Sheobalak Engineering (Pty) Ltd
Civil Engineering, Telecommunication Engineering and Site Acquisition Specialists

Company Reg No.: 2021/348895/07

Level 1 B-BBEE contributor

37 Zenith Drive
Office 004, The Cube
Umhlanga
4319
T: +27 63 501 1120
E: shivam@sheoeng.com

08 October 2024

Department of Environmental Affairs and Development Planning
Directorate: Development Management, Region 1

TO WHOM IT MAY CONCERN

Reference: NEMA PUBLIC PARTICIPATION PROCESS PROPOSED DEVELOPMENT OF THE 25m HIGH DIEMERSFONTEIN TELECOMMUNICATION MAST ON PORTION 0 OF THE FARM NO. 1756, PAARL ROAD, WESTERN CAPE.

RESPONSE TO CONCERNS RECEIVED.

1. **Health Concerns**

Numerous measurement surveys have been conducted globally and within the South African context, shedding light on the levels of public exposure stemming from emissions of base stations. These comprehensive studies consistently reveal that such exposure remains consistently below the thresholds stipulated by the International Commission of Non-Ionizing Radiation Protection (ICNIRP) guidelines.

In a communication dispatched by the Department of Health and authored by LL du Toit (Deputy Director: Radiation Control), included within this Land Use application, it is explicitly stated that verifiable calculations and comprehensive surveys conclusively establish that exposure to electromagnetic fields (EMF) emitted by base stations at ground level remains within the narrow spectrum of 0.001% to 1% of the prescribed ICNIRP guideline thresholds. This unequivocal data renders any conjectures concerning adverse health implications arising from EMF exposure originating from specific base stations devoid of scientific substantiation.

Consequently, the Department is confident in asserting that the well-being of the general public remains uncompromised by their incidental exposure to the microwave emissions emanating from cellular base stations. This affirmation, in turn, alleviates any necessity for local or other regulatory bodies to impose, from a public health standpoint, any restrictions pertaining to parameters such as

distance from the mast, duration of exposure, mast height, and analogous considerations, when evaluating the environmental impact of a given base station.

2. Property Value

Several studies have attempted to assess the impact of cellular masts on nearby property values, but results have been mixed. In some cases, no significant effect has been observed, while in others, any potential impact tends to be minimal and temporary. Factors such as community perception, and overall demand for properties in the area play a crucial role in determining property values.

While individual opinions and anecdotal evidence may vary, comprehensive and conclusive studies have yet to demonstrate a consistent negative impact on property values from the presence of nearby cellular masts. Cellular masts are essential for improving mobile network coverage and connectivity, which can be a positive factor for many property buyers who value strong mobile signal and high-speed internet access. The benefits of enhanced connectivity often outweigh any potential concerns, leading to a neutral or even positive effect on property values over time.

3. Aesthetics

We strive to ensure our base stations are as inconspicuous as possible and harmonize with the surrounding environment. The proposed mast will be designed as a lattice mast to achieve this objective, as its open framework and light, airy appearance blend more seamlessly with the skyline than bulkier designs. Lattice masts offer a less imposing structure that reduces visual clutter and integrates well with natural and urban landscapes.

Although our installations must meet specific technical requirements to function effectively, including a minimum height, the lattice design minimizes the visual impact by appearing less solid and more transparent. This makes it the best aesthetic option, aligning with our commitment to balancing technical needs with the visual and environmental considerations of the communities we serve.

Moreover- a Visual Impact assessment will be carried out to share more light on this matter.

4. Power Connection

In terms of power supply, Mast Services intends to apply for a dedicated connection for the new mast. The existing power line is single-phase, which does not meet the operational requirements

of Mast Services, as they necessitate a three-phase power supply to support the enhanced network capabilities.

5. Co-location

The existing structure currently in place does not fulfill the height requirements set forth by service providers, which limits its effectiveness. In contrast, the tower proposed by Mast Services will be designed to accommodate up to three network providers, Vodacom, as a guaranteed network operator, along with other potential networks, will have the capability to host their equipment on this structure giving the best coverage possible. See images below of how the network will be improved.

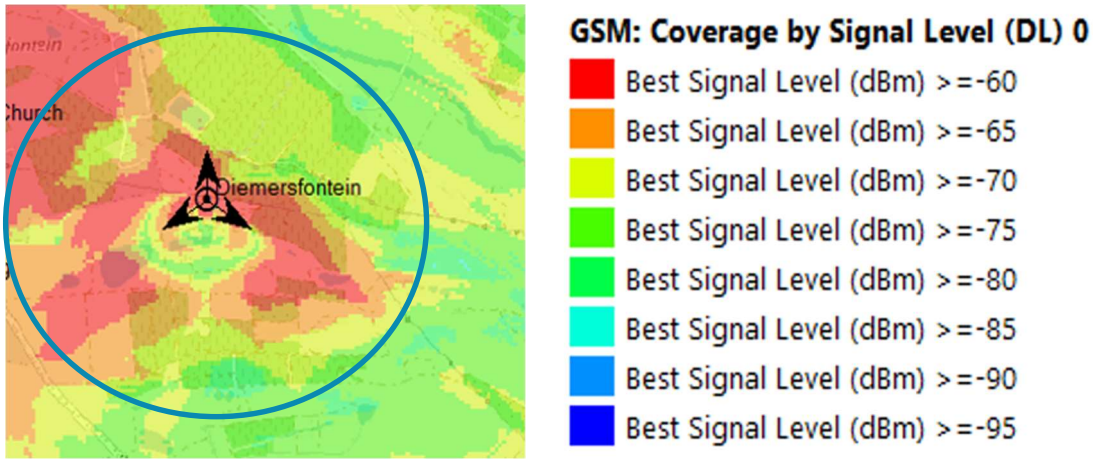

Figure 1. New Coverage Area

6. Conclusion

In summary, we appreciate your attention to this matter and look forward to your understanding and support regarding this essential infrastructure development.

Yours Faithfully,

Shivam Sheobalak
Sheobalak Engineering: Director