

Submitted to: Paratus  
Telecommunications (Pty) Ltd  
Attention: Mr. Edward Esterhuyse  
PO Box 90140  
Klein Windhoek  
Namibia

# REPORT:

## BASE TRANSCEIVER STATION (BTS) AND ASSOCIATED INFRASTRUCTURE ON ERF 361 (BRAKWATER) – COMPLIANCE REPORT

PROJECT NUMBER: ECC-45-625-REP-02-D

REPORT VERSION: REV 01

DATE: 02 JUNE 2025



## TITLE AND APPROVAL PAGE

Project Name: Base transceiver station (BTS) and associated infrastructure on  
ERF 361 (Brakwater) – compliance report

Client Company Name: Paratus Telecommunications (Pty) Ltd

Client Name: Mr Edward Esterhuyse

Ministry Reference: APP-005869

Status of Report: Final for Government Submission

Project Number: ECC-45-625-REP-02-D

Date of issue: 02 June 2025

Review Period NA

## ENVIRONMENTAL COMPLIANCE CONSULTANCY CONTACT DETAILS:

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



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

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**Quality Assurance****Authors:**

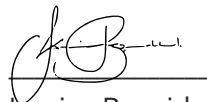
Kelly Ochs

Environmental Compliance Consultancy

**Checked By:**

Carlene Baufeldt

Environmental Compliance Consultancy

**Approved By:**

Jessica Bezuidenhout

Environmental Compliance Consultancy

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## ABBREVIATIONS

Abbreviation	Description
dB	decibel
BTS	base transceiver station
DEAF	Department of Environmental Affairs and Forestry
ECC	Environmental Compliance Consultancy (Pty) Ltd
EIA	environmental impact assessment
EMF	electromotive force
EMP	environmental management plan
H&S	health and safety
HSE	health, safety and environment
HVAC	heating, ventilation and air conditioning
IAQ	indoor air quality
ICNIRP	Commission of Non-Ionizing Radiation Protection
IFC	International Finance Corporation
ILO	International Labour Organisation
km	kilometre
Ltd.	limited
m	Metre
MAWLR	Ministry of Agriculture, Water and Land Reform
MEFT	Ministry of Environment, Forestry and Tourism
MSDS	material safety data sheet
MW	megawatts
No	number
OSH	occupational safety and health
Paratus	Paratus Telecommunications (Pty) Ltd
PPE	personal protective equipment
Pty	proprietary
Reg	registration
RF	radio frequency
SPCA	Society for the Prevention of Cruelty to Animals

# 1 INTRODUCTION

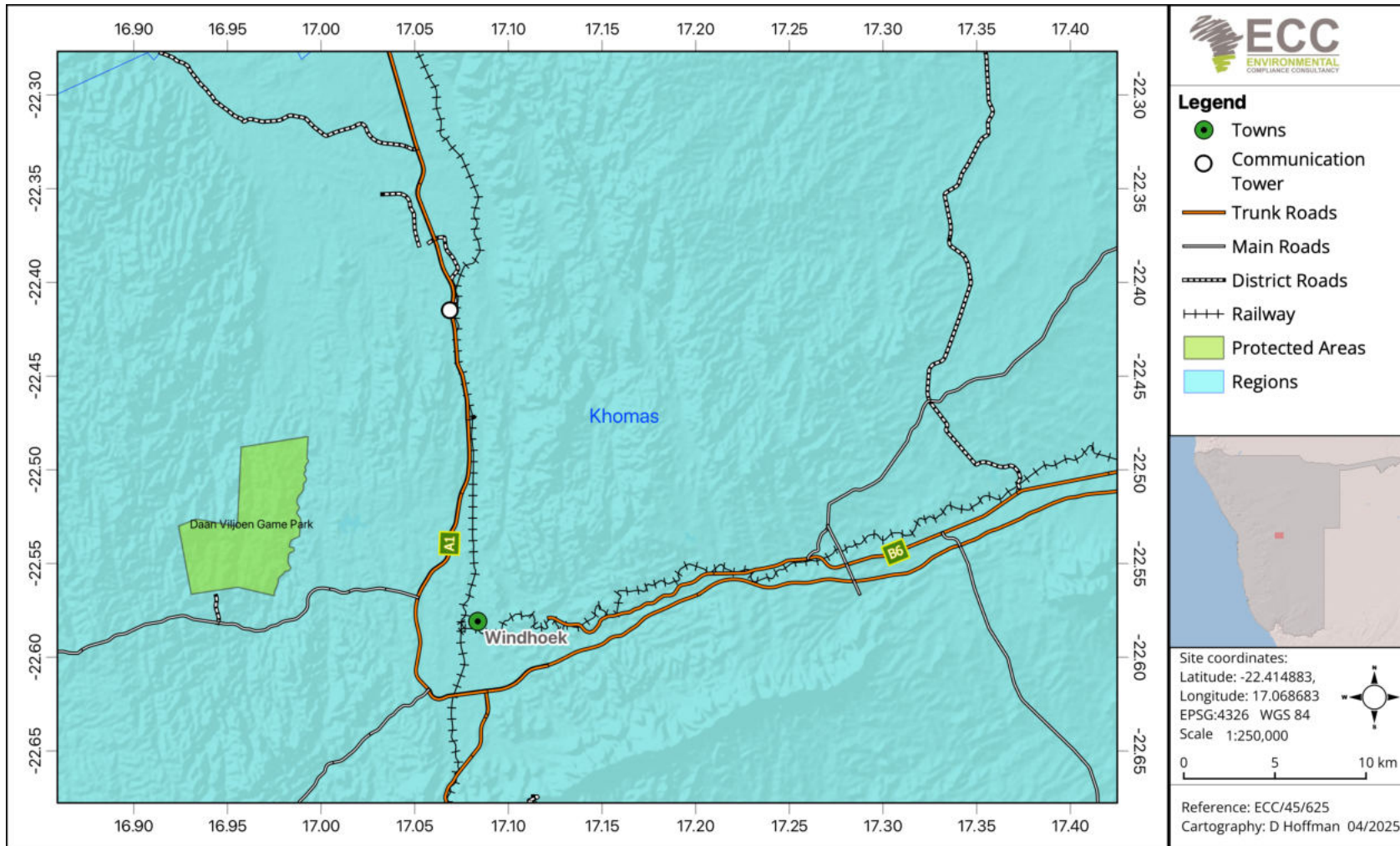
## 1.1 BACKGROUND INFORMATION

Paratus Telecommunications (Pty) Ltd (hereinafter Paratus or the Proponent) constructed a base transceiver station (BTS) and associated infrastructure on Erf 361 in Brakwater, Khomas Region, Namibia. The site can be accessed through the B1 highway (turning onto the D1473 road) when travelling in a northern direction from Windhoek (en route to Okahandja). The site location can be seen in Figure 1 and are situated approximately 12 km north of Windhoek. The tower was constructed on the same Erf as the Armada Data Centre. The data centre meets the Paratus business vision/requirements driven by customer demand for high-end data centre services within Namibia, especially in the Windhoek area. The communication tower is essential for network coverage in Brakwater, which accelerates the use and development of information communication technology in the area and Namibia at large. In addition, the Project has provided employment opportunities to the local people through the construction works and continued maintenance of the structures.

An environmental and social impact assessment (ESIA) was compiled by Environmental Compliance Consultancy (Pty) Ltd (ECC) in line with the requirements of the Environmental Management Act, No. 7 of 2007 and associated 2012 Regulations. The assessment documentation and application for an environmental clearance certificate was submitted on 14 February 2022 to the Ministry of Information, Communication and Technology (MICT) as the competent authority and the Ministry of Environment, Forestry and Tourism (MEFT) for a record of decision (RoD). An environmental management plan (EMP) was compiled and approved for the BTS and associated infrastructure (Appendix A) in line with the approved environmental clearance certificate, which was approved by MEFT on 19 April 2022 (ECC-02127) (Appendix B).

During normal operations, the telecommunication infrastructure requires very little intervention. Inspections are frequently conducted by the site manager. The telecommunication infrastructure is maintained by the Proponent, ensuring its longevity and secure current and potential future use.





**Figure 1 – Location of communication tower**

## 1.2 PURPOSE OF THIS DOCUMENT

ECC has been engaged by Paratus Telecommunications (Pty) Ltd, to prepare the application to renew the environmental clearance certificate for the BTS and associated infrastructure. The Proponent currently holds a valid environmental clearance certificate for the BTS and associated infrastructure on ERF 361 (Appendix B). As part of this application, an environmental compliance desktop audit has been undertaken to determine the status of compliance with the EMP from April 2022 to April 2025.

## 1.3 PROPONENT DETAILS

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

**Table 1 – Proponent details**

Contact	Contact details:
Mr. Edward Esterhuyse  Manager: Technical Infrastructure	Paratus Telecommunications (Pty) Ltd P O Box 90140, Klein Windhoek basie.esterhuyse@paratus.africa Tel: +264 83 300 1000

## 1.4 ENVIRONMENTAL ASSESSMENT PRACTITIONER

Environmental Compliance Consultancy (Pty) Ltd (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  
Tel: +264 81 669 7608  
Email: [info@eccenvironmental.com](mailto:info@eccenvironmental.com)



## **2 BACKGROUND TO THE PROJECT**

Paratus is a multinational organisation and has established telecommunication services across Africa over 15 years. Paratus is always prepared, and to meet the mobile services (voice and data) users' demand throughout Namibia. The Proponent constructed a base transceiver station (BTS) and associated infrastructure on Erf 361 in Brakwater, which lies to the north of Windhoek, within the Khomas Region. The Project has helped improve, develop and promote effective information sharing by expanding network coverage, which provides telecommunication services to the targeted receptors/community. Furthermore, with the current population increase in urban areas, the telecommunication service has experienced tremendous growth in terms of users, prompting advances in technology from 2G to 4G and LTE networks within the area.

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 periodical auditing as the activities transitions throughout the Project phases. The EMP is audited in order to monitor the progress of the Project and to ensure that all measures stipulated in the document are met and effectively adhered to as required by the Department of Environmental Affairs and Forestry (DEAF). In an event where the Project activities alter, the EMP is required to be amended accordingly.

### **2.1 RENEWAL ACTIVITIES**

The following are the activities associated with the operation and maintenance of the BTS:

- Operational/maintenance phase – telecommunication services and BTS maintenance (estimated 25 years)

### **3 ENVIRONMENTAL COMPLIANCE AUDIT**

#### **3.1 SITE ACTIVITIES**

##### **3.1.1 MONITORING AND REPORTING**

A digital audit is required to enable the Proponent to comply to all legal standards by pointing out areas of non-compliance and allowing them to take immediate action on implementing corrective actions.

##### **3.1.2 ACTIVITIES CARRIED OUT DURING CONSTRUCTION AND OPERATIONS**

The following activities were undertaken for the period April 2022 – April 2025:

- Minor ground preparation (trenches and levelling) of the site;
- Storage and stockpiling of material for the construction tower;
- Construction of the tower;
- Installation of cables and wiring;
- BTS operation and telecommunication services; and
- Regular maintenance of BTS.

#### **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 BTS. 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 audit (desktop) during the period of review of the Paratus Telecommunications BTS. 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).

The EMP therefore:

- Identifies all operational 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;

- 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 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.

## 4 EMP COMPLIANCE AUDIT

Table 2 provides an overview of the compliance with EMP requirements as depicted in the approved EMP for the construction and operational phase of the Paratus BTS (Appendix A).

**Table 2 – Construction and operational phases of the EMP compliance audit**

Activity/ Process	Aspect	Impact	Management/mitigation measures	Compliance	Comments
<b>1) All activities</b>	<ul style="list-style-type: none"> <li>General construction and operational activities</li> </ul>	<ul style="list-style-type: none"> <li>Noise nuisances may be felt within and surrounding the data centre, during construction and maintenance activities.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure noise levels are maintained within the Health and Safety of Employees at Work regulations' and International Labour Organisation (ILO) occupational exposure limit of 85 dB (Warning Limit) and a danger limit of 90 dB;</li> <li>Ensure noise levels are maintained within the SANS standard for environmental noise, which is 70 dB (outdoors) and 60 dB (indoors) in an industrial district;</li> <li>Avoid noise-generating activities that could impact on other users of the area; i.e., hammering on metal that generates intermittent noise especially at night, and ensure appropriate measures are put in place to rectify noise complaints should they occur;</li> </ul>	<ul style="list-style-type: none"> <li>Compliant</li> </ul>	<ul style="list-style-type: none"> <li>The Proponent was compliant to this component of the EMP and will continue to adhere to the rules and regulations as per the EMP.</li> </ul>

Activity/ Process	Aspect	Impact	Management/mitigation measures	Compliance	Comments
			<ul style="list-style-type: none"> <li>– Ensure that procedures for receiving complaints from nearby land users or residents to be in place and responded to timeously.</li> <li>– Noise should be minimised during construction work. The following measures should apply: <ul style="list-style-type: none"> <li>– Limit working hours to 7 am to 5 pm weekdays and 7 am until 1 pm on Saturday or Regular maintenance of equipment;</li> <li>– All equipment to be shut down or throttled back between periods of use; and</li> </ul> </li> <li>– Hearing protection should be provided to employees operating equipment that produces excessive noise.</li> </ul>		
<b>2) All activities</b>	<ul style="list-style-type: none"> <li>– General construction and operational activities</li> </ul>	<ul style="list-style-type: none"> <li>– Dust generation: reduced air quality</li> </ul>	<p>To minimise the potential for dust generation during construction the following management measures should be implemented, as required:</p> <ul style="list-style-type: none"> <li>– Vehicles must adhere to speed limits to avoid producing excessive dust within and around the site;</li> </ul>	<ul style="list-style-type: none"> <li>– Compliant</li> </ul>	<ul style="list-style-type: none"> <li>– The Proponent ensured that requirements were met to minimise dust generation.</li> </ul>



Activity/ Process	Aspect	Impact	Management/mitigation measures	Compliance	Comments
			<ul style="list-style-type: none"> <li>– Vehicles and machinery should be maintained to limit exhaust fume emissions;</li> <li>– Construction activities (i.e., cement mixing) should be well managed to reduce dust generation;</li> <li>– Use surfaces that minimise dust accumulation and facilitate effective cleaning;</li> <li>– Where an effect is profound, ensure dust suppression measures are in place</li> </ul>		
		<ul style="list-style-type: none"> <li>– Occupational Health and Safety</li> </ul>	<p>Labour Act, No. 11 of 2007 and regulations relating to the Health and Safety of Employees at Work (No. 156 of 1997) should be closely followed and all relevant sections adhered to:</p> <ul style="list-style-type: none"> <li>– Ensure that health and safety measures and mitigations are enforced on-site according to the site-specific H&amp;S management plan (the proponent will be responsible to develop and implement an H&amp;S management plan);</li> <li>– For specific duties, the appropriate PPE should be worn at all times;</li> </ul>	<ul style="list-style-type: none"> <li>– Compliant</li> </ul>	<ul style="list-style-type: none"> <li>– The Proponent was compliant to this component of the EMP and will continue to adhere to the rules and regulations as per the EMP.</li> </ul>

Activity/ Process	Aspect	Impact	Management/mitigation measures	Compliance	Comments
			<ul style="list-style-type: none"> <li>– Safety induction training sessions should be given to all technicians and field staff before commencement of their shifts;</li> <li>– Risk identification and suitable prevention measures should be employed within the facility area to eliminate potential impacts;</li> <li>– All occupational health-related complaints should be recorded and appropriate action to be taken to resolve potential issues;</li> <li>– Occupational Incidents and accidents on-site should be reported to the division: Occupational Safety &amp; Health (OSH) at the Ministry of Labour, Industrial Relation and Employment Creation, by using form F.5;</li> <li>– Emergency contact details should be readily accessible to contact relevant services during an emergency;</li> <li>– Appropriate signs should be set up on-site, where there might be an occupational risk, i.e., signs noting employees and customers of stairs, poor lighting, small/sudden steps, heights, wiring etc;</li> <li>– Portable signs should also be available on-site, i.e. when floors are wet, when using</li> </ul>		

Activity/ Process	Aspect	Impact	Management/mitigation measures	Compliance	Comments
			<p>chemicals, for construction and maintenance etc;</p> <ul style="list-style-type: none"> <li>– There should at all times be an employee/appointed HSE officer/foreman with up to date first aid training on-site;</li> <li>– The facilities' HVAC systems should be well maintained;</li> <li>– Employees should have access to an ergonomically friendly working environment;</li> <li>– If any occupational health-related complaints are recorded, the proponent should either use an existing risk assessment for the data centre or ensure that a risk assessment is conducted and if the risk assessment shows a high probability of risks. The following should be monitored (depending on risks identified) by professional registered monitoring bodies (i.e. Occupational hygiene company): Indoor Air Quality (IAQ), illumination, ergonomics, RF radiation, thermal conditions (heat generated by servers/processing) and biological surveys</li> </ul>		

Activity/ Process	Aspect	Impact	Management/mitigation measures	Compliance	Comments
			<p>(i.e., bacteria (legionella) due to air conditioning and mold due to humidifiers);</p> <ul style="list-style-type: none"> <li>– Radio Frequency (RF) radiation emitted from the communication tower (i.e. Armada Tower) should be monitored by a registered monitoring body (i.e., Occupational Hygiene companies) if any complaints with regards to headaches, nausea, sleep disturbances, loss of appetite, depressive tendencies, fatigue etc. are recorded;</li> <li>– In the unlikely event of a death occurring on-site from occupational negligence or otherwise from a "freak accident event", the area should be secured and removing all personnel from the scene;</li> <li>– A root cause analysis into the event should be undertaken as soon as practicably possible; and</li> <li>– Counselling should be provided to the witnesses and other personnel members who may have been impacted by the event.</li> </ul>		
<b>3) All activities</b>	<ul style="list-style-type: none"> <li>– General construction and</li> </ul>	<ul style="list-style-type: none"> <li>– Site Safety and Security</li> </ul>	<ul style="list-style-type: none"> <li>– The site should be well secured to prevent theft or vandalism and unauthorized entrance to the premises, which could be</li> </ul>	<ul style="list-style-type: none"> <li>– Compliant</li> </ul>	<ul style="list-style-type: none"> <li>– The Proponent was compliant to this component</li> </ul>

Activity/ Process	Aspect	Impact	Management/mitigation measures	Compliance	Comments
	operational activities		<p>ensured by having a security guard at the gate and facility entrance, security cameras and security fence/wall around the facility;</p> <ul style="list-style-type: none"> <li>– Contractors and staff should be informed in writing of the consequences when breaking law or rules;</li> <li>– Contractors or staff should not trespass on private land;</li> <li>– Security systems should be well maintained;</li> <li>– All employees should be regularly updated about the safety procedures; and</li> <li>– Emergency contact details should be readily available on-site.</li> </ul>		of the EMP and will continue to adhere to the rules and regulations as per the EMP.
<b>4) All activities</b>	<ul style="list-style-type: none"> <li>– Construction and operational activities</li> </ul>	<ul style="list-style-type: none"> <li>– Occupational health and safety</li> </ul>	<ul style="list-style-type: none"> <li>– Labour Act, No. 11 of 2007 and regulations relating to the Health and Safety of Employees at Work (No. 156 of 1997) should be closely followed and all relevant sections adhered to. The IFC Environmental, Health, and Safety Guidelines for Telecommunications should also be followed as a best practice, according to these guidelines the following occupational health and safety issues are mainly seen with telecommunications</li> </ul>	<ul style="list-style-type: none"> <li>– Compliant</li> </ul>	<ul style="list-style-type: none"> <li>– The Proponent was compliant to this component of the EMP and will continue to adhere to the rules and regulations as per the EMP.</li> </ul>



Activity/ Process	Aspect	Impact	Management/mitigation measures	Compliance	Comments
			<p>projects: Electrical safety, Electromagnetic fields (occupational), Optical fiber safety, Elevated and overhead work, Fall protection, Confined space entry and Motor vehicle safety;</p> <ul style="list-style-type: none"> <li>– Ensure that health and safety measures and mitigations are enforced on-site according to the site-specific H&amp;S management plan (the Proponent will be responsible for developing and implementing a H&amp;S management plan);</li> <li>– For specific duties, the appropriate PPE (i.e., harnesses when working at heights) should be worn at all times;</li> <li>– Safety induction training sessions should be given to all technicians and field staff before commencement of their shifts;</li> <li>– Risk identification and suitable prevention measures should be employed within the facility area to eliminate potential impacts;</li> <li>– All occupational health-related complaints should be recorded and appropriate action to be taken to resolve potential issues;</li> <li>– Occupational Incidents and accidents on-site should be reported to the division:</li> </ul>		

Activity/ Process	Aspect	Impact	Management/mitigation measures	Compliance	Comments
			<p>Occupational Safety &amp; Health (OSH) at the Ministry of Labour, Industrial Relation and Employment Creation, by using form F.5;</p> <ul style="list-style-type: none"> <li>– Emergency contact details should be readily accessible to contact relevant services during an emergency;</li> <li>– Appropriate signs should be set up on-site, where there might be an occupational risk, i.e., signs noting employees and customers of stairs, poor lighting, small/sudden steps, heights, wiring etc;</li> <li>– Portable signs should also be available on-site, i.e. when floors are wet, when using chemicals, for construction and maintenance etc;</li> <li>– There should at all times be an employee/appointed HSE officer/foreman with up to date first aid training on-site;</li> <li>– In the unlikely event of a death occurring on-site from occupational negligence or otherwise from a "freak accident event", the area should be secured and removing all personnel from the scene;</li> </ul>		

Activity/ Process	Aspect	Impact	Management/mitigation measures	Compliance	Comments
			<ul style="list-style-type: none"> <li>– A root cause analysis into the event should be undertaken as soon as practicably possible;</li> <li>– Counselling should be provided to the witnesses and other personnel members who may have been impacted by the event.</li> <li>– All occupational health-related complaints should be recorded;</li> <li>– If any occupational health-related complaints are received and a risk assessment indicates that RF radiation may be a potential risk, EMF radiation should be measured and monitored by a registered occupational hygiene/health and safety monitoring body to determine whether the exposure is within recommended exposure limits;</li> <li>– Shorter shifts could be implemented to reduce exposure time;</li> <li>– RF radiation should be kept within the recommended exposure limits as specified in the Atomic Energy and Radiation Protection Act, No. 5 of 2005: Non-Ionising Radiation Regulations No. 126 of 2020; and</li> </ul>		

Activity/ Process	Aspect	Impact	Management/mitigation measures	Compliance	Comments
			<ul style="list-style-type: none"> <li>In partnership with relevant stakeholders, provide awareness campaigns about the effects of non-ionising electromagnetic fields on human health.</li> </ul>		
<b>6) All activities</b>	<ul style="list-style-type: none"> <li>Construction and operational phases</li> </ul>	<ul style="list-style-type: none"> <li>Infrastructure lighting</li> </ul>	<ul style="list-style-type: none"> <li>Light disturbances should be minimised;</li> <li>Lighting on-site is to be sufficient for safety and security purposes; and</li> <li>Lighting should not be a nuisance for any businesses/residents/camps or lodges surrounding the facility.</li> </ul>	<ul style="list-style-type: none"> <li>Compliant</li> </ul>	<ul style="list-style-type: none"> <li>The Proponent was compliant to this component of the EMP and will continue to adhere to the rules and regulations as per the EMP.</li> </ul>
<b>7) All activities</b>	<ul style="list-style-type: none"> <li>General construction and operational phases</li> </ul>	<ul style="list-style-type: none"> <li>Community and environment</li> </ul>	<ul style="list-style-type: none"> <li>Engage with the surrounding communities and/or all stakeholders, especially the nearest neighbours about the construction activities;</li> <li>In partnership with relevant stakeholders, provide awareness campaigns about the effects of non-ionising electromagnetic fields on human health;</li> </ul>	<ul style="list-style-type: none"> <li>Compliant</li> </ul>	<ul style="list-style-type: none"> <li>The Proponent was compliant to this component of the EMP and will continue to adhere to the rules and regulations as per the EMP.</li> </ul>

Activity/ Process	Aspect	Impact	Management/mitigation measures	Compliance	Comments
			<ul style="list-style-type: none"> <li>– Ensure the construction of the BTS blends in with the natural environment as far as reasonably practicable;</li> <li>– Aircraft warning lights should be directed in the right directions and angles, to minimise disturbances to residents;</li> <li>– Ensure that the International Commission on Non-Ionizing Radiation Protection (ICNIRP), IFC guidelines, and precautionary principles, as well as other applicable legal frameworks and regulations, are adhered to.</li> </ul>		
<b>8) All activities</b>	<ul style="list-style-type: none"> <li>– Waste management</li> </ul>	<ul style="list-style-type: none"> <li>– Environmental pollution</li> </ul>	<ul style="list-style-type: none"> <li>– Waste management should be handled by following the International Finance Corporation (IFC) standards as follows:</li> <li>– Implement a waste management plan (from “cradle to grave” methodology) covering all aspects of waste generated on-site;</li> <li>– Training and toolbox talk about the importance of waste management;</li> <li>– Ensure a high standard of housekeeping across the site;</li> <li>– Solid waste shall be stored in an appointed area in covered, tip-proof metal</li> </ul>	<ul style="list-style-type: none"> <li>– Compliant</li> </ul>	<ul style="list-style-type: none"> <li>– The Proponent was compliant to this component of the EMP and will continue to adhere to the rules and regulations as per the EMP.</li> </ul>



Activity/ Process	Aspect	Impact	Management/mitigation measures	Compliance	Comments
			<p>drums/skips for collection and disposal to an approved waste management site;</p> <ul style="list-style-type: none"> <li>– The waste storage areas shall always be kept clean and tidy.</li> <li>– Storage of domestic waste on site may result in the attraction of unwanted scavengers and should be removed as soon as it is feasible;</li> <li>– Implement the waste management hierarchy across the site: Avoid, reuse, recycle, then dispose of;</li> <li>– Return packaging of hazardous and non-hazardous materials (wherever possible), such as empty bags for reuse;</li> <li>– Solid waste should be deposited/emptied regularly;</li> <li>– See the material safety data sheets available from suppliers for disposal of contaminated products and empty containers;</li> <li>– Liaise with the governing body (municipality/council) regarding the waste and handling of hazardous waste;</li> <li>– Hydrocarbon and chemical contaminated solids have the potential to cause</li> </ul>		

Activity/ Process	Aspect	Impact	Management/mitigation measures	Compliance	Comments
			contamination to the soil, ground and or surface water, thus correct storage and disposal methods are required;		
<b>9) All activities</b>	<ul style="list-style-type: none"> <li>– Biodiversity on-site</li> </ul>	<ul style="list-style-type: none"> <li>– The possible encountering of biodiversity on-site</li> </ul>	<p>The Nature Conservation Ordinance Act No. 4 of 1975 and its regulations, Controlled Wildlife Products and Trade Act 9 of 2008 and the Animals Protection Act 71 of 1962 should be closely followed with regards to any biodiversity encounters on-site.</p> <ul style="list-style-type: none"> <li>– No mammals, birds, reptiles, amphibians etc. should be killed or harmed on-site;</li> <li>– No animal should be killed or removed from the site by anyone other than by a professional/registered animal handler, pest control company, SPCA, MEFT/MAWLR or relevant rehabilitation or wildlife organisations.</li> </ul>	<ul style="list-style-type: none"> <li>– Compliant</li> </ul>	<ul style="list-style-type: none"> <li>– The Proponent was compliant to this component of the EMP and will continue to adhere to the rules and regulations as per the EMP.</li> </ul>

Activity/ Process	Aspect	Impact	Management/mitigation measures	Compliance	Comments
			<ul style="list-style-type: none"> <li>– If snakes are encountered on-site or found within the proposed site, employees should stay clear of the room/area where the snake was seen, and a professional snake handler should be contacted to safely remove the snake;</li> <li>– Nests discovered on infrastructure within the site should not be removed or destroyed if it is not clear that there are no eggs or chicks in the nests;</li> <li>– Nests/eggs/birds should be identified by a professional and action could be taken depending on advice or instruction given by the professional;</li> <li>– Pesticides and herbicides should not be used as reasonably possible;</li> <li>– If there is no other possibility the relevant pesticides/herbicides/chemicals should be used by a professional/registered pest control company and the MSDS of the substance used should be closely followed;</li> <li>– If a wild animal expected of having rabies (foam by mouth or unusual behaviour) is spotted/encountered on or near the site</li> </ul>		

Activity/ Process	Aspect	Impact	Management/mitigation measures	Compliance	Comments
			<p>MEFT/the City of Windhoek should be contacted to safely remove the animal;</p> <ul style="list-style-type: none"> <li>– Waste on-site should be well managed and removed from the site to prevent animals (i.e. rodents, snakes, scorpions etc) from breeding/living on-site; and</li> <li>– “Flappers” shiny rotating devices could be used on roofs or other site infrastructures to repel birds.</li> </ul>		
<b>10) All activities</b>	<ul style="list-style-type: none"> <li>– Avifauna</li> </ul>	<ul style="list-style-type: none"> <li>– Possible bird collision due to the erection of the communication structure.</li> </ul>	<ul style="list-style-type: none"> <li>– 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:</li> <li>– 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</li> <li>– Should collisions still take place after mitigation, other methods should be considered;</li> <li>– More stringent and regular monitoring is recommended;</li> </ul>	<ul style="list-style-type: none"> <li>– Compliant</li> </ul>	<ul style="list-style-type: none"> <li>– The Proponent was compliant to this component of the EMP and will continue to adhere to the rules and regulations as per the EMP.</li> </ul>

Activity/ Process	Aspect	Impact	Management/mitigation measures	Compliance	Comments
			<ul style="list-style-type: none"> <li>– Could potentially add objects (i.e., “Flappers”, which are reflective rotating devices) to the tower that will be able to divert birds away from the structures, especially areas where materials are thin and potentially difficult to see;</li> <li>– Audible frequencies (4 to 6 kHz) could be broadcasted from the tower to divert birds from the tower;</li> <li>– Lighting on the tower should preferably be a colour that does not attract insects, to prevent nocturnal birds from flying into the structures; and</li> <li>– The “Flappers” could also be glow in the dark to make it visible for birds at night</li> </ul>		
<b>11) All activities</b>	<ul style="list-style-type: none"> <li>– Soil</li> </ul>	<ul style="list-style-type: none"> <li>– Soil pollution and erosion</li> </ul>	<ul style="list-style-type: none"> <li>– Indigenous vegetation could be planted to prevent erosion;</li> <li>– Rock beds could also be used to prevent erosion on the gentle slopes around the buildings;</li> <li>– An erosion control plan should be implemented on-site due to the relief of the site (draining to the small stream to the west of Erf 361) and due to the vegetation that has been cleared;</li> </ul>	<ul style="list-style-type: none"> <li>– Compliant</li> </ul>	<ul style="list-style-type: none"> <li>– The Proponent was compliant to this component of the EMP and will continue to adhere to the rules and regulations as per the EMP.</li> </ul>



Activity/ Process	Aspect	Impact	Management/mitigation measures	Compliance	Comments
			<ul style="list-style-type: none"> <li>Any spills and waste should be cleaned up immediately;</li> <li>A 'good housekeeping' policy will be adopted across the construction and maintenance working areas;</li> <li>Under no circumstances should oil or other substances be permanently disposed of on-site; and</li> <li>Minimise the disturbance and removal of topsoil.</li> </ul>		
<b>12) All activities</b>	<ul style="list-style-type: none"> <li>Job creation, skills development and business opportunities</li> </ul>	<ul style="list-style-type: none"> <li>Beneficial socio-economic impacts on a local and regional scale</li> </ul>	<ul style="list-style-type: none"> <li>Maximise local employment and local business opportunities;</li> <li>Enhance the use of local labour and local skills as far as reasonably possible; and</li> <li>Ensure that goods and services are sourced from the local and regional economy as far as reasonably possible.</li> </ul>	<ul style="list-style-type: none"> <li>Compliant</li> </ul>	<ul style="list-style-type: none"> <li>The Proponent was compliant to this component of the EMP and will continue to adhere to the rules and regulations as per the EMP.</li> </ul>

## **5 CONCLUSION**

No complaints were received and recorded during the reporting period. All proposed activities were 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 during the operational and maintenance phase. Further recommendation includes annual operational health, safety and environmental reports to be updated throughout operations by an independent environmental practitioner.

## **APPENDIX A – ENVIRONMENTAL MANAGEMENT PLAN**

## **APPENDIX B – CURRENT ENVIRONMENTAL CLEARANCE CERTIFICATE**