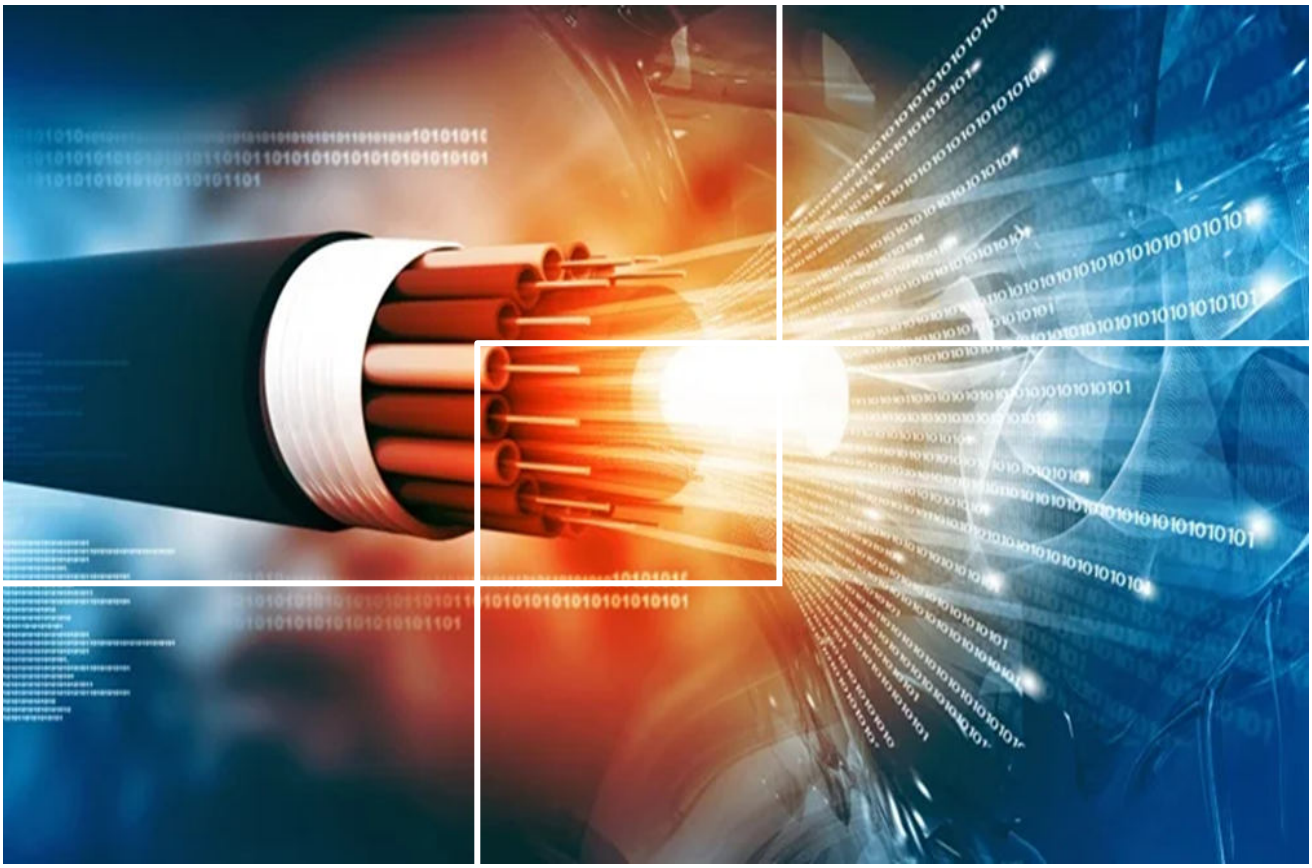

Submitted to: Paratus Telecommunications (Pty) Ltd
Attention: Mr Gerrit Pheiffer
P O Box 90140
104-106 Nickel Street
Prosperita
Windhoek
Namibia

REPORT:

UPDATED ENVIRONMENTAL MANAGEMENT PLAN FOR THE FIBRE OPTIC CABLE BETWEEN WALVIS BAY AND BUITEPOS – NAMIBIA

PROJECT NUMBER: ECC-45-526-REP-03-D

REPORT VERSION: REV 01

DATE: 22 NOVEMBER 2024

TITLE AND APPROVAL PAGE

Project Name:	Updated environmental management plan for the fibre optic cable between Walvis Bay and Buitepos – Namibia
Client Company Name:	Paratus Telecommunications (Pty) Ltd
Client Name:	Gerrit Pheiffer
Client Address:	P.O. Box 90140, Windhoek, Namibia
Client Email:	gerrit.pheiffer@paratus.africa
Client Phone Number:	+264 83 300 1000
Authors:	Diaan Hoffman, Kelly Ochs and Stephan Bezuidenhout
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ENVIRONMENTAL COMPLIANCE CONSULTANCY CONTACT DETAILS:

We welcome any enquiries regarding this document and its content. Please contact:

Environmental Compliance Consultancy
PO Box 91193, Klein Windhoek, Namibia
Tel: +264 81 669 7608
Email: info@eccenvironmental.com

Quality Assurance

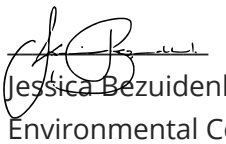
Authors:

Diaan Hoffman
Environmental Compliance Consultancy

Checked By:

Carlene Baufeldt
Environmental Compliance Consultancy

Approved By:



Jessica Bezuidenhout
Environmental Compliance Consultancy

DISCLAIMER

The report has been prepared by Environmental Compliance Consultancy (Pty) Ltd (ECC) (Reg. No. 2022/0593) on behalf of the Proponent. Authored by ECC employees with no material interest in the report's outcome, ECC maintains independence from the Proponent and has no financial interest in the Project apart from fair remuneration for professional fees. Payment of fees is not contingent on the report's results or any government decision. ECC members or employees are not, and do not intend to be, employed by the Proponent, nor do they hold any shareholding in the Project. Personal views expressed by the writer may not reflect ECC or its client's views. The environmental report's information is based on the best available data and professional judgment at the time of writing. However, please note that environmental conditions can change rapidly, and the accuracy, completeness, or currency of the information cannot be guaranteed.

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ABBREVIATIONS

Abbreviation	Description
%	percentage
ECC	Environmental Compliance Consultancy
e.g.	example
EMP	environmental management plan
ESIA	environmental and social impact assessment
I&APs	interested and affected parties
km	kilometre
km/h	kilometre per hour
Ltd.	limited
MEFT	Ministry of Environment, Forestry and Tourism
No	number
Paratus	Paratus Telecommunications (Pty) Ltd
Pty	proprietary
Reg	registration

1 INTRODUCTION

1.1 PROJECT BACKGROUND

Paratus Telecommunications (Pty) Ltd (herein referred to as Paratus of the Proponent) installed an aboveground fibre optic cable near existing railway and infrastructure along the B2, B1 and B6 road from Walvis Bay to Buitepos, Namibia, stretching approximately ~750 km. The fibre optic cable is routed underground in the towns and cities it traverses. Paratus fibre network connects the African east and west coast, from Swakopmund in Namibia to Dar es Salaam in Tanzania. There are approximately 10 000 km of fibre under Paratus management. An environmental management plan (EMP) was submitted in April 2017 to support the request for an environmental clearance certificate for the installation of the aboveground fibre optic cable along the existing railway as seen in Figure 1. This was approved, along with the environmental clearance certificate, by the Ministry of Environment, Forestry and Tourism (MEFT) on 31 May 2017.

The existing railway in the servitude of the Project has already been impacted from various activities that it has been used for and infrastructure associated with the servitude (e.g. roads, tracks, pylons) and will continue to impact the servitude and its adjacent environment(s). A vertebrate fauna and flora desktop study for the proposed Project site was conducted by Dr. Peter Cunningham in February 2017 to establish possible impacts on fauna and flora in the area prior to the installation of the Project. The study concluded that the proposed fibre optic cable development was not expected to adversely affect any unique vertebrate fauna and flora, especially due to the cable installation following existing infrastructure. Avifauna is expected to be impacted the most by the above ground fibre optic cables, due to possible collision risks.

1.2 ADDITIONS TO THE UPDATED EMP

The previous environmental management plan (EMP) compiled and submitted in April 2017 detailed the general conduct, site management and construction management, such as main works and reinstatement of the site after completion of the installation of the aboveground fibre optic cable.

For the renewal of the current environmental clearance certificate, the EMP has been updated to incorporate operational maintenance, repairs, monitoring, and decommissioning activities, along with the associated environmental management mitigation measures for the installed and existing aboveground fibre optic cable related to the Project.

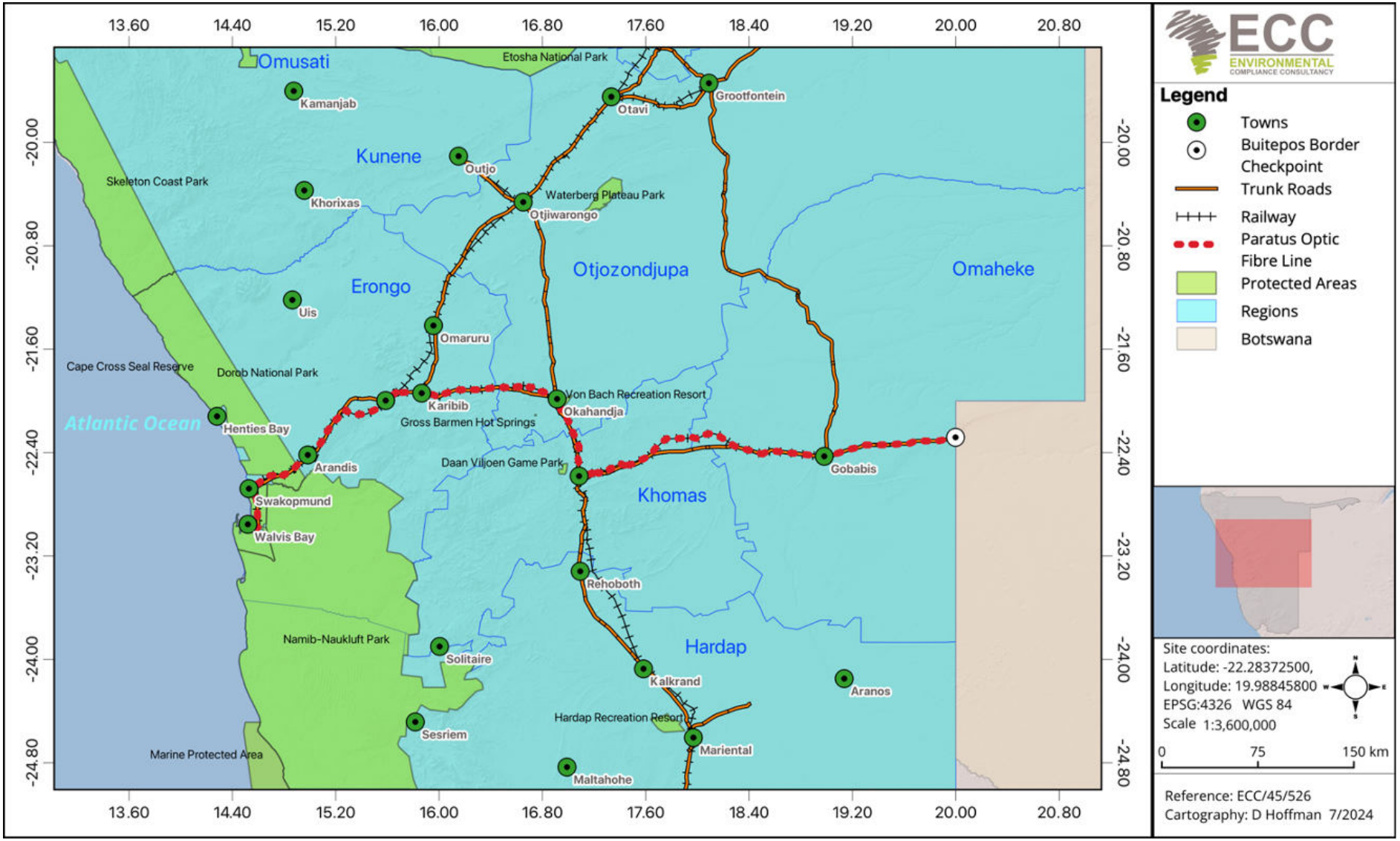

Figure 1 - Locality map of the existing Paratus Fibre optic line

1.3 ENVIRONMENTAL REGULATORY REQUIREMENTS

The Project triggers listed activities as stipulated in the Environmental Management Act, No. 7 of 2007 and its Regulations, promulgated in 2012. An environmental compliance report and an updated EMP (this report) are required to be submitted as part of the renewal application to support the decision-making process for issuing an environmental clearance certificate.

1.4 PURPOSE AND SCOPE OF THIS REPORT

The environmental management plan (EMP) provides a logical framework, mitigation measures and management strategies for the activities associated with the Project. In this way ensuring that the potential environmental impacts are avoided and/or minimised as far as practically possible and that statutory and other legal obligations are adhered to and fulfilled. Outlined in the EMP are the protocols, procedures and roles and responsibilities of the Proponent to ensure the management arrangements are effectively and appropriately implemented.

The EMP forms an appendix to the environmental compliance report and is based on the findings of the broader assessment.

This EMP is a live document and shall be reviewed at predetermined intervals, and/or updated during the ESIA process when or if the scope of work alters, or when further data or information is added. All personnel working on the Project will be legally required to comply with the requirements set out in the final EMP that is approved by the Ministry of Environment, Forestry and Tourism (MEFT).

1.5 MANAGEMENT OF THIS EMP

Paratus Telecommunications (Pty) Ltd, the Proponent, will hold the environmental clearance certificate for the Project and will be responsible for the implementation and management of this EMP. The implementation and management of this EMP, and thus the monitoring of compliance, will be undertaken through daily duties and activities, as well as monthly/bi-annual inspections, as required.

1.6 LIMITATIONS, UNCERTAINTIES, AND ASSUMPTIONS RELATED TO THIS EMP

This EMP does not include measures for compliance with statutory occupational health and safety requirements. This will be provided in the safety management plan to be developed by the Proponent.

Where there is any conflict between the provisions of this EMP and any contractor's obligations under their respective contracts, including statutory requirements (such as licences, project approval conditions, permits, standards, guidelines, and relevant laws), the contract should be amended, and statutory requirements are to take precedence.

The information contained in this EMP is based on the Project description as provided in the previous environmental management plan. Where the design or operation method is different, this EMP may require updating and potential further assessment may be undertaken.

1.7 ENVIRONMENTAL ASSESSMENT PRACTITIONER

The report has been prepared by Environmental Compliance Consultancy (Pty) Ltd (ECC) (Reg. No. 2022/0593) on behalf of the Proponent. Authored by ECC employees with no material interest in the report's outcome, ECC maintains independence from the Proponent and has no financial interest in the project apart from fair remuneration for professional fees. Payment of fees is not contingent on the report's results or any government decision. ECC members or employees are not, and do not intend to be, employed by the Proponent, nor do they hold any shareholding in the project. Personal views expressed by the writer may not reflect ECC or its client's views. The environmental report's information is based on the best available data and professional judgment at the time of writing. However, please note that environmental conditions can change rapidly, and the accuracy, completeness, or currency of the information cannot be guaranteed.

All compliance and regulatory requirements regarding this report should be forwarded by email or posted to the following address:

Environmental Compliance Consultancy
PO Box 91193, Klein Windhoek, Namibia
Tel: +264 81 669 7608
Email: info@eccenvironmental.com

2 ENVIRONMENTAL MANAGEMENT FRAMEWORK

This EMP provides measures, guidelines, and procedures for managing and mitigating potential environmental impacts, based on Project site-specific aspects. The EMP also indicates monitoring and reporting guidelines and sets responsibilities for those carrying out management and mitigation measures.

2.1 OBJECTIVES AND TARGETS

Environmental objectives and targets have been developed so that maintenance and decommissioning activities can minimise potential impacts on the environment, as far as reasonably practicable.

Environmental objectives for the Project are as follows:

- Zero pollution incidents;
- Zero poaching incidents;
- Zero complaints from the adjacent communities/ interested and affected parties (I&APs);
- Minimal waste generation; and
- Protect general area indigenous flora and fauna.

2.2 ORGANISATIONAL STRUCTURE, ROLES, AND RESPONSIBILITIES

The Proponent shall be responsible for:

- Ensuring all members of the Project team, comply with the procedures set out in this EMP;
- Ensuring that all persons are provided with sufficient training, supervision, and instruction to fulfil this requirement; and
- Ensuring that any persons allocated specific environmental responsibilities are notified of their appointment and confirm that their responsibilities are clearly understood.

Table 1 lists the roles and responsibilities allocated to different management levels in the company and specific personnel.

Table 1 – Roles and responsibilities

Role	Responsibilities and duties
Proponent	– Responsible for the overall management and implementation of the EMP; – Ensure environmental policies are drafted/updated and communicated to all personnel throughout the company; – Responsible for providing the resources required to effectively run operations and comply with the EMP; and – Appoint all managers needed to ensure effective running of operations.
Project manager	– Responsible for ensuring compliance with this EMP including overseeing the routine and non-routine maintenance work during operations, as well as the decommissioning of the aboveground and underground fibre optic cable; – Ensure all personnel are aware of the commitments made in the EMP and any other relevant regulatory requirements applicable to the Project; – Responsible for the management, maintenance and revision of the EMP; – Ensure adequate resources are made available for implementation of this EMP; – Maintain the community issues and concern register, and keep records of complaints; – Ensure that the best environmental practice is undertaken throughout the Project; and – Report any non-compliance or accidents to the regulatory authority.
Employees/contractors	– Responsible for being compliant with this EMP throughout the operations and maintenance works, in addition to: – Ensuring they have undertaken a site induction and are conversant with the requirements of this EMP; – Ensuring appropriate briefings for certain activities have been provided and fully understood; – Adherence to this EMP at all times; and – Reporting of any operations and conditions that deviate from the EMP or any non-compliant issues or accidents to the environment manager and site manager/contractor.

2.3 CONTRACTORS

Any contractors hired during maintenance activities in the operational phase shall be compliant with this EMP and shall be responsible for the following:

- Undertaking activities in accordance with this EMP as well as relevant policies, procedures, management plans, statutory requirements, and contract requirements.
- Implementing appropriate environmental and safety management measures.
- Reporting of environmental issues, including actual or potential environmental incidents and hazards, to the Site manager and/or Project manager.
- Ensuring appropriate corrective or remedial action is taken to address all environmental hazards and incidents reported by employees and subcontractors.

2.4 EMPLOYMENT

The Proponent and all contractors shall comply with the requirements of the Republic of Namibia's regulations for labour, health and safety, and any amendments to these regulations. The following shall be complied with:

- In liaison with local government and community authorities, the Proponent shall ensure that local people have access to information about job opportunities and, where they have the prerequisite skills and experience, are considered first for maintenance contract employment positions.
- The number of job opportunities shall be made known together with the associated skills and qualifications.
- The maximum length of time the job is likely to last for shall be indicated.
- Should foreign workers be hired, the Proponent shall ensure that they have a valid work permit at all times.
- Every effort shall be made to recruit from the group of unemployed workers living in the surrounding area for positions that entail unskilled work.

2.5 REGISTER OF ENVIRONMENTAL ASPECTS AND IMPACTS

An environmental review of the Project has been completed to identify all the commitments and agreements made. A list of environmental activities, aspects, impacts and associated commitments has been compiled, which details deliverables including measures identified for the prevention of damage to the environment during the operational and decommissioning phase(s).

Table 2 and Table 3 provides a list of environmental aspects and impacts, as well as associated mitigation (as derived from updated activities) and monitoring measures, and the roles responsible for compliance. It will be subject to regular review by the Project manager and updated when necessary. The Project manager and Site manager will use this register to undertake monthly/bi-annual inspections (section 4to ensure the Project is compliant with this EMP.

Table 2 – A list of environmental aspects and impacts during the operations (maintenance, repairs and monitoring)

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
Community	Maintenance and repairs work may increase waste, nuisance complaints/ social discomfort or anxiety	– Contractors/employees shall: o Always respect the property and rights of local inhabitants i.e. the villages and their traditional leadership and shall treat all such persons with courtesy; o Inform communities prior to accessing areas for maintenance and/or repairs that may be frequented by local communities; and o Engage with the surrounding communities and/ or all stakeholders, especially the nearest neighbours about project related activities. – A complaint register should be kept, maintained and regularly updated by any contactor or employees on site.	– Monthly	– Project manager – Employees
Safety and emergency	Accidental and uncontrolled fire	– Equipment to be well maintained and serviced regularly and documented proof kept; – Restrict movements of people to areas of activities only; – Train people about firefighting and documented proof kept; – No open fire outside designated areas; – Firefighting equipment should be available and deployed in the event of an emergency; – Proper fire hazard identification signage to be placed in areas that store flammable material (i.e. hydrocarbons and gas bottles); and	– Monthly	– Project manager – Employees

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
		– Avoid potential sources of ignition by prohibiting smoking in and around facilities.		
	Possible injury or death to animals	– Avoid driving randomly through the area (i.e. "track discipline"), but rather stick to permanently placed roads/tracks. This would minimise the effect on localised potentially sensitive flora and habitats in the area; – Avoid having to create new tracks for ongoing maintenance and inspections; and – Stick to speed limits that are established to result in fewer faunal road mortalities as well as less dust pollution. Speed humps could also be used to ensure the speed limit.		
Waste generation	Solid waste produced during maintenance and repair activities	– Good housekeeping (no littering); – Training and toolbox talks; – Put in place appropriate waste management mechanisms for solid waste; and – The collected solid waste should be disposed at an approved waste site.	– Monthly	– Project manager – Employees
Air quality	Increased dust levels	– All vehicles and machinery / equipment to be shut down or throttled back between periods of use; – Use existing access roads and tracks where possible; – Apply dust suppression where possible; and – Maintaining speed limits within gravel road areas that reduce dust.	– Monthly	– Project manager – Employees

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
Noise	Potential noise during maintenance and repairs during operations	– Noise should be minimised during maintenance/repair works. The following measures should apply: o Limit working hours to 7 am to 5 pm weekdays and 7 am until 1 pm on Saturday; o Regular maintenance of equipment; o All equipment to be shut down or throttled back between periods of use; and o Hearing protection should be provided to employees operating equipment which produces excessive noise.	– Monthly – Bi-annually – Annually	– Employees
Procurement of goods and services	Sourcing of goods and services from local or regional business could increase economic benefits	– Provide opportunities to local and regional enterprise to participate in tender processes; and – Where possible, procurement of goods and services should be from the local or regional businesses.	– Procurement policy	– Project manager – Financial manager
Biodiversity	Potential damage or disturbance to biodiversity during maintenance of the fibre optic cable.	The Nature Conservation Ordinance Act No. 4 of 1975 and its Regulations, Controlled Wildlife Products and Trade Act 9 of 2008 and the Animals Protection Act 71 of 1962 should be closely followed with regard to any encounters with wildlife when working on fibre optic cables. – Wildlife encountered should be ethically treated; – Prohibit illegal hunting, consumption and possession of game and game products (i.e., illicit trade of pangolins for scales); – Police and MEFT should be notified of any illegal hunting incident involving sensitive or protected species or if	– Monthly, annually or daily (with active maintenance or construction).	– Project manager – Employees – Contractors

Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
		such an animal is found on someone or near working areas / camps; – Snares found near infrastructure should be removed and destroyed; and – All staff should be informed in writing about the consequences with regards to rules that are broken (i.e., possession of a firearm, illegal hunting, stock theft and removal of protected species etc.).		
	Potential avian collisions with the aboveground fibre optic cable.	– Recommended to keep a record of all avifauna collisions and name of species or photographic evidence with dates and locations; and – If collisions increase additional bird deterrent measures could be implemented like Bird Flight Diverters (i.e., coils, flappers, etc.).	– Quarterly or annually or daily (with active maintenance or construction).	– Project manager

Table 3 - A list of environmental aspects and impacts during the decommissioning phase

Aspects	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
Decommissioning	Reinstatement and rehabilitation	– Upon completion of the Project, the Project manager should ensure the reinstatement of the Project site to a state that it was in before commencement of works, this will include the removal of all fibre optic cable and associated, infrastructure, fences and signage. Affected infrastructure such as roads, poles, culverts and small bridges disturbed shall be restored to their original condition; – The Proponent/Project manager should ensure that any trenches / holes created during the removal of material backfilled correctly to avoid minimise the risk of collapse/subsidence afterwards; and – The vertebrate fauna and flora specialist study conducted in 2017 should be consulted during the decommissioning phase and mitigations included should be applied during this phase.	– Annually	– Project manager

3 COMMUNICATION AND TRAINING

To ensure potential risks and impacts are minimised it is vital that personnel are appropriately informed and trained on how to properly implement the EMP. It is also important that regular communications are maintained with stakeholders (if applicable) and made aware of potential impacts and how to minimise or avoid them. This section sets out the framework for communication and training in relation to the EMP.

3.1 COMMUNICATIONS

During operational and decommissioning activities, the Project manager and Site manager shall communicate site-wide environmental issues to the Project team through the following means (as and when required):

- Site induction;
- Audits and site inspections;
- Toolbox talks, including instruction on incident response procedure; and
- Briefings on key Project-specific environmental issues, like feedback on complaints.

This EMP shall be distributed to the operational team, including any contractors, and to ensure that the environmental requirements are adequately communicated. Key activities and environmentally sensitive operations will be highlighted to workers and contractors.

3.2 ENVIRONMENTAL EMERGENCY AND RESPONSE

An emergency is any abnormal event, which demands immediate attention. It is any unplanned event, which results in the temporary loss of management control at site, but where functional resources can manage the response. An emergency response plan document will be put in place that manages the response in relation to emergencies including environmental emergencies. Table 4 contains a list of numbers to be contacted in case of an emergency.

Table 4 - Emergency contact details

Town	Ambulance	Police	Fire brigade
Walvis Bay	+264 64 205443	+264 64 10111	+264 64 203117
Swakopmund	+264 64 405731	+264 64 10111	+264 64 4104111
Okahandja	+264 62 503030	+264 62 503014	+264 62 501051
Windhoek	+264 61 211111	+264 61 10111	+264 61 211111
Gobabis	+264 62 562275	+264 62 10111	+264 62 566666

3.3 COMPLAINTS HANDLING AND RECORDING

Any complaints received verbally by any personnel on the Project site shall be recorded by the receiver including:

- The name of the complainant;
- The contact details of the complainant;
- Date and time of the complaint; and
- The nature of the complaint.

The information shall be given to the Project manager, who is overall responsible for the management of complaints. The Project manager shall do the following:

- Inform the Site manager of issues, concerns, or complaints;
- Maintain a complaint register that requires details of the complaint; and
- Provide a written response to the complainant of the results of the investigation and action to be taken to rectify or address the matter(s). Where no action is taken, the reasons why are to be recorded in the register.

The workforce shall be informed about the complaints register, its location and the person responsible, to refer residents or the public who wish to lodge a complaint. The complaints register shall be kept for the duration of the Project and will be available for government or public review upon request.

3.4 TRAINING AND AWARENESS

All personnel working on the Project shall be competent to perform tasks that have the potential to cause an environmental impact. Competence is defined in terms of appropriate education, training and experience.

3.5 SITE INDUCTION

All personnel involved in the Project shall be inducted to the site with specific environmental and social awareness training, and health and safety issues. The environmental and social awareness training shall ensure that personnel are familiar with the principles of this EMP, and the environmental impacts associated with their activities, the procedures in place to control these impacts and the consequences of departure from these procedures. The Project manager shall ensure a register of completed training is maintained.

The site induction should include, but is not limited to the following:

A general site-specific induction that outlines:

- What is meant by “environment” and “social” in the EMP?
- Why the environment needs to be protected and conserved?
- How can construction activities impact the environment?
- What can be done to mitigate against impacts?

The inductee's role and responsibilities concerning implementing the EMP:

- The site’s environmental rules;
- Details of how to deal with, and who to contact should any environmental problems occur;
- The potential consequences of non-compliance with this EMP and relevant statutory requirements; and
- The role of responsible people working on the Project.

4 REPORTING, COMPLIANCE AND ENFORCEMENT

4.1 ENVIRONMENTAL PERFORMANCE MANAGEMENT

Th current summary of a register of environmental aspects and impacts per activity, identifies mitigation and monitoring measures, as well as the roles responsible for execution. The Project manager and site manager will use this register to undertake monthly/bi-annual inspections to ensure the Project is compliant with this EMP.

4.2 OPERATIONS: ENVIRONMENTAL INSPECTIONS AND COMPLIANCE MONITORING

Bi-annual inspections of the associated infrastructure will be managed and undertaken by the Project manager. All infrastructure will be inspected to ensure that the equipment is operating as per specification, no damage has been caused, and rust has not occurred. Any non-conformance will be recorded, including the following details: a brief description of non-conformance; the reason for the non-conformance; the responsible party; the result (consequence); and the corrective action taken and any necessary follow up measures required.

4.3 REPORTING

There will be a requirement to ensure that any incident or non-compliance, including any environmental issue, failure of equipment or accident, is reported to the Project manager whilst on the same shift.

4.4 NON-COMPLIANCE

Where it has been identified that works are not compliant with this EMP, the Project manager will implement corrective action to the extent that the works return to being compliant as soon as possible. In instances where the requirements of the EMP are not upheld, a non-conformance and corrective action notice will be produced. The notice will be generated during the inspections and the Project manager will be responsible for ensuring a corrective action plan is established and implemented to address the identified shortcoming.

5 IMPLEMENTATION OF THE EMP

This environmental management plan:

A. Has been prepared according to a contract with the Proponent
B. Has been prepared based on information provided to ECC up to October 2024
C. Is for the sole use of the Proponent, for the sole purpose of an EMP
D. Must not be used (1) by any person other than the Proponent or (2) for any purpose other than an EMP
E. Must not be copied without the prior written permission of ECC