



ECC-45-247-REP-11-D

ENVIRONMENTAL MANAGEMENT PLAN

PROPOSED CONSTRUCTION OF PARATUS TELECOMMUNICATION (PTY) LTD BASE TRANSCIVER
STATION IN TAMARISKIA (ERF 785), SWAKOPMUND, ERONGO REGION

PREPARED FOR



MARCH 2020

TITLE AND APPROVAL PAGE

Project Name:	Proposed construction of Paratus Telecommunication (Pty) Ltd base transceiver station in Tamariskia (Erf 785), Swakopmund, Erongo Region
Project Number:	ECC-45-247-REP-11-D
Client Name:	Paratus Telecommunication (Pty) Ltd
Ministry Reference:	NA
Status of Report:	Final submitted to Government
Date of issue:	March 2020
Review Period	NA

Environmental Compliance Consultancy Contact Details:

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

Stephan Bezuidenhout
Environmental Consultant & Practitioner
Tel: +264 81 699 7608
Email: stephan@eccenvironmental.com
www.eccenvironmental.com

Jessica Mooney
Environmental Consultant & Practitioner
Tel: +264 81 699 7608
Email: jessica@eccenvironmental.com
www.eccenvironmental.com

Confidentiality

Environmental Compliance Consultancy Notice: This document is confidential. If you are not the intended recipient, you must not disclose or use the information contained in it. If you have received this document in error, please notify us immediately by return email and delete the document and any attachments. Any personal views or opinions expressed by the writer may not necessarily reflect the views or opinions of Environmental Compliance Consultancy.

Please note at ECC we care about lessening our footprint on the environment, therefore all documents are printed double-sided.

TABLE OF CONTENTS

1	INTRODUCTION	6
1.1	Project Background	6
1.2	Environmental Regulatory Requirements	7
1.3	Purpose and Scope of this Report	7
1.4	Management of this EMP	7
1.5	Limitations, Uncertainties and Assumptions of this EMP	8
1.6	Environmental Consultancy	8
1.7	Structure of this EMP	8
2	PROJECT MANAGEMENT PERSONNEL	9
2.1	Organisational Structure, Roles and Responsibilities	9
2.2	Contractors	10
2.3	Employment	10
2.4	Register of Environmental Risks and Issues	11
3	COMMUNICATION AND TRAINING	14
3.1	Communications	14
3.2	Environmental Emergency and Response	14
3.3	Complaints Handling and Recording	14
3.4	Training and Awareness	15
3.5	Site Induction	15
4	REPORTING, COMPLIANCE, AND ENFORCEMENT	16
4.1	Environmental Performance Management	16
4.2	Construction: Environmental Inspections & Compliance Monitoring	16
4.2.1	Daily Compliance Monitoring	16
4.2.2	Monthly Compliance Monitoring	16
4.3	Operations: Environmental Inspections & Compliance Monitoring	16
4.4	Reporting	16
4.5	Non-compliance	16
5	ENVIRONMENTAL AND SOCIAL MANAGEMENT	17
5.1	Objectives and Targets	17
6	IMPLEMENTATION OF THE EMP	18

LIST OF TABLES

TABLE 1 – ROLES AND RESPONSIBILITIES	9
TABLE 2 – ENVIRONMENTAL RISKS AND ISSUES, AND MITIGATION AND MONITORING MEASURES FOR THE BTS CONSTRUCTION AND OPERATION.....	12
TABLE 3 – EMERGENCY CONTACT DETAILS	14

LIST OF FIGURES

FIGURE 1 – A SATELLITE IMAGE DEPICTING THE LOCATION OF THE PROPOSED BTS AND ASSOCIATED INFRASTRUCTURE IN TAMARISKIA (ERF785) IN SWAKOPMUND	6
---	---

ABBREVIATIONS

BTS	Base Transceiver Station
ECC	Environmental Compliance Consultancy
EMP	Environmental Management Plan

1 INTRODUCTION

1.1 PROJECT BACKGROUND

Paratus Telecommunication (Pty) Ltd (herein referred to as Paratus or the proponent) is a multinational organisation and has established a telecommunication services company across Africa over the years. In order for Paratus to meet the mobile services (voice and data) users' demands in Swakopmund, the proponent proposes to construct a Base Transceiver Station (BTS) and associated infrastructure on a portion of land adjacent to the Tamariskia cemetery (ERF 785) in Swakopmund, Erongo Region (Figure 1). Paratus prefers using its infrastructure, as it is crucial to service delivery and being compliant with the rigorous quality demands of its customers. The proposed project to construct the BTS will improve, develop and promote effective information sharing by expanding network coverage, which will provide a telecommunication service to the targeted society.

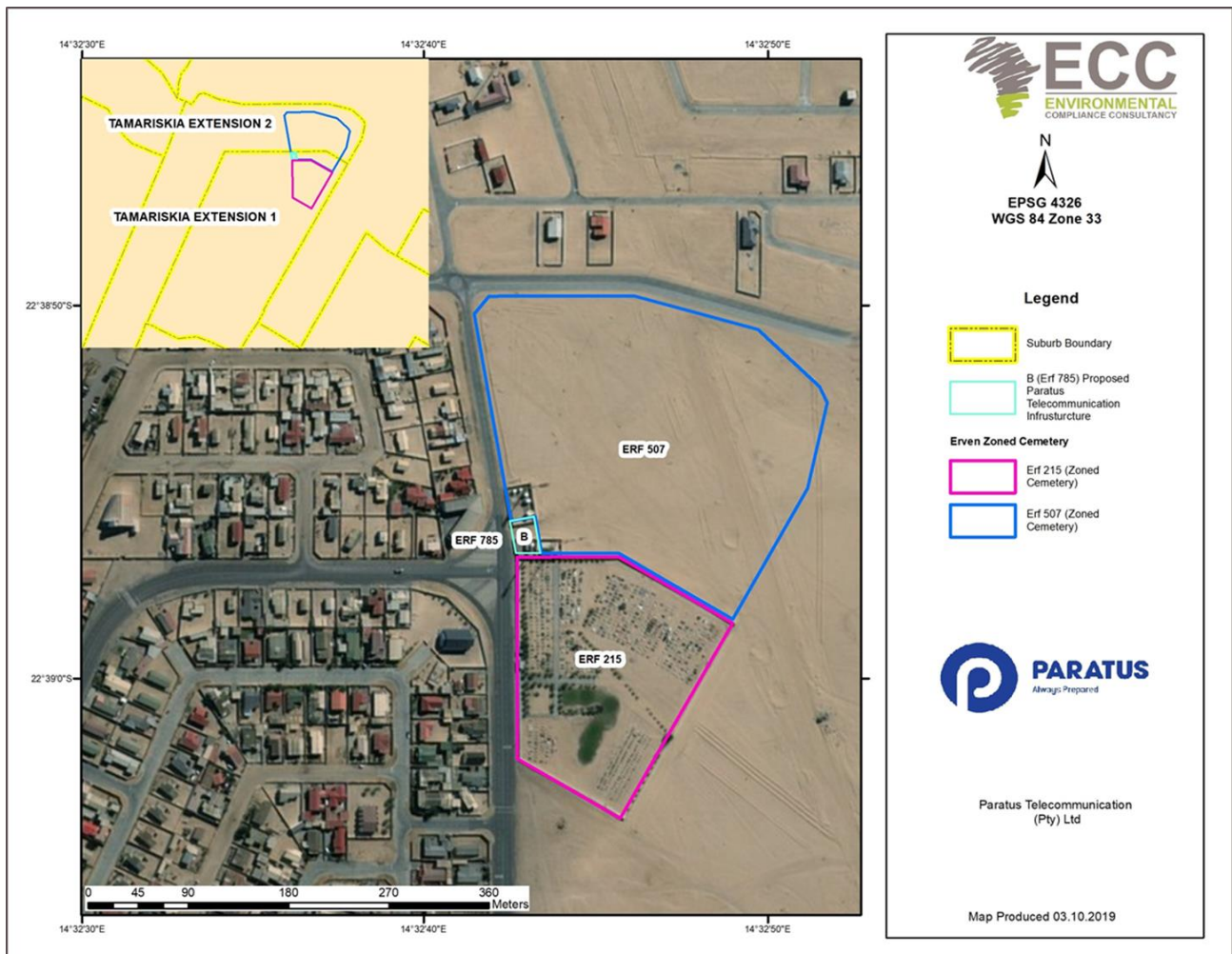


FIGURE 1 – A SATELLITE IMAGE DEPICTING THE LOCATION OF THE PROPOSED BTS AND ASSOCIATED INFRASTRUCTURE IN TAMARISKIA (ERF785) IN SWAKOPMUND

1.2 ENVIRONMENTAL REGULATORY REQUIREMENTS

The proposed project qualifies as a listed activity as stipulated in the Environmental Management Act, No.7 of 2007 and the Environmental Impact Assessment Regulations, No.30 of 2012. Therefore, an application for an environmental clearance certificate is to be submitted. An Environmental Scoping Report and Environmental Management Plan (EMP) are required to be submitted as part of the application process, as well as to support the decision-making process. This report presents the EMP.

1.3 PURPOSE AND SCOPE OF THIS REPORT

Environmental Compliance Consultancy (ECC) has been appointed by Paratus Telecommunications (Pty) Ltd to compile an EMP in terms of the Environmental Management Act, No.7 of 2007.

The purpose of this EMP is to provide a management framework for the planning and implementation of the construction and operational activities for the proposed project so that the potential environmental impacts are avoided, minimised and mitigated as far as reasonably practicable, and that statutory requirements and other legal obligations are fulfilled.

This EMP also presents protocols and procedures, and roles and responsibilities to ensure that management arrangements are appropriately and effectively implemented. This EMP forms an appendix to the Environmental Scoping Report and has been based on the findings of the assessment; therefore, the Environmental Scoping Report should be referred to for further information on the proposed project, assessment methodology, applicable legislation, and assessment findings.

Construction Phase: The proposed construction phase will include low-impact and mostly non-intrusive activities. The following activities are envisaged during the proposed project:

- Staging area development
- Minor ground preparation (trenches and levelling) of the site
- Storage and stockpiling of material for the construction of the BTS
- Construction of the BTS, and
- Installation of cables and wiring.

Operational phase: Once operational, the BTS and staging area will require very little intervention. Inspections will be frequently conducted by the site manager. The BTS and staging area will be maintained by Paratus to ensure the longevity of the material and secure current and potential future use.

1.4 MANAGEMENT OF THIS EMP

Paratus will hold the environmental clearance certificate for the proposed project and will be responsible for the implementation and management of this EMP. Before the construction work commencing, this EMP will be reviewed, amended as required and approved ready for implementation. The implementation and management of this EMP and thus the monitoring of compliance will be undertaken through daily duties and activities, and monthly inspections.

This EMP will be circulated to all contractors and will be made available on ECC's website.

1.5 LIMITATIONS, UNCERTAINTIES AND ASSUMPTIONS OF THIS EMP

This EMP does not include measures for compliance with statutory occupational health and safety requirements. This will be provided in the health and 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 and statutory requirements are to take precedence.

The information contained in this EMP has been based on the project description as provided in the Environmental Scoping Report. Where the design or construction methods change, this EMP may require updating and potential further assessment undertaken.

1.6 ENVIRONMENTAL CONSULTANCY

Environmental Compliance Consultancy (ECC), a Namibian consultancy with registration number 2013/11401, has prepared this EMP on behalf of the proponent. ECC operates exclusively in the environmental, social, health and safety fields for clients across Southern Africa, in the public and private sector. ECC is independent of the proponent and has no vested or financial interest in the proposed project, except for fair remuneration for professional services rendered.

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

Environmental Compliance Consultancy

PO BOX 91193

Klein Windhoek, Namibia

Tel: +264 81 669 7608

Email: info@eccenvironmental.com

1.7 STRUCTURE OF THIS EMP

The report has the following structure:

- Chapter 1 – Introduction
- Chapter 2 – Project Management Personnel
- Chapter 3 – Communication and Training
- Chapter 4 – Reporting, Compliance and Enforcement
- Chapter 5 – Environmental and Social Management, and
- Chapter 6 – Implementation of the EMP.

2 PROJECT MANAGEMENT PERSONNEL

This EMP provides measures, guidelines, and procedures for managing and mitigating potential environmental impacts. The EMP also indicates monitoring and reporting requirements and sets responsibilities for those carrying out management and mitigation measures.

2.1 ORGANISATIONAL STRUCTURE, ROLES AND RESPONSIBILITIES

The proponent will be responsible for:

- Ensuring all members of the project team, including contractors, 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.

Contractors will be responsible for ensuring and demonstrating that all personnel employed by them are compliant with this EMP and meet the responsibilities listed above.

The key personnel and environmental responsibilities of each role through the project life are presented in Table 1.

TABLE 1 – ROLES AND RESPONSIBILITIES

ROLE	RESPONSIBILITY & DUTIES
Proponent	<ul style="list-style-type: none"> - Overall responsibility for the implementation and management of this EMP - Ensure the environmental policy is communicated to all personnel throughout the proposed project, and - Responsible for providing the required resources (including financial and technical) to complete the required tasks.
Project manager	<ul style="list-style-type: none"> - Responsible for ensuring compliance with this EMP including overseeing the construction work, day to day activities during operations, and routine and non-routine maintenance work during operations, as well as the decommissioning of the infrastructure - Ensuring all personnel are aware of the commitments made in this EMP and any other relevant regulatory requirements applicable to the project - Responsible for the management, maintenance and revision of this EMP - Ensuring adequate resources are made available for implementation of this EMP - Maintain the community issues and concern register, and keep records of complaints - Ensuring all employees and contractors participate in a site induction process before commencing work on the project and maintain an up to date register - Provisioning of environmental awareness/management training and inductions for all employees, including impacts of the BTS on human health - Ensuring that best environmental practice is undertaken throughout the project, and - Report any non-compliance or accidents to the regulatory authority.

ROLE	RESPONSIBILITY & DUTIES
Site manager/contractors	<ul style="list-style-type: none"> - Appointed to manage the performance of the construction and operational maintenance activities - Responsible for the implementation of this EMP and ensuring all activities are compliant with this EMP, as well as: <ul style="list-style-type: none"> o Managing the preparation and implementation of method statements for certain activities, and ensuring the environmental manager reviews all method statements and the relevant environmental protocols are incorporated o Reporting any non-compliance or accidents to the project manager and environmental manager o Ensuring that all staff have attended a site induction session before the commencement of any work on-site and that they are adequately informed of the requirements of this management plan o Ensuring that all contract workers, sub-contractors and visitors to the site are conversant with the requirements of this EMP, relevant to their roles on site and adhere to this EMP at all times, and o Receiving, responding to and recording complaints.
Employees/contractor employees	<ul style="list-style-type: none"> - Responsible for being compliant with this EMP throughout the construction work, in addition to: <ul style="list-style-type: none"> o Ensuring they have undertaken a site induction (if necessary) and are conversant with the requirements of this EMP o Ensuring appropriate briefings for certain activities have been provided and fully understood o Adherence to this EMP at all times, and o Reporting of any operations and/or conditions that deviate from the EMP or any non-compliant issues or accidents to the environmental manager and site manager/contractor.

2.2 CONTRACTORS

Any contractors (including the subcontractors) hired during the construction work or maintenance activities during the operational phase, will be compliant with this EMP, and will 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, and
- Ensuring appropriate corrective or remedial action is taken to address all environmental hazards and incidents reported by employees and subcontractors.

2.3 EMPLOYMENT

The proponent and all contractors will comply with the requirements of the Republic of Namibia Regulations for Labour, Health and Safety, and any amendments to these regulations. The following will be complied with:

- In liaison with local government and community authorities, the proponent will ensure that local people have access to information about job opportunities and are considered first for construction/maintenance contract employment positions
- The number of job opportunities will be made known together with the associated skills and qualifications
- Ensure that the maximum length of time the job is likely to last for is indicated
- Foreign workers with no proof of permanent legal residence will not be hired, and
- Every effort will be made to recruit from the pool of unemployed workers living in the surrounding area.

2.4 REGISTER OF ENVIRONMENTAL RISKS AND ISSUES

An environmental review of the proposed project has been completed to identify all the commitments and agreements made within the environmental scoping report. A list of environmental commitments and risks has been produced, which details deliverables including measures identified for the prevention of pollution or damage to the environment during the construction and operational phases.

Table 2 provides a register of environmental risks and issues, which identifies mitigation and monitoring measures, as well as the responsible person. This register 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 inspections to ensure the project is compliant with this EMP.

TABLE 2 – ENVIRONMENTAL RISKS AND ISSUES, AND MITIGATION AND MONITORING MEASURES FOR THE BTS CONSTRUCTION AND OPERATION

ASPECT	POTENTIAL IMPACTS	MANAGEMENT/MITIGATION MEASURES	MONITORING REQUIREMENTS	RESPONSIBILITY
Having screened all potential impacts and having assessed those applicable to the criteria points relevant to the significant impacts and corresponding mitigation measures are summarized below. Given that the proposed site is located within an already disturbed footprint, there is a low potential of additional disturbance.				
Avifauna	<ul style="list-style-type: none"> – Possible bird collision due to the BTS construction 	<p>The BTS and associated infrastructure have no major impacts, however, should any concerns arise during the BTS and associated infrastructure monitoring in the future the following should apply:</p> <ul style="list-style-type: none"> – Monitor to help provide more scientific confirmation of collision data (rates, sites and associated weather conditions) and thereby increase the future predictability of such occurrences as a basis for marking – Should collisions still take place after mitigation, other methods should be considered. More stringent and regular monitoring is recommended, and – Mitigation should take place during the construction phase, rather than the operational phase; regular monitoring would be important during the operational phase. 	<ul style="list-style-type: none"> – Daily – Weekly and – Annual observations 	<ul style="list-style-type: none"> – Project manager – Site manager
Community and environment	<ul style="list-style-type: none"> – Construction of the BTS might increase the probability of complaints – Visual disturbance to the nearest neighbours and the entire community – Social discomfort/anxiety – Possible adverse health effect of non-ionising electromagnetic fields 	<ul style="list-style-type: none"> – Engage with the surrounding communities and/or all stakeholders, especially the nearest neighbours about the construction activities – In partnership with relevant stakeholders, provide awareness campaigns about the effects of non-ionising electromagnetic fields on human health – Ensure the construction of the BTS blend in with the natural environment as practicable as possible – Ensure that the International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines, and precautionary principles, as well as other applicable legal frameworks and regulations, are adhered to – Use correct PPE, if required 	<ul style="list-style-type: none"> – Daily – Weekly and – Annually 	<ul style="list-style-type: none"> – Project manager – Site manager – Employee

ASPECT	POTENTIAL IMPACTS	MANAGEMENT/MITIGATION MEASURES	MONITORING REQUIREMENTS	RESPONSIBILITY
	<p>to the local community.</p> <ul style="list-style-type: none"> Health and safety impact or risk to a construction worker and/or nearby community 	<ul style="list-style-type: none"> Comply with all applicable national regulations and laws to minimize risks at the workplace Ensure appropriate supervision of activities Any accidents or incidents should immediately be reported to the project manager, and All incidents should be recorded in an incident register. 		
Soil contamination	<ul style="list-style-type: none"> Soil pollution through waste and hazardous substances utilized during construction spilling on the ground 	<ul style="list-style-type: none"> Any spills and waste should be cleaned up immediately A 'good housekeeping' policy will be adopted across the construction and maintenance working areas Under no circumstances should oil or other substances be permanently disposed of on-site, and Minimise the disturbance and removal of topsoil. 	<ul style="list-style-type: none"> Daily visual inspection of operations 	<ul style="list-style-type: none"> Project manager
Waste management	<ul style="list-style-type: none"> Visual impacts Waste pollution 	<ul style="list-style-type: none"> Training and Toolbox Talks Good housekeeping across the site Remove construction waste including general waste daily All working areas will apply good house-keeping Marked bins should be provided across the site, if necessary, and Littering by the construction workers will not be allowed. 	<ul style="list-style-type: none"> Daily observations Weekly checks 	<ul style="list-style-type: none"> Project Manager Employees
Noise	<ul style="list-style-type: none"> A nuisance to nearby communities 	<ul style="list-style-type: none"> Noise should be minimised during construction work. The following measures should apply: <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Daily observations 	<ul style="list-style-type: none"> Project manager Employees

3 COMMUNICATION AND TRAINING

To ensure potential risks and impacts are minimised personnel must be appropriately informed and trained on operational procedures that include the above mitigation measures. It is also important that regular communication is 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 concerning the EMP.

3.1 COMMUNICATIONS

During construction, the project manager and site manager will 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 will be distributed to the construction project team, including contractors, to ensure that the environmental requirements are communicated effectively. Key activities and environmentally sensitive operations will be highlighted to workers and contractors.

During the construction phase, regular communication between the management team will include discussing any complaints received and actions to resolve them; any inspections, audits or non-conformance with this EMP; and any objectives or targets missed or achieved.

3.2 ENVIRONMENTAL EMERGENCY AND RESPONSE

Table 3 contains a list of numbers to be contacted in case of an emergency. All personnel will be made aware of these numbers.

TABLE 3 – EMERGENCY CONTACT DETAILS

TOWN	AMBULANCE	POLICE	FIRE BRIGADE
Swakopmund	+264-64 410 6000	219 048 or 10111	+264 81 128 5613
Walvis Bay	+264 81 129 3875	219 048 or 10111	+264 81 122 0833 or 081 122 0888

3.3 COMPLAINTS HANDLING AND RECORDING

Any complaints received verbally by any personnel on the project site will be recorded by the receiver, including the name and contact details of the complainant, date and time of the complaint, and the nature of the complaint. The information will be given to the project manager who is overall responsible for the management of complaints and will provide a written response to the complainant. The project manager will inform the site manager of issues, concerns or complaints. The project manager must maintain a complaint register that details the name of the complainant, date and time of the complaint, the action that was taken to resolve the issues and date of complaint handover/close-out.

The workforce will be informed about the complaints register, its location and the person responsible, enabling them to refer residents or the general public who wish to complain to the correct person. The complainant will be informed in writing 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 and also communicated to the complainant.

The complaints register will 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 will 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 will be inducted to the site with specific environmental and social awareness training, and health and safety issues being covered. The environment and social awareness training will ensure that personnel are familiar with the content of this EMP; the environment and social aspects and impacts associated with their activities; the procedures in place to control these impacts; and the consequences of departure from these procedures.

The project manager will ensure that a register of completed training is maintained.

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

- A general site-specific induction that outlines:
 - o What is meant by “environment” and “social”
 - o Why the environment needs to be protected and conserved
 - o How construction activities can impact on the environment
 - o What can be done to mitigate against such impacts
- The inductee’s role and responsibilities concerning implementing the EMP
- The site environmental rules
- Details of how to deal with, and who to contact if environmental problems should occur
- The potential consequences of non-compliance with this EMP and relevant statutory requirements, and
- The role of responsible people for the project.

4 REPORTING, COMPLIANCE, AND ENFORCEMENT

4.1 ENVIRONMENTAL PERFORMANCE MANAGEMENT

The current summary of a register of environmental risks and issues identifies mitigation and monitoring measures, as well as the roles responsible for execution. This register 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 inspections to ensure the project is compliant with this EMP.

4.2 CONSTRUCTION: ENVIRONMENTAL INSPECTIONS & COMPLIANCE MONITORING

4.2.1 DAILY COMPLIANCE MONITORING

A copy of this EMP will be on-site throughout the construction work and will be available upon request. It is the responsibility of the project manager and site manager to ensure this EMP is complied with through their daily roles. Daily inspections will be undertaken by the site manager (or nominated site supervisor). Any environmental problems or risks identified will be reported to the project manager and actioned as soon as is reasonably practicable.

4.2.2 MONTHLY COMPLIANCE MONITORING

Monthly inspections will be undertaken by the site manager to check that the standards and procedures set out in this EMP are being complied with and environmental control measures are in place and working correctly. 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 OPERATIONS: ENVIRONMENTAL INSPECTIONS & COMPLIANCE MONITORING

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 no leaks or spills or rust have 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.

4.4 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.

4.5 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 ENVIRONMENTAL AND SOCIAL MANAGEMENT

5.1 OBJECTIVES AND TARGETS

Environmental objectives for the project are as follows:

- Less than 10 grievances or complaints per year due to the construction and operation of the BTS structure
- At least one (1) awareness campaign conducted locally or regionally about the possible impacts of non-ionising electromagnetic fields on human health, and
- Increase in the number of telecommunication service users with zero complaints.

6 IMPLEMENTATION OF THE EMP

This EMP:

- A. Has been prepared according to a contract with the proponent
- B. Has been prepared based on information provided to ECC up to January 2020
- 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 a purpose other than an EMP for a BTS, and
- E. Must not be copied without the prior written permission of ECC.