Excel Dynamic Solutions
(PTY) Ltd

Draft Environmental Management Plan (EMP) for:

The Town Planning and Survey Works (Rezoning) on the Land allocated for the Construction of Namibian Correctional Service (NCS) Officers' Accommodation in Gobabis Town of the Omaheke Region

Document Type: **EMP**

Reference No.: **221122000389**

Author: **Fredrika Shagama** Company: **Excel Dynamic Solutions (Pty) Ltd** Telephone: **+264 (0) 61 259 530** Post: **Box 997154 Maerua Mall, Windhoek** Email: **info@edsnamibia.com**	Proponent: **Namibian Correctional Service (NCS)** Contact person: **Commissioner Immanuel Ngolo** Telephone: **+264 61 61 284 6000/6921** Post: **Private Bag 13281, Windhoek** Email: **immanuel.ngolo@ncs.gov.na**

25 November 2022

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

LIST OF ABBREVIATIONS

Abbreviation	Meaning
BID	Background Information Document
CV	Curriculum Vitae
DEAF	Department of Environmental Affairs and Forestry
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner

Abbreviation	Meaning
ECC	Environmental Clearance Certificate
EDS	Excel Dynamic Solutions
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
ESA	Environmental Scoping Assessment
GG & GN	Government Gazette & Government Notice
IAPs	Interested and Affected Parties
MEFT	Ministry of Environment, Forestry and Tourism
NCS	Namibian Correctional Service
PPE	Personal Protective Equipment
Reg / S	Regulation / Section

1 INTRODUCTION

1.1 Project Background and Locality

The Namibian Correctional Service (NCS) (hereinafter referred to as The Proponent) intends to have town planning and survey works undertaken for a site allocated for the construction of accommodation facilities for its officers in the town of Gobabis, Omaheke Region. The proposed site is the Greenfield piece of land of the Remainder of Farm Townlands of Gobabis No. 114 located on the northern part of the current NCS premises near the B8 in Gobabis as shown in Figure 1-1. The centre GPS coordinates of the proposed site: -22.440208° ,18.971157°.

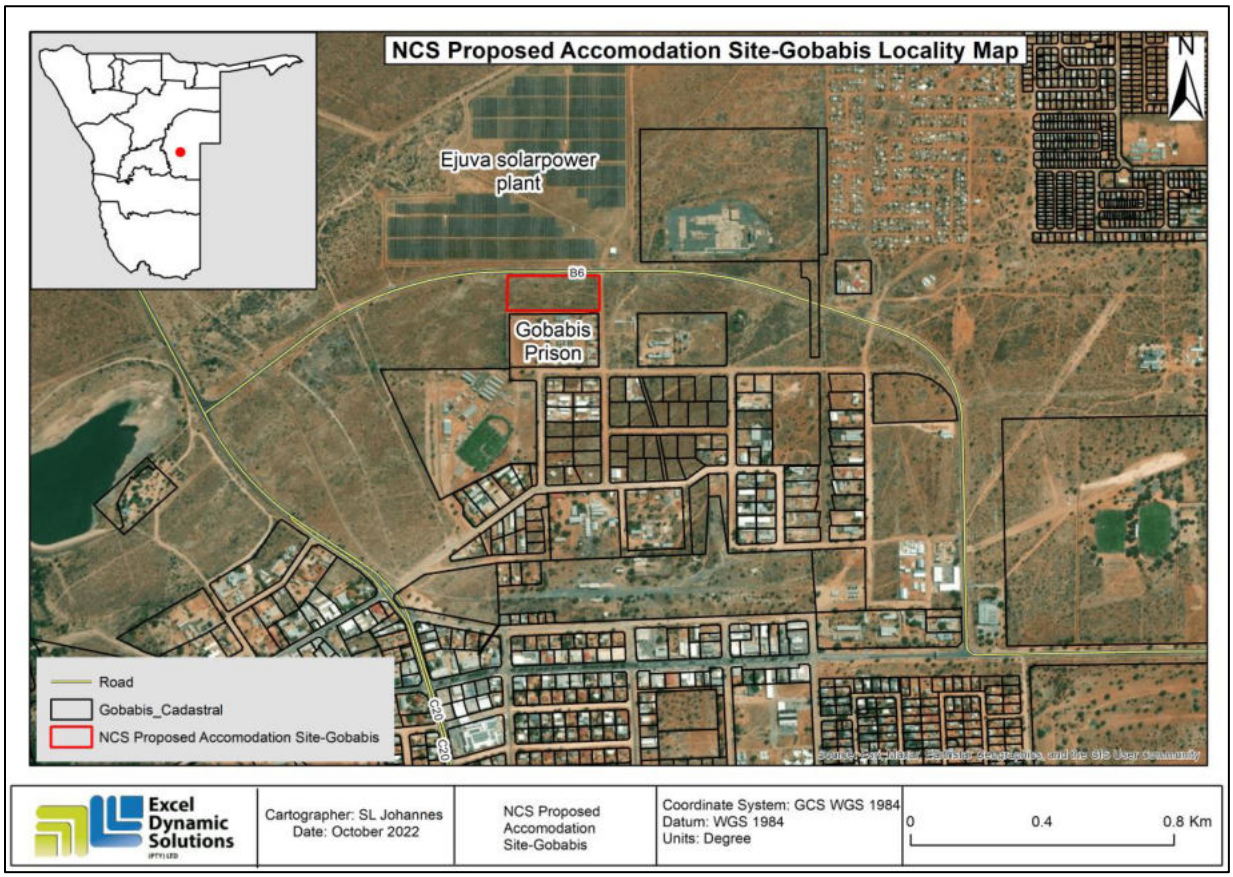

Figure 1-1: Locality of the proposed site for surveying (rezoning) and construction of the accommodation facility of the NCS Officers in Gobabis Town of the Omaheke Region

1.2 The Purpose of the Draft Environmental Management Plan (EMP)

Regulation 8(j) of the EIA Regulations (2012) requires that a draft Environmental Management Plan (EMP) shall be included as part of the Environmental Assessment (EA) scoping report. A 'Management Plan' is defined as:

"…a plan that describes how activities that may have significant environments effects on the environment are to be mitigated, controlled and monitored."

An EMP is one of the most important outputs of the EA process as it synthesizes all the proposed management & mitigation and monitoring actions, set to a timeline and with specific assigned responsibilities. It provides a link between the impacts identified in the EA process and the required mitigation measures to be implemented during the project cycle. It is important to note that an EMP is a statutory document and a person who contravenes the provisions of this EMP may face imprisonment and/or a fine. This EMP is a living document and can be amended to adapt to address project changes and/or environmental conditions and feedback from compliance monitoring.

The purpose of this document is, therefore, to guide environmental management from rezoning to operational phase.

1.3 Application for an Environmental Clearance Certificate (ECC)

Land use and rezoning works are listed as activities that may not be implemented without an Environmental Clearance Certificate (ECC) under the Environmental Management Act (EMA) (2007) and its 2012 Environmental Impact Assessment (EIA) Regulations. The listed activities as per EIA regulations as relevant to the proposed activity/development are as follows:

''5. LAND USE AND DEVELOPMENT ACTIVITIES

- 5.*1 The rezoning of land from -*
- *-(a) residential use to industrial or commercial use, and*
- *-(d) use for nature conservation or zoned open space to any other land use.''*

To ensure that the project activities comply with the environmental management laws, the Proponent appointed Excel Dynamic Solutions Pty Ltd (a team of independent Environmental Assessment Practitioners) to undertake the required ESA process and apply for the ECC. This process includes public & stakeholders' engagement and consultation, compilation of the ESA Report and draft Environmental Management Plan (EMP). These documents will then be submitted to the Environmental Commissioner at the Department of Environmental Affairs and Forestry (DEAF) for evaluation and consideration of the ECC.

The application for the ECC was compiled and submitted to the Environmental Custodian, the Ministry of Environment, Forestry and Tourism (MEFT)'s Department of Environmental Affairs and Forestry (DEAF) for consideration of the ECC by the Environmental Commissioner at MEFT. The ECC would be considered upon submission of an Environmental Scoping Assessment (ESA) or Scoping Report and this Draft Environmental Management Plan (EMP).

1.4 Appointed Environmental Assessment Practitioner

To satisfy the requirements of the EMA and its 2012 EIA Regulations, NCS appointed a team of independent environmental consultants (Excel Dynamic Solutions (Pty) Ltd (EDS)), to conduct the required Environmental Assessment (EA) process. This EMP was drafted by Ms. Fredrika Shagama, an experienced EAP and qualified Geohydrologist with over 7 years of experience in the Environmental and Groundwater Management Consulting sector.

The description of the project activities is briefly provided under the next heading (Chapter 2).

2 THE DESCRIPTION OF PROJECT ACTIVITIES

2.1 Planning and Rezoning Phase

The proposed activity will entail the rezoning of the land portion for the intended use. The land will be rezoned from 'the current' land use (open space) for the establishment of the officers' accommodation and associated facilities.

Upon approval of the surveying/ rezoning works, and completion of all necessary planning and design works, construction works of the accommodation facilities will commence. Construction works will be outsourced to a contractor (to be appointed on tender).

2.2 Construction Phase

During construction phase, earth works will be carried out in certain areas of the project site to erect the buildings and for the installation of the necessary services infrastructure. This will require soil excavation within the construction site. There will be heavy construction vehicles and equipment moving around the site during construction. There is little to no vegetation within the proposed survey site, hence no major disturbance to vegetation is expected during this phase.

The following works will be done in terms of infrastructure and services provision:

- Construction of buildings and related infrastructures such as stormwater management channels, access roads, parking, etc.
- Installation of; power supply cables, potable water pipelines, sewage systems and wastewater disposal pipelines.

2.3 Type of Accommodation to be constructed

The proposed accommodation facility at the site behind the existing Gobabis' NCS premises will include the following (with associated services infrastructure):

- Three (3) marriage quarters,
- Four (4) Bachelor flats,
- Two (2) Single quarters for male and female (for 14 persons/officers), and
- One (1) recreational facility.

2.4 Human Resources, Services, and infrastructure

The following services and infrastructure as provided below will be required for the project activities:

2.4.1 Water supply

For construction will be sourced from the main existing water supply (reticulation) line for Gobabis Town, upon reaching a supply agreement with NCS and construction contractor. The quantity of water consumption is not yet known.

2.4.2 Power and Fuel Supply (machinery and equipment)

In consultation with the Gobabis Municipality and NAMPOWER (the electricity provider)), the new facilities will be supplied from the existing power grid. As a backup, the facility will be equipped with generators to be kept on standby onsite.

Diesel will be used for machinery and equipment and fuel generator during construction.

2.4.3 Project Equipment, Machinery, and Vehicles

There will be heavy trucks, medium-sized trucks, 4x4 bakkies, excavators, generator for power supply, etc.

2.4.4 Solid waste and Sewage management

Solid waste will be stored on-site in designated waste bins and transported to the local municipal site in Gobabis Town, as often as necessary.

Sewage management: the construction workers will be using portable toilets throughout this phase. These toilets will be provided by the appointed construction contractor. For the operational phase, the facilities will be connected to the municipal sewer system.

2.4.5 Hazardous waste

The waste fuel/oils will be carefully stored in a standardized container for disposal at an approved hazardous waste management facility in the Town or at a nearby approved facility in the country.

2.4.6 Road Access

The site is accessible from the B6 by the existing local municipal access roads. If necessary, additional site access road(s) will be surveyed for construction and utilized by project related vehicles.

2.4.7 Workforce

Temporary employment opportunities will be created during the construction phase. However, the exact number of people to be employed by the appointed contractor cannot be determined at this stage. Therefore, the number will be determined by the contractor based on project needs.

2.4.8 Construction materials

For the construction of the facilities, construction materials will be sourced from the local building materials suppliers in Gobabis. And if necessary, and as required, materials will be sourced from elsewhere in the country or outside the country and as per the required and approved building material standards.

2.4.9 Accommodation (construction workers)

During construction, the very skilled that may be from outside Gobabis are expected to be housed in nearby accommodation facilities in Gobabis. Construction workers from Gobabis will be commuting from and to their homes daily. This is to avoid having too many workers living on site for the duration of the construction phase.

2.4.10 Site security

It is expected that there will be construction vehicles and equipment on site during this phase. It is for this reason that 24-hour onsite security personnel will need to be appointed to guard the equipment against possible equipment vandalism and theft and community safety.

2.4.11 Site safety and security

The construction contractor will construct a temporary fence wall or corrugated iron sheets around the construction site to control access to the site. For operations, a concrete / palisade wall will be constructed around the site.

2.4.12 Health and Safety

To ensure health and safety for the construction duration, all workers that will be assigned in high to medium risk working areas will be provided with appropriate Personal Protective Equipment (PPE). A first aid kit will be provided onsite, whereby 2 to 3 workers trained on how to administer first aid.

2.4.13 Potential Accidental Fire Outbreaks

A minimum of two fire extinguishers will be readily available onsite during construction. During the operational phase, each building will be equipped with a well-serviced fire extinguisher

2.5 Operational and Maintenance Phase

During this phase, the officers' accommodation will be operated and managed by the Proponent. The NCS Officers will be having sufficient accommodation to continue carrying out their duties on the premises.

3 LEGAL FRAMEWORK: PERMITTING AND LICENSING

The Proponent has the responsibility to ensure that the project activities conform to the principles of the EMA and must ensure that employees act in accordance with such principles. Table 3-1 below lists the requirements of an EMP as stipulated by Section 8 (e) of the EIA Regulations, primarily on specific approvals and permits that may be required for the project activities.

Table 3-1: The list of applicable of legal requirements and permits to the project activities

Legislation / Policy / Guideline: Custodian	Relevant Provisions	Project Activity Licensing and Contact Details
Environmental Management Act (No. 7 of 2007) and its 2012 Environmental Impact Assessment (EIA) Regulations (Government Gazette (GG) No. 4878 Government Notice (GN) No. 30)	The EMA has stipulated requirements to complete the required documentation to obtain an Environmental Clearance Certificate (ECC) for permission to undertake certain listed activities.	The ECC should be renewed every 3 years, counting from the date of issuance (if the rezoning and construction works are not completed within 3 years from the date of issue of the first ECC). Contact details at the Department of Environmental Affairs and Forestry (DEAF), Ministry of Environment, Forestry and Tourism (MEFT), Office of the Environmental Commissioner **Mr. Timoteus Mufeti** **Tel: +264 61 284 2701**
Petroleum Products and Energy Act (No. 13 of 1990) Regulations (2001):	Regulation 3(2)(b) states that "No person shall possess [sic] or store any fuel except under authority of a licence or a certificate, excluding a person who possesses or stores such fuel in a quantity of 600 litres or less in any container kept at a place outside a local authority area"	The Proponent should obtain the necessary authorisation from the MME for the storage of fuel on-site. **Mr. Carlo Mcleod (Ministry of Mines and Energy: Acting Director – Petroleum Affairs)** **Tel: +264 61 284 8291**
Road Traffic and Transport Act 52 of 1999 and its 2001 Regulations	Provides for the control of traffic on public roads and the regulations pertaining to road transport, including the licensing of vehicles and drivers. **Ensure the distance of 30m from the B2 to the site boundary (road reserve).**	A site access road permit from the existing road should be formalized by applying for it and obtained from the Roads Authority.

Legislation / Policy / Guideline: Custodian	Relevant Provisions	Project Activity Licensing and Contact Details
		Mr. Eugene de Paauw (Roads Authority – Specialist Road Legislation) **Tel.: +264 61 284 7027**
National Heritage Act No. 27 of 2004	To provide for the protection and conservation of places and objects of heritage significance and the registration of such places and objects; to establish an NHC; to establish a National Heritage Register; and to provide for incidental matters. This impact is likely during construction (site preparation and earthworks) when there is a potential inadvertent unearthing and damage of heritage resources.	Contact Details at National Heritage Council (NHC) of Namibia **Mrs. Erica Ndalikokule (NHC Director): Tel: +264 61 301 903**

4 EMP IMPLEMENTATION ROLES AND RESPONSIBILITIES

The Proponent has the overall responsible for the implementation of the EMP. However, the Proponent may delegate this responsibility or part of it to someone else at any time, as they deem necessary. The roles and responsibilities of all delegates/parties involved in the effective implementation of this EMP are set in Table 4-1.

Table 4-1: The list of responsible parties and their roles in implementing the EMP

Role (Person and or Institution)	Responsibilities
The Proponent	-Managing the implementation of this EMP and updating and maintaining it when necessary. -Management and monitoring of individuals and/ or equipment on-site in terms of compliance with this EMP and issuing fines for contravening EMP provisions.
Environmental Control Officer (ECO)	Environmental Control Officer (ECO). The ECO will have the following responsibilities, **particularly during the construction phase:** -Management and facilitation of communication between the Proponent and Interested and Affected Parties (IAPs) regarding this EMP. -Conducting site inspections of all areas with respect to the implementation of this EMP (monitor and audit the implementation of the EMP). -Advising the Proponent on the removal of person(s) and/or equipment not complying with the provisions of this EMP. -Undertaking an annual review of the EMP and recommending additions and/or changes to this document.
Site Manager / Appointed Contractor	-Collaborate with the ECO to ensure the implementation of the EMP, especially on the technical aspects and operations of the project operations.

5 IMPACTS AND ENVIRONMENTAL MANAGEMENT AND MITIGATION MEASURES

5.1 Key Identified Impacts

The key positive and negative impacts associated with the project are presented in Table 6-1 below.

Table 5-1: The key positive and negative impacts associated with the project activities

Positive Impacts	Negative (Adverse) Impacts
-The successful rezoning of the land will lead to the development of the land to establish decent and better accommodation for the NCS officers who are dedicated to rehabilitate offenders. -Temporary creation of employment during construction and possibly operational phase -Increased support for local businesses through the procurement of locally available goods and services.	-Physical land/soil disturbance -Waste generation – improper disposal of wastes may lead to environmental pollution. -Air quality issue owing to dust generation -Vehicular traffic safety and services infrastructure. -Dust (air quality): compromising the local air quality. -Noise generated by project related equipment and vehicles may be a nuisance. -Health and safety (occupation and community). -Loss of biodiversity: the rezoning and eventual construction works may lead to the disturbance of site flora and possible faunal habitats.

The recommended measures to be implemented to mitigate and manage the adverse negative impacts listed above are provided under the next chapter and Table.

5.2 Environmental Management and Mitigation Measures

The management actions are aimed at avoiding the above-listed potential negative impacts, where possible. Where it is impossible to avoid these impacts, measures are provided to reduce the impacts' significance. The measures recommended (Table 5-2) for the potential impacts are described and assessed in the Scoping Report compiled for the proposed site.

Table 5-2: The Environmental management and mitigation measures for the Rezoning, Construction and Operational Phase

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
Construction, Operations and Maintenance Phase					
EMP implementation and training	Lack of EMP awareness and implications thereof	-EMP trainings should be provided to all new workers. -All site personnel should be aware of necessary health, safety, and environmental considerations applicable to their respective work. -The implementation of this EMP should be monitored. The site should be inspected, and a compliance audit done throughout **the project activities, monthly.**	-Compliance monitoring conducted bi-annually and should be recorded. -The ECC is renewed every 3 years if the work is not completed within the first 3 years of the ECC first issue.	-ECO	Throughout the construction phase
Employment opportunities	Unfair practices of labour recruitment	-Contractors should consider locals before considering outsiders (anyone from outside Gobabis) for work. -Equal opportunities should be given to both men and women, where possible.	-There is a fair recruitment process -Locals are given preference for the work they can perform	-Proponent / Contractor (Human Resources Department)	When deemed necessary during construction
Goods and services procurement	The procurement of goods and service from outsiders over local business may lead to conflicts	-The procurement of construction works, and materials should follow a fair and transparent process. -Procurements for goods and services should be open only to local and Namibian companies with strong local participation. -The business opportunities such as cleaning services and site maintenance should be given to local companies	-Goods and services are procured from Gobabis -Local businesses are considered for procurement opportunities	-Proponent (Procurement Department)	When deemed necessary during construction

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
Soils	Physical soil / land disturbance and loss of topsoil during construction	-The topsoil that was stripped from certain site areas to enable project works and can be returned to its initial position, should be returned. This is to avoid unnecessary stockpiling of site soils which would leave them prone to erosion. -All construction trenches and pits excavated on site should be backfilled and areas rehabilitated.	-No proliferation of informal vehicle tracks. -No new erosion gullies.	-ECO	Throughout the project cycle
Site Fire outbreaks	Accidental fire outbreaks and Explosion risks	-The site fire extinguishers should be serviced accordingly, and personnel trained on how to use them. -No open fires to be created by project personnel onsite. -Potential flammable areas and structures should be marked as such with clearly visible signage. -All personnel must be sensitised about responsible fire protection measures and good housekeeping such as the removal of flammable materials such as rubbish, dry vegetation, from the vicinity of the site.	-No wildfires recorded caused by site personnel -Fire extinguishers are readily available and up to date with service	-Proponent -ECO -Site Manager	Throughout the project cycle
Site safety and security	Compromising site security and safety	-A secure wall should be constructed around the site to ensure its security -During construction, the site should be guarded to ensure that construction materials, vehicles and equipment are not vandalised or stolen.	-The site is fenced off	-Proponent -Site Manager	During construction phase
Occupation and community	Project related injuries and other health	-As part of their induction during construction, the Project personnel should be provided with an awareness training of the risks of mishandling equipment and materials on	-Comprehensive health and safety plan for all	-ECO	During construction phase

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
health and safety	and safety related issues on personnel and locals	site and health and safety risk associated with their respective jobs. -the First aid kit should always be fully furnished and ensure that 2 or 3 site personnel are trained on administering first aid. -Employees and visitors should be properly equipped with adequate personal protective equipment (PPE) such as coveralls, gloves, safety boots, earplugs, or safety glasses (depending on the job and site area visited, etc. -The heavy vehicle, equipment should be properly secured to prevent any harm or injury to people. -An emergency preparedness plan should be compiled, and personnel appropriately trained during construction. -Personnel should not be allowed to drink alcohol prior to and during working hours nor allowed on site when under the influence of alcohol. -During construction, the site areas that are considered risks should be equipped with "danger" or "cautionary" signs.	project activities compiled. -Occupational Health and Safety Personnel -Health and Safety Trainings -Fully equipped first aid kits onsite -Trained workers to administer first aid	-Site Manager	
Stormwater management	Rainwater stagnation and possible overtopping	-Stormwater management systems should be incorporated into the site layout to ensure that rainwater is collected and diverted to specific rainwater collection area (point) and not idle on site.	-Stormwater discharge systems are improved and incorporated into the site works	-Proponent	During design and planning and construction

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
	during rainy seasons	-A runoff diversion ditch must be constructed and maintained.			
Water Resources Use	Over-abstraction (water demand and availability)	-Water reuse/recycling methods should be implemented as far as practicable. -Water storage tanks should be inspected daily to ensure that there is no leakage, resulting in wasted water. -Water conservation awareness and saving measures training should be provided to all construction workers so that they understand the importance of conserving water and become accountable	-No water leakages from site water storage tanks -Water is recycled where possible	-ECO -Site Manager	Throughout the project life cycle
Soils and water resources	Soils and water resources pollution	-Spill control preventive measures should be in place on site to management soil pollution, thus preventing and or minimizing soil and water resources pollution. -All fuelling done onsite should be carried out on dedicated impervious surfaces, i.e., concrete slabs or lined surface. -Personnel should be sensitized on the impacts of soil pollution and advised to follow appropriate handling procedures. -Ensure basic Spill Prevention, Control, and Countermeasure (SPCC) Plan training for all personnel. -Project machines and equipment should be equipped with drip trays to contain possible oil spills.	-No complaints of pollutants on the soils and eventually in the water due to project activities -No visible oil spills on the ground or pollution spots. -Sufficient waste containers provided onsite -Non-permeable material to cover the ground surface at areas	-ECO	Throughout the project life cycle

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		-Polluted soil should be removed immediately and put in the designated hazardous waste storage containers for later disposal at approved and appropriately classified hazardous waste treatment facility. -Washing of equipment contaminated hydrocarbons, as well as the washing and servicing of vehicles should take place at a dedicated area (impervious surface), where contaminants cannot contaminate soil or water resources.	where hydrocarbons and potential pollutants are utilized.		
Biodiversity	Loss Fauna and Flora	-Avoid unnecessary removal of vegetation, thus promoting a balance between biodiversity and Project. -If necessary and obstructing the project activities, the permit to remove the protected camelthorn trees should be obtained from the nearest Forestry Directorate at MEFT (Forestry Office in Gobabis). -Avoid the killing or hurting of all kinds of animals, birds and reptiles encountered onsite. -Environmental awareness on the importance of biodiversity preservation should be provided to workers.	-No killing or disturbance of biodiversity -The permit to remove the necessary protected trees is obtained from the nearest Forestry Directorate prior to removing them -Visible preservation of onsite vegetation	-Site Manager -ECO	Throughout the project cycle
Road use and safety	Increase in vehicular traffic flow	-The transportation of construction materials to site should be limited to twice a week to reduce the pressure on local roads. -Ensure that there is a 30m open space between the B6 and the site fence. This is a road reserve for public roads.	-No complaints from members of the public regarding vehicular traffic issues related to the project activities.	-Proponent -ECO	Throughout the project life cycle

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
		-The heavy truck loads should comply with the maximum allowed speed limit for respective vehicles while transporting materials and equipment/machinery on the public and access roads is 40km/h. -Vehicles drivers should be in possession of valid and appropriate driving licenses and adhere to the road safety rules. -Vehicle's drivers should not be allowed to operate vehicles while under the influence of alcohol. -The deliveries and collection to and from site should be done during weekdays between the hours of 8am & 5pm.	-There is a 30m road reserve between the B6 and project boundary -All personnel operating the project vehicles and machinery are appropriately licensed and possession of valid driving licenses. -Demarcated areas for parking, offloading, and loading are on sites.		
Archaeology and heritage	Accidental disturbance of archaeological or heritage objects	-On-site personnel and contractor (during construction involving earthworks) must be sensitized to exercise and recognize "Chance Finds Heritage" – **Appendix 1.** -Adhere to the provisions of Section 55 of the National Heritage Act in event significant heritage and culture features are discovered while conducting site upgrading works. -When the removal of topsoil and subsoil for construction purposes, the site should be monitored for subsurface archaeological materials by Environmental personnel.	-Preservation of all artefacts and objects that are discovered on and around project site during earthworks	-Site Manager -ECO	As and when required, i.e., and during construction works

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
Littering and waste management (general waste and sanitation)	Environmental Pollution	-Project personnel should be sensitized to dispose of waste in a responsible manner and not to litter. -Ensure that there are no wastes left on the sites at the end of each day. -All domestic and general operational waste produced daily should be contained onsite until such that time it is removed by the Municipal waste removal staff / contractor. -No waste may be buried or burned on and offsites. -Maintain separate waste bins for different wastes, i.e., hazardous, and general/domestic waste should be in separate waste bins. -A penalty system for irresponsible disposal of waste on site and anywhere in the area should be implemented.	-No visible litter within and around the Project area owing to the Project -Provision of sufficient waste storage containers -Waste management awareness -Waste disposal permits to municipalities -Environmental, Health and Safety Statements and Policy in place -Waste storage containers	-ECO	Throughout the project cycle
	Wastewater (sewage)	-Ensure that there are always sufficient and accessible toilets for construction workers and security personnel	-Adequate toilet and basic ablution facilities on site.	-Proponent -Site Manager	Throughout the project cycle
Air Quality	Dust generation, and fumes emission (poor air quality)	-Vehicles should only be driven at the authorized site speed to avoid dust generation onsite and surroundings. -The heavy vehicles and fumes generating equipment should not be left idling when not in use. -Water should be used for dust suppressing at problematic areas during construction.	-No complaints from the public about vehicle emissions and dust generation. -Visible efforts to curb dust	-Site Manager -ECO	Throughout the project cycle

Aspect	Impact	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
Noise	Nuisance	-Noise from operations' vehicles and equipment on the sites should be at acceptable levels. -The project activities should not be carried out during the night or before 08h00 in the morning and should be carried out during weekdays only. -Working hours for construction should be restricted to between 08h00 and 17h00 to avoid noise from equipment and the movement of vehicles before or after hours. -Site workers and contractors should be equipped with personal protective equipment (PPE) such as earplugs to reduce exposure to excessive noise.	-No complaints from neighbours about excessive noise from site -Noise protective equipment for workers	-Site Manager -ECO	Throughout the project cycle

5.3 Environmental Management and Mitigation Measures- Decommissioning

The measures provided in Table 5-3 below are aimed at decommissioning the construction works upon completion.

Table 5-3: The Environmental management and mitigation measures for the Decommissioning of Construction Works

Aspect	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
Construction Work Decommissioning Phase and Site Rehabilitation				
Infrastructure and structures:	-Dismantling of temporary structures and office spaces for disposal at the Municipal landfill site (if cannot be reused). -Transport all equipment and vehicles to offsite storage facilities.	-Structures disposed of at the Municipality	-Proponent -ECO	At the end of construction

Aspect	Management and Mitigation Measure(s)	Key Performance Indicator (KPI)	Implementation Responsibility	Timeline
Decommissioning of services and infrastructures		dumpsite or taken away for re-use		
Stockpiled topsoil and trenches	-All the topsoil that was stockpiled to enable construction works should be levelled to prevent soil erosion. -All site trenches and or holes that were dug for construction purposes and no longer required for operational phase, should be backfilled and the ground surface levelled.	-The stockpiled topsoil is levelled	-Site Manager	At the end of construction
Generated and Accumulated Waste	-All the waste generated (building rubbles, and solid waste) from leading to the last days on site should be transported to the municipal dumpsite. -Building rubbles must be removed from the property and taken to an approved dumpsite designated by the Gobabis Municipality. -Waste should be sorted accordingly and disposed of at the Municipal waste management sites/facilities. -No waste should be buried nor left scattered on site.	-All waste is disposed of at the respective waste facilities (based on waste types)	-Proponent -ECO	Before handing over the site to NCS for operations

6 RECOMMENDATIONS AND CONCLUSIONS

6.1 Recommendations

The EDS Consultants are confident that the potential negative impacts associated with the project activities can be managed and mitigated by the effective implementation of the recommended management and mitigation measures. This would also be improved by more effort and commitment towards monitoring the implementation of these measures.

It is therefore, recommended that the project activities be granted an Environmental Clearance Certificate. The Proponent will be required to ensure that:

- All the management and mitigation measures provided in the Draft EMP are effectively and progressively implemented and monitored.
- All required approval consents (particularly from the Gobabis Municipality) for the certain activities should be obtained as required and ensuring compliance with the specific conditions and legal requirements attached thereto.
- All project personnel, contractors, and visitors onsite (during construction) comply with the legal requirements governing their project and its associated activities.
- The disturbed areas owing to the project activities during construction should be rehabilitated, as far as practicable

6.2 Conclusions

Based on the assessment conducted for the proposed site and its planned activities, the project and its associated activities do not pose a significant risk to the environment that would hinder its implementation. However, it is highly recommended that the measures provided are effectively implemented and monitoring to protect the biophysical and social environment throughout the project duration.

APPENDIX 1: CHANCE FINDS PROCEDURE (AFTER KINAHAN, 2020)

The Archaeological and Heritage surveys are based on surface indications alone, and it is therefore possible that sites or items of heritage significance will be found during site preparation and construction. The procedure set out here covers the reporting and management of such finds.

Scope: The "*chance finds*" procedure covers the actions to be taken from the discovery of a heritage site or item to its investigation and assessment by a trained archaeologist or other appropriately qualified person.

Compliance: The "chance finds" procedure is intended to ensure compliance with relevant provisions of the National Heritage Act (27 of 2004), especially Section 55 (4): "*a person who discovers any archaeological …. object ……must as soon as practicable report the discovery to the Council*". The procedure of reporting set out below must be observed so that heritage remains reported to the NHC are correctly identified in the field.

Manager/Supervisor must report the finding to the following competent authorities:

- National Heritage Council of Namibia (+264 61 244 375 / Technical Office +264 61 301 903)
- National Museum (+264 61 276 800),
- National Forensic Laboratory (+264 61 240 461).

Archaeological material must NOT be touched. Tempering with the materials is an offence under the heritage act and punishable upon conviction by the law.

Responsibility:

Operator:	To exercise due caution if archaeological remains are found
Foreman:	To secure site and advise management timeously
Superintendent:	To determine safe working boundary and request inspection
Archaeologist:	To inspect, identify, advise management, and recover remains

Procedure:

<u>Action by person identifying archaeological or heritage material:</u>

a) If operating machinery or equipment stop work

b) Identify the site with flag tape

c) Determine GPS position if possible

d) Report findings to foreman

Action by foreman

a) Report findings, site location and actions taken to superintendent

b) Cease any works in immediate vicinity

Action by superintendent

a) Visit site and determine whether work can proceed without damage to findings

b) Determine and mark exclusion boundary

c) Site location and details to be added to project GIS for field confirmation by archaeologist

Action by Archaeologist

a) Inspect site and confirm addition to project GIS

b) Advise NHC and request written permission to remove findings from work area

c) Recovery, packaging and labelling of findings for transfer to National Museum

In the event of discovering human remains

a) Actions as above

b) Field inspection by archaeologist to confirm that remains are human

c) Advise and liaise with NHC and Police

d) Recovery of remains and removal to National Museum or National Forensic Laboratory, as directed.