intervention solution</td>
<td>2-4 weeks of receiving status report</td>
<td>MLMWS, Project Coordinator, Social and Environmental Officers (PIU), and GRC to review and react</td>
</tr>
<tr>
<td>7.</td>
<td>Judicial adjudication</td>
<td>Take complaint to court of law</td>
<td>No fixed time</td>
<td>Complainant</td>
</tr>
<tr>
<td>8.</td>
<td>Funding of grievance process</td>
<td>WUC logistics and training, redress compensation, court process</td>
<td>No fixed time</td>
<td>WUC</td>
</tr>
</tbody>
</table>

5. **Conclusion**

This report has presented and discussed the findings of the ESIA for the Bere Settlement Water Supply Sub-Project. The designs for the project indicate that the proposed development is to include:
- Construction and equipping of a new borehole (BH 9135) which was drilled in 1999
- Construction and equipping of a new/ additional steel water reservoir tank
- Laying of pipelines

The preparation of this ESIA/ESMP was guided by the Environmental Assessment Regulations (2012) of Botswana and the World Bank’s Safeguard Policies. Site visits were undertaken to the proposed development area to appreciate the prevailing biophysical and socio-economic characteristics of the site and the surrounding area. In addition, consultations were conducted with community members as well as with relevant stakeholders and IAPs. The views from the consultations undertaken were incorporated into this ESIA/ESMP which informed the mitigation measures recommended that are culturally accepted.

The estimated budget for the implementation of the ESMP is **P 3,989,005.00 (US$ 398,900.50)**. This ESMP will form part of the contract and tender documents for engaging the Contractor to ensure that the provisions are costed and implemented as is the requirement under the enhanced Standard Bid Documents for World Bank projects. The ESMP will be disclosed to communities for feedback and following clearance from the Bank it will be publicly disclosed both in-country and the World Bank’s external website.
CHAPTER ONE: GENERAL INTRODUCTION

1.1 BACKGROUND
The environmental and social policies of the World Bank (WB) require the Botswana Emergency Water Security and Efficiency Project (BEWSEP) to conduct an Environmental and Social Impact Assessment (ESIA) with an Environmental and Social Management Plan (ESMP) in line with WB’s Operational Policy/Bank Procedure 4.01, Environmental Assessment (OP/BP 4.01). Other applicable WBG EHS Guidelines are indicated in Section 4.1.

The BEWSEP is a P1,455 billion (US$145.5 million) project funded by World Bank (WB). The Water Utilities Corporation (WUC) is responsible for implementing the project and ensuring compliance with the environmental, social and procurement requirements of the Bank.

The ESIA/ESMP have been prepared based on the requirements of the Botswana’s Environmental Assessment Act of 2011 and the World Bank Safeguard Policies that have been triggered for the BEWSEP. The World Bank policies applicable to the main project are: Environmental Assessment (OP 4.01), Indigenous Peoples (OP 4.10), Natural Habitat (OP 4.04), Physical Cultural Resources (OP 4.11), Involuntary Resettlement (OP 4.12), Safety of Dams (OP 4.37), and International Waterways (OP 7.50).

This ESIA and ESMP are to fulfil the requirements under OP 4.01 as well as applicable WBG EHS Guidelines. To fulfil the requirements of OP 4.10, a Vulnerable Communities Plan has been prepared separately due to the presence of Basarwa in Bere settlement, who meet the criteria of Indigenous Peoples under OP 4.10 (in this project they will be referred to as Vulnerable Communities). In fulfilment of OP 4.11, an Archaeological Impact Assessment has been conducted and an archaeological clearance has been obtained (see Annex 6). Other policies which were triggered by the BEWSEP are not applicable to the Bere sub-project.

The project has three components:

1. Improve availability of water supply and efficacy
2. Improve wastewater and sludge management
3. Sector reforms and institutional strengthening

The Bere Settlement Water Supply Sub-Project (hereafter referred to as “the project”) is a beneficiary of the BEWSEP World Bank funded project.6

Bere settlement (see Map 1) is currently obtaining its water supply from a borehole (BH 9134) with a pump volume capacity of 7 m³/hr. It is under operation for 12 hours a day to meet demand thereby increasing operational costs and wear and tear. The population of Bere (is estimated by the Tribal Administration and Village Development Committee (VDC) to be 1,412 in March 20187. The population is projected to increase to 3,212 persons by the end of the life of the project in 2040. Bere’s daily water demand is estimated at 170 m³/day. Due to increasing population pressures, borehole (BH 9135) with an abstraction capacity of 8 m³/hr has been identified and is proposed to be equipped with pumps to augment borehole BH 9134 (see Map 1.2) to supply water to Bere settlement to meet demand and community needs.

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6 A list of the preparers of this report are shown in Annex 1
7 The population of Bere was listed as 779 people in the 2011 census.
Map 1: Location of Bere settlement within Botswana

Map 2: Location of the Pipeline Corridor Route from the new Borehole (BP 9135) to the Water Tank in Bere settlement
Project Activities:

The project has been designed in house by engineers from WUC. The proposed project activities include:

- Construction of a new reservoir tank with a water holding capacity of 75 m$^3$ on a 15 m elevated stand;
- Equipping of an existing borehole (BH 9135);
- Construction of about 3.7 km long underground water pipeline using 90 mm via uPVC pipes from borehole (BH 9135) to the new reserve tank, located at the existing tank; and
- Other ancillary facilities.

1.2 OBJECTIVES OF THE ESIA/ESMP

The objectives of the ESIA/ESMP are to:

- Undertake a review of the prevailing socio-economic and biophysical environmental conditions within the project area.
- Consult with stakeholders and affected parties as well as relevant institutions/authorities to identify issues that the ESMP should address.
- Review policy and regulatory framework that has a bearing on the implementation of the project.
- Predict and outline the likely impacts associated with the implementation of the project.
- Conduct a social assessment of Basarwa (Vulnerable Community as per OP 4.10).

1.3 PURPOSE OF THE PROJECT AND DEVELOPMENT OBJECTIVE

The purpose of the project is to augment the water supply in Bere settlement to meet the current and future demand of water. The water supply of 84 m$^3$/day (pumped at 7 m$^3$/hour for 12 hours) pumped from the existing borehole is inadequate to meet Bere’s daily water demand which is estimated currently at 170 m$^3$/day (as at 2018) for a population of 1,412 people. There is a shortfall of about 86 m$^3$/day of water supply.

As the population increases, water demand will increase gradually to 321 m$^3$/day by the year 2040 when the population size is projected to be 3,212 people. It is for this reason that borehole (BH 9135) with an abstraction capacity of 8 m$^3$/hr (96 m$^3$/day for 12 hours pumping out of 24 hour) has been identified. It is to be equipped with pumps to augment borehole BH 9134. Borehole BH 9135 together with the existing borehole will be able to supply a total volume of 360 m$^3$/day of water to the settlement when operated for 24 hours.

1.4 SCOPE OF ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The focus of the ESIA/ESMP is confined to the settlement of Bere where civil works will take place and includes the footprint of the borehole (10 m x 10 m), the existing water tank site and the 3.7 km pipeline corridor route (which is 5 m in width).

1.5 TOTAL INVESTMENT COST AND LIFE SPAN

The total investment cost of the project is estimated at P7 million (US$ 0.7million) and the expected project lifespan is 20 years after commissioning of the water supply system.

1.6 IMPLEMENTATION SCHEDULE

As soon as all the approval and statutory requirements have been met, including the ESIA/ESMP approval process by the World Bank, the project is anticipated to be constructed in 2020. It is expected that it will take six months for civil works.
1.7 METHODOLOGY OF ESIA/ESMP

1.7.1 Screening By World Bank
The proposed project entire project is listed as a Category ‘A’ project; however this sub-project is a category B because it is expected that the vast majority of infrastructure development will be in-situ construction within already degraded site and laying new pipelines within existing rights of way. The Basarwa in Bere settlement have been screened by the Bank to meet the criteria of OP 4.10 and thus, OP4.10 has been triggered for this project and is applicable to this sub-project.

1.7.2 Literature Review
A desktop review of existing literature related to the environmental and socio-economic characteristics of the project area was undertaken in order to assess the baseline environmental conditions prevailing within and around the proposed site. The review also served to contextualize how the greater area would be affected by the implementation of the project. In addition, a review of existing vision, relevant, policies, plans, programmes and legislation, that has a significant bearing on the implementation of the proposed project, was undertaken.

1.7.3 Consultation with the General Public, Interested and Affected Parties
The plan has been prepared following a thorough discussion with the project engineers on the aspects of the project and on what is to be delivered to influence the final design of the project. The process of consultation for vulnerable community who meet the criteria under OP 4.10 was done in line with the principles of free, prior and informed consultation leading to community support. This process is addressed more fully in the Vulnerable Communities Plan (VCP). In addition, consultations were carried out through the existing processes, organizations and institutions such as the Bere Village Development Committee, Tribal Administration and the office of the Social and Community Development and following culturally appropriate practices and institutions.

The objectives of the Consultations were to:

a) Inform the project affected parties about the project, the potential adverse and positive impacts of the project

b) Receive feedback from the Vulnerable People (based on identified impacts) to help shape design and mitigation measures

c) Propose development activities to ensure those vulnerable in the project area can receive socio-economic benefits which are culturally appropriate to them, and to enhance support of the community to project.

The dates of consultations and purpose are shown in Table 1.

Table 1: Date and Purpose of Consultations

<table>
<thead>
<tr>
<th>Date of Consultation</th>
<th>Purpose of Consultation</th>
<th>Time</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 November 2017</td>
<td>Prior consultation with Kgosi for a public meeting and site visit of project areas.</td>
<td>09:10hrs</td>
<td>Kgosi and 2 Village Development Committee Members</td>
</tr>
<tr>
<td>6 March 2018</td>
<td>Public Meeting</td>
<td>09:00-12:00hrs</td>
<td>120 women, 40 men</td>
</tr>
<tr>
<td>5 April 2018</td>
<td>Public Meeting</td>
<td>09:00-10:00hrs</td>
<td>100 (30 males; 70 females)</td>
</tr>
<tr>
<td>Date of Consultation</td>
<td>Purpose of Consultation</td>
<td>Time</td>
<td>Number of Participants</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------------------------------------------------------------------------</td>
<td>-----------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>5 April 2018</td>
<td>Focus Group Discussions including Officer from the Social and Community Development (S&amp;CD), Ghanzi District Council.</td>
<td>14:00-16:00hrs</td>
<td>8 (3 males; 5 females)</td>
</tr>
<tr>
<td>6-7 April 2018</td>
<td>Household Surveys- collection of social data and information</td>
<td>2 days</td>
<td>30 households</td>
</tr>
<tr>
<td>4 June 2019</td>
<td>Verification of ESIA and VCP instruments and obtain supplementary data for instruments; inform community about culturally appropriate benefits; discuss their concerns about this project</td>
<td>3 hours</td>
<td>108 people (30 males and 78 females)</td>
</tr>
</tbody>
</table>

Both primary and secondary data were collected and analysed for the preparation of the plan. Primary data were collected through household surveys and focused group discussions with key informants. In addition, observation and photographs of relevant features were taken.

1.7.5 Public Meetings

Three public meetings were held at the Kgotla. The purpose was to consult with the general public including the vulnerable people who constitute about 80 percent of the population. The earlier meetings were presided over by the Chairman of the VDC as the Kgosi of the settlement had passed away.

The meetings were conducted in Setswana language and translated to Sesarwa (language spoken by the Basarwa) language for easy understanding and for them to meaningfully contribute to the meeting. The public was given time to ask questions and comment on the project.

In compliance with Section 7(2) of the EA Act (2011) the public was consulted on the March 6 and April 4, 2018 and June 4, 2019. A public notice was published in the Daily Newspaper after consultation with the Kgosi of Bere settlement regarding the date and time for the meeting. Prior to the public meetings consent was sought sufficiently in advance from the Village Development Committee (VDC) and the Kgosi, where dates and time for the meetings were agreed upon.

This was then advertised in the Daily News of 14 February 2018 (See Annex 2). The notice was published both in English and Setswana. After the expiration of the mandatory 21 days of notification, a Kgotla meeting (public meeting) was held. The VDC and Kgosi also disseminated the information about the meeting to the members of the community through public gatherings such as funerals, kgotla meetings and others.

The Kgotla meeting held on the April 4, 2018 was to inform the community and the Vulnerable Community of the social assessment survey which was to be held from the 6 - 7 April 2018. A summary of the outcome of the meetings is presented in Chapter 5 with the detailed minutes of meetings presented in Annex 3.

In addition to the community consultations, relevant Government and private institutions were consulted, using prepared questionnaires which were either administered in person, faxed to them for self-administration or through telephonic interviews. The letters and some responses have been attached to the report as Annex 4.
1.7.6 Focused Group Discussions

A focused group discussion was held with the community leaders of the Settlement at the kgotla on the 5 April 2018. Those in attendance were the VDC, Di-Kgosi, Social and Community Development (S&CD) Officer, and WUC (attendant based in Bere settlement). The language for the meeting was in Setswana and translated into Sesarwa for easy understanding of all those who attended. Prior to this meeting arrangement for date, time and venue was made with the participants. A schedule of questions was prepared; some questions pertained to the history of the settlement, social, economic, cultural and political issues. The outcome of the meeting is presented in Chapter Five and schedule of minutes of consultations and questions are in Annexes 3 and 4.

1.7.7 Household Survey

A total of thirty households were sampled for the social assessment survey. This represented about 25 percent of the total vulnerable households in the settlement, as was given by the Social and Community Development Officer (S&CD) as of March 2018. This has been reported in detail in the VCP of Bere.

The households were interviewed using a questionnaire. The questionnaires were administered by three research assistants who spoke Setswana, English and Sesarwa and come from the settlement. They were trained on the enumeration of the questionnaires and ethics of conducting the interviews. The training included not guiding the responses of the vulnerable people, not forcing them to answer any question and not deviating from the questionnaire.

The signed consent of participants was obtained before being interviewed. The questionnaire was translated and read out to the participants to ensure that they knew what the questionnaire was about and what the information was to be used for.

1.7.8 Field Survey

Field studies were undertaken in order to complement the baseline information collated through a literature review. During the field survey two techniques were used to collate the information namely observation and completion of field checklist. Information collated about the area using these techniques includes biophysical characteristics of the project area and types of land use to be traversed by the project works.

1.8 ARCHAEOLOGY

An Archaeological Impact Assessment (AIA) was undertaken to inform the preparation of the ESIA/ESMP. The AIA study established that there are no archaeological resources within or around the project site. An AIA Report detailing this finding was submitted to and was approved by the Department of National Museum and Monuments. This was cleared by the department (See Annex 6). In the instance that artefacts are discovered during construction “Chance Finds” procedures will be instituted.

1.9 PUBLIC DISCLOSURE

This ESMP has been consulted upon and will be disclosed to the Bere community and all affected stakeholders and following World Bank clearance, it will uploaded on WUC’s website, as well as on the World Bank’s website. Following clearance, a phone number will be given to the VDC and will also be listed on the WUC website which the public can call to request a copy. The method of disclosure was a presentation to the communities, in a format and language accessible to them. Both hard and soft copies will be made available to the VDC, Kgosi, Contractor, CLO.
CHAPTER TWO: PROJECT DESCRIPTION

2.1. PURPOSE OF PROJECT
The purpose of the Bere sub-project is to augment water supply on a sustainable basis to the community of Bere settlement whose population is increasing and therefore the demand of water is also increasing proportionately. The project is to meet the water demand of the settlement whose population size is projected to be 3,212 at the end of the life span of the project is in 2040.

2.2 PROJECT ELEMENTS
The project entails the following:

- Construction of a 75 m³ galvanized steel tank on a 15 m elevated stand.
- Construction of 3.7 km long water pipeline using 90 mm via uPVC pipes from borehole, (BH 9135) to the new reserve tank, located at the existing tank site.
- Construction and installation of manholes and associated valves.
- Installation of back-up generator set to power the borehole (BH 9135),
- Construction of a pump house,
- Design of a solar powered system which shall be used to pump water from the borehole (BH 9135) to the reservoir tank,
- Fitting of electrical equipment equivalents to run the borehole (BH 9135),
- Installation of bulk water meters before the proposed tank and after the tank,
- Erection of an electrified security palisade fence – for protection of the equipment,
- Pressure testing of pipes,
- Flushing and disinfection of the 3.7 km pipeline and the 75 m³ tank.
- Testing and commissioning of the whole scheme.

2.3 LOCATION OF PROJECT
The project site is in the settlement of Bere. It is situated within the Ghanzi District to the southern part of the district. It is about 150 km from Ghanzi Town along the A2 Road.

A 3.7 km long water pipeline will be constructed from borehole (BH 9135) to the existing site of the water tank where a new reservoir tank will be constructed (Plate 1). The new tank will therefore be located on site at latitude -22.818629 and longitude 21.874816. The pipes will be laid on the left side along the earth road (Plate 3) from the borehole which is located at the outskirts of the settlement.

Plate 1: Reservoir Tanks Located in the Village. Plate 2: WUC Representatives and Consultants Walking to the Borehole Site
2.4 PROPOSED ACTIVITIES
The activities to be undertaken under the project for the various phases of implementation are as follows:

2.4.1 Pre-Construction
During the pre-construction phase, the following activities among others will be undertaken:
- Appointment of the Contractor(s) and sub-Contractor(s) to be engaged in the implementation of the project
- Employment of workers (skilled, semi-skilled and un-skilled)
- Setting up of the Contractor(s) Camp and labour Camp site (see Chapter 6)
- Sourcing of construction material (concrete, wood, steel, and water, etc.)
- Acquisition of portable toilets for use by workers on site and PPEs.
- Purchasing of water tanks or dispensers for drinking water.

2.4.2 During Construction
During this phase of the project, the following activities amongst others will be undertaken:
- Borehole equipping
- Trenching
- Laying of pipes
- Backfilling and compacting of excavated trenches
- Transportation of input materials such as pipes, sand, cement etc.
- Collection and disposal of waste at the designated dumping site
- Construction of a reservoir tank
- Reservoir tank equipping
- Fencing and painting of palisade fence to be erected around the perimeter of the site of the water tank
- Decommissioning and rehabilitating the site used by the Contractor for the site office and labour camp site.

2.4.3 Operation and Maintenance
During this phase of the project, the following activities amongst others will be undertaken:
- Metre reading to ascertain the amount of water abstraction
- Inspection and maintenance of equipment including tanks and palisade fence
- Routine water quality testing
- Routine water pressure testing
2.4.4 Decommissioning after Construction
Following completion of construction works and equipping of Borehole (BH 9135), the site will be decommissioned and cleaned of any remaining waste, spills, packaging (empty cement bags, fittings, plastics, broken glasses), rubble and other waste materials associated with construction activities that were undertaken.

2.4.5 Decommissioning after Project Life
WUC presently has no intention of decommissioning the project after its life span of 20 years. Rather it will upgrade and maintain it or put the water from the borehole to other uses.

2.5 PROJECT ALTERNATIVES
This section presents a discussion on the alternatives which are available to the project design.

2.5.1 Design Alternatives

The No Project Option
The “No Project” option means that the proposed project for Bere Settlement Water Supply Sub-Project should not be implemented. This will mean that all the anticipated negative impacts associated with the project will not occur. These include no setting up of Labourer’s Camp, no disturbance of soil and the social impacts including, no possible impacts to the community such as spread of STIs as a result of the labour influx in the community. However, the positive impacts related to the intended project objective of improved water supply for the settlement would not occur as well as the positive impacts such as the recruitment of local labour in the project. The water situation in the settlement will remain same or worsen with population increase. Should the project not go ahead there will be water shortages which may contribute to diseases and perpetuate the already existing conflicts in the settlement. This situation is not desirable and does not contribute to the well-being of the community. As such, this alternative was rejected.

The Project Option /Choice of Design Options
The Project Option entails that the proposed project for Bere Settlement Water Supply Sub-Project will be implemented. This entails the augmentation of the water supply to the settlement. This will result in the improvement of water supply in the settlement village but will also come with such impacts as dust generation, disruption of essential services such as traffic and potential accidents during the construction period of the project. An amelioration of the impacts would be addressed through mitigating measures and implementation of an Environmental Management Plan and including Codes of Conduct in the Contractor’s ESMP.

The subsequent analysis of alternatives and discussion of their advantages and disadvantages proceeds on the basis that the project will be implemented.

2.5.2 Location Alternative - Pipeline Route Corridor
The pipeline route from the borehole into Bere settlement has no alternatives. However, the turn into the reservoir has two alternatives, these are:

- **Alternative 1**: Along the existing road to the reservoir. The length is 136 m and would cost P48,960 (US$ 489.60). It is the preferred option as there are no land acquisition issues.
- **Alternative 2**: Along the existing pipeline route through a passage of 3m wide in between six residential plots. The length of the pipeline with this alternative is 106 m and would cost P38,160 (US$ 381.60) to be laid. Land measuring 240 m² would be required to be expropriated from the six plots abutting the passage to attain the required space of 5m to allow for construction. This would amount to an estimated total cost of P24,000 (US$ 240.00) would be
required for compensation. This adds up to a total cost of P62,160 (US$ 621.60) should this alternative be used.

A comparison of the two alternatives pipeline is shown in Map 3.

**Advantages (Positive Impacts) of Alternative 1**

- No plots are to be affected, and it neither requires any land uptake nor resettlement costs
- Provides unrestricted space for construction and maintenance purposes.

**Disadvantages (Negative Impacts) of Alternative 1**

- The route is about 30 m longer and will cost an extra of P10,500 (US$ 1,050.00) for pipe laying at a rate of P350/m (US$ 621.60) of pipe laying.

**Advantages (Positive Impacts) of Alternative 2**

- The route is shorter and saves P10,500 (US$ 1,050.00)

**Disadvantages (Negative Impacts) of Alternative 2**

- Restriction of access to the public during construction and maintenance.
- Possible land acquisition as there is inadequate land for the reserve of 5 m for working space. The existing passage is 3 m wide.
- Land uptake of about 240 m² will cost P24,000 (US$ 2,400.00) for compensation.

From the above, it is recommended that Alternative 1 is used to avoid social impacts to residential plots owners.

2.5.3 **Activity Alternative (Labour Accommodation)**

Given the remoteness of Bere settlement and the obvious insufficient number of skilled and semi-skilled workers in the village, consideration about the placement of a Labourer’s Camp on site is necessary as there are no adequate accommodation facilities in the village. The advantages and disadvantages of having a labour Camp site are presented here:

- **Option 1: With a Labourer’s Camp site near Bere settlement**

  **Advantages (Positive Impacts)**

  - Increase in the market for local business resulting from an increase in population and purchasing power.
  - Inculcation of new ideas for the economic and social growth of Bere community.
  - Avoidance of transporting workers over long distances (about 150 km from Ghanzi town) daily, which can increase accident risks and traffic issues.
  - Workers will be more energetic, less likelihood for tardiness, and focussed on work without the fatigue of commuting daily.

  **Disadvantages (Negative Impacts)**

  - Increase pressure on existing resources such as wood (for heating) water, health, power and waste management facilities.
  - Potential increase in social problems such as exacerbating community tensions, impacting relationships, increasing pregnancies including among youth, increase in alcohol use and associated potential impacts such as increase in violence between community members, gender-based violence, spread of sexually transmitted diseases, amongst others.
• **Option 2: Without a Labourer’s Camp Site (Workers commuting from outside Bere)**

**Advantages (Positive Impacts)**
- There will be no or less pressure on existing resources such as water, health, power and waste management.
- There will be minimised increase in social ills, such as dissolutions of relationships and spread of STIs and other communicable diseases.

**Disadvantages (Negative Impacts)**
- Will result in commuting or transporting workers daily over long distances (about 150 km from Ghanzi town), which poses or make them vulnerable to road accident risks.
- Workers will arrive at work less energetic and less focussed at work which could result in occupational injuries and impact employee retention.

**Conclusion:** From the above, a Labourer’s camp is preferred to be established for the sub-project. This is because there are no houses to be readily rented and there is limited skilled or semiskilled personnel which would meet the qualifications required for employment in Bere settlement. Adequate measures are to be made to implement the mitigation measures recommended in this ESMP to avoid or minimize the anticipated environmental and social ills brought about by the labour camp. In addition, the sub-project will hire local labor (unskilled workers) from the community when possible and will reduce the number of outside workers in the subproject.

**Map 3: Alternative Route to the Water Tank (Reservoir)**
2.6 Pipeline Servitude and Depth of Excavation
The pipelines will have a reserve corridor of 3 m wide but will need 5 m wide space for construction. Due to the sandy nature of the project area, the pipes will be laid at an average excavation depth of between 3-6m deep. The pipes will be laid about 2-2.5 m from the edge of road reserves. Excavations will be done using machines (excavators) and the pipes will be laid in the trenches by workers and backfilled and compacted using machines.

2.7 Infrastructure Requirement
**Power Supply:** The project site is in an area which is powered by solar power. Power supply for the new borehole will be by solar with a backup generator.

**Water Supply:** Water supply in Bere settlement is under the authority of the WUC. It is anticipated that water supply for the construction and equipping of the new borehole will be provided by the existing borehole located near the project site.

**Portable Toilets:** These will be provided for workers during construction by the Contractor. They will be maintained by a licensed waste management company to be hired by the Contractor for the duration of the works.

2.8 Anticipated Duration of Construction
Construction and equipping of the borehole are expected to take a maximum of 6 months to complete.

2.9 Land Use Right for Setting Contractor(s) Camp and labour Camp site
Land for temporarily setting up the Contractor’s and Labour’s Camps will be acquired from the Ghanzi Land Board by the Contractor, but with prior discussion with WUC and the Kgosi of Bere settlement, as per the land acquisition process of the country. A formal application has been made to the Land Board for surface rights (see Annex 16). The land will be rehabilitated and restored after use to what is was before the commencement of construction.
CHAPTER THREE: LEGAL, POLICY AND INSTITUTIONAL FRAMEWORK

3.1 INTRODUCTION

This chapter provides a description of the existing national, regional and international regulatory frameworks including World Bank’s Safeguard Policies including WBG EHS Guidelines applicable to the sub-project which have a bearing on the design and implementation of the Bere Water Augmentation Scheme. These include the General Guidelines and the industry sector guidelines for Water and Sanitation. It also presents the institutions that have a role to play in the implementation and management of the sub-project.

3.2 ACTS OF BOTSWANA RELEVANT TO THE PROJECT

a) Environmental

3.2.1 Water Works Act (1962)
An Act to provide for the constitution of water authorities in townships, to confer certain duties and powers upon such water authorities, to provide for the acquisition of existing waterworks and to provide for matters incidental thereto.

This Act is meant to encourage and protect water supply systems. Waterworks areas must be delineated and gazetted. The Water Authority receives the water development rights and has the duty to develop a water supply system. The water authority effectively manages the monopoly of water supply. The Act empowers WUC to provide water supply services to the beneficiary villages as they have been declared as water works area. The Act also empowers WUC to protect the water transfer scheme against vandalism and the quality of water.

3.2.2 Water Utilities Act (1970)
An Act to provide for the establishment of a Corporation to be known as the Water Utilities Corporation (WUC) for the supply and distribution of water. WUC is a state-owned enterprise established in 1970 through an Act of Parliament to provide water in urban areas. The mandate of the Corporation was expanded in 2009 under the Water Sector Reforms Programme to include management of water and wastewater services in the villages previously managed by the Department of Water Affairs and Local Authorities. The mandate of the Corporation is to provide portable and wastewater services throughout the country.

This Act is relevant to the project as it demonstrates that WUC is the legal institution responsible for the design and implementation of the water transfer scheme.

3.2.3 Mines and Minerals Act (Act No. 17 of 1999)
The Act deals with licensing, registration and concessions with respect to mining. It also includes provisions providing that preference should be given to the employment of workers in Botswana and that suitable training should be provided for them consistent with provisions on safety, efficiency and economy.

A license to operate a borrow pit will be required if construction materials especially gravel/sand required for bedding and backfill material for laying of pipes will have to be sourced from a new

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4 International Finance Corporation (IFC), Environmental, Health, and Safety Guidelines for Water and Sanitation
borrow pit. The Act will not apply if the construction materials are obtained from licensed commercial sources.

### 3.2.4 Water Act, (1968)
The Act establishes the Water Apportionment Board (WAB) and makes provisions concerning rights in respect of water and related matters.

It declares all water as public and makes the pollution of public water an offense. Anyone wishing to discharge into public water would need to do so with permission from the Water Registrar. In addition, it introduces the issuing of water rights for use of public water other than for watering stock, drinking, washing and cooking or use in a vehicle.

Tampering or diversion of public streams by individuals also becomes an offense, unless granted permission through the issuing of a water permit. Part IV section 17 (1, iii) prohibits the pollution of water used in these activities to an extent that it causes injury, directly or indirectly to public health, animal and plant lives. This project however does not cross streams or rivers and therefore this is unlikely.

Should the Contractor seek water for construction by sinking boreholes, then rights of abstraction need to be applied for from the WAB.

### 3.2.5 Atmospheric Pollution (Prevention) (1971)
This Act is intended for prevention of pollution of the atmosphere by carrying out industrial processes. The Act seeks to control the emission of ‘objectionable matter’, which is defined in Section 2 as “smoke, gases including noxious or offensive gases, vapours, fumes, grit, dust or other matter capable of being dispersed or suspended in the atmosphere which is produced or is likely to be produced by any industrial process”.

To minimize the quantity of pollutants generated by any industrial activity, the Department of Waste Management and Pollution Control and Botswana Bureau of Standards have developed standards of air quality indicating an allowable maximum measurement of major indicators of pollution such as sulphur, particulate matter etc. as shown in Annex 13.

During the construction phase of the project, considerable amounts of dust are likely to be generated due to the frequent movement of vehicles, machinery and hauling trucks to and from the site, as a result, appropriate mitigation measures should be put in place by the Contractor to control dust nuisance.

The implementation of the project is likely to trigger a decline in ambient air quality levels especially along the pipeline route that traverses built up areas within the beneficiary settlements. Compliance to the Threshold Limits for Common Air Pollutants will have to be adhered to by the Contractor to ensure a safe working environment by implementing the mitigation measures recommended in this document.

### 3.2.6 Environmental Assessment Act (EA) (2011) and Environmental Assessment Regulations (2012)
This Act provides for environmental impact assessment to be used to assess the potential effects of planned developmental activities to determine and to provide mitigation measures for effects of such activities as may have a significant adverse impact on the environment to put in place a monitoring process and evaluation of the environmental impacts of implemented activities and to provide for matters incidental to the foregoing.
According to the Act, the project has been identified as an activity that requires that an ESIA/ESMP be prepared.

The regulations implement provisions of the Environmental Impact Assessment Act, 2011 with respect to, among other things, procedures for environmental impact assessment and public participation, and registration and certification of practitioners. They also concern the compliance with Code of Conduct by practitioners.

The Regulation guided the preparation of the ESIA and the ESMP presented in this report.

3.2.7 Noise levels - BOS 575:2013
Botswana has set permissible noise standards for specific environments. These are to be complied to by controlling noise generation activities and use of machinery. For this purpose, there should be continuous noise monitoring by the Contractor to keep to the thresholds of noise. The maximum permissible noise for specific environments is listed in Annex 14.

The standard indicates that for monitoring purposes, measurement of noise shall be done at the receiving point. Measurement within buildings shall be done with windows and doors wide opened.

The standard is relevant to the project as it provides threshold limits for which noise exposure during project implementation should be measured against.

3.2.8 Monuments and Relics Act (2001)
The Monuments and Relics Act, Act No.12 of 2001, focuses on the preservation and conservation of areas and items of historical, architectural, archaeological and paleontological value.

The Act is of relevance to the project as it governs the preservation and conservation of areas and items of historical, architectural, archaeological and paleontological value.

The undertaking of the project follows Section 19 (1) and (2) wherein it is mandatory for any prospective developer to undertake both an Archaeological and an Environmental Impact Assessment Study (EIA pre-development impact assessment study). This has been done and archaeological watching brief has been recommended. This is with a condition which much be adhered to during civil works.

3.2.9 Factories Act (1979)
This Act regulates the conditions of employment in factories and other places about the safety, health and welfare of workers and for the safety and inspection of certain plant and machinery and for purposes incidental to or connected with the matters aforesaid.

It also states that where grinding, sieving or any such process gives rise to dust, gas or vapor steps should be taken to prevent the accumulation of dust, vapor or gas, and requires the need for protective clothing.

The Act states that where employees are exposed to wet conditions or any such environment liable to cause injuries, they should be provided with necessary suitable gloves, footwear, goggles, head or face coverings. Where electric welding is done, workers should be provided with safety spectacles to avoid exposure of the individual’s eyes to the electric arc flash.
The Act also makes provision for the welfare of workers and stipulates the ratio of workers to portable sanitation facilities, of 1:25 for first 100 workers and thereafter 1:50 for remaining male and female workers.

Compliance to this Act is necessary to protect the health and ensure safety of workers throughout project implementation phase.

3.2.10 Road Traffic Act (1993) and its Amendment of 2001
This Act regulates traffic and ensures road safety, among other things. Part VIII of the Act presents driving and other offenses relating to the use of vehicles on roads and their penalties. These include speeding, unfitness to drive, reckless, dangerous driving, and inconsiderate driving. This Act also addresses road signs, regulations, road markings, signals, and road traffic (speed limits for specified vehicles).

The Act is relevant to the project as vehicles are to be used for transportation of people and goods. The Act seeks to regulate the behaviour of drivers. It provides speed limits to be travelled on specific roads and fines to be paid when the provisions of the Act are contravened. Furthermore, it provides regulation on the size and font to be used for road signs which will be required during construction. Drivers hired to haul construction materials to and from the site during construction and operation of the infrastructure need to be sensitized on the importance of adhering to the Act.

3.2.11 Radiation Protection Act (2006) and Regulations (2008)
The Act provides for the safe use of atomic energy and nuclear technology. The Act applies to any person or body of persons whose undertaking involves, particularly, the production, processing, handling, use, holding, possessing, storage, transport, and disposal of natural and artificial radioactive materials and radiation devices in respect of any other activity which involves a risk or harm arising from radiation.

This Act is relevant to the project given that during construction employees may be exposed to radiation while excavating for the installation of the pipelines and testing for compaction using radioactive machinery. This Act provides conditions of the licensee and regulations for the generation and management of radioactive waste. With relation to the safe handling of radioactive waste, the Act in Section 31 specifies that a person who is licensed to generate, keep or manage radioactive waste shall:

- Be responsible for the safe management of radioactive waste generated by the practice or source for which he or she is authorized
- Appoint a technically competent person to be a Radiation Waste Management Officer to assist the licensee in the safe and efficient on-site management of radioactive waste.

This regulation addresses, among other things, safety precautions and requirements, inspection, protection from public exposure, management of radioactive waste, classification of radioactive waste, transport of radioactive materials and emergency interventions.

It states that the Employer shall ensure this of all workers engaged in activities that involve or could involve occupational exposure, (Part V, Section 29-30) that:

- Occupational exposure is limited
- Radiation safety is optimized in accordance with Regulations 20 and 21.
- Policies, procedures and organizational arrangements for occupational protection and safety are established to implement the relevant requirements of these regulations, and the resulting decisions on measures to be adopted for this purpose are recorded and made available to relevant parties, including workers.
• Suitable and adequate facilities for radiation safety are provided, including personal protective devices and monitoring equipment, and management are made for their proper use
• Arrangements are made to promote workplace safety culture and achieve adequate training of workers on radiation safety matters.

Section 33 indicates the issuance of PPEs to limit exposure. Section 34 outlines the responsibility of employees to assess level of workers and Section 36 details talks about health surveillance of workers.

The Contractor therefore needs to comply with the above particularly to protect the workers from radiation both in the field and in the laboratories of the Contractor.

3.2.12 Herbage Preservation Act (1977)
This Act aims at prevention and control of bush and other fires. The Act prohibits the burning of vegetation on land that the servant does not legally own or have legal rights to without a written permission from the herbage committee. However, if one wants to burn vegetation on land that they legally own they are to give a notice of their intention to the herbage committee, the notice of intent should include the time at which the burning is to begin to all owners or occupiers of adjoining land and, where reasonably practicable, to a police officer or headman. The Act lists offences and penalties.

It is unlikely that this Act will be relevant to the activities of the project. However, if cleared vegetation from along the pipeline route and water tanks sites will require burning, it would be necessary to obtain written permission from the herbage committee to burn the cleared vegetation at a safe designated area.

b) Social

3.2.13 Tribal Land Act (1968)
This Act establishes Tribal Land Boards. This Act transferred all the powers previously vested in a chief and a subordinate land authority under customary law in relation to allocation of land to the Land Board. Under this Act, the Land Board was established as an institution for managing all tribal/customary land. The Land Board grants customary land rights to all citizens of Botswana including members of vulnerable communities. Most of the vulnerable communities fall under the care of the area social worker, who after assessment and finds that a family of vulnerable community/individual has no land or place of residence, makes an application to the Land Board on their behalf for them to be allocated land urgently. Such applications are normally fast tracked by the Land Board; they do not follow the available queue. Upon allocation of land, a recommendation is then made to the District Council for such a family to be included for consideration for decent shelter under the Destitution Policy. The VDC or concerned community member can also alert the social worker about the existence such a family or individual if they were not identified during social assessments.

The Land Board also leases land under common law forms of tenure. Part V of the Act addresses specifically procedures for dealing with the application of expropriation for tribal land required for public purposes. Section 32 of the Tribal Land Act provides that land may be granted to the State for public purposes only if the President determines that the purpose for which it is acquired is in the interest of the public. The President possesses the power of eminent domain for the expropriation of land. The President may acquire any real (immovable) property where the acquisition of such is necessary for public purposes. Section 33 (2) of the Tribal Land Act (1968) provides that compensation is payable when land is acquired for a project and the acquiring body is financially responsible for all aspects of the project; this includes payment for compensation to claimants. However, all
resettlement, compensation and procedural requirements will be in line with the World Bank Involuntary Resettlement Policy (OP4.12).

The Act is relevant to the project as it makes provision for the displaced to be granted the right to use another land if available and is entitled to adequate compensation. The Act makes it mandatory for the establishment of an assessment committee to assess properties to be affected by the project.

### 3.2.14 Children’s Act, 2009
The Children’s Act of 2009 provides for the promotion and protection of the rights of children, including promoting their physical, emotional intellectual and social development wellbeing.

As children are among the most vulnerable, the project will ensure due diligence to protect the rights and well-being of children. The safety of children will be also be addressed in this project through mitigation measures, for example, by putting barriers around trenches to avoid children from falling into them or playing in them, and workers will have training and sensitization to mitigate against sexual harassment, exploitation and abuse (SHEA) and their behaviour will be monitored.

### 3.2.15 Domestic Violence Act, 2008
The Act seeks to provide protection of survivors of domestic violence. According to the Act domestic violence is defined as any controlling or abusive behaviour that harms the health or safety of the survivor including, physical abuse or threats, sexual abuse or threats, emotional, verbal or psychological abuse, economic abuse, intimidation and harassment. The Act lists penalties for those found to be in violation of the Act.

The project will conduct sensitization and awareness training to community members and project workers to mitigate against exploitative, abusive and gender-based violence, especially against women, children and the elderly. It will also provide a screening of social and legal services for survivors to access as part of the GRM. In addition, the Contractors ESMP and bidding documents will refer to the Codes of Conduct which are included in Annex 10).

### 3.2.16 Employment Act (2010)
This Act makes provision for regulating employment and labour issues regarding promoting harmonized relations between employer and employee. The Act specifically:

- Regulates the contracts of employment
- Defines categories of wages paid to employees
- Ensures that workers have rest periods
- Ensures the employment of females and regulates issues of confinement and maternity.
- Defines labour health areas
- Defines the minimum age of employment, which is 14 years, when the child is not attending school. The Act states that he/she may be employed on light work not harmful to his/her health and developments. The child should work for a maximum of six hours a day and 30 hours a week. While adults work for eight hours a week and not more than 48 hours a week.
- Rest Periods and Hours of Work: The Act indicates that every employee shall be granted by the employee in every seven consecutive days, a rest period comprising at least 24 consecutive hours which period ordinarily be or include a Sunday.
- Employees are not required to work more than five consecutive hours without a period of rest which shall not be less than 30 minutes

The Act is of relevance to the project because workers will be employed to undertake civil works.
The Contractor to be employed should comply with all the provisions of the Act when procuring labour for the project. Contracts of employment should be in writing. In addition, resting periods and wages should meet the minimum or better at the prescribed rate at the time of employment. All employment records must be kept. Despite the age limit of 14 years for employment as specified in the Employment Act of Botswana, the minimum age of 18 years as stipulated by the World Bank should prevail when procuring labour for the project. The Contractor should insure all workers on site particularly for Workman’s Compensation prior to civil works.

In terms of employment of women, the Contractor is to allow maternity leave, pay maternity allowance and allow time for the mother to nurse the child.

c) POLICY, PROGRAMS AND STATEMENTS

3.2.17 Botswana’s Vision 2036 (2016) and the Sustainable Development Goals (SDGs)
The theme for Vision 2036 is “Achieving Prosperity for all”. It has four pillars which have been aligned with Global Sustainable Development Goals (2015): Sustainable Economic Development, Human and Social Development, Sustainable Environment, and Governance, Peace and Security.

As the overarching objective of the project is to achieve or enhance human and social development of the people of the Botswana, this project is consistent with the sustainable development vision for Botswana and the global goals.

3.2.18 Botswana Land Policy (2015)
The overall goal of this land policy calls for improvement in the land administration and management, both from system, environmental and economic perspective. This should reduce conflicts at macro and micro levels, particularly the demographic and economic growth and environmental degradation. The object is to use land, conserve and protect it for future generations.

The policy is relevant to the project as the pipeline will be laid on land. This calls for conservation and sustainable development and protection of land rights for all land holders in the project. However, as noted during consultations, vulnerable communities expressed concerns (see 3.3.2.1 Land Tenure and Allocation).

3.2.19 Remote Area Development Programme (RADP) (2009)
The Remote Area Development Programme (RADP) was established in 2002, to target citizens of Botswana who live in settlements located far from centres of basic services and facilities. As described above, the targeted people are characterized by severe poverty, lack of income and education, have low literacy levels and depend on a deteriorating ecological resource base. Bere settlement is amongst the areas identified as most affected with poor water quality and quantity.

The basic assumption of the programme was that the primary constraint to remote area development and poverty reduction was geographic location and inadequate access to basic social services. This meant that people living in these areas did not benefit from national development programme.

The overall goal of the RADP is to achieve sustainable social and economic development of the Remote Area Dwellers (RAD). Specifically, the RADP objectives are to:

- Undertake intensified development of remote settlements to bring them to a level of development comparable with the rest of other communities/villages in the country.
- Promote production-oriented income and employment generating activities.
- Enhance Remote Area Dwellers access to land and other natural resources.
• Provide remote area dwellers with training and education to enable them to be self-sustaining.

Those who qualify for the support are Botswanan citizens and live in settlement with a population of 250-499; those who have inadequate water rights; people who have no real access to land and lack access to basic services such as education, health, banking services, extension, etc. They are then given five livestock (cattle) or fifteen goats, those who qualify for destitution are assisted through the destitution programme. Children who are RADs are provided food, toiletry, clothing, bedding, and transportation.

3.2.20 Government Housing Programme (Destitute Housing Scheme) (1980)
The Government Housing Programme under the National Policy on Housing in general sense is the Government’s measure and decisions designed to improve housing conditions for all citizens in both urban and rural areas.

The National Policy on Destitute Persons states that the “eligibility of destitute benefits is targeted, and conditional eligibility is focused on individuals who are either self-identified or who have been identified and nominated by household members or community leaders or local organization”.

Once beneficiaries who are considered destitute have been identified, an assessment is carried out to determine the need. Those who are found to have no accommodation within that area are housed in destitute houses and provided with food until such time that they can sustain themselves. According to the Policy, where a destitute person has acquired a plot but is unable to develop it, they are assisted through to build decent shelter. Where a destitute person does not have a plot, the Department of Social and Community Development encourages such persons to apply for one and will support their application to Department of Lands to prioritize the provision of housing for that person.

Destitute housing is provided in cases where such people are found to need shelter. This is in line with the Revised National Housing Policy (2000) that is; it is mandatory for District/Town/City Council to provide basic shelter for destitute persons and to budget for and implement the programme.

This programme is relevant to the project as Bere settlement has been identified as remote area settlement as per the Government of Botswana and therefore many residents in Bere have benefited from this programme (Plate 8).

3.2.21 National Settlement Policy (NSP) (1998)
The National Settlement Policy (NSP) has established a settlement hierarchy, based on the population and the size of its catchment area, Bere settlement falls under Tertiary III within the hierarchy, the category includes a population range of 500-999, serving a catchment area of 5km radius. This covers about 20 percent of existing Remote Area Development Programme settlements.

According to this policy, basic infrastructure and services shall be provided to all settlements with a minimum population of 500 people. For a Tertiary III settlement the following services are provided: Health Post, primary school, Council water supply, Headman of records, Tribal police and police station, crop production office and animal health and production office, tertiary road, and radio transmitter.

Bere has been classified as RADP settlement according to its population and remoteness. According to the NSP, Bere is classified as Tertiary III settlements and have all the above-mentioned services. The settlement therefore qualifies for Government assisted programs/projects for rural areas.
3.2.22 National Policy on Destitute Persons (2002)
Revised in 2002, the National Policy on Destitute aids poor households (provision of food). The registered destitute must make every effort to:
- Find employment if he or she is physical and mentally able.
- Produce at least part of his or her food if physical and mentally able.
- Take part in any activities sponsored by Council staff aimed at his or her rehabilitation and financial improvement.
- Use the assistance given only for the specified purpose.

This National Policy on Destitute Persons (2002) is relevant to the project as destitute persons are found in Bere settlement. Destitute persons capable of working should be identified through the social and development officers and be considered for employment in this project.

3.2.23 Affirmative Action Framework for Remote Area Communities (2014)
This framework was conceived to accelerate the implementation of the revised Remote Areas Development Programme which is aimed at promoting equity in the remote area communities (RACs). The action framework is guided by the revised national policy for rural development.

The objectives of the framework are to:
1. Promote social inclusion of people living in recognized remote area settlements, both individually and/or as a family in the development of the country;
2. Provide development infrastructure in the recognized remote area settlements for the RACs to be able to participate in the economic and social activities of the country;
3. Enable RACs to build sustainable livelihoods, promote self-reliance and sustainable utilization of natural resources;
4. Enhance RACs access to social services, poverty eradication initiatives and other national development programmes;
5. Facilitate community participation of RACs in community development initiatives; and
6. Enhance collaboration with Non-Governmental Organizations, (NGOs) / Community Based Organizations (CBOs)/ Faith Based Organizations (FBOs), Development Partners and Private sector on the development of RACs.

The goals of the Affirmative Action Framework are aligned to the Rural Development Council goals. Five new focus areas are:
1. Provision of basic services and Infrastructure development
2. Agriculture development and food security
3. Support and protection of indigenous knowledge
4. Rural entrepreneurial development
5. Harmonization of social welfare programs

The Affirmative Action is relevant to the project as it supports conscious efforts for the employment of people from remote area settlements, promote water supply in remote areas and harmonizes social welfare programmes. It therefore ensures that special consideration is given to people from Bere settlement during employment of people.

3.2.24 Revised Guidelines for Implementation of Ipelegeng Programme (2012) Labour-Based Relief Program (Ipelegeng)
Ipelegeng was started in the 1960s as a poverty eradication strategy. This programme provides temporary employment to members of the community in various villages throughout Botswana through temporary supplement to rural incomes through wages. Unemployed residents in Bere settlement who have registered with the program are offered temporary manual work which is on a
rotational basis among the community members in each village. Ipelegeng workers work for six hours and earn P500 (US $45.00) per month for the three months that they are enrolled in the programme. Ipelegeng workers thereafter receive nothing for the subsequent months as they are laid off to make way for others due to the rotational system of employment under this programme (SLR Consulting, 2015:33).

3.3 WUC’S SAFETY, HEALTH, ENVIRONMENTAL AND QUALITY (SHE) POLICIES AND PROCEDURES

WUC has comprehensive, Safety, Health, Environmental and Quality policies (SHEQ) and procedures that guide all its operations and regulate its Contractors to ensure that works done are within acceptable environmental principles and standards. The Policies and Principles amongst others cover:

1. Environmental Management
2. Water Conservation Policy
3. Environmental Impact Assessment Policy
4. Commitment and HSE Management Policy
5. Occupational Health and Safety
6. PPE Policy
7. Implementation and Operation of the HSE Management System (Contractor and Contractor Control)

WUC SHE’s policies and procedures are relevant to this project particularly during construction as it provides guidelines and procedures for environmental management. The policies apply to all those engaged by WUC for the safety delivery of works.

3.4 REGIONAL AND INTERNATIONAL LEGISLATIVE FRAMEWORK

3.4.1 World Bank (WB) Triggered Safeguards Policies Relevant to the Sub-project

The World Bank Triggered Safeguard Policies as presented in Table 2 are relevant to the Bere Settlement Water Supply Sub-Project and are therefore reviewed for their compliance. They are relevant to the sub-project as they are necessary requirements of the WB for the implementation of the sub-project and to protect the biophysical and social environment of the beneficiary communities and enhance inclusive and sustainable development opportunities for beneficiaries.
Table 2: Environmental and Social Safeguards Policies:

a) Environmental Assessment, OP 4.01

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<thead>
<tr>
<th>Objectives</th>
<th>Operational Principles</th>
<th>Gaps and Resolution</th>
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<tbody>
<tr>
<td>Environmental Assessment, OP 4.01 and applicable WBG EHS Guidelines</td>
<td>To help ensure the environmental and social soundness and sustainability of investment projects.</td>
<td>No Gaps Identified</td>
</tr>
<tr>
<td>1. Use a screening process for each proposed project, as early as possible, to determine the appropriate extent and type of environmental assessment (EA) so that appropriate studies are undertaken proportional to potential risks and to direct, and, as relevant, indirect, cumulative, and associated impacts. Use sectoral or regional environmental assessment when appropriate.</td>
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<tr>
<td>2. Assess potential impacts of the proposed project on physical, biological, socio-economic and physical cultural resources, including transboundary and global concerns, and potential impacts on human health and safety.</td>
<td>No Gaps Identified</td>
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<tr>
<td>3. Assess the adequacy of the applicable legal and institutional framework, including applicable international environmental agreements, and confirm that they provide that the cooperating Government does not finance project activities that would contravene such international obligations.</td>
<td>No Gaps Identified</td>
<td></td>
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<tr>
<td>4. Provide for the assessment of feasible investment, technical, and citing alternatives, including the &quot;no action&quot; alternative, potential impacts, feasibility of mitigating these impacts, their capital and recurrent costs, their suitability under local conditions, and their institutional, training and monitoring requirements associated with them.</td>
<td>No Gaps Identified</td>
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<tr>
<td>5. Where applicable to the type of project being supported, normally apply the Environmental, Health, and Safety Guidelines (WBG EHS).</td>
<td>Both Botswana standards and WBG EHS Guidelines for Water and Sanitation will be applicable, whichever is more stringent.</td>
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<tr>
<td>6. Prevent and, where not possible to prevent, at least minimize, or compensate for adverse project impacts and enhance positive impacts through environmental management and planning that includes the proposed mitigation measures, monitoring, institutional capacity development and training measures, an implementation schedule, and cost estimates.</td>
<td>No Gaps Identified</td>
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<tr>
<td>7. Involve stakeholders, including project-affected groups and local non-governmental organizations, as early as possible, in the preparation process and ensure that their views and concerns are made known to decision makers and considered. Continue consultations throughout project implementation as necessary to address EA-related issues that affect them.</td>
<td>No Gaps Identified</td>
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<tr>
<td>8. Use independent expertise in the preparation of EA where appropriate. Use independent advisory panels during preparation and implementation of projects that are highly risky or contentious or that involve serious and multi-dimensional environmental and/or social concerns.</td>
<td>No Gaps Identified</td>
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<tr>
<td>9. Provide measures to link the environmental assessment process and findings with studies of economic, financial, institutional, social and technical analyses of a proposed project.</td>
<td>No Gaps Identified</td>
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<tr>
<td>10. Provide for application of the principles in this Table to subprojects underinvestment and financial intermediary activities.</td>
<td>No Gaps Identified</td>
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<tr>
<td>11. Disclose draft EA in a timely manner, before appraisal formally begins, in a accessible place and in a form and language understandable to key stakeholders.</td>
<td>No Gaps Identified. Public Disclosure is undertaken through Section of the EA, Act.</td>
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### Indigenous Peoples OP 4.10

<table>
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<tr>
<th>Objectives</th>
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<tr>
<td>To design and implement projects in a way that fosters full respect for Indigenous Peoples’ dignity, human rights, and cultural uniqueness and so that they: (a) receive culturally appropriate social and economic benefits; and (b) do not suffer adverse effects during the development process.</td>
<td>1. Screen early to determine whether Indigenous Peoples are present in, or have a collective attachment to, the project area. Indigenous Peoples are identified as possessing the following characteristics in varying degrees: self-identification and recognition of this identity by others; collective attachment to geographically distinct habitats or ancestral territories and to the natural resources in these habitats and territories; presence of distinct customary cultural, economic, social or political institutions; and an indigenous language.</td>
<td>Botswana does not have legislation on Indigenous Peoples. Botswana Government does not recognize any specific group of people as being Indigenous Peoples in the country, maintaining that instead all citizens of the country are “Indigenous” or understood as those who are original to Botswana. However, this interpretation does not reflect the Bank’s or the ACHPR understanding of the term which does not necessarily mean those who were there first. Nevertheless, in its recent statement to the UN Permanent Forum on Indigenous Peoples (UNPFII) in April 2019, the Government of Botswana stated “the promotion and protection of human rights remains a top priority for the Government of Botswana. [And attaches] great importance to the 1948 Universal Declaration on Human Rights, Declaration on the Rights of Indigenous Peoples and other regional and international human rights instruments.” As such, those of certain tribes such as the San (Basarwa) are considered as Vulnerable Communities as per the criteria of OP 4.10. Over 80 percent of persons who meet the criteria of OP 4.10 are Basarwa and reside in Bere settlement as revealed by a household survey undertaken as part of the social assessment for the VCP. A Vulnerable Communities Plan (VCP) has been prepared and submitted in a separate report. The Project will ensure that the requirements under OP 4.10 are fulfilled for the communities where Vulnerable Communities are present.</td>
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<tr>
<td>2. Undertake free, prior and informed consultation with affected Indigenous Peoples to ascertain their broad community support for projects affecting them and to solicit their participation: (a) in designing, implementing, and monitoring measures to avoid adverse impacts, or, when avoidance is not feasible, to minimize, mitigate, or compensate for such effects; and (b) in tailoring benefits in a culturally appropriate manner.</td>
<td>2. Undertake free, prior and informed consultation with affected Indigenous Peoples to ascertain their broad community support for projects affecting them and to solicit their participation: (a) in designing, implementing, and monitoring measures to avoid adverse impacts, or, when avoidance is not feasible, to minimize, mitigate, or compensate for such effects; and (b) in tailoring benefits in a culturally appropriate manner. No Gaps identified</td>
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<tr>
<td>3. Undertake social assessment or use similar methods to assess potential project impacts, both positive and adverse, on Indigenous Peoples. Consider options preferred by the affected Indigenous Peoples in the provision of benefits and design of mitigation measures. Identify social and economic benefits for Indigenous Peoples that are culturally appropriate, and gender and inter-generationally inclusive and develop measures to avoid, minimize and/or mitigate adverse impacts on Indigenous Peoples.</td>
<td>3. Undertake social assessment or use similar methods to assess potential project impacts, both positive and adverse, on Indigenous Peoples. Consider options preferred by the affected Indigenous Peoples in the provision of benefits and design of mitigation measures. Identify social and economic benefits for Indigenous Peoples that are culturally appropriate, and gender and inter-generationally inclusive and develop measures to avoid, minimize and/or mitigate adverse impacts on Indigenous Peoples. No Gaps identified</td>
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<tr>
<td>4. Where a restriction of access of Indigenous Peoples to parks and protected areas is not avoidable, ensure that the affected Indigenous Peoples’ communities participate in the design, implementation, monitoring, and evaluation of management plans for such parks and protected areas and share equitably in benefits from the parks and protected areas.</td>
<td>4. Where a restriction of access of Indigenous Peoples to parks and protected areas is not avoidable, ensure that the affected Indigenous Peoples’ communities participate in the design, implementation, monitoring, and evaluation of management plans for such parks and protected areas and share equitably in benefits from the parks and protected areas. No Gaps identified</td>
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<td>5. Put in place an action plan for the legal recognition of customary rights to lands and territories, when the project involves: (a) activities that are contingent on establishing legally recognized rights to lands and territories that Indigenous Peoples traditionally owned, or customarily used or occupied; or (b) the acquisition of such lands.</td>
<td>5. Put in place an action plan for the legal recognition of customary rights to lands and territories, when the project involves: (a) activities that are contingent on establishing legally recognized rights to lands and territories that Indigenous Peoples traditionally owned, or customarily used or occupied; or (b) the acquisition of such lands. No Gaps identified</td>
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<tr>
<td>6. Do not undertake commercial development of cultural resources or knowledge of Indigenous Peoples without obtaining their prior agreement to such development.</td>
<td>6. Do not undertake commercial development of cultural resources or knowledge of Indigenous Peoples without obtaining their prior agreement to such development. No Gaps identified</td>
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<tr>
<td>7. Prepare an Indigenous Peoples Plan (VCP) that is based on the social assessment and draws on indigenous knowledge, in consultation with the affected Indigenous Peoples’ communities and using qualified professionals. Normally, this plan would include a framework for continued consultation.</td>
<td>7. Prepare an Indigenous Peoples Plan (VCP) that is based on the social assessment and draws on indigenous knowledge, in consultation with the affected Indigenous Peoples’ communities and using qualified professionals. Normally, this plan would include a framework for continued consultation. No Gaps identified. A VCP has been prepared.</td>
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### Indigenous Peoples OP 4.10

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<td>with the affected communities during project implementation; specify measures to ensure that Indigenous Peoples receive culturally appropriate benefits, and identify measures to avoid, minimize, mitigate or compensate for any adverse effects; and include grievance procedures, monitoring and evaluation arrangements, and the budget for implementing the planned measures.</td>
<td>No Gaps identified</td>
</tr>
<tr>
<td>8. Disclose the draft Indigenous Peoples Plan; including documentation of the consultation process, in a timely manner before appraisal formally begins, in an accessible place and in a form and language that are understandable to key stakeholders.</td>
<td>No Gaps identified</td>
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### Physical Cultural Resources - OP 4.11

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<td></td>
<td>To assist in preserving physical cultural resources and avoiding their destruction or damage. PCR includes resources of archaeological, paleontological, historical, architectural, and religious (including graveyards and burial sites), aesthetic, or other cultural significance.</td>
<td>No Gaps identified. It is undertaken under Archaeological Impact Assessment.</td>
</tr>
<tr>
<td>1. Use an environmental assessment (EA) or equivalent process to identify PCR and prevent or minimize or compensate for adverse impacts and enhance positive impacts on PCR through site selection and design.</td>
<td>No Gaps identified</td>
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<tr>
<td>2. As part of the EA, as appropriate, conduct field-based surveys, using qualified specialists.</td>
<td>No Gaps identified</td>
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<tr>
<td>3. Consult concerned Government authorities, relevant non-Governmental organizations, relevant experts and local people in documenting the presence and significance of PCR, assessing the nature and extent of potential impacts on these resources, and designing and implementing mitigation plans.</td>
<td>No Gaps identified</td>
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<tr>
<td>4. For materials that may be discovered during project implementation, provide for the use of “Chance Finds” procedures in the context of the PCR management plan or PCR component of the environmental management plan.</td>
<td>No Gaps identified</td>
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<tr>
<td>5. Disclose draft mitigation plans as part of the EA or equivalent process, in a timely manner, before appraisal formally begins, in an accessible place and in a form and language that are understandable to key stakeholders.</td>
<td>No Gaps identified</td>
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### Involuntary Resettlement – OP4.12

|            | This policy was triggered for the entire project but is not applicable to this subproject. There is no land acquisition related to subproject activities (pipeline, borehole, and Worker’s Camp and Contractor’s Site). The pipeline from the new borehole will follow the existing right of way of the road. Borehole will be constructed on land for which WUC has acquired land rights from the Ghanzi Land Board. For the land to be used for the Labourer’s Camp and Contractor’s Site, the established guidelines for site location at least 10 kms from the community will be followed and will acquire temporary land use rights by the land board. No economic displacement is expected in this subproject. | |

No Gaps identified

This section provides a description of the specific standard on health and safety to guide the project proponent throughout all phases of implementation of the project and provides guidance on mitigations measures. The Environmental, Health, and Safety (EHS) Guidelines of the World Bank Group are technical referenced documents, with the general and industry-specific Water and Sanitation Guidelines being applicable to this sub-project. Specific guidelines to be adopted and utilized by the Contractors and other project implementers includes Environmental, Occupational Health and Safety, Community Health, and Safety, Construction and Decommissioning.

Complementary to the EHS Guidelines, the Environmental, Social, Health and Safety (ESHS) Enhancements for Standard Procurement Documents (SPDs) and Standard Bidding Documents (SBDs), with a new procurement framework, came into force in 2016 and 2017. The ESHS enhancements for SPDs and SBDs shall be applicable to this sub-project. The following is required for all bidders/proposers/Contractors and the relevant shall:

- Set out clearly the minimum expectations of ESHS performance from the outset, to ensure that all Bidders/Proposers are aware of the ESHS requirements;
- Submit as part of their Bid/Proposal an ESHS Code of Conduct that will apply to their employees and sub-Contractors, and details of how it will be enforced. The suitability of the Code of Conduct will be assessed and discussed as part of the Bid/Proposal evaluation and negotiations;
- The successful Bidder/Proposer is required to implement the agreed Code of Conduct upon contract award;
- Submit, as part of their Bid/Proposal, ESHS Management Strategies and Implementation Plans required to manage the key ESHS risks of the project;
- The suitability of these strategies and plans will be assessed as part of the Bid/Proposal evaluation, and discussed during pre-contract discussions, as appropriate. These strategies and plans will become part of the Contractor’s project specific Environmental and Social Management Plan (C-ESMP);
- Conditions of the contract include provisions relating to the C-ESMP, include:
  - A requirement that the Contractor shall not commence any Works unless the Engineer is satisfied that appropriate measures are in place to address ESHS risks and impacts; and
  - At a minimum, the Contractor shall apply the plans and ESHS Code of Conduct, submitted as part of the Bid/Proposal, from contract award onwards.

d) INTERNATIONAL AND REGIONAL FRAMEWORKS

3.4.3 The United Nations (UN) Declaration on the Rights of Indigenous Peoples (2007) (UNDRIP)

This declaration affirms the minimum standards for the survival, dignity, security and well-being of Indigenous Peoples. It was adopted by the UN General Assembly on September 2007. It delineates and defines the individual and collective rights of Indigenous Peoples, including their ownership rights to cultural expression, identity, language, employment, health, education and other issues. It

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emphasizes the rights of Indigenous Peoples to maintain and strengthen their own institutions, cultures and traditions, and to pursue their development in keeping with their own needs and aspirations. It prohibits discrimination against them, and it promotes their full and effective participation in all matters that concern them and their right to remain distinct and to pursue their own visions of economic and social development.

The Government of Botswana endorsed the UN Declaration in 2007 and stated at the 18th Session of the UN Permanent Forum on Indigenous Peoples Issues (UNPFII) in April 2019, that: “Botswana continues to make significant progress in addressing the needs and concerns of marginalized communities, including issues relating to respect for cultural diversity, development programs, social services, land distribution as well as participation and consultation. As a result of our national policies and programmes, we have also seen great improvements in the areas of economic empowerment, access to decent shelter, employment and access to tertiary education, to cite a few. The promotion and protection of human rights remains a top priority for the Government of Botswana. We also attach great importance to the 1948 Universal Declaration on Human Rights, Declaration on the Rights of Indigenous Peoples and other regional and international human rights instruments.”

This water project is in Bere settlement where there is a vulnerable community, hence the World Bank’s OP 4.10 applies to this sub-project. The UNDRIP will also provide guidance on the implementation of this project to mitigate adverse harms to the rights and well-being of Basarwa, and to ensure that they benefit from this project in line with the culture and priorities.


The African Commission on Human and Peoples’ Rights, a sub-body of the African Union, adopted the report of the Working Group. This is the African Commission’s official conceptualization of, and framework for, understanding Indigenous Peoples, and as such it is an important African instrument for recognizing Indigenous peoples in Africa and improving their situation. In its report, the African Commission outlines key characteristics, which identify indigenous peoples and communities in Africa. The report emphasizes that the African Peoples who are applying the term “Indigenous” in their efforts to address their particular social situation are mainly hunter-gatherers and pastoralists, and in some cases have blended livelihoods to account for changes in circumstances due to land loss, the impacts of Government development initiatives, and other factors. The African Commission report emphasizes that the overall characteristics of groups identifying themselves as “Indigenous” Peoples include:

- Their cultures and ways of life differ considerably from the dominant society
- Their cultures are under threat, in some cases to the point of extinction
- The survival of their way of life depends on access and rights to their lands and the natural resources thereon
- They suffer from discrimination as they are regarded as less developed and less advanced than other more dominant sectors of society
- They often live in inaccessible regions, often geographically isolated
- They suffer from various forms of marginalization, both politically and socially

The African Commission report concludes that this discrimination and marginalization threatens the continuation of Indigenous Peoples’ cultures and ways of life and prevents them from being able to genuinely participate in decisions regarding their own future and forms of development.

In line with the approach of the United Nations and the World Bank, the African Commission emphasizes the principle of self-identification, and stresses that the criteria for identifying Indigenous
Peoples in Africa is not mainly a question of aboriginality (who was there first) but of the above factors of structural discrimination and marginalization.

The African Commission in its report also addresses the misconceptions around the term Indigenous Peoples in Africa and states that the term and discourse of indigenous peoples should be understood as an avenue for the most marginalized to advocate their cause and not an attempt to deny any African his/her rights to their African identity.

This report is important as a guidance to understanding and addressing the needs of Basarwa in the context of this project so that they benefit equally from this project and provides an understanding of the applicability of ‘Vulnerable Communities’ as per OP 4.10 in this project.

3.4.5 *UN Convention on the Rights of the Child (CRC)*

It reaffirms that since children are vulnerable to human rights violations, they need special care and protection. As Botswana is a signatory to this convention, no child is to be employed on this water project and due diligence is essential to ensure their safety, including protection from sexual harassment, exploitation and abuse (SHEA).

3.4.6 *The Convention on the Elimination of All Forms of Discrimination Against Women (1979) (CEDAW)*

This Convention was acceded to in Botswana in 1999 and it establishes not only an international bill of rights for women, but also an agenda for action by countries to guarantee the enjoyment of those rights. The Convention provides the basis for realizing equality between men and women through ensuring women's equal access to, and equal opportunities in, political and public life. State parties agree to take all appropriate measures, including legislation and temporary special measures, so that women can enjoy all their human rights and fundamental freedoms.

This Convention is relevant to the project as women are not to be discriminated against during employment for temporary/permanent positions and skilled/unskilled labour or for any project activities and benefits.

3.4.7 *ILO Convention on Indigenous and Tribal Peoples, 1989 (No. 169) (ILO 169)*

While Botswana is not a signatory to the Convention, it is part of international law and will guide understanding of ‘Vulnerable Communities’ to ensure they benefit from this project in line with their rights and priorities.

The Convention establishes responsibility for Governments to ensure Indigenous Peoples are not discriminated against and to Government socio-economic gaps that may exist between indigenous and other members of the national community, in a manner compatible with their aspirations and ways of life; that the social, cultural, religious and spiritual values and practices of these peoples shall be recognised and protected, and due account shall be taken of the nature of the problems which face them both as groups and as individuals; and that the integrity of the values, practices and institutions of these peoples shall be respected, and that they are properly consulted and able to participate in decision-making about decisions which impact them, among others.

This Convention is relevant to the Bere Settlement Water Supply Sub-Project. Bere settlement is a home to a group of ‘Vulnerable Community’ (Basarwa), as such they are to be involved in the project planning, implementation and monitoring through engagement throughout all the phases of the project, in line with OP 4.10.
3.4.8 UN Convention on the Elimination of All Forms of Racial Discrimination (CERD)

This Convention addresses tackling all forms of racial discrimination, outlining the rights of racial and/or ethnic groups or individuals that need to be guaranteed if everyone is to have equal enjoyment of their human rights and fundamental freedoms.

Women who belong to marginalised racial or ethnic groups often experience discrimination differently than men. The ‘gender dimensions’ of racial discrimination have been increasingly recognised since the adoption of International Convention on Elimination of all Forms of Racial Discrimination (ICERD) and State Parties are now required to incorporate gender analysis into their reports on the implementation of the treaty – which will include the relationship between Violence Against Women (VAW) and racial discrimination.

This convention is relevant to the project as no ethnic group and no gender is to be discriminated against during employment for temporary/permanent positions and skilled/unskilled labour or for any project activities and specific protections to mitigate against gender-based violence as a result of labour influx.

This statement further buttresses Botswana Government’s commitment in supporting the Basarwa in Bere settlement.

3.5 INSTITUTIONAL FRAMEWORK FOR PROJECT PREPARATION AND IMPLEMENTATION

The institutions that have a significant role to play in the implementation and monitoring of mitigation/enhancement measures of the project are described below:

3.5.1 Ministry of Land Management, Water and Sanitation Services

The Ministry of Land Management, Water and Sanitation Services is responsible for the management of land, water and related functions as well as the facilitation of housing and water delivery. The Ministry’s responsibilities entail:

1. National physical planning, which involves determination of optimal utilization and proper organisation of land space and development.
2. Administration of land and water in both the urban and rural areas which entails distributing the land; developing policies that guide or address issues relating to access of land, tenure; title registration; land values; compensation; conflict resolution and compliance with covenants as well as ensuring availability of administrative and physical infrastructure and procedures.
3. Provision of services and information on cadastral surveying, mapping and remote sensing that lay the foundation for physical planning; land administration and development.
4. Provision of service infrastructure to facilitate land development
5. Facilitation of the Housing delivery involves coordinating and promoting the implementation of the National housing policy, which aims at ensuring that every citizen is decently housed.
6. Availing land for residential development; providing funding for development of housing for the low income groups; encouraging financial institutions to finance housing development; exploring innovative building technologies; partnering with the private sector to prove housing for Government employees, encouraging employees to have housing packages for their respective employees.
7. Promoting efficiency in the execution of the mandate and delivery of services to the public through information management and re-engineering processes.
The Ministry has the overall responsibility for the implementation of the project on behalf of the Borrower. It will do so through the established Coordinating Unit which will have the overall oversight responsibility for coordination of project activities, and consolidation of monitoring and reporting for the project. This will include preparation of a consolidated work plan, procurement plan, monitoring reports, financial reports, and other reports required for the project.

3.5.2 Water Utilities Corporation

WUC is responsible for the successful implementation components 1 and 2 and some of component 3. The WUC’s mandate is to supply potable water to all urban centres and villages in the country as well as managing wastewater. The WUC’s mission is to provide sustainable water and wastewater management services in a cost effective and environmentally friendly manner to the economy.

3.5.3 Ghanzi Land Board

The Land Board derives its statutory responsibilities to hold land in trust for the citizens of Botswana from the Tribal Land Act of 1968. The functions of the Land Board, here called Ghanzi Land Board involves granting of rights to use land, cancellation of the grant of any rights to use any land, imposition of restrictions on the use of tribal land, authorizing any transfer of tribal land and hearing appeals from decisions of Subordinate Land Board in respect of any of its functions conferred on such Sub-Land Boards. The granting and repossession of tribal land are carried out through the Land Board and in accordance with the provisions of the Tribal Land Act (1968).

The Ghanzi Land Board will give surface rights to the Contractor for land, should any area be identified to provide suitable earth materials and for the location of a Contractor’s and Labourer’s Camp.

3.5.4 Department of Environmental Affairs

The Department of Environmental Affairs (DEA) within the Ministry of Environment, Natural Resources Conservation and Tourism is responsible for protection and improvement of the quality and safety of the environment, to promote conservation and sustainable use of natural resources.

The DEA is also responsible for receiving and reviewing of Environmental Impact Statements on environmental and social impacts of plans, programmes, and projects. It is also responsible to ensure that mitigation measures for adverse impacts are adequately implemented. This, it ensures through auditing of the project and receiving periodic monitoring reports.

3.5.5 Ghanzi District Council

The duty of the Council is to exercise good governance and take responsibility for development in their areas of jurisdiction. District Councils in Botswana are governed by section 31 of the Local Government (District Council) Act. They serve to:

- Develop primary school infrastructure and other educational services in relation to primary education.
- Provide sanitation services for the removal and disposal of refuse.
- Safeguard and promote public health and mitigate against the occurrence contagious diseases.
- Construct and maintain public roads and streets other than those constructed and maintained by the central Government.
• Act as fire authorities to maintain fire brigades and to be responsible for the extinction of fires and protect life and property in case of fire.
• Control urban building design and standards.
• Organize the collection, retention and where applicable, sale of lost cattle (Matimela).

Within the Council there are the following Departments:
• Roads Departments - responsible for roads within the district. Normally the roads are of tertiary levels as they are within the village. The road reserves vary between 45 m to as low as 15 m. The Council is also to permit the use of their road reserves.
• Social and Community Development Department - deals with social issues including taking care of vulnerable people in the society and also aids in identifying vulnerable people in the society.
• Department of Environmental Health - the core business of the department includes the perusal of factory building plans for suitability of designs, registration of factories, inspection of factories and other places of work such as building operations and works of engineering construction; registration and inspection of plant and machinery e.g. passenger lifts, boilers, air receivers, cranes and lifting tackle etc. and legal action where there is contravention of the law. The division also disseminates information on occupational health and safety, and it participates in the drawing-up of Botswana National Health and Safety Standards. The mandate of the division which is to regulate health, safety and welfare of employees, and the safety of machines and plant, will be executed throughout the Bere Settlement Water Supply Sub-Project.

3.5.6 Department of Waste Management and Pollution Control

The Department of Waste Management and Pollution Control (DWMPC) is mandated to prevent and control pollution of the environment through the formulation of waste management policies, regulating and monitoring of the waste sector. The Bere Settlement Water Supply Sub-Project will ensure compliance to the following policies and acts; Waste Management Act, 1988, Wastewater Sanitation Policy, 2001, Air Pollution Prevention Act, 1971, Botswana National Master Plan for Wastewater and Sanitation 2003, Botswana Strategy for Waste Management, 1998, Wastewater Discharge Standard BOS 93: 2012 (2nd edition), and Ambient Air Quality Standards.

DWMPC will monitor waste management and pollution at the construction site; this will include the control and regulation of remediation of contaminated soil.

3.5.7 Department of National Museum and Monuments (DNMM)

The mandate of the Department of National Museum and Monuments is to promote; conservation, protection and promote Botswana's heritage. The Archaeological Impact Assessment mitigation measures will be put in place to ensure the sustainability of this department’s mandate. The Department is to monitor their recommendations related to archaeological preservation for the project.

3.5.8 Botswana Police Services

The Botswana Police Services operate throughout the country and within the project area. They are mandated to protect life and property, prevent and detect crime, repress internal disturbances, maintain security and public tranquillity, apprehend offenders, bring offenders to justice, duly enforce all written laws with which it is directly charged and generally maintain the peace.
The Bere sub-project will depend on the Botswana Police Services to protect life and prevent crime and maintain security during the implementation of the project. Police stations are in Ghanzi township. The Kgotla also has Police Officers to maintain the peace.

**3.5.9 Department of Labour and Home Affairs**

The mandate of the Department of Labour and Home Affairs is to promote gender equality, provide labour, occupational health and safety, civil registration, migration, citizenship and coordinate vocational training. This department will handle all labour issues or conflicts between employer and employees throughout the implementation of the Bere Settlement Water Supply Sub-Project.

This department will handle all labour issues or conflicts between employer and employees throughout the implementation of the project. These conflicts may include, unfair dismissal, and lack of payment of salaries.

**3.5.10 Ghanzi District Health Management Team (DHMT)**

The responsibility for healthcare in the district under which Bere settlement falls, Ghanzi Health Management Team. During construction of the sub-project, the DHMT will:

- Provide initial medical attention to all prospective employees, prior to employment.
- Monitor the health of employees and advice on their fitness to perform their work.
- Contribute to the protection of the health of persons present on site.
- Provide emergency medical responses.
- Assist in prevention and detection of occupational accidents and illnesses.
- Assist in the prevention of work-related psychological problems.
- Provide monthly education for HIV/AIDs and other diseases.

**3.5.11 Ministry of Youth Empowerment Sports and Culture Development**

The Ministry exists to create an enabling environment that empowers the youth, develops sport and leverages the strength of our culture and heritage. This is done through their various departments within the Ministry.

The Ministry through their offices in Ghanzi will provide awareness training in particularly in the settlements with vulnerable communities to enable them take advantage of the various Government opportunities for funding for the youth in sports, business development and innovation.

**3.5.12 Ministry of Nationality, Immigration and Gender Affairs: Department of Gender Affairs**

The Department of Gender Affairs role will be to coordinate and facilitate capacity building including gender-based violence and promoting the development of gender sensitive sectoral policies and procedures.

**3.5.13 Tribal Administration**

The Tribal Administration headed by the Kgosi in Bere settlement will play a monitoring role and as part of the grievance redress mechanism (GRM) to also ensure that all mitigation measures and interventions proposed and agreed to be implemented are done. It will also play a role of conflict resolution arising from the implementation of project.
3.5.14 Village Development Committee

The Village Development Committee (VDC), which is the developmental wing of the Tribal Administration, will assist the Contractor and monitoring team in acquiring resources from the settlement for the use in the sub-project. It will also play a monitoring role and be part of the resolution of conflicts that are to arise from the project.

3.6 LIST OF CLEARANCES AND LICENCES NEEDED FOR PROJECT IMPLEMENTATION AND ISSUING THEIR AUTHORITIES

The following permits/approvals/licences/clearances as indicated in Table 3 are to be obtained from institutions responsible prior to the project implementation:

Table 3: List of Permits/Approvals/Licences/Clearance

<table>
<thead>
<tr>
<th>Type of Permits/Approvals/Licences/Clearance</th>
<th>Issuing Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approval for civil works to commence including the approval of this project specific C-ESMP.</td>
<td>World Bank</td>
</tr>
<tr>
<td>Clearance for Archaeological Impact Assessment</td>
<td>Department of National Museum and Monuments</td>
</tr>
<tr>
<td>Authorisation for Environmental Impact Assessment</td>
<td>Department of Environmental Affairs</td>
</tr>
<tr>
<td>Water from boreholes for use for construction and disinfecting of pipes</td>
<td>Water Utilities Corporation</td>
</tr>
<tr>
<td>Water from main reticulation system for domestic use</td>
<td>Water Utilities Corporation</td>
</tr>
<tr>
<td>Transport and machinery permit/ Road worthiness</td>
<td>Department of Road Transport and Safety</td>
</tr>
<tr>
<td>All land use rights for Contractor’s and Labour’s Camp</td>
<td>Ghanzi Land Board</td>
</tr>
<tr>
<td>Waste Disposal</td>
<td>Department of Environmental Health of Ghanzi District Council.</td>
</tr>
<tr>
<td>Use of own vehicle to transport waste (liquid and solid)</td>
<td>Department of Waste Management and Pollution Control</td>
</tr>
</tbody>
</table>
CHAPTER FOUR: DESCRIPTION OF BASELINE OF BERE SETTLEMENT

4.1 METHODOLOGY
The methodology employed in providing a description of the environmental and social baseline for Bere settlement includes a desktop literature review (reviewing legislation and policies, population projections from Statistics Botswana and other statistics, Ghanzi District Development Plan 8 from the Ministry of Local Government and Rural Development, metrological data from Department of Metrological Services), community consultations and stakeholder meetings (including focus group discussions, semi-structured interviews and randomly distributed questionnaires), and three field visits.

4.2 BIOPHYSICAL ENVIRONMENT

4.2.1 Climate
The climate of the study area is classified as semi-arid, of the low altitude, hot steppe type with summer rainfall. The climate is characterized by unpredictable rainfall and extreme temperature variations that can occur between day and night in winter which is between the months of May and August.

The climate has dry winters, warm days and cold nights and wet summers with hot days and nights which is when rains occur. This period is between November and March. The climate of the district is slightly different from that of the rest of the country as it receives less rain (Brown, 1974). However, in recent times, the area has been receiving considerable amounts of rain.

a) Rainfall
The long term mean annual rainfall is around 375 mm, although departures from these average values may be extreme with up to 58 percent variation from year to year. Precipitation is characterised by high intensity, highly localized storm events between October and April (See Figure 4.1). Evaporation exceeds precipitation by approximately 93 percent. Average relative humidity is around 61 percent (Department of Metrological Services, 2017).

Figure 1: Ghanzi Monthly Rainfall 2009-2017

Source: Department of Metrological Services (2018)
b) Temperature
Mean maximum daily temperatures are between 33-35°C in January and 25°C in July. Minimum temperatures are between 3-6°C during winter (see Figure 4.2 and Annex 6).

Figure 2: Average Temperatures for Ghanzi (January –December)

Source: Department of Metrological Services (2018)

c) Wind
Wind direction is mainly easterly in the summer and northerly during winter. The average wind speed is about 43km/h (Department of Metrological Services, 2018).

4.2.2 Vegetation
Bere settlement is characterized by a low tree and shrub savanna. The proposed project area has a semi-arid tree and bush savanna. Generally, the vegetation may be characterized by an abundance of low growing shrubs and varying densities of good to poor quality grasses.

Shrub savanna species in the area include *Peltophorum africanum* (weeping wattle, Mosethla) and *Grewia flava* (Raisin Bush, Morelwa) dominating the area. Most of the tree plant species found in the area are Acacia species and they include *Terminalia sericea* (Silver Terminalia, Mogonono), *Acacia erioloba* (Camel Thorn, Mogotho), *Boscia abitrunca* (Shepherd’s Tree, Motlopi), *Acacia mellifera* (Black Thorn, Mongana), and *Dichrostachys cineria* (Moselesele) (See Plate 4 to Plate 7).
Other Vegetation of Importance

Nutrition and economic value plants found in Bere settlement include Morama Bean (Thamani) (*Tylosema esculentum*), Blue Sour Plum (Moretologa-wa-podii) (*Ximenia americana*), Kalahari Truffles/Wild Mushroom (Mahupu) (*Kalaharituber pfeilii*) and Wild Watermelon (Kgengwe).

The Morama Bean (Thamani) has international recognition because of its nutritional value. The Kalahari Truffles/Wild Mushroom (Mahupu) is also a delicacy and nutritious food for the Kalahari inhabitants. It is an aromatic underground fruit body. The fruit only grows in sandy soils. The Wild Watermelon (Kgengwe) is a favoured delicacy as it provides a source of water. No exotic (i.e. introduced/non-native) plant species were identified during site visit.

The Ministry of Local Government and Rural Development (2017) indicates that wildfires and overgrazing is disturbing the regeneration of forest and range resources within the Ghanzi District. They have put in place wildfire management practices which include construction and maintenance of a bet work of fire breaks.
4.2.3 Wildlife
The settlement has wildlife that roams in the areas surrounding the settlement. As indicated by the Department of Wildlife and National Parks, the wildlife that roams within the project area include antelopes, leopards, wild dogs, and hyenas.

4.2.4 Water
The Ministry of Local Government and Rural Development (2017) indicates that water is one of the limited and very scarce resources in the Ghanzi District. The water quality varies from soft to extremely hard. The district is serviced entirely by ground water aquifers for all its water needs, as there are no reliable surface water sources in the region. The augmentation of water in Bere settlement will assist in alleviating water supply problems in the settlement.

4.2.5 Hydrology and Ground Water
Bere settlement does not have a perennial river and/or surface water flow. Seasonal flow in the fossil river valley or channel is very rare because nearly all rainfall is absorbed in the Kalahari sands. Hence water is one of the major limiting factors to both people and animals in the study area.

The community depends on groundwater for its water resources. Bere settlement currently has two equipped boreholes. These are BH 9134 and BH 5698. The boreholes are located at following coordinates; 21.87250: -22.84111 for BH 9134 21.871667: -22.82417 for BH 5698. The estimated yields of the boreholes are 7 m$^3$/hr and 6 m$^3$/hr respectively. BH 5698 is dedicated for the watering of livestock and not for domestic purposes. BH 9135 which is the sub-project’s borehole is to be equipped and used to augment the existing water supply to the settlement. It was drilled in 1999 and it is located at coordinates 21.87111: -22.85028. The depth of the borehole is 225 m with a water strike level of 125 m below ground level (mbgl) and surface water level at 110.49 m below ground level (mbgl). The estimated yield is 8 m$^3$/hr.

An assessment of ground water in the settlement indicates that it is in a low vulnerability area that is; it is very difficult to access groundwater supplies for it to be easily polluted from ground surface activities. The water table is very low and more than 100 m deep. There are no watering holes, or any water bodies close to the borehole that would negatively be affected due to draw down effect. The closest borehole is the existing and operating borehole, BH 9134, which is about a kilometre north of the project borehole (BH 9135). This borehole can be used to monitor the draw down effect of the new borehole. The vegetation at the location of the borehole is not unique to that of its surroundings. They are shrubs and are shallow rooted and therefore do not depend on the water table for survival.

Map 4: Ground Water Vulnerability Map
4.2.6 Topography
Bere settlement is part of a gently undulating plain, with an average altitude of 1100 m above sea level. The topography from the borehole site to the tank is generally flat, with a slope of about 10 percent.

4.2.7 Geology
The geology of Bere settlement is characterized by the rocks of the Ghanzi Group which are located mostly in the north-western side of the project area.

4.2.8 Soils
Soils of the area are generally sandy consisting of brown, reddish brown grey and white colours (GDDP, 2017). The soils have a high capillarity; they drain freely as water seeps into the sandy soils. The soils are also of low fertility and they are marginally suitable for arable agriculture. The lithology of the area indicates that sandy soils could occur as deep as 5m to 200m (Ministry of Local Government and Rural Development (2017). Other soils found are sandstone, clay and mudstone.

4.2.9 Energy
Bere settlement is not connected to the national electricity grid. There is however a solar farm at the primary school, which supplies power to some Government institutions and houses in the village. There are some streetlights in the settlement which is powered by solar energy. The main source for lighting and cooking is the use of firewood.

4.2.10 Air Quality
There is currently no concern about air quality deterioration in the settlement as there is no major industrial establishment in the project area. Air quality recorded in front of the Bere Primary School (during site visit on 6 March 2018) by using a handheld air sampler, HT-9600, Particle Counter read zero (0) for both PM$_{10}$ and PM$_{2.5}$. The location of the recording was at latitude -22.820614 and longitude 21.875144.

The potential impact on air quality will depend on how effectively the Contractor manages the suppression of dust during the civil works. The potential impact of the proposed project on local air quality will be localised and will only pose a risk to immediate neighbours if not effectively handled. Receptors wind ward of excavation and stock piling of soil materials may be affected and will depend largely on the wind direction and wind speed. Sensitive receptors lying west of the pipeline route include the Bere Primary School, the Health Post and the Kgotla. They may be affected when the wind is blowing easterly. Residential plots lying to the south of excavated areas may be when the wind is blowing northerly.

4.2.11 Noise level
The recorded noise levels by use of a handheld sound level metre (SL 4014) which was run for 30 minutes depict a typical rural character of a quite nature. The noise levels recorded in the afternoon on 6th March 2018 around 13h: 00 also in front of the Bere Primary School was between 37 dB and 59.6 dB.

4.3 SOCIO- ENVIRONMENT AND SOCIAL ASSESSMENT AS PER OP 4.10
Socio-economic data were gathered on population, housing, poverty, employment, health, education, gender, water and sanitation amongst others. The main objective of this assessment is to better understand of the socio-economic characteristics of Bere settlement in order to inform the development of the sub-project and adequately anticipate socio-economic impacts, especially to vulnerable communities, mitigate risks and enhance development opportunities.
4.3.1 Criteria for OP 4.10
Considering the criteria of Indigenous Peoples (vulnerable communities) and screening following the World Bank OP4.10 Policy, Bere settlement is the first San settlement in Botswana comprising mostly residents of the San or Basarwa tribe. They possess the following characteristics:

a) Self-identification as members of a distinct indigenous cultural group and the recognition of the Basarwa as a distinct cultural group goes beyond national, regional and international borders. This is because they identify themselves as Basarwa and still live on their ancestral land.

b) Collective attachment to geographically distinct habitats or ancestral territories such as Bere settlement. Basarwa are believed to be the first inhabitants of Botswana after they were driven out of the Cape area, about two hundred thousand years ago. They moved from one place to the other in search for water and wildlife as their livelihoods were hunting wildlife and gathering wild fruits and tubers.

c) Customary cultural, economic, social, or political institutions that is separate from those of the mainstream society or culture. They still practice hunting at a small scale as they must apply for a permit to hunt for example guinea fowls etc. and they still gather wild fruits and tubers for their consumption and selling any surplus left. They still practice their ancestral dance of ‘tutsube’ (traditional dancing moves or styles). They still teach their children this dance. They still practice ‘botsetsi’ whereby a girl who just started their menstrual period is confined at home for seven days while female kin perform and other dance rituals, as well as rites of passage for boys who are maturing into manhood. Some Basarwa still practice traditional medicine that has been passed down from elders.

d) A distinct language or dialect, often different from the official language or languages of the country or region in which they reside. Basarwa speak their distinct dialect, Sesarwa, a click-based language that differs from other languages in the country.

In view of the above, the vulnerable communities are included in the project preparation, implementation and monitoring. They are consulted extensively and appropriately over issues that affect them and any potential adverse impacts emanating from the project are identified and adequately mitigated in relation to vulnerable community, meeting local and international requirements and best practice.

4.3.2 History of Basarwa in Bere settlement
According to the University of Botswana, Okavango Research Institute (1978), and corroborated by the Kgosi of Bere, the settlement\textsuperscript{10} started as a small hamlet where some Basarwa were staying. It later developed to a settlement upon the arrival in 1961 of, Dr. Hans-Joachim Heinz from the University of Witwatersrand (commonly known as University of Wits), South Africa. He was an anthropologist and a parasitologist. He came to study the culture and lifestyle of the San and other communities in the Kalahari in Botswana. He settled at the location now called Bere. With his presence there, more Basarwa came to stay closer as there was plenty of readily available ground water (sunk deeply). Gradually he introduced the Basarwa to subsistence lifestyle such as crop farming and animal rearing, and thus, adversely impacted their traditional livelihoods and culture. Dr. Heinz’s aim was to “help” the San “adapt to modern society” and as more Basarwa came to this location, Bere was established. It is the first Bushmen recognised settlement in the country by the Government. Upon recognition as a settlement, the residents received Government Assistance such under the RADP for

\textsuperscript{10} A settlement is a recognized geographical location of people in an area for economic and social purposes. A settlement has a minimum population of 150 people. Settlements are classified into a hierarchy of 4 according to the population. These are primary (20,000 + people), Secondary (10,000-19,999), Tertiary I-IV (5,000-499) and other settlements (498-150).
primary school, a clinic and water services. The Tswana way of governance system, (Kgosi, Kgotla, codified land rights, etc.) was introduced to them. As time went on, other Basarwa were relocated to Bere settlement from other villages.

4.3.3 Population Characteristics

The population of Bere settlement in 2001 was 385 persons and increased by 7.03 percent to 779 persons in 2011 as presented in Table 4. The population between the two censual years, more than doubled. The growth rate is more than that of the country which was about 2.4 percent. The Tribal Administration and the Village Development Committee (VDC) estimate the population size to be 1,412 as at March 2018 The population size almost doubled as more people have been relocated (migrated) into the settlement from Ranyane village in the year 2013. This has rightly been reported by IWGIA (2019: 530).

The Government of Botswana stated that the purpose of the relocation was for residents of Ranyane village to have access to potable water, schools, and health services provided in Bere settlement. The population size of Bere settlement is projected to reach 3,212 at the end of the project life in 2040 (see Table 5). The population of the settlement is projected using the proportional method to that of Ghanzi District’s population size.

Table 4: Population of Bere Settlement

<table>
<thead>
<tr>
<th>Bere</th>
<th>2001</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td>206</td>
<td>179</td>
</tr>
</tbody>
</table>

Source: Central Statistics Botswana 2011

Table 5: Projected Population of Bere Settlement

<table>
<thead>
<tr>
<th>Year</th>
<th>Ghanzi Districts Population</th>
<th>Bere Settlement</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>33170</td>
<td>385</td>
<td>1.7</td>
</tr>
<tr>
<td>2011</td>
<td>43095</td>
<td>779</td>
<td>1.8</td>
</tr>
<tr>
<td>2020</td>
<td>54919</td>
<td>1,043</td>
<td>1.9</td>
</tr>
<tr>
<td>2025</td>
<td>61961</td>
<td>1,177</td>
<td>1.9</td>
</tr>
<tr>
<td>2030</td>
<td>68,924</td>
<td>1,310</td>
<td>1.9</td>
</tr>
<tr>
<td>2040</td>
<td>88,984</td>
<td>3,212</td>
<td>1.9</td>
</tr>
</tbody>
</table>

Note: a Censual Year, b Statistics Botswana Projections, c Consultants Projections

The average household size for the settlement is about 3.6. There were 216 households (Statistics Botswana, 2011) in 2011.

4.3.4 Ethnicity and Language

The population of Bere settlement is made up mostly of Basarwa (San) who constitute about 80 percent of the residents, followed by Bakgalagadi who constitutes 13 percent and finally the Baherero who constitute 7 percent.

The main languages spoken in the community are Sesarwa (comprising Naro, Sekaukau, Qgoo Dxana and Deui) spoken by the Basarwa ethnic group, Sekgalagadi. spoken by the Bakgalagadi ethnic group and Seherero spoken by the Baherero ethnic group. Other languages spoken are English and Setswana.
4.3.5 Housing

It is evident from the site visit to Bere settlement show that the settlement is characterised by houses made from natural materials, the houses are built using dried trees stems from the local trees, cow dung and mud (Plates 8 and 9).

The Botswana Government has made attempts to improve the standard of housing of the residents by building them one roomed or two roomed houses (depending on the size of the family) using modern man made materials (Plate 9) under the Rural Area Development Programme and Government Housing Programme for destitute persons as described in Chapter 2. Each year the Government builds a minimum of 10 houses through the above mentioned Government safety nets.

4.3.6 Wards

Bere settlement has been divided into five wards (smaller geographic areas) for purposes of governance and community cohesion. These are namely Rasetsswana, Mokala, Khumbulakhaya, Naro, and Motlopi. The wards contain mixed ethnic groups but predominantly Basarwa. Khumbulakhaya ward is a relatively new ward where the relocated people from Ranyane village were resettled. The Motlopi ward contains Government and VDC houses as well as the primary school and the Kgotla building.

Each ward has a headman who presents them on the traditional administration or governance system of the settlement. The headmen just like the Kgosi gain the position by birth right. The headman also seeks for the development and peace of the wards.

4.3.7 Poverty

The income of the residents of Bere settlement is extremely low. Most do not have productive work that generates income. The average income of the households was estimated at P92.00 (US$9.2) per month, which is far below the Poverty Datum Line of Botswana of P1, 371.00 (US$137.10) per household level (World Bank, 2015).

Due to the poverty status of the settlement, the residents benefit from Government’s Safety Nets Programmes which are targeted for vulnerable groups such as: Old Age Pension Scheme, Destitute Person Programme and Remote Areas Development Programme as described in Chapter Two.
4.3.8 Employment and Livelihoods

According to Statistics Botswana (2015) unemployment in the settlement was 3.6 percent which is lower than that of Ghanzi District at 16.9 percent. Unemployment was highest amongst women at 4.4 percent (district was 20.0 percent) and for men it was 3.2 percent (14.9 percent in the District). What could account for this is that most residents in Bere settlement are enrolled in a Government initiative or programme, Ipelegeng, whose main objective is to provide short term employment support and relief whilst at the same time carrying out essential development projects that have been identified through development planning processes (such as maintaining public facilities like schools and health facilities, vegetation control, desilting dams and drains). It targets unskilled and semi-skilled labour for short term assistance. It is targeted mainly at being a source of supplementary income and employment, but not limited to vulnerable members of the community.

Most of the working population or able-bodied residents in Bere settlement are employed in Ipelegeng, because of the high prevalence of poverty in the settlement. Employment is for 20 days (six hours a day) and it is not on a permanent basis. All beneficiaries must apply monthly and are engaged on rotational basis with preference for those who were not previously engaged in the programme to spread access to benefits. Current wage rates are P500.00 (US$50.00) per month for casual Labourer’s (P534.00/US$54 per month for supervisors).

Members of the community still depend on gathering and hunting for subsistence livelihoods. A hunting ban was introduced in January 2014 by the Wildlife Conservation and National Parks. This ban prohibited hunting, capturing or removal of animals (Order 2016) to avoid the extinction of at-risk wildlife species and is currently in place which limits the ability of the Basarwa to practice their traditional hunter gatherer livelihoods.

To supplement livelihoods, the Government of Botswana has numerous poverty alleviation programmes such as the Integrated Support Programme for Arable Agriculture Development (ISPAAD). This programme provides vulnerable people a few domestic animals such as goats and chicken for rearing and subsistence keeping.

While Bere settlement has no surface water, it is endowed with ground water which provides a source for domestic water as well as for livestock watering.

The Government has also encouraged the formation of syndicates and groups to create employment, eradicate poverty and generate income. The syndicates and groups in the settlement include bakery, bricklaying, leatherworks, textile, beadwork and beekeeping. Some of these groups like bakeries supplies bread to the primary school, and the textiles supply the school children with school uniform. These are paid by the Government so as the children receive uniforms for free. Bead workers sell their products in in Ghanzi.

4.3.9 Education

Bere settlement has one primary school for children of ages between 6 to 12 years. Primary school participation rate is about 95 percent and completion rate are about 90 percent as some pupils drop out of school due to pregnancy or working on the fields/commercial farms with their parents.

According to Statistics Botswana (2015), the literacy rate in the settlement in 2011 was 66.8 percent for females and 65.1 percent for males. These figures are lower than the district average of 76.7 and 74.7 percent for females and males respectively, indicating a lower base of education in the settlement.
4.3.10 Health Services

Bere settlement has one health post. HIV/AIDS continues to pose a threat to the socio-economic development of the settlement. The mostly affected population ranges between 20 – 34 years of age, mostly women.

The predominant diseases in the settlement include diarrhoea (due to infections), scabies, and ringworms due to poor hygiene practices, and HIV/AIDS. The most affected population ranges from 20 – 34 years of age and are mostly women.

Traditional medicine as an alternative to modern medicine is also practiced in the village. There is only one traditional healer in the settlement.

![Plate 10: The Health Post in Bere](image)

4.3.11 Waste Management

Bere settlement does not have a waste dumpsite or a landfill. The system used in the settlement is that waste is collected on a periodic basis from households by use of a donkey cart and stored temporarily at a transfer station by Ghanzi District Council then collects the waste/refuse which is disposed at the Ghanzi landfill site. The waste is to be collected weekly, but it is not collected regularly.

![Plate 11 Waste Transfer Station](image)
4.3.12 Water and Sanitation
The water supply service in Bere settlement is through piped water supply from borehole that feeds into a reservoir tank located in the village.

All the wards have a public water standpipe with Motlopi ward having two of them, as it has a wide geographic spread. Khumbulakhaya ward which is a relatively new ward had no public water standpipe as at the time of visit in March 2018. The public water standpipe was also not working in Mokala ward and needed repairs as at the time of visit. The residents of this ward therefore had to travel to other wards to access water. This sometimes results in long queues which threaten to bring minor conflicts. The project will fix broken standpipes to improve accessibility and work to equalize access to standpipes in wards where technically possible.

According to Statistics Botswana, (2011), about 7.4 percent of the population had piped water outdoors and 52.8 percent drew water from communal water standpipes. The settlement has five communal water standpipes, but one was not working as at March 2018.

The water quality data as given by WUC shows that the water in Bere settlement has slightly high levels of sodium, but still fall within the acceptable quality standards for human consumption. The settlement although has no surface water, is endowed with ground water, which provides them with a source for domestic water as well as for livestock watering, water quality should comply with national acceptability standards (BOS 32:2015). The water quality will be routinely monitored to ensure so that it meets the national acceptable standards as required by Environmental, Health, and Safety (EHS) Guidelines General EHS Guidelines: Community Health and nd Safety, Water Quality and Availability\(^\text{11}\). The threshold for water quality for Botswana is shown in Annex 7.

Sanitation is not well organized as only a few households have sanitation facilities, limited only to pit latrines. According to Statistics Botswana, (2011), out of the 216 households only 12 have access to improved sanitation and the rest of the population practice open defecation. Communal places such as the Kgotla, the school and health post, however, have proper sanitation facilities.

4.3.13 Telecommunication
The only means for telecommunication in Bere settlement is through the Botswana Telecommunication Corporation (BTC) and Be Mobile cell phone network.

4.3.14 Power Supply
Bere settlement is not connected to the national electricity grid. Electricity is derived from solar. The power is used in primary school, VDC houses, and the health post. The Government throw Ghanzi District Council has installed solar panel streetlights. No households are connected to the electricity grid and they use batteries to power their electrical appliances.

4.3.15 Land Tenure and Use
The land in Bere settlement is tribal land under the jurisdiction of the Ghanzi Land Board. The land uses in the settlement are mainly residential, civic and community (school and a community centre, Kgotla), commercial (2 drinking bars, a general dealer store, and 10 places where local beer is brewed and sold), and grazing fields.

The community has a syndicate borehole on a communal grazing land about 5 km south of the settlement. They graze and water their livestock within this communal land.

4.3.16 Cultural Practices and Customs
Many customs have fallen into disuse with the impact of sedentarization and development policies. They still practice hunting at a small scale by applying for a permit to hunt (for example guinea fowls) and they still gather wild fruits and tubers for their consumption, and they sell surplus. They still practice their ancestral dance of ‘tsutsube’ (traditional dance moves/styles) and they still teach their children this dance.

Some practices have endured such as rituals related to reaching puberty among Basarwa girls. They still practice ‘botsetsi’ (rites of passage ceremony for girls at first menstruation), as well as rites of passage for boys who are maturing into manhood.

4.3.17 Tribal Administration
Bere settlement is led by a Kgosi (tribal chief) who has five assistants from each ward of the settlement. It has a Village Development Committee (VDC) with elected members. The committee comprises 7 members of which 5 are females. The VDC is responsible for initiating development projects for the settlement and seek funding for it. They also aid in implementing projects in the settlement. The Kgosi and the VDC members are paid sitting allowances from the Central Government through the Ghanzi District Council. However, the traditional form of governance among the Basarwa was organized around an egalitarian system of elders and clan members but this changed with the introduction of the Chieftainship Act of 1933 and its replacement, the Bogosi Act of 1987.

4.3.18 Traditional Ecological Knowledge on Nature
From anthropological documents and discussions held with Bere residents, it was found that particularly the elderly of the community has a profound knowledge of nature that has been acquired over time and passed down from previous generations. Elders know which plants are medicinal, palatable and toxic. They also can determine the lifecycle of insects and can tell which are edible and which are not. Some still practice traditional medicine that has been passed down from elders.

4.3.19 Religion
The predominant religion is Christianity at 87.2 percent, African tradition follows at 4.1 percent, and 8.7 percent stating they practice no religion.

4.3.20 Social Problems (including crime)
The social problems and crime faced by the community as were reported by the leaders, general public and the Botswana Police include alcohol and substance abuse, teenage pregnancy, rape, defilement, affray, and theft including livestock theft in Ghanzi District, Bere included.
CHAPTER FIVE: STAKEHOLDER CONSULTATIONS

5.1 INTRODUCTION

This chapter presents a summary of the consultations held with relevant stakeholders. As most community members were Basarwa (approximately 80 percent), the consultations were undertaken in line with free, prior and informed consultation as per OP 4.10. The concerns and suggestions made by stakeholders have been assessed in the impact assessment and mitigation measures included in the ESMP (see also consultation minutes in Annex 3). The ESIA and VCP has been consulted upon and disclosed to the community in a language and format that was accessible and culturally appropriate. It will be uploaded on the WUC and World Bank websites following Bank clearance. Hard and soft copies of will be available in the VDC and Kgosi offices. Community members will be able to phone the WUC and also request copies of both the ESIA and VCP.

5.2 OBJECTIVES OF STAKEHOLDER CONSULTATIONS

The purpose of the consultations was to:

1. Inform the beneficiary community, relevant stakeholders and indirect stakeholders and project affected people, including the Vulnerable Community of the proposed Bere Settlement Water Supply Sub-Project and to seek their views regarding any impacts and mitigation measures that may result from the proposed project;
2. To ascertain the effects (positive and negative) of the project implementation on the biophysical and social environment, for their perspectives;
3. To identify which of the effects are having a significant impact on the biophysical and social environment, therefore, needing attention in the ESMP; and
4. Seek mitigation measures appropriate to the local conditions, which ought to be considered in developing the ESMP.

5.3 METHODOLOGY FOR CONSULTATION AS PER FREE, PRIOR AND INFORMED CONSULTATION

The following methodology was employed:

Consultations: As part of the preparation of the ESIA/ESMP, letters with questionnaires appended (see Annex 4) were sent to Ghanzi District Council (Department of Physical Planning, Department of Roads, and Department of Environmental Health), Botswana Police Services, Department of Wildlife and National Parks, Department of Forestry and Range Resources, Department of Waste Management and Pollution Control (Gaborone office), Department of Occupational Health (Gaborone office). A summary of the responses received is presented in this chapter and responses are presented in Annex 4. The letters indicated what the project was to be implemented, the purpose of the meeting to be held and request for participation and consultation in the process were distributed to the identified stakeholders. These were attached with questionnaires seeking the views and concerns of relevant stakeholders and were hand delivered to the relevant officers in charge.

The responses obtained from the consultative meetings and Government regulatory departments provided relevant insight into pertinent issues which the ESMP preparation has addressed.

Public Meetings including consultations with the Vulnerable Community: As part of the consultations, Kgotla meetings were held in Bere settlement, focus group consultation, key informants such as the Kgosi, VDC Chairperson and S&CD office were consulted together with conducting a household survey. These were done also to achieve the requirement of OP 4.10. Prior to the public meetings, the communities were made aware of the consultation meeting via an advert placed in the
newspapers as a requirement of the EA, Act 2010 of Botswana (see example of advertisement in Annex 2), writing a formal letter to the Kgosi and VDC, and phone conversations to discuss setting up the consultation.

5.4 SUMMARY OF THE PUBLIC CONSULTATIONS (PUBLIC MEETING, FOCUSED GROUP DISCUSSIONS AND HOUSEHOLD SURVEY)

Three consultative public meetings have been held with the community members. The first public/Kgotla meeting was attended by 160 people and took place on March 6, 2018 (120 women, 40 men). A second meeting was held on April 5, 2018 to inform the general public of the intended social assessment to be conducted for the preparation of the VCP April 6-7, 2018. That meeting was attended by 100 people (30 males and 70 females). After the public meeting, a focus group discussion with the leaders of the settlement was undertaken. On June 4, 2019 a third public meeting was organised with the Vulnerable Community (and open to all members of the community as per community custom) and was observed by the World Bank. The purpose of the meeting was for verification of instruments and supplement data needed for the ESIA and VCP, including obtaining community concerns about the risks of the project, possible mitigation measures, and discuss project benefits. The meeting was attended by 108 people (30 males and 78 females). In all cases, the main aim of the discussion was to find out baseline data about the settlement, cultural or community acceptability of the project, acceptable procedures to be adopted in implementing the project such as for GRM and managing the influx of workers, as well as the problems affecting them in general and how they could benefit from the project.

The outcome of these meetings has been incorporated into the social assessment in Chapter 4. Overall, the project was welcomed by the community given their priority to secure sustainable water supply for their community.

The following issues were raised during the consultation meeting although some these concerns were discussed during the meeting and with immediate answers given at the meeting (see Annex 3):

- Unequal distribution of water standpipes within the wards are potential causes of conflicts amongst the community members.
- Accidents that may result from open trenches for the small stock as they move from one side of the settlement to the other.
- According to the VDC Chairperson, in the past they used to bury the dead in their kraals or in the bush, therefore, a thorough archaeological assessment of old graveyards should be conducted.
- The community indicated that they would want to be informed of the project at least once every two months. However, the project will ensure community engagement at least once a month given high social risks and since the project duration is only six months.
- There is likely to be a loss of veldt products along the pipeline route during the site preparation and the construction of the pipeline, the community did not want to compete with workers for access to veldt products in the settlement.
- Female youth are at risk of being exploited due to their high poverty and lack of job opportunities, therefore they it was felt there could be a likelihood for women/girls engage in relations with workers.
- There is a likely increase in STI and GBV within the settlement.
- There will be a likely increase in single family households as members of the community may engage with workers during the project works.
- There is potential of ‘Chance Finds’ during excavations as the community member used to bury the deceased in animal kraals.
• There is reluctance within the youth in vulnerable community to apply for youth programs with the Department of Youth, Empowerment Sports and Culture Development.
• Women should be hired in the project to the extent possible so they can obtain project benefits.
• There needs to compensations for local workers who are injured during works in the construction site.
• There is normally shortage of staff that operates boreholes and this also contributes to shortage of water in the settlement.
• There should be compensation for land acquisition for pipeline routes if it impacts households and/or the community.

5.5 SUMMARY OF INSTITUTIONAL AND NGOS CONSULTATIONS HELD

Letters of consultation were sent to Government institutions and the responses received were related to the mandate of the institutions consulted. The responses from these institutions are summarised in Annex 4.

5.5.1 Institutions and Stakeholders

All institutions were consulted by use of letters and they responded. The following are some of the institutions consulted:

• Department of Wildlife and National Parks
• Department of Forestry and Range Resources
• Department of Physical Planning (Ghanzi District Council)
• Department of Roads (Ghanzi District Council)
• Department of Environmental Health (Ghanzi District Council)
• Botswana Police (Ghanzi)
• Ministry of Youth, Empowerment Sports and Culture Development

The key issues/suggestions raised from the Vulnerable Community include the following:

• Concerns about dangerous wildlife within Bere settlement such as leopards, lions and wild dogs, cheetahs and hyenas. Advice given was to report to the nearest police station or Department of Wildlife and National Parks as quickly as possible.
• As a safety precaution, workers on site must avoid walking at night; the Camp must be secured with perimeter fence and gate.
• Veldt products that are of high importance to the community such as wild raisins must be spared during site clearing and not taken by outside project workers.
• All building permits must be acquired prior to the commencement of works.
• Access roads to the site must be compacted and dampened to avoid dust pollution.
• Where the pipeline crosses the road, concrete sleeves must be inserted for purposes of maintenance.
• Traffic control personnel/flag person must be employed when working on the road reserve.
• Safety and warning signs must also be put into place to alert motorists and pedestrians of ongoing works.
• The closest dumping site from Bere settlement is in Ghanzi 150 km from the settlement so the project must address waste management.
• The only legal and accepted method of waste disposal is landfilling.
• Type of waste accepted at the dumping site is domestic waste, household waste.
• Bere settlement has incidences of assault, rape, defilement and livestock theft, and petty theft. However, as a safety precaution a 24 hour security guard must be put in post to guard any valuable property.
• The project can assist in getting relevant personnel to train the vulnerable communities on skills development and financial management capacity training to enable VCs to properly budget and allocate funds received from constituency sports and choral competitions on their priority needs.
• Women should be hired in the project to the extent possible so they can obtain project benefits.
• Labor should be sourced locally as much as possible.
• The project can engage with Local Enterprise Authorities (LEA) to assist the vulnerable communities with writing business proposal to ensure that youth from the vulnerable communities stand a better chance in benefiting from Youth Development Funding.

A consultation matrix of the institutional consultations is presented in Annex 4.

5.5.2 Non-Governmental Organisations (NGOs)
The following Non-Governmental Organisations operating country wide were consulted with regards to the project and particularly with the Vulnerable Communities.

a. Gender Links: Deals with gender and development issues
• There is a link between poverty and Gender Based Violence (GBV). Women are often less economically empowered as compared to their male counterparts.
• This is because women tend to take home duties roles and often working jobs that are less demanding and less paying than males. Hence why the level of poverty among women is higher than that of men.
• The Country Manager indicated that during the commencement of works, when hiring workers women must be given an equal opportunity. VC community workers must be trained on gender issues, HIV/AIDS, Violence Against Children (VAC) and Sexual Harassment Exploitation and Abuse (SHEA)

b. Tebelopele Voluntary Counselling and Testing Centre Ghanzi (TVCT) [TVCT deals with HIV Prevention, Testing and Counselling]
• TVCT visited Bere settlement in January 2019.
• Basarwa are open to testing and are very receptive to information.
• The supervisor also encouraged the Contractor to ensure that during project works, workers and community members should be given the opportunity to access HIV/AIDS information, care and support programmes in the village.

• Kuru, also an NGO engaged them to teach residents of Bere settlement about permaculture gardens (backyard gardens) and how to care for them.
• Recipients of the back-yard gardens can sell excess produce for money.
• The coordinator also mentioned that with assistance and funding they would be eager to start working within the villages to establish backyard gardens to potentially alleviate poverty.

d. San Youth Network (SYNet): Promotes the Culture and Development of San/ Barsarwa Youth In and Around Botswana.
• The Director of San Youth Network indicated that he personally has worked with the San people in the project areas.
• GBV impacts women of different ethnicities. The Basarwa (San) women are victims of GBV as all women, mainly because they are considered lesser or minority and they are often afraid of reporting the matter to the authorities.
• Quite often, in cross-ethnic marriage, it is Basarwa women who suffer the most. He further stated that there is a need to disseminate information of gender equality and fair treatment of San women.
• The director mentioned that the San language (Sesarwa) in the Ghanzi area is very rich and many Basarwa still speak it.
• The project should employ San youth where possible.
• The San people do not have the resources to develop arable lands given by the Land Boards in the time frame given. Consequently, the land is repossessed depriving them of rights to the land.

\textbf{e. Gender Innovation and Development (GIDA): Advocates Against GBVs, VAC and SEA. Promotes Women/Girl Child Empowerment.}

• In rural areas gender-based violence is a major issue because women don’t have jobs and therefore not a source of income. They therefore are reliant on their male partners; this in turn makes men feel as though they own the women.
• GIDA supports that women must be given preference during employment of workers as there is a strong need to ensure women are employed in order to give them economic freedom.
• There is also a need to educate members of village on issues of gender-based violence as well as sexual exploitation and abuse of women.

\textbf{f. Ghanzi Craft: Teach Skills of Craft Making and Buys and Skills Craft Works}

• They work with the community of Bere assisting them with selling their craft
• The also educate the members of the beads group on jewellery making standards in order to sell their products at an international market.
• The project can engage them to be able to continue teaching the locals on jewellery making this would increase money that they earn thus assisting them have a better life.

\textbf{g. Botswana Khwedom Council (BKC): An Umbrella Organisation Representing San in Botswana for the Promotion of their Rights and Welfare}

• The name Basarwa was viewed as demeaning. BKC argued that the term should be Bakhwe (Mokhwe in the singular).\(^{12}\)
• It was agreed with BKC that project documents would be shared with the Khwedom Council during validation and they would be able to give feedback on the document.
• The BKC argued that the Vulnerable Community must remain a priority during all stages of the project the project.

Consideration has been made of the stakeholder suggestions and relevant ones have been incorporated into the impact assessment, mitigation and monitoring (Chapter Six).

\(^{12}\) The WUC consultants discussed the name with Vulnerable Community members in Bere and the community stated they prefer to be referred to as Basarwa. The project will therefore respect that decision by the community.
CHAPTER SIX: IDENTIFICATION AND ASSESSMENT OF ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACTS

6.1 INTRODUCTION

This chapter focuses on the identification and evaluation of potential environmental and socio-economic impacts of the sub-project. The impacts are identified for the construction, operational and maintenance phases of the sub-project as well as the decommissioning phases. Characterization of impacts as to whether they are positive, or negative, reversible or irreversible, short term or long term and the temporal and spatial boundaries of the impacts were made.

An assessment of the impacts was also undertaken to determine whether they are significant or insignificant to guide decision-making in the implementation of the project. A description of mitigation measures to ameliorate negative impacts and enhance positive ones was undertaken. Decommissioning in this chapter means removal of construction materials and machinery from site and restoration after construction.

6.2 METHODOLOGY OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

A qualitative approach has been used in this report to assess and manage environmental and social impacts. The assessment takes into consideration, the severity, duration, spatial scale and probability of the occurrence of the impact as shown in Table 6. These have been ranked on an ordinal scale to determine the positive or adverse impact levels. The point of the assessment is to determine the significance of the impact which has implications for decision making on the design of the chosen option of the project.

The significance of an impact is also dependent on judgments about what is important, probable, desirable or acceptable. It also interprets degrees of importance. The significance of an issue is determined by a threshold of concern, a priority of that concern, and a probability that a potential environmental and social impact may cross the threshold of concern. It has been described and its meaning and required intervention are presented in Table 7.

Table 6: Criterion for Ranking (Ordinal Scale) and Description of Impacts

<table>
<thead>
<tr>
<th>SEVERITY/MAGNITUDE</th>
<th>DURATION</th>
<th>SPATIAL SCALE</th>
<th>PROBABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very high/Don’t know</td>
<td>Permanent/beyond project closure</td>
<td>International</td>
<td>Definite/continuous/do not know</td>
</tr>
<tr>
<td>High</td>
<td>long term/life of a project</td>
<td>National</td>
<td>Highly probable/frequent</td>
</tr>
<tr>
<td>Moderate</td>
<td>Medium term (4-40 years)/reversible over time</td>
<td>Regional</td>
<td>Medium/possible</td>
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<tr>
<td>Low</td>
<td>Short term/reversible</td>
<td>Local</td>
<td>Low</td>
</tr>
<tr>
<td>Minor</td>
<td>Immediate/quickly reversible</td>
<td>Site only</td>
<td>Unlikely/seldom</td>
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<tr>
<td>None</td>
<td></td>
<td></td>
<td>None</td>
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</tbody>
</table>
Table 7: Significance Level of Impacts

<table>
<thead>
<tr>
<th>LEVEL OF ENVIRONMENTAL/SOCIAL SIGNIFICANCE</th>
<th>INTERPRETATION AND REQUIRED INTERVENTION</th>
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</thead>
<tbody>
<tr>
<td>High</td>
<td>Requires aggressive mitigation measures and strict monitoring or a change in design of project to avoid or reduce adverse significance impact</td>
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<tr>
<td>Moderate</td>
<td>Requires mitigation measures and monitoring to minimise adverse impacts</td>
</tr>
<tr>
<td>Low</td>
<td>Require minor mitigation measures for adverse impacts with or without monitoring or no monitoring</td>
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</tbody>
</table>

6.3 ASSESSMENT OF THE PREDICTED IMPACTS
Following consultation with VCs and other stakeholders, use of the environmental checklist, analogues (experience with similar projects), field survey, expert opinion and literature review, the impacts below have been identified as likely to occur during the implementation of the proposed project. Table 8 shows these broadly characterized by biophysical, socio-economic, socio cultural and decommissioning impacts.
### Table 8: Activities and their Identified Impacts

<table>
<thead>
<tr>
<th>PROJECT PHASE AND ACTIVITIES</th>
<th>POTENTIAL BIOPHYSICAL ENVIRONMENTAL IMPACTS</th>
<th>POTENTIAL SOCIO-ECONOMIC IMPACTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Positive</td>
<td>Negative</td>
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<td></td>
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<tr>
<td>Pre-Construction Phase:</td>
<td></td>
<td></td>
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<tr>
<td>• Recruitment of labour</td>
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<td></td>
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<tr>
<td>• Clearing shrub bushes and trees</td>
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<tr>
<td>• Stockpiling</td>
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<td>• Waste disposal</td>
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<tr>
<td>• Movement of machinery and haulage of waste material</td>
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<tr>
<td>• Establishment of Labourer’s Camp and Contractor’s Camp or site office</td>
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<td></td>
<td>Loss of vegetation</td>
<td>Soil (wind) erosion</td>
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<td>Noise pollution</td>
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<td></td>
<td></td>
<td>Decline in air quality</td>
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<td></td>
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<td>Impeded access to the project site, due to sandy terrains</td>
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<td>Land pollution</td>
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<td></td>
<td>Reduced air quality</td>
<td>Contamination of on-site soil due to leaks and spillages from fuels and other hydrocarbons</td>
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<td>Noise pollution</td>
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<td>Land pollution</td>
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<td>Impeded access to the project site, due to sandy soils</td>
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<tr>
<td></td>
<td></td>
<td>Trench collapse (Cave ins)</td>
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<td>Reduction of area for range/natural habitat for wildlife</td>
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<td></td>
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<td>Risk of igniting bush fires</td>
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<td>Construction</td>
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<tr>
<td>• Excavations</td>
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<td>• Borehole equipping</td>
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<td>• Trenching and pipe laying</td>
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<td>• Reservoir tank construction and equipping</td>
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<td>• Movement of vehicles</td>
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<td>• Pipeline flushing</td>
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<tr>
<td>Operation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Provision of portable water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Maintenance of infrastructure (borehole, laid under-ground pipes and the water tank)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improved Aesthetics at the Reservoir Site</td>
<td>Potential Water Draw Down Effects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High levels of Sodium in Ground water supply</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Noise</td>
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<tr>
<td>Decommissioning after construction:</td>
<td></td>
<td></td>
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<tr>
<td>• Site clearance and cleaning</td>
<td></td>
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</tr>
</tbody>
</table>

Note: The table above outlines the activities and their potential biophysical and socio-economic impacts during various phases of a project.
6.4 ASSESSMENT OF IMPACTS AND THEIR INTERVENTIONS/MITIGATIONS

An evaluation of the impacts and presentation of mitigation measures is undertaken below:

**Anticipated Environmental Impacts**

**Negative Impacts**

**Impact 1: Loss of Vegetation:**

**Phase of Project Implementation: Pre-Construction**

Setting up of the Contractor’s and Labourer’s Camp and creation of access roads will involve the clearing or removal of existing vegetation, even though the sites are not known at this stage and will be chosen by the Contractor.

Sites clearance will involve the removal of indigenous trees with significant value (edible fruits) to the community such as Mogotho (*Acacia erioloba*), Mosu (*Acacia tortilis*), Motlopi (*Boscia albitrunca*) and *Grewia flava* (raisin bush, moretiwa).

**Assessment of Impact**

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severity</td>
<td>Moderate</td>
</tr>
<tr>
<td>Duration</td>
<td>Immediate</td>
</tr>
<tr>
<td>Spatial scale</td>
<td>Site only</td>
</tr>
<tr>
<td>Probability</td>
<td>Definite</td>
</tr>
</tbody>
</table>

**Significance of Impact:** Moderate

The significance of this impact is of a moderate, negative and reversible nature but this is only reversible for plants indigenous to the site. The impact is also a direct one as it will occur during the clearing of the site. It is a non-cumulative impact.

**Impact Mitigation**

1. As much as possible clearing should be limited to the areas required for excavation activities.
2. The vegetation to be cleared should be temporarily stockpiled in a location that will not interfere with the intended project activities. Given the economic and social value of the trees/shrubs found at the project site, residents of Bere settlement should be allowed to harvest them once they are stockpiled. Vegetation that is potentially harmful to human health should not be included in the stockpile.

**Impact 2: Soil Erosion**

**Phase of Project Implementation: Pre-Construction and Construction**

It is anticipated that sites clearance activities will result in localized disturbance to the topsoil (being 1-4 m of soil in the study area) and may either trigger the start of erosion activities or increase the rate of already existing erosional actions on the exposed areas especially during windy seasons (end of winter i.e. August - September) due to their loose and porous materials which are highly susceptible to wind erosion. The discharge of flush effluent could potentially lead to erosion.

**Assessment of Impact**

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severity</td>
<td>Moderate</td>
</tr>
<tr>
<td>Duration</td>
<td>Immediate</td>
</tr>
<tr>
<td>Spatial scale</td>
<td>Site only</td>
</tr>
<tr>
<td>Probability</td>
<td>Definite</td>
</tr>
</tbody>
</table>
Significance of Impact: Moderate
The significance of this impact is of a moderate, negative and reversible nature. This is in view of the characteristic of the project area which are receiving relatively low rains and having light but gusty and fairly strong winds towards the end of the winter season.

Impact Mitigation
1. Excavation and clearing activities should be limited to the proposed sites.
2. All stockpiled topsoil awaiting reuse should be stockpiled in north, north-east and south-west direction out of the windward direction. This is to minimise the blowing away of dust which could affect people.

Flush water should only be discharged in environments that are not susceptible to erosion. Discharge water should be spread out to minimise erosion.

Impact Mitigation
1. Excavation and clearing activities should be limited to the proposed sites.
2. All stockpiled topsoil awaiting reuse should be stockpiled in north, north-east and south-west direction out of the windward direction. This is to minimise the blowing away of dust which could affect people.

Impact Mitigation
1. Excavation and clearing activities should be limited to the proposed sites.
2. All stockpiled topsoil awaiting reuse should be stockpiled in north, north-east and south-west direction out of the windward direction. This is to minimise the blowing away of dust which could affect people.

Impact 3: Noise Pollution

Phase of Project Implementation: Pre-Construction, Construction, Operation and Decommissioning

• Construction activities are likely to generate noise which may be above the ambient noise limits for the area. Movement and use of heavy machinery, earth moving equipment, cranes, movement of trucks and vehicles to and from the site are sources of anticipated noise generation.

• The major source of noise will most likely be diesel powered equipment from undertaken civil works most of which will be operation specific and/or localised. These will include activities related to excavation, hammering, sawing, grinding, and moving of material to and from storage and the use of generators. The typical noise levels to be generated and their distances from the source are shown in Table 9 below. Long periods of enduring noise levels beyond the threshold may be damaging to the ear.

• During operation, the pump station to be constructed may generate noise typically of about 85dB at source (empirical noise level of a pump station). This noise may, however, not affect any receiving environment as the closest human habitation is about 3.3 km downwind. And the vegetation will act as a buffer for noise This impact is therefore not significant during the operation stage and requires no mitigation.

### Table 9: Noise Levels Generated by Construction Machinery Under Normal Wind Conditions dB (A)

<table>
<thead>
<tr>
<th>Type of Plant</th>
<th>The distance between Plant and Observer</th>
<th>Typical Standard</th>
<th>International</th>
<th>NEPA Limit(dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5 m</td>
<td>20 m</td>
<td>50 m</td>
<td>Day (dBA)</td>
</tr>
<tr>
<td>Loader</td>
<td>90</td>
<td>78</td>
<td>70</td>
<td>75</td>
</tr>
<tr>
<td>Bulldozer (excavator)</td>
<td>86</td>
<td>74</td>
<td>66</td>
<td>75</td>
</tr>
<tr>
<td>Pneumatic Hammer</td>
<td>86</td>
<td>84</td>
<td>78</td>
<td>75</td>
</tr>
<tr>
<td>Concrete Mixer</td>
<td>91</td>
<td>79</td>
<td>71</td>
<td>75</td>
</tr>
<tr>
<td>Concrete Pump</td>
<td>85</td>
<td>70</td>
<td>62</td>
<td>75</td>
</tr>
</tbody>
</table>

**Source:** Federal High Way Authority, 2006

Assessment of Impact

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severity</td>
<td>High</td>
</tr>
<tr>
<td>Duration</td>
<td>Immediate</td>
</tr>
<tr>
<td>Spatial scale</td>
<td>Local</td>
</tr>
<tr>
<td>Probability</td>
<td>Definite</td>
</tr>
</tbody>
</table>

Significance of Impact: High
The level and nature of construction noise from the proposed project sites will be highly variable as different activities with different plant equipment will take place at different times, over different periods of time, in different combinations, in different sequences and at different parts of the construction sites. Noise resulting from the construction project activities might affect neighbouring land uses abutting the project site especially the Bere Primary School where the maximum threshold of 35 dB has been set as a standard by BOS.

One of the risks of the noise would be to the surrounding areas where they may create a nuisance or disturbance. Whereas at the site the loud noises pose a risk to the workers and site personnel since loud noises increase the risk of ear damage and deafness (Westlands Skye Development Ltd, 2015). Albeit annoying, this negative impact will be a short-term/ temporary nuisance (limited to the duration of construction works) and is not considered to be a significant threat to the health or wellbeing of humans. Construction will mainly take place during the day and no construction activity is anticipated at night (08h00 – 17h00).

**Impact Mitigation/Intervention Measures**
- All construction machinery should be in good working condition before work commences, as well as fitted with the necessary silencers (if required).
- All machines and engines should be switched off when not in use.
- Workers should be provided with noise protection gear. The Contractor should ensure that all machinery and equipment are well maintained in order to reduce the magnitude of noise generated during operations. Workers operating equipment generating noise levels greater than 70 dBA continuously for 8 hours or more should use earmuffs. Workers experiencing prolonged noise levels of 70 – 80 dBA should wear earplugs.
- Stationary equipment should be carefully positioned such that they are oriented away from sensitive receptors and/or shielded from receptors by other non-noisy equipment.

**Impact 4: Decline in Air Quality**

**Phase of Project Implementation: Pre-Construction, Construction, and Decommissioning**

The construction activities are likely to result in decline of air quality through the generation of dust and the movement of construction vehicles.

During construction, dust becomes airborne when the soil is exposed or left uncovered. The wind then picks up the exposed soil and carries it off-site. Most dust particles are too big to be inhaled but can cause eye, nose and throat irritation.

Not only will dust be generated from the construction, the operation of on-road vehicles associated with the construction sites and on-sites machinery (off-road emissions) including both static and non-road mobile machinery will also result in the emission of carbon monoxide (CO). It is also anticipated that vehicles, machinery and equipment which depend on the use of diesel will emit oxides of Carbon, Sulphur and Nitrogen, and these also pose risks to human and environmental health on top some of them being greenhouse gases (GHGs) such as carbon dioxide (CO₂).

Welding operations will also emit gases and fumes such as ozone, chromium particularly in its hexavalent state (Cr₆⁺), nickel (potential carcinogens), cadmium and lead, whilst others include: nitrogen oxides (NOx), nitrogen dioxide (NO₂), carbon monoxide (CO), carbon dioxide (CO₂), ozone (O₃) from mild and stainless steel welding.

The health effects of exposure to these fumes can include irritation of the upper respiratory tract (nose and throat), tightness in the chest, wheezing, metal fume fever, lung damage, bronchitis,
pneumonia or emphysema. While particulate welding fume is usually fairly easy to see, gaseous fumes are invisible (Westland’s Skye Development Ltd, 2015).

Assessment of Impact

<table>
<thead>
<tr>
<th>Criterion</th>
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<tbody>
<tr>
<td>Severity</td>
<td>Low</td>
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<tr>
<td>Duration</td>
<td>Immediate</td>
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<td>Spatial scale</td>
<td>Local</td>
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<tr>
<td>Probability</td>
<td>Definite</td>
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</tbody>
</table>

**Significance of Impact:** Moderate

The significance of this impact is moderate and negative but of a temporal nature. The impact is of a direct nature as it will occur during the excavation and stockpiling of soil. The impact would not re-occur with cessation or stoppage of work. It is a non-cumulative impact as the impact is neither already occurring on the site nor the project area.

**Mitigation Measures**

1. Adequate dust suppressant measures by using dustex should be used rather than using a regular sprinkling of water. Water is a scarce resource in the project area and the sandy nature, and the high evaporation rate does not make the use of water for dust suppression sustainable.
2. Stockpiling of earth materials for construction should be covered or dustex should be used to bond the soil particles to limit fugitive dust.
3. All construction vehicles plying the access road should be tuned and maintained regularly to ensure that emission levels are kept within permissible limits.
4. Movement of trucks and construction vehicles should be controlled in order to reduce the impact of increased air pollution in neighbouring land users.
5. All construction machinery should be in good working condition and engines switched off when not in use.
6. Workers should be provided with adequate protective clothing including nose masks during construction activities to prevent them from contracting respiratory and other dust related diseases.
7. Hauling trucks should be covered as per directive from the Department of Waste Management and Pollution Control to prevent dust pollution along the access roads during the transportation of the earth materials.
8. Speed limits of 40 km/hr should be adhered to by construction/haul vehicles especially along the access roads to the sites and the roads in order to reduce dust pollution.
9. All stockpiled spoils should not be kept for long periods; (more than 3 days) otherwise they should be covered with tarpaulin to prevent it from being blown away.
Impact 5: Impeded Access to the Project Site due to Sandy Soils.

Phase of Project Implementation: Pre-Construction, Construction, Decommissioning and Operation.

The settlement of Bere as a whole is sandy, making it near impossible to move around certain parts of the area especially along the road to the borehole location and the reservoir tanks as cars tend to get stuck in the sand.

Assessment of Impact

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<tr>
<th>Criterion</th>
<th>Scale</th>
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<tbody>
<tr>
<td>Severity</td>
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<tr>
<td>Probability</td>
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</tr>
</tbody>
</table>

Significance of Impact: **High**
The significance of the impact is high, negative and reversible nature.

Impact Mitigation

- Use of all wheel drive vehicles within Bere settlement.

Impact 6: Land and Water Pollution

Phase of Project Implementation: Pre-Construction, Construction, Operation and Decommissioning

It is anticipated that waste in the form of litter, cleared vegetation, excess spoil and contents from portable toilets supplied will be generated during the different development phases of the project.

Water lines require to be flushed prior to the scheme’s commissioning and at regular intervals during operation to remove accumulated sediments or other impurities that have accumulated in the pipes. The major environmental aspect of water pipe flushing is the discharge of flushed water, which may be high in suspended solids, residual chlorine, and other contaminants that can harm surface water bodies.

Assessment of Impact

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<thead>
<tr>
<th>Criterion</th>
<th>Scale</th>
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<tbody>
<tr>
<td>Severity</td>
<td>Low</td>
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<tr>
<td>Duration</td>
<td>Immediate</td>
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<tr>
<td>Spatial scale</td>
<td>Site only</td>
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<tr>
<td>Probability</td>
<td>Definite</td>
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</tbody>
</table>

Significance of Impact: **Low**
The significance of this impact is negative and low but of a temporal and reversible nature. Livestock and wild animals in the project area are likely to be exposed to tape worms from human faeces if the toilets are not provided or utilized at the site.

Impact Mitigation

**Solid waste**

- A well-constructed temporary waste holding facility comprising of a roof, gate and side protection using nets should be provided within the confines of the construction site to store all solid wastes such as cement bags and plastic wrappings that would be generated during construction. The waste collection area should be clearly marked.
- Adequate facilities for the storage of building materials and chemicals should be created. Access to these facilities should be controlled.
• A bunded facility for the storage of contaminated soil should be constructed on site. It should be a minimum size of 5 m x 5 m. The bunded area floor should be paved and the facility roofed.
• Contaminated soil should be collected, treated and disposed of by a licensed and registered company or trained person that deals with hazardous waste collection and disposal.
• Colour coded bins for waste segregation should be strategically placed around the construction site.
• Excess spoil generated should be stockpiled for use in rehabilitation/reclamation of the project site.
• Appropriate materials to be used for the construction of the office facility should be ordered to minimise waste generation.
• Skips and bins should be emptied regularly, at least weekly at a designated dumping site.
• Waste receptacles especially those that would be used for waste food at the Contractor’s and Labourer’s Camp should be covered to prevent access by vermin and minimise odour.
• The Contractor should sort the waste according to its type, to enable Reuse and Recycle of the waste before final disposal.
• If the Contractor provides a vehicle for waste collection it must be duly registered or engage a registered waste collection company for waste collection.
• Adequate numbers of portable toilets should be made available to cater for workers while on site. These need to be secured down to prevent them from being blown over and provided at a ratio of 1 toilet per 25 workers as per the Factories Act, 1979. The toilets need to be provided within walking distance from each active site to encourage their use. Toilet paper shall be provided by the Contractor.
• The servicing of the portable toilets should be undertaken by a licensed waste management company at least once a week.
• For the Labourers’ Camp and offices, water borne toilet should be provided by using a conservancy tank. The tank should be vacuumed regularly and disposed of at the Wastewater Treatment Works (WWTW) at Ghanzi Town.

Impact 7: Contamination of On-Site Soil and water Due to Leaks and Spillages from Fuels and Other Hydrocarbons and flushing of pipelines.

Phase of Project Implementation: Pre-Construction, Construction, Operation and Decommissioning
One of the anticipated impacts associated with construction is the environmental risk to the soil. This is usually through leaks or spills of chemical or petroleum hydrocarbons from storage areas within the construction camp site and around the site, from mechanical servicing areas and inappropriate containment or disposal of wastewater from mechanical servicing and wash down areas. Inappropriate discharge of effluent from flushing could impact negatively on the soil and water (surface and groundwater) within the vicinity of the project area.

Assessment of Impact

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<tr>
<th>Criterion</th>
<th>Scale</th>
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</thead>
<tbody>
<tr>
<td>Severity</td>
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</tr>
<tr>
<td>Duration</td>
<td>Medium-term</td>
</tr>
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<td>Spatial scale</td>
<td>Local</td>
</tr>
<tr>
<td>Probability</td>
<td>Definite</td>
</tr>
</tbody>
</table>

Significance of Impact: Moderate
The significance of this impact is of a moderate, negative and reversible nature. If the contaminated soil is not managed and treated well, this impact can be persistent in the environment and weather agents can carry it long distances from the site.

**Impact Mitigation/Intervention**
- Environmental mats with adequate absorbing capacities and large enough to cover the environmental footprint of the fuelling and workshop area where vehicle and machinery repairs will be undertaken should be provided.
- Portable spill containment and clean up equipment should be provided at the construction site.
- In the event of an accidental spill, the Contractor should expedite the clean-up of the area to prevent the spread of the pollutant.
- Bulk storage of fuel and oil should be in clearly marked containers indicating the type and mainly being stored. The container should be placed within a bonded enclosure with an impervious surface or environmental mat.
- All contaminated soil should be stored temporarily in used drums. The services of a competent waste management company should be sought to collect, treat and dispose of the contaminated soil.
- All fuel and lubricants should be kept in clearly marked containers with lids and stored within a bonded area which should either be paved or laid with tarpaulin.
- There is no municipal sewerage system with adequate capacity nor stormwater system within the study area. As such, flush water should be discharged into the environment, avoiding sensitive areas (ecological, social, susceptible to erosion) and spreading the flow to avoid erosion.

**Impact 8: Potential Trench Collapse (Cave ins)**

**Phase of Project Implementation: Construction,**

Trench collapse or cave-ins is one of the most injurious and fatal activities in construction and associated with excavations or trenching. The project is to trench for about 3.7 km long at a depth of between 3-6m depending on the sandy topsoil. Health and Safety Executive guidelines indicates that any trench with depths of 1.22 m or deeper is risky and needs all attention to protect workers and the walls of the trench depending on the soil type being worked and the surrounding conditions such as weather and vehicle movement. The sandy soils are most prone to trench collapse and therefore present a challenge in the study area to keep the soils or wall of the trenches stable and keeping the workers safe during excavations and pipe laying.

**Assessment of Impact**

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Scale</th>
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</thead>
<tbody>
<tr>
<td>Severity</td>
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</tr>
<tr>
<td>Duration</td>
<td>Medium-term</td>
</tr>
<tr>
<td>Spatial scale</td>
<td>Site 1</td>
</tr>
<tr>
<td>Probability</td>
<td>Probable</td>
</tr>
</tbody>
</table>

**Significance of Impact:** Moderate

The significance of this impact is of a moderate, negative and non-reversible nature.

**Impact Mitigation/Intervention**
- Employ a competent person to inspect trenching daily.
- Train workers on working in trenches and keeping safe and detecting collapse of trenches.
- Keep heavy equipment away from trench edges.
- Identify locations of underground utilities.
• Provide safe access and ingress to all excavations. This should be ladders, and steps ramps. The devices should be provided at intervals of 8 m.
• Stockpiles of excavated materials should be put at minimal a safe distance of 1 m from the edge of the trench.
• Protect workers and trenches by use of shoring or shielding.

Impact 9: Reduction of Area of Range/Natural Habitat for Wildlife
Phase of Project Implementation: Construction
Vegetation will be lost during site clearing due to cutting down of the trees to make way for the proposed water pipeline. There is possibility/ chance that some of the trees that will be cut would have bird nests, and this will result in loss of habitat for birds. Again, some of the palatable grass and shrubs which are a source of food to some wild animals will be lost due to site clearing. Also during trenching for the water pipeline, there is the possibility of disturbing and loss of habitat of wild animals that are burrowers. The roaming range of wildlife species (e.g. antelope, leopards, dogs and hyenas) and their watering holes are not significantly affected by the project.

Assessment of Impact

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severity</td>
<td>Low</td>
</tr>
<tr>
<td>Duration</td>
<td>Short term</td>
</tr>
<tr>
<td>Spatial Scale</td>
<td>Site Only</td>
</tr>
<tr>
<td>Probability</td>
<td>Low</td>
</tr>
</tbody>
</table>

Significance of Impact: Low
The impact is regarded to be of low environmental significance. The impact is of negative, short term, non-recurring, cumulative, direct and non-reversible nature.

Impact Mitigation
• Site clearance should only be limited to the water pipeline route.
• Any disturbed area outside the proposed water pipeline route should be rehabilitated.

Impact 10: Risk of igniting bush fires
Phase of Project Implementation: Construction
There is possibility that some of the workers might be tempted to ignite/burn waste such as vegetation and plastics along the water pipeline route, and somehow fail to put off the fire completely, this act is likely to cause bush fires. Also, those workers who smoke cigarettes should ensure that they do not through cigarette butts onto dry grass as this might result in ignition of bush fires. Therefore, the before mentioned acts that are likely to result in bush fires are prohibited on site.

Assessment of Impact

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severity</td>
<td>High</td>
</tr>
<tr>
<td>Duration</td>
<td>Short term</td>
</tr>
<tr>
<td>Spatial Scale</td>
<td>Local)</td>
</tr>
<tr>
<td>Probability</td>
<td>2 (Low)</td>
</tr>
</tbody>
</table>

Significance of Impact: Low
The impact is regarded to be of low environmental significance. The impact is of negative, short term, non-recurring, non-cumulative, direct and irreversible nature.
Impact Mitigation

- Burning of waste should be prohibited. No fire should be ignited at any point at the project site.
- No smoking of cigarettes should be allowed at the project sites. A designated and controlled area should be demarcated for smoking.
- Workers should be trained on Fire prevention and fighting.
- There should be a fire extinguisher at all working places.

Impact 11: Potential Water Draw Down Effects

Phase of Project Implementation: Operation

The abstraction of groundwater causes rapid drop of water level in the immediate vicinity of the well (the water table drops causing shallower wells to dry and also directly threatens groundwater ecosystems especially the groundwater fauna (stygofauna), which are important for maintaining water quality and water flow in aquifers and also assist in processing organic matter. There is a potential that when the project’s new well is over abstracted beyond the recommended abstraction level, it may affect surrounding water bodies and vegetation.

Assessment of Impact

<table>
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<td>Probability</td>
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Significance of Impact: Low

The impact is regarded to be of low environmental significance, as there are no water bodies within at least 1 km from the borehole. The vegetation in the borehole are are not unique as compared to those at other areas near the Bere settlement. The vegetation is predominantly shrubs with shallow roots. Also the aquifer around Bere settlement has been extensively studied by the Department of Water Affairs in 2008 (Matsheung Groundwater Development Project – TB 10/3/93/2001 – 2002) and was found to have sustainable resources.

Impact Mitigation

1. Monitor abstraction of levels and volume of water in borehole and water bodies that are closest to the supply borehole.

Impact 12: High levels of sodium in groundwater

Phase of Project Implementation: Operation

The water quality of the project beneficiary area indicates a high sodium quality above the threshold stipulated by the Botswana Bureau of Standards (see Annex 7) and World Health Organisation (WHO) of 200 mg/L. WHO (2003) indicates that in general, sodium salts are not acutely toxic because of the efficiency with which mature kidneys excrete sodium. However, acute effects may include nausea, vomiting, convulsions, muscular twitching and rigidity, and cerebral and pulmonary oedema and deaths have been reported. High sodium levels also affect taste of drinking water, the taste threshold concentration of sodium in water depends on the associated anion and the temperature of the solution. At room temperature, the average taste threshold for sodium is about 200 mg/l.

According to WHO on the basis of existing data, no firm conclusions can be drawn concerning the possible association between sodium in drinking-water and the occurrence of hypertension. No
health-based guideline value is therefore proposed\textsuperscript{13,14} as, as the contribution from drinking-water to daily intake is small.

Assessment of Impact

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<td>Probability</td>
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Significance of Impact: Moderate

The impact is regarded to be of moderate negative environmental significance. This current project unfortunately does not provide mitigations to bring down the elevated sodium level.

Impact Mitigation

1. Routine monitoring of the sodium and other water quality parameters as per BOS 32:2015 should be undertaken and the community should be informed of the quality of water and any elevated parameters.
2. In the longer term, WUC should initiate a project to reduce the sodium levels to acceptable levels possibly through Reverse Osmosis.

Positive Impact

Impact 13: Improved Aesthetics at the reservoir (tank) site

Phase of Project Implementation: Construction

Following the completion of the erection of the reservoir tank and the removal of the broken tank and repair of the fence around the perimeter of the plot, the aesthetics of the area will drastically improve.

Enhancement:

The colour of the perimeter fence should blend in with the environment to avoid any visual intrusion. The colours of WUC, blue and white is recommended.

Anticipated Social Impacts

Positive Impact

Impact 14: Creation of Employment

Phase of Project Implementation: Pre-construction, Construction, and Decommissioning

The activities involved in the implementation of the project are anticipated to create employment for both skilled and unskilled people. It will be created either directly or indirectly. Directly it may create employment for about 50 people and indirectly it will create many opportunities for people in the area to take advantage of for creating employment. The establishment and dismantling of the

\textsuperscript{13} Sodium in Drinking-water; Background document for development of WHO Guidelines for Drinking-water Quality
https://www.who.int/water_sanitation_health/dwq/chemicals/sodium.pdf

\textsuperscript{14} Guidelines for Drinking-water Quality
FOURTH EDITION, World Health Organisation;
https://apps.who.int/iris/bitstream/handle/10665/44584/9789241548151_eng.pdf;sequence=1
Labourer’s Camp and Contractor’s Camp will create employment; the operation and maintenance of the pump station will also create employment. Direct opportunities will be created for skilled and unskilled workers involved in the civil, mechanical and electrical works including engineers, masons, foremen, bricklayers, machine operators, electricians etc.

**Enhancement of Impact**
- As much as possible residents of Bere settlement should be considered when recruiting labour especially for the semi-skilled and unskilled labour. Assistance should be sort from the District Labour Office, the S&C Officer and the VDC.

**Impact 15: Creation of Market for Local Businesses (Hawkers and tabletop sellers)**

**Phase of Project Implementation: Pre-construction, Construction, and Decommissioning**

The implementation of the project is anticipated to create a market for local business such as street hawkers, general dealers, tuck-shops and table-top sellers. As the execution of the project will result in the locals having more purchasing power, as well as other staff that will be outsourced from outside (influx of workers will provide a potential market.

**Enhancement of Impact**
- Provision should be made for table-top small-scale food vendors to sell their food.

**Impact 16: Identification of Vulnerable People (VP) for assistance through the Project**

**Phase of Project Implementation: Construction and Operation**

The proposed project has led to the identification of vulnerable people to be assisted by the project to uplift their social and economic development.

**Enhancement of Impact**
- The project should consider the needs of the VCs and empower them by employing those that able to do some work in the project.
- The project to ensure there is even distribution of standpipes so minimize exclusion and disadvantage, reduce the chance of social conflict, and improve water accessibility

**Impact 17: Increase (Augmentation) of Water Supply to Bere settlement**

**Phase of Project Implementation: Operation**

The implementation of the project is anticipated to increase the supply of water to residents. This will adequately be met the increasing demand of water due to increasing population. This will reduce the scramble for water at the wards and may also improve upon the hygiene of the residents in the settlement.

**Enhancement of Impact**
- The system should be maintained periodically to sustain the supply of water in terms of water pressure and quality. It is recommended that the high sodium content should be reduced to accepted threshold.
- The project to ensure there is even distribution of standpipes so minimize exclusion and disadvantage, reduce the chance of social conflict, and improve water accessibility

**Negative Impacts**

**Impact 18: Potential Increase in New Infections of Diseases (Community Health)**

**Phase of Project Implementation: Pre-construction, Construction, and Decommissioning**

The presence of construction workers in the project area may result in the development of sexual relationships amongst themselves or with the community which may result in the transmission of STDs.
including HIV/AIDS and other communicable diseases. Considering the ongoing HIV/AIDS pandemic in the country, there is a potential for workers to contribute negatively to the population of the project area. School girls and young unemployed women are especially vulnerable, as they can easily be tempted with prospects of financial benefits from relationships.

**Assessment of Impact**

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**Significance of Impact: High**

This is of moderate significance and could be life threatening and may be either reversible or irreversible depending on the type of diseases. The impact is of an indirect nature as the workers employed may be exposed to communicable diseases or have pre-existing conditions (such as flu and STIs), Some are transmitted through bites from insects while others are caused by ingesting contaminated food or water.

**Impact Mitigation**

- The Contractor will conduct an awareness talk periodically (monthly) on communicable diseases, their prevention and treatment.
- Workers should be encouraged to keep good personal hygiene.
- Harness all the existing HIV/AIDS programs and integrate them into the HIV/AIDS programme for the construction of the project. It will be important for the Contractor to liaise with the local AIDs co-coordinating office to set up an effective HIV-AIDS programme.
- Sensitize workers on HIV/AIDS and afford them time to attend health talk sessions.
- Consult Ghanzi Primary Hospital to ensure alignment of health and safety programs with national HIV/AIDS Policy and District HIV/AIDS programs.
- Condom dispensers filled with condoms daily should be placed at the Contractor’s office block, toilets’ and change rooms.
- Give women equal opportunity when hiring labour or come up with a reasonable ratio between male and female employees as this could help address the problem of younger women getting into relationships for financial support.
- Ensure the community is aware of the GRM.

**Impact 19: Increased Pressure on Existing Social and Health Facilities.**

Phase of Project Implementation: Pre-construction, Construction, and Decommissioning

The influx of workers from outside the settlement is estimated to be around 30 people will undoubtedly exert increase in pressure on the existing social and health infrastructure like health post, transfer station, roads, veldt products, and water. This could lead to social conflict as it is already experienced in the settlement.

**Assessment of Impact**

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<td>Probability</td>
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</table>
Significance of Impact: **Moderate**
The significance of this impact is of a moderate, negative and irreversible nature. It is also of a direct nature as it the workforce and staff will need these social services to survive. There is however enough capacity to absorb the demands of the workers and staff, with a little support from the Contractor to attain high order services in Ghanzi Town.

**Impact Mitigation**
1. The Contractor should assist the Ghanzi District Council in the collection and final disposal of waste from the village
2. The Contractor should support the health post with emergency evacuation vehicle when needed.
3. The Contractor should also assist the health post with some medical supplies that are unavailable or inadequate at the health post.
4. The workers and staff are to be educated to share the natural resource or services wisely and with due respect to the residents of the settlement bearing in mind the sustainability of the services or resources.
5. The workers should be educated on a monthly basis the norms and cultural values of the people of Bere for conformity.
6. The workers outside shall be prohibited from collecting veldt products in the settlement area but they may purchase products (including their by-products) from the local community.

**Impact 20: Potential attack of workers by wildlife**

*Phase of Project Implementation: Pre-construction, Construction, Decommissioning and Operation and Maintenance.*
The project area is close to the Central Kalahari Game Reserve therefore wild animals sometimes roam the area and are spotted by residents. The Department of Wildlife and National Parks has confirmed the presence of wildlife in the project area. It is therefore likely that there could be an encounter with wildlife during the various stages of construction and even during operation. This could result in fatality if not properly handled.

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**Significance of Impact: **Moderate**
The significance of this impact is moderate, negative and irreversible given that when it occurs. Depending on the nature of attack it could lead to maiming or even fatality.

**Impact Mitigation**
- Prior to commencement of civil works all the staff and workers of the project should be educated on the behaviour of wild animals and the reaction required of them to remain safe.
- Workers and staff should work in gangs or groups particularly at the borehole site.

Workers should be discouraged to walk at night let alone at the outskirts of the village.

**Impact 21: Potential Occupational, Health, and Safety Risk to Workers.**

*Phase of Project Implementation: Pre-construction, Construction, and Decommissioning*
From the physical perspective, the following activities have implications for health and safety of workers and residents:

- Dust pollution (particulates) may be toxic or may carry toxic and carcinogenic organic and inorganic substances. May also penetrate deep into the respiratory system irritating lung tissue. Episodes of high atmospheric concentration often correlate with deaths from respiratory illness.
- Construction Noise
- Road crashes.

### Assessment of Impact

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**Significance of impact**: Moderate

Though this a negative impact normally associated with construction, it is of moderate significance. The impact is of a direct nature as the workers employed may get injured through the activities of construction. The impact may reoccur if the workers are not well trained and conditions of the working environment are not conducive and if the right tools and equipment are not used. It is not a cumulative impact.

**Impact mitigation**

1. To reduce the risk of occupational hazards, workers should be provided with the appropriate protective equipment which should protect them from the risk of sustaining injuries, coughing, and damage to ears.
2. At least one first aid box stocked to the specifications as prescribed in the Factories Act (First-Aid Equipment) Regulations, 1979 should be readily available on site.
3. To reduce dust in loading/ unloading areas, consideration should be given to lowering drop height and use of water mist spray.
4. During transportation of material, speed limits of 40 km/h should be adhered to

### Impact 22: Potential accidents and injuries

**Phase of Project Implementation: Pre-construction, Construction, and Decommissioning**

There is a potential risk of accidents involving members of the public who may gain unauthorized access or inadvertently venture on to the site during construction.

Open trenches may pose a threat to the animals (domestic and wild) as they move from one place to the other. The trenches also pose a threat to the community members especially the school kid as the pipes that will be laid along the road reserve pass in front of Bere Primary School. The project will also require installation of elevated water tank; this is likely to cause potential accidents and injuries to workers, as they would be working at heights.

### Assessment of Impact

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Significance of Impact: **Moderate**
The significance of this impact is moderate, negative and reversible nature given that the perimeter of the site will be boarded using iron sheets prior to the commencement of construction works and this will minimise the risk of any unauthorized access.

**Impact Mitigation**
- Men at work signs should be placed close to working areas especially when they are near roads or working on roads.
- All open trenches should be adequately barricaded using danger tapes strung around profiles.
- No authorized entry signs should be placed at the entrance to the site which should always be staffed with a.
- All possible entry points into the site should be closed immediately.
- The local community should be informed in advance of project commencement including safety measures that would be upheld throughout the construction period.
- A community liaison officer should be engaged to handle and record for reference purposes any complaints that might be raised by members of the community.
- Ensure the scaffolding at the 15m high tank is inspected by competent person before use.
- Appropriate PPE such as harnesses, safety nets and helmets should be provided and the use of these should be enforced.

**Impact 23: Possible Heat Exhaustion of Workers (Heat Stress)**
**Phase of Project Implementation: Pre-construction, Construction, and Decommissioning**
Direct sun exposure of workers puts them at a greater risk of heat related illness which could cause fainting. The temperatures within the project area are on the average about 33°C during the rainy season from December to March. Temperatures can sometimes reach about 40°C in the project area. When this occurs, people exposed to direct sunlight become at greater risk to heat related illness. As workers are engaged in the implementation of the project, they would be exposed to direct sunlight and may fall sick depending on the intensity of the sunlight and their level or period of exposure.

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**Significance of Impact: Moderate**
The significance of this impact is of a moderate, negative and irreversible nature. It is also of an indirect nature as it depends on the intensity of the heat from the sun and the exposure level of workers. The occurrence of the impact therefore depends on the heat of the sun. This is not a cumulative impact as the project does not cause or add up to the heat of the sun.

**Impact Mitigation**
1. On extremely hot days, with temperature more than 35°C, there should be work/rest cycles, and often drinking water.
2. The Contractor should include the preventative steps, as indicated above in the training schedules of workers.
3. The workers should know and look out for the symptoms of heat–related illness in then selves and others during hot weather. This should be done through training and toolbox or awareness talks.
4. The workers should be given an opportunity to build up a level of tolerance to working in the heat.
5. The workers should be provided with PPE so as not to absorb the heat.

**Impact 24: Obstruction of access to residential plots**

**Phase of Project Implementation: Pre-construction, Construction, and Decommissioning**

During trenching, access to plots along the trench may be cut off. Entrance and exit to these plots especially by cars, wheelbarrows and even walking may be difficult.

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**Significance of Impact:** Moderate significance

The significance of this impact is of a moderate, negative and reversible nature. It is also of a direct nature. Its impact could be significant if the trenches are left open for a long and no provision for crossing has been made or provided.

**Impact Mitigation**

1. Plot owners should be informed of the trenching activity and the time frame of activities to restore access.
2. A temporary crossing facility should be provided to enable crossing of the trenches.

**Impact 25: Potential Vandalism of the New Facilities.**

**Phase of Project Implementation: Operation**

The operation of the borehole and the reservoir tank will undoubtedly attract unscrupulous people to the premises. These areas are vulnerable to theft and vandalism. According to the site visits conducted it showed that the residents especially heard men destroy the reservoir tanks for their livestock to drink, the fence at the reservoir tank has been destroyed it has been said that they use the fencing materials for their livestock kraal. It is therefore pertinent that suitable measures be put in place to ensure the security of the equipment.

**Assessment of Impact**

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**Significance of impact:** Moderate

The impact is of moderate significance with negative consequences if measures are not put in place to protect the safety and security of the property.

**Impact Mitigation/Intervention measures**

- Consideration should be given to engaging the services of a qualified security company to provide security at the premises.

**Impact 26: Possible conflicts between migrant/non resident workers with host community**
Phase of Project Implementation: Construction
The potential for conflicts to arise due to civil works and particularly social relationships with the opposite sex are high. Discussions held with the community during the consultations point to this assertion. It is therefore relevant to avoid or minimise such conflicts in the settlement. This could lead to break down in relationships, spread of diseases and fights within the community.

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Significance of Impact: Moderate
The impact is regarded to be of moderate environmental significance and can be avoided.

Impact Mitigation
1. Adoption of Codes of Conduct for workers.
2. Engage in periodic dialogue and updates with host community.
3. Undertake community relations programme and implementation of Grievance Redress Mechanism.

Impact 27: Uneven access to public standpipes
Phase of Project Implementation: Operation
Khulekhaya ward has no access to standpipes for water. This has resulted in the members of this ward having to walk long distances to fetch water from standpipes of other wards. Although installation of public pipelines or distribution is not part of the project design, the vulnerable community has requested for the repair of broken down public standpipes and putting up of new ones within new wards as the settlement spatially expands. This impact has been discussed in the VCP and recommendation has been made to the effect of repairing broken down standpipes and putting up new ones.

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Significance of Impact: High
The impact is regarded to be of High social significance. It needs to be addressed or managed otherwise it could lead to community unrest.

Impact Mitigation
1. House or yard connection should be encouraged, and WUC will assist the community members in accessing social protection measurers to be assisted in plot connections through the office of S & CD.
2. WUC will repair existing broken down public water standpipes and implement public awareness Campaigns to minimize vandalism.
3. WUC Ghanzi Management Centre is already working on providing the required network expansion so standpipes are provided in the areas that are not currently served, construction of the lines have started and are ongoing at this stage with WUC resources.

**Impact 28: Establishment of Contractor’s and Labourer’s Camps**

**Phase of Project Implementation: Pre-construction,**

As discussed in Chapter 2 and the project implementation will require the establishment of a Contractor’s and Labourer’s camp. The Contractor’s Camp will comprise structures to accommodate the following:

- Workshop for vehicle repairs
- Store
- Fuel storage and dispensing
- Pipes storage areas
- Carpentry shed
- Welding shed
- Offices including that of the engineers and environmental monitoring team.
- Batching plant shed
- Car washing bays
- Power (Generator)
- Water (JoJo Tank)
- Sanitation facilities (Water borne using conservancy tank)
- Solid waste holding facility
- Contaminated soil remediation facility (Hospital)

The Labourer’s Camp will consist of the following:

- Accommodation facilities
- Kitchen
- Playground/ games area/recreational facilities
- Food selling area
- Power (Generator)
- Water (JoJo tank)
- Sanitation facilities (water borne using conservancy tank)
- Laundry, hand washing and bathing facilities
- Fenced area and with access control

**Significance of impact:** The impact is neutral to the project. A good site selection criteria for the Camps that is to be guided by the mitigation measures and guidelines, is included in Annex 9 together with the implementation of the other mitigation measures proposed in this document will minimise the adverse impacts of the establishment of the Camps.

**Impact Mitigation/Intervention measures**

1. Selected site/s should be at least 500 m radius away from any borehole head or any sensitive receptor.
2. Site should be located at the western side of the settlement to reduce impact of noise and adverse air quality and a minimum of 10 km outside of the community.
3. The site/s or Camp/s should be protected/guarded against intruders and wildlife.
4. The Ghanzi Land Board, Tribal Administration and Bere’s Village Development Committee and the environmental team to approve of the Camp site/s prior to establishment
5. Preferable the site for both Contractor and Labour’s Camp should be adjacent to each other to reduce the cost of provision of services such as water and power.

6. The Contractor to prepare a construction and Labourer’s Camp site plan (with layout of facilities prescribed above) based on guidelines presented as Annex 10\textsuperscript{15}.

**Impact 28: Potential Increase in Gender Based Violence (GBV), Violence Against Children (VAC) and Sexual Exploitation and Abuse (SEA)**

Due to the high poverty rate within the settlement of Bere there is a potential for an increase in Gender Based Violence (GBV), Violence Against Children (VAC) and Sexual Exploitation and Abuse (SEA). Community member are likely to form relationship with workers on the project for monetary benefit, this may lead to cases of gender based violence in households as stated in the minutes of consultation with GIDA Botswana.

**Assessment of Impact**

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**Impact Mitigation/Intervention Measures**

- **Contractor** to engage a GBV service provider to conduct an awareness talk periodically (monthly) on GBV, and their prevention and to provide services to GBV survivors and perpetrators.
- **Train project-related staff** and beneficiary villages on behaviour obligations. To make this effective, all workers should sign Individual Code of Conduct for good behaviour as presented in The Worlds Bank Code of Conduct in Annexure 5.
- **Give women equal (30 percent)** opportunity when hiring labour as per the hiring plan (labour) under the C-ESMP.
- **A Gender Based Violence (GBV), Sexual Harassment and Exploitation and Abuse (SHEA) and Violence Against Children (VAC) Compliance Team** to be formed as per World Bank’s guidelines as presented in Annex 10.
- **The Contractor and its sub-contractors and all workers** are to be sensitized on Codes of Conduct and Action Plan for preventing Gender Based Violence (GBV) and Violence against Children (VAC) throughout the implementation of the project.

**Impact 29: Use of the existing roads passing through the settlement may create a potential serious hazard to children who cross the road to school and to community members**

Bere is a rural settlement and there is not much traffic on a normal working day. However, during construction, the travel of trucks ferrying building materials to and from to the borehole and pipeline construction sites via the settlement will be a potential accident risk for children who cross the road to school and to the Vulnerable Community and other community members, including disadvantages groups such as the elderly or persons with disabilities, who are not familiar with that magnitude of traffic. The noise of trucks, the dust from the big wheels of truck and the frequent movement of other vehicles will be a disturbance of to the Bere community.
**Assessment of Impact**

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<td>Duration</td>
<td>Short term</td>
</tr>
<tr>
<td>Spatial Scale</td>
<td>Local</td>
</tr>
<tr>
<td>Probability</td>
<td>Definite</td>
</tr>
</tbody>
</table>

**Significance of Impact:** *High*

The impact is regarded to be of high social significance and therefore needs to be addressed or it could lead to community unrest.

**Impact Mitigation/Intervention Measures**

- The Contractor to build an access road from the Labourer’ Camp to the borehole and the pipelines which does not pass through the village (see **Annex 15**) but must be consulted upon with the community to ensure the road does not impact livelihoods or have other adverse cultural, economic and social impacts.

- Where the pipeline works are to be done next to the school, considerations should be made to work during the weekend when school is closed for the weekend.

- The access road should be compacted and watered regularly to reduce the dust.

- The Contractor should in addition to the identified access road, use other alternative routes which do not pass through the settlement.

- The access road should be used to access the borehole by the Contractor when fetching water from the borehole.
CHAPTER SEVEN: ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

7.1 INTRODUCTION
This chapter represents the measures and actions required for the project to achieve compliance with the ESMP considering the findings of the environmental and social assessment, World Bank’s due diligence and alignment with its policies and principles, the laws and regulations of Botswana, and the results of the engagement with stakeholders, interested parties and project affected people.

7.2 MITIGATION PLAN
The mitigation plan presents a programme for the management of mitigation measures. It answers the questions on what impact is to be mitigated, the mitigation measure to be implemented, and resources required for implementing the measures and assigning responsibility on who undertakes the mitigation measures. This is represented in Table 12.

7.3 THE MONITORING PLAN
This monitoring plan is designed to ensure compliance of the activities of the project against set standards and regulations. According to the EIA Act 2010, the minimum content of the monitoring programme is shown in Table 13.

7.4 ENVIRONMENTAL AND SOCIAL INSPECTION AND REPORTING
The Contractor shall appoint an environmental officer registered with Botswana Environmental Assessment Practitioners Association (BEAPA) and a qualified sociologist/socio-economist to foresee the proper implementation of all social and environmental mitigation and enhancement measures recommended in the report.

The Contractor’s environmental officer will prepare a Contractor’s ESMP (C-ESMP) and compile a monthly report showing environmental and social performance for the month. It will include past performance, audit reports and monitoring data, planned action for mitigating forthcoming risks, and how recommendations made by WUC’s project environmental and social officers are being implemented. The Codes of Conduct, GRM, C-ESMP and related safeguards will also be included as requirements for procuring the Contractor.

7.5 ROLES AND RESPONSIBILITIES
a) WUC
The overall responsibility for implementing the ESMP lies with the Water Utilities Corporation (WUC). WUC will need to monitor the implementation of the mitigation measures and has appointed environmental and social officers as part of the Project Implementation Unit (PUI) to assist with this responsibility.

b) Environmental and Social Specialist Consultants (Project Liaison Officers)
Earthtec Consultancy (Pty) Ltd. has been appointed as the environmental and social consultant to be called the Project Liaison Officers (PLO) tasked to monitor the project. It will carry out daily site inspections and to verify compliance with ESMP requirements. Feedback to the client would be in the form of bi-weekly progress reports and feedback. Urgent issues will be brought to the WUC immediately. The PLOs will oversee the implementation of project activities in accordance with the mitigation implementation programme, ensure that the code of conduct is adhered to, sign off to indicate the satisfactory implementation of mitigation measures, and impose the necessary sanctions, if activities are not carried out in accordance with the ESMP. The PLO will ensure that the Contractor
follows through the specified mitigation measures and implement them to the proponent’s satisfaction in the specified timeframe.

The key responsibilities of the PLOs are to:

- Monitor the Contractor’s implementation of his the ESMP/C-ESMP via daily inspections of the Contractors Camps and works sites.
- Organize periodic stakeholders meeting to ascertain effectiveness of mitigation measures.
- Prepare and submit Monthly Environmental and Social Reports summarizing the Contractor’s activities (such as training programmes, community meetings, etc.) and compliance with the ESMP and C-ESMP to WUC and the DEA in compliance with Section 18 of the EA Act 2011.

If the PLOs identify any ESMP/C-ESMP non-compliance issues by the Contractor, a non-compliance notice will be issued to the Contractor if the engineer must act. This will be included in the report to the WUC and on urgent issues, will be reported immediately. All documentation and communications to the Contractor will be kept and preserved in accordance with good record keeping practices as this will be essential in the event of disputes and for project completion reviews. The Contractor will be required to prepare a corrective action plan to be implemented by a date agreed with the engineer. Non-compliance will be ranked according to the following criteria:

- **Non-Compliance Level I**: A situation that is not consistent with requirements of the ESMP/C-ESMP, but not believed to present an immediate or severe social or environmental risk. Repeated Level I concerns may become Level II concerns if left unattended.

- **Non-Compliance Level II**: A situation that has not yet resulted in clearly identified damage or irreversible impact, but which demonstrates potential significance. Level II requires expeditious corrective action and site-specific attention to prevent severe effects. Repeated Level II concerns may become Level III concerns if left unattended.

- **Non-Compliance Level III**: A critical situation that will result in significant in social or environmental damage occurring or a reasonable expectation of very severe impending damage. International disregard of Non-Compliance Notices or specific prohibitions is also classified as a Level III concern.

c) The Contractor

The Contractor will be responsible for the day to day implementation of the project activities. To effectively implement this, the Contractor shall appoint an Environmental Officer (EO), a Health and Safety Officer (HSO) and a Community Liaison Officer (CLO). The Contractor must ensure that the supervisors including the workers supervisor of the project are well informed of the contents of the ESMP so that these are cascaded to the rest of the workforce on the project. The Contractor will report any difficulties in implementing the mitigation measures to the PLO and ensure that all instructions which are given by the client in pursuance of the same are carried out.

The Contractor shall prepare and submit to the Engineer for acceptance the “Contractor’s Environmental and Social Management Plan” (C-ESMP) which provides a detailed explanation of how the Contractor shall comply with the project’s safeguard documents such as the Project Environmental and Social Management Plan (ESMP) that were provided as part of the bid documents and/or have been publicly disclosed. No civil works shall commence until the C-ESMP has been cleared by the Engineer. In addition, the Contractor shall:
• Attend public meetings as requested by the Engineer to discuss the C-ESMP or any other aspects of the project’s environmental and social compliance of interest to the public.
• Submit monthly reports on the C-ESMP implementation progress to the Engineer in an agreed format.
• Update the C-ESMP as necessary—in particular when there are design changes, (e.g. changes in the alignment, lay down areas, working hours or practices, etc.) that impact on the project area of influence or the public—or upon instruction by the Engineer for re-approval and re-disclosure.

The C-ESMP should include specific mitigation and enhancement measures based on the ESMP, the final design and the site selected for the Contractor’s Camp. The plan should have Management Strategy and Implementation Plans (MSIPs) for the following and guidelines for details required are presented in Annexes 11, 13 and 14:

• Work Activities Plan
• Traffic Management Plan
• Occupational Health and Safety Plan
• Community Health and Safety Management Plan
• Environmental and Social Management Plan at the Contractor’s Camp
• Labour Influx Management Plan
• Hiring of Labour Plan
• Vibration Plan
• Codes of Conduct Implementation Plan to address GBV/VAC including training and awareness plans on community relations and norms for its workers as well as codes of conduct, handling of grievances, reporting and handling of GBV/VAC cases
• Training/awareness plan for workers of community relations/norms and how grievances are handled for the project, so all workers understand how it works.

For C-ESMP or ESMP infringements, the Contractor shall be given a Notice by the Engineer to initiate actions to remedy the issue. If remediation and restoration has been satisfactorily initiated but could not be completed during the specified period, the Engineer shall determine a reasonable extended period to complete the remediation in consultation with the Contractor and the Employer.

f) The World Bank
The World Bank provides supervision to ensure compliance with the provisions of the Environmental and Social Management Plan (ESMP) and World Bank safeguards policies and will assist with technical capacity building.

g) Other Supporting National and Local Institutions

In addition to WUC, the PLOs, and the Contractor, further checks and balances will be provided by relevant institutions. These are shown in Table 10 below. All these institutions which have an oversight role to ensure environmental and social safeguards are complied with in the implementation of the ESMP are listed in the Monitoring Plan. They are to be formally introduced to the project by WUC before and during implementation. They will be invited to attend monthly site progress meetings and shall be trained to increase their capacity for oversight monitoring.
<table>
<thead>
<tr>
<th>Institution</th>
<th>Mandated Role</th>
<th>Role/Activities to Play in ESMP Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Land Management, Water and Sanitation Services</td>
<td>Policy and funding for land, water and sanitation</td>
<td>- Funding and policy direction</td>
</tr>
<tr>
<td>Ghanzi Land Board</td>
<td>Management of Tribal Land</td>
<td>- Permit/ Give surface rights for Labourer’s Camp</td>
</tr>
<tr>
<td>Ministry of Youth Empowerment Sports and Culture Development</td>
<td>Development of the Youth and Sports and Culture</td>
<td>- Educate Vulnerable Community members on capacity for Financial Management and entrepreneurship and sports development.</td>
</tr>
<tr>
<td>Ministry of Nationality, Immigration and Gender Affairs</td>
<td>Policy and responsible for Gender Affairs, and labour</td>
<td>Assist in creating awareness with drug and alcohol use as well as other issues that could affect the youth and the community as a result of labour influx and also on GRM</td>
</tr>
<tr>
<td>Department of Environmental Affairs</td>
<td>Responsible for Environmental and Social Impact Assessment Preparation and education of the environment</td>
<td>- Will receive monthly reports and audit the project.</td>
</tr>
<tr>
<td>Ghanzi District Council</td>
<td>Seeks development of various districts</td>
<td>- Provides oversight monitoring of environmental, social safeguards measures and overall project delivery.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Through S &amp; CD will monitored that beneficiaries including the vulnerable people are employed.</td>
</tr>
<tr>
<td>Department of Occupational Health and Safety</td>
<td>Ensures the safety and welfare of workers at the factories</td>
<td>- Inspect site for safety of workers and compliance with the Factories Act</td>
</tr>
<tr>
<td>Department of Waste Management and Pollution Control</td>
<td>Policy making and in charge of waste management in the country</td>
<td>- Inspect Site for waste management (land pollution, soil contamination etc.)</td>
</tr>
<tr>
<td>Department of National Museum and Monuments</td>
<td>Responsible for archaeology in the country (Cultural and historically sites and artefacts)</td>
<td>- Will respond to Chance Finds and give guidance</td>
</tr>
<tr>
<td>Botswana Police Services</td>
<td>Protection and prevention of Crime and Civil cases,</td>
<td>- To maintain peace at the work sites and provide advice on crime prevention and affrays; will address crime</td>
</tr>
<tr>
<td>Department of Labour and Home Affairs</td>
<td>Labour Issues</td>
<td>- Provide Safety awareness/education materials for workers.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Inspect site periodically</td>
</tr>
<tr>
<td>Department of Road Transport and Safety</td>
<td>Promotes Road and Machinery use in a safety manner</td>
<td>- Ensure that the machinery to be used by the Contractor is safe to use.</td>
</tr>
<tr>
<td>Institution</td>
<td>Mandated Role</td>
<td>Role/Activities to Play in ESMP Implementation</td>
</tr>
<tr>
<td>-------------</td>
<td>---------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Department of Radiation Protection and Inspectorate.</td>
<td>Permits use of Radiation Equipment and monitors the exposure</td>
<td>- Permit use of laboratory equipment at site</td>
</tr>
<tr>
<td>Ghanzi District Medical Health Teams (Medical Facilities)</td>
<td>Provide health education and medical services</td>
<td>- Provide health awareness/education materials and provide medical services to ill/sick workers.</td>
</tr>
<tr>
<td>Bere Village Development Committee and Tribal Administration</td>
<td>Village Development and Local/Community Governance</td>
<td>- Elect/Choose representatives for GRM - Monitor implementation of Safeguard measures</td>
</tr>
<tr>
<td>NGOs (GIDA, Khwedom Council)</td>
<td>Seeks/advocates for the rights/education/awareness of vulnerable people (including the Sans) in National/Community/Individual Development</td>
<td>- Educate and create awareness on social issues such as GBV and resuscitation on some San cultures/traditions such as speaking the Sesarwa language - Be part of the GRM Committee for Bere settlement villages.</td>
</tr>
</tbody>
</table>

### Table 1: Resources Table

<table>
<thead>
<tr>
<th>No.</th>
<th>Activity</th>
<th>Time Frame</th>
<th>Budget (Pula)</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>CAPACITY BUILDING</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Capacity building of WUC officers in Environmental and Social Safeguards</td>
<td>Throughout Project</td>
<td>50,000.00</td>
<td>WUC</td>
</tr>
<tr>
<td></td>
<td>Capacity building of Stakeholders involved in ESMP and GRM implementation</td>
<td>Within first 3 months of project implementation</td>
<td>100,000.00 (Hiring of venues, stationary, resources for GRM, food, sitting allowances for GRC and CLO stipend etc.)</td>
<td>WUC</td>
</tr>
<tr>
<td>2.</td>
<td><strong>ESMP IMPLEMENTATION, MONITORING, EVALUATION AND REPORTING</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Regular monitoring of Project site and activities and sitting allowance for GRM</td>
<td>Entire project period, of 6 months and defect liability of 12 months – monthly</td>
<td>720,000.00 (Monitoring by (Project Liaison Officers))</td>
<td>WUC (part pre-funded by engagement of environmental/social consultants)</td>
</tr>
</tbody>
</table>

### 7.6 FINANCIAL PLAN

Table 11 which follows below presents a summary of cost the associated with the implementation of this ESMP.
<table>
<thead>
<tr>
<th>Description</th>
<th>Activity</th>
<th>Cost</th>
<th>Funding Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESMP implementation of mitigation measures including VCP and GRM</td>
<td>Pre-construction, Construction and Decommissioning</td>
<td>2,598,700.00</td>
<td>To be borne by the appointed Contractor.</td>
</tr>
<tr>
<td>Implementation Costs</td>
<td>During operations and maintenance annually</td>
<td>From WUC's regular operational costs</td>
<td>WUC</td>
</tr>
<tr>
<td>Sub Total</td>
<td></td>
<td>P 3,468,700.00</td>
<td></td>
</tr>
<tr>
<td>15 percent contingency</td>
<td></td>
<td>P 520,305.00</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>P 3,989,005.00</strong> (US$ 398,900.50)</td>
<td></td>
</tr>
<tr>
<td>Impact to be Mitigated/Enhanced</td>
<td>Phase</td>
<td>Activities</td>
<td>Management Objectives</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------</td>
<td>------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td><strong>ENVIRONMENTAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Establishment of Labourer’s and Contractor’s Camp or site office.</td>
<td>Pre-Construction</td>
<td>Selection of site and site establishment</td>
<td>To select site/s with least adverse environmental impacts</td>
</tr>
<tr>
<td>- Loss of Vegetation  - Reduction of Area for range/natural habitat for wildlife</td>
<td>Pre-Construction, Construction and Operation</td>
<td>Site clearing for borehole equipment and Camp site for Contractor and Labourer’s.</td>
<td>To limit the area cleared to the required site only</td>
</tr>
<tr>
<td>Soil Erosion</td>
<td>Pre-Construction and Construction</td>
<td>- Site clearing  - Excavations,  - Stockpiling of loose materials  - Movement of construction vehicles</td>
<td>To minimize erosion of soil.</td>
</tr>
<tr>
<td>Decline in Air Quality</td>
<td>Pre-Construction, Construction, and Decommissioning</td>
<td>- Site clearing  - Excavations/ Trenching,  - Stockpiling of loose materials</td>
<td>To reduce dust pollution that may affect surrounding residents</td>
</tr>
<tr>
<td>Impact to be Mitigated/Enhanced</td>
<td>Phase</td>
<td>Activities</td>
<td>Management Objectives</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------</td>
<td>------------</td>
<td>-----------------------</td>
</tr>
</tbody>
</table>
| Contamination of On-Site Soil Due to Leaks and Spillages from Fuels and Other Hydrocarbons | Pre-Construction, Construction, Decommissioning and Operation | Parking and movement of vehicles  
Storage of fuel and other hydrocarbon products | To avoid contamination of soils and remediate the soils when they occur | 1. Workshop, vehicle repairing and fuelling areas should be paved.  
2. Environmental mats with absorbing capacities large enough to cover the environmental footprint when working outside the workshop area such as fuelling and repairing machineries in situ,  
3. Portable spill containment and clean up equipment should be provided at the construction site.  
4. In the event of an accidental spill, the Contractor should expedite the clean-up of the area to prevent the spread of the pollutant.  
5. Bulk storage of fuel and oil should be in clearly marked containers indicating the type of fuel being stored.  
6. All contaminated soil should be collected and stored in a bunded structure of 5m x 5m in size, with a roof to prevent ingress of rainwater for remediation. | Contractor | 200,000.00 |
| Noise Pollution | Pre-Construction, Construction, and Decommissioning | - Site Clearing  
- Excavations/Trenching  
- Movement of vehicles and use of machineries | To reduce noise pollution to acceptable levels | 1. All construction machinery should be in good working condition  
2. Engines of all machinery and vehicles should be switched off when not in use.  
3. Workers should be provided with noise protection gear. Workers exposed to noise levels greater than 70 dBA continuously for 8 hours or more should use earmuffs. Workers experiencing prolonged noise levels of 70 – 80 dBA should wear earplugs.  
4. Stationary equipment should be carefully positioned in such a way that they are oriented away from sensitive receptors and/or shielded from receptors by other non-noisy equipment or structures.  
5. Construction site yard, concrete batching plants, construction labourers’ Camp (accommodation) and other noisy fixed facilities should be located well away from noise sensitive areas (Bere Primary School, Bere Health post and Bere Kgotla).  
6. Rules should be established to prevent the playing of loud music and making of unnecessary noise at the labourers’ Camp.  
7. Construction works should be undertaken between the hours of 6am to 6 pm. Sundays should be left as a resting day. | Contractor | 50,000.00 |
| Land Pollution | Pre-Construction, Construction, and Decommissioning | - Site clearing  
- Excavations/Trenching  
- Movement of vehicles and use of machineries  
- Living/Staying at Construction Camp | To minimize, reuse or recycle waste as much as possible and dispose waste in sustainable manner. | Solid waste  
1. A well-constructed temporary waste holding facility (10m x 10m) comprising of a roof, gate and side protection using nets should be provided within the confines of the construction site to store all solid wastes such as cement bags and plastic wrappings that would be generated during construction. The waste collection area should be clearly marked. | Contractor | 100,000.00 |
<table>
<thead>
<tr>
<th>Impact to be Mitigated/Enhanced</th>
<th>Phase</th>
<th>Activities</th>
<th>Management Objectives</th>
<th>Mitigation Enhancement Measures/Action</th>
<th>Responsibility for implementing mitigation measures</th>
<th>Estimated Cost (BWP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impeded accesses to the Project Site due to Sandy Soils</td>
<td>Phase of Project: - Implementation: - Pre-Construction, - Construction, - Decommissioning and Operation.</td>
<td>Movement of vehicles To avoid vehicles getting stuck in the sand and thereby wasting construction time</td>
<td>1. Use all-wheel drive vehicles for the project</td>
<td>1.1. Use all-wheel drive vehicles for the project</td>
<td>Contractor</td>
<td>Considered when purchasing vehicles for the project</td>
</tr>
<tr>
<td>Risk of igniting bush fires</td>
<td>- Construction, - Operation and Decommissioning</td>
<td>- Site clearing - Excavations/ Trenching - Movement of vehicles and use of machineries - Laying of pipes - Equipping of borehole - Installation of generator and shelter. To avoid the occurrence of Bush fires</td>
<td>1. Burning of waste should be prohibited. No fire should be ignited at any point along the project site. 2. No smoking of cigarettes should be allowed at the project sites. A designated and controlled area should be demarcated for smoking. 3. Workers should be trained on fire prevention and fighting. 4. There should be a fire extinguisher/ fire beater at all working places</td>
<td>1. Burning of waste should be prohibited. No fire should be ignited at any point along the project site. 2. No smoking of cigarettes should be allowed at the project sites. A designated and controlled area should be demarcated for smoking. 3. Workers should be trained on fire prevention and fighting. 4. There should be a fire extinguisher/ fire beater at all working places</td>
<td>Contractor</td>
<td>60,000.00</td>
</tr>
<tr>
<td>Potential Draw Down Effects</td>
<td>Operation</td>
<td>- Abstraction of water To abstract water in a sustainable manner as not to lead to water draw down or affect the supplies of water to other dependent uses on the water table.</td>
<td>1. Monitor abstraction of levels and volume of water in borehole and close water bodies to the supply borehole. Use BH 9134 as a monitoring borehole.</td>
<td>1. Monitor abstraction of levels and volume of water in borehole and close water bodies to the supply borehole. Use BH 9134 as a monitoring borehole.</td>
<td>WUC</td>
<td>Part of Operation and maintenance cost.</td>
</tr>
<tr>
<td>High Sodium Levels</td>
<td>Operation</td>
<td>- Abstraction of water To inform community members of elevated water quality parameters</td>
<td>1. No mitigation measure provided by the project. The community should however be informed of the quality of water and elevated parameters such as sodium.</td>
<td>1. No mitigation measure provided by the project. The community should however be informed of the quality of water and elevated parameters such as sodium.</td>
<td>WUC</td>
<td>Part of Operation and maintenance cost.</td>
</tr>
</tbody>
</table>
### SOCIAL

<table>
<thead>
<tr>
<th>Impact to be Mitigated/Enhanced</th>
<th>Phase</th>
<th>Activities</th>
<th>Management Objectives</th>
<th>Mitigation Enhancement Measures/Action</th>
<th>Responsibility for implementing mitigation measures</th>
<th>Estimated Cost (BWP/USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased employment opportunities</td>
<td>Pre-construction, Construction, and Decommissioning</td>
<td>Recruitment and labour hiring</td>
<td>To ensure fair hiring practices and avail employment opportunity to locals</td>
<td>1. The Contractor to develop a hiring plan that includes a commitment to sourcing labour (unskilled and semi-skilled) and if available, skilled workers from Bere. 2. 35-40% available opportunities reserved for vulnerable groups (women and persons with disabilities). 3. Recruitment process should be transparent, inclusive and fair, and assistance offered to those who are illiterate or other needs to ensure accessibility. This process should be carried at the Kgottla. 4. Job advertisements should be put up at strategic locations such as tribal administration office notice boards to ensure equitable information dissemination. This should also be verbally communicated at community meetings and other gathering locations of the community. Assistance to those who are illiterate to fill job applications will be provided by VDC and CLO.</td>
<td>Contractor</td>
<td>Part of Contractor’s Cost</td>
</tr>
<tr>
<td>Stimulation of Local Economy</td>
<td>Pre-construction and Construction</td>
<td>Procurement of services and goods</td>
<td>To reduce poverty</td>
<td>1. The Contractor should procure goods and services from local service providers i.e. housekeeping, catering and security services 2. Local Contractors and suppliers where possible should be contracted hence boosting their businesses</td>
<td>Contractor</td>
<td>Part of Contractor’s Cost</td>
</tr>
<tr>
<td>Erosion of societal norms and values due to labor influx</td>
<td>Pre-construction, Construction, and Decommissioning</td>
<td>All activities</td>
<td>To avoid conflicts among host community and workers</td>
<td>1. Raise awareness among the local communities on various social ills and their implications. 2. Sensitise the construction workers on community values and norms. 3. Closely liaise with the police and other crime law enforcement authorities to address crime and social problems 4. Adoption of Code of Conduct for all workers in the project 5. Engage in periodic dialogue and updates with host community 6. Undertake community relations programme 7. Ensure community understands the Grievance Redress Procedures</td>
<td>Contractor</td>
<td>50,000.00</td>
</tr>
<tr>
<td>Potential Occupational, Health, and Safety Risk to Workers</td>
<td>Pre-construction, Construction, and Decommissioning</td>
<td>- Site clearing - Excavations/ Trenching.</td>
<td>To ensure the safety of workers and staff</td>
<td>1. To reduce the risk of occupational hazards, workers should be provided with the appropriate protective equipment as indicated in EHS Guidelines (see Annex 15).</td>
<td>Contractor</td>
<td>50,000.00</td>
</tr>
</tbody>
</table>

Sub-Total Environmental Cost | $20,000.00

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2. In the longer term, WUC should initiate a project to reduce the sodium levels to acceptable levels through Reverse Osmosis.
<table>
<thead>
<tr>
<th>Impact to be Mitigated/Enhanced</th>
<th>Phase</th>
<th>Activities</th>
<th>Management Objectives</th>
<th>Mitigation Enhancement Measures/Action</th>
<th>Responsibility for implementing mitigation measures</th>
<th>Estimated Cost (BWP)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(Activities and Objectives)</td>
<td></td>
<td>2. Workers should be trained on safety measures at work through toolbox talks and monthly talks, 3. First aid boxes stocked to the specifications as prescribed in the Factories Act (First Aid Equipment) Regulations, 1979 should be readily available on site, at the site offices, borehole site, and site for the water tank.</td>
<td>Contractor</td>
<td>50,000.00</td>
</tr>
<tr>
<td>Potential accidents and injuries due to Open Trenches and working at heights</td>
<td>Pre-construction, Construction, and Decommissioning</td>
<td>- Excavations/Trenching</td>
<td>To avoid accidents and injuries</td>
<td>1. Adequate and relevant signage should be provided at all work areas, 2. All open trenches should be barricaded using danger tapes strung around profiles, 3. Access gate to the offices and Camp sites should be manned, 4. The local community should be informed in advance of project commencement including safety measures that would be upheld throughout the construction period, 5. The community liaison officer should handle and record for reference purposes any complaints that might be raised by members of the community, 6. Ensure the scaffolding are inspected by competent person before use, 7. Appropriate PPE such as harnesses, safety nets and helmets should be provided and used.</td>
<td>Contractor</td>
<td>50,000.00</td>
</tr>
<tr>
<td>Potential Increase in new infections (Community Health)</td>
<td>Pre-construction, Construction, and Decommissioning</td>
<td>All activities</td>
<td>To prevent or minimize new infections</td>
<td>1. The Contractor should conduct regular awareness talks to the community of Bere and workers on communicable diseases, their prevention and treatment, and keep clean surroundings, 2. Harness all the existing HIV/AIDS programs and integrate them into the HIV/AIDS programme for the construction of the project. It will be important for the Contractor to liaise with the local AIDS Co-coordinating Office to set up an effective HIV-AIDS programme, 3. Sensitize workers on HIV/AIDS and afford them time to attend health talk sessions, 4. Consult Ghanzi Primary Hospital to ensure alignment of health and safety programs with national HIV/AIDS Policy and District HIV/AIDS programs, 5. Condom dispensers filled with condoms daily should be placed at the Contractor’s office block, toilets’ and change rooms, 6. Give women equal opportunity when hiring, 7. No alcohol/drugs on site, 8. Ensure community is aware of GRM to report concerns</td>
<td>Contractor</td>
<td>100,000.00</td>
</tr>
<tr>
<td>Identification of Vulnerable Community members, disadvantaged groups and persons (such as illiterate,</td>
<td>Preconstruction</td>
<td>All activities</td>
<td>Ensure those most vulnerable and excluded have access to project benefits</td>
<td>The project should consider the needs of the VCs and other disadvantaged empower them by employing those that able to do some work in the project.</td>
<td>Contractor</td>
<td>Part of the entire cost</td>
</tr>
<tr>
<td>Impact to be Mitigated/Enhanced</td>
<td>Phase</td>
<td>Activities</td>
<td>Management Objectives</td>
<td>Mitigation Enhancement Measures/Action</td>
<td>Responsibility for implementing mitigation measures</td>
<td>Estimated Cost (BWP)</td>
</tr>
<tr>
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</tr>
<tr>
<td>persons with disabilities, children, women, elderly) People (VP) for assistance through the Project and ensure inclusive project benefits</td>
<td>Pre-construction, Construction, and Decommissioning</td>
<td>All Activities.</td>
<td>Ensure project protects vulnerable and disadvantaged people and groups, promote equality and respect for all community members, including the Vulnerable Community throughout the project period</td>
<td>1. Contractor to engage a GBV service provider to conduct an awareness talk periodically (monthly) on GBV, and their prevention and to provide services to GBV survivors and perpetrators. 2. Train project-related staff and beneficiary villages on behaviour obligations. To make this effective, all workers should sign Individual Code of Conduct for good behaviour as presented in The Worlds Bank Code of Conduct in Annexure 5 of the ESIA. 3. Give women equal (30 %) opportunity when hiring labour as per the hiring plan (labour) under the C. ESMP. 4. A Gender Based Violence (GBV) and Violence Against Children (VAC) Compliance Team to be formed as per World Bank's guidelines as presented in Annex 10 in the ESIA. 5. The Contractor and its subs and all workers are to be sensitized on Codes of Conduct and Action Plan for preventing Gender Based Violence (GBV) and Violence against Children (VAC) throughout the implementation of the project</td>
<td>Contractor</td>
<td>100,000.00</td>
</tr>
<tr>
<td>Potential Increase in Gender Based Violence (GBV), Violence Against Children (VAC) and Sexual Exploitation and Abuse (SEA)</td>
<td>- Pre-construction, - Construction, and - Decommissioning</td>
<td>- Excavations/ Trenching - Pipe laying - Equipping Borehole</td>
<td>To avoid heat exhaustion of workers</td>
<td>1. On extremely hot days, with temperature more than 35°C, there should be work/rest cycles, and drinking water often. 2. Through training and toolbox or awareness talks, workers should be trained to look out for the symptoms of heat-related illness in themselves and others. 3. Drinking water in dispensible containers should be provided to workers at all working fronts (sites)</td>
<td>Contractor</td>
<td>50,000.00</td>
</tr>
<tr>
<td>Possible Heat Exhaustion of Workers (Heat Stress)</td>
<td>- Pre-construction, - Construction, and - Decommissioning</td>
<td>- Equipping Borehole</td>
<td>To familiarize workers on how to behave when they have an encounter with wildlife.</td>
<td>1. Prior to commencement of civil works all the staff and workers of the project should be educated on the behaviour of wild animals and the reaction required of them to remain safe. 2. Workers and staff should work in gangs or groups particularly at the borehole site. 3. Workers should be discouraged to walk at night let alone at the outskirts of the village.</td>
<td>Contractor</td>
<td>5,000.00</td>
</tr>
<tr>
<td>Potential attack of workers by wildlife</td>
<td>- Pre-construction, - Construction, and - Decommissioning and - Construction.</td>
<td>- Equipping Borehole</td>
<td>To familiarize workers on how to behave when they have an encounter with wildlife.</td>
<td>1. The Contractor should have an emergency evacuation vehicle. 2. The Contractor should also assist the health post with some medical supplies that are unavailable or inadequate at the health post.</td>
<td>Contractor</td>
<td>400,000.00</td>
</tr>
<tr>
<td>Increased pressure on existing social facilities</td>
<td>- Pre-construction, - Construction, and - Decommissioning</td>
<td>All Activities</td>
<td>To ensure adequate capacity/resources exist to meet the increased demand.</td>
<td>1. The Contractor should have an emergency evacuation vehicle. 2. The Contractor should also assist the health post with some medical supplies that are unavailable or inadequate at the health post.</td>
<td>Contractor</td>
<td>400,000.00</td>
</tr>
<tr>
<td>Impact to be Mitigated/Enhanced</td>
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</tr>
<tr>
<td>Potential conflict between residents and non-resident workers</td>
<td>- Construction, and - Decommissioning</td>
<td>All Activities</td>
<td>To avoid conflicts among host community and workers</td>
<td>1. Adoption of Code of Conduct for workers 2. Engage in periodic dialogue and updates with host community 3. Undertake community relations programme 4. Ensure community understands Grievance Redress Procedures</td>
<td>Contractor</td>
<td>Cost as part of those for community and workers awareness and training</td>
</tr>
<tr>
<td>Severance of access to plots</td>
<td>Phase of Project Implementation: - Pre-construction, - Construction, and - Decommissioning</td>
<td>Excavations/ Trenching</td>
<td>To provide crossing facilities over trenches.</td>
<td>1. Plot owners along the pipeline route should be informed of the trenching activity programme through a public meeting or the use of a letter. 2. A temporary crossing facility should be provided to enable crossing of the trenches</td>
<td>Contractor</td>
<td>10,000.00</td>
</tr>
<tr>
<td>Potential vandalism of new facilities</td>
<td>Operation</td>
<td>After Installation of all equipment and facilities</td>
<td>To avoid vandalism</td>
<td>1. Consideration should be given to engaging the services of a qualified security company to provide security at the premises. 2. The community should be educated against the vandalism of the water infrastructure.</td>
<td>WUC</td>
<td>60,000.00 (10,000 per month) for the construction period</td>
</tr>
<tr>
<td>Unequal access to community standpipes across Bere wards</td>
<td>Pre-construction</td>
<td>Assessment of standpipes (both non-functioning and distribution per ward) to provide more equitable access to water across wards</td>
<td>To ensure project benefits area shared and accessible to beneficiaries</td>
<td>1. Conduct assessment of standpipes locations/presence in each ward 2. Repair damaged/non-functioning standpipes 3. Provide standpipes to wards that do not have any and provide additional ones to wards that have too few according to population distribution and needs</td>
<td>WUC</td>
<td>Provided for Ghanzi Management cost</td>
</tr>
<tr>
<td>Use of existing roads passing through the settlement may create a potential accident hazard to children who cross the road to school and community members</td>
<td>- Pre-construction - Construction - Decommissioning</td>
<td>Contractor to build an access road and use alternates route around the settlement</td>
<td>To protect children and community members from the possible accidents and social disturbance of the noise and dust caused by trucks ferrying construction materials</td>
<td>1. Where the pipeline works are to be done next to the school, considerations should be made to work during the weekend when school is closed for the weekend 2. The access road should be compacted and watered regularly to reduce the dust 3. The Contractor should in addition to the identified access road, use other alternative routes which do not pass through the settlement 4. The access road should be used to access the borehole by the Contractor when fetching water from the borehole</td>
<td>Contractor</td>
<td>100,000.00</td>
</tr>
<tr>
<td>Increase (augment) water supply to Bere settlement</td>
<td>Operation</td>
<td>Commissioning of water supply</td>
<td>To ensure that the project increased water supply in the village</td>
<td>The system should be maintained periodically to sustain the supply of water in terms of water pressure and quality. It is recommended that the high sodium content should be reduced to accepted threshold</td>
<td>WUC</td>
<td>Routine/Periodic Costs</td>
</tr>
<tr>
<td>VCP Mitigation Costs (Details Presented in VCP Report) and includes the cost for mitigating Uneven Access to standpipes</td>
<td>All phases</td>
<td>See VCP</td>
<td>To ensure VC’s can share in the project benefits, enhance development opportunities and mitigate adverse impacts on their culture, livelihoods and identity</td>
<td>See VCP</td>
<td>772,500.00</td>
<td></td>
</tr>
<tr>
<td>GRM Implementation (including GBV mapping of services and action plan, and sensitization sessions)</td>
<td>Pre-construction, Construction, Decommissioning</td>
<td>See Chapter 8</td>
<td>To enable accessible reporting, recording and resolution of grievances to project beneficiaries and PAPs</td>
<td>See Chapter 8</td>
<td>331,200</td>
<td></td>
</tr>
</tbody>
</table>

**Total MITIGATION COST (Environmental + Social + VCP + GRM):** P2,598,700.00
<table>
<thead>
<tr>
<th>Issue</th>
<th>The parameter to be monitored</th>
<th>Location of monitoring</th>
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<tr>
<td><strong>GENERAL</strong></td>
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<tr>
<td>- Permits or clearance from authorized agencies for construction and that of Labour’s Camp and Contractor’s Camp.</td>
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<td></td>
<td>- Civil works should not commence until all relevant licences and clearances are obtained from relevant authorities.</td>
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<tr>
<td><strong>ENVIRONMENTAL</strong></td>
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<td></td>
<td>- Designated waste management disposal site to be identified before the project commences</td>
</tr>
<tr>
<td>- Noise pollution</td>
<td>Noise</td>
<td>At site where Contractor’s Camp is to be located</td>
<td>Noise levels</td>
<td>Observation • Measurement by use of Sound Level metre • Documentary evidence or list of complaints</td>
<td>Site Agent, Earthtec, Ghanzi District Council</td>
<td>Weekly during construction</td>
<td>ESMP Monthly Monitoring Report</td>
<td>Noise not to exceed 85 dB during the day.</td>
<td>- Work to be stopped until the source of noise is identified and corrected.</td>
</tr>
<tr>
<td>- Air pollution</td>
<td>Dust Emission</td>
<td>At site where Contractor’s site is to be located</td>
<td>Ensure that all workers have adequate protective clothing and using them (dust protection gear) Number of days and times dust suppression measures are implemented All construction vehicles are covered with tarpaulin</td>
<td>Observation • Documentary evidence/ list of complaints • Use of handheld air particulate sampler</td>
<td>Site Agent, Earthtec, Ghanzi District Council</td>
<td>Weekly during construction</td>
<td>ESMP Monthly Monitoring Report</td>
<td>Atmospheric Pollution Act for PM10 which is 150mg/m³</td>
<td>- Work to be stopped until dust suppression measures are implemented.</td>
</tr>
<tr>
<td>- Site Clearing/Vegetation loss/ Reduction in habitat for wildlife</td>
<td>Vegetation clearing</td>
<td>At borehole site where the Contractor’s and Labour’s Camp are to be located</td>
<td>Limit of the site</td>
<td>Observation • Document review</td>
<td>Earthtec, Site agent, Tribal Administration, Ghanzi District Council</td>
<td>Prior and after clearing</td>
<td>ESMP Monthly Monitoring Report</td>
<td>National Policy on Natural Resources Conservation and Development</td>
<td>- Adhere to stipulated measures on tree conservation</td>
</tr>
</tbody>
</table>

The estimated cost of mitigation measures identified above is **BWP 2,598,700.00 (US$259,870.00)** and will be included in the Bill of Quantities. The Contractor is responsible to implement the proposed mitigation measures as per the ESMP.
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</tr>
</thead>
<tbody>
<tr>
<td>- Wildlife attacks on community</td>
<td>- Borehole site</td>
<td>- Borehole site</td>
<td>- Number of awareness training given to workers</td>
<td>- Documented review</td>
<td>- Earthtec, WUC, PIU</td>
<td>- Once prior to the commencement of construction</td>
<td>- ESMP Monthly Monitoring Report</td>
<td>- No wildlife attacks any worker.</td>
<td>- Stop work, reprimand SHE officer and ensure awareness training is undertaken.</td>
</tr>
<tr>
<td>- Employment of key personnel such as Environmental officer, SHE Officer, Community Liaison Officer and Health Educator/Officer</td>
<td>- Presence on site of the Contractor’s Environmental Officer, SHE Officer and Health Educator/Officer</td>
<td>- Contractor’s Camp Site/Offices</td>
<td>- Presence or availability of key personnel at the project site. - Hours of work spent on site</td>
<td>- Document review</td>
<td>- Earthtec, WUC, PIU</td>
<td>- Once before construction</td>
<td>- ESMP Monthly Monitoring Report</td>
<td>- Employment of the key staff</td>
<td>- The construction work should be stopped until all key personnel are employed.</td>
</tr>
<tr>
<td>- Fair and transparent access to employment of local skilled and unskilled workers in the project, including women</td>
<td>- Number of workers from Bere settlement (men and women)</td>
<td>- Contractor’s Camp Site/Offices</td>
<td>- At least 40 percent of unskilled workers are from Bere settlement and should include the Vulnerable Community. - Include measures to ensure women are hired</td>
<td>- Document review (contractor’s hiring plan and personnel records)</td>
<td>- Earthtec, WUC, PIU</td>
<td>- Throughout the lifespan of the project cycle</td>
<td>- ESMP Monthly Monitoring Report</td>
<td>- At least 40 percent of all workers</td>
<td>- The construction work should be stopped until people from the settlement are hired as prescribed in the hiring plan</td>
</tr>
<tr>
<td>- Ensuring community has regular consultations</td>
<td>- Consultations</td>
<td>- Bere Tribal Administration and Ghanzi District Council</td>
<td>- Formally consult tribal authorities, VDC and local Government authorities to inform them of impending works.</td>
<td>- Participation and verification with local authorities</td>
<td>- Earthtec, Tribal Administration, VDC, Ghanzi District Council</td>
<td>- Once prior to the commencement of construction</td>
<td>- EA Act</td>
<td>- All relevant consultations to be undertaken before the project commences</td>
<td></td>
</tr>
<tr>
<td>- Rights to land (servitudes, access roads, labor/contractor’s camp, etc)</td>
<td>- Contractor’s and Labourer’s Camp and surrounding area - Borehole and reservoir area</td>
<td>- Contractor’s and Labourer’s Camp and surrounding areas</td>
<td>- Servitudes and land rights required for the pipeline route and Camp sites for Contractor and Labourer’s Camp are acquired before the commencement of the project.</td>
<td>- Document review</td>
<td>- Ghanzi Land Board, Earthtec, Tribal Administration, Ghanzi District Council</td>
<td>- GHLCW</td>
<td>- Tribal Land Act</td>
<td>- Any inconsistency the Ghanzi Land board and PCU will be notified. Documentation will be immediately obtained and provided to the World Bank and included in the ESIA.</td>
<td></td>
</tr>
<tr>
<td>- Occupation Health and Safety of workers</td>
<td>- Protective Clothing</td>
<td>- The construction and Camp Site.</td>
<td>- Preparation for health educational sessions on diseases such as HIV/AIDS conducted for workers and villagers - Adequate number of well-equipped first aid kits mobilized - Adequate number of protective clothing, gloves, boots, earplugs and nose masks for workers purchased</td>
<td>- Observation and Documentary evidence</td>
<td>- Site Agent, Earthtec, District Health Management Team</td>
<td>- Once a month since project commencement</td>
<td>- ESMP Monthly Monitoring Report</td>
<td>- Policy on HIV/AIDS, Public Health Act</td>
<td>- Contractor instructed to order requisite PPE.</td>
</tr>
<tr>
<td>- A Gender Based Violence (GBV), Sexual Harassment Exploitation and Abuse (SHEA)/ and</td>
<td>- Recruiting of team members and their formation</td>
<td>- Bere Kgotla</td>
<td>- Formation of a Compliance Team</td>
<td>- Documentary Review - Field visits and spot checks</td>
<td>- WUC</td>
<td>- Once before works commences and monthly thereafter to ensure it is</td>
<td>- Community of Bere, WUC, Ghanzi District Council</td>
<td>- Requirement of ESMP, EA, Act 2010</td>
<td>- Assess requirement and comply with the ESMP before project work commences</td>
</tr>
</tbody>
</table>

### SOCIAL

- **Key Performance Indicators**
  - Number of awareness training given to workers
  - Presence of key personnel at the project site.
  - Hours of work spent on site
  - Document review (contractor’s hiring plan and personnel records)
  - Preparation for health educational sessions on diseases such as HIV/AIDS conducted for workers and villagers
  - Adequate number of well-equipped first aid kits mobilized
  - Adequate number of protective clothing, gloves, boots, earplugs and nose masks for workers purchased

- **Reporting Mechanism**
  - ESMP Monthly Monitoring Report
  - Site Agent’s Report
  - ESMP Monitoring Report

- **Threshold or Existing Standard**
  - At least 40 percent of all workers
  - Number of women hired
  - All relevant consultations to be undertaken before the project commences

- **Recommended Action When the Threshold is Exceeded**
  - Stop work, reprimand SHE officer and ensure awareness training is undertaken.
  - The construction work should be stopped until all key personnel are employed.
  - Should be hired and available onsite immediately before the works commence.
  - The construction work should be stopped until people from the settlement are hired as prescribed in the hiring plan.
### ENVIRONMENTAL

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<tr>
<th>Issue</th>
<th>The parameter to be monitored</th>
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<th>Responsible Agent for Monitoring</th>
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<th>Threshold or Existing Standard</th>
<th>Recommended Action When the Threshold is Exceeded</th>
</tr>
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<tbody>
<tr>
<td>Noise Pollution</td>
<td>Noise</td>
<td>In front of Bere Primary School and at the Council Residential Plots</td>
<td>Noise levels Number of Complaints/Grievance on noise received</td>
<td>Observation List of complaints (document review) Measurement by use of Sound Level Metre</td>
<td>Earthtec Site Agent Tribal Administration Ghanzi District Council, Department of Waste management and Pollution Control</td>
<td>Weekly during construction</td>
<td>ESMP Monthly Monitoring Report Site Agent’s Report</td>
<td>Noise not to exceed 85 dB during the day</td>
<td>Work to be stopped until the source of noise is identified and corrected.</td>
</tr>
<tr>
<td>Air Pollution</td>
<td>Dust</td>
<td>In front of Bere Primary School and residential plots</td>
<td>Dust emissions of PM10</td>
<td>Observation List of complaints</td>
<td>Earthtec Site Agent</td>
<td>Weekly during construction</td>
<td>ESMP Monthly Monitoring Report Atmospheric Pollution Act for</td>
<td></td>
<td>Work to be stopped until</td>
</tr>
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</table>

### (II) CONSTRUCTION STAGE

#### ENVIRONMENTAL

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<tr>
<th>Issue</th>
<th>The Parameter to be Monitored</th>
<th>Monitoring Objective</th>
<th>Location of Monitoring</th>
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<th>Recommended action when the threshold is exceeded</th>
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<tr>
<td>Air Pollution</td>
<td>Dust</td>
<td>To prevent air pollution.</td>
<td>In front of Bere Primary School and residential plots</td>
<td>Dust emissions of PM10</td>
<td>Observation, List of complaints</td>
<td>Earthtec, Site Agent</td>
<td>Weekly during construction</td>
<td>ESMP Monthly Monitoring Report</td>
<td>Atmospheric Pollution Act for</td>
<td>Work to be stopped until</td>
</tr>
<tr>
<td>Noise Pollution</td>
<td>Noise</td>
<td>To reduce the impact of noise pollution on workers and recipients within 100m from the pipeline route, water tank and pipeline route.</td>
<td>In front of Bere Primary School and at the Council Residential Plots</td>
<td>Noise levels Number of Complaints/Grievance on noise received</td>
<td>Observation List of complaints (document review) Measurement by use of Sound Level Metre</td>
<td>Earthtec Site Agent Tribal Administration Ghanzi District Council, Department of Waste management and Pollution Control</td>
<td>Weekly during construction</td>
<td>ESMP Monthly Monitoring Report Site Agent’s Report</td>
<td>Noise not to exceed 85 dB during the day</td>
<td>Work to be stopped until the source of noise is identified and corrected.</td>
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#### (I) IMPLEMENTATION STAGE

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<th>Method of Monitoring</th>
<th>Responsible Agent for Monitoring</th>
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<th>Reporting Mechanism</th>
<th>Threshold or existing standard</th>
<th>Recommended Action When the Threshold is Exceeded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violence Against Children (VAC) Compliance Team Formed</td>
<td>- Guiding document to organise team and their roles and responsibilities. - Selection of 2 community members and appointment of a Community liaison Officer - Mapping of services for GBV completed and GRM GBV process is established - Training sessions to ensure roles are clear</td>
<td>Bere Kgotla/ WUC offices</td>
<td>Number and type of training organised for all stakeholders Number of people in attendance and their organisations</td>
<td>Documentary Review Monitoring CLOs and PLOs logs Monitoring contractor engagement logs</td>
<td>WUC</td>
<td>Once a month after award of civil works</td>
<td>Community of Bere, WUC, Ghanzi District Council</td>
<td>Requirement of ESMP</td>
<td>Assess requirement and comply with the ESMP</td>
</tr>
</tbody>
</table>

#### (II) CONSTRUCTION STAGE

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<th>Key performance indicator</th>
<th>Method of Monitoring</th>
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<th>Recommended action when the threshold is exceeded</th>
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<tr>
<td>Noise Pollution</td>
<td>Noise</td>
<td>To reduce the impact of noise pollution on workers and recipients within 100m from the pipeline route, water tank and pipeline route.</td>
<td>In front of Bere Primary School and at the Council Residential Plots</td>
<td>Noise levels Number of Complaints/Grievance on noise received</td>
<td>Observation List of complaints (document review) Measurement by use of Sound Level Metre</td>
<td>Earthtec Site Agent Tribal Administration Ghanzi District Council, Department of Waste management and Pollution Control</td>
<td>Weekly during construction</td>
<td>ESMP Monthly Monitoring Report Site Agent’s Report</td>
<td>Noise not to exceed 85 dB during the day</td>
<td>Work to be stopped until the source of noise is identified and corrected.</td>
</tr>
<tr>
<td>Air Pollution</td>
<td>Dust</td>
<td>To prevent air pollution.</td>
<td>In front of Bere Primary School and residential plots</td>
<td>Dust emissions of PM10</td>
<td>Observation, List of complaints</td>
<td>Earthtec, Site Agent</td>
<td>Weekly during construction</td>
<td>ESMP Monthly Monitoring Report</td>
<td>Atmospheric Pollution Act for</td>
<td>Work to be stopped until</td>
</tr>
</tbody>
</table>

#### (I) IMPLEMENTATION STAGE

<table>
<thead>
<tr>
<th>Issue</th>
<th>The parameter to be monitored</th>
<th>Location of monitoring</th>
<th>Key Performance Indicator</th>
<th>Method of Monitoring</th>
<th>Responsible Agent for Monitoring</th>
<th>Frequency of Monitoring</th>
<th>Reporting Mechanism</th>
<th>Threshold or existing standard</th>
<th>Recommended Action When the Threshold is Exceeded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violence Against Children (VAC) Compliance Team Formed</td>
<td>- Guiding document to organise team and their roles and responsibilities. - Selection of 2 community members and appointment of a Community liaison Officer - Mapping of services for GBV completed and GRM GBV process is established - Training sessions to ensure roles are clear</td>
<td>Bere Kgotla/ WUC offices</td>
<td>Number and type of training organised for all stakeholders Number of people in attendance and their organisations</td>
<td>Documentary Review Monitoring CLOs and PLOs logs Monitoring contractor engagement logs</td>
<td>WUC</td>
<td>Once a month after award of civil works</td>
<td>Community of Bere, WUC, Ghanzi District Council</td>
<td>Requirement of ESMP</td>
<td>Assess requirement and comply with the ESMP</td>
</tr>
<tr>
<td>Issue</td>
<td>The Parameter to be Monitored</td>
<td>Monitoring Objective</td>
<td>Location of Monitoring</td>
<td>Key performance indicator</td>
<td>Method of Monitoring</td>
<td>Responsible Agent for Monitoring</td>
<td>Frequency of Monitoring</td>
<td>Reporting Mechanism</td>
<td>Threshold or existing standard</td>
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</tr>
<tr>
<td>- Soil</td>
<td>Soil erosion</td>
<td>To ensure that project works do not trigger erosion and siltation</td>
<td>at the Council Residential Plots</td>
<td>- Measurement by use of Handheld Air Sampler</td>
<td>- Department of Waste management and Pollution Control</td>
<td>- Site Agent's Report</td>
<td>- Site Agent's Report</td>
<td>- PM10 which is 150 mg/m³</td>
<td>- Dust suppression measures are implemented</td>
</tr>
<tr>
<td>- Soil</td>
<td>Hydrocarbon in soils</td>
<td>To prevent soil contamination due to project works</td>
<td>- All excavated areas /working areas along the pipeline route</td>
<td>- Depth of eroded soil</td>
<td>- Number of erosional features visible on site.</td>
<td>- Earthtec</td>
<td>- Earthtec</td>
<td>- No new erosional features initiated on site.</td>
<td>- Contractor to rehabilitate damaged areas.</td>
</tr>
<tr>
<td>- Land Pollution</td>
<td>Solid waste and Liquid (human waste)</td>
<td>To ensure that the working environment and workers have adequate sanitation services</td>
<td>- Borehole site, along pipeline route and location of reservoir tank, site offices, and Labour’s Camp site.</td>
<td>- Concentration of hydrocarbons in contaminated soil</td>
<td>- Soil Test</td>
<td>- Earthtec, Site Agent Ghanzi District Council, Department of Waste management and Pollution Control</td>
<td>- Daily during construction,</td>
<td>- ESMP Monthly Monitoring Report</td>
<td>- Waste Management Act, Public Health Act</td>
</tr>
<tr>
<td>- Risk of Bush Fires</td>
<td>Bush fires</td>
<td>All project sites: Borehole, Contractor’s and Labour’s Camp, pipeline route and reservoir tank.</td>
<td>- All working areas</td>
<td>- Number of training given to workers to prevent and fight fire.</td>
<td>- Observation and Document review</td>
<td>- Earthtec, Site Agent, Tribal Administration Ghanzi District Council, Department of Waste management and Pollution Control</td>
<td>- Daily during construction,</td>
<td>- ESMP Monthly Monitoring Report</td>
<td>- No burning on site.</td>
</tr>
<tr>
<td>- Equitable and transparent access to employment of community members in the project (men and women, vulnerable groups, etc.)</td>
<td>Employment of local Labourer's from Bere settlement</td>
<td>To make sure that a minimum of 40 percent of the employees come from Bere settlement and includes members of the vulnerable group insofar as the capacities needed for the project can be</td>
<td>- Site Offices</td>
<td>- Number of people employed (break down according to gender, age, vulnerable community, etc.).</td>
<td>- Documentary Review (contractor’s hiring plan, personnel records)</td>
<td>- Earthtec, Site Agent District Labour Office, Ghanzi Tribal Administration</td>
<td>- Monthly</td>
<td>- ESMP monitoring report, Site Agent report Contractor’s Monthly Progress Site report</td>
<td>- A minimum of 40 percent of workers to come from Bere settlement</td>
</tr>
</tbody>
</table>

**SOCIAL**

- Equitable and transparent access to employment of community members in the project (men and women, vulnerable groups, etc.)
- Employment of local Labourer’s from Bere settlement

**Location of Monitoring**: at the Council Residential Plots

**Key performance indicator**: Number of people employed (break down according to gender, age, vulnerable community, etc.).

**Method of Monitoring**: Documentary Review (contractor’s hiring plan, personnel records) and community meetings

**Responsible Agent for Monitoring**: Earthtec, Site Agent District Labour Office, Ghanzi, Tribal Administration

**Frequency of Monitoring**: Monthly

**Reporting Mechanism**: ESMP monitoring report, Site Agent report, Contractor’s Monthly Progress Site report

**Threshold or existing standard**: A minimum of 40 percent of workers to come from Bere settlement

**Recommended action when the threshold is exceeded**: Contractor to employ at least 40% of its labour from Bere settlement, including women and Vulnerable Community members insofar as the capacities needed for the project are available in the community.
<table>
<thead>
<tr>
<th>Issue</th>
<th>The Parameter to be Monitored</th>
<th>Monitoring Objective</th>
<th>Location of Monitoring</th>
<th>Key performance indicator</th>
<th>Method of Monitoring</th>
<th>Responsible Agent for Monitoring</th>
<th>Frequency of Monitoring</th>
<th>Reporting Mechanism</th>
<th>Threshold or existing standard</th>
<th>Recommended action when the threshold is exceeded</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Aesthetics of infrastructure</td>
<td>- Aesthetics</td>
<td>- To preserve the natural beauty of the area</td>
<td>- Water tank Site</td>
<td>- Erection and painting of palisade fence - Heaped soils to be used timely</td>
<td>Observation</td>
<td>Earthtec, Site Agent, Tribal Administration</td>
<td>Monthly during construction</td>
<td>- ESMP monitoring Report, Site Agent Report</td>
<td>National Policy on Natural Resources Conservation and Development</td>
<td>Discussion with contractor to agree on steps improve outcome</td>
</tr>
<tr>
<td>- Potential Road Traffic Accidents</td>
<td>- Training on Road Traffic</td>
<td>- To prevent road traffic accidents</td>
<td>- Access roads to the site, Site offices, Ghanzi Police Station</td>
<td>- Number of road traffic education given to drivers and workers. - Number and types of road signs erected - Number of road traffic offences committed</td>
<td>Police records/discussion with local police - Observation - Community engagement</td>
<td>Earthtec, Site Agent, Traffic Police, Ghanzi District</td>
<td>Monthly during construction</td>
<td>- ESMP Monitoring Report, Site Agent Report</td>
<td>Road traffic Act and Regulations No Road Traffic Accidents</td>
<td>Contractor ordered to implement road traffic education - Contractor order to comply with road/traffic safety plan</td>
</tr>
<tr>
<td>- Wildlife</td>
<td>- Attacks and presence of Wildlife on site.</td>
<td>- To ensure that all workers receive education and training to enable them prevent encounters with wildlife.</td>
<td>- Site offices, Borehole Site - Office of the Department of Wildlife and National Parks in Ghanzi</td>
<td>- Number of workers received training/induction on wildlife prior to work. Document review - Number of training to workers and staff conducted by the Department of Wildlife and National Parks</td>
<td>Document review</td>
<td>Earthtec, Site Agent, Department of Wildlife and National Parks</td>
<td>Monthly</td>
<td>- ESMP monitoring Report, Site Agent Report</td>
<td>No Worker-Wildlife encounters</td>
<td>Work to be stopped until training is provided.</td>
</tr>
<tr>
<td>- Occupational Health</td>
<td>- Health wellbeing of workers</td>
<td>- To ensure protection and promotion of the health of workers</td>
<td>- All working areas on site. - Site Office</td>
<td>- Number and type of health educational sessions conducted for workers - Number of First Aid Box provided on site and stocked with necessary drugs and - Number of condom containers on site - Number of trained workers in health and Safety - Add the other measures discussed (like GBV/VAC awareness, awareness of use of GRM and understanding of the codes of conduct)</td>
<td>Observation - Document review</td>
<td>Earthtec, Site Agent, Ghanzi District Health Management Team - Department of Occupational Health and Safety</td>
<td>Monthly during construction</td>
<td>- ESMP monitoring report, Site Agent report - Ghanzi District Health Management report</td>
<td>Development Control Code, Public Health Act, Factories Act</td>
<td>Contractor reprimanded to put in corrective measures as per the mitigation plan</td>
</tr>
<tr>
<td>Issue</td>
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<td>Method of Monitoring</td>
<td>Responsible Agent for Monitoring</td>
<td>Frequency of Monitoring</td>
<td>Reporting Mechanism</td>
<td>Monitoring/record type</td>
<td>Threshold or existing standard</td>
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<tr>
<td>• STD/HIV Transmission</td>
<td>- STIs</td>
<td>To ensure that project does not result in accelerated transmission of STIs including HIV</td>
<td>- Settlement clinics, - Waste Transfer Station, - Public Standpipes</td>
<td>- Number and type of HIV awareness information in place for workers and the community of Bere - Record of HIV Awareness meetings and training undertaken per month - Record of HIV Counselling and Testing held</td>
<td>- Document review and Observation, GRM monitoring/record s</td>
<td>- Ghanzi District Council Health Management Team, - Earthtec, - Site Agent</td>
<td>- Once every month during construction</td>
<td>- ESMP monitoring report, - Site Agent report, - District Health Management report</td>
<td>- HIV/AIDS Policy</td>
<td>• The Contractor asked to implement HIV/AIDS/STIs awareness programmes within the time frame set by the PLO • Education on Codes of Conduct and expected behaviours reinforced</td>
</tr>
<tr>
<td>• Pressure on Social Facilities</td>
<td>- Requirements on health, water and waste management</td>
<td>To verify effectiveness of mitigation measures.</td>
<td>- Bire Health Post, - Waste Transfer Station, - Public Standpipes</td>
<td>- Number of workers treated at the health post per week, - Volume of waste at the Transfer Station, - Time spent in queues at the public standpipes for water</td>
<td>- Document review and Observation, GRM monitoring/record s</td>
<td>- Earthtec, - WUC Plant Operator and - PIU - Tribal Administration - Ghanzi District Council</td>
<td>- Once every month during construction</td>
<td>- Site Agent report, - PIU monthly report, - WUC Plant Operator monthly meter reading report</td>
<td>- Public Health Act</td>
<td>• The contractor ordered to provide adequate sanitation, water, power and health facilities for his employees.</td>
</tr>
<tr>
<td>• Severance of access to plots due to excavation</td>
<td>- Blockage of access (plots and roads)</td>
<td>To avoid blockage of access to plots and roads</td>
<td>- Main road within in the settlement and the road which leads to the water tank. Plots along the pipeline route corridor.</td>
<td>- Number of plots or roads affected by excavation, - Period of blockage</td>
<td>- Observation - Time keeping</td>
<td>- Earthtec - Site Agent - Tribal Administration - Ghanzi District Council</td>
<td>- Daily</td>
<td>- ESMP monitoring report, - Site Agent report</td>
<td>- No Blockage for more than 12 hrs.</td>
<td>• The contractor should fill up to unblock access.</td>
</tr>
<tr>
<td>• Trench Protection</td>
<td>- Unprotected open Trenches, - Cave ins</td>
<td>To protect all excavations against risk of human and animals falling into them and cave-ins</td>
<td>- Along the entire 3.7 km pipeline route corridor.</td>
<td>- Length of protected trenches, - Percentage of protected trenches against total excavations dug, - Number of caves-ins /collapse of trenches</td>
<td>- Measurement • Observations</td>
<td>- Earthtec, - Site agent, - Tribal Administration</td>
<td>- Daily</td>
<td>- ESMP monitoring report, - Site Agent report</td>
<td>- All dug trenches should be protected</td>
<td>• The Contractor is ordered to protect the trench or fill them up and protect walls of trenches.</td>
</tr>
<tr>
<td>• Community Complaints/Conflicts between Migrant workers and host community</td>
<td>- The number of complaints recorded</td>
<td>To ensure effective communication between the community and the Contractor, To avoid conflicts, To ensure that all the complaints are properly recorded, and complaints are mitigated.</td>
<td>- Site Office: Community Liaison Officer, - The number and type of complaints reported to both the GRM And Community Liaison Office</td>
<td>- Observation - Document review/ list of complaints - GRM monitoring log - Consultation with community/spot checks with community to ask them their views about how the project is addressing social and environmental issues</td>
<td>- Earthtec, - WUC, - PIU and - Community Liaison Officer - Site Agent</td>
<td>- Daily during construction</td>
<td>- Site Agent report, - PIU monthly reports, - Community liaison monthly report</td>
<td>- All complaints should be attended to, - The GRM must be functioning and recorded properly</td>
<td>- The Contractor must address the complaints as soon as possible and ensure the GRM is properly used if the complaint is an issue that cannot be immediately addressed. • The Contractor must keep accurate records of all communications with the complainant, including notations of all interactions with the complainant.</td>
<td></td>
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</tbody>
</table>

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<table>
<thead>
<tr>
<th>Issue</th>
<th>The Parameter to be Monitored</th>
<th>Monitoring Objective</th>
<th>Location of Monitoring</th>
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<th>Responsible Agent for Monitoring</th>
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<th>Reporting Mechanism</th>
<th>Threshold or existing standard</th>
<th>Recommended action when the threshold is exceeded</th>
</tr>
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<tbody>
<tr>
<td>Implementation of VCPs requirements including GBVs, VAC</td>
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<tr>
<td>- Impact/Issue</td>
<td>Water Quantity</td>
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<td>- Water Quantity</td>
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<tr>
<td>- (III) OPERATION AND MAINTENANCE PHASE</td>
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</tbody>
</table>

**Impact/Issue**

**The parameter to be monitored**

**Monitoring Objective**

**Location of Monitoring**

**Key Performance Indicator**

**Method of Monitoring**

**Responsible Agent for Monitoring**

**Frequency of Monitoring**

**Reporting Mechanism**

**Threshold or existing standard**

**Recommended action when the threshold is exceeded**

- Water Quality
  - Sodium
  - To ensure all parameters of water quality are within acceptable thresholds especially sodium.
  - Borehole, Reservoir tanks
  - Sampling and testing schedules
  - Records and results of water testing
  - Document review
  - WUC
  - Every three months after project completion
  - WUC Project Monthly/quarterly report
  - Drinking Water Quality Standard - BOS 32:2015
  - Appropriate water treatment to ensure water quality is achieved

- Water Quantity
  - Volume
  - To ensure that residents receive adequate good quality water
  - Public Standpipes
  - Record of complaints and when they were addressed
  - Record of volume of water supplied
  - Waiting time to fetch water at the public standpipes
  - Education to the community of Bere on the wise use of water.
  - Document review and observation
  - WUC
  - Every three months after project completion
  - WUC Project Monthly/quarterly report
  - Drinking Water Quality Standard - BOS 32:2015
  - Appropriate water treatment to ensure water quality is achieved
<table>
<thead>
<tr>
<th>Draw Down Effect</th>
<th>Level of water in borehole and surrounding water bodies or boreholes</th>
<th>To avoid over abstraction that would adversely affect other users who depend on the water table for survival, as well as vegetation composition.</th>
<th>BH 9134 as a monitoring borehole.</th>
<th>Water level in boreholes</th>
<th>Use of Water Level Indicator Depth Gauge.</th>
<th>WUC</th>
<th>Once a year</th>
<th>WUC Project Monthly/quaterly report</th>
<th>Abstraction does not affect other water bodies adversely</th>
<th>Reduce abstraction rate from the borehole and look for other alternative water sources.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uneven access to public standpipes</td>
<td>Public standpipes and house/Yard connections</td>
<td>To provide public standpipes that are evenly distributed in the settlement</td>
<td>Bere settlement</td>
<td>Number of repaired public standpipes.</td>
<td>Number of new public standpipes provided.</td>
<td>Number of new household/yard connections</td>
<td>Document review, Observation</td>
<td>WUC</td>
<td>Once a year</td>
<td>WUC Project Monthly/quarterly report</td>
</tr>
<tr>
<td>Protection of integrity of equipment</td>
<td>Palisade fence, Reservoir tank, borehole, pump station, generator, solar panels and public standpipes</td>
<td>To ensure the protection of the integrity of the equipment</td>
<td>Reservoir tanks, borehole site and public standpipes</td>
<td>Number and types of vandalism</td>
<td>Education to the community of Bere against vandalism.</td>
<td>Observation and Document review</td>
<td>WUC</td>
<td>Every month after project completion</td>
<td>WUC Project Monthly/quarterly report</td>
<td>WUC Plant Operator monthly report</td>
</tr>
</tbody>
</table>
CHAPTER EIGHT: GRIEVANCE REDRESS MECHANISM (GRM)

8.1 INTRODUCTION

A Grievance Redress Mechanism is necessary for addressing the concerns of Project Affected People and other stakeholders. It is anticipated that some of these concerns may include eligibility criteria, compensation entitlements for loss of livelihood and use of land.

The mechanism for grievance redress includes:
- Provision for the establishment of a Grievance Redress Committee (see GRC members below)
- Multiple grievance uptake locations and multiple channels for receiving grievances
- Fixed service standards for grievance resolution, include adjudication process and process of handling situations related to gender-based violence/sexual exploitation and abuse
- Prompt and clear processing guidelines (including reviewing procedures and monitoring system)
- A time frame for responding to grievances
- A reliable and effective reporting and recording system
- Procedure for assessing the grievance
- Grievance escalation process

The grievance redress mechanism is designed with the objective of solving disputes at the earliest possible time before they escalate. In addition, World Bank OP 4.12 emphasizes that the PAPs should be heard and as such, they must have access to a fair, transparent and accessible means to address their concerns and views related to the project. Furthermore, the mechanism should be effective in addressing projects at project-level so that grievances are not referred through the court system for resolution, especially since the court system may not be financially accessible to all and may add cost and time burdens.

General Principles and Key Aspects of the GRM

The Project has put in place an extra-judicial mechanism for the management of grievances and disputes. The VCs will be able to trigger this mechanism, while still being able to resort to the judicial system.

Key aspects of the grievance redress mechanism are:
- The community including VCs need to be informed about the grievance redress mechanism and how they can make use of this process.
- Grievances will be recorded using a Grievance Form (in local language, also available in English). Grievance Forms will contain details regarding the grievance as well as the name and address of the applicant, application date, type of application and the name of the persons receiving the grievance. The forms will be logged in a register where they will be tracked through to a suitable resolution.
- Complainant will receive notification that their grievance has been received (if complainant is known) in writing.
- Grievance monitoring log (which includes actions taken, corrective measures, see Annex 8).
- Closure sheet copy of which will be handed to the complainant after he/she has agreed to the resolution and signed off.
• The PIU will maintain a digital grievance database, containing the logs and records of all grievances received, with an indication of the respective status of a grievance (i.e. resolved, not resolved, pending, etc.), in addition to a hard copy.
• Resolution options will be developed through unilateral proposal, bilateral discussion and/or third-party mediation. If a complaint is not legitimate the case will be closed without agreement with the complainant. Any response will be communicated clearly either orally or in writing, and a grievance case will only be closed when an agreement with the complainant is reached.
• Community members including VCs will have access to third party legal advice, through referral to Botswana Legal Aid, at no cost to them. Information on access to legal advice will be communicated to the affected people.

8.2 MANAGEMENT FUNCTIONS AND RESPONSIBILITIES

During the implementation phase of the Project, the mechanism for grievance redress shall include:
• Provision for the establishment of a grievance redress committee with a sitting allowance budgeted for the Grievance Redress Committee (GRC) members.
• Multiple grievance uptake locations and multiple channels for receiving grievances (project hotline, project website, Facebook page, WhatsApp blasts, WUC PIU office, Kgosi and VDC, grievance box at the Kgotla).
• Fixed service standards for grievance resolution which include adjudication process.
• Prompt and clear processing guidelines: including reviewing procedures and monitoring system (see flow chart)
• A time frame for responding to grievances (see flow chart on GRM chapter)
• A reliable and effective reporting and recording system (grievance register, complaints logbook – hard copy)
• Procedure for assessing and responding to the grievance

8.3 RESPONSIBILITIES FOR IMPLEMENTING STAKEHOLDER ENGAGEMENT ACTIVITIES

8.3.1 Roles and Responsibilities

The WUC PIU in consultation with the respective community will appoint Community Liaison Officers (CLOs) in project area villages/settlements where there are project works, to conduct stakeholder outreach during project implementation and respond to any grievances or complaints that may arise. The CLOs will act as key points of contact to bring project grievances from PAPs, stakeholders, construction workers, residents, and community members to the Grievance Redress Committee (GRC). They will liaise with the WUC Safeguards Team to inform them of all complaints and outcomes. The CLO will contact the PIU Safeguards Team in case a complaint is not resolved within two weeks after receiving the alert. The PIU safeguards team will go to the field in order to obtain further information and resubmit the case to the GRC. The complainant will be notified that further information is being collected and kept informed about the status.

a. Community Liaison Officers (CLOs)

The WUC PIU will, in consultation with the Vulnerable Community appoint Community Liaison Officers (PLO) in the specific sub-project areas. The Community Liaison Officers (CLOs) will be situated in the project area villages/settlements where there are project works, will be designated to receive, review, record and address project related complaints. Every two weeks, CLO will consolidate complaints and submit to the GRC. Their contact information will be published and communicated via public announcements and information sharing about the project, (radio, television and newspapers,
community meetings, etc.), to conduct stakeholder outreach during project implementation and respond to any grievances or complaints that may arise.

Key Functions:

- The Community Liaison Officer (CLO) will create awareness on the existence of the project and Grievance Redress Mechanism
- The CLO will act as the key point of contact to bring project grievances from project affected people, construction workers, residents, and community members to the GRC.
- Register the grievance/complaints on the Grievance Logbook and acknowledge receipt within 5 days.
- Respond back to the beneficiary’s queries/complaints lodged, giving their status and/or their outcome if they had been resolved.
- Ensure that all queries/complaints from beneficiaries have been formally recorded following the existing procedures.
- Review and evaluate grievances/complaints and ensure that complainant is given feedback within 14 days
- Conduct community consultations to provide inputs into the GRM
- Facilitate communication which in the form of reports WUC PIU and Project Contractor and distribution of information, education and communication material to the community including VCs.
- Represent the project during Kgotla meetings
- Represent the interests of vulnerable individuals and groups following consultations with them to better understand their concerns and issues, and keep notes and records of such meetings
- The CLOs will be responsible for making sure the recommendations of the GRC are implemented and advising WUC PIU during ESMP and RAP implementation, as well as contractors to make any appropriate adjustments to their works.
- Work closely with the WUC Principal Sociologist and Environmental Officer and flag any issues of concern as well as report incidents as they occur
- If a concern of a highly sensitive nature is raised such as Gender-Based violence (GBV) or Sexual Harassment Exploitation and Abuse (SHEA), VACs, the CLO shall invoke the special procedures related to GBV/SHEA/VACs and will ensure the anonymity and confidentiality of the survivor. See Annex 10 for special procedures.

In addition to the CLO, the project will make available grievance forms in every settlement (at the Kgotla office) as an accessible venue for filing a grievance and a Grievance Box. In collaboration with the communication and IT team for the project, the WUC telephone hotline and website will be also available to receive complaints anonymously or they can identify themselves. Every two weeks, the CLOs will collect forms filled out to submit them to the GRC and record them in the grievance logbook.

The WUC PIU Safeguards Team will work closely with the WUC communication and IT Team, who will oversee compiling complaints received on social media, website and WUC hotline. A meeting will be held at least once per week to review complaints and submit them to the GRC in order to provide timely and responsive feedback as per the commitments in this GRM. WUC’s IT and communication team will have dedicated staff who are trained on the GRM to ensure the principles and commitments under the GRM are adhered to. For illiterate persons, CLOs will assist them to write and submit complaints. To be sure that the adequate confidentiality well be kept, the Project will issue a code of conduct to be signed by the VDC and community liaison officers, as well as all project workers (including WUC staff) involved in the GRM.
b. **The Grievances Redress Committee (GRC)**

The GRC be responsible for receiving and resolving in a fair, objective, accountable, effectively, timely and accountable manner. All concerns or complaints raised by project affected persons (PAPs) in the communities during all phases of the project lifecycle.

**C. COMPOSITION AND MEMBERSHIP OF THE GRIEVANCE RESOLUTION COMMITTEE (GRC)**

The GRC will meet as and when required, preferably once per month.

When complaints arise, they will be submitted to the Project Grievance Redress Committee.

The committee will be created with clear terms of reference, and the guiding principles to be followed by the GRC during their conducting of business include among others: Confidentiality, Transparency and Accountability. In addition, specific Grievance Redress Mechanism for conflict prevention and resolution at the project level will be devised in consultation with the affected communities.

The GRC, shall maintain all records from complaint to final decisions made by the GRC for future reference, with an accurate and up to date grievance logbook (the PLO is to ensure the logbook is accurate and ensure they have a copy of updates to the logbook). The GRC shall also ensure that public participation and consultation is always a part of the process to promote understanding, transparency, trust in the project, accountability and mitigate against unnecessary complaints and disputes. The Chairmanship of the GRC will rotate amongst the Committee Members depending on the issues to be considered by the Committee.

The GRC Members include:

- Project Contractor
- Land Board Representative
- Water Utilities Corporation Representative
- Two Local Representatives (One man and one woman. In Vulnerable Communities, at least one representative of VC)
- Project Liaison Officer 1 (Safeguards Social Development Consultant)
- Environmental Officer 2 (Safeguards Social Development Consultant)
- Community Liaison Officer (Secretary)
- NGO representing Basarwa (e.g. Khwedom Council, San Youth Network)

The WUC PIU Safeguards Team Members will attend meetings when there is a matter that requires their urgent attention.

The broad responsibilities of the GRC include:

- Publicizing the grievance management procedures
- Receiving, reviewing, investigating and keeping track of grievances referred to them by the CLO
- Adjudicating grievances
- Monitoring and evaluating the fulfilment of agreements achieved through the grievance redress mechanism.
d. **Project Liaison Officers (PLOs)**

The Project Liaison Officers (PLOs) - the environmental and social safeguard monitoring consultants for the project will be tasked. Their contact information will be published and communicated via public announcements and information sharing about the project, (radio, television and newspapers, community meetings, etc.), to conduct stakeholder outreach during project implementation and respond to any grievances or complaints that may arise.

**Key functions:**

- Attend to households’ issues regarding the reconstruction works and facilitate the liaison between the beneficiary(households), local communities (community buildings) and the project team.
- Ensure prompt communication of concerns and issues about the project to the project team (not the Contractors).
- Assist the project communication team with all communication matters and to provide feedback on the effectiveness of the messages and means of communication used.
- Assist project team to arrange meetings and location of meeting for any consultation with the community.
- Monitor the implementation of the ESMP and report progress at Onsite Project Progress meetings.

e. **The Contractor**

During the implementation, Contractors shall work in line with the World Bank Standards on Environmental, Social, Health and Safety (ESHS) and Occupational Health and Safety (OHS) in the workplace and on their relationship with affected communities. The application of these Codes of Conduct will help ensure the project meets its ESHS and OHS objectives, as well as preventing and/or mitigating the risks of GBV and VAC on the project and in the local communities. Contractors should make sure these Codes of Conduct are adopted by those working on the project and are meant to:

- Create awareness of the ESHS and OHS expectations on the project
- Create common awareness about GBV and VAC and ensure a shared understanding that they have no place in the project
- Create a clear system for identifying, responding to, and sanctioning GBV and VAC incidents

Three codes of conduct must be adhered to in this project (full codes are in **Annex 10**):

i. **Company Code of Conduct:** Commits the company to addressing GBV and VAC issues;

ii. **Manager’s Code of Conduct:** Commits managers to implementing the Company Code of Conduct, as well as those signed by individuals; and,

iii. **Individual Code of Conduct:** Code of Conduct for everyone working on the project, including managers.

These codes of conduct will be explained and displayed in the work sites, workers and affected communities will be sensitized prior to works start. The company liaison officer will work closely with WUC PIU safeguards team to bring to the GRC all complaints and special cases which affect the Codes of conduct.
For issues regarding GBV and VAC, the Response Protocol which is the mechanisms set in place to respond to cases of GBV and VAC will be implemented. By doing that, the Contractor will first establish a ‘GBV and VAC Compliance Team’ (GCCT).

The GCCT will include, as appropriate to the project, at least four representatives (‘Focal Points’) as follows:

1. A safeguards specialist from the WUC;
2. The occupational health and safety manager from the Contractor (or someone else tasked with the responsibility for addressing GBV and VAC on the Contractors side) with the time and seniority to devote to the position;
3. The Project Liaison Officer (also known as the supervision consultant); and,
4. A Social Worker with experience in Sexual Harassment, Exploitation and Abuse (SHEA), including Gender Based Violence (GBV) and Violence Against Children (VACs) GBV and VAC (the ‘Service Provider’).

8.4. COMMUNITY LEVEL GRIEVANCE REDRESS MECHANISM

Local communities have existing traditional and cultural grievance redress mechanisms. It is expected that some disputes at the community level may be resolved using these mechanisms, without the involvement of the Project, Contractor(s), and or Government representatives at local and national level should. The extended family, settlement and/or Kgosi may be involved at this level. This may be more suitable for issues and concerns that are minor. For example, if the Contractor needs to recruit housekeepers or other human resource needs, he or she can choose among the resumes collected by the community. The community and Contractor will be informed that the principle of non-discrimination and fairness as per the Botswanan Labor Law will apply in the selection. Also, if the company wants to compensate the community for using their sand, gravel or because of the impact of its activity (dust dispersion), those grievances can be solved at the community level, without the GRC, if the community so chooses.

8.5. PROJECT LEVEL GRIEVANCE REDRESS MECHANISM

Many project related grievances during the works are minor and site-specific. Often, they revolve around nuisances generated during construction such as noise, dust, vibration, workers disputes, etc. They can be resolved easily on site. However, regarding disputes that include differences between households over land, or boundaries, even on issues triggered indirectly by the Project during its lifecycle, the GRM will have a body, the GRC to address disputes.

Other issues that are potential grievances may involve access to property arrangements, or sexual harassment, exploitation and abuse (SHEA), including Gender Based Violence (GBV) and Violence Against Children (VACs) of workers Contractors and/or community members during construction phase. Most of these cannot be resolved immediately and on site and in the case of GBV, require specific interventions and processes to protect the safety, well-being and identity of survivors.

8.6 GRM PROCEDURES

The community will be informed and sensitized about the use of an existence of the GRM (through radio notices, TV, community meetings, community signage, Kgotla, CLOs, PLOs) of the various uptake options where complaints can be submitted. The WUC PIU Safeguards Team will meet every two weeks with the communication and IT team to review all complaints from social media, websites and
hotline and inform the complainants within three days that complaints have been received and the procedures they must follow.

The WUC PIU Safeguards Team will then organize a meeting for the GRC to meet at the soonest to ensure compliance with the timeline for responses to complainants.

If the identity of the person who submitted a grievance is known, the GRC must inform them within three days of the decision or when a decision is to be expected. The date of this outreach is to also be logged into the grievance log. The GRM will commit decisions to be finalized within two weeks of date of receipt and complainants will be notified and will record the complainant’s comments about decision. If the complainant is not satisfied, they will be notified about escalation procedures.

Notices and signage will be erected at all sites providing the public information on the Project and summarising the GRM process, including contact details of the relevant Community Liaison Officer. All complainants should be free to lodge a complaint in one or as many of the uptake stations noted above.

A Complaints Register (or Grievance Log) will be at the WUC PIU Safeguards Office and village/settlement Kgotala office with CLOs, but also with Contractors, who will log the: i) details and nature of the complaint (include categorization of sensitive/urgent, non-sensitive); ii) the complainant name and their contact details if known; iii) date the complaint was received; iv) corrective actions taken in response to the complaint; v) the date the response was made available to the community and the complainant; vi) the resolution; vii) the response of the complainant if response was acceptable to them or not; viii) the name of the person who received the complaint and location/method the complaint was lodged. This information will be included in WUC Safeguards Team progress reports to the World Bank. (See Annex 8) for example of grievance log). The CLOs are responsible for ensuring that they collect all grievances so that they can update the PIU logbook and their logbook.

8.7 The Grievance Redress Structure

The structure or steps of the grievance mechanism includes:

- Multiple and accessible uptake stations to receive complaints (text, phone number, project website, mailing address, grievance box, others, communication to CLO, VDC, Kgosi) and account for vulnerable or disadvantaged individuals (persons with disabilities, elderly, illiterate, lack access to phone/computer, etc.)
- Receive, register and acknowledge complaint in logbook
- Screen and establish the foundation of the grievance
- Implement and monitor decision
- Notify complainant of outcome and obtain feedback on acceptability
- If grievance is not escalated, conclusion to redress grievance and note in logbook
- Advise for a judicial proceedings as last resort if necessary
- Document the experience for future reference
- Notify the community (community boards, on project website, CLO, community meetings) about various complaints and outcomes without naming names

A step-by-step process, with duration of each stage from the reception of the complaint to the notification of the resolution, with suggested timeframe and responsibilities is indicated in Table 14.
8.8 Grievance Redress Process

The steps of the grievance mechanism consist of:

- The Agrieved Party (AP) will take his/her grievance to the CLO who will endeavour to resolve it immediately.
- Where AP is not satisfied, the CLO will refer the grievance to the GRC.
- Receive, register and acknowledge complaint.
- Screen and establish the foundation of the grievance.
- Implement and monitor redress action.
- Notify the complainant of the result and obtain a response if the resolution is satisfactory. If not, inform the complainant of escalation process.
- Advise for judicial proceedings as last resort if necessary
- Document the experience for future reference.

Where the traditional and administrative procedures fail to resolve disputes, the aggrieved party has the right to take the matter to the courts in accordance with the Constitution of Botswana, other national laws, and the Lenders’ policies.

The process is highlighted in Table 14 with suggested timeframe and responsibilities.

**Table 14: Grievance Redress Mechanism Process**

<table>
<thead>
<tr>
<th>Step</th>
<th>Process</th>
<th>Description/Required Action</th>
<th>Completion Timeframe</th>
<th>Responsible Agency/Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Receipt of Complaint</td>
<td>Document date of receipt, name of complainant, nature of complaint</td>
<td>1 day</td>
<td>CLO (Community Liaison Officer)</td>
</tr>
<tr>
<td>2.</td>
<td>Acknowledgement of Grievance</td>
<td>By letter, email, phone</td>
<td>1-5 days</td>
<td>CLO</td>
</tr>
<tr>
<td>3.</td>
<td>Screen and Establish the foundation / merit of the grievance</td>
<td>Visit the site; listen to the complainant/community; assess the merit</td>
<td>7-14 days</td>
<td>GRC members including the Community Liaison Officer, complainant and his/her representative</td>
</tr>
<tr>
<td>4.</td>
<td>Implement and Monitor a Redress Action</td>
<td>Where complaint is justified, identify and carry out the redress</td>
<td>21-30 days or at a time specified in writing to the complainant</td>
<td>Community Liaison Officers, WUC Social and Environmental Safeguard Specialists to coordinate the implementation of redress action</td>
</tr>
<tr>
<td>5.</td>
<td>Inform Complainant and Community (use of community boards, newspaper, radio, what’s app group, Facebook page) to inform community of grievance outcome and solicit response from complainant if claim has been fully addressed or not.</td>
<td>Where complainant is not satisfied, inform complainant of escalation process. If satisfied or not, ensure grievance logbook is updated.</td>
<td>1-2 days after deciding on a grievance by the GRC</td>
<td>CLO</td>
</tr>
</tbody>
</table>
6. Extra intervention for a dissatisfied scenario
Review the redress steps and conclusions, provide intervention solution
2-4 weeks of receiving status report
MLM/WSPLO, Social and Environmental Officers, and GRC to review and react

7. Judicial Adjudication
Complainant has the option to take complaint to court of law
No fixed time
Complainant

8. Funding of Grievance Process
WUC logistics and training, redress compensation, court process
No fixed time
WUC

8.9 Escalation of Grievances

If the complaint is not resolved to the satisfaction of the aggrieved party by the Grievance Redress Committee, it will then be referred by the WUC PIU Project Coordinator or to the Project Steering Committee (PSC).

The Project Steering Committee (PSC) will be composed of:
- Permanent Secretary - Ministry of Land Management, Water and Sanitation (MLMWS) - (Chairperson)
- Permanent Secretary - Ministry of Environment, Wildlife and Tourism (MEWT)
- Permanent Secretary - Ministry of Finance and Economic Planning (MFEP)
- Permanent Secretary - Ministry of Local Government and Rural Development (MLGRD)
- Permanent Secretary - Mineral, Energy and Water Resources (MEWR)
- All DPS under MLMWS
- CEO - Water Utilities Corporation
- Director General - National Strategy Office
- Director - Department of Water and Sanitation Services
- Director - Department of Environmental Affairs

The NSC will meet when required to address escalated grievances and will be required to address the concern within 30 days. Should measures taken by the National Steering Committee fail to satisfy the complainant, the aggrieved party is free to take his/her grievance to the Botswana judicial courts.

8.10 Judicial Level Grievance Redress Mechanism

The project level GRM process will not impede affected persons access to the legal system. At any time, the complainant may take the matter to the appropriate legal or judicial authority as per the laws of Botswana. However, the quality and effectiveness of the judicial system should be assessed, as well as issues related to accessibility and affordability.

8.11 For Sensitive Issues Regarding Gender Based Violence, Sexual Harassment or Violence Against Children

An exceptional or ad hoc meeting will be called the day after receiving this information. The Grievance Redress Committee, the National Steering Committee, the Contractor, and local authorities of the locality where this issue occurs will all meet as a plenary. At all times, the approach for such issues will follow a survivor - centered approach and the anonymity of the survivor will remain intact. In addition, the survivor will have been informed of options such as receiving psycho-social support, medical assistance and other services as required.
For those issues, the mechanisms set in place to respond to cases of GBV and VAC will be implemented. By doing so, the Contractor will first establish a ‘GBV and VAC Compliance Team’ (GCCT). The GCCT will include, as appropriate to the project, at least four representatives (‘Focal Points’) as follows:

a. The Community Liaison Officer
b. The Occupational health and safety manager from the Contractor, or someone else tasked with the responsibility for addressing GBV and VAC with the time and seniority to devote to the position
c. The Supervision Consultant (PLO)
d. The Social Worker
e. The Police Officer

The Potential Procedures for Addressing GBV, SHEA and VAC are in Annex 10.

8.12 Capacity of Local Institutions to Address Grievances and Disputes

- **Village Settlement Development Committee:** The settlement parliament has the responsibility to monitor developmental projects in their settlement. The interest of the community is their priority as per their mandate.
- **Kgosi:** The settlement tribal leader and is also an ex-officio member of the Settlement Development Committee and is a key figure in mediating among community members.
- **Project Resident Engineer:** As the head of the project, the engineer is responsible for ensuring that it is implemented smoothly.
- **Supervising Project Engineer:** Ensures that The Project Resident Engineer and ESIA Consultants are implementing the project as per their approved documents.
- **Project Liaison Officer (social and environmental safeguards monitor):** Has a responsibility to ensure that all the ESIA/ESMP mitigation measures and plans are implemented accordingly.
- **Community Liaison Officer:** Liaises between the Project Officials/ Grievance Redress Committee and the Community. *Reports all grievances to the GRC.*
- **Grievance Redress Committee:** Has a responsibility to ensure that all grievances are addressed timely and properly recorded.
- **Water Utilities Corporation:** Has a responsibility to ensure that the objectives of the project are delivered as promised

8.13 Good Communication and Information Sharing

- Vulnerable and marginalized groups and individuals can report to the CLO who will be based at the settlement Kgotsa.
- Can report by phone to Community Liaison Officer/Resident Engineer.
- Can send a text to the CLO/Resident Engineer
- There will be an accessible grievance/complaints boxes in community areas which will be checked daily. For those who cannot write, the CLO will facilitate submission of a grievance and will be guided by an ethical code of conduct to respect the privacy of the complainant
- There will also be a project email and website to enable users to submit their grievances anonymously.
- A WhatsApp group (or equivalent) will also be created for the community members who want to be informed on updates of the project.
- All complaints must be acknowledged for receipt regardless if they are anonymous. Community boards and the project website will list complaints that were submitted (without names) and will include expected date of response. Once the response is determined, the response with the original complaint will also be posted on the community boards and on the project website.
• There will be a specific person or persons who will be tasked to oversee the grievance process to ensure that all grievances are logged correctly and the GRC is notified.

• There will be specific training for the GRC and the CLO to ensure quality control of the GRM process.

8.14 MONITORING

Annex 8 shows the grievance log that will be used to monitor and track the GRM and which will be reviewed regularly for accuracy and compliance to the GRM process. The logbook and at times, correspondence between the Contractor and PLOs in addressing grievances will also be reviewed by World Bank safeguards specialists undertaking project supervision.

8.15 ESTIMATED COST OF GRM IMPLEMENTATION

The detailed cost of implementing the GRM is presented below in Table 15.

**TABLE 15: COSTING OF THE GRM IMPLEMENTATION**

<table>
<thead>
<tr>
<th>No.</th>
<th>Activity</th>
<th>Time Frame</th>
<th>Budget (Pula)/USD</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>GRM Implementation and Monitoring</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Allowances for GRC Members</td>
<td>Throughout the project</td>
<td>(P500.00 per sitting) x Members x Once month x 12 months x 9 people = <strong>P54,000.00</strong> (USD5,400.00)</td>
<td>WUC</td>
</tr>
<tr>
<td></td>
<td>Monthly Stipends for Community Liaison Officers</td>
<td>Throughout the project</td>
<td>(2 people x P600.00 for 6 months = <strong>P7,200.00</strong> (USD1200.00)</td>
<td>WUC</td>
</tr>
<tr>
<td></td>
<td>GRM awareness raising, material and stationery (including GBV-GRM related sensitization)</td>
<td>Throughout the project</td>
<td><strong>P100,000.00</strong> (USD 10,000.00)</td>
<td>WUC</td>
</tr>
<tr>
<td></td>
<td>Capacity Building for all stakeholders on GRM (including community)</td>
<td>Throughout the Project</td>
<td><strong>P75,000.00</strong> (USD 7,500.00)</td>
<td>Contractor</td>
</tr>
<tr>
<td></td>
<td>Funding for GBV mapping of services and inclusion of GBV/SHEA/VAC compliance team and modification of GRM for GBV reporting</td>
<td>Throughout the project</td>
<td>GBV Mapping of Services <strong>P80,000.00</strong> (USD 8000.00) GCCT (P500 x 5 people x 6 months) <strong>P15,000.00</strong> (USD1,500.00)</td>
<td>Contractor &amp; WUC</td>
</tr>
<tr>
<td></td>
<td>Sub-Total</td>
<td></td>
<td><strong>P331,200.00</strong></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER NINE: CONCLUSION

This report has presented and discussed the findings of the ESIA/ESMP for the Bere Water Augmentation Scheme. The designs for the project indicate that the proposed development is to include:

- Construction and equipping of a new borehole (BH 9135) which was drilled in 1999
- Construction and equipping of a new/ additional steel water reservoir tank
- Laying of pipelines

The preparation of this ESIA/ESMP was guided by the Environmental Assessment Regulations (2012) of Botswana and the World Bank’s Safeguard Policies and the WBG General EHS Guidelines including the General and the Water and Sanitation Guidelines.

The biophysical and socio-economic characteristics of the site and the surrounding area were assessed. In addition, consultations were conducted with the Vulnerable Community (the Basawra) and all community members as well as with indirect stakeholders. The views from the consultations undertaken were incorporated into this ESMP which in turn informed the mitigation measures that were recommended and accepted by the community. The estimated budget for the implementation of the ESMP is P 3,989,005.00 (US$ 398,900.50.).

A project specific C-ESMP shall be prepared by the Contractor and will strictly implemented and monitored for compliance.
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## ANNEX 1: LIST OF ESMP PREPARERS

### ENVIRONMENTAL CONSULTANT

<table>
<thead>
<tr>
<th>Name of Company</th>
<th>Earthtec Consultancy (Pty) Ltd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Person</td>
<td>Dr. E.K Archer</td>
</tr>
<tr>
<td>Contact Address</td>
<td>P.O. Box 405754, Gaborone, Botswana</td>
</tr>
<tr>
<td>Telephone Number</td>
<td>+267 3923604</td>
</tr>
<tr>
<td>Fax Number</td>
<td>+267 3162082</td>
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<tr>
<td>e-mail</td>
<td><a href="mailto:earthtec@bbi.co.bw">earthtec@bbi.co.bw</a></td>
</tr>
</tbody>
</table>

### ESIA Study Team

**Environmental Consulting Team**

<table>
<thead>
<tr>
<th>Personnel</th>
<th>Qualification</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>E.K. Archer</td>
<td>PhD (Environmental Science)</td>
<td>Project Manager/Environmentalist (BEAPA No. 2013.0010)</td>
</tr>
<tr>
<td>L. A Archer</td>
<td>PhD (Environmental Science)</td>
<td>Team Leader/Environmentalist (BEAPA No. 2013.0034)</td>
</tr>
<tr>
<td>D. Ndlovu</td>
<td>B.A (Humanities)</td>
<td>Assistant Environmentalist</td>
</tr>
<tr>
<td>L. Masogo</td>
<td>B.A (Humanities)</td>
<td>Archaeologist</td>
</tr>
<tr>
<td>N. Ramasesane</td>
<td>B.A (Humanities)</td>
<td>Socio-economist</td>
</tr>
<tr>
<td>I. Afful</td>
<td>B.A (Humanities)</td>
<td>Socio-economist</td>
</tr>
</tbody>
</table>

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Consulting Environmentalists, Planners and Researchers  
P.O. Box 405754 Gaborone  
Plot 14417- Suite 2  
G-West Industrial  
Tel: 3923604 Fax: 3162082
ANNEX 2: ADVERT PLACED IN MASS MEDIA FOR PUBLIC MEETING

PUBLIC NOTICE
ENVIRONMENTAL IMPACT ASSESSMENT THE PROVISION OF INFRASTRUCTURE SERVICES IN PITSANE

Southern District Council intends to provide infrastructure services in the village of Pitsane. These services are to include roads, storm water reclamation and sewage reticulation. In fulfillment of Section 7, Subsection 2 of the Environmental Assessment Act (1991), notice is hereby given for the intent to undertake an Environmental Impact Assessment in respect of provision of the above mentioned services in Pitsane.

The anticipated impacts of the project are:

Positive Impacts:
- Creation of employment opportunities
- Improved infrastructure (roads, water & sanitation)

Negative Impacts:
- Acquaculture of land and property
- Potential disruption to traffic flow
- Potential poisoning of livestock
- Dust pollution which is a health hazard

This notice serves to invite the residents of Pitsane and all interested and affected parties to a meeting to be held at the following venue, date and time:

Venue: Main Hall, Pitsane
Date: 27th March 2018
Time: 09:00 hrs

The purpose of the meeting is to inform and solicit the views and concerns of the community of Pitsane on the implementation of the proposed project.

Any comments regarding the proposed implementation of the project may be addressed to any of the following:

Mophato Infrastructure
Botlhokgo Road, Gaborone
P.O. Box 4089
Gaborone
Tel: 391998
Fax: 391994
Email: mophato@bdc.gov.bw

KITSISO MO SECHABENG
TSHEKATSENG YA SEEMO SA TIOLOGO LA MATHESO LE BATHO MABAPHE LE MACHITSELO YA NBOMO WA PITSANE


Dilamangana le ditso de motlho:
- Tshhilo ya dilo ka raile
- Tshhilo ya dilo ka raile

This notice serves to invite the residents of Pitsane and all interested and affected parties to a meeting to be held at the following venue, date and time:

Venue: Main Hall, Pitsane
Date: 27th March 2018
Time: 09:00 hrs

The purpose of the meeting is to inform and solicit the views and concerns of the community of Pitsane on the implementation of the proposed project.

Any comments regarding the proposed implementation of the project may be addressed to any of the following:

Mophato Infrastructure
Botlhokgo Road, Gaborone
P.O. Box 4089
Gaborone
Tel: 391998
Fax: 391994
Email: mophato@bdc.gov.bw

KITSISO MO SECHABENG
TSHEKATSENG YA SEEMO SA TIOLOGO LE MATHESO LE BATHO MABAPHE LE MACHITSELO YA NBOMO WA PITSANE

ANNEX 3: MINUTES OF PUBLIC MEETING AND CONSULTATIONS

- Consultation Minutes of 6th March, 2018
- Consultation Minutes of 4th April, 2018
- Consultation Minutes of 4th June, 2019
- Table of Consultation with Stakeholders
- NGO and Ministry of Youth Empowerment, Sports and Culture Development
- Consultation Minutes of 31st July, 2019

Minutes of the Public Consultation Meeting held at Bere Customary Court on the 6th of March 2018 1000hrs

Key people present at the meeting were as follows:

<table>
<thead>
<tr>
<th>Name</th>
<th>Designation</th>
<th>Institution</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lebolomo Motlolaphotsane (Chairing)</td>
<td>VDC Chairperson</td>
<td>Bere</td>
<td>7398551</td>
</tr>
<tr>
<td>Annah Mangogorego</td>
<td>VDC Vice Chairperson</td>
<td>Bere</td>
<td>73985511</td>
</tr>
<tr>
<td>Basimile Monjwa</td>
<td>VDC Secretary</td>
<td>Bere</td>
<td>73165405</td>
</tr>
<tr>
<td>Tshaba Tshabatshothe</td>
<td>VDC Member</td>
<td>Bere</td>
<td>73453147</td>
</tr>
<tr>
<td>Buang Bork</td>
<td>Community Member</td>
<td>Bere</td>
<td>73704068</td>
</tr>
<tr>
<td>Keabetswe Raditedu</td>
<td>Care Taker (S&amp;CD)</td>
<td>S&amp;CD</td>
<td>73482966</td>
</tr>
<tr>
<td>Oratile Ratomai</td>
<td>Plant Attendant</td>
<td>WUC (Bere)</td>
<td>73971111</td>
</tr>
<tr>
<td>Nelson Ramasesane</td>
<td>Environmentalist</td>
<td>Earthtec Consultancy</td>
<td>7266659</td>
</tr>
<tr>
<td>Lesaba John Lephalo</td>
<td>Archeologist</td>
<td>Earthtec Consultancy</td>
<td>71316732</td>
</tr>
<tr>
<td>Jane Seobe</td>
<td>Snr Environmentalist</td>
<td>WUC (Gaborone)</td>
<td>73969913</td>
</tr>
<tr>
<td>Tirelo Mulenga</td>
<td>Technician</td>
<td>WUC (Gaborone)</td>
<td>73775889</td>
</tr>
<tr>
<td>Dr. E.K Archer</td>
<td>Principal Environmentalist</td>
<td>Earthtec Consultancy</td>
<td>71775925</td>
</tr>
<tr>
<td>Dora Ndlovu (Recording)</td>
<td>Environmentalist</td>
<td>Earthtec Consultancy</td>
<td>71967834</td>
</tr>
</tbody>
</table>

Total number of attendants: 160 people, 120 females and 40 males.

Agenda

i. Prayer
ii. Welcome Remarks
iii. Introductions
iv. Project Brief
v. Project Presentation
vi. Comments and Questions
vii. Closing Remarks

1.0 Welcome Remarks

The meeting was officially opened with a prayer by a village elder Mr Teetee Kanshoro, after which the Village Development Committee Vice Chairperson Mrs Annah Magongorego also the Late Chiefs wife delivered the welcome remarks to the meeting. The VDC Chairperson Mr Motlolaphotsana informed the community that the meeting was about the Bere Settlement Water Supply Sub-Project by Water Utilities Corporation. The chairperson also informed the community that he welcomes the meeting and advised the attendees to listen attentively to the presentations and comment positively to the discussions.

2.0 Introduction of Key Attendees

Village Development Committee Chairperson for Bere settlement, Mr. Lebolomo Motlolaphotsana led the proceedings of the public consultation meeting. He introduced the VDC Vice Chairperson Mrs Anna Magongorego, representatives from WUC, Village elders and Consultants from Earthtec Consultancy to the meeting.
3.0 Project Brief
WUC representatives Mrs Jane and Ms Tirelo delivered overview of the project. Ms Tirelo informed the meeting that Water Utilities Corporation intends to carry out a water supply project in Bere, which is funded by the World Bank. In which a new borehole (BH 9135) with an abstraction capacity of 8m$^3$/hr has been identified and will be equipped with a 3.7km pipeline from the borehole the village and a reservoir tank which will be located at the existing reservoir tank located in the village. She went further to explain that the main objective of the project is to address the water shortage experience by residents in Bere, as the current borehole (BH 9134) which pumps 7m$^3$/hr does not meet the daily water needs of the community and that the existing pipeline and reservoir tank are old and have a low storage capacity.

She also informed that the public meeting serves to inform and seek views and concerns of the residents of Bere settlement regarding the project. She pleaded with those at the meeting to listen attentively and comment accordingly to the meeting.

The research Environmentalist, Mr. Nelson Ramasesane gave the project presentation and he informed the meeting that the community is consulted in fulfilment of Section 7 of the Environmental Assessment Act, 2011 to hear their views/concerns on the proposed project with respect to the following anticipated positive and adverse impacts emanating from the its implementation. He expanded on the overview of the project that, WUC intends to carry out a sustainable development in the settlement, which is why environmentalist has been commissioned for the project. To identify and address any negative and positive impacts that may come as a result of the project.

Benefits
- Generation of employment
- Increased supply of water

Adverse Impacts
- Disturbance to soil stability
- Open trenches may cause accidents
- Generation of dust and noise
- Expropriation of properties
- Health and safety issues
- Social issues

He also informed the meeting that this assessment is done in order to identify appropriate mitigation measures to the raised anticipated impacts/issues. Mr Ramasesane finally requested the community to voice their views, question and comments on the proposed project.

The Archaeologist Mr John told the meeting that the intention of their archaeological research is for the project to be sensitive to the culture and traditions of the community. He went on to explain what they are on the lookout for, culture and traditional items such as old graveyards, pottery amongst other things. The village elders are to be consulted to give history of the settlement.

5.0 Comments and Questions
Following presentation, the attendants raised the following comments, issues, questions and suggestion of which the Consultants responded to.

<table>
<thead>
<tr>
<th>Comment, issue, question and suggestion</th>
<th>Responses by (Ms Tirelo)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution of pipe stands amongst the wards</td>
<td>Points noted and will be taken into consideration.</td>
</tr>
<tr>
<td>Complained about unequal distribution of standpipes within the wards, which causes conflicts amongst the community members.</td>
<td>Ms Mulenga advised residents to stop fighting for standpipes as everyone has a right to be granted equal access.</td>
</tr>
<tr>
<td>When will the project start, to recruit employees?</td>
<td>She also encouraged residents to connect water into their homesteads.</td>
</tr>
<tr>
<td>Will the pipe be joined together the new and the old or they shall run parallel to each other?</td>
<td>A public announcement shall be made to notify the community as to when the works will start as well as to when recruitment of employees will start.</td>
</tr>
<tr>
<td>Compensations for injuries that may occur during works in the construction site</td>
<td>The pipelines shall, run parallel to each other.</td>
</tr>
<tr>
<td>Mrs Jane</td>
<td>WUC intends to make sure that any Contractor that shall be awarded the project has insurance of employees in case such fatalities occur.</td>
</tr>
<tr>
<td>VDC Chairperson Mr Lebolomo Motlolaphotsana</td>
<td>Mr John Lephalo</td>
</tr>
<tr>
<td>Archaeological assessment of old graveyards</td>
<td>In case of any discoveries of old graveyards, the department of Museum and Monuments will be consulted to advice.</td>
</tr>
<tr>
<td>Accidents that may result from open trenches for small stock as they move from one side of the village to the other</td>
<td>Mr Ramasesane</td>
</tr>
<tr>
<td>Shortage of staff that operates the borehole causes scarcity of water in the settlement.</td>
<td>The Contractor will be advised not to leave the trenches open for a long time, they are to be dug and the pipes laid the same day.</td>
</tr>
<tr>
<td>Ms Tirelo</td>
<td>Noted and will be taken into consideration</td>
</tr>
<tr>
<td>Compensation of land acquisition regarding the pipeline route</td>
<td>The new borehole that is to be constructed will be equipped in such a way that it will not require manual operation.</td>
</tr>
</tbody>
</table>

**POINTS/ COMMENTS NOTED**

The VDC Chairperson Mr Lebolomo Motlolaphotsana welcomes the water supply project in Bere. He promised the environmental team that the community is prepared to help especially on identifying graves/tombs that are likely to be affected by the proposed project. Mr Motlolaphotsana also urged residents to stop fighting for standpipes as everyone has a right to be granted equal access.

Mr. Dikgang Paakanyo pleaded with the proposed project to employ unskilled labour from the local community.

**5.0 Closing Remarks**

In conclusion, VDC Chairman thanked all the attendees for their time and patience at the meeting. The Chairman also thanked the Consultants and WUC representative, for taking time to talk to the community.
MINUTES OF FOCUSED GROUP DISCUSSION HELD ON THE 4TH APRIL 2018 AT BERE KGOTLA.

Attendance list of focus group discussion

<table>
<thead>
<tr>
<th>District/Village: Ghanzi District / Bere</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date: 05 / 04 / 2018</td>
</tr>
<tr>
<td>Description of the person/group: Village Authority</td>
</tr>
<tr>
<td>Total number of people in the meeting: 8</td>
</tr>
</tbody>
</table>

Participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Gender</th>
<th>Occupation</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mmapula Pusoloso</td>
<td>Female</td>
<td>S&amp;CD</td>
<td>6511605</td>
</tr>
<tr>
<td>Kebaabetswe Raditedu</td>
<td>Female</td>
<td>S&amp;CD</td>
<td>73482966</td>
</tr>
<tr>
<td>Oratile Ratomai</td>
<td>Female</td>
<td>WUC</td>
<td>73971111</td>
</tr>
<tr>
<td>Boneetswemang Gakeoralale</td>
<td>Female</td>
<td>VDC</td>
<td>73525334</td>
</tr>
<tr>
<td>Jombo Xlate</td>
<td>Male</td>
<td>Tribal</td>
<td>73733329</td>
</tr>
<tr>
<td>Mafungane Sethantsho</td>
<td>Male</td>
<td>Tribal</td>
<td>75847888</td>
</tr>
<tr>
<td>Nelson Ramasesane (Chair)</td>
<td>Male</td>
<td>Earthtec Consultancy</td>
<td>72366639</td>
</tr>
<tr>
<td>Ivy Afful (Recording)</td>
<td>Female</td>
<td>Earthtec Consultancy</td>
<td>3623604</td>
</tr>
</tbody>
</table>

Opening:
The meeting started at 2:00 pm with a brief introduction of all attendees. After which Mr. Nelson Ramasesane briefed the attendees on the project.

Outcomes of the focus group discussion
On the 5th of April 2018, a focus group discussion with key informants of the settlement was undertaken. The focus group discussion was held in the kgotla the list of all attendees is attached. The main aim of the focus group discussion was to find out key details about the settlement starting with its origins to the problems affecting the settlement in general and the VC.

Opening Remarks
Nelson of Earthtec consultancy gave a brief background of the project details and the main reason for the focus group discussion which was get further information about the settlement from the key informants. He further explained that participants were chosen based on their position within the community. However, he noted that participated were free to opt out of the discussion and are not forced to partake in the discussion.

A summary of the focus group discussion is as below:
It is said that the settlement was founded in the early 1960s by Dr Hans-Joachim Heinz who was an anthropologist Bere community later settled in the area due to availability of water.

The settlement has about more than 800 people and about 100 were relocated by the Government from Ranyane.

There are three main ethnicities in the Bere settlement that being Basarwa (major tribe), Bakgalagadi, and Baherero.

The most common languages used in the settlement are Qhoo, Naro, Sekgalagadi, Seherero, Setswana, and English.

There are two main religions in the area that is Christianity and African religion.

The population of Bere is said to have rapidly increased due to the people that were relocated from Ranyane.

People have been migrated Ranyane as it is believed that the place is used by animals. Those migrated have benefited from the availability of clean consumable water in Bere. However, conflicts have arisen amongst the residents and in migrants because residents feel that the in migrants steal their girlfriends and jobs.

In the settlement, there is a Multipurpose cooperative that stocks and sells groceries.

The main form of employment in the area is the Labour bases Public Work Programme (Ipelegeng).

In the settlement, they have groups that do unique works such as Beads made from ostrich eggs which are turned into jewellery and sold in Ghanzi. Some of these bead workers also buy the bead and add value to the ones that they make by themselves.

The people in Bere still practice hunting and gathering as they gather Motsojoane and Moretwa (wild fruits). Some of this vegetation in the area is also used as medicine to treat illness.

They have the following agriculture projects, some are said to be small scale while others are on a larger scale beekeeping, chickens, goats, and cattle rearing and usually sell to Livestock Management and Infrastructure Development Programme (LIMID).

Maize, watermelon, and sorghum, which is usually sold to primary school to prepare meals for the students.

All the people in the settlement that own land were allocated such by the Land board and they are believed to have the legal documents in their possession.

Over the past years, the settlement has never witnessed any conflict of natural resources such as water, energy, and raw materials, land or employment. However, conflicts in households have been witnessed. These conflicts come about from drunken family members returning home from drinking and causing chaos. Another cause of household conflicts is interrelations and cheating, as most men in the settlement have multiple partners.

However, they do not foresee any conflict likely to arise between migrant workers and locals.

The proximity of the following infrastructure services to the settlement is as below:

<table>
<thead>
<tr>
<th>Facilities available in Bere Settlement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Socio-economic infrastructures</strong></td>
</tr>
<tr>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Primary education school</td>
</tr>
<tr>
<td>High school</td>
</tr>
<tr>
<td>Hospital</td>
</tr>
<tr>
<td>Health Post (village clinic)</td>
</tr>
<tr>
<td>Other health facilities</td>
</tr>
<tr>
<td>Police station</td>
</tr>
</tbody>
</table>
There is currently no electricity in the settlement; the only form of electricity is the solar panel which powers the school, staff housing, VDC houses and council houses. They, however, wished that all houses can be connected with electricity.

The main source of water comes from a borehole which is pumped to standpipes however the water pressure is low. They mentioned that the water is not enough for the settlement as some standpipes are not working. As at the time of the site visits in March 2018, one of the standpipes (at Mokala Ward) out of the six (6) provided were not working and needed repairs.

The settlement has a primary school and a preschool.

Bere has a Health Post that offers primary services to community members and in the event of serious illnesses, one would have to be transported to Ghanzi town for further assistance. The most widespread and contiguous illnesses in the area is that of scabies, ringworms, and TB.

Currently, there is no transport service within the village or to the main road. If one wants to get to the main road, they would have to walk a stretch of about 15km to get to the main road to hitch hike. Alternatively, they ask residents in the settlement with cars to take them to the main road. They usually charge them P100.00 because they say that the condition of the road is poor and therefore it destroys their car shocks. With exception of the road in the centre of the settlement, all the other roads in the village are unpaved earth road.

The main environmental problem in the village is that of drought. The lack of rains and the shortage of water add on to the drought problem which also leads to an agricultural problem.

The social problems in the area are said to be that of teenage pregnancy, high school dropouts, rape, defilement, drug, and alcohol abuse. The high unemployment poses an economic problem within the settlement.

Almost everyone in the village is said to be poor, and dependent upon support from others.

In the settlement, there are about 8 persons living with disabilities who rely on the Government’s assistance for necessities such as food, clothing and education.

The VC members receive food baskets from the S&CD monthly and benefit from housing scheme and from the provision of livestock.

**Anticipated Impacts from the Water Augment Project**

During the discussion, it was said that Khumbulakhaya ward in the settlement would greatly benefit from this project as it will potentially add a standpipe in their area.

The project will come with positive effects such as assisting with the shortage of water currently been faced in the settlement. It will bring employment opportunities for the people, which will increase the income and resources in the area.

However, negative impacts could as well emanate from the implementation of the project. During the focus group discussions, it emerged that the people most at risk are the female youth, as there may be inducements to engage in sexual activities with the workers given poverty levels which would lead to unwanted pregnancies.
and increase in STIs and GBV. This may also result in single parenting if return to their homes after the project is completed.

They also said that there is a possibility of infidelity in marriages and relationships as some partners may engage in sexual activities outside their marriage and relationships, which may increase the HIV/AIDS and STIs in the area.

As part of the focus group meeting, participants also discussed ways in which the project can assist the settlement in terms of development. These are as below.

1. Tarring of the gravel road that leads to main Ghanzi-Kang tarred road
2. Electrification of VDC and government offices
3. Renovation of the community hall
4. Tarring of Hunhuke Road

The grievance redress mechanism was presented to the group. They accepted the mechanism and advised that the Community Liaison officer should be employed from the settlement.

Closing
The meeting ended at 4:00 pm with a remark by Nelson where he thanked all those who attended the meeting.

MINUTES OF THIRD PUBLIC MEETING HELD AT BERE KGOTLA

Date: 04 June 2019
Time: 09:00hrs
Attendants: See list attached

<table>
<thead>
<tr>
<th>ITEM</th>
<th>INTRODUCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The Kgosi of the village welcomed the World Bank and WUC and said that he is happy about the project as water is the source of life without water there is life. He further encouraged the community to listening attentively and ask questions where necessary he then handed over to the VDC chairman facilitated the discussion.</td>
</tr>
</tbody>
</table>

| 2.   | The VDC chairman welcomed all the guests and handed over to the WUC sociologist to introduce each guest. The WUC sociologist introduced all the guests and further went on to briefly describe the project and the intention of this particular meeting which was to familiarize the World Bank specialist with the project area as well as to collect further information about the vulnerable community in the area. She then handed over to the World bank specialist to present |

| 3.   | The world bank specialist introduced herself and explained her reasons for coming to the village she stated that she works with traditional communities in and around Africa and she would like to know more about their community (Bere), history as well as how they agree to decisions made. She further encouraged everyone including women, youth and the elderly present in the meeting to feel free and take part in the discussions as the project is for the people in Bere. The discussion was in English and Setswana and translated into local languages (Sekgaladi and Sesarwa) |

| 4.   | Key outcomes of discussion: |

- **What do the Basarwa preferred to be called?** - Majority said that they prefer Basarwa however a few would like to be differentiate by language/dialect spoken for example Basarwa, Baqho
- **Where are Basarwa from** – Elder woman stated they lived in the bush and moved to Bere for a better life (water) because there was no water in the bush.
- **Where is your ancestral lands and livelihoods**: - Came from the Matlhaaphuduhudu pans near the Okwa river they lived there because they used to get water from the pans for survival they used to practice hunting and gathering they hunted wildlife such as Impalas and Kudus.
- **How did community members end up in Bere?** - They were missionaries who were brought by the government they drilled a borehole and that is what attracted us to live in move to Bere.
- **Traditional practices examples** - Hunting has stopped however gathering of veld product such was wild raisins (Moretlwa) and the likes is still being done these are harvested from bushed in
and around a village; they still make beads with ostrich egg shells and wood which they decorate and make jewellery which the sell to an Organization called Kuru and Ghanzi craft. These ostrich shells and wood are gathered from in and around the village.

- **Are there NGOs the community works with?**
  In the past they worked with Kuru which was assisting community members with making dye from a fruit found in the bush (VDC Chairman). Currently they are working with Botswana Cheetah Conservation on putting together a trust which will be dealing with wildlife management.

- **Any sacred sites including ancestral burial sites, traditional practices?** VDC Chair stated there was none. In the past the used to go to the bush and throw fire and speak to the ancestors through the fire this s no longer practiced. Stated some elders still dance around an open fire singing traditional songs. Another member stated there is a traditional practice called Ngwale celebrated at a girl’s first menstruation.

- **Other rituals?** VDC Chair stated that in the past they didn’t bury the dead they would leave people who were sick or the elderly in a hut and leave them they and everyone else in the family would relocate. Currently they use the modern burial methods such as coffins.

- **Traditional healers used in the settlement:** Elderly women stated on one traditional healer remains in the village although there are others in nearby villages

- **How was land acquired in the past?** – They self-allocated plots. The Kgosi added that previously the village did not have a leader hence why it was self-allocated however after the shift of allocation power from the Kgosi. The land board they have since been given title deeds for their plots.

- **How often would you like the project team to inform you about the project, provide updates, come to discuss the project?** - We would like you to come to the Kgotla at least every two months to discuss issues, if not sooner if there are important matters to be discussed.

- **Discussion on GRM:** The team stressed that anyone and everyone will be able to launch a grievance at any time through the various channels such as mobile via a toll-free number a emails or written letter and other means which will be discussed with the community. The grievance committee will have community representatives (at least one male and one female)

- **Are there additional project benefits you would like the project to assist with?** The VDC chair said a community hall, developing their permaculture garden, extending their solar panels so as more house can be connected, assistance with building more houses for the destitute. The community also stated they wanted to discuss this among themselves and would communicate with the project team on benefits. The Chair said this project should leave a legacy- “such projects should not just bring water but [provide additional benefits as per above]”.

- **Comment by member of the community:** People with disabilities should not be left out of the benefits of the project

- **Questions from the community:**
  - **When will the project start?** - The WUC is currently putting together the documents that are needed. These documents must be approved before the project can start
  - **How will employment opportunities be managed?** - Employment will follow the Employment Act of Botswana. It would also be done in the Kgotla and where possible, there are certain skillsets available in the villages, they will be hired in the village – it will be a fair and transparent process. Notices for jobs will be made available in the VDC and kgotla and by the CLO. The representative further noted to the community that not everyone will be hired because that is impossible there are other ways community members can get an income from the project for example setting up tabletop food stalls to sell to workers.

5 CONCLUSION
After the VDC Chairman asked for further questions, he thanked all participants and closed the meeting.
<table>
<thead>
<tr>
<th>Name/Leina Surname/Sebene</th>
<th>Position /Maemo</th>
<th>Department/Village Lephata/Motse</th>
<th>Contacts /Mogala</th>
<th>Signature /Monkana</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ruth Raboro</td>
<td>SOCIOLOGIST</td>
<td>WATER</td>
<td>758006919</td>
<td></td>
</tr>
<tr>
<td>Nelson Ramosebese</td>
<td>Environmental</td>
<td>Em-Tec</td>
<td>72366639</td>
<td></td>
</tr>
<tr>
<td>Gina Cosentino</td>
<td>Social Specialist</td>
<td>WORLD BANK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vihani Leshoko</td>
<td>Houseman</td>
<td>ARB International</td>
<td>730749327</td>
<td></td>
</tr>
<tr>
<td>Tumo Xaoane</td>
<td>HORSEMAN</td>
<td>AGRI-CULTURE</td>
<td>78915327</td>
<td></td>
</tr>
<tr>
<td>O Mchunu</td>
<td>Gym</td>
<td>WUC</td>
<td>73710001</td>
<td></td>
</tr>
<tr>
<td>Iven Ndimung</td>
<td>WNF</td>
<td>WUC</td>
<td>73969111</td>
<td></td>
</tr>
<tr>
<td>Desnl Bologwana</td>
<td>Environment</td>
<td>Envi-Save</td>
<td>73739371</td>
<td></td>
</tr>
<tr>
<td>Munambo Phelela</td>
<td>EDO II</td>
<td>SCD</td>
<td>73921504</td>
<td></td>
</tr>
<tr>
<td>Morangile Monganye</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Gakegobele</td>
<td>WDCięrown</td>
<td>WDC</td>
<td>75595334</td>
<td></td>
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<tr>
<td>Enoch Sebegughe</td>
<td>ACDO</td>
<td>SCD</td>
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<tr>
<td>Kalwa Makhoshe</td>
<td>TPS</td>
<td>Tribal</td>
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<td></td>
</tr>
<tr>
<td>M. Robidwana</td>
<td>CORD</td>
<td>SCD</td>
<td>73912946</td>
<td></td>
</tr>
<tr>
<td>Dr. Makumbe</td>
<td>PLANT ATTENDANT</td>
<td>WUC</td>
<td>73971123</td>
<td></td>
</tr>
<tr>
<td>Culese Phelela</td>
<td>NL</td>
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## Consultation Process with Identified Stakeholders

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<th>Name of Contact Person</th>
<th>Telephone</th>
<th>Date of Consultation</th>
<th>Date Response Was Received</th>
<th>Strategy/Method Used</th>
<th>Reason for Consultation</th>
<th>Responses</th>
<th>How Responses have been Considered in the ESMP</th>
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<tr>
<td>Bere Chief VDC Chairperson</td>
<td>Kgosi Mr. Lebolomo Motlolaphotsana</td>
<td>6597337</td>
<td>7 March 2018</td>
<td>7 March 2018</td>
<td>Letter and telephonic follow up</td>
<td>Key community leader(s) who should be consulted to inform and mobilize the community on any developments in their areas</td>
<td>Date for the Kgotla meeting was set Community Based organizations were identified.</td>
<td>Kgotla meeting and Consultations were carried out in Bere settlement on the given date.</td>
</tr>
<tr>
<td>Ghanzi District Council (Department of Environmental Health)</td>
<td>Mr. M. Lepang (Chief Environmental Health Technician)</td>
<td>6597327</td>
<td>27 February 2018</td>
<td>8 March 2018</td>
<td>Letter attached with questionnaire and telephonic follow up</td>
<td>Department responsible for environmental health issues and waste management in the project area</td>
<td>The nearest dumping site to the project location is 150 km The only legal disposal method in Ghanzi island filling. The landfill is used to dispose household waste and health care waste is incinerated. Used oil can be temporarily stored at the landfill. Any other waste is acceptable depending on its type and the acceptance can be determined upon classification.</td>
<td>Included in the mitigation measures</td>
</tr>
<tr>
<td>Ghanzi District Council (Department of Physical Planning)</td>
<td>Mr. Able Mothowakgosi (Principal Physical Planner)</td>
<td>6597327</td>
<td>27 February 2018</td>
<td>8 March 2018</td>
<td>Letter attached with questionnaire and telephonic follow up</td>
<td>Department responsible for land use issues and planning in the project area</td>
<td>▪ All planning and building permits are to be acquired prior to the commencement of the project. ▪ Manholes to be covered for safety purposes ▪ Construction site should be cleared for safety purposes ▪ Consideration to be given to livestock when erecting the security electrical fence ▪ Aesthetics to be taken into consideration ▪ Protection of both natural vegetation and grazing area to be taken into consideration ▪ Socio economic benefits such as employment pre and post construction to be considered ▪ Traffic to be generated during construction and operation should be well managed ▪ Access roads to the site should be considered.</td>
<td>Included in Mitigation measures in ESMP</td>
</tr>
<tr>
<td>Ghanzi District Council (Department of Roads)</td>
<td>Mr. Kais Dimpho Bishop (Principal Roads Engineer)</td>
<td>6597327</td>
<td>27 February 2018</td>
<td>08 March 2018</td>
<td>Letter attached with questionnaire and telephonic follow up</td>
<td>Responsible for overseeing the roads ad road reserves.</td>
<td>▪ From the road center, it should be 5500m for a 15km road and 700m for an 18km road for purposes of maintenance of the road and the pipeline ▪ Where a pipeline crosses the road, concrete sleeves should be inserted for purposes of maintenance ▪ When working on the roadside, the pipeline works should observe the safety of traffic and road users, by</td>
<td>This has been communicated to the client and engineers</td>
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| Department of Wildlife and National Parks | Mr. Tabona Nyakane (Wildlife Research Officer) | 6596323 | 27 March 2018 | 14 March 2018 | Letter attached with a questionnaire and telephonic follow up | To identify wildlife species available at the project site. | • There are dangerous wildlife species around the project area, such as Leopards, Lions, and Wild dogs  
• There might be other visiting or on transit predators like cheetahs and hyenas.  
• Safety precautions during project implementation;  
• Secure the open pits to avoid wildlife falling inside  
• Avoid walking at night and provide enough lighting in the Camp.  
• Secure the Camp perimeter with a fence and a gate.  
• No person should walk alone in the bush  
• People should not run when they encounter dangerous wildlife, stand still and retreat to a safe position  
• Secure all Camp waste to avoid attracting wild animals to the site  
• Report all human wildlife conflict incidents to the nearest police office or Department of Wildlife and National Parks as soon as possible. | Included in Mitigation measures in ESMP |
| Ghanzi Land Board | | 6596236 | 27 February 2018 | 14 March 2018 | Letter attached with a questionnaire and telephonic follow up | Overseer allocation of land in Bere settlement | Service right have been granted to WUC for the borehole area and there are no resettlement issues with this project | There are no resettlement issues with this project |
| Department of Forestry and Range Resources | Mr. K.M Seabe (Senior Forestry and Range Resources Officer) | 65976211 | 27 February 2018 | 13 March 2018 | Letter attached with a questionnaire and telephonic follow up | Responsible for trees and range resources some of which are likely to be affected. | • There are no endangered and protected plant species around the project site  
• Veldt products of high importance to livelihoods of VC’s in the project area should be taken into consideration | Included in mitigation measures in ESMP |
| Bere Health Post | Ms. Thamani Mathethe | 73925245 | 27 February 2018 | 27 February 2018 | Face to Face Interview | Health administrative of the settlement | • The health post has the capacity to attend to minor injuries that may be incurred by workers on site. All other major issues will be taken to Ghanzi Primary Hospital  
• Although from time to time the health post experiences a shortage in medication and other supplies  
• Recommended that the Contractor hire a health assistant to work on site. | Included in mitigation measures in ESMP |
<p>| Botswana Police | Mr. Keats Macaque | 6596222 | 27 February 2018 | 08 March 2018 | Letter attached with a questionnaire and | The institution charged with crime prevention and | In terms of theft cases in Bere settlement, they are not worrisome, but | Included in Mitigation measures in ESMP |</p>
<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Name of Contact Person</th>
<th>Telephone</th>
<th>Date of Consultation</th>
<th>Date Response Was Received</th>
<th>Strategy/Method Used</th>
<th>Reason for Consultation</th>
<th>Responses</th>
<th>How Responses have been Considered in the ESMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service (Ghanzi) (Station Commander)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>telephonic follow up</td>
<td>enforcement of the country law</td>
<td>we cannot rule out that there are theft occurrences in the area. Most cases reported at the settlement include rape, assault, defilement and other related issues. We advise that a 24hr security guard be appointed.</td>
<td>Included in mitigation measures in ESMP</td>
</tr>
<tr>
<td>Department of Waste Management and Pollution Control</td>
<td>Mr. B. Paledi (Principal Waste Management Officer)</td>
<td>3934479</td>
<td>27 February 2018</td>
<td>08th March 2018</td>
<td>Letter attached with a questionnaire and telephonic follow up</td>
<td>Department responsible for waste management and pollution control in the country</td>
<td>The department advises ensuring compliance with the following policies and legal instruments; Waste Management Act, 1998 Wastewater and Sanitation Policy, 2001 Botswana National Master Plan for wastewater and sanitation 2003 Botswana strategy for waste management, 1998 Water discharge standards BOS 93 Ambient air quality</td>
<td>Included in mitigation measures in ESMP</td>
</tr>
<tr>
<td>Community of Bere Kgosi/ VDC</td>
<td>6597337</td>
<td>6 March 2018</td>
<td>-</td>
<td>Public/Kgotla Meeting</td>
<td>For community support and include their grievances and contribution to design and management of impacts.</td>
<td>Accepted project and seeks employment.</td>
<td>Included in mitigation measures in ESMP</td>
<td></td>
</tr>
<tr>
<td>Community of Bere Kgosi/ VDC</td>
<td>6597337</td>
<td>5 April 2018</td>
<td>-</td>
<td>Public/Kgotla Meeting and Focus Group Discussion</td>
<td>For community support and include their grievances and contribution to design and management of impacts.</td>
<td>The household interviews could proceed by the community. Issues as raised by the focus group are presented above and in the VCP.</td>
<td>Included in mitigation measures in ESMP and preparation of VCP</td>
<td></td>
</tr>
<tr>
<td>Households of Vulnerable Community members Kgosi/ VDC</td>
<td>6597337</td>
<td>6-7 April 2018</td>
<td>-</td>
<td>Household Survey</td>
<td>For social assessment for OP4.10</td>
<td>Issues as raised by the household are presented above and in the VCP.</td>
<td>Included in Mitigation measures in ESMP and preparation of VCP</td>
<td></td>
</tr>
<tr>
<td>Community of Bere Kgosi/ VDC</td>
<td>6597337</td>
<td>4 June 2019</td>
<td>-</td>
<td>Public/Kgotla Meeting</td>
<td>World Bank’s site visit and verification of instruments/consultation process For community support, inform them on GRM, seek their contribution to design and management of impacts.</td>
<td>The community accepted project (via show of hands). The community would like to be part of management of risks and implementation of project and grievance redress mechanism, employment viewed as an important benefit. However, they stated they would like other benefits besides water as noted during the consultation.</td>
<td>Included in mitigation measures in ESMP</td>
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</tr>
</tbody>
</table>
Additional Consultations held with Non-Governmental Organisations and Ministry of Youth Empowerment Sports and Culture Development.

**Gender Links**
Gender Links is a non-governmental organisation. Gender Links is guided by SADC Protocol on Gender and Development which are aligned to the Sustainable Development Goals.

Working with partners at the local, national, regional and international level, GL:

- Promotes gender equality through the media, and in all areas of governance.
- Develops policies and action plans to ensure that gender equality is achieved, especially at the local level.
- Builds the capacity for women, men and all citizens to engage critically in democratic processes that advance equality and justice.
- Conducts Campaigns for ending gender-based violence, HIV and AIDS, economic and climate justice as well as Campaigning for the rights of marginalised groups.

From the telephonic conversation with the country manager at Gender Links Botswana on the 17 of June 2019. The country manger stated that the main gender issue in the country is gender-based violence. The main cause of GBV is substance abuse especially alcohol by both males and females. This leads to them abusing their partners both physically and emotionally.

GBV is also occurs among non-sexual partners usually as a result of the social and cultural perception of women by men. Women are perceived as less than or are considered the weaker sex, which makes the susceptible to being objectified by men. This is therefore one of the main causes of rape.

It was also mentioned that during this interview that there is a link between poverty and GBV. Women are often less economically empowered as compared to their male counterparts. This is because women tend to take home duties roles and often working jobs that are less demanding and less paying than males. Hence why the level of poverty among women is higher than that of men.

Currently, there are about 20 percent women in council, 10 percent in the cabinet and 9 percent in parliament. This shows the lack of women representation is political and decision-making roles.

Gender Links has made it its mandate to educate women on political issues with the aspiration of increasing female representation in decision making sectors, so as the views and opinions of women are taken into consideration.

The country manger indicated that during the commencement of works, when hiring workers women must be given an equal opportunity. VC community workers must be trained on gender issues, HIV/AIDS, VAC and Sexual exploitation.

Person spoken to: Country Manager
Contacts: 318 8250

**Permaculture Botswana**
From a Telephonic conversion on the 12 of June 2019 with the coordinator of Permaculture Botswana it was said that Permaculture Botswana is a nongovernmental organisation that assists in alleviating poverty, by providing food security, using backyard gardens. The organisation also educates people on nutrition and how to care for their backyard gardens.
The Coordinator mentioned that Permaculture Botswana works with VDC, Home-based Care, and SNCD officers to select people within their committees that would need their assistance. Recipients of the backyard gardens can sell excess produce for subsistence.

The Coordinator also mentioned that with assistance and funding they would be eager to start working within these villages to establish backyard gardens to potentially alleviate poverty.

Person spoken to: Coordinator
Contacts: 71883437

San Youth Network (SYNet)

San Youth Network (SYNet) is a Non-Governmental Organization for the San youth in South Africa, Botswana, Namibia and Zimbabwe. Its aspiration is to bring together different San youths around within these countries to share their experiences in their diversity. San groups in Botswana, Namibia, Zimbabwe and South Africa all share common problems however living in different political, economic, societal, and geographical areas.

SYNet is a platform in which youth of different dialects can freely advocate and share ideas with others. This creates a strong and sensitive environment that helps them display common interests and desires, of how they aspire to change the status quo in their own respective countries to be respected peoples of the society. African countries, mainly Botswana, Namibia and South Africa, who oppose the concept of indigenousness of the San, have marginalized the San and they remain the poorest in the regions. SYNet therefore advocates for their rights to access and inclusion in decision making platforms to be better leaders who have the interests of their people at heart.

During the telephonic conversation on the 20th of June 2019 with the Founder and Executive Director of San Youth Network, the organisation has not worked with the San people in the project areas. However, they are aware that they are some San people living in the central district.

According to the Chairman the San community lacks intensified implementation efforts to prevent violence against women. As African states, GBV impacts women of different ethnicities. The San women are victims of GBV as all women, mainly because they are considered lesser or minority and they are often afraid of reporting the matter to the authorities. Quite often, in cross-ethnic marriage, it is when San women suffer the most. He further stated that there is a need to disseminate information of gender equality and fair treatment of San women.

The Founder and Executive Director mentioned that the San language in the Ghantsi area is very rich and a lot of the san still speak a different dialect of their language, however the san in the central and southern districts have lost their language mainly due to intermarriage and modernisation. Some of the youth are ashamed of speaking their language due to the stigmatization of the San as they have been told that their language is backward. The Founder and Executive Director also mentioned that majority of the San people are poor so the network tries to assist the youth with training opportunities to better develop their skill sets that they may be able to gain employment he further noted that the project should employ San youth where possible.

Land issues were also discussed by the Founder and Executive Director he made known to us that the San do not own arable land, although legally everyone including the San are said to have free access to land. However, the San have issues with accessing arable land in respect to equity of access as most the san people don’t have the resources to develop the arable land in the time frame set by the land board.

Person spoken to: Founder and Executive Director
Contacts: +267 74196559/+267 76847828

Gender Innovation and Development (GIDA)

A telephonic conversation with the Sectary General of GIDA on the 20 June 2019, mentioned that GIDA is a newly formed nongovernmental organisation that started works last year. GIDA seeks to empower women through capacity building and motivation. According to the Sectary General of GIDA there are less females within
the science field as compared to males which is among one of the high paying jobs worldwide. Through their mentorship program (STEM) they seek to educate women in the job prospects within the Science field.

Secretary General mentioned that in rural areas gender-based violence is a major issue because women don’t have jobs or a source of income, they are reliant on their male partners, this in turn makes men feel as though they own the women. This is said to be the main reason as to why most women remain in domestic violence situation because they feel as they are the lifeline of the family.

The secretary general further insisted that in the VC regions women must be given preference during employment of workers as there is a strong need to ensure women are employed in order to give them economic freedom. There is also a need to educate members of village on issues of gender-based violence as well as sexual exploitation and abuse of women.

Person spoken to: Secretary General
Contacts: +267 71762207

**Minutes of Meeting with Ministry of Youth Empowerment Sports and Culture Development.**

An interview with the Ministry of Youth Empowerment Sports and Culture Development Public Relations Officers (PRO) on the 2 of June 2019 at 2:30 pm at the Ministry. The public relation officer spoke on the 3 main departments within the ministry.

First, they have a Department of National Service and Internship (DNSI). The PRO said that the department seeks to facility skills transfer and participation in community development by employing youth and providing them with opportunities that will help them realise their potential. The programs under this department are as she explained Botswana National Service programme (BNSP) also known locally as Tirelo Sechaba. Individuals can serve within this program for 10 years (until they are 30). Those under this program get paid 600 BWP per month. This program is targeted to those with junior school certificate up to diploma holders. Usually the jobs they do are those that don’t require academic/professional experience. The main idea of this program is to assist these people gain life skills and good work ethics.

The next program she discussed was National Internship program which she mentioned was mainly for degree holder/fresh graduates. Graduates in this program are only allowed to serve in this program for 24 months and they are paid 1400 BWP per month. She mentioned that one of the main goals of this program was to mentor and mould fresh graduates into productive and disciplined workforce.

Lastly under this department is the Graduate Volunteer Scheme the public relations officer stated that this program is for those that have served in the internship and seek to continue as volunteers however the payment is lower than internship program which is 700BWP per month. Volunteers can only work under this program for a year. She stated that these programs are open for every single Motswana in the country.

The second department under the ministry is the Library the Public Relations officer stated that this department seeks to cultivate the spirit of reading in rural areas. She added that because most villages do not have libraries the ministry has established village reading rooms. These village reading rooms have different programs such as storytelling/reading where youth within the village can volunteer to read books and tell stories to the younger kids. These volunteers would also help children in villages with their assignments. She mentioned that she is unaware if they are village reading rooms that have been established in the project areas/Vulnerable Community areas.

Under their department of Sports and Culture Development, the department has constituency tournaments. These tournaments include football, netball, and volleyball as well as athletics. Members from the village develop teams within the wards of which they compete at different levels of the competition and at each level there a prize money to be won. This is also the same for Arts and cultural codes members of community will sign up for these competitions and participate in different art codes such as drama choir and traditional dance. She
further explained that the project can assist the vulnerable committee by educating them on money issues and the importance of reinvesting the money back into their groups and teams as she said that in most case where teams win money they tend to misuse the money instead of reinvesting the money into better their teams/groups and craft.

Lastly, we discussed the Youth Development Fund which is a program under the Ministry of Youth Empowerment Sports and Culture Development. This program gives funds to youth to start businesses or to expand already existing businesses. The Ministry of Youth Empowerment Sports And Culture Development along with their district offices go into the villages in Botswana to orientate the youth in the rural areas about the process of applying for this fund as well as which offices they can seek help from. The PR officers did however state that in the rural areas and among the vulnerable community there is a reluctancy among the youth to apply. She further explained that this could be a way in which the project could assist the vulnerable community in motivating them to apply for these programs as can greatly improve their lives. She also stated that another reason for the reluctance among the youth could be because to apply for this program a written business proposal is needed this turn to scare away the youth in rural areas from applying for the funding. She therefore stated that project can engage with personnel such as Local Enterprise Authorities (LEA) who can assist the vulnerable community members in writing business proposals in which they would be able to submit and be considered for the funding.
MEETING DETAIL

<table>
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<tr>
<th>Meeting No:</th>
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<tr>
<td>Meeting Date:</td>
<td>31 July 2019</td>
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<tr>
<td>Meeting Time:</td>
<td>1000 – 1155</td>
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<tr>
<td>Meeting Venue:</td>
<td>Block 7 Boardroom</td>
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<tr>
<td>Meeting Originator:</td>
<td>Ms Ruth M. Radibe</td>
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Meeting Name: BEWSE PROJECT MEETING WITH BOTSWANA KHWEDOM COUNCIL

Meeting Purpose: Consultative meeting to brief Khwedom Council on the project background and to give an update on environmental and social safeguards in relation to vulnerable communities.

MEETING ATTENDEES

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Designation and Organization</th>
<th>Email</th>
<th>Contact number</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ruth M. Radibe</td>
<td>Sociologist - WUC (Chairing)</td>
<td><a href="mailto:rradibe@wuc.bw">rradibe@wuc.bw</a></td>
<td>75 806 918</td>
</tr>
<tr>
<td>2.</td>
<td>Khotso Sebeke</td>
<td>Environmentalist – WUC</td>
<td><a href="mailto:ksebeke@wuc.bw">ksebeke@wuc.bw</a></td>
<td>73 388 557</td>
</tr>
<tr>
<td>3.</td>
<td>Keemenao Nkgalo</td>
<td>Finance Specialist – WUC (Recording)</td>
<td><a href="mailto:knkgalo@wuc.bw">knkgalo@wuc.bw</a></td>
<td>73 879 461</td>
</tr>
<tr>
<td>4.</td>
<td>Chilipi Mogasha</td>
<td>Project Coordinator – Innolead</td>
<td><a href="mailto:cmogasha@wuc.bw">cmogasha@wuc.bw</a></td>
<td>75 765 311</td>
</tr>
<tr>
<td>5.</td>
<td>Reuben Maboko</td>
<td>Coordinating Unit</td>
<td><a href="mailto:rmaboko@gov.bw">rmaboko@gov.bw</a></td>
<td>73 003 253</td>
</tr>
<tr>
<td>6.</td>
<td>Ivy A. Afful</td>
<td>Sociologist – Earthtec</td>
<td></td>
<td>392 3604</td>
</tr>
<tr>
<td>7.</td>
<td>E.K. Archer</td>
<td>Director – Earthtec</td>
<td></td>
<td>392 3604</td>
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<tr>
<td>8.</td>
<td>Keikabile Mogodu</td>
<td>Chairperson – Botswana Khwedom Council</td>
<td></td>
<td>74 507 867</td>
</tr>
<tr>
<td>9.</td>
<td>Beauty Mokoba</td>
<td>Communications – WUC</td>
<td><a href="mailto:bmokoba@wuc.bw">bmokoba@wuc.bw</a></td>
<td>73 326 352</td>
</tr>
</tbody>
</table>
1. Welcome Remarks and Meeting objective

Sociologist – WUC introduced Mr. Keikabile Mogodu as Botswana Khwedom Council Chairperson, introduced herself and requested all attendees to introduce themselves. She welcomed all to the meeting and highlighted that the objective of the meeting is to update Botswana Khwedom Council on the BEWSEP that have vulnerable communities, procedures and processes being followed on this project with regards to the vulnerable communities in Botswana.

2. Agenda

2.1 Project Background

- The meeting was briefed that the project is a product of a loan ($145.5m) sort by Botswana Government to improve efficiency and reliability of water supply in the country.
- The project has fourteen (14) sub-projects, of which eleven (11) are on potable water, as Component 1, and three (3) are on wastewater, as Component 2. The projects were identified from NDP projects cohort.
- The other Component (3) is on studies to improve internal processes for Water Utilities Corporation (WUC) and Department of Water and Sanitation (DWS).
- One of the initial phases of the implementation process of the sub-projects, is completeness of the environmental and social safeguards. This is work in progress, with some of the reports already reviewed by World Bank. The work done under the safeguards pertaining to Vulnerable Communities is guided by OP4.10 Indigenous Peoples Policy (World Bank). The policy requires that vulnerable communities should not be impoverished or disadvantaged by the project in anyway, but they should be left as they were or better.

2.2 Project Update on Areas with Vulnerable Communities

- Selebi Phikwe – Serule Water Transfer Scheme
  - Environmental and Social Impact Assessment (ESIA) report, Resettlement Action Plan and Vulnerable Community Plan (VCP) are being done and the Consultant is currently working on comments from World Bank. Once finalized, the documents would be included as part of bidding documents for a Construction Contractor.
  - The Environmental and Social Consultant would also do monitoring and supervision during construction, to ensure that what is on the reports and plans, is implemented accordingly.
This project has two (2) villages with vulnerable communities. These are Damuchojena and Gojwane and also Bere settlement in the Ghanzi District. Consultation meetings have already been held with them. The World Bank (WB) Social Safeguards Specialist, together with the Project Safeguards Team, attended one of the meetings to corroborate the information on the submitted reports and observe how consultations were conducted.

- Two (2) people would have to be compensated before construction starts.
- The Chairperson of Khwedom Council mentioned that as a Council, they are not in agreement with some of the policies of Government such as the RADP because they are for everyone in the settlements and not for their people. He also stated that they find the name Basarwa to be derogatory but prefer to be called Bakhwe.

- North East – Tutume. It was reported that there are no vulnerable communities under this project.
  - Botswana Khwedom Council (BKC) informed the meeting that there is a ward in Tutume which has Bakhwe, but they have been assimilated and now speak Kalanga.

- Boteti Southern and Central Cluster Villages
  - It was reported that this project has a VCP because of Xere and Kedia which have vulnerable communities. The project is expected to have RAP.
  - BKC through its Chairperson was asked if he is aware of any areas with vulnerable communities in the project besides the two that have already been mentioned and he stated that they are only aware of the two.

- Kuke
  - It was reported that a VCP is being prepared as the settlement qualifies under OP 4.10. There is no RAP for the project.
  - WB Social Safeguards Specialist has done a site visit to corroborate the information on the safeguards reports submitted to them and observe how the consultations were done. She was accompanied by the Project Safeguards team and the Consultants.
  - Consultations have been done through kgotla meetings and focus group meetings. It has been highlighted during those meetings that
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<th>No</th>
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<th>Action.</th>
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<tbody>
<tr>
<td>1</td>
<td>the project benefits must be culturally appropriate.</td>
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<td></td>
<td>• Bere</td>
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<td></td>
<td>- The settlement qualifies for a VCP and it is currently being worked on. There is no Resettlement Action Plan (RAP) being done, because the pipeline will be on the road reserve.</td>
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<td></td>
<td>- WB Social Safeguards Specialist has done a site visit, accompanied by the Project Safeguards Team together with Consultants.</td>
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<td></td>
<td>• Ghanzi</td>
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<td>- Work on the safeguards instruments has not progressed much on the sub-project.</td>
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<td>- BKC, through its Chairman, is to confirm specific wards where Bakhwe are. Most of them are at Kgaphamadi ward.</td>
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<td></td>
<td>- He stated that most Bakhwe are on the periphery of the township.</td>
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<td>• Malwelwe</td>
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<td>- It was reported that there are no vulnerable communities under this project.</td>
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<td>• Sowa</td>
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<td></td>
<td>- It was reported that there will be a VCP for this project because of Kutamogoree and Manxotai. The BKC Chairperson mentioned that Mosetse village is a village formed by Bakhwe people.</td>
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<td>• Letlhakane Wastewater Ponds</td>
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<td>- It was mentioned that a VCP will be done because of the project site, which is close to Metsiela settlement, which has Bakhwe people. It was also stated that though there are Bakhwe in other areas such as Phase1, they would not be affected by the project in anyway.</td>
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2.3 Botswana Khwedom Council (BKC) Comments and Concerns

- The Chairperson was grateful for the meeting and appreciated the seriousness and professionalism showed by the Project Team.

- Point of clarification: he stated that there is no group of people called Basarwa. They are called Bakhwe and that is what they want to be referred to as. They deem Basarwa as a name used to show lack of respect.
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<tr>
<td></td>
<td>• The Council is the “voice of the Sans”. It is derived from the fact that Khwe means a San and dom means a voice.</td>
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<td>Project Coordinating Unit and Project Safeguards Team</td>
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<td></td>
<td>• Its office is in Gaborone and the reason for this is that they are closer to the Government decision makers.</td>
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<td>Project Coordinating Unit</td>
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<td></td>
<td>• Botswana Government does not recognize them as the first inhabitants and indigenous people of this country. This concern has been formally raised with the Government, several times, some years back, but no correction and/or feedback has been received to date.</td>
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<td></td>
<td>• There are no Government policies properly addressing them.</td>
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<td>• The Council would like to have safeguards documents availed to them before anything can be done.</td>
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<td></td>
<td>• The Council is not aware of consultations which have been held with Bakhwe people prior to the sourcing of the loan. Bakhwe are deemed voiceless by the Government, hence not protected and projects always done at their own expense.</td>
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<td>• They need documents to be shared with them so that they can engage with the project team and protect their rights.</td>
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<td>• The project should assist to resuscitate the Bakhwe culture.</td>
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### 2.4 Responses to 2.3

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<th>Project Coordinating Unit and Project Safeguards Team</th>
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<tbody>
<tr>
<td>• Consultation meetings are an ongoing process. Dates for future meetings would be shared with the Council.</td>
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<tr>
<td>• Sharing and disclosure of documents (e.g. VCPs, ESIA reports) can only be done once cleared by the WB Regional Safeguards Advisor. Once the documents are finalized, they become public information through WB website.</td>
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<td>• Going forward, BKC, would be engaged at an earlier stage.</td>
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<td>• The Project Coordinating Unit will relay their concerns and feedback to the decision makers.</td>
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<td>• The project implementation is guided by both the WB and Botswana Government policies. These policies are hinged on the spirit of harmony and have keen interest in protecting the rights of all stakeholders and communities.</td>
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<td>• Safeguards documents are live documents, so new information can be added where need arises.</td>
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<td>• During consultations in Bere and Kuke, the communities were asked what they prefer to be called and they said they are Basarwa.</td>
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</table>
1. WB personnel verifies information on the documents through site visits. They also perform due diligence and compliance checks before approving documents.

### 2.5 Questions and Comments Raised by Earthtec and BKC Answers

- **Bere:** People there prefer to be called Basarwa, not Bakhwe
  - BKC highlighted that this is hinged on politics of ethnicity, so they will engage with the community there for awareness raising.

- **Damuchojenaa:**
  1. The communities there do not speak their language but Setswana. They are also not part/aware of BKC.
     - BKC: they have lost their identity including language. Resuscitation of culture (including language) and awareness are key here. The communities are currently not aware of BKC as they deem themselves comfortable now. But this does mean that they would be unaware forever. They would join BKC when they need it.
  2. How does Bakhwe govern themselves?
     - BKC: They are for consensus. Currently, they are following Baswana imposed rules. Ideally, they should be governing themselves through homesteads/families, not kgotla meetings.

- **3. How are burial ceremonies done?**
  - BKC: Bakhwe people have 32 clans which used to do burial ceremonies in a diverse manner. Some used to burn the dead bodies and relocate to a place far from where the burial was one. Some would leave ailing body, about to die, with water in a hut and relocate. All these are currently getting lost as the clans are adapting to/adopting what is being done around them.

- **4. How are Bakhwe marriages done?**
  - BKC: they have lost their culture on this area. They used to have an arrangement in which the bride would stay with the in-laws for a year, after which the groom’s family would then pay lobola in the form of animal skins.

- **5. History of Bakhwe dating 100+ years back**
  - BKC does not have information on that but will look for something and share with the project safeguards team. They can also link the team with their historian as they feel...
<table>
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<tr>
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<th>Item</th>
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<td></td>
<td>some literature does not truly represent their history.</td>
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<td><strong>Closing Remarks</strong></td>
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<td>All were thanked for attending the meeting by R. Radibe.</td>
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</table>
Council Secretary
Ghanzi District Council
Private Bag 6015
Ghanzi

Attention: Department of Environmental Health

Dear Sir/Madam,

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) FOR BERTE SETTLEMENT WATER SUPPLY PROJECT

CONSULTATION AND INVITATION TO STAKEHOLDERS MEETING

Earthtec Consultancy (Pty) Ltd has been commissioned by Water Utilities Corporation (WUC) to undertake the Environmental and Social Management Plan (ESMP) including an Archaeological Impact Assessment (AIA) for the above mentioned project, as a pre-requisite for securing World Bank funding. The project entails:

- Revitalization of an old borehole (BH 9135) to augment the existing borehole (BH 9134),
- Construction of a new reservoir tank with a water holding capacity of 75 m³/hr,
- Laying of 3.7 km long water pipeline from the revitalized borehole (BH 9135) to the proposed new reservoir tank,
- Construction and installation of manholes and associated valves, and
- Installation of an electrified security palisade fence to protect the equipments from vandalism by the community.

We are by this letter writing to cordially invite you to a public meeting to be held at Bere customary court on the 7th of March 2018 at 10:00 hours. The purpose of this meeting is to consult your office as important stakeholder with regard to the implementation of the proposed project.

This exercise is in compliance with Section 7, Subsection 2 of the Environmental Assessment Act (2011). We have also attached to this letter a questionnaire which we request you to kindly respond to and submit at the meeting.

Your response will be highly appreciated.

Yours sincerely,

[Signature]

Dr. E. K. Archer
For/Earthtec Consultancy (Pty) Ltd
ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) FOR BERE SETTLEMENT WATER SUPPLY PROJECT

Questionnaire: Department of Environmental Health

1. How far is the closest dumping site or landfill from here?
   
   150 km

2. What types of waste is accepted by your department?
   
   Domestic waste / household waste

3. How in your view should the waste generated be disposed of?
   
   The only legal disposal method is incineration. This involves open burning of waste materials. Other wastes that are acceptable or disposed of depends on their type and purpose. The acceptance of these waste types is determined by the municipalities. Health and safety issues must be considered. Incineration is used in incinerators that are permanently sealed at the landfill.

Thank you.

Name: [Handwritten]

Designation: [Handwritten]

Signature: [Handwritten]

Date: 13/10/2018
Station Commander  
Botswana Police Services  
P. O. Box 29  
Ghanzi  

Dear Sir/ Madam,  

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) FOR BERE SETTLEMENT WATER SUPPLY PROJECT  

CONSULTATION AND INVITATION TO STAKEHOLDERS MEETING  

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Your response will be highly appreciated.  

Yours sincerely,  

Dr. E. K. Archer  
For/ Earthtec Consultancy (Pty) Ltd.
Police Questionnaire

In terms of their cases in being settlement they are not worry some but we can not rule out that there occurred in the area. Most cases reported at the same settlement includes assaults, rape, settlement and related issues like murder. We can advise that any project that had taken there which involve properties valuable they need to be guard on look for by security guards 24 hrs.
28 March 2018

Lawrence Victor Masoga
P O Box 100
Boka

RE: AIA FOR PROPOSED BERRE WATER SUPPLY PROJECT CONTRACT NO: WUC.007/2016.

Your client Water Utilities Corporation (WUC) is given a conditional planning consent for the above stated project. The conditions are as follows:

1. That development takes place strictly within the surveyed plot.
2. An archaeological watching brief by an accredited archaeologist should be undertaken especially during construction of the water pipe line from borehole BH 9135 to the new reserve tanks, and construction of installation manholes and associated valves.
3. An induction course for all construction crew should be conducted before any development is undertaken.
4. In the event of archaeological chance finds, all activities should be halted in the project area and a report must be made to the consultant archaeologist or the Department of National Museum and Monuments-Salvage Unit-3610409.
5. If burials are encountered along the project area, the affected area should be barricaded and a report must be made to the DNMM or the consultant archaeologist.
6. There has to be a systematic representative sampling approach in line with Grade 4 of the DNMM grading scale, and a sampling report submitted to the DNMM.

Thank you

Yours faithfully

[Signature]

DIRECTOR, BOTSWANA NATIONAL MUSEUM

Our Vision: To protect the environment; Conserve the country’s renewable and natural resources; Derive value out of environment for the benefit of Botswana
### ANNEX 6: DATA FROM METEOROLOGICAL DEPARTMENT

Station: Gantsi

#### Mean Monthly Maximum temperatures (°C)

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<th>Oct</th>
<th>Nov</th>
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#### Mean Monthly Minimum temperatures

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**ANNEX 7: QUALITY OF WATER IN BERE SETTLEMENT FROM WUC (COMMUNITY HEALTH AND SAFETY)**

Customer Data Req

**WATER QUALITY**

Customer Name: Earthtec Consultancy (Pty) Ltd  
Date Request Received: 21/03/2018  
Date Data Provided: 21/03/2018  
Purpose of Request: Environmental and Social Impact Assessment for Ghanzi/Bere Area

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<tr>
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<td>Sulphate SO4, mg/L</td>
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<td>Aluminium Al, µg/L</td>
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<tr>
<td>Calcium Ca, mg/L</td>
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<tr>
<td>Cadmium Cd, µg/L</td>
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<td>Cobalt Co, µg/L</td>
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<td>Copper Cu, µg/L</td>
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<td>Iron Fe, µg/L</td>
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<tr>
<td>Manganese Mn, µg/L</td>
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<tr>
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<tr>
<td>Zinc Zn, µg/L</td>
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**ND - Not Detected**

Note: The results only relate to the samples submitted to the laboratory and do not apply to any similar item that was not tested.

Although Water Utilities Corporation has used every endeavor to perform a correct and proper analysis neither Water Utilities Corporation nor any of its officials will be liable for any inaccuracy or incorrectness of the interpretation of the results. The Laboratory
<table>
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<th>Date Claim Received</th>
<th>Name of Person Receiving Complaint</th>
<th>Where/how the complaint was received</th>
<th>Name &amp; contact details of complainant (if known)</th>
<th>Content of the claim (include all grievances, suggestions, inquiries)</th>
<th>Was Receipt of Complaint Acknowledged to the Complainant? (Y/N – if yes, include date, method of communication and by whom)</th>
<th>Expected Decision Date</th>
<th>Decision Outcome (include names of participants and date of decision)</th>
<th>Was Decision communicated to complainant? Y/N</th>
<th>If yes, state when and via what method of communication</th>
<th>Was the complainant satisfied with the decision? Y/N</th>
<th>If no, explain why and if known, will pursue appeals procedure</th>
<th>Any follow up action?</th>
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*Note: The table continues with more entries.*
Site Selection and Location

- No Contractor’s and Labourer’s camp should be cited within a radius of 500m of the head of any borehole and should be a minimum of 10 km outside the village.
- The site should be adequately drained and slope between 3-7 percent.
- Apply for surface rights from the Ghanzi Land Board in consultation with the Bere’s Village Development Committee and Traditional Authority (and send to WUC for addendum to ESIA).
- Consult with the Vulnerable Community to ensure the site does not impact access to livelihoods, sacred sites, or other land uses. Record consultations/minutes in writing, noting date and attendance (including community concerns and questions) and report to PLO how these questions have been addressed. Immediately notify any concerns from community to the PIU safeguards team and PIU to be address in consultation with the. Submit report of consultation and resolution to WUC for inclusion into VCP as an addendum.
- The size or area acquired should be adequate to accommodate engineers’ offices as well and avoid overcrowding.
- Complete and submit a Project Brief form to the Department of Environmental Affairs (DEA) in Ghanzi for them to recommend which kind of assessment to be undertaken for the Camp site/s.
- Undertake assessment (if required) as recommended by DEA and obtain approval.
- Limit clearing strictly to allocated size of camp/s.
- Areas outside the project site which are disturbed due to construction activities should be rehabilitated following completion of work.
- Cleared vegetation should be heaped away from the road where they cannot interfere with traffic.
- The movement of construction vehicles should be restricted to designated access routes.
- Cleared vegetation should be stockpiled at an agreed location with the ECO to allow the communities to harvest or collect them in a safe environment.
- The site/s or Camp/s should be hoarded against intruders and wildlife.
- The Contractor’s Camp site shall be separated from the labours’ Camp.

Facilities to be provided at Camp site

**Contractor’s Camp.**

- Workshop for vehicle repairs
- Storeroom
- Store are for pipes with shades/roof
- Fuel storage and dispensing
- Pipes storage areas
- Carpentry
- Welding
- Offices including that of the engineers and environmental monitoring team.
- Batching plant
- Car washing bays
- Power (Generator)
- Water (Jojo Tank)
- Sanitation facilities (Water borne using conservancy tank)
- Solid waste holding facility
- Contaminated soil remediation facility (Hospital)

**The Labour’s Camp**

- 50 single rooms with beds made of wood/steel (separate area for women)
- Kitchen conforming to public health standards
- Recreation facilities
- Food vending area of 30m²
- Power (Generator)
• Water (Jojo Tank)
• Sanitation facilities (Water borne using conservancy tank)
• Laundry, hand washing and bathing facilities.
• Rest room/area
• Access control

Features to consider when setting up the Contractors and Labours Camp:
• Every shelter in the Camp shall be constructed in a manner which will provide protection against the elements.
• Each room used for sleeping purposes shall contain at least 4.6 sq. for each occupant. At least a 2.1m high of ceiling shall be provided.
• Beds or bunks and suitable storage facilities such as lockers for clothing and personal articles shall be provided in every room.
• The floor of each structure shall be constructed of concrete and kept in good repair.
• All living structures shall be provided with windows. The number of windows shall be 1/10 of the floor area.
• Common kitchen area should be provided in an enclosed and screened area.
• An adequate and convenient water supply approved by WUC shall be provided in the Camps for drinking, cooking, bathing and laundry purposes. An adequate water supply will be supplied at 120l/per capita/day.
• Toilet facilities adequate for the capacity of the Camps shall be provided.
• Each toilet room shall be located to be accessible without any individual passing through any sleeping room. Toilets shall have a window/s or satisfactorily ventilated.
• Separate toilet rooms shall be provided for men and women. Each shall be distinctly marked “Men” and “Women” and in the local language as well and/or using pictures or symbols to ensure understanding by all. The toilet for men and women shall be separated by partitions extending from the floor to the roof or ceiling.
• The toilet should be provided at the Camp in a ratio of one toilet seat to 15 persons with a minimum of two seats for any shared facility.
• Each toilet shall be lighted naturally or artificially by a safe type of lighting at all hours of the day and night.
• As a adequate supply of toilet paper shall be provided.
• Toilet rooms shall always be kept in sanitary conditions.
• A shower head shall be provided for every 10 people
• Facilities for drying clothes may be provided.
• Each habitable room shall be provided with lighting.
• Locks should be provided to each door. However, no room doors should be fitted with one-way locks to prevent workers being trapped inside rooms in the event of an emergency.
• Shall appoint a labours’ Camp Superintendent who is to be trained to oversee the management of the Camp and as well report any incidence of person with a communicable disease within the Camp, report any violation of the Codes of Conduct related to GBV/SHEA/VAC and expected behaviours regarding no one from the community (or other workers male or female) should be in a worker’s room; as well as no alcohol or drug use on the premises. The superintendent should be multi-lingual and speak at least one of the local languages.
• Generators should be on stable ground with clearances, ventilation and fenced with mesh wires.
• Camp closure and rehabilitation should carefully be thought out in consultation with the authorities and leaders of the settlement.
• A well-constructed temporary waste holding facility comprising of a roof, gate and side protection using nets should be provided within the confines of the construction Camp site to store all solid wastes such as cement bags and plastic wrappings that would be generated not only during preconstruction phase but throughout project implementation. The waste collection area should be clearly marked.
• A soil hospital consisting of two partitions should be constructed to store and treat contaminated soil. The bounded area floor should be paved, and the facility roofed. The soil hospital wall should be at least 1m high and should be covered at the top. This facility should be approved by Department of Waste Management and Pollution Control.
• Purchase of waste bags and colour coded bins or waste receptacles for use within and around the construction Camp site and offices.
• The waste bins should be conveniently placed to be easily accessible to all the residents of the Camp.
• The construction Camp and engineer’s office should be provided with a waterborne toilet connected to a conservancy tank. The capacity of the conservancy tank should be adequate to cater for the two facilities. These should be emptied periodically depending on how long it takes to fill
• A vehicle should be dedicated to collecting and disposing of solid waste to the nearest dumping site or landfill.
• Purchase and installation of fire extinguishers at workshop, fuel filling points and offices
• Open fire cooking should be discouraged. No cooking is allowed in rooms.
• The perimeter of the construction Camp and office should be graded to provide a firebreak of at least 5m between the Camp site and the surrounding area.
• Workers should be educated on good housekeeping rules to prevent fire outbreaks.
• A Jojo tank permanently filled with water should be placed within the construction Camp and connected to hosepipe to deal with any fire emergency within the Camp and site perimeter
• Harness all the existing HIV/AIDS programs and integrate them into the HIV/AIDS programme for the construction of the project. It will be important that the Contractor liaise with the local AIDS Co-coordinating Office to set up an effective HIV/AIDS prevention programme for the workers.
• Sensitize workers on a monthly basis on the risks associated with contracting HIV/AIDS.
• Consult with District (local) stakeholders e.g. Clinics, HIV/AIDS Coordinators in the District or Sub-district and ensure alignment with national HIV/AIDS Policy and District or Sub-district HIV/AIDS programs.
• Recruit labour work force from within beneficiary communities so that most of the workforce is not separated from their families during the construction period.
• Give women equal opportunity when hiring labour, and proactive seek opportunities for women to be employed in the project. This could help address the problem of mitigation against transactional sexual relationships for financial support and being abused in that process.
• Potential health outbreaks should be monitored, and measures taken to prevent spread

Fire Safety
• Open fires/burning is strictly prohibited
• Fire prevention and firefighting /control facilities are to be provided particularly in the kitchens
• The Camp must have the appropriate firefighting equipment as required by local authorities.
• Maintain a safe distance between buildings and consider the prevailing wind direction.
• Place firefighting equipment including fire extinguishers and a fire horn in one or more muster stations in a central location(s).
• Place fire extinguishers in a strategic location – near the exit of structures.
• Locate extinguishers in the office and kitchen tents, sleeping tents, the incineration site, generator enclosures, drill shack, fuelling locations and fuel storage areas and in vehicles. Fire extinguishers should be the appropriate size to fight a potential fire.
• Periodically hold practice for fire drills.
• Allocate parking for vehicles so there are two exit routes whenever possible.
• Construct firebreaks around Camp site/s. The firebreak should be 10 meters wide.

Fuels and Fuel Handling
• Fuel storage of more than 23,000 litres will require an environmental impact assessment
• Fuel storage should be bunded at 110 percent to contain spillages
• Keep appropriate spill kits where fuel spills may occur.
• Store each type of fuel in a separate cache; it is important not to mix different types of fuels.
• Fuel storage and dispensers should be paved with concrete
• Fuel drums should be stored in a secondary containment system, which should be rated for diesel
• Post signs that clearly prohibit smoking and open flames in fuel storage and handling areas.

Fuel handling
• Handle fuel carefully to prevent accidents including fires, spills and fuel contamination.
• Employees who handle fuel should receive appropriate training in handling fuel and transportation of dangerous goods.
• Keep appropriate spill kits at fuelling sites or stations and take precautions to prevent injury and environmental damage.
• Wear PPE: Wear safety glasses or goggles and gloves. When drums are under pressure from sun exposure, the bungs may come off unexpectedly and the contents may splash out. Fuel drum placement.
• Once a drum is opened and partially used, it is very important to replace and securely tighten the bungs.
• Store a drum in use in an inclined position (preferably 60-70° from the vertical).

First Aid
The Contractor is required to provide an adequate level of first aid resources within the Camp, including first aid staff, equipment and supplies. Injuries and illnesses usually happen suddenly and often they are unexpected. Because medical aid may be many hours away, the presence of well-trained personnel and adequate first aid resources are essential. First aid providers should have the appropriate required level of training.

Waste Management
The Camps and their surroundings shall be maintained in a clean and sanitary condition free from rubbish, garbage or other refuse.

The Contractor should determine how waste products are handled – whether they are recycled or subject to various treatment and disposal options.

• Recycle as much waste as possible and consider donating safe materials that might otherwise be disposed of as waste for public use.
• Purchase of mobile toilets for workers. The ratio of toilets to workers should be 1:25 in compliance with Factories Act regulation on Sanitation.
• Purchase of waste bags and colour coded bins or waste receptacles for use within and around the construction Camp site and offices.
• The waste bins should be conveniently placed to be easily accessible to all the residents of the Camp.
• The Camp sites should be provided with waterborne toilet connected to a conservancy tank. The capacity of the conservancy tank should be adequate to cater for the two facilities. These should be emptied periodically depending on how long it takes to fill
• A vehicle should be dedicated to collecting and disposing of solid waste to the nearest dumping site or landfill.

Security/Wildlife
• Train all workers to avoid provocation wildlife when they are in contact
• Train workers to avoid poaching
• Hoard/fence the Camp sites
• Control access into the Camp sites by engaging security offices.
• Provide a 10m fire break around the perimeter of the Camps
• Provide signs for site rules
• Provide security at gate and monitor entry and exist of the Camp

Access to Camp Site
• Provide access to the Camp sites with roads of minimum reserve of 6m.
ANNEX 10: CONTRACT CLAUSES TO BE INCLUDED IN CONTRACTOR’S AGREEMENTS AND CODES OF CONDUCT

- Company Code of Conduct
- Manager’s Code of Conduct
- Individual Code of Conduct
- GBV, SHEA and VAC Action Plan

The rules, including specific prohibitions and construction management measures, should be incorporated into all relevant bidding documents, contracts, and work orders.

Prohibitions: The following activities should be prohibited on or near the project site:

- Cutting of trees for any reason outside the approved construction area
- Hunting, fishing, wildlife capture, or plant collection
- Use of unapproved toxic materials
- Disturbance to anything with architectural or historical value
- Setting of fires
- Use of firearms (except authorized security guards)
- Use of alcohol or drugs by workers
- Employment of children in accordance with international law and the Children’s Act.

Construction Management Measures:

Waste Management:

- Minimize the production of waste that must be treated or eliminated.
- Identify and classify the type of waste generated. If hazardous wastes are generated, proper procedures must be taken regarding their storage, collection, transportation and disposal.
- Identify and demarcate disposal areas clearly indicating the specific materials that can be deposited in each.
- Control placement of all construction waste (including earth cuts) to approved disposal sites. Dispose in authorized areas all of garbage, metals, used oils, and excess material generated during construction, incorporating recycling systems and the separation of materials.
- Establish and enforce daily site clean-up procedures, including maintenance of adequate disposal facilities for construction debris.

Maintenance:

- Ensure that all equipment maintenance activities, including oil changes, are conducted within demarcated maintenance areas; never dispose spent oils on the ground, in water courses, drainage canals or in sewer systems.
- Identify, demarcate and enforce the use of within-site access routes to limit impact to site vegetation.

Labour Health and Safety:

- Place signs and lighting at strategic locations informing community before works starts.
- Conduct safety training for construction workers prior to beginning work.
- Provide personal protective equipment and clothing (goggles, gloves, respirators, dust masks, hard hats, steel-toed boots etc..) for construction workers and enforce their use.
- During heavy rains or emergencies of any kind, suspend all work.
- Safely store hazardous items away from the public.
- Educate on risks and prevention of STD/STIs and GBV/VAC
- Erect Speed bumps and speed limits.
- Cover up trucks transporting sand and gravel

**Community Safety during Construction:**
The Contractor’s responsibilities include the protection of every person (workers and the public) and nearby property from construction accidents. The Contractor shall be responsible for complying with all national and local safety requirements and any other measures necessary to avoid accidents, including the following:
- Carefully and clearly mark pedestrian-safe access routes.
- If school children are in the vicinity, include traffic safety personnel to direct traffic.
- Keep the public away from construction sites

**Nuisance and dust control should include:**
- Maintain all construction-related traffic at minimum
- Maintain equipment and machinery to reduce noise
- In sensitive areas (including residential neighbourhoods, health centres, schools) more strict measures may need to be implemented to prevent undesirable noise levels, including controlled working times
- Minimize production of dust and particulate materials at all times, to avoid impacts on surrounding families and businesses
- Spray water as needed on dirt roads, cut areas and soil stockpiles or fill material.
- Apply proper measures to minimize disruptions from vibration or noise coming from construction activities.

**Community Relations:**
To enhance adequate community relations, the Contractor should:
- Inform the population about construction and work schedules, interruption of services, traffic detour routes as appropriate and inform the community about lodging grievances as per the GRM.
- Avoid construction activities at night.

**Environmental and Social Supervision during Construction**
The bidding documents should indicate how compliance with environmental rules and design specifications would be supervised, along with the penalties for noncompliance by Contractors or workers. Construction supervision requires oversight of compliance with the ESMP by the Contractor or his designated environmental supervisor.

The “Codes of Conduct and Action Plan for Implementing ESHS and OHS Standards, and Preventing Gender Based Violence (GBV) and Violence Against Children (VAC)” should be included in contracts and including procedures for reporting GBV.

Ensure accuracy of and keep all records of correspondence between the Contractors and project supervisors should be included in contracts.

The bidding documents should all indicate that Contractor will familiarize himself/herself with the GRM and inform project workers about grievance procedures.
Codes of Conduct and Action Plan For Implementing ESHS and OHS Standards, and Preventing Gender Based Violence and Violence Against Children

1. **Background**

The purpose of these *Codes of Conduct and Action Plan for Implementing ESHS and OHS Standards, and Preventing Gender Based Violence (GBV) and Violence Against Children (VAC)* is to introduce a set of key definitions, core Codes of Conduct, and guidelines that:

i. clearly define obligations on all project staff (including sub-contractors and day workers) regarding implementing the project’s environmental, social, health and safety (ESHS) and occupational health and safety (OHS) requirements, and;

ii. help prevent, report and address GBV and VAC within the work site and in its immediate surrounding communities.

The application of these Codes of Conduct will help ensure the project meets its ESHS and OHS objectives, as well as preventing and/or mitigating the risks of GBV and VAC on the project and in the local communities.

These Codes of Conduct are to be adopted by those working on the project and are meant to:

i. create awareness of the ESHS and OHS expectations on the project;

ii. create common awareness about GBV and VAC and:

   a. ensure a shared understanding that they have no place in the project; and,

   b. create a clear system for identifying, responding to, and sanctioning GBV and VAC incidents.

Ensuring that all project staff understand the values of the project, understand expectations for all employees, and acknowledge the consequences for violations of these values, will help to create smoother, more respectful and productive project implementation thereby helping ensure that the project’s objectives will be achieved.

2. **Definitions**

The following definitions apply:

**Environmental, Social, Health and Safety (ESHS):** an umbrella term covering issues related to the impact of the project on the environment, communities and workers.

**Occupational Health and Safety (OHS):** Occupational health and safety is concerned with protecting the safety, health and welfare of people engaged in work or employment. The enjoyment of these standards at the highest levels is a basic human right that should be accessible by each worker.

**Gender-Based Violence (GBV):** is an umbrella term for any harmful act that is perpetrated against a person’s will and that is based on socially ascribed (i.e., gender) differences between males and females. It includes acts that inflict physical, sexual or mental harm or suffering, threats of such acts, coercion, and other deprivations of liberty. These acts can occur in public or in private. The term GBV is used to underscore systemic inequality between males and females (which exists in every society in the world) and acts as a unifying and foundational characteristic of most forms of violence perpetrated against women and girls. The 1993 United Nations Declaration on the Elimination of Violence against Women defines violence against women as “any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women.”

The six core types of GBV are:

- **Rape:** non-consensual penetration (however slight) of the vagina, anus or mouth with a penis, other body part, or an object.

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16 It is important to note that women and girls disproportionately experience violence; overall 35 percent of women worldwide have faced physical or sexual violence (WHO, Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence, 2013). Some men and boys also face violence based on their gender and unequal power relationships.
• **Sexual Assault**: any form of non-consensual sexual contact that does not result in or include penetration. Examples include attempted rape, as well as unwanted kissing, fondling, or touching of genitalia and buttocks.
  - **Sexual Harassment**: is unwelcome sexual advances, requests for sexual favours, and other verbal or physical conduct of a sexual nature. Sexual harassment is not always explicit or obvious, it can include implicit and subtle acts but always involves a power and gender dynamic in which a person in power uses their position to harass another based on their gender. Sexual conduct is unwelcome whenever the person subjected to it considers it unwelcome (e.g. looking somebody up and down; kissing, howling or smacking sounds; hanging around somebody; whistling and catcalls; in some instances, giving personal gifts).
  - **Sexual Favourites** is a form of sexual harassment and includes making promises of favourable treatment (e.g. promotion) or threats of unfavourable treatment (e.g. loss of job) dependent on sexual acts—or other forms of humiliating, degrading or exploitative behaviour.

• **Physical Assault**: an act of physical violence that is not sexual in nature. Examples include hitting, slapping, choking, cutting, shoving, burning, shooting or use of any weapons, acid attacks or any other act that results in pain, discomfort or injury.

• **Forced Marriage**: the marriage of an individual against her or his will.

• **Denial of Resources, Opportunities or Services**: denial of rightful access to economic resources/assets or livelihood opportunities, education, health or other social services (e.g. a widow prevented from receiving an inheritance, earnings forcibly taken by an intimate partner or family member, a woman prevented from using contraceptives, a girl prevented from attending school, etc.).

• **Psychological / Emotional Abuse**: infliction of mental or emotional pain or injury. Examples include threats of physical or sexual violence, intimidation, humiliation, forced isolation, stalking, harassment, unwanted attention, remarks, gestures or written words of a sexual and/or menacing nature, destruction of cherished things, etc.

**Violence Against Children (VAC)**: is defined as physical, sexual, emotional and/or psychological harm, neglect or negligent treatment of minor children (i.e. under the age of 18), including exposure to such harm, that results in actual or potential harm to the child’s health, survival, development or dignity in the context of a relationship of responsibility, trust or power. This includes using children for profit, labour, sexual gratification, or some other personal or financial advantage. This also includes other activities such as using computers, mobile phones, video and digital cameras or any other medium to exploit or harass children or to access child pornography.

**Grooming**: are behaviours that make it easier for a perpetrator to procure a child for sexual activity. For example, an offender might build a relationship of trust with the child, and then seek to sexualize that relationship (for example by encouraging romantic feelings or exposing the child to sexual concepts through pornography).

**Online Grooming**: is the act of sending an electronic message with indecent content to a recipient who the sender believes to be a minor, with the intention of procuring the recipient to engage in or submit to sexual activity with another person, including but not necessarily the sender.

**Accountability Measures**: are the measures put in place to ensure the confidentiality of survivors and to hold Contractors, consultants and the client responsible for instituting a fair system of addressing cases of GBV and VAC.

**Contractors Environmental and Social Management Plan (C-ESMP)**: the plan prepared by the Contractor outlining how they will implement the works activities in accordance with the project’s environmental and social management plan (ESMP).

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17 Exposure to GBV is also considered VAC.
18 The employment of children must comply with all relevant local legislation, including labour laws in relation to child labour and World Bank’s safeguard policies on child labour and minimum age. They must also be able to meet the project’s Occupational Health and Safety competency standards.
19 For example, the Vanuatu Criminal Code Act 1995, Division 474 (telecommunications offences, subdivision C).
**Child**: is used interchangeably with the term ‘minor’ and refers to a person under the age of 18. This is in accordance with Article 1 of the United Nations Convention on the Rights of the Child.

**Child Protection (CP)**: is an activity or initiative designed to protect children from any form of harm, particularly arising from VAC.

**Consent**: is the informed choice underlying an individual’s free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained using threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even if national legislation of the country into which the Code of Conduct is introduced has a lower age.\(^\text{20}\) Mistaken belief regarding the age of the child and consent from the child is not a defence.

**Consultant**: is any firm, company, organization or other institution that has been awarded a contract to provide consulting services to the project and has hired managers and/or employees to conduct this work.

**Contractor**: is any firm, company, organization or other institution that has been awarded a contract to conduct infrastructure development works for the project and has hired managers and/or employees to conduct this work. This also includes sub-Contractors hired to undertake activities on behalf of the Contractor.

**Employee**: is any individual offering labour to the Contractor or consultant within country on or off the work site, under a formal or informal employment contract or arrangement, typically, but not necessarily (e.g. including unpaid interns and volunteers), in exchange for a salary, with no responsibility to manage or supervise other employees.

**GBV and VAC Allegation Procedure**: is the prescribed procedure to be followed when reporting incidents of GBV or VAC.

**GBV and VAC Codes of Conduct**: The Codes of Conduct adopted for the project covering the commitment of the company, and the responsibilities of managers and individuals with regards to GBV and VAC.

**GBV and VAC Compliance Team (GCCT)**: a team established by the project to address GBV and VAC issues.

**Grievance Redress Mechanism (GRM)**: is the process established by a project to receive and address complaints.

**Manager**: is any individual offering labour to the Contractor or consultant, on or off the work site, under a formal or informal employment contract and in exchange for a salary, with responsibility to control or direct the activities of a Contractor’s or consultant’s team, unit, division or similar, and to supervise and manage a pre-defined number of employees.

**Perpetrator**: the person(s) who commit(s) or threaten(s) to commit an act or acts of GBV or VAC.

**Response Protocol**: is the mechanisms set in place to respond to cases of GBV and VAC (see Section 4.7 Response Protocol).

**Survivor/Survivors**: the person(s) adversely affected by GBV or VAC. Women, men and children can be survivors of GBV; children can be survivors of VAC.

**Work Site**: is the area in which infrastructure development works are being conducted, as part of the project. Consulting assignments are considered to have the areas in which they are active as their work sites.

\(^{20}\) For example, under Article 97 Criminal consolidation act for age of legal consent in Vanuatu, sexual activity with any child under the age of 15 years for heterosexual conduct and 18 years for same sex conduct is prohibited [http://tinyurl.com/vu-consent](http://tinyurl.com/vu-consent). However, the World Bank follows the United Nations for the age of consent (18 years) so this applies on World Bank financed projects.
Work Site Surroundings: is the ‘Project Area of Influence’ which are any area, urban or rural, directly affected by the project, including all human settlements found on it.

3. **Codes of Conduct**

This chapter presents three Codes of Conduct for use:

i. **Company Code of Conduct:** Commits the company to addressing GBV and VAC issues;

ii. **Manager’s Code of Conduct:** Commits managers to implementing the Company Code of Conduct, as well as those signed by individuals; and,

iii. **Individual Code of Conduct:** Code of Conduct for everyone working on the project, including managers.
Company Code of Conduct
Implementing ESHS and OHS Standards
Preventing Gender Based Violence and Violence Against Children

The company is committed to ensuring that the project is implemented in such a way which minimizes any negative impacts on the local environment, communities, and its workers. This will be done by respecting the environmental, social, health and safety (ESH) standards, and ensuring appropriate occupational health and safety (OHS) standards are met. The company is also committed to creating and maintaining an environment in which gender-based violence (GBV) and violence against children (VAC) have no place, and where they will not be tolerated by any employee, sub-Contractors, supplier, associate, or representative of the company.

Therefore, to ensure that all those engaged in the project are aware of this commitment, the company commits to the following core principles and minimum standards of behaviour that will apply to all company employees, associates, and representatives, including sub-Contractors and suppliers, without exception:

General

1. The company—and therefore all employees, associates, representatives, sub-Contractors and suppliers—commits to complying with all relevant national laws, rules and regulations.
2. The company commits to full implementing its ‘Contractors Environmental and Social Management Plan’ (C-ESMP).
3. The company commits to treating women, children (persons under the age of 18), and men with respect regardless of race, colour, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status. Acts of GBV and VAC are in violation of this commitment.
4. The company shall ensure that interactions with local community members are done with respect and non-discrimination.
5. Demeaning, threatening, harassing, abusive, culturally inappropriate, or sexually provocative language and behaviour are prohibited among all company employees, associates, and its representatives, including sub-Contractors and suppliers.
6. The company will follow all reasonable work instructions (including regarding environmental and social norms).
7. The company will protect and ensure proper use of property (for example, to prohibit theft, carelessness or waste).

Health and Safety

8. The company will ensure that the project’s occupational health and safety (OHS) Management Plan is effectively implemented by company staff, as well as sub-Contractors and suppliers.
9. The company will ensure that all person’s on-site wear prescribed and appropriate personal protective equipment, preventing avoidable accidents and reporting conditions or practices that pose a safety hazard or threaten the environment.
10. The company will:
   i. prohibit the use of alcohol during work activities.
   ii. prohibit the use of narcotics or other substances which can always impair faculties.

11. The company will ensure that adequate sanitation facilities are available on site and at any worker accommodations provided to those working on the project.

Gender Based Violence and Violence Against Children

12. Acts of GBV or VAC constitute gross misconduct and are therefore grounds for sanctions, which may include penalties and/or termination of employment, and if appropriate referral to the Police for further action.
13. All forms of GBV and VAC, including grooming are unacceptable, regardless of whether they take place on the work site, the work site surroundings, at worker’s Camps or within the local community.
i. Sexual Harassment—for instance, making unwelcome sexual advances, requests for sexual favours, and other verbal or physical conduct, of a sexual nature, including subtle acts of such behaviour, is prohibited.

ii. Sexual favours—for instance, making promises or favourable treatment dependent on sexual acts—or other forms of humiliating, degrading or exploitative behaviour are prohibited.

14. Sexual contact or activity with children under 18—including through digital media—is prohibited. Mistaken belief regarding the age of a child is not a defence. Consent from the child is also not a defence or excuse.

15. Unless there is full consent by all parties involved in the sexual act, sexual interactions between the company’s employees (at any level) and members of the communities surrounding the workplace are prohibited. This includes relationships involving the withholding/promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered “non-consensual” within the scope of this Code.

16. In addition to company sanctions, legal prosecution of those who commit acts of GBV, or VAC will be pursued if appropriate.

17. All employees, including volunteers and sub-Contractors are highly encouraged to report suspected or actual acts of GBV and/or VAC by a fellow worker, whether in the same company or not. Reports must be made in accordance with project’s GBV and VAC Allegation Procedures.

18. Managers are required to report and act to address suspected or actual acts of GBV and/or VAC as they have a responsibility to uphold company commitments and hold their direct reports responsible.

Implementation

To ensure that the above principles are implemented effectively the company commits to ensuring that:

19. All managers sign the project’s ‘Manager’s Code of Conduct’ detailing their responsibilities for implementing the company’s commitments and enforcing the responsibilities in the ‘Individual Code of Conduct’.

20. All employees sign the project’s ‘Individual Code of Conduct’ confirming their agreement to comply with ESHS and OHS standards, and not to engage in activities resulting in GBV or VAC.

21. Displaying the Company and Individual Codes of Conduct prominently and in clear view at workers’ Camps, offices, and in in public areas of the workspace. Examples of areas include waiting, rest and lobby areas of sites, canteen areas and health clinics.

22. Ensure that posted and distributed copies of the Company and Individual Codes of Conduct are translated into the appropriate language of use in the work site areas as well as for any international staff in their native language.

23. An appropriate person is nominated as the company’s ‘Focal Point’ for addressing GBV and VAC issues, including representing the company on the GBV and VAC Compliance Team (GCCT) which is comprised of representatives from the client, Contractor(s), the supervision consultant, and local service provider(s).

24. Ensuring that an effective GBV and VAC Action Plan is developed in consultation with the GCCT which includes as a minimum:

   i. **GBV and VAC Allegation Procedure** to report GBV and VAC issues through the project Grievance Redress Mechanism (Section 4.3 Action Plan);
   
ii. **Accountability Measures** to protect confidentiality of all involved (Section 4.4 Action Plan); and,
   
iii. **Response Protocol** applicable to GBV and VAC survivors and perpetrators (Section 4.7 Action Plan).

25. That the company effectively implements the agreed final GBV and VAC Action Plan, providing feedback to the GCCT for improvements and updates as appropriate.

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Consent is defined as the informed choice underlying an individual’s free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained using threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even if national legislation of the country into which the Code of Conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.
26. All employees attend an induction training course prior to commencing work on site to ensure they are familiar with the company’s commitments to ESHS and OHS standards, and the project’s GBV and VAC Codes of Conduct.

27. All employees attend a mandatory training course once a month for the duration of the contract starting from the first induction training prior to commencement of work to reinforce the understanding of the project’s ESHS and OHS standards and the GBV and VAC Code of Conduct.

I do hereby acknowledge that I have read the foregoing Company Code of Conduct, and on behalf of the company agree to comply with the standards contained therein. I understand my role and responsibilities to support the project’s OHS and ESHS standards, and to prevent and respond to GBV and VAC. I understand that any action inconsistent with this Company Code of Conduct or failure to act mandated by this Company Code of Conduct may result in disciplinary action.

Company name: _________________________
Signature: ___________________________
Printed Name: _______________________
Title: _______________________________
Date: _______________________________
Manager’s Code of Conduct
Implementing ESHS and OHS Standards
Preventing Gender Based Violence and Violence Against Children

Managers at all levels have a responsibility to uphold the company’s commitment to implementing the ESHS and OHS standards, and preventing and addressing GBV and VAC. This means that managers have an acute responsibility to create and maintain an environment that respects these standards and prevents GBV and VAC. Managers need to support and promote the implementation of the Company Code of Conduct. To that end, managers must adhere to this Manager’s Code of Conduct and sign the Individual Code of Conduct. This commits them to supporting the implementation of the C-ESMP and the OHS Management Plan and developing systems that facilitate the implementation of the GBV and VAC Action Plan. They need to maintain a safe workplace, as well as a GBV-free and VAC-free environment at the workplace and in the local community. These responsibilities include but are not limited to:

Implementation

1. To ensure maximum effectiveness of the Company and Individual Codes of Conduct:
   i. Prominently displaying the Company and Individual Codes of Conduct in clear view at workers’ Camps, offices, and in public areas of the workspace. Examples of areas include waiting, rest and lobby areas of sites, canteen areas and health clinics.
   ii. Ensuring all posted and distributed copies of the Company and Individual Codes of Conduct are translated into the appropriate language of use in the work site areas as well as for any international staff in their native language.
2. Verbally and in writing explain the Company and Individual Codes of Conduct to all staff.
3. Ensure that:
   i. All direct reports sign the ‘Individual Code of Conduct’, including acknowledgment that they have read and agree with the Code of Conduct.
   ii. Staff lists and signed copies of the Individual Code of Conduct are provided to the OHS Manager, the GCCT, and the client.
   iii. Participate in training and ensure that staff also participate as outlined below.
   iv. Put in place a mechanism for staff to:
      (a) report concerns on ESHS or OHS compliance; and,
      (b) confidentially report GBV or VAC incidents through the Grievance Redress Mechanism (GRM)
   v. Staff are encouraged to report suspected or actual ESHS, OHS, GBV or VAC issues, emphasizing the staff’s responsibility to the Company and the country hosting their employment, and emphasizing the respect for confidentiality.
4. In compliance with applicable laws and to the best of your abilities, prevent perpetrators of sexual exploitation and abuse from being hired, re-hired or deployed. Use background and criminal reference checks for all employees.
5. Ensure that when engaging in partnership, sub-Contractor, supplier or similar agreements, these agreements:
   i. Incorporate the ESHS, OHS, GBV and VAC Codes of Conduct as an attachment.
   ii. Include the appropriate language requiring such contracting entities and individuals, and their employees and volunteers, to comply with the Individual Codes of Conduct.
   iii. Expressly state that the failure of those entities or individuals, as appropriate, to ensure compliance with the ESHS and OHS standards, take preventive measures against GBV and VAC, to investigate allegations thereof, or to take corrective actions when GBV or VAC has occurred, shall not only constitute grounds for sanctions and penalties in accordance with the Individual Codes of Conduct but also termination of agreements to work on or supply the project.
6. Provide support and resources to the GCCT to create and disseminate internal sensitization initiatives through the awareness-raising strategy under the GBV and VAC Action Plan.
7. Ensure that any GBV or VAC issue warranting Police action is reported to the Police, the client and the World Bank immediately.
8. Report and act according to the response protocol (Section 4.7 Response Protocol) any suspected or actual acts of GBV and/or VAC as managers have a responsibility to uphold company commitments and hold their direct reports responsible.

9. Ensure that any major ESHS or OHS incidents are reported to the client and the supervision engineer immediately.

**Training**

10. The managers are responsible to:
    i. Ensure that the OHS Management Plan is implemented, with suitable training required for all staff, including sub-Contractors and suppliers; and,
    ii. Ensure that staff have a suitable understanding of the C-ESMP and are trained as appropriate to implement the C-ESMP requirements.

11. All managers are required to attend an induction manager training course prior to commencing work on site to ensure that they are familiar with their roles and responsibilities in upholding the GBV and VAC elements of these Codes of Conduct. This training will be separate from the induction training course required of all employees and will provide managers with the necessary understanding and technical support needed to begin to develop the GBV and VAC Action Plan for addressing GBV and VAC issues.

12. Managers are required to attend and assist with the project facilitated monthly training courses for all employees. Managers will be required to introduce the trainings and announce the self-evaluations, including collecting satisfaction surveys to evaluate training experiences and provide advice on improving the effectiveness of training.

13. Ensure that time is provided during work hours and that staff prior to commencing work on site attend the mandatory project facilitated induction training on:
    i. OHS and ESHS; and,
    ii. GBV and VAC required of all employees.

14. During civil works, ensure that staff attend ongoing OHS and ESHS training, as well as the monthly mandatory refresher training course required of all employees to combat increased risk of GBV and VAC.

**Response**

15. Managers will be required to take appropriate actions to address any ESHS or OHS incidents.

16. About GBV and VAC:
    i. Provide input to the GBV and VAC Allegation Procedures (Section 4.2 Action Plan) and Response Protocol (Section 4.7 Action Plan) developed by the GCCT as part of the final cleared GBV and VAC Action Plan.
    ii. Once adopted by the Company, managers will uphold the Accountability Measures (Section 4.4 Action Plan) set forth in the GBV and VAC Action Plan to maintain the confidentiality of all employees who report or (allegedly) perpetrate incidences of GBV and VAC (unless a breach of confidentiality is required to protect persons or property from serious harm or where required by law).
    iii. If a manager develops concerns or suspicions regarding any form of GBV or VAC by one of his/her direct reports, or by an employee working for another Contractor on the same work site, s/he is required to report the case using the GRM.
    iv. Once a sanction has been determined, the relevant manager(s) is/are expected to be personally responsible for ensuring that the measure is effectively enforced, within a maximum timeframe of 14 days from the date on which the decision to sanction was made.
    v. If a Manager has a conflict of interest due to personal or familial relationships with the survivor and/or perpetrator, he/she must notify the respective company and the GCCT. The Company will be required to appoint another manager without a conflict of interest to respond to complaints.
    vi. Ensure that any GBV or VAC issue warranting Police action is reported to the Police, the client and the World Bank immediately.

17. Managers failing address ESHS or OHS incidents or failing to report or comply with the GBV and VAC provisions may be subject to disciplinary measures, to be determined and enacted by the company’s CEO, Managing Director or equivalent highest-ranking manager. Those measures may include:
    i. Informal warning.
ii. Formal warning.
iii. Additional Training.
iv. Loss of up to one week's salary.
v. Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.
vi. Termination of employment.

18. Ultimately, failure to effectively respond to ESHS, OHS, GBV and VAC cases on the work site by the company’s managers or CEO may provide grounds for legal actions by authorities.

I do hereby acknowledge that I have read the foregoing Manager’s Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to ESHS, OHS, GBV and VAC requirements. I understand that any action inconsistent with this Manager’s Code of Conduct or failure to act mandated by this Manager’s Code of Conduct may result in disciplinary action.

Signature: _______________________
Printed Name: _____________________
Title: _______________________
Date: _______________________
Individual Code of Conduct
Implementing ESHS and OHS Standards
Preventing Gender Based Violence and Violence Against Children

I, ______________________________, acknowledge that adhering to environmental, social health and safety (ESHS) standards, following the project’s occupational health and safety (OHS) requirements, and preventing gender based violence (GBV) and violence against children (VAC) is important.

The company considers that failure to follow ESHS and OHS standards, or to partake in GBV or VAC activities—be it on the work site, the work site surroundings, at workers’ Camps, or the surrounding communities—constitute acts of gross misconduct and are therefore grounds for sanctions, penalties or potential termination of employment. Prosecution by the Police of those who commit GBV or VAC may be pursued if appropriate.

I agree that while working on the project I will:

1. Attend and actively partake in training courses related to ESHS, OHS, HIV/AIDS, GBV and VAC as requested by my employer.
2. Will always wear my personal protective equipment (PPE) when at the work site or engaged in project related activities.
3. Take all practical steps to implement the Contractor’s environmental and social management plan (C-ESMP).
4. Implement the OHS Management Plan.
5. Adhere to a zero-alcohol policy during work activities, and refrain from the use of narcotics or other substances which can always impair faculties.
6. Consent to Police background check.
7. Treat women, children (persons under the age of 18), and men with respect regardless of race, colour, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
8. Not use language or behaviour towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
9. Not engage in sexual harassment—for instance, making unwelcome sexual advances, requests for sexual favours, and other verbal or physical conduct, of a sexual nature, including subtle acts of such behaviour (e.g. looking somebody up and down; kissing, howling or smacking sounds; hanging around somebody; whistling and catcalls; giving personal gifts; making comments about somebody’s sex life; etc.).
10. Not engage in sexual favours—for instance, making promises or favourable treatment dependent on sexual acts—or other forms of humiliating, degrading or exploitative behaviour.
11. Not participate in sexual contact or activity with children—including grooming or contact through digital media. Mistaken belief regarding the age of a child is not a defence. Consent from the child is also not a defence or excuse.
12. Unless there is the full consent22 by all parties involved, I will not have sexual interactions with members of the surrounding communities. This includes relationships involving the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered “non-consensual” within the scope of this Code.
13. Consider reporting through the GRM or to my manager any suspected or actual GBV or VAC by a fellow worker, whether employed by my company or not, or any breaches of this Code of Conduct.

Regarding children under the age of 18:

14. Wherever possible, ensure that another adult is present when working in the proximity of children.

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22 Consent is defined as the informed choice underlying an individual’s free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained using threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even if national legislation of the country into which the Code of Conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.
15. Not invite unaccompanied children unrelated to my family into my home, unless they are at immediate risk of injury or in physical danger.

16. Not use any computers, mobile phones, video and digital cameras or any other medium to exploit or harass children or to access child pornography (see also “Use of children’s images for work related purposes” below).

17. Refrain from physical punishment or discipline of children.

18. Refrain from hiring children for domestic or other labour below the minimum age of 14 unless national law specifies a higher age, or which places them at significant risk of injury.

19. Comply with all relevant local legislation, including labour laws in relation to child labour and World Bank’s safeguard policies on child labour and minimum age.

20. Take appropriate caution when photographing or filming children.

Use of children’s images for work related purposes

When photographing or filming a child for work related purposes, I must:

21. Before photographing or filming a child, assess and endeavour to comply with local traditions or restrictions for reproducing personal images.

22. Before photographing or filming a child, obtain informed consent from the child and a parent or guardian of the child. As part of this I must explain how the photograph or film will be used.

23. Ensure photographs, films, videos and DVDs present children in a dignified and respectful manner and not in a vulnerable or submissive manner. Children should be adequately clothed and not in poses that could be sexually suggestive.

24. Ensure images are honest representations of the context and the facts.

25. Ensure file labels do not reveal identifying information about a child when sending images electronically.

Sanctions

I understand that if I breach this Individual Code of Conduct, my employer will take disciplinary action which could include:

1. Informal warning.

2. Formal warning.

3. Additional Training.

4. Loss of up to one week’s salary.

5. Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.

6. Termination of employment.

7. Report to the Police if warranted.

I understand that it is my responsibility to ensure that the environmental, social, health and safety standards are met. That I will adhere to the occupational health and safety management plan. That I will avoid actions or behaviours that could be construed as GBV or VAC. Any such actions will be a breach this Individual Code of Conduct. I do hereby acknowledge that I have read the foregoing Individual Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to ESHS, OHS, GBV and VAC issues. I understand that any action inconsistent with this Individual Code of Conduct or failure to act mandated by this Individual Code of Conduct may result in disciplinary action and may affect my ongoing employment.

Signature: __________________________

Printed Name: __________________________

Title: __________________________

Date: __________________________
GBV, SHEA and VAC Action Plan

1. The GBV, SHEA and VAC Compliance Team

The project shall establish a ‘GBV, SHEA and VAC Compliance Team’ (GCCT). The GCCT will include, as appropriate to the project, at least four representatives (‘Focal Points’) as follows:

i. A safeguards specialist from the client;
ii. The occupational health and safety manager from the Contractor23, or someone else tasked with the responsibility for addressing GBV and VAC with the time and seniority to devote to the position;
iii. The supervision consultant; and,
iv. A representative from a local service provider with experience in GBV and VAC (the ‘Service Provider’).

It will be the duty of the GCCT with support from the management of the Contractor to inform workers about the activities and responsibilities of the GCCT. To effectively serve on the GCCT, members must undergo training by the local service provider prior to the commencement of their assignment to ensure that they are sensitized on GBV and Child Protection.

The GCCT will be required to:

i. Approve any changes to the GBV and VAC Codes of Conduct contained in this document, with clearances from the World Bank for any such changes.
ii. Prepare the GBV and VAC Action Plan reflecting the Codes of Conduct which includes:
   (a) GBV and VAC Allegation Procedures
   (b) Accountability Measures
   (c) An Awareness raising Strategy
   (d) A Response Protocol
iii. Obtain approval of the GBV and VAC Action Plan by the Contractor’s management;
iv. Obtain client and World Bank clearances for the GBV and VAC Action Plan prior to full mobilization;
v. Receive and monitor resolutions and sanctions regarding complaints received related to GBV and VAC associated with the project; and,
vi. Ensure that GBV and VAC statistics in the GRM are up to date and included in the regular project reports.

The GCCT shall hold quarterly update meetings to discuss ways to strengthen resources and GBV and VAC support for employees and community members.

2. Making Complaints: GBV and VAC Allegation Procedures

All staff, volunteers, consultants and sub-Contractors are encouraged to report suspected or actual GBV or VAC cases. Managers are required to report suspected or actual GBV and/or VAC cases as they have responsibilities to uphold company commitments and they hold their direct reports accountable for complying with the Individual Code of Conduct.

The project will provide information to employees and the community on how to report cases of GBV and VAC Code of Conduct breaches through the Grievance Redress Mechanism (GRM). The GCCT will follow up on cases of GBV, VAC and Code of Conduct breaches reported through the GRM.

23 Where there are multiple Contractors working on the project, each shall nominate a representative as appropriate.
3. Addressing Complaints about GBV or VAC

GRM

The project operates a grievance redress mechanism (GRM) which is managed by a designated GRM operator with the project management unit. Reports of GBV or VAC, other complaints, or other concerns may be submitted online, via telephone or mail, or in person.

All complaints regarding GBV and VAC must immediately be reported to the World Bank task team by the GRM operator.

The GRM operator will refer complaints related to GBV or VAC to the GCCT to resolve them. In accordance with the GBV and VAC Action Plan, the GCCT through the Service Provider and Focal Point(s) will investigate the complaint and ultimately provide the GRM operator with a resolution to the complaint, or the Police if necessary. The victim’s confidentiality should also be kept in mind when reporting any incidences to the Police.

The GRM operator will, upon resolution, advise the complainant of the outcome, unless it was made anonymously. Complaints made to managers or the Service Provider will be referred by them to the GRM for processing.

If the complaint to the GRM is made by a survivor or on behalf of a survivor, the complainant will be directly referred to the service provider to receive support services while the GCCT investigates the complaint in parallel.

Service Provider

The Service Provider is a local organization which has the experience and ability to support survivors of GBV or VAC. The client, the Contractor(s) and consultant must establish a working relationship with the Service Provider, so that GBV and VAC cases can safely be referred to them. The Service Provider will also provide support and guidance to the GBV and VAC Focal Points as necessary. The Service Provider will have a representative on the GCCT and be involved in resolving complaints related to GBV or VAC.

GCCT GBV and VAC Focal Points

The GCCT shall confirm that all complaints related to GBV or VAC have been referred to the World Bank by the GRM operator.

The GCCT shall consider all GBV and VAC complaints and agree on a plan for resolution. The appropriate Focal Point will be tasked with implementing the plan (i.e. issues with Contractor’s staff will be for the Contractor to resolve; consultant’s staff the consultant; and client staff the client). The Focal Point will advise the GCCT on resolution, including referral to the Police if necessary. They will be assisted by the Service Provider as appropriate.

All the Focal Points on the GCCT must be trained and empowered to resolve GBV and VAC issues. It is essential that all staff of the GRM and GCCT understand the guiding principles and ethical requirement of dealing with survivors of GBV and VAC. All reports should be kept confidential and referred immediately to the Service Provider represented on the GCCT24. In GBV and VAC cases warranting Police action, the Focal Points must appropriately refer the complaint to: (i) the authorities; (ii) the Service Provider; and, (iii) management for further action. The client and the World Bank are to be immediately notified.

4. Accountability Measures

All reports of GBV or VAC shall be handled in a confidential manner to protect the rights of all involved. The client, Contractor and consultant must maintain the confidentiality of employees who notify any acts or threats of violence, and of any employees accused of engaging in any acts or threats of violence (unless a breach of

24 Survivors of GBV and VAC may need access to Police, justice, health, psychosocial, safe shelter and livelihood services to begin on a path of healing from their experience of violence.
confidentiality is required to protect persons or property from serious harm or where required by law). The Contractor and consultant must prohibit discrimination or adverse action against an employee because of survivor’s disclosure, experience or perceived experience of GBV or VAC.

To ensure that survivors feel confident to disclose their experience of GBV or VAC, they can report cases of GBV or VAC through multiple channels: (i) online, (ii) phone, (iii) in-person, (iv) the local service provider, (v) the manager(s), (vi) village councils; or, (vii) the Police. To ensure confidentiality, only the service provider will be privy to information regarding the survivor. The GCCT will be the primary point of contact for information and follow up regarding the perpetrator.

5. Monitoring and Evaluation

The GCCT must monitor the follow up of cases that have been reported and maintain all reported cases in a confidential and secure location. Monitoring must collect the number of cases that have been reported and the share of them that are being managed by Police, NGOs etc.

These statistics shall be reported to the GRM and the Supervision Engineer for inclusion in their reporting.

For any GBV and VAC cases warranting Police action, the client and the World Bank are to be immediately notified.

6. Awareness-raising Strategy

It is important to create an Awareness-Raising Strategy with activities aimed to sensitize employees on GBV and VAC on the work site and its related risks, provisions of the GBV and VAC Codes of Conduct, GBV and VAC Allegation Procedures, Accountability Measures and Response Protocol. The strategy will be accompanied by a timeline, indicating the various sensitization activities through which the strategy will be implemented and the related (expected) delivery dates. Awareness-raising activities should be linked with trainings provided by the Service Provider.

7. Response Protocol

The GCCT will be responsible for developing a written response protocol to meet the project requirements, in accordance to national laws and protocols. The response protocol must include mechanisms to notify and respond to perpetrators in the workplace (See 4.9 for Perpetrator Policy and Response). The response protocol will include the GRM process to ensure competent and confidential response to disclosures of GBV and VAC. An employee who discloses a case of GBV or VAC in the workplace shall be referred to the GRM for reporting.

8. Survivor Support Measures

It is essential to appropriately respond to the survivor’s complaint by respecting the survivor’s choices to minimize the potential for re-traumatization and further violence against the survivor. Refer the survivor to the Service Provider to obtain appropriate support services in the community—including medical and psychosocial support, emergency accommodation, security including Police protection and livelihood support—by facilitating contact and coordination with these services. The client, Contractor or consultant may, where feasible, provide financial and other supports to survivors of GBV or VAC for these services.

If the survivor is an employee, to ensure the safety of the survivor, and the workplace in general, the client, Contractor or consultant, in consultation with the survivor, will assess the risk of ongoing abuse to the survivor and in the workplace. Reasonable adjustments will be made to the survivor’s work schedule and work environment as deemed necessary. The employer will provide adequate leave to survivors seeking services after experiencing violence.

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25 Develop appropriate protocol for written recording of GBV issues and VAC raised in case the notes are subpoenaed. Develop processes for record keeping including activities undertaken by the GCCT.
9. Perpetrator Policy and Response

Encourage and accept notification through the GRM from employees and community members about perpetrators in the workplace. Through the GCCT and/or the Service Provider, oversee the investigation of these grievances, ensuring procedural fairness for the accused, and within the local laws. If an employee has breached the Code of Conduct, the employer will act which could include:

i. Undertake disciplinary action in accordance with sanctions in the GBV and VAC Codes of Conduct;
ii. Report the perpetrator to the Police as per local legal paradigms; and/or
iii. If feasible, provide or facilitate counselling for the perpetrator.

10. Sanctions

In accordance with the Code of Conduct, any employee confirmed as a GBV or VAC perpetrator shall be considered for disciplinary measures in line with sanctions and practices as agreed in the Individual Code of Conduct. It is important to note that, for each case, disciplinary sanctions are intended to be part of a process that is entirely internal to the employer, is placed under the full control and responsibility of its managers and is conducted in accordance with the applicable national labour legislation.

Such process is expected to be fully independent from any official investigation that competent authorities (e.g. Police) may decide to conduct in relationship to the same case, and in accordance with the applicable national law. Similarly, internal disciplinary measures that the employer’s managers may decide to enact are meant to be separate from any charges or sanctions that the official investigation may result into (e.g. monetary fines, detention etc.).

Potential Procedures for Addressing GBV and VAC

Accountability Measures to maintain confidentiality can be achieved through the following actions:

1. Inform all employees that confidentiality of GBV/VAC survivors’ personal information is of utmost importance.
2. Provide the GCCT with training on empathetic and non-judgmental listening.
3. Take disciplinary action, including and up to dismissal, against those who breach survivor’s confidentiality (this is unless a breach of confidentiality is necessary to protect the survivor or another person from serious harm, or where required by law).

GBV and VAC Allegation Procedures should specify:

1. Who survivors can seek information and assistance from.
2. The process for community members and employees to lodge a complaint through the GRM should there be alleged GBV or VAC.
3. The mechanism for how community members and employees can escalate a request for support or notification of violence if the process for reporting is ineffective due to unavailability or non-responsiveness, or if the employee’s concern in not resolved.

Financial and Other Supports to survivors can include:

1. Direct payment of medical costs.
2. Coverage of all medical costs related specifically to the incident.
3. Upfront payments for medical costs to later be recouped from the employee’s health insurance.
4. Providing or facilitating access to childcare.
5. Providing security upgrades to the employee’s home.
6. Providing safe transportation to access support services or to and from accommodation.

Based on the rights, needs and wishes of the survivor, survivor support measures to ensure the safety of the survivor who is an employee can include:

1. Changing the perpetrator or survivor’s span of hours or pattern of hours and/or shift patterns.

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26 It is critical that a survivor centered approach be adopted. The survivor should be fully involved in the decision making. Except for exceptional circumstances the perpetrator should be required to take appropriate actions to accommodate the survivor (e.g. move, change hours, etc.), rather than the survivor changing.
2. Redesigning or changing the perpetrator or survivor’s duties.
3. Changing the survivor’s telephone number or email address to avoid harassing contact.
4. Relocating the survivor or perpetrator to another work site/alternative premises.
5. Providing safe transportation to and from work for a specified period.
6. Supporting the survivor to apply for an Interim Protection Order or referring them to appropriate support.
7. Taking any other appropriate measures including those available under existing provisions for family friendly and flexible work arrangements.

**Leave options for survivors that are employees can include:**

1. An employee experiencing GBV should be able to request paid special leave to attend medical or psychosocial appointments, legal proceedings, relocation to safe accommodation and other activities related to GBV.
2. An employee who supports a person experiencing GBV or VAC may take care givers leave, including but not limited to accompanying them to court or hospital, or to take care of children.
3. Employees who are employed in a casual capacity may request unpaid special leave or unpaid care givers leave to undertake the activities described above.
4. The amount of leave provided will be determine by the individual’s situation through consultations with the employee, the management and the GCCT where appropriate.

**Potential Sanctions to employees who are perpetrators of GBV, and VAC include:**

1. Informal warning
2. Formal warning
3. Additional Training
4. Loss of up to one week’s salary.
5. Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.
6. Termination of employment.

Referral to the Police or other authorities as warranted
ANNEX 11: CHANCE FINDS PROCEDURES

In case culturally valuable materials are uncovered during excavation:

- Stop work immediately following the discovery of any materials with possible archaeological, historical, paleontological, or other cultural value, announce findings to project manager and notify the PCU who in turn notifies the Department of National Museum and Monuments.

- Protect artefacts as well as possible, using plastic covers or marking off the area, and implement measures to stabilize the area, if necessary.

- Prevent unauthorized access to the artefacts.

- Restart construction works only upon the authorization of the relevant authorities.
ANNEX 12: GUIDELINE FOR THE PREPARATION OF CONTRACTOR’S ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (C-ESMP)

Introduction

The construction Contractor must prepare an environmental and social management plan\textsuperscript{27} for the construction works of the Bere Settlement Water Supply Sub-Project, to be cleared, prior to the initiation of the construction works, by WUC officers, the Environmental Site Officer (ESO) and the Resident Engineer. The Contractor’s Environmental and Social Management Plan (C-ESMP) shall incorporate the directives of the World Bank Group (IFC) Environmental, Health, and Safety General Guidelines (IFC EHS Guidelines\textsuperscript{28}), with special attention to the IFC EHS specific guidelines on: Air Emissions and Ambient Air Quality, Wastewater and Ambient Water Quality, Hazardous Materials Management, Waste Management, Noise, Occupational Health and Safety, Physical Hazards, Personal Protective Equipment (PPE), Community Health and Safety, Life and Fire Safety (L&FS), Traffic Safety, Disease Prevention, Emergency Preparedness and Response and notably Environmental, Health, and Safety (EHS) Guidelines for Construction And Decommissioning.

The C-ESMP shall determine the set of mitigation, monitoring, and institutional measures to be taken during implementation to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels, considering the significant adverse environmental impacts (including those involving vulnerably populations) identified in the Environmental and Social Impact Assessment (ESIA) Report.

The C-ESMP shall:

- Describes--with technical details\textsuperscript{29}--each mitigation measure, including the type of impact to which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate;
- Estimates any potential environmental impacts of these measures; and
- Provides linkage with any other mitigation plans (e.g., for Resettlement Action Plan, Vulnerable Community Plan, health and safety management plan) required for the project.
- The C-ESMP must detail the environmental monitoring to be conducted by the Contractor during construction, addressing key environmental aspects of the works, particularly the environmental impacts of the project and the effectiveness of mitigation measures.
- The monitoring section of the ESMP shall provide specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions. The monitoring report content must be agreed with the Environmental Site Officer (ESO) and the Resident Engineer, prior to the initiation of the construction works.
- For mitigation and monitoring aspects, the C-ESMP must provide an implementation schedule for measures to be carried out as part of the construction works and coordination with overall project implementation plans. The costs for implementing the C-ESMP must be integrated into the total construction cost estimates.

Objectives of the C-ESMP

The Objectives of the C-ESMP are:

- Ensuring compliance with regulatory authority stipulations and guidelines which may be local, provincial, national and/or international (notably the World Bank Group Environmental, Health and Safety Guidelines);

\textsuperscript{27} The management plan is sometimes known as an “action plan.” The C-ESMP may be presented as two or three separate plans covering mitigation, monitoring, and institutional aspects, depending on Botswana legal requirements.

\textsuperscript{28} The World Bank Group EHS Guidelines are available at www.ifc.org/ehsguidelines.

\textsuperscript{29} To be based on the Method Statements for the different works to be developed by the Constructor.
Ensuring that there is enough allocation of resources on the project budget so that the scale of C-ESMP-related activities is consistent with the significance of project impacts;

Verifying environmental and social performance through information on impacts as they occur;

Responding to changes in project implementation not considered in the ESIA;

Responding to unforeseen events; and

Providing feedback for continual improvement in environmental and social performance.

General Scope of the C-ESMP

In order to achieve the above objectives, the scope of the C-ESMP should include the following topics:

a) Contractor’s H&S Policy Statement

b) Institutional Arrangements – Roles and Responsibilities
   - Environmental and Social duties of the Contractor
   - Duties of the Environmental and Social Site Officer (ESSO)
   - Environmental and Social oversight duties of other staff
   - Process to escalate critical hazards and incidents to the attention of the project leadership, including the Contractor’s Management, the Environmental and Social Officer, the Engineer and WUC officers.

c) Regulatory Requirements
   - Applicable legislation (national and provincial) to the construction works
   - Applicable World Bank Group Environmental Health and Safety Directives
   - Status of Permits and Permissions

d) Environmental and Social Training Plan
   - Key environmental and social management team
   - Appointment of the ESSO and HSO with requisite and suitable experience and expertise to address both social and environmental oversight (or separate officers as required) and health and safety. This may include hiring specialists to address GBV/SHEA/VAC as well as HIV/AIDS in training.
   - Awareness of responsibility and requirements under the instruments, including monitoring
   - Content and methodology for the training
   - Training on project level Grievance Redress Mechanism and GRM measures to ensure anonymity and survivor centered GRM process for survivors of GBV/SHEA/VAC.

e) Environmental and Social Impact Assessment of Access Road and Alternative Routes
   - Access road that pass outside the settlement to work sites
   - Routes that do not pass in front of the school and clinic
   - Routes that avoid passing through the Basarwa residential area

f) Environmental and Social Management During the Construction Phase – Detailing Procedures for:
   - Method Statement Preparation
   - Site Location and Contractor’s Camp
   - Site Establishment (Working Areas and No-go Areas), factoring in community land use
   - Water Supply
   - Site Clearance
     - Topsoil Conservation and Stockpiling
     - Access Roads/Haul Roads
     - Site isolation procedures
   - Workshop, Equipment Maintenance and Storage
     - Workshop
     - Equipment Maintenance and Storage
   - General Materials Handling, Use and Storage
   - Spoil Sites
   - Fuels, Oils, Hazardous Substances and other Liquid Pollutants
• Fuels (Petrol and Diesel) and Oil
• Hazardous Substances
• Solid Waste Management
• Sanitation
  • Wastewater and Contaminated Water Management
• Storm Water Management and Erosion Control
• Noise Control
• Dust Control
• Traffic Control
• Disruption of Access to Property
• Disruption of Services
• Protection of Sensitive Environments and Natural Features
• Fire Prevention and Control
• Emergency Procedures
• General Health and Safety Procedures
• Diseases, Heat Stress and Wounds
• Public Liability
• Special Procedures:
  • Gender Based Violence, Sexual Harassment Exploitation and Abuse and Violence Against Women issues, including implementing Codes of Conduct (See Annex 10);
  • HIV/AIDS/STDs mitigation efforts
  • Alignment with commitments under Vulnerable Community Plan (including consultation requirements and information sharing)
  • Proper and accurate record keeping of communications between contractor and community and alignment with procedures under the Grievance Redress Mechanism (GRM) and special procedures for reporting GBV/SHEA/VAC in the GRM
  • Environmental, health and safety procedures for works close and/or related to the Vulnerable Communities;
  • Procedures to mitigate potential impacts due to labour Influx, especially if the communities are rural, remote or small.
  • Heavy equipment operation and transit;
  • Road blockage and crossing
  • Demolition works
  • Hard rock excavation (including blasting)
  • Access and exploitation of borrow areas
• Management and Monitoring Plans (Detailed Schedule)

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30 The labour influx potential impacts were identified in a project’s Environmental and Social Impact Assessment (ESIA), but may only become fully known once a Contractor is appointed and decides on sourcing the required labour force.
ANNEX 13: GUIDELINE FOR THE PREPARATION OF A HEALTH AND SAFETY MANAGEMENT PLAN

Introduction

The Construction Contractor must prepare a Health and Safety Management Plan (H&SMP) for the construction of the Bere Settlement Water Supply Sub-Project, to be cleared prior to the initiation of the construction works, by WUC officers, the Environmental Site Officer (ESO) and the Resident Engineer. The preparation of the H&SMP must consider the Botswana Labour, Health and Safety legislation and the World Bank Group (IFC) Environmental, Health, and Safety General Guidelines (IFC EHS Guidelines31), with special attention to the IFC EHS specific guidelines for occupational health and safety, personal protective equipment (PPE), and for community health and safety.

The H&SMP aims to implement the policies and approaches to protect the safety and health of the construction workers, Contractors, and the communities that may affected by the construction works. The Health and Safety Management Plan (H&SMP) should adopt the principle of continuous improvement, consistent with the Occupational Health and Safety Management System (OHSAS) 18001, dated 2007, and complies with all requirements of the Botswana Health and Safety regulations. The H&SMP aims to control health and safety risks of the construction activities, addressing: policy; legal requirements; hazard identification and risk assessment; health and safety targets and objectives; roles and responsibilities; training and awareness; reporting and documentation; EHS communication; operational control; emergency preparedness and response; performance measurement and monitoring; accidents, incidents, non-conformance, and corrective/preventive actions; records and records management; audits and assurance; and management review.

A copy of the H&SMP should be available to all workers and sub-contractors, on the site, for the duration of the project. The Contractor must ensure that they can read, understand, clarify and ask questions. The Contractor may review the plan, regularly, throughout the construction and make any revisions known to those working on the project.

General Scope

In order to achieve the above objectives, the scope of the H&SMP should include the address the following topics:

a) Project Information
   • Principal Contractor details
   • Details of persons at workplace with H&S responsibilities

b) Scope of Work
   • Description of project
   • Location of project

c) Roles and Responsibilities
   • Principal Contractor
   • Contractors
   • Workers

d) General H&S Information
   • Relevant legislation
   • H&S Policy Statement
   • Codes of Practice and other guidance
   • Relevant Codes of Practice, including (if applicable): Confined spaces, construction work, cranes, demolition work, excavation work, first aid in the workplace, formwork and falsework, hazardous manual tasks, managing work health and safety risks, labelling of workplace hazardous chemicals,

managing electrical risks at the workplace, managing noise and preventing hearing loss at work, managing the risks of falls in the workplace, safe design structures, traffic management in workplaces, welding processes, work health and safety consultation, cooperation and coordination, working in the vicinity of overhead and underground electrical lines, among others.

- Insurances

e) Workers’ Induction and Training
  - Worker induction (including signing Codes of Conduct and training on its contents for all new workers and regular training throughout project lifecycle)
  - Worker training

f) Risk Management
  - Identification and management of hazards and risks (Detail procedures to identify hazards and assess risks before the construction works start)

g) Hierarchy of Control

h) High Risk Construction Works
  - Description of safe work method statement (SWMS) for each of the high-risk construction work activity.

i) Licenses and Certification for High Risk Work
  - Applicable licenses and certifications for workers to undertake high risk work

j) Emergency and Incident Response
  - Emergency preparedness
  - Emergency response procedures

k) Incident Procedures
  - Notifiable incidents
  - First aid

l) Consultation and Communication
  - Consultation
  - Communication

m) Disciplinary Procedures

n) Site Safety Procedures
  - Site rules
  - Site amenities
  - Site security
  - Site signage

o) Managing Construction Hazards specified in the Regulations, including:
  - Falls from heights
  - Falling objects
  - Demolition work
  - Excavation work/trenching
  - For work near overhead power lines up to and including 133kV:
  - For excavation work near underground essential services:
    - Electrical
    - Other construction hazards

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32 Addressing: Eliminate, Substitute, Isolate, Engineering controls, Administrative controls and Personal Protective Equipment.
33 E.g, addressing first violation, second violation, third violation and serious breach of safety
p) Traffic Management Plan

- The contactor must identify, evaluate and monitor the potential traffic and road safety risks to workers and potentially affected communities throughout the project life cycle and, where appropriate, develop measures and plans to address them, determining road safety initiatives proportional to the scope and nature of construction activities.
- Traffic management plan should be drawn and certified by a person who has proper training and certification for the task;

q) Ladder Safety

r) Manual Handling

s) Hand Operated and Power Tool Use

t) Sun Safety

u) Alcohol and Drug Control

v) Gender Based Violence/Sexual Harassment Exploitation and Abuse/Violence Against Children

w) Any Other Construction Hazards

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34 Traffic safety should be promoted by all project personnel during displacement to and from the workplace, and during operation of project equipment on private or public roads. Prevention and control of traffic related injuries and fatalities should include the adoption of safety measures that are protective of construction workers and of road users, including those who are most vulnerable to road traffic accidents. The Plan must consider implementing the following control measures to keep pedestrians and vehicles apart at the construction workplace and when vehicles enter or exit the workplace: Providing separate traffic routes for pedestrians and vehicles, where possible. Providing separate clearly marked pedestrian walkways that take a direct route. Creating pedestrian exclusion zones where powered mobile plant is operating. Creating vehicle exclusion zones for pedestrian-only areas around amenities and pedestrian entrances. Securing areas where vehicles and powered mobile plant operate by installing pedestrian barriers, traffic control barricades, chains, tape or bollards. Designating specific parking areas for workers’ and visitors’ vehicles outside the construction area. Providing clearly signed and well-illuminated crossing points where walkways cross roadways, so drivers and pedestrians can see each other clearly. “ Using traffic controllers, mirrors, stop signs or warning devices at site exits to make sure drivers can see or are aware of pedestrians before driving out onto public roads, among others.

35 Note: If the Contractor identifies asbestos in any facility to be demolished and/or refurbished, it should adopt specific procedures for asbestos and follow the correct removal processes, with workers trained on the use the appropriate personal protective equipment.
ANNEX 14: THRESHOLDS FOR ENVIRONMENTAL AND OCCUPATIONAL HEALTH AND SAFETY ASPECTS

- Noise Level Guidelines
- WHO Ambient Air Quality Guidelines
- Fugitive PM Emissions Controls
- Acceptable Effective Dose Limits for Workplace Radiological Hazards
- Summary of Recommended Personal Protective Equipment According to Hazard
- Maximum permissible noise for specific environment by BOBS
- Maximum permissible noise levels for impact or impulsive noise
- Maximum permissible peak noise levels
- Threshold Limits for Common Air Pollutants

### Noise Level Guidelines

<table>
<thead>
<tr>
<th>Receptor</th>
<th>Daytime 07:00-22:00 am</th>
<th>Night Time 22:00-07:00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential, institutional, educational</td>
<td>55</td>
<td>45</td>
</tr>
<tr>
<td>Industrial; commercial</td>
<td>70</td>
<td>70</td>
</tr>
</tbody>
</table>

*Source: General EHS Guidelines: Environmental Noise Management.*

### World Health Organization (WHO) Ambient Air Quality Guidelines

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Period</th>
<th>Guideline value in µg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulphur dioxide (SO)</td>
<td>24-hour</td>
<td>125 (Interim target-1) 50 (Interim target-2) 20 (guideline) 500 (guideline)</td>
</tr>
<tr>
<td></td>
<td>10 minutes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1-year</td>
<td>40 (guideline) 200 (guideline)</td>
</tr>
<tr>
<td></td>
<td>1-hour</td>
<td></td>
</tr>
<tr>
<td>Nitrogen dioxide (NO₂)</td>
<td>1-year</td>
<td>70 (Interim target-1) 50 (Interim target-2) 30 (Interim target-3) 20 (guideline)</td>
</tr>
<tr>
<td></td>
<td>24-hour</td>
<td>150 (Interim target-1) 100 (Interim target-2) 75 (Interim target-3) 50 (guideline)</td>
</tr>
<tr>
<td>Particulate Matter PM₁₀</td>
<td>1-year</td>
<td>35 (Interim target-1) 25 (Interim target-2) 15 (Interim target-3) 10 (guideline)</td>
</tr>
<tr>
<td></td>
<td>24-hour</td>
<td>75 (Interim target-1) 50 (Interim target-2) 37.5 (Interim target-3) 25 (guideline)</td>
</tr>
<tr>
<td>Particulate Matter PM₂.₅</td>
<td>1-year</td>
<td>35 (Interim target-1) 25 (Interim target-2) 15 (Interim target-3) 10 (guideline)</td>
</tr>
<tr>
<td></td>
<td>24-hour</td>
<td>75 (Interim target-1) 50 (Interim target-2) 37.5 (Interim target-3) 25 (guideline)</td>
</tr>
<tr>
<td>Ozone (O₃)</td>
<td>8-hour daily maximum</td>
<td>160 (Interim target-1) 100 (guideline)</td>
</tr>
</tbody>
</table>

*Source: General EHS Guidelines: Environmental Noise Management*
Fugitive PM Emissions Controls

<table>
<thead>
<tr>
<th>Control Type</th>
<th>Control Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Stabilization</td>
<td>0 percent - 98 percent</td>
</tr>
<tr>
<td>Hygroscopic salts Bitumen’s/adhesives</td>
<td>60 percent - 96 percent</td>
</tr>
<tr>
<td>Surfactants</td>
<td>0 percent - 68 percent</td>
</tr>
<tr>
<td>Wet Suppression – Watering</td>
<td>12 percent - 98 percent</td>
</tr>
<tr>
<td>Speed Reduction</td>
<td>0 percent - 80 percent</td>
</tr>
<tr>
<td>Traffic Reduction</td>
<td>Not quantified</td>
</tr>
<tr>
<td>Paving (Asphalt / Concrete)</td>
<td>85 percent - 99 percent</td>
</tr>
<tr>
<td>Covering with Gravel, Slag, or “Road Carpet”</td>
<td>30 percent - 50 percent</td>
</tr>
<tr>
<td>Vacuum Sweeping</td>
<td>0 percent - 58 percent</td>
</tr>
<tr>
<td>Water Flushing/Broom Sweeping</td>
<td>0 percent - 96 percent</td>
</tr>
</tbody>
</table>

Source: General EHS Guidelines: Environmental Noise Management

Acceptable Effective Dose Limits for Workplace Radiological Hazards

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Workers (min.19 years of age)</th>
<th>Apprentices and students (16-18 years of age)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Five consecutive year average – effective dose</td>
<td>20 mSv/year</td>
<td></td>
</tr>
<tr>
<td>Single year exposure – effective dose</td>
<td>50 mSv/year</td>
<td>6 mSv/year</td>
</tr>
<tr>
<td>Equivalent dose to the lens of the eye</td>
<td>150 mSv/year</td>
<td>50 mSv/year</td>
</tr>
<tr>
<td>Equivalent dose to the extremities (hands, feet) or the skin</td>
<td>500 mSv/year</td>
<td>150 mSv/year</td>
</tr>
</tbody>
</table>

Source: General EHS Guidelines: Environmental Noise Management

Summary of Recommended Personal Protective Equipment According to Hazard

<table>
<thead>
<tr>
<th>Objective</th>
<th>Workplace Hazards</th>
<th>Suggested PPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye and face protection</td>
<td>Flying particles, molten metal, liquid chemicals, gases or vapours, light radiation.</td>
<td>Safety glasses with side-shields, protective shades, etc.</td>
</tr>
<tr>
<td>Head protection</td>
<td>Falling objects, inadequate height clearance, and overhead power cords.</td>
<td>Plastic helmets with top and side impact protection.</td>
</tr>
<tr>
<td>Hearing protection</td>
<td>Noise, ultra-sound.</td>
<td>Hearing protectors (ear plugs or earmuffs).</td>
</tr>
<tr>
<td>Foot protection</td>
<td>Falling or rolling objects pointed objects. Corrosive or hot liquids.</td>
<td>Safety shoes and boots for protection against moving &amp; falling objects, liquids and chemicals.</td>
</tr>
<tr>
<td>Hand protection</td>
<td>Hazardous materials, cuts or lacerations, vibrations, extreme temperatures.</td>
<td>Gloves made of rubber or synthetic materials (Neoprene), leather, steel, insulating materials, etc.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>Dust, fogs, fumes, mists, gases, smokers, vapours.</td>
<td>Facemasks with appropriate filters for dust removal and air purification (chemicals, mists, vapours, and gases). Single or multi-gas personal monitors, if available.</td>
</tr>
<tr>
<td></td>
<td>Oxygen deficiency</td>
<td>Portable or supplied air (fixed lines). On-site rescue equipment.</td>
</tr>
<tr>
<td>Body/leg protection</td>
<td>Extreme temperatures, hazardous materials, biological agents, cutting, and laceration.</td>
<td>Insulating clothing, bodysuits, aprons etc. of appropriate materials.</td>
</tr>
</tbody>
</table>

Source: General EHS Guidelines: Environmental Noise Management
### Maximum permissible noise for specific environment by BOBS

<table>
<thead>
<tr>
<th>Facility</th>
<th>Noise Limit dBA(Leq)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-school bedrooms, inside bedrooms, indoor hospital and ward rooms</td>
<td>Day: 30</td>
</tr>
<tr>
<td>School classrooms and preschools during class(indoors)</td>
<td>Day: 35</td>
</tr>
<tr>
<td>Any building used as hospital, convalescence home, home for the aged,</td>
<td>Day: 45</td>
</tr>
<tr>
<td>sanatorium, learning institutions, conference rooms, public library,</td>
<td></td>
</tr>
<tr>
<td>and environmental and outdoor recreational site</td>
<td></td>
</tr>
<tr>
<td>Residential building</td>
<td>Day: 50</td>
</tr>
<tr>
<td>Mixed residential with some commercial and outdoor entertainment</td>
<td>Day: 55</td>
</tr>
<tr>
<td>Residential and industry/small scale production and commerce</td>
<td>Day: 60</td>
</tr>
<tr>
<td>Industrial area, commercial, civic community including churches, shopping</td>
<td>Day: 70</td>
</tr>
<tr>
<td>and traffic areas (Indoor and outdoor)</td>
<td></td>
</tr>
<tr>
<td>Railway and highways</td>
<td>Day: 70</td>
</tr>
<tr>
<td>Ceremonies, festivals and entertainment events</td>
<td>Day: 100</td>
</tr>
</tbody>
</table>

*Day is from 6:00am to 8:00pm*
*Night is from 8:00pm to 6:00am*
*Time base is per 24 hours*
*Time base is per 4 hours*
*Limit shall not be exceeding more than five times in a year*

*Source: BOS 575:2013:2*

### Maximum permissible continuous and/or intermittent noise exposure levels

<table>
<thead>
<tr>
<th>Noise level dBA (Leq)</th>
<th>Duration per day(^a)</th>
<th>Duration per week(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>85</td>
<td>8:00 hours</td>
<td>40:00 hours</td>
</tr>
<tr>
<td>88</td>
<td>4:00 hours</td>
<td>20:00 hours</td>
</tr>
<tr>
<td>91</td>
<td>2:00 hours</td>
<td>10:00 hours</td>
</tr>
<tr>
<td>94</td>
<td>1:00 hours</td>
<td>5:00 hours</td>
</tr>
<tr>
<td>97</td>
<td>30:00 minutes</td>
<td>2:50 hours</td>
</tr>
<tr>
<td>100</td>
<td>15:00 minutes</td>
<td>1:25 hours</td>
</tr>
<tr>
<td>103</td>
<td>7:50 minutes</td>
<td>37:5 hours</td>
</tr>
<tr>
<td>106</td>
<td>3:75 minutes</td>
<td>18:75 hours</td>
</tr>
<tr>
<td>109</td>
<td>1:87 minutes</td>
<td>9:37 hours</td>
</tr>
</tbody>
</table>

*Day refers to a 24-hour period*
*Week refers to 7 days*

*Source: BOS 575:2013:3*

### Maximum permissible noise levels for impact or impulsive noise

<table>
<thead>
<tr>
<th>Sound level (dBA) Lmx</th>
<th>Permitted number of impulses or impacts per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>140</td>
<td>100</td>
</tr>
<tr>
<td>130</td>
<td>1000</td>
</tr>
<tr>
<td>120</td>
<td>10000</td>
</tr>
</tbody>
</table>

*Day refers to a 24-hour period*

*Source: BOS 575:2013:2*
### Maximum Permissible Peak Noise Levels

<table>
<thead>
<tr>
<th>Facility</th>
<th>Limit value dBC</th>
</tr>
</thead>
<tbody>
<tr>
<td>For any building used as hospital, school, convalescent home, old age home residential building</td>
<td>109</td>
</tr>
<tr>
<td>For any building in an area used for residential and one or more of the following purposes: civic and community including churches, commerce, small-scale production, entertainment, or any residential apartment in an area that is used for purpose of industry, commerce or small-scale production</td>
<td>114</td>
</tr>
</tbody>
</table>

*Source: Botswana Standard (2013)*

### Threshold Limits for Common Air Pollutants

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Pollutant</th>
<th>Limit Value (µg/m³)</th>
<th>Averaging Period</th>
<th>Permitted Annual Exceedances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient Air Quality (Chemical Pollutants)</td>
<td>Sulphur dioxide</td>
<td>350</td>
<td>1 hour</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>(SO₂)</td>
<td>125</td>
<td>24 hours</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Nitrogen dioxide</td>
<td>200</td>
<td>1 hour</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>(NO₂)</td>
<td>40</td>
<td>1 year</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Carbon monoxide</td>
<td>30 000</td>
<td>1 hour</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>(CO)</td>
<td>10 000</td>
<td>8 hours a</td>
<td>N/A</td>
</tr>
<tr>
<td>Particulate matter</td>
<td>200</td>
<td>monthly</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(PM₁₀)</td>
<td>100</td>
<td>1 year</td>
<td>N/A</td>
</tr>
<tr>
<td>Ozone (O₃)a</td>
<td>120</td>
<td>8 hours a</td>
<td>25 days averaged over 3 years</td>
<td></td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>0.5</td>
<td>1 year</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Benzene (B₆H₆)</td>
<td>5</td>
<td>1 year</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

*a The maximum daily 8 hour mean concentration will be selected by examining 8 hourly running averages, calculated from hourly data and updated each hour. Each 8 hour average so calculated will be assigned to the day on which it ends i.e. the first calculation period for any one day will be the period from 17h00 on the previous day to 01h00 on that day; the last calculation period for any one day will be the period from 16h00 to 24h00 on that day.

*b Target value.

*Source: BOS, 498: 2012*
Access road starts from the proposed Contractor’s Camp and branches off 1 km before the Bere settlement and joins an existing road another 1 km south of the settlement to the boreholes.
ANNEX 16: LAND RIGHTS APPLICATIONS

a) Borehole site application

GHANZI LAND BOARD
P. O. BOX 78, GHANZI
TEL: 6596236

DATE: 23/03/2020

TO:
WATER UTILITIES CORPORATION

ACKNOWLEDGEMENT OF APPLICATION FOR LAND RIGHTS
RE: Borehole Site at Bake

Please refer to the above subject matter. This serves to confirm receipt of your application for Borehole Site at Bake dated 23/03/2020.

Your application number is

You are advised to produce this acknowledgement whenever you make a follow up on your application.

Yours faithfully,

For/Board Secretary

Name of Officer

YOUR ATTACHMENTS ARE:

..........................................................
b. Contractor's camp application

OUR REF: ________________________________

YOUR REF: ________________________________

TO:

HARU MUTESU

P.O. BOX 00276

Gaborone

ACKNOWLEDGEMENT OF APPLICATION FOR LAND RIGHTS

RE: Application for Contractor's Camp Site

Please refer to the above subject matter.

This serves to confirm receipt of your application for Camp Site dated 13/03/2020 at Boke in Gaborone village.

Your application number is ____________________________

You are advised to produce this acknowledgement whenever you make a follow up on your application.

Yours faithfully

For/Board Secretary

Name of Officer

YOUR ATTACHMENTS ARE:

[Signature]

[Stamp]
c. Pipeline servitude application