



Submitted to: Paratus
Telecommunications (Pty) Ltd
Attention: Mr. Gerrit Pheiffer
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REPORT:

COMPLIANCE REPORT FOR THE UNDERGROUND FIBRE OPTIC CABLE ON THE EXISTING B8 ROAD SERVITUDE BETWEEN KATIMA MULILO AND NGOMA, ZAMBEZI REGION, NAMIBIA

PROJECT NUMBER: ECC-45-527-REP-02-D

REPORT VERSION: REV 01

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TITLE AND APPROVAL PAGE

Project Name: Compliance report for the underground fibre optic cable on the

existing B8 road servitude between Katima Mulilo and Ngoma,

Zambezi Region, Namibia

Client Company Name: Paratus Telecommunications (Pty) Ltd

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Ministry Reference: APP-004661

Status of Report: Final for Government Submission

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Review Period NA

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Paratus Telecommunications (Pty) Ltd

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ABBREVIATIONS

Abbreviation	Description
CLO	Community Liaison Officer
DEA	Directorate of Environmental Affairs
ECC	Environmental Compliance Consultancy
ECC	environmental clearance certificate
EIA	environmental impact assessment
EMP	environmental management plan
ICNIRP	Commission of Non-Ionizing Radiation Protection
IEEE	Institute of Electrical and Electronics Engineers
IFC	International Finance Corporation
km	kilometres
Ltd.	limited
m	metre
MEFT	Ministry of Environment, Forestry and Tourism
MSDS	material safety data sheets
No	number
OHS	Occupational Health and Safety
PM	particulate matter
PPE	personnel protective equipment
Pty	proprietary
Reg	registration
SDWAN	software defined wide area network
WHO	World Health Organization



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1 INTRODUCTION

1.1 BACKGROUND INFORMATION

Paratus Telecommunications (Pty) Ltd (herein referred to as the 'Proponent' or 'Paratus') is a multinational organisation and Africa's largest infrastructure network, offering comprehensive satellite services for almost 20 years. Paratus provides fibre, wireless, satellite and software-defined wide area network (SDWAN) solutions are advanced enough to support customers, ranging from personal use to large enterprises.

Paratus fibre network connects the African east and west coast, from Swakopmund in Namibia to Dar es Salaam in Tanzania. There is current approximately 10 000 km of fibre under Paratus management.

An environmental management plan (EMP) (Appendix A) was submitted in June 2017 to the Ministry of Environment, Forestry and Tourism (MEFT), to support the application for an environmental clearance certificate for the proposed installation of an underground fibre optic cable along the existing servitude stretching approximately 70.1 km. The EMP was approved for the Project, in line with the approved environmental clearance certificate (Appendix B).

The EMP submitted in 2017, details the general conduct and site management, construction management and reinstatement of the site after completion of the installation of the underground fibre optic cable. A new and updated EMP (Appendix C) has been produced for the operations (maintenance and repairs) and decommissioning activities which includes the rehabilitation of the area when the underground fibre optic cable is no longer in use.

Figure 1 provides a locality map of the existing underground fibre optic cable between Katima Mulilo and Ngoma in the Zambezi Region, Namibia.



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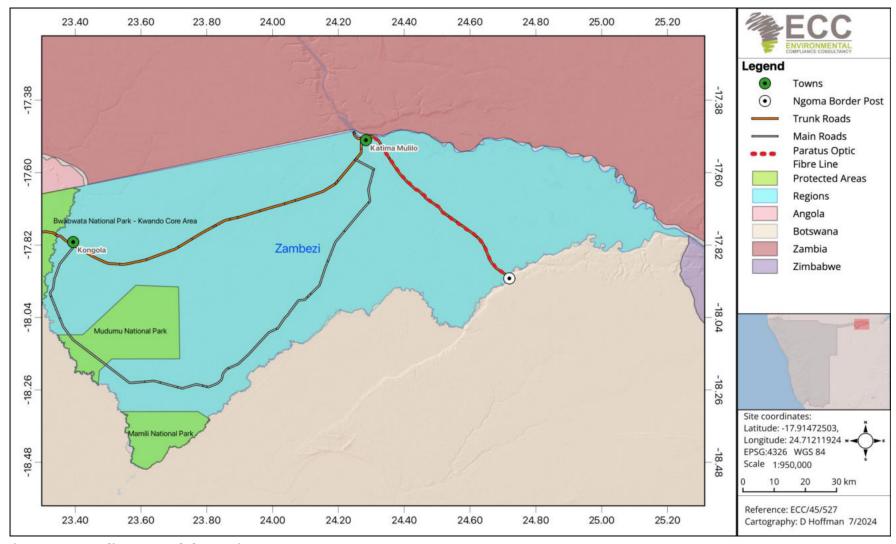


Figure 1 – Locality map of the Project



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1.2 Purpose of this document

Environmental Compliance Consultancy (ECC) has been engaged by Paratus, to prepare the application to renew the environmental clearance certificate for the fibre optic cable between Katima Mulilo and Ngoma, Zambezi Region, Namibia. As part of this application, an environmental compliance desktop audit has been undertaken to determine the status of compliance with the EMP from July 2017 to July 2024.

1.3 Proponent details

The Proponent's details are set out in Table 1.

Table 1 - Proponent details

Contact	Postal Address	Email Address	Telephone
Mr. Gerrit Pheiffer Manager: Project & Fiber Planning	P.O. Box 90140 Windhoek Namibia	gerrit.pheiffer@paratus.africa	Tel: +264 83 300 1000

1.4 Environmental assessment practitioner

Environmental Compliance Consultancy (ECC) (Reg. No. 2022/0593) has prepared this renewal report and on behalf of the Proponent.

This report has been authored by employees of ECC, who have no material interest in the outcome of this report, nor do any of the ECC team have any interest that could be reasonably regarded as being capable of affecting their independence in the preparation of this report. ECC is independent from the proponent and has no vested or financial interest in the project, except for fair remuneration for professional fees rendered based upon agreed commercial rates. Payment of these fees is in no way contingent on the results of this report or the assessment, or a record of decision issued by Government. No member or employee of ECC is, or is intending to be, a director, officer, or any other direct employee of The Proponent. No member or employee of ECC has, or has had, any shareholding in the Proponent.

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

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2 BACKGROUND TO THE PROJECT

Paratus installed an underground fibre optic cable on the existing servitude along the B8 road from Katima Mulilo to Ngoma, Namibia, stretching ~70.1 km. A vertebrate fauna and flora desktop study for the proposed Project site was conducted by Dr. Peter Cunningham to establish possible impacts on fauna and flora phenomenon in the area prior to the installation project. The exact right of way will be passing through an already degraded servitude, such that there will be no direct impact to fauna and flora in the area. Additionally, a letter of consent was granted by Roads Authority (Appendix D).

The EMP is the binding document to which a clearance certificate is granted to a Proponent to carry out a proposed activity. This document is subjected to periodic auditing as the activities transition throughout the Project phases. The EMP is audited to monitor the progress of the Project and ensure that all measures stipulated in the document are met and effectively adhered to as required by the Department of Environmental Affairs (DEA). The EMP has been updated to reflect the current Project activities.

2.1 RENEWAL ACTIVITIES

The following is the activities associated with the operational and decommissioning stages of the underground fibre optic cable that could potentially have an impact on the biophysical and social environments:

- Operations and associated activities of the installed fibre optic cable; and
- Decommissioning phase reinstatement and rehabilitation



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3 ENVIRONMENTAL COMPLIANCE AUDIT

3.1 SITE ACTIVITIES

3.1.1 ACTIVITIES CARRIED OUT FOR THE PERIOD OF JULY 2017 TO JULY 2024

The following activities were undertaken for the period July 2017 – July 2024:

- Installation of the fibre optic cable;
- Removal of all temporary works; and
- Restoration and reinstatement of the affected environment in the appropriate manner.

3.2 Environmental management plan and auditing

The approved EMP covers all adverse environmental impacts, including any additional potential impacts that may result from the Paratus fibre optic cable operations and closure between Katima Mulilo and Ngoma. The EMP provides the technical details for each mitigation, monitoring and institutional measure, including the impact(s) to which it relates and the conditions when required, together with designs, equipment descriptions and operating procedures as granted.

3.3 COMPLIANCE AUDIT FINDINGS

This section outlines the findings of environmental audits (physical or desktop) during the period of review of the Paratus underground fibre optic cable between Katima Mulilo and Ngoma. It addresses obligations in terms of the key Acts that govern the activities on site, the commitments made in the EMP, and present the findings and recommended corrective actions where applicable (Table 2, Table 3 &

Table 4).

The EMP therefore:

- Identifies all construction activities that could cause environmental damage (aspects and potential impacts) and provides a summary of actions required;
- Identifies institutions responsible for ensuring compliance with the EMP and provides their contact information;
- Provides standard procedures to avoid, minimise and mitigate the identified negative environmental impacts and to enhance the positive impact of the proposed activities on the environment;



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- Forms a written record of procedures, responsibilities, requirements and rules for contractor/s, their staff and any other person who must comply with the EMP;
- Ensure zero pollution incidents; protect local flora, fauna, and water resources; and water use and other natural resources effectively and efficiently;
- Provides a monitoring and auditing programme to track and record compliance and identify and respond to any potential or actual negative environmental and social impacts;
- Provides a monitoring programme to record any mitigation measures that are implemented;
- Ensure that regular environmental audits are carried out by an experienced environmental control officer where appropriate; and
- Once operations have ceased, any impacts shall be rehabilitated.

3.4 ISSUES OF NON-COMPLIANCE

No issues of non-compliance were identified.



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4 EMP COMPLIANCE AUDIT

Table 2 - General conduct and site management EMP compliance audit

Receptors	Potential impacts	Management/mitigation measures	Compliance	Comments
Landscape,	Campsite	The Paratus appointed contractor shall select campsites and lay	Compliant	 The Proponent
biophysical	selection and	down depots along the Katima Mulilo-Ngoma B8 road servitude		ensured
and social	management	only at specifies locations that minimize the potential for social and		campsite
environment		ecological impacts. In order to minimize conflict between local		selection and
		inhabitants and construction workers campsites shall not be		management
		located within or in close proximity to main population centres or		prior to
		villages, this will also be done to minimise in migration of job-		construction
		seekers from their villages to the construction workers' camps. The		occurred as per
		contractor shall comply with all laws and regulations in Namibian		the EMP.
		relevant to the project construction activities concerning water		
		provision, sanitation, wastewater discharge and solid waste		
		disposal.		
		- The contractor shall not locate campsites in any area in which		
		vegetation is pristine, nor within 200 m of any watercourse, pan or		
		other wetland as defined in this report, nor where threatened		
		plants or animals occur, nor in any area that could cause nuisance		
		or safety hazards to surrounding inhabitants or the general public.		
		Prior to the commencement of construction, the Contractor shall		
		prepare a method statement for each proposed campsite which		
		contains, but is not limited to, details of:		



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	Potential	atus Telecommunio	- (-5),	
Receptors	impacts	Management/mitigation measures	Compliance	Comments
	-	Site location and layout;		
		o Topsoil management;		
		Cuts and fills;		
		 Waste management, as detailed below in Section 3.2; 		
		 Management of polluted runoff; 		
		o Erosion control;		
		o Fencing;		
		 Management of hazardous materials; 		
		o Water supply;		
		 Management of bush fire risk; and 		
		o Reinstatement		
		o The above documentation shall be submitted to Paratus for		
		review prior to establishment on site		
		The above documentation shall be submitted to Paratus for review		
		prior to establishment on site.		
		- The Contractor shall prohibit visits from local people to the		
		campsite unless planned and approved and shall restrict, as far as		
		possible, the access of contract personnel into local villages.		
		The contractor shall avoid and/or limit the use of lights during		
		nocturnal exploration activities as this could influence and/or affect		
		various nocturnal species – e.g. bats and owls, etc., hence there		
		should be use of focused lighting for least effect.		
		- The Contractor shall be prohibited from recruiting workers at the		
		·		
		camp.		



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Receptors	Potential impacts	Management/mitigation measures	Compliance	Comments
		- The Contractor shall organize a recreational area inside the base camp to promote pastime activities and social interaction between workers.		
Waste management	Waste pollution	 The Contractor shall prepare a waste management plan and obtain all necessary Namibian Government approvals for the local disposal of waste. The Waste Management Plan shall comply with the regulations' requirements as well as the aspects mentioned in the current section and must be submitted to the Proponent for approval prior to submission to responsible local Government Authorities. The required information for the waste management comprises the following: Waste management operations location; Identification and classification of all types of waste to be handled, their origin and envisaged quantities; Quantities and characteristics of final products; Facilities description, including storage areas; Identification of devices, machinery and all equipment mentioning the primary sources of noise and vibrations; Qualitative and quantitative characterization of liquid and gas effluents, as well as the waste generated by activities; 	- Compliant	- A waste management plan was provided and made available on-site during construction.



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	Potential		· ,, · · ·	
Receptors	impacts	Management/mitigation measures	Compliance	Comments
	Impacts	Description of waste minimization, reuse and recycling		
		measures;		
		 Waste disposal destination and local storage conditions 		
		when applicable;		
		 Proof document of acceptance from the planned waste 		
		receiver;		
		 Description of environmental measures envisaged to 		
		minimise, monitor and treat liquid effluents, indication final		
		discharge site;		
		Organic (biodegradable) domestic waste generated at the base		
		camp and fly camps can be buried in purpose-built pits, as long as		
		approved by the Authorities and done according to the Namibian		
		Waste Management Regulations. The pits must have a temporary		
		cover, while in operation and, upon work completion, shall be		
		covered with topsoil. Alternatively, the waste can be incinerated at a		
		nearby incinerating facility such as Katima Mulilo State Hospital,		
		subject to negotiations and agreement with the owners of the		
		incinerator plant.		
		– Non-organic (non-biodegradable) waste, such as glass, metal or		
		plastic shall be collected and securely and separately stored (by		
		category), prior to removal and transportation by a professional		
		waste handling company.		



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_	Potential			
Receptors	impacts	Management/mitigation measures	Compliance	Comments
		The Contractor shall set up a system of solid waste control and		
		removal. Domestic waste shall not be left uncontained. Temporary		
		storage shall be managed to keep out unauthorised people and		
		animals. Bins shall be emptied regularly. Waste storage areas shall		
		be kept clean and tidy at all times. Littering and the random discard		
		of solid waste on the site shall be prevented.		
		- All hazardous material and wastes (including medical waste, if		
		necessary) shall be managed in a safe and responsible manner so		
		as to prevent contamination of soils, pollution of water and/or harm		
		to people or animals as a result of the use of these materials and		
		according to Namibian Waste Management Regulations.		
		- Hazardous and non-hazardous waste shall be stored separately at		
		all times.		
		All hazardous waste shall be stored, handled, transported and		
		disposed according to Namibian Waste Management Regulations.		
		Amongst other aspects, the following must be considered:		
		o Hazardous waste shall be placed in drums with sealable lids and		
		labelled accordingly.		
		o Transport within the construction camp areas may be performed by		
		the Contractor, as long as the correct means of transportation is		
		ensured; and		
		o Transport on public roads and outside the construction area must		
		be performed by a certified waste service provider.		



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Receptors	Potential impacts	Management/mitigation measures	Compliance	Comments
Hazardous	Fuels and	- The Contractor shall comply with all applicable Namibian laws,	– Compliant	– The use,
substance	Lubricants	regulations, permit and approval conditions and requirements		handling and
management		relevant to the storage, use, and proper disposal of hydrocarbons.		storage of any
		The Contractor shall not locate fixed fuel storage tanks in any		hazardous
		location other than at approved plant yards or campsites that have		substances were
		provision for safe storage facilities.		done according
		- The Contractor shall locate any fuel storage facilities with a capacity		to the Namibian
		greater than 1000 litres on flat or gently sloping ground and shall		laws and
		berm the surrounding area to contain at least 110% of the total		regulations with
		capacity of the storage containers. The berms and the floor of the		the relevant
		bermed area shall be of impermeable material or shall be lined to		licences and
		ensure that petroleum products cannot escape.		permits
		The Contractor shall enclose all fixed fuel storage with a security		obtained.
		fence which has a lockable gate. Signs indicating 'no smoking' 'no		
		naked flames' and 'danger' shall be provided in appropriate		
		languages, and are to conform to a recognised standard such as the		
		SABS Code 1186 or equivalent Namibian standards. The capacity of		
		the tank and the product within the tank shall be displayed using		
		the emergency system detailed in SABS 0232 or similar		
		international code.		
		The Contractor shall not construct fixed fuel storage or service or		
		refuel any vehicle or equipment within 100 metres of any		
		settlement, within 100 meters of a watercourse, pan or wetland,		
		within a floodplain, or where there is the potential for spilled fuel to		



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Potential				Lations (Pty) Ltd
Receptors	impacts	Management/mitigation measures	Compliance	Comments
		rapidly enter a watercourse. Fixed fuel storage shall always be		
		located within the base camp or fly camps.		
		- The Contractor shall take all reasonable precautions to prevent fuel		
		and lubricant spills during the course of construction. To this end,		
		the Contractor shall ensure that:		
		 There is no overfilling of diesel bowsers and equipment tanks; 		
		 Regular audits are performed to verify that no leaking or defective equipment is brought onto site; 		
		 Any oils or lubricants discharged during routine vehicle servicing on 		
		site are captured using drip trays, containers or other appropriate containment measures; and		
		o Equipment is maintained regularly to ensure that no fuel, oil or		
		hydraulic leaks occur.		
		- The Contractor shall ensure that all vehicles or equipment that are		
		required to cross rivers, wetlands or floodplains are cleaned of oil,		
		grease and other contaminants damaging to aquatic life.		
		The Contractor shall ensure that there is sufficient absorbent		
		material available on site to manage accidental spills and an		
		inventory of this equipment and its location on site shall be		
		prepared and included in the method statement.		
		- The Contractor shall ensure that fuelling and repairs are carried out		
		or are supervised by personnel familiar with spill containment and		
		clean up procedures.		



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Receptors	Potential impacts	Management/mitigation measures	Compliance	Comments
		 The Contractor shall immediately clean up accidental spillages of fuels and oils, or other hazardous substances, and shall report the incident to the PSC/Proponent and the measures taken to remediate the spill problem. Oil or petrol spills shall be bio- remediated according to approved methods as per legislative regulations and standards. 		
Groundwater and surface water	Sewerage waste management	 The Contractor shall use portable toilets to avoid faecal pollution around camp sites and at fly camps required. These shall not be placed within 100 meters of a known source of ground or surface drinking water or near river systems, wetlands or floodplains. Any release of waste effluent shall comply with Namibian Water Resources Management Act, 2004. 	– Compliant	- The Proponent adhered to this component of the EMP.
	Polluted site drainage	 The Contractor shall comply with all applicable Namibian laws such as the Namibian Water Resources Management Act, 2004, guidelines on Building Systems for Water Distribution and Waste Water Drainage and applicable Water Licenses. The Contractor shall prevent the discharge of any pollutants from the site into the surrounding environment, such as cements, concrete, lime, chemicals and fuels, as well as untreated sewage effluent. Any effluent disposed from site shall meet Namibian guidelines on Environmental Quality and Effluent quality. The Contractor shall prevent accelerated erosion from construction campsites and any other area affected by the Works. In the event 	- Compliant	- The Proponent complied with all applicable Namibian laws related to water resources.



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Receptors	Potential impacts	Management/mitigation measures	Compliance	Comments
		that erosion is initiated during the course of the Works as a result of construction activities, the necessary steps to prevent further erosion and sedimentation shall be taken.		
	Water supply and abstraction	 The Contractor shall obtain all necessary permissions and licences for water abstraction for use at the base camps and construction areas. The Contractor shall prepare a method statement detailing any proposed sources of water required on site during construction for review and approval by the proponent prior to implementation. The Contractor shall obtain all necessary permissions and licences for this water abstraction. 	– Compliant	- The Proponent complied with all applicable Namibian laws related to water resources.
Safety and emergency	Uncontrolled fires and fire prevention	 The Contractor shall take all necessary precautions to prevent the ignition and spread of fires caused either deliberately or accidentally as a result of the work being performed. The Contractor shall prepare a Method Statement for fire prevention and emergency management as a part of the Environmental Plan to be submitted to the Paratus and the Environmental Auditor prior to establishment on site. The method statement shall include, but shall not be limited to, the following: Sources of fire risk; Procedures to be followed to minimise the risk of accidental bush fires caused by any activity related to the Works; Procedures to be followed to control an accidental bush fire; 	- Compliant	- The Proponent adhered to this component of the EMP.



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Receptors	Potential	Management/mitigation measures	Compliance	Comments
Receptors	impacts	 Firefighting equipment that will be maintained on site and deployed in the event of an emergency. Open fires shall be prohibited except in designated areas. Employees shall be briefed of the risks and potential consequences of starting fires. Employees shall also be warned of the risks of careless disposal of burning cigarette butts. The Contractor shall provide firefighting equipment at specified localities on the Work site to meet any emergency resulting from a fire. This equipment shall include, but not be limited to, fire extinguishers, fire resistant clothing for fire fighters. 	Compliance	Comments
	Emergency preparedness and response plan	 The Contractor shall develop an emergency preparedness and response plan that will enable rapid and effective response to all types of environmental emergency in accordance with recognised international standards. This Plan shall be submitted to Paratus for approval prior to the commencement of construction activities. 	- Compliant	- The Proponent ensured an emergency preparedness and response plan was developed for the installation of the fibre optic cable.
Terrestrial environment and ecology	Introduction of invasive alien plants	 A common method of inadvertently spreading invasive weeds in the Zambezi area such as the Kariba weed, and other aquatic and terrestrial weeds is by means of vehicles and may carry the weed or 	– Compliant	 The Proponent adhered to the mitigation



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Potential			Tus refeconfindinca	
Receptors	impacts	Management/mitigation measures	Compliance	Comments
		weed spores with them. To avoid such incidences the contractor		measures of the
		shall ensure that all heavy vehicles and equipment that enters the		EMP.
		site for the first time is washed down using high-pressure water		- The mitigation
		containing a contact herbicide suitable for the elimination of		measures
		invasive species and weeds. Thorough checks shall be made to		provided in the
		ensure that no weed is clinging to the underside of such vehicles		biodiversity
		and that the herbicide reaches all the more inaccessible areas of		specialist study
		the vehicle where the weed could be harboured.		was adhered to.
		 The contractor should avoid introducing ornamental plants, 		
		especially potential invasive alien species, as part of the landscaping		
		of the camp sites, etc., but rather use localised indigenous species,		
		should landscaping be attempted, which would also require less		
		maintenance (e.g. water);		
		- Remove all invasive alien species on route - e.g. <i>Opuntia</i> spp. This		
		would not only demonstrate environmental commitment, but also		
		actively contribute to a better landscape.		
	Trespassing,	- This section is regulated by the Forest Act, 2001 (Act No. 12 of 2001),	- Compliant	- The Proponent
	poaching and	Controlled Wildlife Products and Trade Act (Act 9 of 2008) and the		adhered to this
	protection of	Nature Conservation Ordinance Act (Act no. 4 of 1975).		component of
	plants and	The contractor shall prohibit and actively monitor and prevent		the EMP.
	wildlife	poaching or harassment of wild animals by employees as well as		
		buying and consumption of game meat. Any employee found		
		poaching shall be dismissed.		



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Receptors	Potential	Management/mitigation measures	Compliance	Comments
	impacts			
		- Consumption of game meat inside the contractor's facilities shall be		
		prohibited and discouraged outside the camp boundaries also.		
		At the start of every working day the contractor shall patrol the site		
		and any open pits or trenches and shall rescue any animals that are		
		trapped in it either by catching and releasing (e.g. frogs and toads)		
		or by driving out (e.g. dangerous snakes).		
		- The contractor shall prohibit and actively monitor and prevent the		
		harvesting of medicinal or any other plants by employees.		
		- The contractor shall ensure that employees remain within the		
		project site or on existing roads providing access to the Project site.		
Community	Community	The contractor shall respect the property and rights of local	 Compliant 	 All activities
	nuisance and	inhabitants i.e. the villages and their traditional leadership at all		carried out
	hazards	times and shall treat all such persons with courtesy.		complied with
		- The contractor will inform communities prior to accessing areas for		land use and
		construction that may be frequented by local communities.		administration
		- The contractor shall comply with land use and administration		regulations in
		regulations in Namibia.		Namibia.
		 The contractor shall control the following activities in the best 		
		interests of the local inhabitants: access over land, the integrity of		
		fences, the closure of gates, control of bush and forest fires,		
		littering, dust control, noise abatement, harassment of domestic		
		and wild animals, sedimentation and contamination of ground and		
		surface waters, damage to landscape, crops and vegetation, and all		



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Receptors	Potential impacts	Management/mitigation measures	Compliance	Comments
		such environmental and social matters referred to elsewhere in this		
		CM-EMP.		
		The contractor shall prepare a method statement for the		
		management of community nuisance and hazards in the areas		
		where community access roads and tracks cross the site or access		
		roads. The method statement shall include:		
		o Proof of consultation with community leaders in the areas defined		
		above, concerning possible nuisance and nuisance management;		
		 Any necessary measures, agreed to by the community leaders, to 		
		maintain access for people whose patterns of movement will be		
		disrupted by the construction activities. Such movement may		
		include routes to schools, shops, water supply, fields, grazing lands		
		or a variety of other daily or occasional activities undertaken by		
		households;		
		Measures to accommodate people for temporary loss of access in		
		the event that arrangements cannot be made to maintain the		
		access while construction is ongoing e.g., the supply of drinking		
		water.		
		- The contractor shall maintain a record during construction of all		
		actions taken to comply with the provisions of the Method		
	lineran es e tie e	Statement.	Committee	A governleint
	Increase the	The contractor shall maintain a register for periodic review and	Compliant	- A complaint
	probability of	audit that logs any complaints and issues raised by inhabitants or		register was kep
	complaints/	the general public about construction activities. The register shall		on site, howeve



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Receptors	Potential impacts	Management/mitigation measures	Compliance	Comments
	social discomfort or anxiety and the use of a complaints register	be regularly updated and shall maintain records including the name of the complainant, his or her domicile and contact details, the nature of the complaint and any action that was taken to rectify the problem. The contractor shall employ competent Community Liaison Officer (CLO), fluent in English and local language (according to the area), to manage this issue. The complaints procedure should also take into consideration complainants who may be unable to read and write in any language or to speak English. The contractor shall inform government officials at local level (Zambezi Region, Katima Mulilo Town Council, and traditional leaders) of the complaints register, its location and the person responsible to ensure that inhabitants or the general public are aware and know about the complaints register. The contractor's personnel shall be informed about the complaints register, its location and the person responsible, in order to forward to him/her any inhabitant or the general public who wishes to lodge		no complaints we filed by the local community
	Community health and social cohesion	 a complaint. The contractor shall prepare an OHS plan for the implementation of a programme to minimise diseases and illnesses incidence among employees, and the consequent spread of disease into the surrounding populous. The programme shall be prepared with the assistance of a medical doctor with experience of diseases such as malarial infections and their treatment. A typical programme would include, among other things, the following: 	– Compliant	- The Proponent adhered to this component of the EMP.



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	Potential			tions (Fty) Ltu
Receptors	impacts	Management/mitigation measures	Compliance	Comments
		Measures to control the breeding of mosquitoes and other disease		
		distributing parasites at the construction sites;		
		 Measures to prevent employees from contracting the disease, 		
		including education with respect to malarial prevention and the		
		installation of protective measures in sleeping accommodation and		
		eating areas;		
		o Distribution of treated mosquito nets to all workers; and		
		o Measures to determine and effectively treat infection as quickly as		
		possible after the disease is contracted.		
		- The contractor shall prepare an Occupational Health and Safety		
		(OHS) plan for the implementation of a programme to minimise the		
		spread of HIV infection as a result of the construction contract. The		
		programme shall be prepared with the assistance of a medical		
		doctor with experience of HIV prevention and treatment. A typical		
		programme would include, among other things, the		
		implementation of the following measures:		
		 An HIV/AIDS training course and on-going education on 		
		transmission of HIV/AIDS and STDs to employees, through		
		workshops, posters and informal information sessions;		
		 Encouragement of employees to determine their HIV status; 		
		 Supply of condoms at the project site; 		
		 Encouragement of early treatment of STD's in employees, so as 		
		to minimise the risk of HIV infection;		



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Receptors Potent impact	Mana	agement/mitigation measures	Compliance	Comments
		secondary/opportunistic infections such as coughs, influenza and pneumonia; Promotion of an HIV/AIDS stigma-free environment by means of an open and non-discriminatory approach to the epidemic at all levels of employment; Development of a comprehensive construction camp management plan including rules for on-site behaviour, entrance and exit policies, and prohibition of the sex worker trade;		



Paratus Telecommunications (Pty) Ltd

Table 3 - Construction management measures EMP compliance audit

Receptors	Potential impacts	Management/mitigation measures	Compliance	Comments
Access and	Access and route	- Prior to commencement of works Paratus and the contractor are to	- Compliant	- The Proponent
route	alignment	inform the local Roads Authority Officer of the intended activities.		adhered to this
alignment	impacts	- Paratus has to inform the contractor on site of the regulations and		component of
		specifications of construction and cable laying works on the		the EMP.
		servitude as specified in the guidelines (Ref: 14/19/2/8/7) given to		
		Paratus by Roads Authority-Namibia, for reference the guidelines		
		are annexed on Appendix 8 of the CM-EMP.		
		- The contractor shall consult relevant authorities (Roads Authority)		
		in terms of administrative issues and land rights if there are any		
		misunderstandings during operations.		
		- The contractor shall obtain access to the site a) on a public road,		
		and b) n the Project site. No new access roads shall be constructed.		
		- The utility and safety of any existing access road shall not be made		
		worse by the use for construction work or construction-related		
		activities. Spillages, littering, accelerated erosion, and other		
		environmental impacts shall be carefully managed. The contractor		
		shall ensure compliance with these requirements and remedy		
		immediately any non-compliance and the effects thereof.		
		In any areas where construction requires gravelling or other		
		methods of improving vehicle access, the contractor shall		
		completely remove these materials after construction and prior to		
		rehabilitation of the area.		



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Receptors	Potential impacts	Management/mitigation measures	Compliance	Comments
		- The contractor shall not clear any vegetation outside of the Project		
		 areas as defined by the project site boundaries. The contractor shall minimize infringement into the pristine ecosystems near the project area. 		
Health and	Impacts on	Construction activities main works on site, including roadside	- Compliant	– All health and
safety	health and safety	camping will have the potential to affect amenity, safety, the		safety
		environment and human health. A general regard for the social and		precautions were
		ecological wellbeing of the route and adjacent areas, as well as the		taken, and no
		safety of the workers and the surrounding communities, is		safety incidences
		expected of the contractor working on this Project.		were recorded.
		The contractor is expected to have a Safety officer implementing		
		health and safety management practices recommended by the		
		safety consultant or Paratus. Paratus should prepare a safety		
		management Pan for reference by the contractor to ensure health		
		and safety of construction workers and nearby sensitive receptors.		
		– This Plan should identify and encompass safe work practices that		
		are expected of all the Paratus employees, Contractor's and sub-		
		contractor's employees who are engaged in the installation,		
		maintenance and repair of the fibre optic cable. The plan should		
		consider all health and safety issues that will have to do with the		
		project implementation including the following:		
		 Safe drinking water, food sources and sanitation facilities. 		
		 Personal protective clothing and safety equipment 		



Paratus Telecommunications (Pty) Ltd

	Potential	T die	itus reiecommunica	Lions (i ty) Ltd
Receptors	impacts	Management/mitigation measures	Compliance	Comments
		 Putting in place a practical emergency responsive plan and 		
		associated training such as first aid.		
		 As far as is possible, all precautions and measure to ensure 		
		that no harm comes to the general public, either directly		
		through construction-related activities or indirectly must be		
		included in the safety management plan to be implemented		
		on site.		
Air quality	Increased dust	- Construction activities along the right of way may result in potential	 Compliant 	 Dust pollution
I	levels	air pollution from dust emitted as a result of the following:		and emissions
		 Vehicle movements 		mitigation
		 Machinery operations 		measures were
		 Clearing of vegetation and topsoil when digging the trench 		adhered to
		to lay the cable.		during the
		 Refilling trench 		installation of the
		 In order to minimise the potential for dust generation during the 		fibre optic cable.
		project activities the following management measure will have to be		
		implemented by the contractor:		
		 Vehicle movements will be restricted to pre-existing 		
		designated roads only.		
		· ·		
		······		
		•		
		 Appropriate speed limits will be set and enforced, particularly on dirt roads. Ground disturbance will be minimised as far as practical. Vehicles and machinery will be maintained so as to limit exhaust fume emissions. 		



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Receptors	Potential impacts	Management/mitigation measures	Compliance	Comments
Traffic	Occurrence of	- The contractor will have to implement the following:	- Compliant	- The Proponent
management	accidents along	There should be appropriate temporary signage signalling		ensured
	the road	construction activities along the road, a speed limit as well as		mitigations
		alternative routes/detours if necessary to ensure that there is low		related to this
		risk of accidents.		aspect were
		 Construction traffic should be visible during the day and night, 		complied to.
		adding on the vehicles should have minimal contact with B8 road		
		users. - During the construction phase there will be suspension of some		
		waiting, loading or parking areas so as to avoid confusion in		
		management of construction traffic, B8 road users and pedestrians.		
		- The contractor's employees shall not make recreational use of all-		
		terrain vehicles or motorcycles on the site.		
		- The contractor shall determine safe travelling speeds on the access		
		roads to the site and shall ensure that these restrictions are		
		enforced. This may include, but not be limited to, the monitoring of		
		vehicle speeds, the erection of speed limit signs and the installation		
		of speed humps.		
		The contractor shall take particular care to avoid injury to livestock		
		in areas where local communities frequent.		
Noise	Noise generation	Scheduling of works to avoid disturbance between the hours of 6	- Compliant	- The Proponent
management		pm and 5 am because it is during this time that noise travel the		ensured minimal
		farthest.		noise generation
				during the



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Receptors	Potential impacts	Management/mitigation measures	Compliance	Comments
		 Saturday construction period from 8 am – 12 noon, when near residential areas. Procedures for receiving complaints from nearby land users or residents to be in place and mitigation measures to be implemented should construction generate excessive noise, which is unexpected. The contractor shall comply with the World Health Organization (WHO) guidelines for the management of community noise, if instructed to do so by the Paratus, the contractor shall demonstrate compliance with the noise guidelines by means of measurement of residual noise levels at receiver points specified. Measurement shall be in accordance with the requirements of a recognised standard, such as SANS 10103 - 2007. 		installation of fibre optic cable.
Terrestrial environment and ecology	Threatened plant and animal species	 Regarding this matter, consult this section is regulated by the Forest Act, 2001 (Act No. 12 of 2001), the Controlled Wildlife Products and Trade Act (Act 9 of 2008) and the Nature Conservation Ordinance Act (Act No. 4 of 1975). The contractor shall ensure that any infrastructure on site must not exceed 3 meters and the cable is placed below ground close to Katima Mulilo and between Bukalo and Ngoma. The Contractor shall not damage or harm threatened plant species as a result of any activities related to the Works. A formal listing of threatened plant species is clearly outlined in the Forest Act No. 12 0f 2001. The Contractor shall advise how this shall be dealt with, 	- Compliant	 The Proponent adhered to the mitigation measures of the EMP. The mitigation measures provided in the biodiversity specialist study was adhered to.



Paratus Telecommunications (Pty) Ltd

	Potential	Parat		
Receptors	impacts	Management/mitigation measures	Compliance	Comments
		which could include calling upon a suitably qualified botanical		
		expert to oversee the work necessary to evaluate the risk to the		
		species and to determine appropriate action, which may include:		
		o Rescue of the plant(s) and transplantation in a suitable local		
		habitat; or, where this is not possible;		
		 The collection of seeds and cuttings for use at botanical 		
		gardens and for storage in seed banks in		
		o Southern Africa;		
		o No action.		
		- A listing of threatened animals that could occur in Namibia and		
		possibly along the project site will be specified in Appendix C. The		
		contractor shall take particular note of the occurrence of these		
		species and shall ensure that they are not harmed or harassed in		
		any way. In the event that the contractor or any other party		
		encounters threatened species during the course of the work or in		
		any of the other areas impacted by the works, this shall		
		immediately be reported and a course of action to prevent harm to		
		them agreed upon.		
		- In addition to threatened animals, the contractor shall take all		
		necessary precautions to ensure that such species are not harassed		
		or harmed.		
		- The contractor shall train all site staff to respect and prevent injury		
		to wildlife. It is likely that snakes and potentially dangerous species		
		will be encountered around the project site during construction.		



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	Potential		us Telecommunications (Pty) Ltd	
Receptors	impacts	Management/mitigation measures	Compliance	Comments
		Killing of snakes and any other wildlife found during construction is		
		strictly prohibited. These messages shall be reinforced in daily		
		toolbox talks with workers.		
	Vegetation	- The contractor shall comply with what is foreseen in the Namibian	 Compliant 	- Vegetation
	clearing	Forest Act of 2001 concerning vegetation clearance.		clearing was
		- The contractor shall clear only vegetation along the cable route site		reduced
		to the minimum degree necessary for construction. Cleared		
		vegetation shall be windrowed along the perimeter of the site.		
		The contractor shall not clear any vegetation outside of the areas		
		defined by proponent and approved by the relevant land use		
		authority.		
	Topsoil and	 In the process of constructing the fibre optic cable trench Paratus 	- Compliant	- The Proponent
	subsoil	will implement careful topsoil conservation procedures to maintain		adhered to this
		the productive capability of all lands. This activity supports		component of
		reclamation and helps to protect the land. It is important to note		the EMP.
		that Paratus and the contractor will have to operate in strict		
		adherence to the Soil Conservation Act 76 of 1969 and its		
		amendments to date.		
		- The contractor shall store topsoil (defined as the top 150mm of soil)		
		excavated for construction works in a windrow or stockpile which		
		shall be separate from wind rows or stockpiles of any other		
		excavated materials, i.e. To avoid soil mixing, topsoil is salvaged and		
		stored separately from subsoil and other construction related		



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Receptors	Potential impacts	Management/mitigation measures	Compliance	Comments
		activities. After pipeline installation is complete, subsoil is replaced		
		within the trench and disturbed right-of-way to re-establish the land's natural contours. Following this, the topsoil is then placed on		
		top of the subsoil on the disturbed right-of-way, completing the		
		process.Topsoil shall not be disturbed more than is absolutely necessary for construction works.		
		- Topsoil shall not be contaminated with anything that might impair		
		its plant- support capacity (e.g., aggregate, cement, concrete, fuels, litter, oils, domestic and industrial waste). The contractor shall		
		stockpile topsoil in a location that will minimise any loss due to		
		erosion or mixing with other material. The contractor shall ensure that topsoil is stockpiled in a manner and for a period of time that		
		does not result in deterioration in its plant support capacity.		
	Stone and rock	- Excavated material will be backfilled into the same trenches on site.	- Compliant	- The Proponent
	waste	In cases of huge volumes of rock material, the contractor shall		adhered to this
		dispose of this waste material in a manner that does not impact on		component of
		the use of the land by local inhabitants, nor on the ecological		the EMP.
		integrity of the area concerned. Windrowing of waste rock and		
		other material along the perimeter of the construction area shall be		
		prohibited.		



Paratus Telecommunications (Pty) Ltd

Receptors	Potential impacts	Management/mitigation measures	Compliance	Comments
Socio-	Employment	- The Proponent shall align its Project Labour Agreement in general	- Compliant	- The Proponent
economic		alignment with the guidelines enshrined in the Labour Act, No. 11 of		adhered to the
		2007 of the Government of Namibia.		guidelines of the
		The Contractor shall comply with the proponent's Project Labour		Namibian Labour
		Agreement. In considering job applications, the Contractor shall be		Act, No 11 of
		as objective and impartial as possible.		2007.
Community	Compensation	- Compensation for loss or damage to community assets shall be	- Compliant	- The Proponent
	and damages	done in accordance with the procedures and unit rates regulated by		ensured
		the Government of Namibia.		mitigations
		- The proponent shall discuss with Regional Council when necessary		related to this
		any cases of households that have built residential structures that		aspect were
		will be affected by the construction. These discussions shall include		complied to.
		the local Regional Council (Administrative Post and Locality Chiefs)		
		and local community and traditional authority. In this process both		
		district authorities, community leaders and affected households		
		must understand that infrastructure is not permitted within the		
		safety zone.		
		The Proponent shall implement a monitoring and evaluation		
		framework that includes local government officials and community		
		representatives at district, administrative and locality level and		
		affected parties to audit the effectiveness of any required		
		mitigation.		



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Receptors	Potential impacts	Management/mitigation measures	Compliance	Comments
Heritage	Impacts on archaeological sites	 The Contractor shall comply with the requirements of the National Heritage Act, 2004 (Act No. 27 of 2004), all national antiquities and areas of historical and cultural heritage are protected. This includes archaeological sites, graves and graveyards and other sacred sites. Should any archaeological sites be found, the contractor shall appoint a professional archaeologist to ensure that the Project activities do not damage or destroy any such sites accidentally found. In the event that archaeological sites are found the contractor shall be responsible for the action necessary to provide independent evaluation of the significance of the site, to mitigate the impacts, to inform the Department of Monuments and Ministry of Culture and to obtain any necessary approvals in the event that the site is to be damaged by construction. 	- Compliant	- The Proponent complied with the requirements of the Namibian National Heritage Act, 2004 (Act No. 27 of 2004).
	Impacts on graves and sacred sites	 Regarding these matters, the contractor shall comply with the traditional laws of land, forest and wildlife with regard to following local community customary norms and practices, to do with sanctuaries and other sacred, religious and cultural places. Graves and sacred sites are important in the cultural tradition of local communities and shall not be disturbed by construction unless agreement is reached with the affected communities. A site inventory conducted did not identify any graves or sacred sites since the right of way is an existing servitude, however in the event that additional grave(s) are found during bush clearing or construction of the main works that cannot be avoided by 	- Compliant	- The Proponent adhered to this component of the EMP.

ECC Report Nº: ECC-45-527-REP-02-D



Paratus Telecommunications (Pty) Ltd

Receptors	Potential impacts	Management/mitigation measures	Compliance	Comments
		construction, the contractor shall immediately stop work and shall		
		prevent further damage to the vegetation within 20 m of the site.		
		The Proponent in conjunction with the contractor, shall reach		
		agreement with the affected family members/ community leaders		
		as to an appropriate course of action, acceptable to all parties.		
		Records of all such meetings shall be maintained for the purpose of		
		independent audit.		
		- In the event that unknown graves are discovered, and no related		
		family is identified, the contractor and proponent shall discuss with		
		local government and traditional authorities the appropriate course		
		of action to be taken.		
		- Prior to starting the main works, the contractor shall contact the		
		traditional authority to conduct ceremonies in accordance with		
		traditional beliefs to ensure that the works will be carried out		
		without problems. The contractor shall make all preparations		
		necessary to carry out these ceremonies.		



Paratus Telecommunications (Pty) Ltd

Table 4 - Decommissioning phase EMP compliance audit

Receptors	Potential impacts	Management/mitigation measures	Compliance	Comments
Decommissioni	Reinstatement and rehabilitation	 Upon completion of the Project the contractor should reinstate the site to a state that it was in before commencement of works, this will include the removal of all temporary works on site such as fence and temporary signage. Affected infrastructure such as roads, poles, culverts and small bridges disturbed shall be restored to their original condition. The contractor shall restore the affected environment to the natural contours of the ground so as to allow normal surface drainage across the trench. The contractor shall ensure that any settlement in the trench does not result in the creation of a ditch or channel on or near the project site. In places where erosion control is required, including the top of bank of all gullies, watercourses, large depressions and steep slopes, the contractor shall construct diversion banks. These diversion banks shall be constructed according to the following requirements: The banks shall be extended across the entire disturbed width of working area; The height of each bank shall be such that it will be capable of retaining a depth of water behind the bank of not less than 150 mm. In areas of steep slopes, the height of the 	- Compliant	- The Proponent ensured mitigations related to this aspect were complied to.

ECC Report Nº: ECC-45-527-REP-02-D



Paratus Telecommunications (Pty) Ltd

Receptors	Potential impacts	Management/mitigation measures	Compliance	Comments
		bank may be varied to accommodate the total flow of water during storms; The interval of banks shall be sufficient to prevent concentration of runoff and erosion at the point of discharge on the down slope end of the bank. The contractor shall ensure that backfilling and compaction has been done correctly to minimize the risk of backfilled trench collapse/subsidence afterwards. Paratus telecommunications in conjunction with the contractor, shall undertake a programme of social monitoring and evaluation after completion of the compensation programmes if required. This will be achieved through the facilitation of the community liaison officer, the site manager and local authorities. Compensation evaluation shall consist of verifying whether livelihoods for those families that were affected are being left at a better position than		
		they were before the project inception in their communities.		

ECC Report Nº: ECC-45-527-REP-02-D



Paratus Telecommunications (Pty) Ltd

CONCLUSION

No complaints were recorded during the reporting period. The operation of the installed fibre optic cable shall be carried out in compliance with the relevant requirements and conditions of the granted environmental clearance certificate in accordance with the approved EMP. It is recommended that the Proponent continues to adhere to all environmental legislation and company standards to ensure that best practical environmental protection continues.



Paratus Telecommunications (Pty) Ltd

APPENDIX A - ENVIRONMENTAL MANAGEMENT PLAN



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APPENDIX B - CURRENT ENVIRONMENTAL CLEARANCE CERTIFICATE





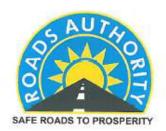
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APPENDIX C - UPDATED EMP (2024)



Paratus Telecommunications (Pty) Ltd

APPENDIX D – ROADS AUTHORITY CONSENT LETTER



Our Ref:

RA14/19/2/8//

Your Ref:

ROADS AUTHORITY
Private Bag 12030
Ausspannplatz
Windhock
NAMIBIA

Enquiries: Telephone: Fax: E-mail: EAM de Paauw +26461 284 7027 +26461 284 7151 depaauwe@ra.org.na

27 April 2017

The Managing Director Paratus Telecom PO Box 90140 Windhoek

Attention: Mr G Duvenhage

Sir

TRUNK ROAD 0807 (B8): REQUEST FOR THE LAYING OF UNDERGROUND FIBRE OPTIC CABLES ALONG AND INSIDE THE ROAD RESERVE: KATIMA MULILO TO NGOMA

Your letter of 26 April 2017 has reference.

Approval is herewith granted to Paratus Telecom as the applicant for the laying of an underground communications fibre optic cable line within and along the road reserve of Trunk Road 0807 between Katima Mulilo and Ngoma as requested in your above letter.

The approval is subject to the following conditions, instructions and specifications as applicable:

• The Roads Authority has decided that communication cables running along and inside the road reserve of proclaimed roads need to run along one side of the road reserve only in order that the other side of the road reserve may be reserved for the placing of other services if so required. It will thus need to be determined whether other communication cables have already been laid in the road reserve, along the section of road that you wish to lay the fibre optic cable line, and if this is the case, then that side of the road reserve needs to be utilized for the laying of the cable line.

Established in terms of the Roads Authority Act, 1999 (Act 17 of 1999)

Board of Directors: Ms. H. Kalfanua (Chairperson), Ms. M.E. Hanekom, Ms. E.S.T. Haipinge, Mr. B. Katjaerua, Mr. L.S. Likando



Paratus Telecommunications (Pty) Ltd

- Where an underground communications line is to be placed along and within a road reserve that is proclaimed 60 metres wide, the cable line and all of its appurtenant infrastructure (except for repeater huts) need to be confined within a strip thirteen metres wide as measured from two metres to fifteen metres from the road reserve boundary line. However the cable line may not be laid closer than one metre to the toe of fill nor, where the road is in cut, closer than two metres to the intersection of a cut face and the natural ground. Further the underground cable lines must be placed as close to the two metre cable boundary line from the road reserve boundary line as is practical. The road reserve width of the road concerned is 60 metres.
- Where repeater huts are to be erected, the enclosure around the repeater hut must abut against the road reserve fence (or boundary line if no road reserve fence is present) and may not exceed six by nine metres in plan dimensions with the longer side parallel to the road reserve boundary.
- Manholes may be placed in the road reserve along the line of the underground cable. The top of the manhole cover must be at least fifty millimetres above natural ground level. Manholes may not be an obstruction to inter alia water run-off or future improvements at road intersections. Manhole covers must be painted using a conspicuous yellow colour.
- Markers are to be placed vertically above underground cable lines at points visible
 from each other, at points of direction change, at all manholes, close to all rest areas
 and on either side of road crossings. These markers must stand proud of the natural
 ground by at least one thousand millimetres. The markers must be painted white
 and must show the symbol of a telephone to signify the underground communication
 line. The owner of the cable line must maintain the markers and replace those which
 have been removed.
- The communication cable line and its appurtenant infrastructure are installed within the road reserve at the sole risk of the owner thereof and at no risk to the Roads Authority or its employees.
- · All the relevant SANS and other standards as applicable are to be adhered to.
- Should the Roads Authority require at any time that the communication cable line in
 question be repositioned or removed for whatever reason, it shall forthwith be
 repositioned or removed in accordance with the instructions given by the Roads
 Authority, failing which the Roads Authority will arrange for such repositioning or
 removal at the cost of the owner thereof and at no risk to the Roads Authority.
- Any damage caused, during the laying of the cable line, to infrastructure of the Roads Authority shall be repaired or replaced as determined by the Roads Authority at the cost of the owner of the cable line.
- Any damage caused by the applicant and/or its agents to the property of any third party shall be a matter between the applicant and that third party.
- Before any excavations inside the road reserve are proceeded with, it will first need to be determined whether any other services such as telecommunication or power cables or water lines are present, either along or across the road reserve.



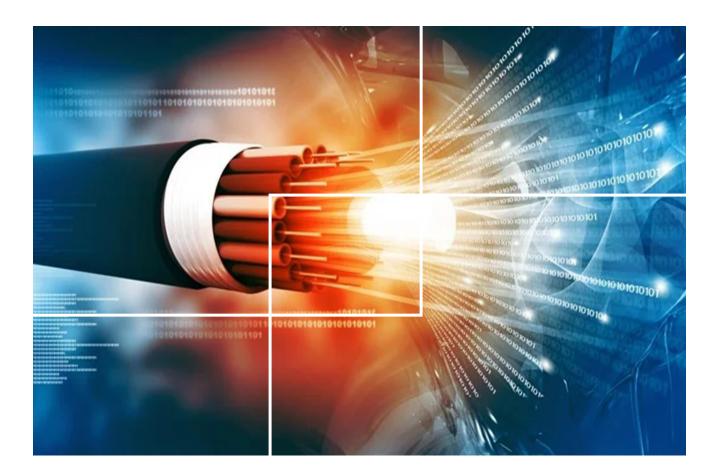
Paratus Telecommunications (Pty) Ltd

- Suitable warning signs as necessary and complying with the Road Traffic and Transport Act and its regulations must remain erected for as long as the works are in progress.
- All necessary precautions must be taken to ensure the safety and comfort of the travelling public during the construction process.
- The local Area Manager of the Roads Authority must be informed at least two days in advance of the commencement and completion dates of the works in order to allow for the necessary inspections to be carried out.
- It is of paramount importance that all aspects of the works be carried out in close cooperation with the office of the Regional / District Engineer and in accordance with his/her instructions.
- The road reserve must, at the completion of the works, be left in a clean and tidy state and all rubble and excess construction material must be gathered and carted away from the site.
- The Roads Authority will not accept responsibility for any damage, injury or loss of life that may occur as a result of negligence, inadequate warning signs or the inadequacy of any other precautionary measures needing to be taken while the works are in progress.

Your above letter does not mention whether there is a need to cross the roadway at any point with the communication cable line or whether there is a need to lay cables along bridges over rivers. If so, a separate application therefor will need to be submitted to this office.

Yours sincerely

CHIEF EXECUTIVE OFFICER





Submitted to: Paratus Telecommunications (Pty) Ltd
Attention: Mr Gerrit Pheiffer

P O Box 90140 102-106 Nickel Street Prosperita Windhoek Namibia

REPORT:

UPDATED EMP FOR THE UNDERGROUND FIBRE OPTIC CABLE ON THE EXISTING B8 ROAD SERVITUDE BETWEEN KATIMA MULILO AND NGOMA, ZAMBEZI REGION, NAMIBIA

PROJECT NUMBER: ECC-45-527-REP-03-D

REPORT VERSION: REV 01

DATE: 12 SEPTEMBER 2024





Namibia

Paratus Telecommunications (Pty) Ltd

TITLE AND APPROVAL PAGE

Project Name: Updated EMP for the underground fibre optic cable on the

existing B8 road servitude between Katima Mulilo and

Ngoma, Zambezi Region, Namibia

Client Company Name: Paratus Telecommunications (Pty) Ltd

Authors: Environmental Compliance Consultancy

Client Name: Mr. Gerrit Pheiffer

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Client Phone number: +264 83 300 1000

Client email address: <u>gerrit.pheiffer@paratus.africa</u>

Project Number: ECC-45-527-REP-03-D

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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



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1 INTRODUCTION

1.1 PROJECT BACKGROUND

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. Paratus Telecommunications (Pty) Ltd (herein referred to as the Proponent) installed an underground fibre optic cable on the existing servitude along the B8 road from Katima Mulilo to Ngoma, Zambezi Region, Namibia, stretching about 70.1 km. An environmental management plan (EMP) was drafted in June 2017 to support the request for an environmental clearance certificate for the installation of the underground fibre optic cable along the existing road servitude.

The road servitude has already been impacted from various activities that it has been used for and infrastructure associated with the servitude (e.g. roads, tracks, pylons) 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 April 2017 to establish possible impacts on fauna and flora phenomenon in the area prior to the installation 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 an underground route.

The location of the proposed site is shown in Figure 1.

1.2 ADDITIONS TO THE UPDATED EMP

The previous environmental management plan (EMP) compiled and submitted in June 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 underground fibre optic cable.

Upon the current environmental clearance certificate renewal, the EMP is updated to include the operational maintenance, repairs, monitoring and decommissioning activities with the associated environmental management mitigation measures of the installed and existing underground fibre optic cable for the Project.

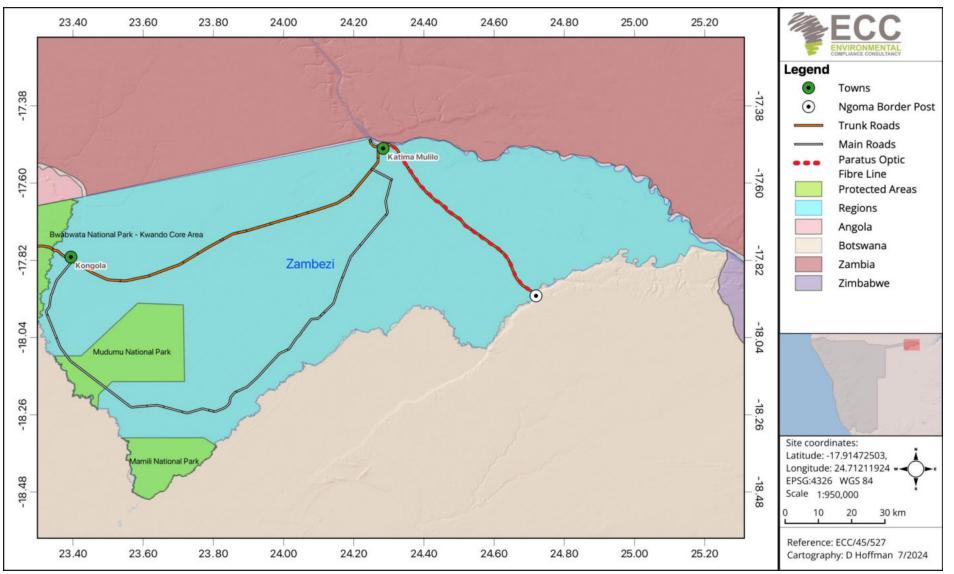


Figure 1 - Locality map of the proposed Project



1.3 Environmental regulatory requirements

The proposed 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 curbed and 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 proposed 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.



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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:

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2 ENVIRONMENTAL MANAGEMENT FRAMEWORK

This EMP provides measures, guidelines, and procedures for managing and mitigating potential environmental impacts. 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.



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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 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/con tractors	 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.



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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 produced, which details deliverables including measures identified for the prevention of damage to the environment during the operational and decommissioning phase.

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 4 to 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: 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; Inform communities prior to accessing areas for maintenance and/or repairs that may be frequented by local communities; and 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 managerEmployees
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 managerEmployees

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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	 Avoid driving randomly through the area (i.e. "track 		
	animals	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	Solid waste produced	- Good housekeeping (no littering);	- Monthly	– Project manager
generation	during maintenance and	 Training and toolbox talks; 		– Employees
	repair activities	 Put in place appropriate waste management 		
		mechanisms for solid waste; and		
		The collected solid waste should be disposed at an		
		approved waste site.		
Air quality	Increased dust levels	- All vehicles and machinery / equipment to be shut down	- Monthly	 Project manager
		or throttled back between periods of use;		- Employees
		 Use existing access roads and tracks where possible; 		
		 Apply dust suppression where possible; and 		
		 Maintaining speed limits within gravel road areas that 		
		reduce dust.		
Noise	Potential noise during	Noise should be minimised during maintenance/repair	- Monthly	- Employees
	maintenance and repairs	works. The following measures should apply:	– Bi-annually	



Aspect	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
	during operations	 Limit working hours to 7 am to 5 pm weekdays and 7 am until 1 pm on Saturday; Regular maintenance of equipment; All equipment to be shut down or throttled back between periods of use; and Hearing protection should be provided to employees operating equipment which produces excessive noise. 	- Annually	
Procurement of goods and	Sourcing of goods and services from local or	 Provide opportunities to local and regional enterprise to participate in tender processes; and 	Procurement policy	Project managerFinancial
services	regional business could increase economic benefits	 Where possible, procurement of goods and services should be from the local or regional businesses. 	policy	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	Upon completion of the Project, the Project manager	- Annually	- Project manager
	rehabilitation	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 fences and signage. Affected infrastructure		
		such as roads, poles, culverts and small bridges		



Updated EMP for the underground fibre optic cable on the existing B8 road servitude between Katima Mulilo and Ngoma,

Zambezi Region, Namibia

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Aspects	Potential impacts	Management/mitigation measures	Monitoring requirements	Responsibility
		disturbed shall be restored to their original condition;		
		- The Proponent/Project manager should ensure that any		
		trenches created during the removal of material		
		backfilled correctly to avoid minimise the risk of		
		backfilled trench 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.		



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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.



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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
Katima Mulilo	+264 66 253012	+264 66 253060	+264 66 253236

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.



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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.



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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.



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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 August 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.