Environmental and Social Management Plan (ESMP) template for:
DWN Component One or Two

Instructions

Development Workshop Namibia (DWN) has committed to implement an Environmental and Social Management Plan (ESMP) for each intervention of the Programme. This ESMP Report template may be applied to interventions not requiring a full ESIA.

DWN together with the contractor - shall use this document as guidance and amend it to the Project specifications, characteristics and risks as identified through the Site Assessment Tool. The text highlighted in *italics and grey* includes instructions for the authors (DWN/ Contractor) of the ESMP report and must be changed, based on the scope and risks of the Project (detail derived from the Site Risk Assessment).

The Project-specific ESMP Actions Table shall be included in Section 7.2 of this document. This ESMP should be supplemented by relevant Annexes, potentially including:

Annex A – Code of Conduct
Annex B – Grievance Mechanism
Annex C – Health and Safety Plan
Annex D – Incident Reporting
Annex E – Land Acquisition and Compensation Guidance

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

Proposed Bulk Infrastructure Projects in Urban Areas/ Okahao, Omusati Region

Namisun Environmental Projects & Development

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Prepared for: Development Workshop Namibia

Contents

Annexes

Annex A – Code of Conduct
Annex B – Grievance Mechanism (Appendix E of the ESMF)
Annex C – Health and Safety Plan
Annex D – Incident Reporting

List of Acronyms and Glossary

AoI Area of Influence
DWN Development Workshop Namibia
ESIA Environmental and Social Impact Assessment
ESMP Environmental and Social Management Plan
E&S Environmental and Social
For the sake of simplicity, the acronym E&S is used throughout this document, but the Project's ESMP is developed to address all aspects of "sustainability", i.e. environment, social, occupational health and safety, human rights and labour aspects.
H&S Health and Safety
ILO International Labour Organisation
LCE Lund Consulting Engineers CC
OTC Okahao Town Council

1. Introduction

The Development Workshop Namibia (DWN) is implementing the overall Project "Poverty-Oriented Development of Infrastructure in urban areas of Namibia" with financial support from KfW Development Bank (KfW). The project seeks to contribute to more sustainable and inclusive urban development in Namibia by supporting DWN to plan and develop low-cost residential land with titles in 15 towns across Namibia.

DWN subsequently planned to deploy part of the KfW grant through "Component two" (see section 2 for further details) of the overall Project and hired Lund Consulting Engineers (LCE) to design and supervise the construction of various pro-poor infrastructure components in (amongst others) the town of Okahao, in the Omusati Region (refer to Figure 1), i.e. "the proposed Okahao Project".

The proposed construction activities will be executed by the construction contractor (*Contractors still to be appointed*) with various sub-contractors (*sub-contractors still to be appointed).* The construction activities will be supervised by the Implementation Consultant, *Lund Consulting Engineers CC (LCE).*

The purpose of this Environmental and Social Management Plan (ESMP) is to provide a consolidated summary of all the Environmental and Social (E&S)[1] commitments relevant for the construction and operational phases of the Project. The measures focus on key environmental and social aspects identified and assessed through the Environmental and Social Impact Assessment (ESIA) process (refer to the ESIA Scoping (including Impacts Assessment Report (Namisun, 2025)). This ESMP gives an overview of the generic E&S Management System that is being implemented to ensure systematic and effective execution of these commitments, including roles and responsibilities between DWN / Implementation Consultant and the appointed Contractor(s).

The ESMP can be updated as the Project proceeds through detailed design and construction to reflect the results of discussions with stakeholders and to include details of any other E&S developments.

Namisun Environmental Projects and Development (Namisun) is the Team of Environmental Assessment Practitioners, appointed by LCE to undertake the EISA process, who compiled this ESMP, taking the findings of the ESIA Scoping (including Impact Assessment) Report into consideration.

[1] For the sake of simplicity, the acronym E&S is used throughout this document, but this acronym should be interpreted as including environment, social, occupational health and safety, human rights and labour aspects.

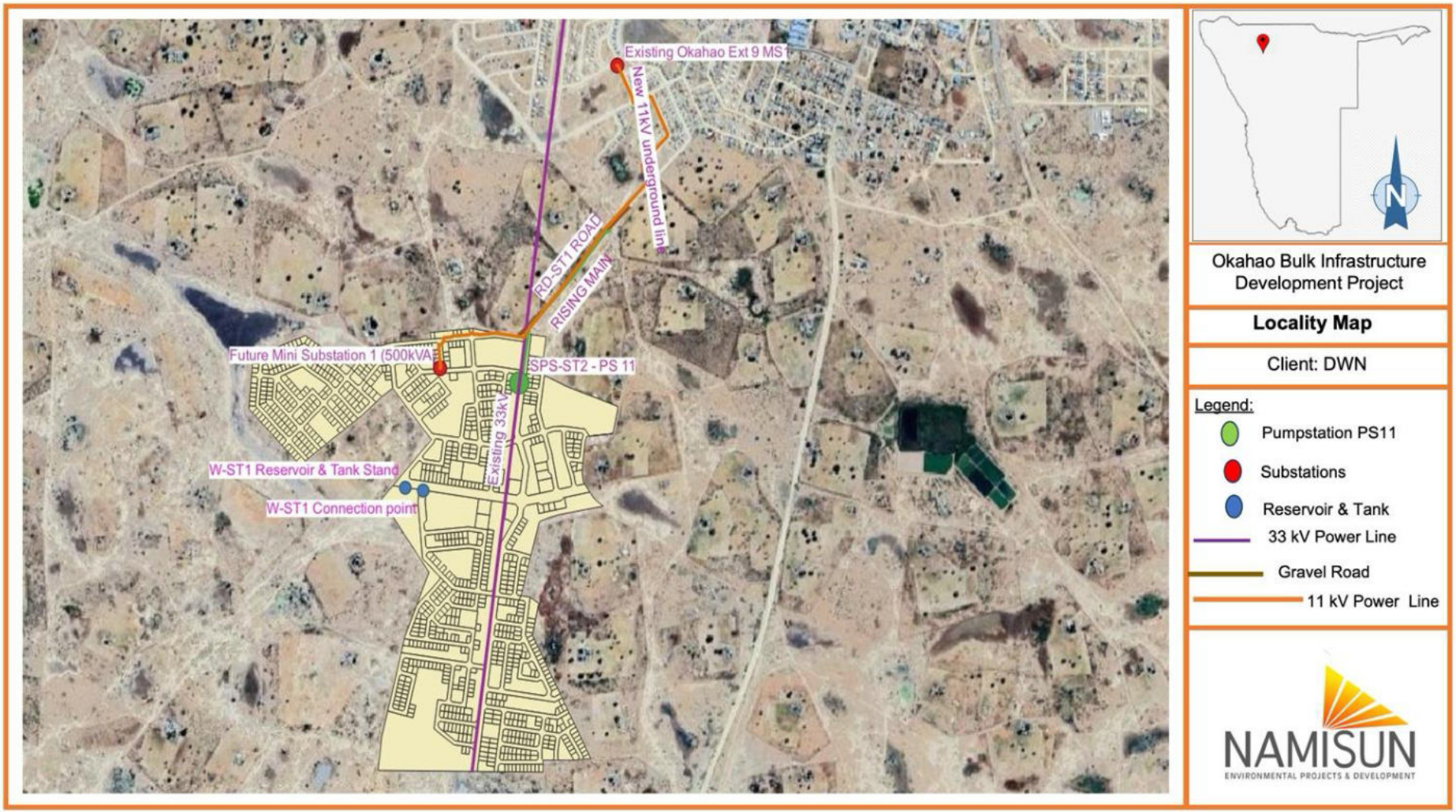

Figure 1: MAP OF PROPSOED OKAHAO BULK INFRASTRUCTURE PROJECT *(REF. LCE)*

2. Short Baseline description of the Project area (i.e. sensitivities, etc.)

Baseline descriptions and key sensitivities of the larger Omusati region and Okahao town are discussed in detail in Chapter 6 of the Scoping Report. For the proposed bulk infrastructure project, it is essential to consider the water flow and topography to avoid disrupting seasonal water flow. There are concerns about potential introduction of invasive species, though the project will be in an already disturbed area. However, urbanization may help alleviate pressure on local biodiversity, potentially providing new livelihoods for the community away from reliance on dwindling natural resources.

The Cuvelai Basin experiences highly seasonal surface water availability, with abundant flow during the wet season and total dryness in the dry season. This variability affects water management, land use, and settlement patterns. Historically, communities relied on seasonal surface water and groundwater abstraction, but recent improvements in freshwater supply through canals have reduced dependence on seasonal sources. However, man-made structures can significantly disrupt surface water flow, leading to erosion and impacts on water availability for agriculture, fishing, and aquifer recharge. Blockages in drainage channels can cause water pooling, increasing health risks like water-borne diseases. Additionally, construction activities can introduce contamination to both surface and groundwater. Waste management remains a significant issue, contributing to surface water contamination, and any development must avoid worsening this problem. Surface water can also facilitate the spread of invasive aquatic species.

Heavy cultivation and soil overuse lead to continuous land degradation and low productivity, as repeated planting of low-productive crops hinders soil fertility and water retention. The construction of buildings and structures in flat areas like the Cuvelai Basin alters local topography, affecting surface water drainage and increasing erosion potential. These structures can have more significant visual impacts than in uneven terrains. Additionally, the lack of varied topography and vegetation facilitates the dispersion of noise and air pollution. Construction activities can pose temporary risks to both people and animals, loosen soil, and increase wind and water erosion. Compaction from heavy machinery and potential soil contamination from construction-related activities are also concerns, threatening surface and groundwater quality.

The visual resources of Okahao are low due to its urban environment, surrounded by a densely populated rural area with existing infrastructure and significant environmental degradation. This disturbed landscape lacks natural attractiveness and is generally non-sensitive to visual change. The land use and activities in Okahao and its surroundings are consistent with the broader Cuvelai Basin. The proposed bulk infrastructure project will be located within this urban area, and its components are not expected to conflict with the existing environment or sense of place, as none of the proposed facilities or activities are considered intrusive.

The environment's barrenness allows noise to disperse easily, especially during dry periods. During construction, noise levels may temporarily increase to 60 dBA during the day and will stop once construction ends. In the operational phase, noise levels are expected to remain within urban district thresholds of 60 dBA during the day and 50 dBA at night. However, near the planned road, vehicle noise may fluctuate but is anticipated to stay below 50 dBA during the day and 40 dBA at night, typical for a quiet suburban area. The nearby homesteads are unlikely to experience significant impacts since informal tracks already pass close by, and any noise increase is expected to result in only sporadic complaints.

Dust in Okahao is a concern, however these concerns are based on perceptions rather than empirical data due to the lack of official wind data and background information on airborne impurities. It notes that while dust from vehicles is a nuisance during the dry season, levels are not expected to exceed the residential limit of 600 mg/m²/day, both during construction and operations of the proposed bulk infrastructure project. The construction activities will be localized and temporary, with dust suppression measures in place, which should prevent significant increases in ambient dust levels. Additionally, the impact of a new unpaved road will be minimal compared to existing dust sources.

The likelihood of uncovering unknown heritage sites during earthworks is low; however the possibility of finding hidden archaeological remains, such as graves exists. Therefore, there is need for precautionary measures to protect any discovered sites and it is recommended that a Chance Finds Procedure is implemented. Additionally, team members should be trained on potential heritage resources they might encounter and the appropriate actions to take if a discovery occurs.

3. Project Description

The objective of the overarching "Poverty-Oriented Development of Infrastructure in urban areas of Namibia" Project is to transform current informal settlement growth into formal urban growth and to initiate and contribute to changing the way urban planning is done towards a more holistic and participatory planning approach to create socially and economically conducive living environments.

The project is implemented by three distinct components:

Component one: Planning and developing low-cost residential land with title.

Component two: Providing "pro-poor" infrastructure investments in four selected towns.

Component three: Improving public hygiene and access to appropriate sanitation.

The infrastructure requirements subject of Component two were identified in some of the project towns through a Bulk Infrastructure Assessment (BIA) exercise conducted by Consulting firms engaged by DWN. Thereafter, priority infrastructure projects were jointly drawn up by the DWN and the Town Council authorities.

DWN selected four infrastructure projects in Okahao. The project components include the construction of a 1.65 km 11 kV underground electricity supply line from an existing 315 kVA mini substation namely Okahao Ext 9 MS, construction of pump station 11 and a 0.61 km rising main for Kashenda Proper; construction of 178 m^3 ground reservoir and 20 m^3 elevated tank for DWN project area and gravelling of 0.6 km access road to DWN project area connecting to Okahao Ext 9.

By using defined selection criteria and a selection process that included Okahao Town Council, it was suggested that these four projects provide the best option available with the available funds.

In addition, all four projects directly benefit DWN project area which comprises Kashenda Proper, Kashenda Extension 1, Kashenda Extension 2, and the new adjacent DWN project area under Component 1.

3.1 Proposed Project Activities

The sections below summarise the proposed Project activities. Further details of the various Project Components and Activities are provided in Chapter 4 of the ESIA Scoping (including Impact Assessment Report) (Namisun, 2025).

3.1.1 Project ID EE-ST2 11 kV Powerline

Construction of a new underground 11 kV electrical supply line from an existing 315 kVA mini substation, namely Okahao Ext 9 MS1 to the north of Kashenda Proper. The underground power cable will follow the existing roads and the new proposed road that will be constructed to link Kashenda Proper to the existing Okahao town infrastructure. The underground cable will thereafter follow the new proposed extension roads to the new proposed position of a 500 kVA mini substation between Kashenda Proper and DWN Extension. The new cable route will avoid any existing properties.

3.1.2 Project ID SPS-ST2 Pumpstation 11 & 0.61 km rising main

Construction of Pump Station 11 and 0.61 km rising main. This will provide access to bulk sewer to DWN existing project area Kashenda Proper. Kashenda Extension 1 and Extension 2 will also benefit in future.

3.1.3 Project ID W-ST1 Ground level reservoir and elevated tank

Construction of a 178 m³ ground steel reservoir and 20 m³ elevated tank. This will provide water storage facilities and boost the water pressure at the new and existing DWN project areas.

3.1.4 Project ID RD-ST1 Gravelling of 0.6 km main access roads

Kashenda Proper and Kashenda Extension 1 are situated to the south of Okahao and the new DWN Extension is situated to the west of Kashenda Proper. The main road linking Kashenda Proper to Okahao Extension 9 was chosen to be upgraded to the gravelled road.

The following (key) activities are expected to take place during the construction phase of the above-mentioned infrastructure:

- Appoint contractors, labourers, etc.
- Limited earth moving activities to create flat surfaces.
- Pipeline trench excavations, laying of pipelines and backfilling.
- Grading activities for roads.
- Setting up contractors' laydown areas.
- Digging of foundations and trenches.
- Delivery of materials – storage and handling of material such as sand, rock, cement, etc.
- General building / construction activities including, amongst others: mixing of concrete; operation of construction vehicles and machinery; refuelling of machinery; civil, mechanical and electrical works; painting; grinding; welding; etc.

- Handling and storage of hazardous material, including lubricants, paints, gas (welding), cement, chemical additives for cement, diesel and petrol.
- Handling, storage and disposal of non-hazardous waste, including steel off-cuts, domestic waste, wood off-cuts, grinding wheels, other general construction waste, redundant concrete packaging, e.g. plastic wrapping, styrofoam.
- Handling, storage and disposal of hazardous waste, including empty paint containers, cements bags, chemical additives (for cement) containers, hydrocarbon contaminated PPE and soil and other.

4. Stakeholders

The broad list of persons, group of persons or organisations that were informed about the proposed Okahao Project and were requested to register as I&APs, should they be interested and or affected, include:

- Government and parastatals – National, Regional and Local, including (amongst others) the following:
    - The Ministry of Urban and Rural Development.
    - The DEA at the MEFT.
    - The Ministry of Agriculture, Water and Land Reform.
    - Omusati Regional Council and the local authorities (Okahao Town Council).
    - Traditional Authorities.
    - NamPower.
    - NORED.
    - NamWater.
    - Roads Authority.
- Non-government organisation (i.e. Development Workshop Namibia).
- Local Community.
- Beneficiaries.
- Consultants (i.e. Stubenrauch Planning Consultants).
- Other I&APs that registered on the project.

A full list of I&APs is included in Appendix B of the ESIA Scoping (including Impact Assessment) Report.

5. Roles and Responsibilities

The overall roles and responsibilities for the implementation of the ESMP are provided in the sections below. Further details relating to each of the management and mitigation measures are provided in chapter 11.

5.1 Construction phase (and detail design phase)

5.1.1 Development Workshop Namibia

The DWN / Implementation Consultant has the overall responsibility for E&S management during the construction phase of the intervention. This includes the following responsibilities:

- Ensuring compliance with all relevant national legislation, as well as with the environmental controls and mitigation measures contained in this ESMP.
- Ensure that the design and planning follow national requirements and align with international best practice (See Chapter 7).
- Monitoring the performance of contractors and sub-contractors used for providing workforce, supplies and services (see Monitoring Provisions in Chapter 6.2, *Table 1*).
- Acting as point of contact for consultation and feedback to stakeholders and the public (stakeholder engagement).
- Training of construction workers to raise awareness in the fields of E&S topics and in general implementation of this ESMP.

The respective Programme Manager is ultimately responsible for implementation of this ESMP. The E&S Manager at DWN is responsible for providing support and guidance to contractors for E&S management and the implementation of this ESMP.

5.1.2 Engineering Technical Team (LCE)

LCE, as the Technical Engineers, with the overall responsibility to design and supervise the construction activities, also need to ensure the following:

- Implement specific (design) requitements documented in Chapter 8 of this ESMP in final design, relevant to the respective Project Components.
- Bidding documents to include the ESMP.
- Contractual agreements to include reference to the commitments in the ESMP, relevant to construction activities.
- Ensure compliance to commitments with relevant performance clauses.
- Report on the Environment Performance (i.e. compliance to the relevant ESMP commitments), also those commitments to be implemented by the Contractors and sub-contractors (see section 5.1.3).

5.1.3 Contractors and Sub-contractors

The Contractors are required to fulfil the commitments (relevant to the construction phase) as set out in this ESMP and also to ensure that its sub-contractors (if any) fulfil the ESMP. This includes the following:

- To implement all provisions of the ESMP. If the contractors encounter difficulties with specifications, he / she must discuss alternative approaches with the LCE Project Manager and DWN prior to proceeding.

- To ensure that all staff are familiar with the ESMP.
- To make personnel aware of environmental issues and to ensure they show adequate consideration of the environmental aspects of the project.
- To prepare required Method Statements / Procedures indicating how the requirements of the ESMP will be implemented.
- To report any incidents of non-compliance with the ESMP to the LCE Manager and DWN.
- To rehabilitate any sensitive environments damaged due to the contractors' negligence. This shall be done in liaison with the LCE Project Manager.
- Appoint an E&S Officer to assist with the implementation of the ESMP (see below for responsibilities of the E&S Officer).
- Refer to all sections of this ESMP for relevant commitments.

Failure to comply with the ESMP may result in fines through legal persecution and reported non-compliance may result in the suspension of work or termination of the contract if not rectified or monitored to ensure no future adhesive impacts may arise.

5.1.3.1 E&S Officers

Each Contractor will appoint an E&S Officer with the following key duties:

- Assist with developing Method Statements / Procedures.
- Advising the Project Manager (and contractors) on environmental issues within defined construction areas.
- Undertaking daily site visits to ensure compliance with the ESMP and / or Method Statements / Procedures and verifying that environmental impacts are kept to a minimum throughout the contract.
- Completing environmental checklists during site visits.
- Monitoring and verifying that the ESMP and / or Method Statements / Procedures are adhered to at all times and taking action if specifications are not followed.
- Monitoring and verifying that environmental impacts are kept to a minimum.
- Keeping a photographic record of progress onsite from an environmental perspective.
- Assisting the Site Manager in finding environmentally acceptable solutions to construction problems.
- Recommending additional environmental protection measures should this be necessary.
- Giving a report back on any environmental issues at site meetings and during monthly reports.
- Reporting any incidents that may or have caused damage to the environment or breaches of the ESMP to the Site Manager who need to follow further reporting requirements (see above).
- Prepare an environmental audit report at the conclusion of the construction phase.
- Provide training to personnel / contractor staff.

5.1.4 External Environmental Practitioner

The External E&S Practitioner (i.e. Namisun) will prepare training material for the Contractor's Environmental Officer and provide once-off training.

Furthermore, the External E&S Practitioner will conduct one site visit during the Construction phase to audit the performance of the Contractors against the ESMP commitments, also compiling a short Audit report afterwards.

5.2 Operations phase

Most of the commitments in this ESMP relate to the Detail Design and Construction Phase of the Project.

The Okahao Town Council will oversee the implementation of the operational phase and the associated commitments outlined in this ESMP. The specific roles, responsibilities, mechanisms, reporting requirements, and other relevant details will be executed through existing structures and systems.

6. Training

The DWN will provide Induction Training to all its employees and Contractor' personnel working on the Project before early works start. This Induction Training shall be conducted for all new workers, and also those joining the construction site later during construction activities. The goal of the training is for DWN employees and Contractor personnel (including sub-contractors) to understand:

- The mitigation measures included in this ESMP and how it will be implemented on site including responsibilities.
- The sensitivities of the area (if any) in which the Intervention will be constructed and operated.
- Occupational Health and Safety (H&S) rules at the construction site (e.g. personal protective equipment, code of conduct, first aid).
- The Grievance Mechanism and the basic worker's rights (see 8 Core Labour Standards below).
- How to deal with enquiries/ questions/ grievances by the public/ local stakeholders.
- Interaction rules with the people living close to the construction site (Code of Conduct) and how to deal with unauthorised visitors to the site.
- How to deal with unforeseen incidents/ emergency situations.
- The roles and responsibilities within DWN, the Contractors, sub-Contractors and workers with respect to environmental and social issues.

The DWN keeps records of the training sessions. The training will be repeated as needed during the construction activities.

See further (specific) training requirements in the above sections.

7. Project Standards (National and International)

The key respective national legislation needs to be respected, including (amongst others) the following:

- Environment - Environmental Management Act (No. 7 of 2007 (EMA)) and the EIA Regulations.
- Labour - Labour Act, 2007 (No. 11 of 2007) and its amendment: No. 2 of 2012
- Occupational and Community Health and Safety - Regulations relating to the health and safety of employees at work (GN 156 of 1997)
- Public Health - Public Health Act (Act No. 36 of 1919) and Public and Environmental Health Act (Act No. 1 of 2015, Government Notice No. 86 of 2015)

Refer to Chapter 3 of the ESIA Scoping (including Impact Assessment) Report (Namisun, 2025) for an overview of relevant Namibian policies and applicable Namibian legislation and international conventions / treaties and lender environmental and social safeguards applicable to the proposed Okahao Bulk Infrastructure Project.

The various commitments outlined in this document becomes legally binding, if the Application for an Environmental Clearance associated with the proposed Okahao Bulk Infrastructure Project is approved by MEFT.

8. Stakeholder Engagement and Grievance Mechanism

DWN had to ensure that the local communities were informed at an early stage about the planned Overall Project, timelines, expected impacts and communication channels and had to assign personnel in charge of the engagement with stakeholders. The DWN will also seek for feedback from the communities about the Project. Refer to the Programmes' Stakeholder Engagement Framework in Appendix E of the ESMF.

As part of its community liaison process, the DWN initiated a generic Grievance Mechanism, to be implemented by each Project, ensuring that all stakeholder comments, suggestions and objections are captured and considered. This will ultimately enable the affected community and the workers to express their concerns and any complaints directly to DWN.

Refer to Appendix A for a copy of the generic Grievance Mechanism developed by DWN. Each appointed contractor is required to adapt this into an "Operational Grievance Mechanism" and establish a specific procedure that ensures the following elements are included:

- Contact details for the relevant contractor personnel handling grievances.
- Clear distribution methods for informing local communities (as applicable).
- A process for addressing grievances and providing responses. It is expected that, in general, grievances will be acknowledged and responded to within 20 working days of receipt.
- All grievances and complaints will be thoroughly investigated by the contractor, with findings shared with LCE and DWN. Appropriate actions will be taken as necessary.
- A record of all complaints and the actions taken will be maintained on-site.

For further details regarding Stakeholder Engagement, refer to Section 11 of this ESMP.

9. Register of E&S Aspects

9.1 Planning and Design – In general (relating to the "Overarching Project")

The Project will be planned and designed by LCE, contracted by DWN with the following basic commitments:

- Avoid land acquisition of private land, resettlement of persons or any associated land use impacts that could result in compensation, disputes or other conflict situations.
- Avoid forests, protected areas or ecologically sensitive areas.
- Avoid culturally sensitive areas (e.g. places of worship, holy trees).
- Design the Project to:
    - Ensure that key/ routine maintenance and operations can be implemented by the community/beneficiaries.
    - Apply low-maintenance solutions in the design of buildings, e.g. based on other buildings of the same type in the region.
    - Account for proper ventilation and adequate resistance to severe weather or natural disasters.
    - If feasible, develop a maintenance plan with the beneficiaries of the building.
- Plan the Project to make use of local resources to avoid construction traffic and associated impacts to the communities.
- Plan the Project so as to minimize use of natural resources (material, water, land).
- Plan the Project in a climate-friendly way so as to minimize its carbon footprint and tap into the mitigation potential of the building and construction industry.
- Engage with the persons living in the area around the Project site (including neighbours, local decision makers) early in the planning process and throughout construction activities to inform them about the planned construction and also seek for their feedback around potential sensitivities (protected areas, places of worship, holy trees etc.). Site visits and discussions with the local population should be conducted throughout the design and planning phase. A grievance mechanism will be designed and established for workers and the public during the planning phase already.
- Hire unskilled workers and skilled workers, if available, from the local communities to encourage social growth and development in the region.
- Conduct Induction Training for workers as outlined in this ESMP before start of construction.
- Establish core E&S procedures already at the planning stage. This includes as a minimum:
    - Incident Reporting (fatal accidents, medical treatment cases; first aid cases; restricted work injuries; near misses; environmental events).
    - Grievance Mechanism (one combined mechanism for workers and community).
    - Training Procedures/ Training material as outlined above (Occupational H&S; Community H&S; environmental sensitivities).
    - Work site/ construction site risk assessment and corresponding Construction H&S Plan.

9.2 Aspects and Impacts relating to the proposed Okahao Project

The environmental and social aspects and potential impacts associated with the development and implementation of the proposed Okahao Project were identified and assessed though an ESIA process and the findings presented in the ESIA Scoping (including Impact Assessment) Report (Namisun, 2025). The following broad "categories of aspects" were considered:

- General Requirements for ESHS Management
- Protection of the environment
- Labour and relations with local communities.

A summary of the key environmental and social aspects and potential impacts linked to the various Project Components and associated activities are presented in Table 1 below (taking cognisance of the above broad aspects).

The ESIA focused on third parties only and did not assess health and safety impacts on workers because the assumption was made that these aspects are separately regulated by labour acts, health and safety legislation, policies and standards, which Contractors will adhere to. However, section 11.10 provides general (i.e. 'high level') requirements for the Contractors to implement and further develop occupational health and safety risks assessments, requirements and procedures.

Table 1: SUMMARY OF THE KEY ENVIRONMENTAL AND SOCIAL APSECTS AND POTENTIAL IMPACTS LINKED TO THE VARIOUS PROJECT COMPONENTS AND ASSOCIATED ACTIVITIES

ACTIVITY / FACILITY	ASPECT	POTENTIAL IMPACT AND RELEVANCE (SCREENING) OF POTENTIAL IMPACT
Construction phase: • Clearance, site preparation • Stripping and stockpiling of topsoil • Establishment of contractor laydown areas • Digging / excavation of foundations and trenches • Maintenance area, stores, work areas, wash bay, batch plant, fuel handling and storage area, site offices • Ablution facilities, change rooms, sanitation / septic tank • Delivery of building materials such as sand, rock, bricks and cement • Storage and handling of supplies and materials • Storage and handling of hazardous materials • Storage and handling of non-hazardous materials • Operations of vehicles and equipment	Soil: • Clearing of vegetation and soil stripping. • Use of machinery, vehicles, equipment, etc.	Soil related impacts associated with the project entail: • Loss of soil because of disturbance and subsequent (aeolian) erosion. • Compaction of soil because of heavy vehicles, equipment and structures • Contamination of soils because of sewage and dirty water discharges, waste and because of leaks and spills of hazardous substances. Refer to Chapter 8 for the assessment of soil impacts.
	Hydrology: • Use of machinery, vehicles and equipment that can, amongst others spill hydrocarbons. • The infrastructure area causing reduced storm water flow.	Hydrological impacts associated with the project entail: • Enhancement of pooling of water (e.g. through man-made obstructions) can influence the recharge of the groundwater on which the "omithima" depends and cause knock-on effects such as water-borne diseases and mosquito breeding grounds. • Blocking of the water flow can exacerbate potential flooding causing the inundation of residences, damages to infrastructure, disrupt operations and cause drownings of humans and animals. • Fluvial erosion can be increased due to the redirecting (e.g. through excavations), partial blocking and channelling of surface water through man-made interferences in the drainage channels. • Surface water can be contaminated through discharges (of sewage and dirty water), waste and discarded items, and leaks and spills (of hazardous substances), which may in turn lead to contamination of groundwater. • Surface water can spread aquatic alien invasive organisms when accidentally released into the channels of the Cuvelai Basin. Refer to Chapter 8 for the assessment of hydrological impacts.

ACTIVITY / FACILITY	ASPECT	POTENTIAL IMPACT AND RELEVANCE (SCREENING) OF POTENTIAL IMPACT

• Maintenance of vehicles and equipment
• Vehicle movements to and off site
• Water supply and use
• Excavation and earthworks
• Roadbuilding
• Concrete batching and mixing
• Construction and or installation of structures
• Backfilling of excavations
• Shaping and profiling of the landscape
• Spoil and rubble management
• Hazardous waste management
• Non-hazardous waste management
• Rehabilitation and decommissioning
Operations:
• Maintenance of electrical substation, distribution network and meters (if installed).
• Maintenance of the power supply connection
	Biodiversity:
	• Clearing of vegetation and soil stripping.
	• Use of machinery, vehicles, equipment, etc.
	• Activities disturbing/ destroying biodiversity and habitats.
	• Underground powerline and associated infrastructure.
		The project can cause biodiversity impacts:
		• Loss of biodiversity (e.g. removal of vegetation, road kills, etc.)
		• Change, fragmentation or loss of the (modified) habitats.
		• Introduction and spread of opportunistic, less usable plants, or even alien invasive plants
		• Temporary or permanent blockage, channelling or redirecting the surface water can interfere with water's vital role as ecological driver by:
		  ○ inhibiting the spread of aquatic organisms through water
		  ○ limiting the rejuvenation role of water by not distributing seeds and nutrients, not wetting the soil, decomposing organic matter, etc.
		  ○ reducing the recharge rates of the groundwater supplies abstractable through the "omithima
		• By advancing the town through the development and implementation of the project, people can be attracted to an urban area and by doing so relieve the pressure on biodiversity in the degraded areas of the Cuvelai Basin
		Refer to Chapter 8 for the assessment of biodiversity impacts.

	Visual: • Construction activities and new site infrastructure.	A project of this nature can trigger negative visual (and sense of place) impacts because of the visual intrusion of its man-made facilities and activities on a flat landscape. Visual impacts on the receiving environment may be lessened though because it is an already developed urban area surrounded by a densely populated rural periphery with existing man-made structures, marked by a severe degraded environment and modified habitats. The landscape is thus already altered, lacking natural features, and may be considered non-sensitive to visual change in general. The activities and land use within the Okahao Townlands are consistent with the Cuvelai Basin. As the Bulk Infrastructure Project will be situated within this existing urban area, it will not disrupt the current sense of place of the built-up environment. No further assessment is thus required.

ACTIVITY / FACILITY	ASPECT	POTENTIAL IMPACT AND RELEVANCE (SCREENING) OF POTENTIAL IMPACT
• Maintenance of the sewage system • Maintenance of the connections to other linear infrastructure (power, water) • Maintenance of tank, water distribution network, pumps, valves and meters. • Maintenance of road surface • Maintenance of culverts, pipes and flow of surface water • Maintenance of stormwater arrangements	Noise: • Noise from various construction activities, vehicles, equipment and associated activities.	Daytime erratic increases in noise levels during the construction phase is possible. It is not expected that the ambient noise in the Okahao Townlands will increase significantly because of the project during the operational phase. These noise-related impacts are qualitatively assessed in Chapter 8.
	Air quality: • Air emissions (e.g. dust) from various construction activities, vehicles, equipment and associated activities.	Although ambient atmospheric impurities can increase during the construction of the project, it is not going to exceed industry-related thresholds. Also, the increase of ambient atmospheric impurities during the operational is not expected to be much different from the current situation. Impacts related to air quality are qualitatively assessed in Chapter 8.
	Archaeology: • Construction, land clearing; use of machinery, vehicles, equipment, etc. that could damage archaeological / heritage sites.	The construction activities associated with the project have the potential to encroach upon, disturb, damage or destroy archaeological remains and unknown heritage sites, including graves, which are protected under the National Heritage Act (27 of 2004). However, the likelihood of this to happen is low, as the project is proposed within a disturbed environment. If the project impacts unknown archaeological sites, precautionary measures must be taken to protect them. A Chance Finds Procedure is recommended, and team members should be trained on identifying and reporting discoveries. No further assessment is thus required.
Construction activities and general operations: • Employment of people • Advancement of the Okahao Townlands	Socio-economic: • Impacts to local, regional and national economy.	Socio-economic impacts associated with the project entail: • Economic benefits • Social benefits • Socio-economic ills (community welfare – health, safety and security issues) • Refer to earlier aspects and potential impacts relating to nuisance impacts (i.e. dust, noise, etc.).

ACTIVITY / FACILITY	ASPECT	POTENTIAL IMPACT AND RELEVANCE (SCREENING) OF POTENTIAL IMPACT
	• Jobs creation and skills development. • Impacts to community (i.e. surrounding landowners) health, safety and security, including Sexual Exploitation/ Harrassment and Abuse. • Emissions to land, environmental degradation, visual and nuisance impacts. • Construction activities and placement of infrastructure on existing properties.	Refer to Chapter 8 of the Scoping Report for the assessment of the socio-economic impacts. The construction activities and the location of the physical infrastructure could result in potential impacts relating to the relocation of residents or inhibition of their current activities / land use. However, these potential impacts are eliminated by considering their location in the design and the layout. Therefore, the impact relating to the potential resettlement / relocation of people / expropriation or any associated land use impacts are not relevant to the proposed activities. See Section 1.4.1. Furthermore, this is a commitment in the ESMP (Appendix F) to ensure compliance.

10. E&S OBJECTIVES

The following overall environmental and social objectives are applicable to the proposed Okahao Project:

- To ensure compliance with relevant national legislation and standards as well as this ESMP. Take cognisance of the relevant KFW requirements and other internal Standards (see Chapter 7).
- To limit contaminated effluent discharge into the environment, and to protect soils and surface and groundwater resources through the implementation of measures for spill prevention and clean-up and the containment, recycling and removal of contaminated water.
- To ensure the legal and appropriate management and disposal of general and hazardous waste, through the implementation of a strategy for the minimization, recycling, management, temporary storage, and removal of waste.
- To minimize the potential for dust emissions.
- To minimize the potential for noise disturbance to third parties.
- To prevent and minimize pollution.
- To undertake rehabilitation wherever possible.
- To develop, implement and manage monitoring systems to ensure good environmental performance.
- To support and encourage environmental awareness and responsibility amongst all employees, contractors (and their sub-contractors) and service providers.
- To provide appropriate environmental education and training for all employees and service providers.
- To ensure that all the employees and contractors adhere to the relevant management commitments.
- To minimize cumulative negative socio-economic impacts and enhance positive socio-economic impacts.
- To ensure safe working conditions for Contractors, their subcontractors, and all employees.

11. Management and Mitigation measures – Construction Phase (as well as design phase)

A series of “Management Plans” (MPs) were developed to ensure potential impacts avoided or at least minimised. These MPs are presented in the following sections.

11.1 STAKEHOLDER CONSULTATION / COMMUNICATION MP

It is important that channels of communication are maintained over the life of the Project for relevant surrounding landowners (i.e. neighbours) and other relevant stakeholders.

11.1.1 Objective

The objective is to keep relevant / key stakeholders (including nearest receptors) informed, as far as is possible, about developments and the associated facilities and activities of the Proposed Bulk Infrastructure Project through the implementation of forums for communication and constructive engagement.

11.1.2 Actions required

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
a) <u>Understanding who the I&APs are</u>				
Action 1: I&AP database	Maintain the I&AP database developed as part of the ESIA process. Further identify key stakeholders to consult with during the implementation of the project.	Database in place and updated.	Contractor / E&S Officer	Review of I&AP Database. *Frequency: Once-off, prior to construction and as required.*
b) <u>Liaison with I&APs</u>				
Action 1: Stakeholder engagement	Devise and implement a stakeholder communication and engagement strategy. DWN will engage with the key I&APs to inform them of the commencement of the activities and to share relevant information.	Strategy in place and rolled out/	DWN with assistance from Contractor / E&S Officer (where relevant)	Review strategy and proof of engagement (i.e. Attendance Registers). *Frequency: Once off, prior to construction.*
Action 2: Meetings	Meetings with the Okahao Town Council will be carried out (the frequency of the meeting will be determined between DWN and the Okahao Town Council at the outset of the project).	Meetings held.	DWN with assistance from Contractor / E&S Officer (where relevant)	Attendance Registers and meeting minutes. *Frequency: To be determined between DWN and the Okahao Town Council at the outset of the project.*
Action 3: Meetings	Meetings with other neighbouring landowners to be arranged on an ad-hoc basis, depending specific complaints being raised. However, at the outset of the project, the relevant Contractors will engage with the immediate landowners (as a minimum) to inform them of the commencement of the activities and also to share relevant safety related information.	Meetings held.	Contractor / E&S Officer (where relevant)	Attendance Registers and meeting minutes. *Frequency: As required.*

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
c) **Managing perceptions, issues and / or complaints**				
Action 1: Grievance Process	Develop and implement a concerns / complaints (grievance) process for stakeholders and publicise the channels through which issues can be submitted by Contractors to DWN.	Grievance process in place and communicated.	DWN with assistance from Contractor / E&S Officer (where relevant)	Review of grievance process. *Frequency: Once-off, prior to construction and as required.*
Action 2: External Communication Register	Document all complaints in an external communication register.	External communication register in place.	DWN with assistance from Contractor / E&S Officer (where relevant)	Review of external communication register. *Frequency: Once-off, prior to construction and as required.*
Action 3: Receipt of complaints	Respond immediately to acknowledge receipt of complaints and comments.	Response of complaints and comments documented.	DWN with assistance from Contractor / E&S Officer (where relevant)	Review complaints and comments responses *Frequency: As required.*
Action 4: Investigation of findings	Investigate and report on findings of issue to the complainant.	Investigation reports documented.	DWN with assistance from Contractor / E&S Officer (where relevant)	Review investigation reports. *Frequency: As required.*
Action 5: Records of complaints	Keep complete records of complaints, responses and actions taken.	Reports	DWN with assistance from Contractor / E&S Officer (where relevant)	Review of complaints, responses and actions register. *Frequency: As required.*
Action 6: Grievance Mediation	Introduce an independent mediator if the grievance / complaint cannot be resolved between the Contractor / LCE / DWN and the affected party.	Grievance mediation process in place.	DWN with assistance from Contractor / E&S	Review of grievance mediation process.

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
			Officer (where relevant)	*Frequency: As required.*

11.2 THIRD PARTY SAFETY AND SECURITY MP

It is essential that safety and security measures are defined and implemented to adequately protect the project site from being accessed by unauthorised people. The proposed Okahao Bulk Infrastructure Project Sites are located in the town of Okahao, which belongs to the Okahao Town Council.

11.2.1 OBJECTIVE

The objective is to prevent physical harm to third parties (and animals) from potential dangers associated with the facilities and activities of the Project. Also not to compromise the safety and security of the neighbouring landowners from Project workers, both during the construction and operational phases.

11.2.2 ACTIONS REQUIRED

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
a) <u>Access of unauthorised people on the Project Site</u>				
Action 1: Sign Boards	Construction sign boards and warning signs will be erected and maintained at the (relevant) site boundaries / access roads (and the entrance to the Project Sites).	Sign boards in place.	Contractor / E&S Officer	Site inspections *Frequency: Initially daily (first two weeks of construction) at a new site – then weekly.*
Action 2: Access Control	Where relevant, security control will be in place at the access point to the project area to prevent uncontrolled vehicle and pedestrian access.	Access control in place, where relevant	Contractor / E&S Officer	Site inspections *Frequency: Initially daily (first two weeks of construction) at a new site – then weekly.*
Action 3: Site Induction	Any persons entering the Project area will be required to undergo a formal induction.	Induction material.	Contractor / E&S Officer	Attendance registers *Frequency: Daily.*
Action 4: Security Plan	Operate and publicise a security plan for the Project Site among all site workers and visitors. Workers will remain within the work areas during working hours. This includes information to all workers, contractors and visitors of the detailed consequences of anyone found in breach of the security measures.	Security Plan in place (part of induction)	Contractor / E&S Officer	Attendance registers *Frequency: As required.*

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
b) Safety risks				
Action 1: Zero tolerance	Operate an alcohol and drug - free site.	Confirm through testing	Contractor / E&S Officer	Random alcohol testing *Frequency: Random.*
Action 2: Training	Ensure all security personnel are well vetted and trained.	Confirm competence of security personnel	Contractor / E&S Officer	Proof of competence *Frequency: Once-off, prior to construction and as required.*
Action 3: Prohibited Items	Prevent workers and contractors / visitors from collecting any prohibited items from the Project sites.	Random search / declaration form where relevant	Contractor / E&S Officer	Completed declaration forms and site inspections *Frequency: Daily.*
c) Emergency situations				
Action 1: Emergency Response Plan	Develop and implement an emergency response plan relating to the safety of third parties.	Emergency Response Plan in place.	Contractor / E&S Officer	Records of Emergencies / Incidents *Frequency: Once-off, prior to construction and as required.*
Action 2: Consequence Management	The Contractors must inform all employees / sub-contractors of the detailed consequences of anyone found in breach of the security measures. It must include a contingency plan to protect the local community if labourers go on strike.	Training records, including third party security related issues.	Contractor / E&S Officer	Attendance registers *Frequency: Once-off, prior to construction and as required.*

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
d) <u>Handling, storage, transport and use of hazardous substances</u>				
Action 1: Transport of hazardous substances	All legal health and safety requirements will be implemented when transporting hazardous substances to site.	MSDSs and relevant procedures for the handling, storage and transport of hazardous substances.	Contractor / E&S Officer	Site inspections *Frequency: Weekly.*
Action 2: Handling of hazardous substances	Transport companies will comply with all legal requirements for the handling and transport of hazardous substances.	MSDSs and relevant procedures for the handling, storage and transport of hazardous substances.	Contractor / E&S Officer	Site inspections *Frequency: Weekly.*
Action 3: Storage of hazardous substances	Storage facilities will comply with all relevant health and safety requirements applicable for Namibia.	Refer to Soil MP	Contractor / E&S Officer	Site inspections *Frequency: Weekly.*
Action 4: Incident Management	Major spillage incidents will be handled in accordance with emergency response procedures. Any significant spills will be reported to the authorities within 24 hrs and corrective action taken.	Emergency Response Procedure	Contractor / E&S Officer	Site inspections *Frequency: Daily.*
Action 5: Induction	Induct all relevant employees and contractors in the Project's spillage management procedure.	Induction / training	Contractor / E&S Officer	Attendance registers *Frequency: Once-off, prior to construction and as required.*

11.3 SOIL MP

11.3.1 OBJECTIVE

The objective is to limit the loss of soil because of disturbance and pollution.

11.3.2 ACTIONS REQUIRED

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
a) <u>Aeolian Erosion</u>				
Action 1: Dust suppression	If construction activities are scheduled during the dry season, dust suppression must be applied in the work areas where excessive dust is created.	Visual inspections	Contractor / E&S Officer	Site inspections *Frequency: Daily.*
Action 2: Avoidance during windy conditions	Construction activities during windy conditions must be avoided.	Visual inspections and construction timing	Contractor / E&S Officer	Site inspections *Frequency: Daily.*
b) <u>Soil Compaction</u>				
Action 1: Avoidance of arable land	Demarcate work areas, taking cognisance of possible arable land and avoid these areas.	Visual inspections	Contractor / E&S Officer	Site inspections *Frequency: Initially daily (first two weeks of construction) at a new site – then weekly.*
Action 2: Backfilling of excavations	In addition, do backfilling of all excavations and trenches – i.e. the work areas must be reworked and profiled to eliminate possible compaction.	Visual inspections	Contractor / E&S Officer	Site inspections *Frequency: Initially daily (first two weeks of construction) at a new site – then weekly.*

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
c) <u>Soil Contamination</u>				
Action 1: Waste management	Manage the handling of sewage and waste according to specifications and conditions as stipulated by the applicable authorities (by-laws of the Okahao Town Council, and the Directorate of Water Affairs).	Waste management procedure developed and implemented	Contractor / E&S Officer	Site inspections *Frequency: Daily.*
Action 2: Proper handling of waste	Implement proper site management and measures to enforce the proper handling of waste and to prevent and manage spills, leaks and discharges.	Waste management procedure developed and implemented	Contractor / E&S Officer	Site inspections *Frequency: Daily.*
Action 3: Avoidance and Recycling	Follow the waste management hierarchy with emphasis on avoidance and recycling.	Waste management procedure developed and implemented.	Contractor / E&S Officer	Site inspections and safe disposal certificates *Frequency: Daily.*
Action 4: Storage of hazardous substances	Store hazardous substances (including hydrocarbons) in bunded areas able to accommodate 110% of the largest container or tank, equip parked vehicles and generators with spill trays.	Visual inspections	Contractor / E&S Officer	Site inspections *Frequency: Initially daily (first two weeks of construction) at a new site – then weekly.*
Action 5: Training	Train employees on the importance of waste management and spill emergency response to avoid littering and to clean up spills immediately.	Training records	Contractor / E&S Officer	Attendance registers *Frequency: Once-off, prior to construction and as required.*

11.4 HYDROLOGY MP

11.4.1 OBJECTIVE

The objective of the management measures is to prevent the pollution of surface water, and by doing so, restrict indirectly the potential to pollute groundwater as well. Also, reduced storm water flow must be minimised.

11.4.2 ACTIONS REQUIRED

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
a) <u>Artificial Pooling</u>				
Action 1: Prevention of artificial pooling	Select and schedule some of the construction activities during the dry season to prevent that man-made interferences can cause artificial pooling.	Design, planning and construction Visual inspection	LCE & Contractors	Site inspections *Frequency: Once-off, prior to construction and as required.*
Action 2: Linear infrastructure	Align the placement of linear infrastructure in accordance with the general gradient and direction of the surface flow to prevent possible artificial pooling.	Design and construction	LCE & Contractors	Site inspections *Frequency: Once-off, prior to construction and as required.*
Action 3: Engineering Design	The engineering and design team must plan the connection roads with appropriate culverts and pipes not to create artificial pooling.	Design and construction	LCE & Contractors	Site inspections *Frequency: Once-off, prior to construction and as required.*
Action 4: Findings of previous studies	It is recommended to consider the findings of previous flood studies to identify the possible risks of artificial pooling related to the connection road.	Design and construction	LCE & Contractors	Site inspections *Frequency: Once-off, prior to construction and as required.*
b) <u>Flooding</u>				
Action 1: Avoidance of flooding	Select and schedule some construction activities during the dry season to avoid man-made interferences with the natural functioning of the drainage channels which can cause flooding.	Design, planning and construction Visual inspection	LCE & Contractors	Site inspections *Frequency: Once-off, prior to construction and as required.*

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
Action 2: Linear infrastructure	The placement of linear infrastructure must be done in accordance with the general gradient and direction of the surface flow to prevent possible flooding.	Design and construction	LCE & Contractors	Site inspections *Frequency: Once-off, prior to construction and as required.*
Action 3: Stormwater management	Provision must be made for stormwater management and flood and erosion control measures, despite the long dry periods in between.	Design and construction	LCE & Contractors	Site inspections *Frequency: Once-off, prior to construction and as required.*
c) <u>Fluvial Erosion</u>				
Action 1: Minimise fluvial erosion	Select and schedule some construction activities during the dry season to avoid potential man-made interferences with the natural functioning of drainage channels and minimize the potential of fluvial erosion.	Design, planning and construction Visual inspection	LCE & Contractors	Site inspections *Frequency: Once-off, prior to construction and as required.*
Action 2: Linear infrastructure	By aligning the placement of linear infrastructure in accordance with the general gradient and direction of the surface flow, potential man-made interferences with the drainage channels will be mitigated and thus minimize the risk of causing fluvial erosion.	Design and construction	LCE & Contractors	Site inspections *Frequency: Once-off, prior to construction and as required.*
Action 3: Engineering Design	The engineering and design team must plan the connection road with appropriate culverts and pipes not to enhance fluvial erosion.	Design and construction	LCE & Contractors	Site inspections *Frequency: Once-off, prior to construction and as required.*
Action 4: Findings of previous studies	It is recommended to consider the findings of previous flood studies to identify the possible risks of fluvial erosion related to the connection road.	Design and construction	LCE & Contractors	Site inspections

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
				Frequency: Once-off, prior to construction and as required.
d) <u>Water Contamination</u>				
Action 1: Waste management	Manage the handling of sewage and waste according to specifications and conditions as stipulated by the applicable authorities (by-laws of the Okahao Town Council, and the Directorate of Water Affairs).	Refer to Soil MP.		
Action 2: Proper handling of waste	Implement proper site management and measures to enforce the proper handling of waste and to prevent and manage spills, leaks and discharges.	Waste management procedure developed and implemented	Contractor / E&S Officer	Site inspections *Frequency: Daily.*
Action 3: Avoidance and Recycling	Follow the waste management hierarchy with emphasis on avoidance and recycling.	Waste management procedure developed and implemented.	Contractor / E&S Officer	Site inspections and safe disposal certificates *Frequency: Daily.*
Action 4: Storage of hazardous substances	Store hazardous substances (including hydrocarbons) in bunded areas able to accommodate 110% of the largest container or tank, equip parked vehicles and generators with spill trays.	Visual inspection	Contractor / E&S Officer	Site inspections *Frequency: Daily.*
Action 5: Training	Train employees in the importance of waste management and spill emergency response to avoid littering and to clean up spills immediately.	Training Records	Contractor / E&S Officer	Attendance registers *Frequency: Once-off, prior to construction and as required.*

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
e) <u>Aquatic Alien Invasive Species</u>				
Action 1: Proper site management	Implement proper site management and measures.	Visual inspections	Contractor / E&S Officer	Site inspections *Frequency: Monthly*
Action 2: Training	Train employees in the importance of alien invasive species to avoid its release and spread.	Training Records	Contractor / E&S Officer	Attendance registers *Frequency: Once-off, prior to construction and as required.*

11.5 BIODIVERSITY MP

11.5.1 OBJECTIVE

The objective is to prevent, as far as possible, the unacceptable disturbance and loss of species and habitats, and related ecosystem functionality as well as to minimize impacts on sensitive areas.

11.5.2 ACTIONS REQUIRED

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
a) <u>Loss of Biodiversity</u>				
Action 1: Loss or damage of key species	Identify the plants in the works areas prior to construction to avoid the loss or damage of protected species during construction activities and avoid clearing mature trees as far as possible and obtain relevant permits.	Detailed design Visual inspection	LCE / Contractor / E&S Officer	Site inspections *Frequency: Once-off, prior to construction and as required.*
Action 2: Clearing of vegetation	Clear vegetation only where necessary.	Visual inspections	Contractor / E&S Officer	Site inspections *Frequency: Once-off, prior to construction and as required.*
Action 3: Incident recording	With reference to any potential human-wildlife conflict or road kills, keep records of wildlife incidents.	Recording and reporting of incidents	Contractor / E&S Officer	Site inspections and records *Frequency: Daily.*
Action 4: Reporting	Keep record of biodiversity observations for reporting purposes.	Recording and reporting of incidents	Contractor / E&S Officer	Site inspections and records *Frequency: Daily.*
Action 5: Restrictions on use of chemicals / pesticides	Ensure that no chemicals/pesticides are used and burning of vegetation is restricted	Visual inspection	Contractor / E&S Officer	Site inspections *Frequency: Initially daily (first two weeks of construction) at a new site – then weekly.*

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
Action 6: Clearing of vegetation	Do not clear vegetation more than two months in advance of operations	Visual inspection	Contractor / E&S Officer	Site inspections *Frequency: Once-off, prior to construction and as required.*
Action 7: Clearing of endangered species	Avoid clearing mature trees and endangered species	Visual inspection	Contractor / E&S Officer	Site inspections *Frequency: Once-off, prior to construction and as required.*
Action 8: Underground Powerline	Monitor impacts of avifauna (key / priority species). Refer to Section 13.3.3 for further details.	Visual inspection	DWN	Site inspections / Avifauna monitoring (see Section 13.3.3) *Frequency: Once-off, prior to construction and as required.*
b) <u>Habitat Change, Fragmentation or Loss</u>				
Action 1: Loss or damage of key plant species	Identify the plants present in the work areas prior to construction to avoid the loss or damage of possible protected plant species during construction activities.	Visual inspection	Contractor / E&S Officer	Site inspections *Frequency: Once-off, prior to construction and as required.*
Action 2: Clearing of vegetation	Clear vegetation only where necessary.	Visual inspection	Contractor / E&S Officer	Site inspections *Frequency: Once-off, prior to construction and as required.*

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
Action 3: Reporting	Keep record of biodiversity observations for reporting purposes.	Recording and reporting of incidents	Contractor / E&S Officer	Site inspections and records *Frequency: Daily.*
c) <u>Introduction of Opportunistic (and Alien Invasive) Plants</u>				
Action 1: Management measures	Implement proper site management and measures.	Visual inspections	Contractor / E&S Officer	Site inspections *Frequency: Daily.*
Action 2: Training	Train employees in the importance of alien invasive species to avoid its release and spread.	Training Records	Contractor / E&S Officer	Attendance registers *Frequency: Once-off, prior to construction and as required.*
d) <u>Inhibited Rejuvenation</u>				
Action 1: Prevention of blockages	Select and schedule some of the construction activities during the dry season to prevent that man-made interferences can cause blocking of the surface water flow.	Visual inspection	LCE & Contractors	Site inspections *Frequency: Once-off, prior to construction and as required.*
Action 2: Linear infrastructure	Align the placement of linear infrastructure in accordance with the general gradient and direction of the surface flow to prevent possible artificial pooling.	Design and construction	LCE & Contractors	Site inspections *Frequency: Once-off, prior to construction and as required.*
Action 3: Engineering design	The engineering and design team must plan the connection road with appropriate culverts and pipes not to create the inhibition of water as an ecological driver.	Design and construction	LCE & Contractors	Site inspections

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
				Frequency: Once-off, prior to construction and as required.
Action 4: Findings of previous studies	It is recommended to consider the findings of previous flood studies to identify the possible risks related to the rejuvenation role of water.	Design and construction	LCE & Contractors	Site inspections *Frequency: Once-off, prior to construction and as required.*

11.6 NOISE MP

11.6.1 OBJECTIVE

The objective is to limit the noise impacts of the bulk infrastructure project during its construction activities.

11.6.2 ACTIONS REQUIRED

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
a) <u>Noise Disturbance to third parties (closest sensitive noise receptors)</u>				
Action 1: Noise Register	Establish and maintain a complaint register where interested and affected parties can lodge noise-related complaints during the construction phase.	Complaints register in place.	Contractor / E&S Officer	Review register *Frequency: Once-off, prior to construction and as required.*
Action 2: Investigation of exceedances	In response to a complaint, investigate possible causes and if required make use of a specialist to determine the likely source through monitoring and or a site inspection. Remedial actions to prevent such events in future should then be taken.	Investigation reports documented	Contractor / E&S Officer	Review reports and corrective actions implemented where relevant *Frequency: As required.*
Action 3: Restrictions	Do not allow construction and operation activities during nighttime that can generate noise.	Contractual requirements / Procedure in place	LCE / Contractor / E&S Officer	Review of contracts Site inspections *Frequency: Once-off, prior to construction and as required.*

11.7 AIR QUALITY MP

11.7.1 OBJECTIVE

The objective is to limit the air quality (i.e. dust) impacts of the bulk infrastructure project during its construction activities.

11.7.2 ACTIONS REQUIRED

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
a) <u>Air Pollution, Dust Nuisance</u>				
Action 1: Sources of dust generation	Visually inspect the dust generation sources regularly. Keep photographic record.	Visual inspections	Contractor / E&S Officer	Site inspections *Frequency: Daily.*
Action 2: Dust suppression	Apply dust suppression on dusty areas during construction, where relevant.	Visual inspections	Contractor / E&S Officer	Site inspections *Frequency: As required.*
Action 3: Restrictions	Avoid construction activities during extreme windy conditions.	Visual inspections	Contractor / E&S Officer	Site inspections *Frequency: As required.*

Further recommendation:

It will be wise to conduct a proper air quality study in the Okahao Townlands. Suh a study will assist decision makers with accurate data on meteorology and dust, monitoring requirements and the necessary mitigation and management measures.

11.8 Waste Management Plan

11.8.1 OBJECTIVE

The proper storage, recycling, re-using, removal, transportation and disposal of waste.

11.8.2 Waste Inventory list

A typical Waste inventory list for the Construction activities could include the following:

Waste type	Possible waste specifics (i.e. example of waste types)*
Non-hazardous solid waste	Metal Cut offs, rubber, wood, product packaging, organic materials, glass, plastics, food scraps, cardboard/paper, used PPE, etc.
Hazardous solid waste	Printer cartridges, sewerage, batteries, hydrocarbons (oils, grease), fluorescent bulbs, etc.
Medical waste	Syringes, material with blood stains, bandages, etc.

Note: Each Contractor to identify more specific waste types during the project execution.

11.8.2 ACTIONS REQUIRED

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
a) General				
Action 1: Waste management procedure	Each Contractor will develop a waste management procedure that will cover the recycling, re-use, storage, handling, transportation and disposal. Ensure that the sub-contractor's responsible for the above are made aware of these procedures.	Waste Management Procedure in place.	Contractor / E&S Officer	Site inspections Review of waste management procedure Review of training records *Frequency: Once-off, prior to construction and as required.*
b) Collection, storage and disposal of non-hazardous waste				
Action 1: Waste collection	Designated waste collection points will be established on sites. Care will be taken to ensure that there will be sufficient collection points with adequate capacity. Receptacles must have lids to prevent wind borne litter, or scavenging by animals.	Waste collection points are in place Visual inspections	Contractor / E&S Officer	Site inspections *Frequency: Daily.*
Action 2: Waste Landfill site	Recyclable waste will be sent to a reputable recycling company (where possible). The remainder of the waste will be disposed at a licenced landfill site.	Visual inspections	Contractor / E&S Officer	Review of waste transfer records and safe disposal certificates *Frequency: Monthly.*

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
Action 3: Off-site waste facility	Non-recyclable waste will be collected and taken to an off-site waste facility.	Visual inspections	Contractor / E&S Officer	Site inspections Review waste transfer records *Frequency: Weekly / monthly.*
Action 4: Scrap metals	Scrap metal will be sold to a reputable company.	Transfer notes documented	Contractor / E&S Officer	Review of transfer notes *Frequency: Monthly.*
Action 5:	Consider using a press on site to press relevant waste material before storage and disposal.	Safe storage of materials	Contractor / E&S Officer	Site inspections *Frequency: Weekly.*
Action 6:	Avoid foamalite packaging for food container on site.	Visual inspections	Contractor / E&S Officer	Site inspections *Frequency: Daily.*
Action 7:	Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities.	Storage, transport and treatment of waste is documented	Contractor / E&S Officer	Review of waste transfer notes *Frequency: Monthly.*
Action 8:	Ensure that the temporary waste storage site is identified. Ensure that temporary waste storage does not obstruct the pathways.	Visual inspection	Contractor / E&S Officer	Site inspections *Frequency: Weekly.*
Action 9:	Construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers.	Visual inspection	Contractor / E&S Officer	Site inspections *Frequency: Daily.*
Action 10:	Records of waste disposal will be maintained.	Records of waste are kept	Contractor / E&S Officer	Review of waste transfer records

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
				Frequency: Monthly.
Action 11:	Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos).	Visual inspection	Contractor / E&S Officer	Site inspections *Frequency: As required.*
c) <u>Collection, storage and disposal of hazardous waste</u>				
Action 1:	Designated waste collection points will be established on site for hazardous waste. Care will be taken to ensure that there will be sufficient collection points with adequate capacity.	Waste collection points are in place Visual inspections	Contractor / E&S Officer	Site inspections *Frequency: Daily.*
Action 2:	Hazardous waste will be disposed of at a permitted hazardous waste disposal site.	Licensed landfill site exists	Contractor / E&S Officer	Review of waste transfer records *Frequency: Monthly.*
Action 3:	The contractor yard will have a dedicated area for used oil / chemicals storage that will include an impermeable concrete slab, bunding, an oil trap and sump.	Safe storage of materials Spill response procedure Spill response and remediation equipment in place.	Contractor / E&S Officer	Site inspections *Frequency: Weekly.*
Action 4:	Used oil will be sent to a reputable recycling company for recycling.	Waste transfer notes	Contractor / E&S Officer	Review of waste transfer notes *Frequency: Monthly.*

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
Action 5:	Materials contaminated with oils and greases will be disposed of at a permitted hazardous waste disposal site.	Waste transfer notes	Contractor / E&S Officer	Review of waste transfer notes *Frequency: Monthly.*
Action 6:	Ensure that hazardous waste is kept covered, in impermeable bunded areas until it can be removed from site to the hazardous waste facility.	Visual inspection	Contractor / E&S Officer	Site inspections *Frequency: Weekly.*
Action 7:	Store fluorescent tubes (if any) in a special labelled steel drum at the workshop.	Visual inspection	Contractor / E&S Officer	Site inspections *Frequency: Weekly.*
Action 8:	Ensure that waste storage areas and/or containers meet the risk needs for that specific waste (e.g. impervious floor, bunded areas with drainage/containment systems, lids to prevent light material from blowing away or sealed containers for hazardous material).	Safe storage of materials Visual inspection	Contractor / E&S Officer	Site inspections *Frequency: Weekly.*
d) <u>Medical waste</u>				
Action 1: Medical waste	Incinerate the medical waste offsite at an approved medical facility.	Records of medical waste	Contractor / E&S Officer	Site inspections *Frequency: Monthly.*

11.9 SOCIO-ECONOMIC MP

11.9.1 OBJECTIVE

The objective is to further enhance positive socio-economic impacts and to avoid minimize or mitigate the negative socio-economic impacts of the Bulk Infrastructure Project's activities.

11.9.2 ACTIONS REQUIRED

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
a) <u>Local, regional and national economy</u>				
Action 1:	Promote opportunities to maintain open communication channels with the Okahao Residents and local business in the area/region to seek win: win opportunities for business growth, e.g. to produce and deliver goods and services at a fair price.	Procurement policy Contractual agreements	LCE & Contractors	Review of procurement policy *Frequency: Once-off, prior to construction and as required.*
Action 2:	Purchase Namibian-made goods and services whenever possible or those from businesses within the South African Development Community.	Procurement policy	LCE & Contractors	Review of procurement policy *Frequency: Once-off, prior to construction and as required.*
Action 3:	Have procurement policies that give preference to the purchase of Namibian-made goods and services whenever and specifically from Okahao, where possible.	Procurement policy and employment records	LCE & Contractors	Review procurement and employment rules and records *Frequency: Once-off, prior to construction and as required.*
Action 4:	Develop a grievance procedure which it will publicise to neighbours and relevant stakeholders, so that issues and concerns can be addressed adequately and promptly. See Chapter 8.	Grievance mechanism in place, grievances recorded Training performed and recorded	Contractor / E&S Officer	Review of grievance register Review of training records *Frequency: Once-off, prior to construction and as required.*

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
b) <u>Job creation and skills development</u>				
Action 1:	Recruit local (Namibian) Contractors and Sub-contractors and where possible from Okahao. Contractors to recruit workers (largely) from Okahao.	Procurement policy and employment records	LCE & Contractors	Review procurement and employment rules and records *Frequency: Once-off, prior to construction and as required.*
Action 2:	Weight tender selection in favour of contractors and suppliers of goods and services which employ Namibians and Namibian suppliers (and where possible from Okahao) down the supply chain.	Procurement policy and employment records	LCE & Contractors	Review procurement and employment rules and records *Frequency: Once-off, prior to construction and as required.*
Action 3:	Be gender sensitive and select women for interview, training and recruitment, where possible.	Employment records	Contractor / E&S Officer	Review of employment records *Frequency: Once-off, prior to construction and as required.*
Action 4:	Translate the positive social impacts as benefactors that can be used in strategies such as the Okahao Structure Plan, Local Economic Developments Plans, etc.	Procurement policy and employment records	LCE & Contractors	Review procurement and employment rules and records *Frequency: Once-off, prior to construction and as required.*

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
c) <u>Community health, safety and security</u>				
Action 1:	See General (third party) safety and security	H&S Plan in place	Contractor / E&S Officer	Review of H&S Plan *Frequency: Once-off, prior to construction and as required.*
Action 2:	The Contractors must inform all employees / contractors of the detailed consequences of anyone found in breach of the security measures. It must include a contingency plan to protect the local community if labourers go on strike.	Code of Conduct to include (consequence management) Training performed and recorded	Contractor / E&S Officer	Review of Code of Conduct Review of training records *Frequency: Once-off, prior to construction and as required.*

11.10 WORKERS' HEALTH AND SAFETY AND WELL-BEING

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
Action 1:	With reference to section 9.2, the ESIA focused on third parties only and did not assess health and safety impacts on workers. These Occupational Health and Safety aspects must be addressed through the Contractors' own occupational health and safety risks assessments, requirements and procedures to be developed and implemented, taking the relevant labour acts, health and safety legislation, policies and standards into consideration. It should, amongst others, include all Personal Protective Equipment, (PPE) requirements, etc. Lund to include these requirements as part of the tender process.	H&S Plan in place Training performed and recorded	Contractor / E&S Officer	Review of H&S plan Review of training records *Frequency: Once-off, prior to construction and as required.*
Action 2:	Contractors must inform all employees / contractors of the detailed consequences of anyone found in breach of Community Health, Safety and Security measures (i.e. IFC's Performance Standard PS-4).	Code of Conduct to include (consequence management) Training on procedures performed and recorded	Contractor / E&S Officer	Review consequence management records Review training records *Frequency: Once-off, prior to construction and as required.*
Action 3:	Provide compulsory training to all employees and contractors on personal safety, mutual respect and sexual health including posters and other means of communication to remind and highlight expected behaviour.	Training on procedures performed and recorded	Contractor / E&S Officer	Review training records *Frequency: Once-off, prior to construction and as required.*
Action 4:	Ensure contractors have a comprehensive HIV, AIDS, TB and general hygiene workplace policy and wellness programme which will detail HIV prevention measures in the workplace. Implement an employee wellness programme.	Occupational health plan in place Training performed and recorded	Contractor / E&S Officer	Review of Occupational health plan Review training records

NR / ITEM	MITIGATION, MANAGEMENT AND ENHANCEMENT MEASURES	MEANS OF VERIFICATION	RESPONSIBILITY	MONITORING PROCEDURE
				Frequency: Once-off, prior to construction and as required.
Action 5:	Promote public health and safety by supporting the Ministry of Health and other stakeholders' initiatives to reduce the spread of communicable diseases such as sexually transmitted diseases, including HIV, TB and malaria, by organising awareness programmes, ensuring that codes of conduct for workers are implemented and adhered to, and by promoting healthy lifestyles and in their health campaigns.	Awareness campaigns recorded Attendance register	Contractor / E&S Officer	Review records Review attendance register *Frequency: Once-off, prior to construction and as required.*

12. Management and Mitigation measures – Operations Phase

- At the end of the Construction phase all work areas must be rehabilitated (i.e. backfilled and profiled). Final hand over of each site must the approved by DWN, LCE and the Town Council.
- At the end of the Construction phase, the Responsibility of the ESMP (i.e. operational phase) will be handed over to the Okahao Town Council.
- In addition, the ECC issued will need to be transferred to the Town Council.
- The ongoing maintenance related activities associated with the various Project components will therefore become the responsibility of the Town Council, with their appointed contractors and related by-laws.
- Aligned with the above, the proposed new sewer line shall be regularly inspected for accidental discharges and immediate remediation action taken in the event of such discharges.
- The proposed new water reservoir will similarly be monitored for spills and water wastage.
- With regards to the proposed new road, the following action is recommended:
    - It will be wise to conduct a proper air quality study in the Okahao Townlands. Such a study will assist relevant (local or regional) decision makers with accurate data on meteorology and dust, monitoring requirements and the necessary mitigation and management measures.

In addition to the above, it is recommended that the Okahao Town Council considers developing a completed Waste Management Strategy for the Townland and ensure the landfill site is compliant with National Legislation.

13. ESMP Monitoring and Auditing Compliance

13.1 AUDITS AND INSPECTIONS

The Contractors E&S Officer will conduct internal management audits against the commitments in the ESMP. These audits will be conducted every month. The audit findings will be documented for both record keeping purposes and for informing continual improvement.

The Environmental Officer will furthermore conduct daily inspections during construction.

In addition, an independent professional will conduct at least one ESMP performance assessment (i.e. audit).

The Contractors will develop an ESMP Auditing (and Monitoring) Table and monitor the related commitments. The table (in the form of a checklist) should include as a minimum:

- ESMP commitments.
- Date of Inspection.
- Findings/ Observations (potentially including a colour code red/orange/green).
- Defined Corrective Actions (if any) with target dates for implementation.

A separate Occupational Health and Safety related auditing procedure / table need to be developed by the Contractor.

Should any environmental or Health and Safety incidents be observed or reported by the construction workers, this shall be reported to DWN and LCE immediately.

13.2 Submission of Information

As a minimum, the following documents will be submitted to the relevant authorities on an ongoing basis by DWN:

- The bi-annual report required by the MEFT will be submitted every six months. The above-mentioned audit and inspection findings will (amongst others) be included in this report.

13.3 Monitoring

13.3.1 SOIL Monitoring

Recommended Monitoring

- Daily inspections can be conducted during the construction phase to prevent activities during windy conditions.
- During the construction phase daily inspections must be conducted to prevent possible compaction outside the allowable work areas.
- After the backfilling of excavations and trenches, the disturbed areas must be monitored for potential aeolian erosion.
- After the construction phase (after all excavations and trenches are backfilled) the work areas must be inspected to confirm that no compacted areas remain behind.
- Carry out regular inspections to detect spills, leaks and improper waste management, including illegal discharges for immediate clean-up.
- Keep a record of the various waste volumes (recycled, disposed, hydrocarbons, hazardous) and disposal certificates.

13.3.2 HYDROLOGY Monitoring

Monitoring Recommendations

- During the construction phase daily inspections must be conducted to prevent artificial pooling because of man-made interferences.
- After the construction phase (after all excavations and trenches are backfilled) the work areas as well as the connection road must be inspected to confirm that no artificial pooling occurs.
- During the construction phase daily inspections must be conducted to prevent enhanced flooding because of man-made interferences.

- Consider weather forecasts and early warnings regarding potential flooding during construction activities in the wet season to avoid man-made disasters due to the obstructions caused by construction activities.
- After the construction phase (after all excavations and trenches are backfilled) the work areas must be inspected finally for potential enhanced flooding because of the project.
- Daily inspections can be conducted during the construction phase to prevent that man-made obstructions can enhance potential fluvial erosion.
- After the backfilling of excavations and trenches, the disturbed areas must be monitored for potential fluvial erosion.
- Carry out regular inspections to detect spills, leaks and improper waste management, including illegal discharges for immediate clean-up.
- Keep a record of the various waste volumes (recycled, disposed, hydrocarbons, hazardous) and disposal certificates.
- Construction teams must carry out regular inspections to detect aquatic alien invasive species.
- Construction teams must remove aquatic alien invasive species as soon as they are detected.

13.3.3 BIODIVERSITY Monitoring

Monitoring Recommendations

- Construction teams must carry out regular inspections to detect alien invasive species.
- Constructions teams must remove alien invasive species as soon as they are detected.
- During the construction phase daily inspections must be conducted to prevent inhibited water flow because of man-made interferences.
- After the construction phase (after all excavations and trenches are backfilled) the work areas as well as the connection road must be inspected to confirm that no inhibited water flow occurs.

13.3.4 Noise and Air quality (dust) Monitoring

Monitoring Recommendations

- Monitoring requirements only in response to a complaint after further investigation by the E&S Officer, LCE and DWN and possible specialist (where required).

APPENDIX A: Generic Example of a Grievance Mechanism