



Environmental Management Plan (EMP)

The Proposed Construction and of a 20 m Tall lattice Network Tower in Windhoek's Goreangab Area, Khomas Region, Namibia

DRAFT

EDS Project Number: APP-002188

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1. INTRODUCTION

1.1. Project Background

The constant growth in the use of mobile communication services in Namibia, has exerted pressure for demand to expand the communications networks. This demand will continue to grow with increase in urban development and population growth. PowerCom (Pty) Ltd (The Proponent) has identified the need for a network tower in the Goreangab area of Windhoek, and proposed to make provision for the need for adequate telecommunication services in the area. The proposed network tower would reduce existing congestion problems and improve the network coverage in the Goreangab area, by providing additional capacity for mobile communication services.

The Proponent proposes to erect and operate a 20m high three-legged lattice network tower in Goreangab, Windhoek, which will occupy a tower footprint of 64 m² (8m x 8m). The rest of the site area will be used for storing the operational and maintenance equipment. The locality map of the proposed tower is shown in **Figure 1**.

This document has been prepared as a legal requirement by the Section 8 of the Environmental Management Act (EMA), No.7 of 2007 and its 2012 Environmental Impact Assessment (EIA). The compilation of this EMP is also one of the outputs required of the Environmental Consultant, by the Proponent. Furthermore, it is required of the Environmental Consultant (Environmental Assessment Practitioner (EAP)) to comply with the Environmental Management Act and provide for the following:

- Prepare a detailed Environmental Management Plan that can be used as guide to monitor compliance to the recommendation made in the EIA and to assist in managing and monitoring activities during the construction, operation and maintenance of the proposed network tower.
- Furthermore, the Environmental Consultant must clearly clarify in the EMP the roles and responsibilities of the Proponent, the contractors and any other identified stakeholders.

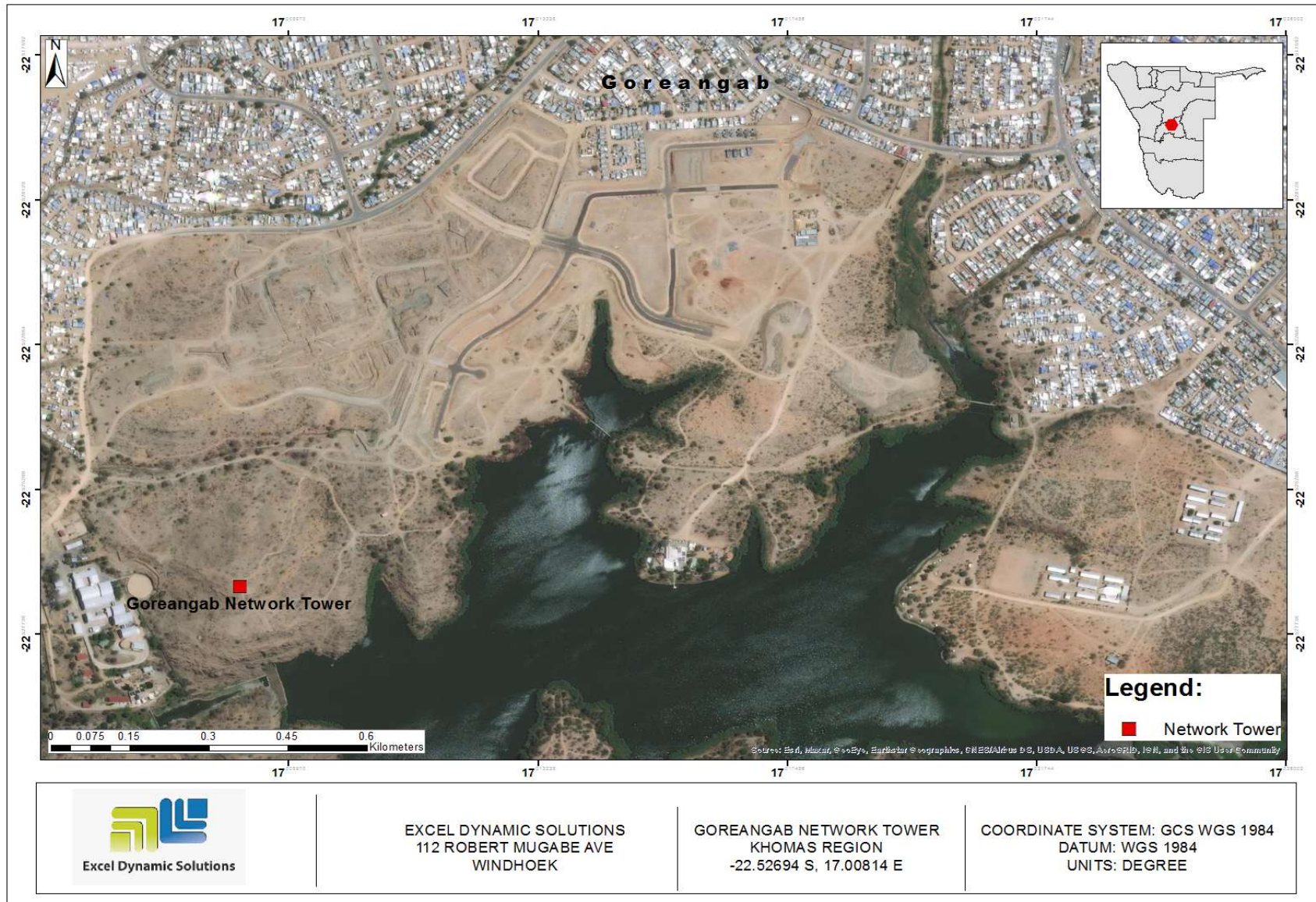


Figure 1: Location of the proposed network tower site in Goreangab, Windhoek, Khomas Region

1.2. Aim of the Draft Environmental Management (EMP)

Regulation 8(j) of the EIA Regulations (2012) requires that a draft Environmental Management Plan (EMP) 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 of the proposed 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 environmental management on the ground during project implementation and operation. 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 should 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 throughout the different phases of the proposed project activities, namely: the planning and design, construction, operation and maintenance, and decommissioning phases.

- **Planning and design** - the period, prior to construction, operation and maintenance, during which preliminary legislative and administrative arrangements (such as construction tendering and recruitment processes) are carried out in preparation for the construction of the network tower.
- **Construction** - During this phase, there will be some earthworks to prepare the site for construction and installation of necessary services infrastructure and structures required for the network tower.
- **Operation and maintenance** - This is the phase during which the network tower will be operational and maintenance done by the Proponent.
- **Decommissioning** – Should the structure be decommissioned, this phase will be implemented.

Environmental Monitoring Requirements: In order to support and ensure that the proposed mitigation measures are achieving the desired results, a monitoring plan must be implemented alongside the mitigation plan.

This draft EMP should be used by The Proponent and/or contractors to provide management measures to be followed during the network tower construction and operations. The EMP addresses the environmental impacts identified in the scoping report, to ensure that the impacts on the environment are avoided, or limited if they cannot be avoided completely.

1.3. Appointed Environmental Assessment Practitioner

In order to fulfill the requirements of the EMA and its 2012 EIA Regulations, The Proponent appointed Excel Dynamic Solutions (Pty) Ltd (EDS), an independent consulting company to conduct the required EA process on their (Proponent's) behalf. This draft EMP will be submitted as part of an application for an ECC to the Environmental Commissioner at the Department of Environmental Affairs (DEA), at Ministry of Environment, Forestry and Tourism (MEFT).

The EIA project is headed by Mr. Nerson Tjelos, a qualified geoscientist and experienced Environmental Assessment Practitioner (EAP). The consultation process and reporting are done by Ms. Rose Mtuleni with Support from Ms. Althea Brandt and Mr. Silas David. Mr. Nerson Tjelos contributed to the overall report review.

1.4. Details of the Project Proponent

The details of the Proponent are presented in **Table 2** below.

Table 1: Proponent contact details and purpose of the required ECC

Full name of Proponent	Physical Address & Contact number	Postal Address	ECC Application for:
PowerCom (Pty) Ltd	No. 4 Julius K. Nyerere Street Erf 8161 Southern Industrial Area Tel: +264 (0) 61 201 2090	P.O Box 40799 Windhoek Namibia	Construction and Operation of a 20m tall lattice network tower in the Goreangab area, Windhoek , Khomas Region

1.5. Environmental Assessment Legal Requirements

The content of the EMP must meet the requirements of Section 8 (j) of the EIA Regulations. The EMP must address the potential environmental impacts of the project activities on the environment throughout the project life-cycle. It must also include a system for assessment of the effectiveness of monitoring and management arrangements after project implementation.

The Proponent, therefore, has the responsibility to ensure that the project activities as well as the EA process conform to the principles of the EMA and must ensure that employees act in accordance with such principles. **Table 3** 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 network tower project activities.

Table 2: Applicable legal requirements relevant to the activities of network tower establishment in Goreangab, Windhoek

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
Environmental Management Act EMA (No 7 of 2007)	<p>Requires that projects with significant environmental impacts are subject to an environmental assessment process (Section 27).</p> <p>Details principles which are to guide all EAs.</p>	<p>The EMA and its regulations should inform and guide this EA process.</p> <p>Should the ECC be issued to the Proponent, it should be renewed every 3 years, counting from the date of issue.</p>
Environmental Impact Assessment (EIA) Regulations GN 28-30 (GG 4878)	<p>Details requirements for public consultation within a given environmental assessment process (GN 30 S21).</p> <p>Details the requirements for what should be included in a Scoping Report (GN 30 S8) and an Assessment Report (GN 30 S15).</p>	<p>Contact details at the Department of Environmental Affairs (DEA), Ministry of Environment and Tourism (MET)</p> <p>Contact person(s) at MET and their details:</p> <p>Mr. Damian Nchindo or Mr. Josafat Hiwana (Chief and Senior Conservation Scientists and EIA Report Reviewers/evaluators)</p> <p>Tel: +264 61 284 2717 / +264 61 284 2962</p> <p>Email: damian.nchindo@met.gov.na and josafat.hiwana@met.gov.na, respectively</p>

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
Convention on International Civil Aviation, Annex 14	<ul style="list-style-type: none"> • Annex 14 to the Convention on International Civil Aviation. • Chapter 4: Obstacle restrictions and removal • Chapter 6: Visual aids and donating of obstacles 	The proposed new structure may be an obstacle to some aerodromes in Namibia. Those that are close to existing aerodromes need to be assessed in accordance with the document. Visual aids to the new structures to make them visible to aircraft need to be applied in accordance with this Convention.
The Aviation Act, Act 74 of 1962	Gives effect to certain International Aviation Conventions and makes provision for the control, regulation and encouragement of flying within the Republic of Namibia and for other matters incidental thereto	Provides the regulations for setting up telecommunication structures in Namibia. Contact: Mr. Golden Siteketa (Senior Manager, Aerodrome and Ground Aids Section) Tel: +264 83 235 2361 Email: siteketag@ncaa.com.na
National Heritage Act No. 76 of 1969	Call for the protection and conservation of heritage resources and artefacts	Should any archaeological material, e.g. bones, old weapons/equipment etc be found on the construction sites, work should stop immediately and the National Heritage Council of Namibia must be informed as soon as possible. The Heritage Council will then decide to clear the area or decide to conserve the site or material. Contact Details at National Heritage Council of Namibia

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
		<p>Mr. Salomon April, Email: salomon@nhc-nam OR Dr. A. M. Nankela, Email: archeology@nhc-nam.org</p> <p>Tel: +264 (0) 61 244 375</p>
<p>Labour Act 11 of 2007</p> <p>Health and Safety Regulations (HSR) GN 156/1997 (GG 1617).</p>	<p>Adhere to all applicable provisions of the Labour Act and the Health and Safety regulations.</p>	<p>Division of Labour Services at the Ministry of Labour, Industrial Relations and Employment Creation.</p> <p>Tel: +264 61 206 6111</p>
<p>Forestry Act 12 of 2001, Amended Act 13 of 2005</p>	<p>Prohibits the removal of any vegetation within 100 m from a watercourse (Forestry Act S22 (1)). The Act prohibits the removal of and transport of various protected plant species.</p>	<p>Should there be protected plant species, which are known to occur within the project sites, these are required to be removed and a permit should be obtained from the nearest Forestry office (Ministry of Agriculture, Water & Forestry(MAWF)) prior to removing them.</p> <p>Contact Details at MAWF (Director of Forestry)</p> <p>Mr. Joseph Hailwa</p> <p>Tel: +264 61 208 7663</p> <p>Email: Joseph.Hailwa@mawf.gov.na</p>

1.6. Draft EMP Limitations

This EMP has been drafted with the acknowledgment of the following limitations:

- This EMP has been drafted based on the Environmental Assessment (EA) conducted for proposed network tower establishment in the Goreangab area in Windhoek. **No specialist study was included as part of the environmental assessment.**
- The mitigation measures recommended in this EMP document are based on the risks/impacts in the EIA Report which were identified based on the project description as provided by the Proponent, site investigation, and public input. Should the scope of the proposed project change, the risks/impacts will have to be reassessed and mitigation measures provided accordingly.

2. EMP ROLES AND RESPONSIBILITIES

The Proponent is ultimately responsible for the implementation of the EMP. Alternatively, the Proponent may delegate this responsibility at any time, as they deem necessary, during the project phases. The roles and responsibilities of all delegates/parties involved in the effective implementation of this EMP are set out below:

Competent Monitoring authority (Ministry of Environment, Forestry and Tourism: Department of Environmental Affairs (DEA)): Responsible for enforcing compliance with the EMA, its regulations and full implementation of this EMP. The competent authority also reviews biannual reports and grants ECC renewal after 3 years following the environmental Audits.

Proponent's Representative (PR): If the Proponent does not personally manage all aspects of the planning and design, construction, operation and maintenance, and decommissioning and rehabilitation phase activities referred to in this EMP, they should assign this responsibility to a suitably qualified individual referred to in this plan as the Proponent's Representative (PR). The Proponent may decide to assign the role of a PR to one person for both phases or a PR may be appointed to manage the EMP aspects for each project phase. The PR's responsibilities include:

- 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.
- Issuing fines for contravening EMP provisions.

Construction contractor or project manager (as appropriate): This individual(s) will be responsible for the construction of the network tower as appointed by the Proponent. The contractor's responsibilities will include:

- Ensure that the relevant commitments contained in the EMP Action Plans are adhered to.
- Ensure relevant staff is trained in procedures.
- Maintain records of all relevant environmental documentation.
- Reviewing the EMP annually and amending the document when necessary.
- Issuing fines to individuals who may be in breach of the EMP provision and if necessary, removing such individuals from the site.
- Cooperate with all relevant interested and affected parties/stakeholders.
- Development and management of schedules for daily activities.

Alternatively, the Proponent may delegate an external/internal Environmental Control Officer (ECO) or Safety, Health & Environment (SHE) Officer to ensure EMP compliance throughout the project life cycle.

Environmental Control Officer (ECO) or Safety, Health & Environment (SHE) Officer: The Proponent should assign the responsibility of overseeing the implementation of the whole EMP to a designated member of staff or external qualified and experienced person, referred to in this EMP as the Environmental Control Officer (ECO) or Safety, Health & Environment (SHE) Officer. The ECO/SHE will have the following responsibilities:

- Management and facilitation of communication between the Proponent, PR and Interested and Affected Parties (I&APs) with regard to this EMP.
- Conducting site inspections (recommended frequency is monthly during the operation phase and bi-annually for the operation and maintenance) of all areas with respect to the implementation of this EMP (monitor and audit the implementation of the EMP).
- Advising the PR on the removal of person(s) and/or equipment not complying with the provisions of this EMP.
- Making recommendations to the PR with respect to the issuing of fines for contraventions of the EMP.
- Undertaking an annual review of the EMP and recommending additions and/or changes to this document.

2.1. Management of Key Potential Environmental Impacts to be managed

From the assessment conducted, the following key potential negative impacts have been identified per project phase and are summarized in **Table 4** below.

Table 3: Summary of key potential environmental impacts per project phase

	Project Phase	Potential negative impacts identified in the EA
1	Planning and Design	Design and planning failures
2	Construction	Disturbance to neighbours, health and safety, impact on fauna and flora, vehicular safety, visual and waste generation
3	Operation and maintenance	Health and safety , visual, waste and civil aviation
4	Decommissioning	Loss of better cellular network coverage

2.2. Aim of the Environmental Management Plan Actions

The aim of the management actions of the EMP is to avoid potential negative impacts where possible. Where impacts cannot be avoided, measures are provided to reduce the significance of these impacts.

Management actions recommended for the potential impacts rated in the EA carried out for the proposed network tower establishment were based on the four project phases listed below:

- Planning and Design (**Table 4**)
- Construction (**Table 5**)
- Operation and Maintenance (**Table 6**)
- Decommissioning and Rehabilitation (**Table 7**)

The responsible person(s) should assess these commitments in detail and should acknowledge their commitment to the specific management actions detailed in the phases given under the following subsections.

2.3. Phase 1: Planning and Design Phase Management Action Plans

The management action plans recommended for the Planning and Design phase are presented in **Table 5** below.

Table 4: Management action plans for the Planning and Design Phase

Environmental Feature	Impact	Management Actions	Responsible person(s) / Implementation responsibility	Timeframe (When?)
EMP training	Lack of EMP awareness and the implications thereof	<ul style="list-style-type: none"> All personal should be educated about the necessary health, safety and environmental considerations applicable to their respective works. 	Proponent: ECO	Ongoing
Structure Design	Tower design failure	<ul style="list-style-type: none"> The design standards to be applied for the network tower structure should comply with the internationally accepted public exposure guidelines. 	Proponent: Technical / Design Team	Pre-construction
Visual (sense of place)	Visual	<ul style="list-style-type: none"> The Proponent should use the camouflaged tower to cause less of a visual nuisance. All the necessary options to improve the aesthetic of the site should be considered and incorporated in the design of the tower. This should be done so that the tower blends in with the surrounding area or at least enhance it for a better appeal to the public. 	Proponent: Technical / Design Team	During this phase / pre-construction

Civil aviation	Potential civil aviation issues owing to poor planning and design	<ul style="list-style-type: none"> • The proposed tower designs and locations need to be verified, to ensure that they meet the approval of the Namibia Civil Aviation Authority (Namibia Civil Aviation Regulations (NAMCARS)) regarding the tower height and the position in the area. • Civil Aviation Standards of the International Civil Aviation Organisation (ICAO) pertaining to the network tower structure should be adhered to. • The Regulations of Namibian Aviation Act No. 74 of 1962 for setting up cellular towers in Namibia should be complied with. • The Proponent should consult with the NCAA, and if required apply for the approval or permit to erect the tower, especially that it is less than 15 km distance (according to NAMCARS) and 8 km distance as per ICAO requirements. 	Proponent: Technical / Design Team In consultation with the Namibia Civil Aviation Authority (please refer to Table 2 above for contact person)	
Employment	Labour recruitment	<ul style="list-style-type: none"> • Preference for both formal and casual works during construction and operational & maintenance work should be given to Windhoek\locals. • No recruitment should be done on site. This should be carried out at the Proponent's premises as per their recruitment policy. 	Proponent: Human Resources Department.	Pre-construction

Construction works	Appointment of construction contractor	<ul style="list-style-type: none"> • Preference for construction works should be given to Windhoek based companies. • Apart from construction work tender related site visits, appointment of construction contractors should not be done on site. This should be carried out at the Proponent's premises as per their procurement process. 	Proponent: Procurement Department	During this phase / pre-construction
Construction schedule	Appointment of contractors	<ul style="list-style-type: none"> • A convenient construction work/schedule should be prepared and be shared with the Body of Trustees who will then circulate the information to the rest of the residents. This will ensure that the residents are aware of when to expect the construction team at the proposed location. • Construction activities should be restricted to weekdays i.e. Mondays to Fridays and during working hours (8:00 - 17:00) only. 	Proponent/ Appointed Contractors	Pre-construction
EMP Implementation	Implementation agent	<ul style="list-style-type: none"> • The Proponent needs to appoint a Proponent's Representative (PR) that will act as their on-site implementing agent. This person should be responsible to ensure that the Proponent and Contractor's responsibilities are executed in compliance with relevant legislation and this EMP 	Proponent: Human Resources Department	As required during this phase

2.4. Phase 2: Construction Phase Management Action Plans

The management action plans recommended for the construction phase are presented in **Table 6** below.

Table 5: Management action plans for the Construction Phase

Environmental Feature	Impact	Management Actions	Responsible person(s) / Implementation responsibility	Timeframe (When?)
EMP training	Lack of EMP awareness and the implications thereof	<ul style="list-style-type: none"> • Employees appointed for construction work on respective infrastructure must ensure that all personnel are aware of necessary health, safety and environmental considerations applicable to their respective work. • Comprehensive induction forms a critical component during the construction and operational period. This includes the following: <ul style="list-style-type: none"> ○ Ensuring that all employees are aware of their individual impact on the environment. ○ Ensuring that preventative measures and procedures are undertaken in order to reduce the risk of a potential impact. ○ Ensuring that all workers on site are aware of the rules of conduct within the vicinity of Goreangab. 	Proponent: ECO/SHE Officer	Ongoing
Monitoring	EMP non-compliance	<ul style="list-style-type: none"> • The ECO or the Proponent/Contractor should monitor the implementation of this EMP. • The ECO(s) should inspect the site throughout the construction period and after completion. 	Proponent: ECO	Ongoing

Biodiversity	Loss of biodiversity	<ul style="list-style-type: none"> • Clear only footprint areas to maintain as much of the remaining natural vegetation on site. • During maintenance ensure that site is cleared of any alien vegetation. • No equipment should be left leaning on or on top of the site shrubs or trees during and after construction. • Environmental awareness on the importance of biodiversity preservation should be provided to the workers • Workers should refrain from killing species (big or small) that may be found on the site. • Environmental awareness on the importance of biodiversity preservation should be provided to the network tower contractors and workers. <p>With regards to the vegetation on or within proximity of site, the following mitigation measures should be implemented:</p> <ul style="list-style-type: none"> • Care should be taken when preparing the site without destroying the vegetation, when it is not necessary 	<p>Proponent: ECO</p> <p>Workers involved in this phase</p>	Ongoing
Health and Safety	Health and safety of the workers	<ul style="list-style-type: none"> • Construction workers should be trained on how to handle materials and equipment on site (if they do not already know how to) in order to avoid injuries. • Construction equipment and materials transported to site should be securely fastened to the vehicles (trucks and cars). This is to ensure that the materials and equipment do not fall off the vehicles and cause injuries to anyone while transporting them. • The contractor(s) should ensure that all personnel are provided with appropriate personal protective equipment (PPE), such as gloves, 	<p>Proponent: ECO / SHE Officer</p> <p>Workers involved in this phase</p>	Ongoing

		<p>safety boots, safety glasses and hard hats at all times during construction hours on site.</p> <ul style="list-style-type: none"> • The construction site should be equipped with "danger" or "cautionary" signs for any potential danger or risk area identified on site during construction works. • No employee should be allowed to drink alcohol prior to and during working hours as this may lead to mishandling of equipment which results into injuries and other health and safety risks. 		
Neighbours to the site	Disturbance	<ul style="list-style-type: none"> • Construction works schedule should be limited to weekdays only and between 08h00 and 17h00. This will keep the vehicle-related dust level minimal in the area. 	Proponent: ECO Construction contractor/manager	Ongoing
Waste	Environmental Pollution	<ul style="list-style-type: none"> • The construction site should be kept tidy at all times. • All domestic and general construction waste produced on a daily basis should be cleaned and contained daily. • No waste may be buried or burned on site or anywhere else. • Waste containers (bins) should be emptied after the construction and removed from site to the municipal waste disposal site. • Separate waste containers (bins) for hazardous and domestic / general waste must be provided on site. • Construction labourers should be sensitised to dispose of waste in a responsible manner and not to litter. • No waste may remain on site after the completion of the project. • Construction labourers should be sensitised to dispose of waste in a responsible manner and not to litter. • No waste may remain on site after the completion of the project. 	<p>Proponent: ECO</p> <p>Construction contractor/manager</p> <p>Workers involved in this phase</p>	Ongoing

Construction labourers		<ul style="list-style-type: none"> Construction workers will be transported, in a bus (or similar suitable passenger vehicle) to and from site. If the construction team is not allowed to use the estate toilets, portable toilets (i.e. easily transportable) should be available: No workers may reside on-site for the entire duration of the construction period. 	Proponent: ECO	Ongoing
Visual (sense of place)	Visual	<ul style="list-style-type: none"> The structure should be camouflaged 	Proponent: ECO	Ongoing
Vehicular traffic safety	Increase in local traffic flow	<ul style="list-style-type: none"> All drivers of the project vehicles should be in possession of valid and appropriate driving licenses to operate such vehicles. Vehicle drivers should adhere to the road safety rules. Project vehicles should be in a road worthy condition and serviced regularly in order to avoid accidents as a result of mechanical faults of vehicles. Vehicles drivers should not be allowed to operate vehicles while under the influence of alcohol. No heavy trucks or project related vehicles should be parked next to the residents' properties or obstruct the local traffic in any way. 	Proponent: ECO	Ongoing

2.5. Phase 3: Operation and Maintenance Phase Management Action Plans

The management action plans recommended for operations and site maintenance are presented in **Table 6** below.

Table 6: Management action plans for the Operation and Maintenance Phase

Environmental Feature	Impact	Management Actions	Responsible person(s) / Implementation responsibility	Timeframe (When?)
EMP training	Lack of EMP awareness and the implications thereof	<ul style="list-style-type: none"> ○ The Proponent employees/Maintenance team should be made aware of all necessary health, safety and environmental considerations applicable to their respective works. 	Proponent: ECO	Ongoing
Monitoring	EMP non-compliance	<ul style="list-style-type: none"> • The ECO or the Proponent should monitor the implementation of this EMP. • The ECO should inspect the site operation throughout the operational phase on a bi-annual basis (every 6 months). <p>An EMP non-compliance penalty system should be implemented on site.</p>	Proponent: ECO	Ongoing
Health and Safety	Electromagnetic Radiation (EMR) emission	<ul style="list-style-type: none"> • The Proponent should ensure that the network tower construction and its EMR are within the international standards of The Atomic Energy and Radiation Protection Act, Act 5 of 2005 and Guidelines for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (April 1998 developed by the International Commission on Non-Ionizing Radiation Protection (ICNIRP)). • The design standards to be applied for the structure should comply with the internationally accepted public exposure guidelines. • The Proponent should adopt a cautionary policies, and in particular the Precautionary Principle. This approach should be adopted in such a manner to optimize the benefits that is derived from the technology while also providing protection to 	Proponent: ECO/SHE Officer In consultation with the National Radiation Protection Authority (NRPA)	Ongoing

		<p>allay the fears of those for which the State has responsibility to protect.</p>		
		<ul style="list-style-type: none"> The National Radiation Protection Authority should be involved during this phase (operational) to assess the possible emissions from the tower. 	National Radiation Authority of Namibia	Ongoing
Health and Safety	Health and safety of the workers and general public	<ul style="list-style-type: none"> When transporting equipment and materials to and from site, these should be securely fastened to the vehicles. This is to ensure that the materials and equipment do not fall off the vehicles and cause injuries to anyone. All personnel should be provided with appropriate personal protective equipment (PPE), such as gloves, safety boots, safety glasses and hard hats at all times while on site. No employee should be allowed to drink alcohol prior to and during working hours as this may lead to mishandling of equipment which results into injuries and other health and safety risks. 	<p>Proponent: ECO/SHE Officer</p> <p>Workers involved in this phase</p>	Ongoing

Civil aviation	Civil aviation impact	<ul style="list-style-type: none"> The Proponent should ensure that no other high projections/extensions will be added on top of the tower that may compromise the aerodrome (civil aviation). In the case that the Proponent will need to increase the height of the tower or add additional infrastructure on top of the tower, prior consultations should be made with the NCAA to ensure that that the new infrastructure does not interfere with civil aviation operations. 	Proponent: Maintenance Team / Department	Ongoing
Waste generation	Environmental Pollution	<ul style="list-style-type: none"> Please refer to management action plans provided under the Construction Phase 	Proponent: ECO	Ongoing
Visual (sense of place)	Visual nuisance	<ul style="list-style-type: none"> When carrying out regular maintenance, the team should ensure that they do not in any way alter the physical appearance of the tower such that it goes against its initial design shape or colour. 	Proponent: Maintenance Team / Department	As required (when maintaining the site)
Waste	Environmental pollution	<ul style="list-style-type: none"> The maintenance team should ensure that no waste is left nor buried on site after completion of works. After every maintenance work on site, waste should be stored in designated waste bins on site, carried away and disposed of at the local landfill site. For other waste management action plans, please refer to management action plans provided under Construction Phase 	Proponent: ECO Proponent: Maintenance Team	Ongoing

2.6. Phase 4: Decommissioning Phase Management Action Plans

The management action plans recommended for closure are presented in **Table 7** below.

Table 7: Management action plans for the Closure (Decommissioning Phase)

Environmental Feature	Impact	Management Actions	Responsible person(s) / Implementation responsibility	Timeframe (When?)
Structure Decommissioning	Loss of better mobile network coverage	<ul style="list-style-type: none"> The Proponent should ensure that the mobile coverage in the area is not compromised, by putting up an alternative cellular infrastructure. 	Proponent: Planning Department	Pre-decommissioning

3. ENVIRONMENTAL MONITORING

In order to reduce the "medium" and maintain the "low" significance ratings of impacts identified and assessed in the EIA report, the following monitoring activities are recommended:

Environmental: bi-annual EMP compliance monitoring should be undertaken throughout the project cycle. The first bi-annual monitoring exercise should be done counting 6 months from the date of ECC issuance. Monitoring reports are to be compiled and submitted to the Department of Environmental Affairs (DEA) for archiving. This practice will make the ECC renewal easy when it is about to expire. Therefore, the Proponent should effectively monitor and submit the reports to the DEA. The submission is not only done for record keeping purposes, but also in compliance with the environmental legislation.

4. CONCLUSIONS

The potential negative impacts stemming from the proposed network tower establishment and associated activities were identified, assessed and mitigation measures made thereof. The mitigation measures and recommendations provided in the EIA report and management action plans provided in this document, can be deemed sufficient to avoid and/or reduce (where impact avoidance impossible) the risks to acceptable levels. EDS is therefore confident that these measures are sufficient and thus recommends that the Proponent be issued with the Environmental Clearance Certificate (ECC) to enable the construction and operational of the network tower. However, the ECC should be issued on condition that the provided management measures and action plans are effectively implemented on site and monitored. Furthermore, should the ECC be issued, the Proponent will be expected to be compliant with the ECC conditions as well as legal requirements governing network tower constructions and operations.