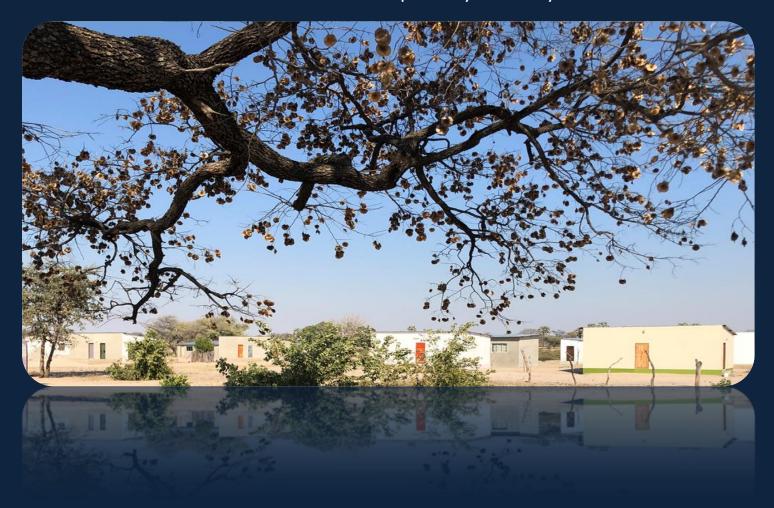
# ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

## OUKANGO PROPER, EENHANA WITHIN THE OHANAGWENA REGION

Prepared for Development Workshop Namibia Prepared by Urban Dynamics



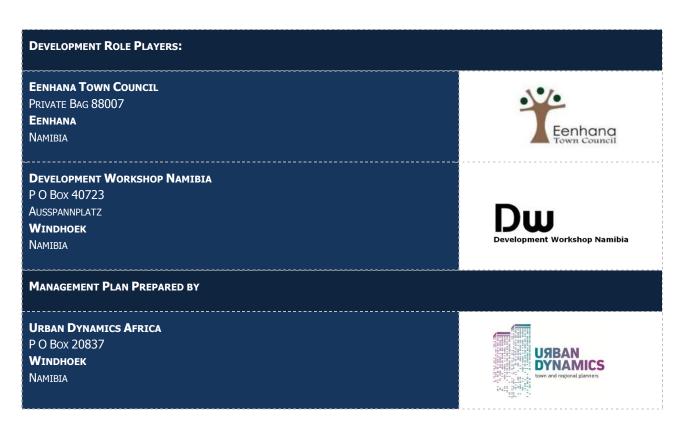
UDA Project No: Eenhana 1237

Revision No: 01: January / 2024

#### DOCUMENT INFORMATION

Title ESMP for Oukango Proper Eenhana Construction Activities I			
	ESMP Report: Volume 1		
Client	Eenhana Town Council		
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Keywords	Development Workshop, Urban Development, Management Plan		
Status	Draft		
Report No.			
Company	Urban Dynamics Africa (Pty) Ltd.		
MEFT App Ref	231018002333		
UDA Project No.	Eenhana 1237		

#### DOCUMENT REVISION RECORD



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#### **ACRONYMS AND ABBREVIATIONS**

ACRONYM / ABBREVIATION	DESCRIPTION	
BID	Background Information Document	
BMZ	Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung	
DEA	Department Of Environmental Affairs	
DEM	Digital Elevation Model	
DWN	Development Workshop Of Namibia	
EA	Environmental Assessment	
EC	Environmental Commissioner	
ECC	Environmental Clearance Certificate	
ECO	Environmental Control Officer	
EHS	Environmental, Health And Safety	
EIA	Environmental Impact Assessment	
EMA	Environmental Management Act	
EMP	Environmental Management Plan	
ER	Employers Representative	
ESF	Environmental And Social Framework	
ESHS	Environmental, Social, And Health And Safety	
ESIA	Environmental And Social Impact Assessment	
ESS	Environmental And Social Standards	
FRMP	Flood Risk Management Plan	
ha	Hectares	
I&APs	Interested And Affected Parties	
ILO	International Labour Organization	
KfW	Kreditanstalt Für Wiederaufbau	
Km	Kilometre	
m	Meter	
m²	Square Meters	
MEFT	Ministry Of Environment, Forestry, And Tourism	
mm	Millimetre	
N&S	Health, and Safety	
NBD	The Namibia Biodiversity Database	
NCE	Namibian Chamber Of Environment	
NHC	Namibian Health Care	
NoRed	Northern Regional Electricity Distributor	
PPE	Personal Protective Equipment	
SME	Small-And-Medium-Sized Enterprise	
ТВ	Tuberculosis	
TRRP	Tree Removal And Replacement Plan	
UDA Urban Dynamics Africa		
URPB	Urban And Regional Planning Board	
WMP	Waste Management Plan	
E&S	Environmental And Social	
ESMP	Environmental And Social Management Plan	

#### 1 BACKGROUND

Development Workshop Namibia (DWN) is planning to construct a sewer and water infrastructure as well as road building for 316 erven in Oukango Proper. The Project will be constructed at Eenhana in the Ohangwena Region within Namibia. The construction activities will be executed by, Eenhana United Construction cc (Contractor). The construction activities will be supervised by the Implementation Consultant Knight Piésold Consulting (Pty) Ltd.

The purpose of this Environmental and Social Management Plan (ESMP) is to provide a consolidated summary of all the Environmental and Social (E&S) commitments relevant for the construction phase of the Project. The report focus on environmental (such as air emissions, biodiversity, and environmental contamination) and social aspects (such as the protection of human rights, communication with local stakeholders, safety of workers and communities). This ESMP also gives an overview about the 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 Contractor.

#### 2 PROJECT DESCRIPTION

This section provides a brief overview of the site assessment, project activities, and key stakeholders. It outlines insights from a thorough site assessment covering biological, physical, social-cultural, and land-use aspects. The summary then shifts to outlining the proposed project's activities and the roles of various stakeholders. The goal is to offer a concise entry point into the ESMP.

#### 2.1 SUMMARY OF THE SITE ASSESSMENT

#### 2.1.1. Locality:

The proposed development is strategically positioned on Portion A of the Remainder of Eenhana Townlands No. 859, falling within Namibia's Ohangwena Region. Located south of the C45 Road at coordinates -17.292356 S, 16.184629 E, the site's geographic details are highlighted in Figure 1 and 2, offering a visual representation of its strategic positioning.

Figure 1: Locality of Eenhana

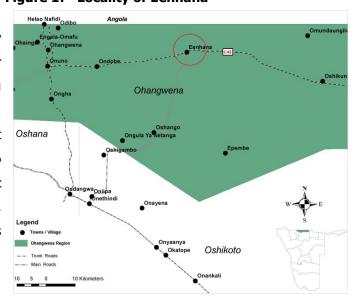
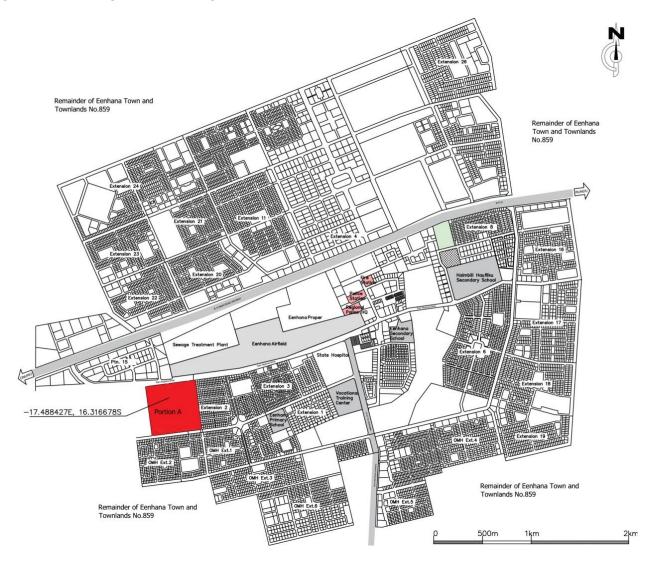


Figure 2: Locality of the Development Site within Eenhana



#### 2.1.2. Ownership, Size, Shape, And Land Use Activities:

Owned by the Eenhana Town Council, the site is classified as "Undetermined" in the Eenhana Town Planning Scheme. Covering 26.2 hectares, the site includes permanent structures from Namibia's Build Together Program, shaping its current informal land use activities.

#### 2.1.3. Surrounding Activities:

Within a 500-meter radius, the site is in proximity to several significant features, including the Eenhana airfield, landfill, sewage treatment plant, and residential areas such as Extensions 2 and 3 in Eenhana and Omhito Extension 2.

#### 2.1.4. Access and Utility Services:

The site is accessible via Sam Nujoma Drive, linking from Onunho to Okongo. Managed by the Eenhana Town Council, the water supply features three strategically positioned connection points on-site. Electricity is sourced from NamPower through the NoRed network and includes a dedicated substation. Sewerage services cover formal areas, while informal settlements rely on septic tanks and pit latrines. Various communication services are available onsite. Given that part of the development is currently part of an informal situation, the council should prioritize connecting the development with the sewerage network to improve infrastructure and community well-being.

#### 2.1.5. Environmental Conditions:

Eenhana experiences a hot, arid climate with low humidity and monthly temperatures ranging from 20°C to 36°C. Mild seasonal winds prevail from the northeast. The gently sloping topography functions as a rainwater catchment area, but drainage challenges arise due to the presence of Arenosols and clay in the soil on the western portion of the site. The site falls within the Broadleaved Trees and Shrub Savanna biome, and its diverse vegetation is threatened by continuous development.

#### 2.1.6. Socio-Economic Conditions:

The Ohangwena Region is Namibia's second most populous due to significant population growth. Eenhana is rapidly urbanising, but high unemployment rates persist despite an increase in mean household consumption. This underscores the urgency of economic diversification. There is a demand for improved housing options, and targeted initiatives are essential for enhancing education and health infrastructure in the region.

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#### 2.2 SUMMARY OF THE KEY FINDINGS

**Table 1: Key Potential Impact** 

FEATURE	DESCRIPTION	SENSITIVITY	POTENTIAL IMPACT
AIRFIELD:	Proximity to residential areas earmarked for development.	Safety and noise.	<ul><li>Safety of workers, residents and passengers.</li><li>Noise.</li></ul>
SEWAGE TREATMENT PLANT:	The facility responsible for treating and managing sewage and wastewater.	Eenhana's sewage treatment plant is located less then 500m from land use earmarked for residential land use.	<ul><li>Property value.</li><li>Health and Safety.</li></ul>
WIND:	The dominant wind direction blows from northeast.	The proximity of zoned residential areas downwind increases the sensitivity to potential impacts on the local community.	Air quality.
PROTECTED TREES:	Existence of protected tree species on the site.	Protected trees located in the roads, public open space and land zoned residential.	<ul><li>Extension of biodiversity,</li><li>Damaging to vegetation,</li><li>Violation of environmental regulations.</li></ul>
POTENTIAL FLOODING:	The development incorporates a water catchment situated at the south-western corner.	Relatively flat topography with gradual drainage slopes towards the southwest.  Proposed residential erven and roads located within flooded area.	<ul> <li>Contamination of surface/ runoff water.</li> <li>Flood-related risk for infrastructure and residential even.</li> </ul>
SOIL:	The soil type in the project area possesses a loose structure and is vulnerable to wind erosion.	Construction activities.  Sandy porous soil structure.	<ul><li>Increase in dust.</li><li>Contamination of surface and ground water.</li></ul>
POPULATION GROWTH:	The Ohangwena Region, Eenhana Constituency, and the Eenhana Town have witnessed significant population growth in the last years.	Lack of serviced erven within Eenhana.	The project aims to formalise land occupation, ensuring tenure security, access to capital, active participation in the economy, and wealth creation during the operational phase.

FEATURE	DESCRIPTION	SENSITIVITY	POTENTIAL IMPACT
ECONOMIC ACTIVITIES:	Economic activities are predominantly cantered around wages and salaries.	Lack of economic activity diversification.	During development, the construction company will contribute to the formal economy, focusing on local employment, tax contributions, and economic stimulation.
JOB CREATION:	The region faces a high unemployment rate.	Job creation during construction and future economic activities.	The project should focus on local employment creating job during construction and future economic activities.
TRAFFIC:	Construction activity increase will result in higher traffic volume	Lack of formal traffic assessment.	Traffic congestion is expected during the construction phase, necessitating proper planning and management.
NOISE:	Increased construction activity will lead to elevated noise levels.	Proximity of residences and businesses to construction sites.	Potential disruption due to increased noise.
HEALTH AND SAFETY OF WORKERS:	Construction activities may increase health and safety concerns.	Construction activities may elevate health and safety concerns, affecting both construction workers and residents alike.	The increase in health and safety concerns during construction activities highlights the recognition that not all aspects of health and safety can be entirely prevented.

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#### 2.3 PROJECT ACTIVITIES

Oukango Proper is a brown field development makes provision for 316 erven. The erven will be reserved for various land uses, most zoned residential. The development will alter the current zoning of Portion A from Undetermined to Residential-, Business-, Institutional land uses, as well as Public Open Spaces.

The site currently accommodates a number of residential structures, and the majority of the land uses proposed within the new township layout are based on the current actual use of the land. Table 2 summarises the detailed land-use allocation for Oukango Proper's layout. The erven's shapes are illustrated in Figure 3.

Table 2: Erf Sizes and Zonings

OUKANGO PROPER					
Zonings	# erven	m²	%		
Residential	304	143 702	56.4		
Business	2	3 794	1.5		
Institutional	5	10 516	4.1		
Public Open Space	5	24 381	9.5		
Street		72 174	28		
TOTAL	316	254 567	100%		

#### 2.3.1. Residential Land Uses:

The development layout integrates several currently occupied residential plots from the existing informal layout, aiming to accommodate about 304 Single Residential plots to meet the high demand for residential land in Eenhana.

Presently, over 60% of beneficiaries have already built houses on their plots, emphasizing the urgent need for residential land. In total, the new layout assigns more than 50% of the total land area for residential use, directly addressing the substantial demand for housing in Eenhana, ensuring it caters to existing plots and provides additional spaces for the growing community needs.

#### **2.3.2.** Business:

The layout also includes provisions for business development with the allocation of two business erven on the eastern edge of the township. These erven are strategically positioned to serve existing townships, including Eenhana Extension 2, a fully developed township. Each business erf boasts an average size of 1,897m², providing ample space for the construction of substantial business buildings

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#### 2.3.3. Institutional:

Five institutional erven are provided in the layout, each varying in size, with the largest spanning 5,330m<sup>2</sup>. These erven serve as designated areas for the local authority to establish vital institutions, including clinics, community youth centres, crèches, and churches. Notably, one of the erven already includes a church.

#### 2.3.4. Public Open Space:

Approximately 10% of the layout is designated for public open space, including a lower-lying area in the southwest prone to water accumulation during the wet season. Additionally, two erven are designated for public open space, providing opportunities for play parks and entertainment areas with large trees. Recognised as sensitive areas, they remain unsuitable for development. These spaces are versatile for various recreational facilities, emphasizing their paramount planning priority in maintaining a crucial balance between human activities and nature.

Figure 3: Oukango Proper



#### **3 ROLES AND RESPONSIBILITIES**

#### 3.1 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 is in compliance with national requirements and aligned with international best practise. As indicated in Chapter 6.1 of the Environmental and Social Impact Assessment Framework.
- Monitoring the performance of contractors and sub-contractors used for providing workforce, supplies and services.
- 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.

#### 3.2 CONTRACTORS

Eenhana United Construction cc the Contractor, is required to fulfil the commitments as set out in this ESMP and ensure that its sub-contractors (if any) fulfil the ESMP. This includes the following:

- Conduct monitoring and on-site audits to verify implementation of the ESMP and report on findings to the PEA.
- Communicate any environmental issues and incidents to the DWN immediately.
- Support the DWN with the training of the construction workers to raise awareness in the fields of E&S topics and in general implementation of this ESMP.

#### 3.3 OTHER ENTITIES

Eenhana Town Council will be informed on the ESMP and involved in its implementation. In addition, responsibilities of these authorities shall be named.

#### 3.4 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, rules 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.

The training should as a minimum include the above topics. Please amend the text as needed to add further topics to the induction training. After completing the Induction Training refresher trainings may be needed. It is in the responsibility of the DWN and the Contractor to prepare a detailed training plan, especially for the construction workers.

#### **4 PROJECT STANDARDS**

#### 4.1 NATIONAL

The Constitution of the Republic of Namibia (1990) establishes the foundational principles governing Namibia. Article 95 commits the state to endorse sustainable development by preserving ecosystems, essential ecological processes, and biological diversity in Namibia. It underscores the sustainable utilisation of natural resources for the collective benefit of all Namibians, both present and future.

Namibia's Environmental Impact Assessment Policy of 1995 plays a crucial role in fostering accountability and informed decision-making. It mandates the necessity of EIAs for specified programs and projects (activities). This policy is enforced through the Environmental Management Act (No. 7 of 2007) and the EIA Regulations.

The EMA, enacted in December 2007 and effective from January 2012, delineates various rights and obligations for citizens and the government. Key aspects of the EMA include:

- Defining the environment.
- Promoting the sustainable management of the environment and the responsible use of natural resources.
- Establishing a process for assessing and controlling activities that may significantly affect the environment.

Part 2 of the EMA outlines several principles of environmental management aligning with the Constitution's provisions for integrated environmental management. Decision-makers must consider these principles when determining whether to grant environmental clearance for listed activities.

The EIA Regulations, promulgated in January 2012, provide the framework for the control of listed activities (GN No. 29). These activities are prohibited until an ECC is issued by the office of the Environmental Commissioner in the MEFT. ECC applications, subject to specific conditions, are considered by the MEFT only after compliance with the EIA process detailed in the EIA Regulations 2012 (GN No. 30).

An Environmental Management Plan is an essential product of an Environmental Assessment (EA) process. An EMP synthesises all recommended mitigation and monitoring measures according to the various stages of a project life cycle, with clearly defined follow-up actions and responsibilities assigned to specific actors. This EMP has been drafted in accordance with the Namibian Environmental Management Act (No. 7 of 2007) and it is Environmental Impact Assessment

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Regulations (2012). This plan describes the mitigation and monitoring measures to be implemented during the following phases of the development:

- **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),
- · Permit and Monitoring requirements; and
- Contractor management.

The management and mitigation measures outlined in this document are aligned with international best practice standards for the management of E&S risks. Reference sources include:

#### 4.2 INTERNATIONAL LENDER STANDARDS

The Proposed program's development is funded by official development assistance from the Government of the Federal Republic of Germany. Consequently, the program must adhere to the regulations set forth by the Federal Ministry for Economic Cooperation and Development and the Kreditanstalt für Wiederaufbau (KfW) Development Bank. KfW aligns with the principles outlined in the Environmental and Social Standards (ESS) of the World Bank Group. The following sections detail the pertinent international criteria and standards that must be followed throughout the Program.

#### KfW's Sustainability Guideline (2023):

All the Financial Cooperation measures financed by KfW must be subject to assessment and implementation in terms of KfW's Sustainability Guideline 2023, or its successor. The guideline describes the principles and procedures to assess the environmental, social and climate impacts during the preparation and implementation of FC measure financed by KfW.

The KfW Sustainability Guideline (2023) sets out that the relevant national law and legal requirements as well as the ESS of the World Bank Group are compulsory during the identification and assessment of environmental, social and climate risks and impacts. Additionally, the World Bank's General and sector-specific Environmental, Health and Safety (EHS) Guidelines and the core labour standards of the International Labour Organization (ILO) must be applied. During the assessment, the requirements of the Human Rights Guidelines of the BMZ must be taken into account.

#### **World Bank Environmental and Social Framework:**

The World Bank's Environmental and Social Framework (ESF) is aimed at enabling the World Bank and Borrowers to manage environmental and social risks of projects and to improve development outcomes. The ESF offers broad and systematic coverage of environmental and social risks. The ESF sets out the World Bank Group's commitment to sustainable development, through a Vision for Sustainable Development, a Policy for Investment Project Financing, and a set of ESS.

KfW's Sustainability Guideline (2021) requires the application of the World Bank's ESS to their projects, but not the overall ESF.

#### World Bank Environmental and Social Standards (2018):

The World Bank's ESS consists of ten standards as summarised below. Application of the standards intends to: (a) support Borrowers in achieving good international practice relating to environmental and social sustainability; (b) assist Borrowers in fulfilling their national and international environmental and social obligations; (c) enhance non-discrimination, transparency, participation, accountability, and governance; and (d) enhance the sustainable development outcomes of projects through ongoing stakeholder engagement.

KfW's Sustainability Guideline (2021) requires the application of the relevant ESS. The likely applicability of each standard to the DWN Programme is indicated. A review must be undertaken for each intervention to confirm (based on scope, locality, and site specifics) the applicability of the ESS.

#### The International Labour Organisation's (ILO) 8 Core Labour Standards:

- Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87);
- 2. Right to Organise and Collective Bargaining Convention, 1949 (No. 98);
- Forced Labour Convention, 1930 (No. 29);
- 4. Abolition of Forced Labour Convention, 1957 (No. 105);
- 5. Minimum Age Convention, 1973 (No. 138);
- 6. Worst Forms of Child Labour Convention, 1999 (No. 182);
- 7. Equal Remuneration Convention, 1951 (No. 100); and
- 8. Discrimination (Employment and Occupation) Convention, 1958 (No. 111).

### 5 STAKEHOLDER MECHANISM

#### ENGAGEMENT

#### AND

**GRIEVANCE** 

DWN will ensure that the local communities are informed early about the planned project, timelines, expected impacts, and communication channels and should assign personnel in charge of engaging with stakeholders. DWN will also seek feedback from the communities about the Project.

As part of its community liaison process, DWN will initiate and implement a Grievance Mechanism to ensure that all stakeholders' comments, suggestions, and objections are captured and considered. The Grievance Mechanism for this project is attached as **Annexure 2**. This will enable the affected community and the workers to express their concerns and any complaints directly to DWN. Contact details and information on the procedure, including the grievance form, will be distributed to the local communities. It is envisaged that general grievances should be responded to within 20 working days after receipt. All comments and complaints will be investigated by the DWN, and appropriate action will be taken as necessary. Records of all complaints and actions will be maintained on-site.

Public consultation is a vital aspect of the Environmental Assessment (EA) process, enabling Interested and Affected Parties (I&APs) to express their perspectives and concerns about the project. This practice ensures compliance with the Environmental Management Act (EMA) and its Environmental Impact Assessment (EIA) Regulations. It fosters collaboration and assists the Environmental Assessment Practitioner (EAP) in thoroughly assessing potential impacts, the necessity for further investigations, and potential mitigation measures.

According to the Environmental Management Act (Act No. 7 of 2007) of Namibia, the environmental practitioner is responsible for overseeing the evaluation of social and environmental impacts, finalising the application process, and facilitating public engagement with Interested and Affected Parties (I&APs). To meet these obligations, the EIA process involves establishing an I&AP database, maintaining an issue and response register, and disseminating all draft and final documents to registered stakeholders.

#### 5.1 METHODS

The methods used during the public consultation to communication with I&APs are as follows:

#### **Newspaper Notices:**

Newspaper notices were placed in two separate newspapers simultaneously for two successive weeks. They were published in, The Namibian and The New Era, with publication dates of 5 and 12 October 2023.

The notices provided a brief explanation of the proposed activity and its location. They also invited members of the public to attend the meeting and register as I&APs.

#### **Background Information Document (BID):**

A comprehensive Background Information Document (BID) was prepared and distributed. This document contains descriptive information about the proposed township activities. It was emailed to all identified and registered I&APs on 9 August 2021 (**Appendix C.2**).

#### **Site Notice:**

A notice was put up at the project site to inform the local community and passersby about the proposed development. This notice makes the public aware of the project and the ongoing public consultation process.

#### **Notification to Surrounding Property Owners:**

On the day of the public meeting, which took place on 21 October 2023, surrounding property owners were notified explicitly about the meeting. This ensured that those directly impacted by the development had the opportunity to participate in the consultation.

The Namibia Civil Aviation Authority was also consulted regarding the new development.

#### **Town Council Notice Board:**

Notices regarding the intended development and the scheduled public meeting were posted on the Town Councils Notice board. This step helps in reaching out to the local community and government authorities.

#### **Public Meeting:**

Representatives of Urban Dynamics, the Eenhana Town Council, and the DWN held a community meeting on 21 October 2023 at 14:00, within Eenhana. The meeting was conducted in Oshowambo. This public meeting provided a platform for I&APs and the general public to engage in direct discussions, ask questions, and share their concerns or opinions about the proposed development

#### **6 REGISTER OF E&S ASPECTS**

This section outlines the key elements of an Environmental and Social Management Plan (ESMP) Action Table, capturing the mitigation measures that need to be implemented in the context of the Project activities, at minimum. The ESMP includes measures derived from the KfW standard bidding documents.

**Table 3: Generic and Site-Specific Environmental Management Actions:** 

Тнеме:	Objective:	MITIGATIO	N DETAIL:
		GENERIC:	SITE-SPECIFIC:
GENERAL REQUIREMENTS FOR ESHS MANAGEMENT:	Focusing on the community's wellbeing near the construction site.	PLAN COMPONENT A	YES
PROTECTION OF THE ENVIRONMENT:	Minimise the effect of the activity and protect the social environment in which it is happening.	PLAN COMPONENT B	YES
WORKERS HEALTH & SAFETY:	Prioritise the health and safety of construction workers.	PLAN COMPONENT C	YES
LABOUR AND RELATIONS WITH LOCAL COMMUNITIES:	Ensure the protection and wellbeing of all stakeholders involved in the construction project.	PLAN COMPONENT D	YES

DWN together with the contractor - should use this template as guidance and amend it to the Project specifications, characteristics, and risks as identified through the Site Assessment Tool. The ESMP Actions Table Template should not be used "as is" but serve as a basis for a Project-specific ESMP, commensurate with the relevant E&S risks and expected impacts of the Project. The ESMP Actions Table is structured as follows:

This ESMP Action Table shall complement the **ESMP Report** prepared for the Project. The "Do and Don't Table" (**Appendix 1**) provides guidance on general best practices to be used during (construction) works. These recommendations are to be used regardless of the content of the ESMP.

#### 6.1 PLANNING AND DESIGN

The Project should be planned and designed by Urban Dynamics Africa in collaboration with DWN, with the following basic considerations:

- Avoid land acquisition of private land and resettlement of persons.
- 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.
  - o 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 on the communities.
- Plan the Project to minimise the use of natural resources (material, water, land).
- Plan the Project in a climate-friendly way to minimise 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 their feedback on 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 phases. 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 the start of construction.

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- Establish core E&S procedures already at the planning stage. This includes, at a minimum:
  - Incident Reporting (fatal accidents, medical treatment cases; first aid cases; restricted work injuries; near misses; environmental events)
  - o Grievance Mechanism (one combined mechanism for workers and the community)
  - o Recruitment Procedure for the upcoming construction phase.
  - Training Procedures/Training material as outlined above (Occupational H&S; Community H&S; environmental sensitivities).

#### 6.2 PROJECT IMPLEMENTATION - ESMP

Item	Mitigation, Management and Enhancement Measures	Means of Verification	Responsibility	Monitoring Procedure	
6.3 A. GENERAL REQUIREMENTS FOR ESHS MANAGEMENT					
A1 <sup>1</sup> .  Responsibilities  and Liabilities <sup>2</sup>	Ensure that all workers, suppliers and possible subcontractors are familiar and comply with the ESHS requirements and specifications of this ESMP.	Induction training performed and recorded.  Contracts with subcontractors and suppliers	Contractor/DWN	Review of training records  Review of Contracts to ensure that  Project requirements are included	
	Adjust this ESMP template to be project specific, define the frequency of the monitoring procedure and share it with DWN and KfW.  Identify if further Management Plans are required and prepare these.	Final Project-specific ESMP  Requisite Management Plans	Contractor/DWN	Review final ESMP and Management Plans prior to commencement of work 'No objection' from KfW for final ESMP	

 $<sup>^{\</sup>mathrm{1}}$  Numbering is not continuous because it refers to the items of KfW standard bidding documents

 $<sup>^{2}</sup>$  Reminder: Bold and underlined ESMP items are always to be considered, regardless of the results of the Site Assessment.

Item	Mitigation, Management and Enhancement Measures	Means of Verification	Responsibility	Monitoring Procedure				
6.3 A. GENE	6.3 A. GENERAL REQUIREMENTS FOR ESHS MANAGEMENT							
A4. Resources allocated to ESHS Management	Assign ESHS responsible staff <sup>3</sup> and define the requirements and responsibilities.  Define person(s) responsible for contact with stakeholders (Relations officer or Community Liaison officer)	Document assigned responsibilities.  Inform the relevant authorities/stakeholders about the ESHS responsible staff.	Contractor/DWN	Review assignment of ESHS responsibilities.  Records of notification to stakeholders				
A6. Reporting	Reporting of progress and incidents, accidents, observations, near misses.	Final Project-specific ESMP (note monitoring and reporting requirements)  Records of ESHS and incident reporting	Contractor/DWN	Review E&S Monitoring Checklist E&S audits				
A7. Code of Conduct	Establish a Code of Conduct taking into consideration legislation, safety rules, substance abuse, environmental sensitivity, communicable diseases, gender issues (sexual harassment), respect for local beliefs and customs, community interactions etc.	Code of Conduct in place and rules shared with personnel (see <b>Annex A</b> )	Contractor/DWN	Review of Code of Conduct induction records  Review of reported punishable or misconduct behaviour  Review of grievance records				

 $^{3}$  Note: in many legislations an ESHS manager is required on sites employing 50 workers or more

Item	Mitigation, Management and Enhancement Measures	Means of Verification	Responsibility	Monitoring Procedure	
6.3 A. GENERAL REQUIREMENTS FOR ESHS MANAGEMENT					
A8. ESHS Training	Provide induction, training, and awareness to the workforce regarding ESHS risks and mitigation measures (including indirect workers) tailored to Project scope.	Training performed and recorded	Contractor/ DWN	Review of ESHS induction and training records	

Item	Mitigation, Management and Enhancement Measures	Means of Verification	Responsibility	Monitoring Procedure
6.4 B. PROT	ECTION OF THE ENVIRONMENT:			
B10. Protection of adjacent areas	Ensure to stay out of surrounding wetland areas.	Pre-construction survey to make sure that site is not in wetland areas	Contractor/DWN	Site assessment prior to site selection.  Ecological value assessment if needed.
	Ensure to keep the buffer distances from permanent water course and outside of floodable areas; sensitive urban services and buildings (health centre, school, water supply for populations); any housing;	Marking the borders of works site boundaries in line with given limits and usage of warning signs	Contractor/DWN	Site inspection prior to commencement of activities.
	Ensure that work site boundaries and limits are in accordance with plans agreed upon in advance. All construction activities should be carried out within boundaries.	Marking the borders of works site boundaries and usage of warning signs	Contractor/DWN	Site inspection prior to commencement of activities.
	Ensure that means of protection are in place to avoid or minimise adverse effects on vegetation, soils, groundwater and surface water, biodiversity, natural drainage and the water quality in areas within the works area. Construction methods to minimise impacts to the extent possible.	No impacts identified in the adjacent environment	Contractor/DWN	Site assessment prior to site selection.  Site inspection prior to commencement of activities.  Regular monitoring of adjacent natural resources.
	Protect excavation works with cut off ditches to prevent water from entering excavations.	No water entering excavations	Contractor/DWN	Site inspection
	Restrict excavation activities during periods of intense rainfall. Use temporary bunding to reduce the risk of sediment, oil or chemical spills to the receiving waters.	No excavation during intense rainfall	Contractor/DWN	Check weather forecast and inspect the site conditions prior to excavation.

Item	Mitigation, Management and Enhancement Measures	Means of Verification	Responsibility	Monitoring Procedure		
6.4 B. PROT	6.4 B. PROTECTION OF THE ENVIRONMENT:					
	Minimise visual impacts by good house-keeping and erecting screens if required	Visual inspection and comparison with adjacent undisturbed areas.	Contractor /DWN	Site inspection  Review of grievance records		
	After construction, form reshaped land so that it is inherently stable, adequately drained and suitable for the desired long-term land use and allows natural regeneration of vegetation	Visual inspection and comparison with adjacent undisturbed areas.	Contractor /DWN	Site inspection at completion		
B11. Selection of borrow areas, backfill material stockpile sites and	Select areas to be excavated, backfill material stockpile locations and access roads if applicable to the project.	Designated areas selected	Contractor /DWN	Once during site selection		
access road	Locate stockpile areas in areas where trees can act as buffers to prevent dust pollution	Designated areas selected	Contractor /DWN	Once during site selection		
	Deposit any excess material in areas approved by local authorities	Designated areas selected	Contractor /DWN	Once during site selection		
	Locate disposal site on low value land.	Designated areas selected	Contractor /DWN	Once during site selection		
B12. Pollution prevention	Ensure all works carried out minimise pollution risk (e.g. liquid effluents, air emissions, noise and vibration management, vehicle and equipment maintenance and selection, fuel, oil and chemical storage and handling) including the whole duration of the Project.	Ensure that potential pollutants are not stored and handled within 50 m of sensitive receptors (particularly watercourses).	Contractor /DWN	Regular site inspection  Review of grievance records		

Item	Mitigation, Management and Enhancement Measures	Means of Verification	Responsibility	Monitoring Procedure
6.4 B. PROT	ECTION OF THE ENVIRONMENT:			
B13. Effluents	Ensure appropriate containment and storage of construction wastewater, including sanitary water. No untreated effluent is discharged.	No untreated wastewater discharge	Contractor/DWN	Regular site inspection Review of grievance records
B14. Emissions and dust	Use to the extent possible, vehicles in appropriate technical conditions. Provide emissions control equipment where applicable (e.g. filters).	Technical Specification Sheet	Contractor/DWN	Prior to commencement of works and each time new equipment/vehicle is used at the site.  Review of grievance records  Visual inspection on regular basis
	Use low sulphur content fuels, in line with legal provisions in force as well as local availability.	Technical Specification Sheet	Contractor /DWN	Regular documentation inspection
	Ensure vehicles are switched off when not in use.	Engines switched off	Contractor /DWN	Driver training Regular site inspection
	Best practice to ensure minimisation of dust emissions (e.g. proper stockpiling, watering etc.) during dry and windy conditions and transportation.	Watering conducted, no dust emissions are observed, no workers' grievances	Contractor /DWN	Regular site inspection Review of grievance records
	Ensure speed limits on site and when passing local receptor areas. Sensitise drivers.	Speed signs installed Training performed and recorded Accident/incident reports	Contractor/DWN	Random site inspection Review of grievance records Review of accident/incident records Review of training records

Item	Mitigation, Management and Enhancement  Measures	Means of Verification	Responsibility	Monitoring Procedure
6.4 B. PROT	ECTION OF THE ENVIRONMENT:			
B15. Noise and vibration	Avoid operations and vehicle movements at night.	No work conducted between 10 pm and 7 am	Contractor/ DWN	Random site inspection Review of grievance records Review of accident/incident records Review of training records
	Locate stationary equipment (such as power generators) as far as possible from nearby receptors (e.g. worker resting areas, populated areas and environmentally sensitive areas).  Make sure that noise levels don't exceed 120db in case of equipment or vehicle use.	Distances between equipment and receptors are kept	Contractor/ DWN	Review of grievance records  Monitor noise levels in case of complaints
B16. Waste Management	Identify waste management facilities and waste management contractors.  Ensure disposal through waste contractors licensed for treatment/removal/recycling of each of the waste types.	Waste management through licensed contractors, if feasible Waste management contracts Waste transfer notes	Contractor/ DWN	Inspect waste management facilities Proof of contractors' certifications Review of waste transfer records
	Ensure that all wastes produced are properly collected, segregated, stored, transported and treated	Waste collection areas existent, waste inventories Waste transfer notes	Contractor/ DWN	Regular site inspection  Review of waste inventories  Review of waste transfer records

Item	Mitigation, Management and Enhancement  Measures	Means of Verification	Responsibility	Monitoring Procedure
6.4 B. PROT	ECTION OF THE ENVIRONMENT:			
	Minimise the waste production to the extent possible.	Records of waste production are kept  Waste Management Plan  Training performed and recorded	Contractor/ DWN	Monitor (e.g. monthly) the amount of waste produced Review of training records
	Document all waste related operations (type of wastes, quantities produced etc.).	Storage, transport and treatment of waste is documented  Waste transfer notes  Waste inventories	Contractor/ DWN	Review of waste transfer records  Review of waste inventories
	Appropriate and safe storage of fuels, construction materials, wastes and any materials that can cause spills (e.g. batteries from energy generators).	Safe storage of materials  Spill response procedure  Spill response and remediation equipment in place.	Contractor/ DWN	Regular site inspection
B17. Vegetation clearing	Limit vegetation clearing to areas within the site boundary where it is strictly necessary.	Vegetation clearing minimal  Marking the borders of works site boundaries	Contractor/ DWN	Site inspection prior to commencement of activities.

Item	Mitigation, Management and Enhancement Measures	Means of Verification	Responsibility	Monitoring Procedure			
6.4 B. PRO	6.4 B. PROTECTION OF THE ENVIRONMENT:						
	Ensure that no chemicals/pesticides are used, burning of vegetation is restricted etc.  Do not clear vegetation more than two months in advance of operations	No use of fires or chemicals on site  Marking the borders of works site boundaries	Contractor/ DWN	Site inspection prior to commencement of activities.  Site inspection during site clearance			
	Avoid clearing mature trees and endangered species.	Usage of warning signs  No mature trees cleared	Contractor/ DWN	Site inspection prior to commencement of activities.			
B18. Biodiversity	Avoid to the extent possible areas of ecological value.	Areas of ecological value avoided	Contractor/ DWN	Site assessment prior to site selection.  Ecological value assessment if needed.			
	Avoid natural habitat disturbance.	No habitats disturbed	Contractor/ DWN	Regular site inspection			
B20. Site rehabilitation	Ensure revegetation and restoration of cleared areas where possible after construction using native species.	Revegetation completed	Contractor/ DWN	Site inspection at completion			
	Ensure that rehabilitated areas don't pose health and safety risks (such as holes, ponds).	Reinstatement completed	Contractor/ DWN	Site inspection at completion Inspection after heavy rainfalls			
	Reinstatement of construction working area to the best possible after construction activities are completed.	Reinstatement completed	Contractor/ DWN	Site inspection at completion Inspection after heavy rainfalls			
	Rehabilitate borrow areas, backfill material stockpile sites and access roads, where applicable.	Rehabilitation completed	Contractor/ DWN	Site inspection at completion			

Item	Mitigation, Management and Enhancement Measures	Means of Verification	Responsibility	Monitoring Procedure
6.5 C. HEA	LTH AND SAFETY			
C22. Health and Safety Plan	Develop a Health and Safety Plan to provide for a safe and healthy work environment, taking into account the ESHS impacts and risks level of the works.	H&S Plan in place	Contractor/ DWN	Review of H&S Plan
C24. Accident reporting	Ensure all H&S related incidents (e.g. observations, accidents) on site are recorded and followed up properly.  (See Annex D – Incident Reporting)	Incident recording process in place	Contractor/ DWN	Check incident/accident records
C28. Personal protective equipment	Ensure the provision of Personal Protective Equipment (PPE) for workers (hardhats, masks, safety glasses, safety boots etc).	PPE used by everyone on-site  Training performed and recorded	Contractor/Site Manager	Random site inspection Review training records
C31. Emergency scenarios prevention	Ensure immediate cleaning of any spills and remediation of contaminated areas after construction.	Workers trained Emergency Response Team (ERT) is in place	Contractor/ DWN	Random site inspection after spill events One-time inspection after construction Review of training records Review of ERT
	Provide necessary prevention equipment and teams on site in line with applicable regulations to respond to emergency scenarios e.g. fire, explosion, floods, natural hazards etc.	Prevention equipment and team is in place  Training performed and recorded	Contractor/ DWN	Regular site inspection Review list of equipment Review of ERT Review of training records

Item	Mitigation, Management and Enhancement Measures	Means of Verification	Responsibility	Monitoring Procedure
6.4 B. PRO	TECTION OF THE ENVIRONMENT:			
	Maintain high standard in housekeeping on site. Construction materials and equipment should be stored properly.	Visual verification of good housekeeping on-site	Contractor/ DWN	Random site inspection
C33. First-aid  C37. Access to health care	Ensure minimum first aid provisions on site (suitably stocked first-aid kits; a person, respectively an adequate number of first-aid helpers and ensure that staff and workers are informed about first-aid arrangements)  Ensure the workforce has access to primary healthcare on site, providing prescriptions and vaccinations.	Suitable first aid kits on site Ensure the presence of first aid helpers in all shifts First aid certificates  Healthcare available on site Medical surveillance records	Contractor/ DWN  Contractor/ DWN	Regular monitoring of first aid kits Review of first aider certificates Review of number of first aiders required by local legislation  Random site inspection Review of grievance records
	In case more than 35 workers are present on site, ensure that a hospital, medical clinic or a health centre can be reached within a period of 45 minutes.	Medical centres in the proximity of the site.	Contractor/ DWN	Review of medical records (in case not confidential)  Medical centres in the proximity of the site identified once prior the commencement of works
C40. Hygiene, accommodation and food	Ensure provision of Health and Safety (H&S) and hygienic and sanitary facilities at the site, including shaded welfare areas, bathrooms, changing rooms and potable water.  Ensure toilets and changing rooms are separated between male and female employees.	Appropriate H&S and sanitary facilities provided at site	Contractor/ DWN	Campsite inspection prior to accommodation of the workers.  Regular inspection  Review of grievance records

Item	Mitigation, Management and Enhancement  Measures	Means of Verification	Responsibility	Monitoring Procedure
6.4 B. PRC	TECTION OF THE ENVIRONMENT:			
	Ensure the provision of adequate space, supply of water, adequate sewage and garbage disposal system, appropriate protection against heat, cold, damp, fire and disease-carrying animals, adequate sanitary and washing facilities, adequate lighting, and basic medical services, in accordance with all applicable health and safety regulations and norms.	Appropriate conditions for workers on site	Contractor/ DWN	Campsite inspection prior to accommodation of the workers.  Regular inspection  Review of grievance records
	Report any occurrence of any communicable diseases amongst the workforce (STD, HIV/AIDS, TB, malaria and Hepatitis B and C). Sensitise workers.	Communicable Diseases Register Training performed and recorded	Contractor/ DWN	Review of diseases register and disease prevention programme if available.  Review of training records

Item	Mitigation, Management and Enhancement Measures	Means of Verification	Responsibility	Monitoring Procedure
6.6 <b>D. LAB</b>	OUR AND RELATIONS WITH LOCAL CON	MUNITIES		
D42. Labour conditions	Ensure minimum legal labour standards as per ILO regulations (child/forced labour, sexual assault, no discrimination, equal opportunities, working hours, minimum wages) are met.	Grievance Mechanism Records, Training performed and recorded	Contractor/ DWN	Review of Inspection reports (also from labour authorities), Review of grievance records Review of training records
	Ensure that all direct and indirect workers have access to and are aware about the Grievance Mechanism were they can raise workplace relevant complaints anonymously.  (See Annex B – Grievance Mechanism)	Grievance Mechanism in place and grievances recorded Training performed and recorded	Contractor/ DWN	Review of grievance register  Review of training records
	Ensure all workers have the same rights and are treated equally.	Non-discrimination policy in place	Contractor/ DWN	Random site inspection  Review of grievance register
D43. Local recruitment	Ensure local communities are preferred for the supply of goods and services to the Project and Project personnel, where appropriate.	Local Procurement and Employment Records	Contractor/ DWN	Review procurement and employment rules and records Review of grievance register
D44. Transport	Organise carpools/buses for worker transportation where needed.  Ensure safe transportation is available for workers.	Carpools/ buses used	Contractor/ DWN	Review of grievance register

Item	Mitigation, Management and Enhancement Measures	Means of Verification	Responsibility	Monitoring Procedure
6.6 <b>D. LABO</b>	UR AND RELATIONS WITH LOCAL COM	MMUNITIES		
D47. Community interaction	Engage/ communicate/inform communities.  Ensure consultations with the local authorities and communities regarding the construction.  Obtain local knowledge regarding chance finds and land acquisition matters.	Minutes of Meetings Grievance Mechanism	Contractor/ DWN	Review of grievance register  Minutes of consultation meetings
	Initiate an efficient Grievance Mechanism to allow potentially affected individuals to raise their concerns	Grievance Mechanism in place (See <b>Annex B</b> ). Grievances recorded	Contractor/ DWN	Review of grievance register
	Engage with the local community and potential affected households to understand their needs and identify the risk of damage to their livelihood basis through the Project (e.g. take of pasture land, lack of access to water).  Should land acquisition be inevitable, a timely and fair compensation should be given to all affected persons?	Minutes of Meetings Grievance Mechanism records Management Plan for Land Acquisition and Compensation if needed (See <b>Annex E</b> )	Contractor/ DWN	Review of grievance register and meeting minutes

Item	Mitigation, Management and Enhancement  Measures	Means of Verification	Responsibility	Monitoring Procedure
6.6 <b>D. LAB</b> (	OUR AND RELATIONS WITH LOCAL CO	MMUNITIES		
D48. Damage to people and property	Ensure all contractors implement Codes of Conduct concerning employment and workforce behaviour (including but not limited to safety rules, zero tolerance for substance abuse, environmental sensitivity of the area, dangers of sexually transmissible diseases and HIV/AIDS, gender equality and sexual harassment, respect for the beliefs and customs of the populations and community relations in general).	Code of Conduct (See <b>Annex A</b> ).  Grievance Mechanism records	Contractor/ DWN	Worker interviews,  Review of grievance register
	Ensure that site areas are provided with appropriate security, fencing, signage and lighting. Use hazard notices/signs/barriers to protect children and other vulnerable people from harm and prevent access to non-workers.	H&S planning of construction site done, items installed	Contractor/ DWN	Inspection prior to the activities.  Regular site inspection  Review of grievance register

Item	Mitigation, Management and Enhancement  Measures	Means of Verification	Responsibility	Monitoring Procedure
6.6 <b>D. LAB</b> 0	OUR AND RELATIONS WITH LOCAL CO	MMUNITIES		
D49.Land acquisition and land take	Engage with the local community to understand the land ownership and land use.  Avoid to the extent possible land take of both formal and informal land owners/land users. If land take is inevitable, no forced eviction should take place.  Owners should be compensated prior to access to land.	Grievance Mechanism  Management Plan for Land  Acquisition and Compensation  if needed (See <b>Annex E</b> )	Contractor/ DWN	Once during site selection  Review of grievance log  Follow up of land acquisition/compensation process
D50. Traffic management	Ensure safe driving by Project personnel (e.g. through training/induction).	Driver Training Records as part of Induction training	Contractor/ DWN	Review of training records  Review of grievance register
	Target signage and outreach activities to improve public awareness of traffic changes and potential hazards for high-risk sections of public roads, including near the site and lay down areas.	Warning signs Minutes of Meetings	Contractor/ DWN	Inspection if traffic routes,  Review of grievance register

Item	Mitigation, Management and Enhancement  Measures	Means of Verification	Responsibility	Monitoring Procedure		
6.6 <b>D. LABOUR AND RELATIONS WITH LOCAL COMMUNITIES</b>						
D51. Fossils/ Archaeological Chance Finds	Establish specific procedures to manage the protection of archaeological and historical sites, chance finds, and fossils.  Ensure all finds of cultural heritage (e.g. graves, old ceramic, old building fragments) are reported	Chance Finds Procedure  Notification records to relevant authority  Training records,  Records about chance finds	Contractor/ DWN	Site inspection  Review records of chance finds		
	immediately to the relevant authority and avoid excavation in the ultimate neighbourhood of a chance find, fence the chance find and await instructions from the competent authority.	Records about Chance Illius				

Topic	DO	DON'T
Land Use	<ul> <li>Prefer already disturbed areas for workers' accommodation, storage, workshop and the worksite.</li> <li>Clearly mark "No-go" areas (cultivated lands or fruit trees, wetlands, grave sites or any sensitive environment or social site/area).</li> <li>Avoid proximity to schools, health posts and households with vulnerable families.</li> <li>Clean up the worksite and rehabilitate the site to its original condition.</li> <li>Rehabilitate all temporary access tracks, haul roads and any other disturbed areas outside of the approved working areas to their original condition.</li> </ul>	<ul> <li>Do not enter any worksites and areas without permissions and approvals.</li> <li>Do not damage any households and associated structures, cultivated lands, fruit trees or any other potential source of income.</li> <li>Do not undertake any activity and park your vehicles outside of the working area borders.</li> </ul>
Noise	<ul> <li>Limit working hours for noisy activities working hours close to schools, hospitals, residents, religious buildings, etc.</li> <li>Turn off vehicle engines if not required.</li> <li>Keep the noise level to acceptable limits.</li> </ul>	Do not undertake any noisy activity during night time.
Dust and Air	<ul> <li>Minimize traffic wherever possible and drive slowly.</li> <li>Spray the unpaved roads with water if you're working close to schools, hospitals, residential areas, etc.</li> <li>Revegetate the disturbed areas as soon as activity is completed.</li> <li>Drive slowly not to generate dust.</li> </ul>	<ul> <li>Do not store cement, sand, excavated material without cover sheets or shelters.</li> <li>Do not clear the vegetation cover if it's not required.</li> </ul>
Water	<ul> <li>Refuel the vehicles at least 30 m away water courses.</li> <li>Fence the construction site adjacent to the sensitive areas such as natural water courses, ponds, drains.</li> <li>Divert the runoff / water the construction sites or disturbed areas, using ditches.</li> </ul>	<ul> <li>Do not use any natural water resources to supply water (e.g. springs, streams, lakes without approval of relevant authorities, local leaders.</li> <li>Do not discharge of hazardous substances, chemicals, construction material and wastes d into water courses, ponds, drainage systems.</li> <li>Do not block the water flow.</li> </ul>
Waste	<ul> <li>Keep the working site clean and tidy.</li> <li>Store hazardous waste using secondary containment and restrict access to hazardous waste storage area to prevent harm to construction staff, environment and public.</li> <li>Perform on site sorting to separate liquid, organic, demolition, hazardous, recyclables waste streams and identity the disposal pathway for each of them.</li> <li>Use waste containers without any damages and leakages.</li> <li>Reuse the excavated soil as much as possible for backfilling, landscaping and for other project areas where excavation material is required.</li> <li>Collaborate with local authorities to transport and dispose waste in accordance with legal requirements.</li> </ul>	<ul> <li>Do not burn any type of waste.</li> <li>Do not dump waste at any unpermitted area and especially near watercourses.</li> <li>Do not leave any sharp or dangerous objects (knives, box cutters, scissors, broken glass, etc.) that may attract children's attention living close to the construction site.</li> </ul>

Topic	DO	DON'T		
Employment and Labour Rights	<ul> <li>Implement a fair and transparent employment process.</li> <li>Provide workers with clear and understandable information regarding rights via contract documents in local language.</li> </ul>	<ul> <li>Do not discriminate any workers or job applicants on the basis of their gender, marital status, nationality, ethnicity, age, religion or sexual orientation.</li> <li>Do not recruit children (under 18 years old) or use forced labour.</li> </ul>		
Code of Conduct	<ul> <li>Establish a Code of Conduct for worker-community interaction and on-site behavior. Oblige workers to adhere to code of conduct.</li> </ul>			
Grievances	Establish and maintain grievance mechanism accessible for workers.	Do not ignore community complaints		
Community Safety	<ul> <li>Establish and maintain grievance mechanism for local communities adjacent to construction sites.</li> <li>Secure worksites (temporary bridges, traffic controls, barricades, signs and warning lights).</li> <li>Demarcate open trenches with high visible temporary fencing, undertake monitoring after rainfall, and prevent flooding of trenches.</li> <li>Inform relevant authorities immediately in case of damages on utilities such as underground and aboveground electricity lines, water lines, gas lines, oil pipelines, etc.</li> <li>Establish appropriate site boundary and access controls near settlements to prevent unauthorized entry to construction or activity sites especially by children (e.g. fencing of construction section in the vicinity of settlements or communities).</li> </ul>	<ul> <li>Do not leave any holes and openings without secure fencing provided with fixed, clearly marked covers.</li> <li>Do not exceed the speed limits.</li> </ul>		
Traffic Management	<ul> <li>Implement speed limits for all Project vehicles.</li> <li>Equip vehicles with reverse signals. Ensure that truck drivers are accompanied by a flagman or watchman while reversing, unloading and loading.</li> <li>Train all drivers on safety provisions.</li> <li>Avoid routes with blind curves, blind intersections and very narrow roads alongside steep slopes.</li> <li>Avoid routes that are frequently used by locals.</li> <li>Use local traffic signage and collaborate with the responsible local authorities and communities.</li> <li>Keep access roads in good condition and free from deposits, waste, construction material.</li> <li>Use flagmen where appropriate and install clear and visible signage.</li> <li>Avoid vehicle traffic during hours that children are travelling to and from school.</li> </ul>	<ul> <li>Do not drive without a valid driver's license.</li> <li>Do not use cell phones while driving.</li> </ul>		

Topic	DO	DON'T
Occupational Health and Safety	<ul> <li>Provide health and safety training to all Project employees and familiarize workers with the risks related with their activities.</li> <li>Conduct risk assessment and define mitigation measures for each activity.</li> <li>Record and report any workplace hazards or any incidents or injuries.</li> <li>Provide the right PPE and make sure that all employees use them.</li> <li>Keep PPEs in good condition and change them in case they are damaged.</li> <li>Prohibit usage of alcohol or illegal drugs.</li> <li>Use the right tool for the activity.</li> <li>Use undamaged ladders if you need to climb up.</li> <li>Implement good housekeeping to prevent trips, slips and falls.</li> <li>Conduct daily tool-box talks / conversations on health and safety issues before starting works.</li> <li>Conduct medical examination for all personnel before the activities start.</li> <li>Provide sufficient drinking water for workforce.</li> <li>Provide and maintain toilet facilities for workforce separately for female and male workers.</li> <li>Provide one trained first aiders per 25 employees and adequate amount of first aid kits on site.</li> </ul>	<ul> <li>Do not try to repair any broken equipment and machinery if you are not authorized.</li> <li>Do not use of metal ladders close to overhead power lines?</li> <li>Do not work without PPE.</li> <li>Do not work alone or isolated.</li> </ul>
Housekeeping	<ul> <li>Keep working areas clean and tidy.</li> <li>Secure loose materials that have the potential to fall.</li> <li>Keep aisles, stairways, passageways, ladders, etc. free of obstructions, materials, cables, chords, hoses, etc.</li> <li>Keep materials away from the edge of excavations, trenches, roofs, etc.</li> <li>Cover and secure open trenches, holes and other openings Avoid pools of stagnant water in working areas.</li> <li>Undertake daily clean-up of activity area.</li> </ul>	
Hazardous Material Management	<ul> <li>Store fuels, oils, chemicals and other hazardous materials on a suitably sized impervious and bunded base.</li> <li>Label the containers clearly with content, handling, storage, expiration, and health and safety information.</li> <li>Use drip trays during fueling and maintenance (e.g. changing oil) of equipment.</li> <li>Install proper warning signs at hazardous material storage yards, lock gates and restrict access to authorized personnel.</li> <li>Store hazardous waste using secondary containment and restrict access to hazardous waste storage area to prevent harm to construction staff, environment and public.</li> </ul>	<ul> <li>Do not smoke close to hazardous materials.</li> <li>Do not dispose of Hazardous Material inappropriately</li> </ul>

Topic	DO	DON'T		
Fire Prevention and Control	<ul> <li>Take all reasonable and precautionary steps to ensure that fires are not started as a consequence of Project activities on site.</li> <li>Provide basic fire-fighting equipment available on site (including but not limited to, rubber beaters when working in grass/bush areas, at least one fire extinguisher of the appropriate type when welding or other 'hot' activities are undertaken).</li> <li>Store flammable materials under conditions that will limit the potential for ignition and the spread of fires.</li> <li>Train all employees on the fire risks and how to deal with any fires in case one occurs.</li> </ul>	<ul> <li>Do not light fire for any reason, incl. waste burning.</li> <li>Do not throw your cigarette butts on the ground.</li> </ul>		

#### 7 ESMP MONITORING

DWN will ensure that the implementation of the ESMP is being undertaken by the Contractor and all subcontractors. To monitor the related commitments an ESMP Monitoring Table shall be used. The sheet should be amended as needed but 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)

The Contractor shall undertake internal assessment of their implementation of the ESMP on a regular basis. This means that the responsible person for the ESMP implementation at the Contractor will undertake a visit to the construction site with the ESMP commitments at hand. After each site visit the status of compliance with the ESMP commitments shall be noted down in the ESMP Monitoring Table, including corrective actions if any. The frequency of the site visits shall depend on the E&S risks, but be at least once per month. The Contractor shall report on ESHS performance and progress to DWN on a monthly basis

Should any environmental or Health and Safety incidents be observed or reported by the construction workers, this shall be reported to DWN immediately (see also **Incident Reporting Template – Annex 4**).

**Table 4: ESMP Monitoring Table** 

Topic/ Potential Impact	Mitigation, Management and Enhancement Measures	Means of Verification	Responsibility	Monitoring Procedure	Date of Inspection/ Review/ ESMP Monitoring DD/MM/JJ	
Occupational Health and Safety				Findings/ Observations	Corrective Action	
Ambient Air			Findings/ Observations	Corrective Action		

#### Colour Code for Findings/ Observations

Red Flag. Major Non-compliance with ESMP requirements. Urgent Action needed to protect ecological and human environment and avoid risks to the Project schedule.

Minor Non-compliance. Action needed but no immediate threat for ecological and human environment or Project schedule.

In compliance with ESMP commitment.