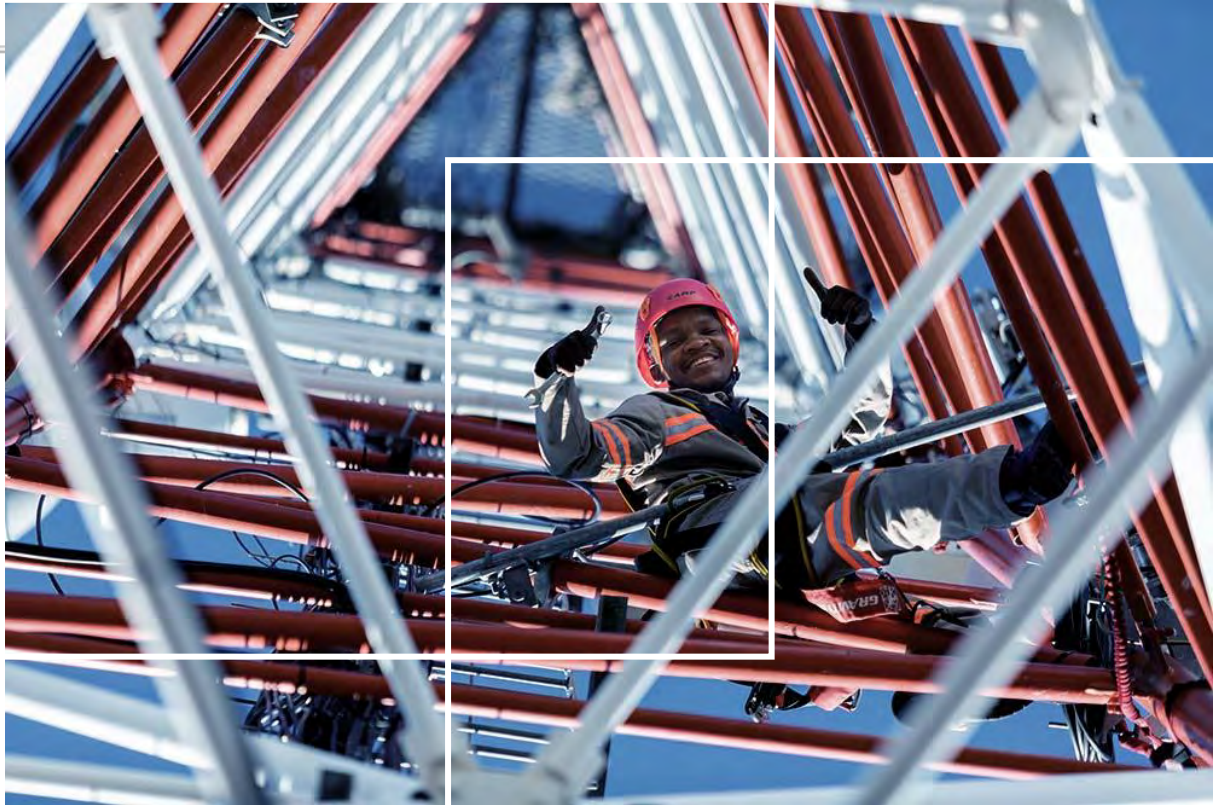




Submitted to: Paratus
Telecommunications (Pty) Ltd.
Attention: Mr. Robert Archer
P O Box 90140
102-104 Nickel Street, Prosperita
Windhoek, Namibia.

ADDENDUM REPORT:

I&AP COMMENTS AND RESPONSES ON SCOPING REPORT FOR THE CONSTRUCTION OF A BTS IN EXT. 11(ERF 2747), HENTIES BAY, NAMIBIA

PROJECT NUMBER: ECC-45-452-REP-15-D

REPORT VERSION: REV 01

DATE: 18 AUGUST 2023

TITLE AND APPROVAL PAGE

Project Name: I&AP comments and responses on scoping report for the construction of a BTS in ext. 11(ERF 2747), Henties Bay, Namibia

Client Company Name: Paratus Telecommunications (Pty) Ltd.

Client Name: Mr. Robert Archer

Ministry Reference: APP-001503

Authors: Kelly Ochs and Jessica Bezuidenhout

Status of Report: Final for Government submission

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ABBREVIATIONS

ABBREVIATIONS	DESCRIPTION
EAP	environmental assessment practitioner
ECC	Environmental Compliance Consultancy
EIA	environmental impact assessment
EMA	Environmental Management Act, No.7 of 2007
ESIA	environmental and social impact assessment
Ext	Extension
I&APs	interested and affected parties
MEFT	Ministry of Environment, Forestry and Tourism
NRPA	National Radiation Protection Authority
Paratus	Paratus Telecommunications (Pty) Ltd

1 INTRODUCTION

1.1 PURPOSE OF THE COMMENTS CONSOLIDATED REPORT

This document has been compiled following the required period of review to be provided for public and registered interested and affected parties (I&APs). This allowed I&APs an opportunity to comment in writing on the draft scoping report for the proposed construction of a BTS and associated infrastructure in ext.11 (ERF 2747), Henties Bay, Namibia.

The draft scoping report was completed for the Project and undertaken in accordance with the requirements of the Environmental Management Act, 2007 (Act No. 7 of 2007) and the Environmental Impact Assessment Regulation, 2007 (No. 30 of 2011) gazetted under the Environmental Management Act (EMA), 2007 (Act No. 7 of 2007).

Environmental Compliance Consultancy (ECC) prepared the scoping report, which was provided to the public and registered I&APs for review for 14 days from 13th of July – 20th of July 2023.

This document compiles all comments received during the public review period; presents the responses from ECC as the appointed environmental assessment practitioner (EAP) for the project and the Proponent in the assessment.

2 SUMMARY OF COMMENTS FROM I&APS

2.1 INTRODUCTION

In accordance with the Regulations of the EMA 2007, on the 13th of July 2023 the scoping report was circulated electronically to all registered interested and affected parties (I&APs), identified key stakeholders. A letter was received by one individual which was collated in a separate "Comments and Responses" table per that are presented in Table 1. An email has been received from the National Radiation Protection Authority (NRPA) which was addressed in Table 2. Responses have been provided to all comments received. The original letter submission as received from the I&AP is provided in Appendix A. The comments from NRPA are provided in Appendix B.

2.2 KEY FEEDBACK ON ISSUES OF CONCERN

The scoping report was provided to all I&APs, identified stakeholders and made publicly available on ECC's website. This public review period is set out to solicit comments, feedback, and allow genuine participation in the final phase of the ESIA process. Several concerns were raised in a letter received from homeowner, Mr. D.J. Grobler, ext. 11(ERF 2717), on behalf of the surrounding residents. The NRPA advised the Proponent regarding a few aspects. The key areas raised from the review of the I&APs' comments can be summarised as follows:

Impacts of EMR on residents

Mr. Grobler expressed concern about the impacts of prolonged electromagnetic radiation and its health implications on the surrounding residents. The EAP addressed this potential impact in the scoping phase of the project and the Proponent assures that all equipment has been tested and approved by Communications Regulatory Authority of Namibia (CRAN).

Impacts of the BTS on property value

Mr. Grobler highlighted that the tower amongst the homes will likely affect the aesthetic appeal and deter potential home buyers and diminish the overall property value of the homes in this area. The Proponent will style the tower in such a manner that it does not diminish the aesthetic appeal of the area.

Noise generation during the operational phase

Mr. Grobler explained that the noise generation during the operational phase may be an annoyance to residents in proximity, however the EAP and Proponent assures that the telecommunications tower will not make a noise whereby it will disturb residents.

Bird dropping and waste

Mr. Grobler expressed concern over possible attraction of birds and the mess it may create in the yards of homeowners. The EAP addressed this potential impact during the scoping phase of the project.

Dialogue with Neighbourhood

Mr. Grobler pointed out that the Proponent should initiate a dialogue with residents before moving forward with the proposed Project. The Proponent would be happy engage with the I&APs should the responses not be sufficient.

Radiological Impact Assessment

The National Radiation Protection Authority (NRPA) requested that the Proponent (Paratus) submit a comprehensive radiological impact assessment. The Proponent responded to the requirements of the NRPA.

3 DRAFT SCOPING REPORT – COMMENTS AND RESPONSES

Table 1 - Comments and feedback from the scoping report public review period received from: Mr D J Grobler

Comment	EAP Response
We are writing to express our deep concern regarding the proposed installation of a base transceiver station and associated infrastructure (installation) in the middle of our residential area. As an active member of this community and a homeowner, we believe it is crucial to voice our collective apprehensions and seek an alternative solution that ensure the well-being of our neighbourhood.	We appreciate the feedback and agree your input is critical to the process.
The location of the proposed installation raises significant health and safety concerns for our residents. Numerous scientific studies raised questions about the potential health risks associated with prolonged exposure to the electromagnetic radiation emitted by these installations. Placing such an installation in such close proximity to our homes and families is a cause of alarm and warrants a thorough examination of the potential health implications.	A thorough impact assessment has been conducted in accordance with the EMP. Furthermore, Paratus is subject to the Regulations in Respect of Telecommunications Equipment Requiring Type Approval: Communications Act, 2009 which prohibits Paratus from using any equipment that has not been tested and approved by the Communications Regulatory Authority of Namibia for safety and quality.
Installation in the middle of a residential area could have severe negative impacts on our property value. The sight of a towering structure amidst our homes would undoubtedly diminish the aesthetic appeal of the neighbourhood, making it less attractive to prospective homebuyers. This could have detrimental effect on property prices and the financial well-being of the residents who have invested their hard-earned savings in their homes.	This impact has been included in the impact assessment under section 7 of the Project scoping report. The style of the tower will be minimalistic and neat to draw as little attention as possible.

The noise generated by the equipment associated with the operation of such an installation could be disruptive to the peaceful ambience of our residential area. The constant hum and mechanical sounds could not only cause annoyance but also disturb the tranquillity that we all cherish and value. Our neighbourhood should remain a heaven serenity, free from audible distractions associated with an industrial facility.	During the operational phase, the telecommunication tower will not make noise and disturb residents in proximity. Paratus is committed to keeping the tower in good repair and will immediately attend to any complaints of noise from the air-conditioner, which runs silently. There are currently two sites in Henties Bay that are operational where no noise complaints have been received.
The installation will attract birds, and this will create a mess on the surrounding properties. The cleaning of these properties will create an increase financial burden on homeowners.	This comment has been addressed in the impact assessment under section 7 of the Project scoping report.
We respectfully request that you reconsider the proposed location and explore alternative options. There may be other areas, such as commercial or industrial zones, that are better suited for this purpose, which would minimise the impact on our residential community.	Alternative locations were extensively considered, but this location was agreed to by the municipality, because it already houses a substation and is divided into 52m² portions. The location is also ideal to address the underserved residential areas where Paratus does not have coverage.
We kindly urge you to take our concerns seriously and initiate a dialogue with the residents before moving ahead with any installation plans. Community engagement and open communication are essential in addressing our shared concerns and finding a mutual beneficial solution that respects the well-being and aspirations of all parties involved. Thank you for taking the time to consider our concerns, we trust that you will give due attention to the issues raised and work towards a resolution that prioritizes the health, safety and quality of life to our community. We look forward to your prompt response and further collaboration on the matter.	Paratus is happy to further engage in person if this written engagement has not sufficiently addressed the legitimate concerns raised and further written engagement is not satisfactory. However, we trust that we have answered in depth. We have taken care to construct the tower in the most environmental and socially friendly manner and look forward to bringing reliable connectivity to all households in the area.

Table 2 - Comments and feedback from the scoping report public review period received from: Amakali Gideon (NRPA)

Comment	EAP Response						
This communication has reference to the ECC Report No: ECC-45-452-REP-02-C, dated 13 July 2023 regarding the construction of the telecommunication base station site on ERF 2747, Henties Bay. Please note that our office, the National Radiation Protection Authority (NRPA) is the regulatory body established by the Atomic Energy and Radiation Protection Act (Act. No 5 of 2005) to control and regulate activities associated with radiation. As part of its regulatory control, the NRPA implement and enforce the Non-Ionising Radiation (NIR) Regulations, applies to, amongst others, cellular base stations and microwave dish antennas. For NRPA to consider your submission and recommend for an Environmental Clearance Certificate, it is expected that you submit a comprehensive radiological impact assessment result for the site of interest as per the Regulation 5. 4 (b) of the Non-Ionising Radiation Regulations: Atomic Energy and Radiation Protection Act, 2005. You are therefore required to undertake a comprehensive study to quantify the current exposure levels at critical areas	Please see below, the response to the mentioned points for the Radiological impact assessment: - Confirmation that the public exposure from the equipment is less than 10 mJ kg⁻¹ for workers and 2mJ kg⁻¹ for general public: <table border="1"> <caption>Table 8: Whole body SAR exclusion power levels</caption> <thead> <tr> <th>Exposure category</th><th>Maximum output power (rms)</th></tr> </thead> <tbody> <tr> <td>General public</td><td>Max. power [W] = general public whole body SAR limit [W/kg] * 12.5 kg: 4-year-old child body mass = 1 W</td></tr> <tr> <td>Occupational</td><td>Max. power [W] = occupational whole body SAR limit [W/kg] * 42 kg: 16-year-old worker body mass = 16.8 W</td></tr> </tbody> </table> - Output power 40 Watts of power - Titling angles -2 Tilt angle - Height of the tower 30 meters - Boundary in which public may not come near tower	Exposure category	Maximum output power (rms)	General public	Max. power [W] = general public whole body SAR limit [W/kg] * 12.5 kg: 4-year-old child body mass = 1 W	Occupational	Max. power [W] = occupational whole body SAR limit [W/kg] * 42 kg: 16-year-old worker body mass = 16.8 W
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Occupational	Max. power [W] = occupational whole body SAR limit [W/kg] * 42 kg: 16-year-old worker body mass = 16.8 W						

/ critical members of the public, due to any existing sources of NIR installations in the neighbourhood. You are also required to provide estimated exposure values to critical people in the surrounding as a result of the proposed installation.

The estimation study should consider the relevant parameters specific to the installations under study, e.g. output power, tilting angles, height of the tower, etc. The study should consider usage of internationally recognized or validated mathematical calculation or appropriate modelling to establish boundaries / exclusion zones for workers and members of the public for each antenna mounted on the base station, outside of which electric and magnetic field (EMF) exposure is below the International Commission on Non-Ionizing Radiation Protection (ICNIRP) limits. Without this information, we would not be able to reach an informed decision.

Table 9: Compliance boundaries for general public and occupational levels

Power	General public levels		Occupational levels	
	Frequency range			
	698-960 MHz	1710-2690 MHz	698-960 MHz	1710-2690 MHz
	Distance			
2 W	150 cm (59.1 in.)	100 cm (39.4 in.)	70 cm (27.6 in.)	50 cm (19.7 in.)
5 W	230 cm (90.1 in.)	150 cm (59.1 in.)	110 cm (43.3 in.)	70 cm (27.6 in.)
10 W	320 cm (126 in.)	210 cm (82.7 in.)	150 cm (59.1 in.)	100 cm (39.4 in.)
20 W	450 cm (177.2 in.)	290 cm (114.2 in.)	210 cm (82.7 in.)	140 cm (55.1 in.)
30 W	550 cm (216.5 in.)	350 cm (137.8 in.)	260 cm (102.4 in.)	160 cm (63 in.)
40 W	640 cm (252 in.)	410 cm (161.4 in.)	290 cm (114.2 in.)	190 cm (74.8 in.)
50 W	710 cm (279.5 in.)	460 cm (181.1 in.)	330 cm (130 in.)	210 cm (82.7 in.)
60 W	780 cm (307.1 in.)	500 cm (196.9 in.)	360 cm (141.7 in.)	230 cm (90.1 in.)
70 W	840 cm (330.7 in.)	540 cm (212.6 in.)	390 cm (153.5 in.)	250 cm (98.4 in.)
80 W	900 cm (354.3 in.)	580 cm (228.3 in.)	410 cm (161.4 in.)	270 cm (106.3 in.)
90 W	950 cm (374 in.)	610 cm (240.2 in.)	440 cm (173.2 in.)	280 cm (110.2 in.)

The component specifications for 900 MHz and 1800 MHz also apply to 850 MHz and 1900 MHz products respectively, and can be used to demonstrate compliance with FCC guidelines for human exposure to radio frequency electromagnetic fields contained in the FCC

The specific frequency range for this BTS is 1800 MHz

4 ACKNOWLEDGEMENTS

Through the ESIA process, the Proponent and ECC have endeavoured to provide a platform to hear and address all relevant comments put forward by I&APs. ECC would like to thank the I&APs and stakeholders for providing feedback during the scoping phase of the ESIA process. We acknowledge and appreciate the time required to review these documents and ECC genuinely appreciate the input provided by I&APS. The valuable feedback received during the scoping report phase of the ESIA process will ensure a robust impact assessment is submitted to the relevant authorities for a record of decision to be made. ECC acknowledges that constructive feedback results in an improved ESIA and a project that is understood by the community and I&APs.

APPENDIX A – THE ORIGINAL LETTER SENT BY MR. GROBLER

APPENDIX B - EMAIL FROM NRPA

From: Amakali Gideon <Amakali.Gideon@mhss.gov.na>
Date: Tue, Aug 1, 2023 at 12:03 PM
Subject: Review - ECC Report No.:ECC-45-452-REP-02-C
To: Info ECC <info@eccenvironmental.com>
Cc: Joseph Eiman <Joseph.Eiman@mhss.gov.na>, Dauphin Matomola <Dauphin.Matomola@mhss.gov.na>

Good day sir/madam,

This communication has reference to the ECC Report No.:ECC-45-452-REP-02-C, dated 13 July 2023 regarding the construction of the telecommunication base station site on ERF 2747, Henties Bay.

Please note that our office, the National Radiation Protection Authority (NRPA) is the regulatory body established by the Atomic Energy and Radiation Protection Act (Act. No 5 of 2005) to control and regulate activities associated with radiation. As part of its regulatory control, the NRPA implement and enforce the Non-Ionising Radiation (NIR) Regulations, applies to, amongst others, cellular base stations and microwave dish antennas.

For NRPA to consider your submission and recommend for an Environmental Clearance Certificate, it is expected that you submit a comprehensive radiological impact assessment results for the site of interest as per the Regulation 5. 4 (b) of the Non-Ionising Radiation Regulations: Atomic Energy and Radiation Protection Act, 2005.

You are therefore required to undertake a comprehensive studies to quantify the current exposure levels at critical areas / critical members of the public, due to any existing sources of NIR installations in the neighbourhood. You are also required to provide estimated exposure values to critical people in the surrounding as a result of the proposed installation.

The estimation study should consider the relevant parameters specific to the installations under study, e.g. output power, tilting angles, height of the tower, etc. The study should consider usage of internationally recognized or validated mathematical calculation or appropriate modelling to establish boundaries / exclusion zones for workers and members of the public for each antenna mounted on the base station, outside of which electric and magnetic field (EMF) exposure is below the International Commission on Non-Ionizing Radiation Protection (ICNIRP) limits. Without these information, we would not be able to reach an informed decision.

Best regards

Gideon Amakali (PhD)
Chief Radiation Physicist
Atomic Energy & Radiation Protection Authority
Ministry of Health and Social Services,
-1C,02, Basement
Ministerial Building