



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Case ID 1500126253

**Erf 18055, 8 Banjo Walk, Belhar Ext 7,
Bellville**

Development Management

ERF 18055, BELLVILLE

APPLICATION FOR REZONING, CONSENT USE & PERMANENT DEPARTURE

TO ALLOW A FREESTANDING BASE TELECOMMUNICATION STATION



JULY 2024

HIGHWAVE
CONSULTANTS

CLIENT: EAGLE TOWERS SA

PREPARED BY: HIGHWAVE CONSULTANTS PTY LTD

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DEFINITIONS:

FOR THE PURPOSE OF THIS APPLICATION THE TERMS USED HERE IN ARE AS FOLLOWS:

PROPERTY:

ERF 18055, BELLVILLE, BELHAR. CAPE DIVISION

CLIENT:

Eagle Towers S.A.

APPLICANT:

Highwave Consultants (Pty) Ltd

OWNER:

ABBREVIATIONS:

FOR THE PURPOSE OF THIS APPLICATION, AND UNLESS IT APPEARS OTHERWISE IN THE TEXT, THE TERMS USED HEREIN ARE AS FOLLOWS:

EXISTING GROUND LEVEL:

Referred to as (EGL)

CITY OF CAPE TOWN MUNICIPAL PLANNING BY-LAW, 2015

City of Cape Town: Municipal Planning Removal By-law, 2022 (MPBL)

RF

Radio Frequency

SPLUMA

Spatial Planning and Land Use management Act (Act. 16 of 2013)

TELECOMMUNICATION MAST INFRASTRUCTURE POLICY

City of Cape Town, April 2015

FSBTS:

Freestanding Base Telecommunications Station as defined in the MPBL.

TI

Telecommunication Infrastructure as defined in the MPBL

TOA

Top of Antenna

1. THE APPLICATION

Application is hereby made on behalf of our client Eagle Towers SA to allow the following on Erf 18055, Bellville, Belhar, Cape Division.

- **Rezoning application** in terms of Section 42(a) of the Cape Town Municipal Planning By-Law, 2015 to allow the rezoning of Erf 18055, Bellville from Single Residential 1 to Community Zone 1 to allow the main use as that of a place of worship and a proposed consent use of a Freestanding Base Telecommunication station with a 25m Monopole Mast, and
- **Consent use application** in terms of Section 42(i) of the Cape Town Municipal Planning By-Law, 2015 for the purpose to allow the additional use of a Freestanding Base Telecommunication station with a 25m Monopole mast.
- **Building line Departure** application in terms of Section 42(b) of the Cape Town Municipal Planning By-Law, 2015 to allow the relaxation of the street boundary building line, shared with Chopin Street; from 6.0m to 1.0m; and the relaxation of the common boundary building line shared with Erf 18054 from 6.0m to 1.0m to allow the placement of the proposed development.

2. PROPERTY DESCRIPTION, SIZE AND OWNERSHIP

The subject property relating to the application is identified as ERF 18055, Bellville, Belhar. Cape Division (hereafter referred to as the “Property”) with an extent of 4271m² (One Thousand Eight Hundred and Eighty-Eight square metres). The property is situated in the Belhar area of Bellville and forms part of the greater Cape Town metropolitan area. The property is situated on 8 Banjo Walk in Belhar and is currently owned by the Moravian Church in the Western-Cape Province. A copy of the Title Deed for Erf 18055, Bellville containing the details outlined below is attached.

TITLE DEED DESCRIPTION: Erf 18055, Bellville, Belhar, Cape Division.

TITLE DEED NUMBER:

TITLE DEED RESTRICTIONS: None.

PROPERTY SIZE: 3342m² (Three thousand three hundred and forty two square metres).

ZONING: Single Residential 1

PROPERTY OWNER:

SERVITUDES: None

3. CONTEXT AND BACKGROUND

Locality

The subject property is identified as Erf 18055, Bellville situated in Belhar, forming part of the greater City of Cape Town metropolitan area. As previously mentioned, the property is situated on 8 Banjo Walk (**Plans submitted**).

Land Use

The property is currently zoned Single Residential Zone (SR1) (**Figure 1 and Zoning Plan attached**) and the current land use is that of a church (Moravian Church in the Western-Cape Province). The surrounding properties are zoned and utilised as Single Residential properties (SR1), General Residential (GR1), Community Zone (CO1) and Public Open Space (OS2).



Figure 1: City of Cape Town Map Viewer (July 2024).

4. DEVELOPMENT PROPOSAL

Development

- It is the intention of our client to apply for a **rezoning** in terms of Section 42(a) of the Cape Town Municipal Planning By-Law, 2015 to allow the rezoning of Erf 18055, Bellville from Single Residential 1 to Community Zone 1 to allow the main use to be that of a place of worship and a proposed consent use of a Freestanding Base Telecommunication station with a 25m Monopole Mast. The **Consent use application (Figure 2)** in terms of Section 42(i) of the Cape Town Municipal Planning By-Law, 2015, is as explained above, to allow the additional use of a Freestanding Base Telecommunication station with a 25m Monopole mast on the south-western portion of the property. In addition, application is

also made for a Building line Departure to allow the relaxation of the street boundary building line, shared with Chopin Street; from 6.0m to 1.0m; and the relaxation of the common boundary building line shared with Erf 18054 from 6.0m to 1.0m to allow the placement of the proposed development (**Figure 3**).

COMMUNITY ZONINGS	
COMMUNITY ZONING 1: LOCAL (CO1)	
PRIMARY USES Place of instruction, place of worship, clinic, rooftop base telecommunication station, open space, minor freestanding base telecommunication station, minor rooftop base telecommunication station and filming	
CONSENT USES Institution, hospital, place of assembly, cemetery, freestanding base telecommunication station, urban agriculture and veterinary practice	

Figure 2: Municipal Planning By Laws: Consent Uses for Community Zoning (CO1)

Table of floor factor, floor space, coverage, height and building lines in Single Residential Zoning 1

[Heading and Table substituted by s. 32 (c) of City of Cape Town: Municipal Planning Amendment By-Law, 2019]

Land unit area (m ²)	Floor factor	Maximum floor space	Coverage	Maximum height above existing ground level		Street boundary building line	Common boundary building line
				To wall-plate	To top of roof		
>2 000	N/a	1 500 m ²	N/a	9,0 m	11,0 m	6,0 m	6,0 m

Figure 3: Development Parameters for Single Residential1 Zoning

The application entails the following proposed development parameters:

- Erection of a 25m monopole mast situated in the western portion of the property.
- Installation of 12 triband antennae on the proposed 25m mast.

- Installation of two transmission dishes on the proposed 25m mast.
- Construction of concrete plinths and installation of two x telecommunications equipment containers measuring at existing ground level.
- The mast and equipment containers will be placed inside an approximate 64m² compound enclosed off by a fence appropriate in the context or housed in a specially designed building to match other buildings on the site **(Plans submitted)**.

Access

Access to the proposed freestanding base station will be obtained from a proposed new access gate on Chopin Street. Cognisance was taken of the following:

- (a) The City may require compliance with standard municipal or provincial access spacing guidelines;
 - (b) No vehicular ingress or egress shall be closer than 10 m from an intersection as defined by the prolongation of street boundaries; except for industrial-zoned properties, where the distance shall be 15 m; and
 - (c) The City may restrict or prohibit access if a pedestrian or traffic hazard is created or is likely to be created.
- (2) Vehicle entrances and exit ways to and from property shall conform to the following requirements:
- (a) Motor vehicle carriageway crossings shall be limited to one per site per public street or road abutting the site;
 - (b) Notwithstanding paragraph (a) above, where the total length of any street boundary of a site exceeds 30 m in length, one additional carriageway crossing may be permitted, provided that no two carriageway crossings are closer than 12 m to each other;
 - (c) The minimum and maximum width of any motor vehicle carriageway crossing shall be 2,4 m and 8,0 m respectively.
[Para. (c) substituted by s. 76 (a) of City of Cape Town: Municipal Planning Amendment By-Law, 2019]
 - (d) ...
[Para. (d) inserted by s. 54 of City of Cape Town: Municipal Planning Amendment By-Law, 2016]
[Para. (d) deleted by s. 76 (b) of City of Cape Town: Municipal Planning Amendment By-Law, 2019]

Figure 4 Access

Security

The proposed freestanding base telecommunications station will be constructed on Erf 18055, Bellville surrounded by a palisade fence. Extra security to the actual telecommunications base station will be added by a 2,4m high palisade fence. The telecommunications radio and transmission equipment will be installed inside alarm monitored containers; these containers are secure as they are always locked. The antennae will be located 16m above ground level and are inaccessible to the public. A mast door with a high security lock will be installed ensuring increased security to mast. Access

to the equipment and antennae will be limited to registered and qualified personnel only. Health and safety legislation also require restrictive security signage (0, 4 x 0,5m) to be attached to access gate, containers and mast door. The above mentioned safety and security measures have been put in place by telecommunication operators and legal entities to prevent access to the public and greatly reduce vandalism of the equipment.

Electricity Requirements

Electricity supply will be obtained from the available on-site supply, technological advances have also seen current telecommunications equipment reduce their electricity usage.

Environmental

Environmental and social sustainability are regulated by The National Environmental Management Act (Act 107 OF 1998) (NEMA) - published in Government Notice No. R324. When read together with the National Environmental Management Act Regulations Listing Notice 3 of 2017 (promulgated April 2017) (**Copy attached**), an Environmental Impact Assessment (EIA) or Environmental Authorization (EA) is only applicable in the following circumstances:

The development of masts or towers of any material or type used for telecommunication broadcasting or radio transmission purposes where the mast or tower:

- i) is to be placed on a site not previously used for this purpose; and
- ii) will exceed 15 metres in height

But excluding attachments to existing buildings and masts on rooftops.

The requirements in the Western Cape are defined in NEMA Listing Notice 3 of 2017:

(f) In Western Cape:

- i) All areas outside urban areas; or
- ii) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority, or zoned for a conservation purpose, within urban areas.

As this site falls within an urban area inside the City of Cape Town and not in an area designated for conservation use as prescribed in the Spatial Development Framework

adopted by the competent authority, or zoned for conservation purposes, it does not trigger a listed activity in terms of the 2017 NEMA regulations and therefore no environmental impact assessment or ROD (Record of Decision) is required. Our client will submit an Environmental Applicability Checklist application should the Municipality it deemed necessary.

5. MOTIVATION

Background

Recent research conducted has indicated that there is not necessary a lack of coverage in the Belhar area, but the Operators are planning upgrades for the area to coincide with all the new developments projected in the surroundings. This will all be done to prepare the area for future technology.

The need for optimal coverage was mainly caused by the increase in subdivisions of the surrounding large properties into residential, commercial, business properties and schools over the past few years as well as the introduction of LTE (latest cellular technology). As identified by the TMIP the coverage radius/ footprint for cellular telecommunications technology has been reduced due to the latest technology and additional need for increased data speed and voice quality. In addition to the research there has been a clear increase in customer complaints in the surrounding area regarding poor or no voice and data coverage which is paramount to ensuring economic development of the surrounding area.

To provide clarity and for ease of reference, below please find an extract from the Cape Town Development Management Scheme defining a Freestanding Telecommunications base station in the context of the CTDMS and telecommunications infrastructure.

“Freestanding Base telecommunication station (FSBTS) means a freestanding support structure on land or anchored to land and used to accommodate telecommunication infrastructure for the transmitting or receiving of electronic communication signals, and may include an access road to such facility;”

“Telecommunication Infrastructure (TI) means any part of the infrastructure of a telecommunication network for radio / wireless communication [in the 0 to 300 GHz range], including voice, data and video telecommunications that is used in the transmission or reception of electromagnetic waves. This includes the following: Freestanding base telecommunication station (FBTS); Rooftop base telecommunication station (RBST); antennae; any support structure; equipment room (defined); radio equipment (irrespective of spectrum used); and optical communications equipment (laser and infra-red) provided by cellular network operators and any other telecommunication provider as well as all ancillary structures and the associated feeder cables between the communication equipment and the antennae, needed for the operation of TI. Optic Fibre installations, Point to Point copper (cable) installations, and undersea cables are excluded from this Policy.”

Proposed Development Parameters

Compliance with the current and proposed allowable development parameters (**Figure 3**) as per the CTDMS are indicated in the tables below:

Table 1: Development Parameters Applied

Development Parameters	Municipal Planning By Laws: Single Residential 1 (SR1)	Proposed Development on Erf 18055, Bellville
Building Lines	Street Building Lines: 6,0m	Applied for relaxation
	Common Building Lines: 6,0m	Applied for relaxation
Parking	Development does not encroach onto parking area	COMPLY: N/A

Height	S130 (3) A freestanding base telecommunication station is not subject to the development rules pertaining to height in the applicable base zone insofar as it does not exceed a maximum height of 25 m.	Comply: 25 m (Incl. Lighting spike)
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The proposed erection of a freestanding base telecommunication station will not have an impact on parking, coverage, height or floor factor as described in the CTDMS.

Physical Characteristics

Radio Frequency Engineers are subject matter experts and identify sites by utilizing a specific set of engineering rules and principles. Erf 18055, Belville was identified as a prime position on the following premise:

- Property offers the optimal position situated between existing and planned base stations to provide efficient data and voice coverage.
- Surrounding geographical aspects are in line with the requirements.
- Minimized physical, natural and visual impact.
- Ability to reduce the number of base stations in the surrounding areas.
- Ability to provide sufficient security to the equipment.
- Capacity to share infrastructure with majority of the operators.
- Property position will address the complaints received in the area.
- Sufficient space to erect a freestanding base telecommunications station.

Erf 18055 Belville lies between the 55m and 56m contour lines (**Figure 5**). The site slopes slightly by 1.0634m from 57.1397m on the northern erf boundary, to 56.0763m on the southern boundary, where the development is proposed. Therefore, the slope is within the

allowed slope of 1:3 (Objective 7 p39). The site measures 87.27m from north to south (SG diagram submitted).

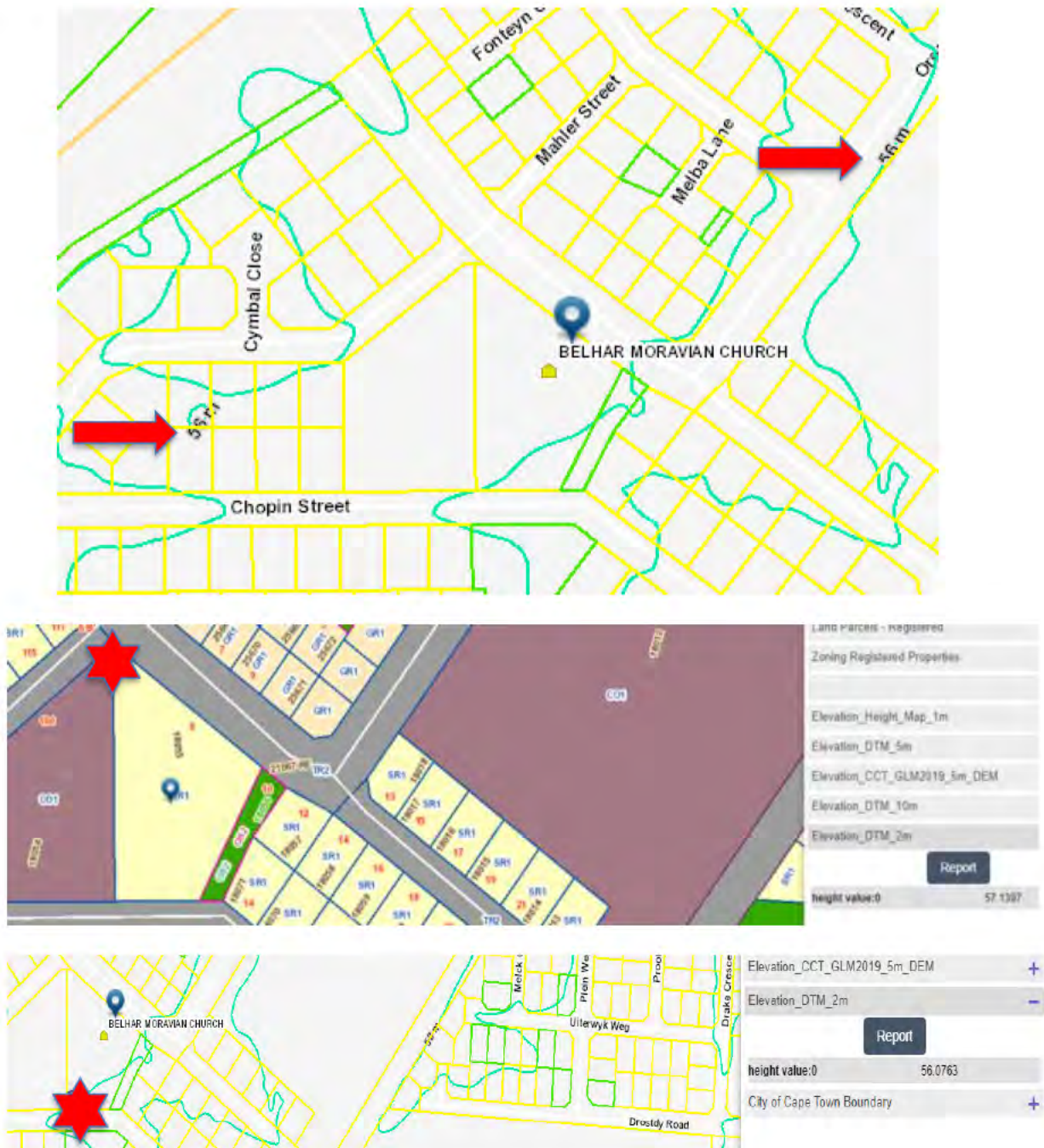


Figure 5: Site elevation

To achieve the optimal data and voice coverage objectives base stations in this specific area needs to be approximately 500m apart on average, this is due to the density of the surrounding areas as well as geographical and physical features. The fresnaye effect also influences the

quality of the voice and data coverage caused by the amount of steel and concrete of the buildings in the surrounding area, this results in a reduced coverage area.

Title Deed Restrictions

In respect of Erf 18055, Belville it was found that there are not restrictive conditions contained in title deed no. **(copy submitted)**.

Health

Current research on freestanding base telecommunication stations has reached a point whereby scientists are satisfied that base stations do not pose a health threat. Research on handsets is however ongoing, as it is deemed that placing the handset against your head could pose a greater threat to health. Mobile phones are low powered radiofrequency transmitters. They operate at frequencies between 450 and 2700 MHz. The handset only transmits power when turned on. Using the phone in areas of good reception decreases exposure as it allows the phone to transmit at reduced power. Radio waves are emitted by numerous instruments including microwave ovens and television screens inside our households. Walking along any street exposes us to RF emissions. RF emissions are part of modern-day society and scientists continuously monitor the impacts of these.

ICNIRP (International Commission on Non-Ionizing Radiation Protection), an independent scientific organization established in 1992 published guidelines providing a means of limiting and guiding human exposure to electromagnetic fields. These guidelines have become the world standard for human exposure to electromagnetic fields. ICNIRP considers both the thermal and non-thermal effects of RF exposures as well as all other identified hazards of RF exposure. Cellular equipment needs to comply with all the regulations of ICNIRP as well as the WHO and National Legislation governing the use of this equipment and the emissions of radio waves. ICNIRP allows for an exposure measurement level of 41.000 (v/m) within 15m from the antennae. Cellular operator antennae operate at a level of not more than 0.04 (v/m) within 15m, in laymen's terms the levels are approximately 1/1000th of the prescribed exposure levels. It is therefore clear that the installation of these antennae does not pose a health risk. Cellular companies monitor the health impact of their base stations carefully and spend large sums of money researching this topic annually.

South Africa's Department of Health has also published EMF exposure limit guidelines. These are based on guidelines endorsed by the ICNIRP. Emissions from all existing and proposed

base stations are following these guidelines and are far below international standards. A statement made by the Department of Health dated 19 January 2018 on the Health Effects of cellular communications base stations states the following (**letter attached**):

” Considering the very low exposure levels and research results collected to date, there is no convincing scientific evidence that the weak RF signals from base stations and wireless networks cause adverse health effects”.

Also mentioned in the statement of the Department of Health another WHO fact sheet was published in June 2011 and reviewed in October 2014 (i.e. Electromagnetic fields and public health: mobile phones viewable online and concluded the following:

“Many studies have been performed over the last two decades to assess whether mobile phones pose a potential health risk. To date, no adverse health effects have been established as being caused by mobile phone use.”

Further on in the document (attached), the Department of Health goes on to say that:

“The Department is therefore satisfied that the health of the public is not being compromised by their exposure to the microwave emissions of cellular base stations. This also means that local and other authorities, in considering the environmental impact of any base station, do not need to and should not attempt, from a public health point of view, to set any restrictions with respect to parameters such as distance to the mast, duration of exposure, height of the mast, etc.”

The following is an extract from the Radiation Protection and Nuclear Safety Agent of the Australian Government which clearly differentiate between two types of radiation, one can cause harm to the human body and the other one pose no threat to the human health. The name of the two are:

- **Ionising Radiation**

This type of radiation refers to the type that carries enough energy to cause ionisations in atoms. This is a much stronger type of radiation compared to non-ionising radiation. This is the dangerous type that you typically will find in gamma rays, x-rays, etc.

- **Non-Ionising Radiation**

This type of radiation refers to types of radiation that do not have enough energy to cause ionisation of the atoms. These types of radiation are the “every day” radiation that everyone experience such as infrared, microwaves and do not have enough energy to cause harm.

It is proven that the proposed cell mast development and every other freestanding base telecommunication station utilise **non-ionising** radiation.

5G and the concerns related to it:

The following was a study that was conducted in South Africa and published on the 6th of September 2021 on My Broadband. (The source is below). The electromagnetic radiation you are exposed to when standing close to an active microwave oven is much higher than a 5G cellular tower, a MyBroadband investigation has shown.

Even though the radiation from the microwave was much higher, it remained within the safety thresholds of the International Commission on Non-Ionizing Radiation Protection (ICNIRP). MyBroadband sent a researcher to several cellular masts around the Gauteng area to see if the electromagnetic radiation they emit present any danger to the people living around them. For points of comparison, he also measured the radiation emitted from a microwave oven and Wi-Fi router. All testing was performed using an RS Pro IM-195 RF Field Strength Meter.

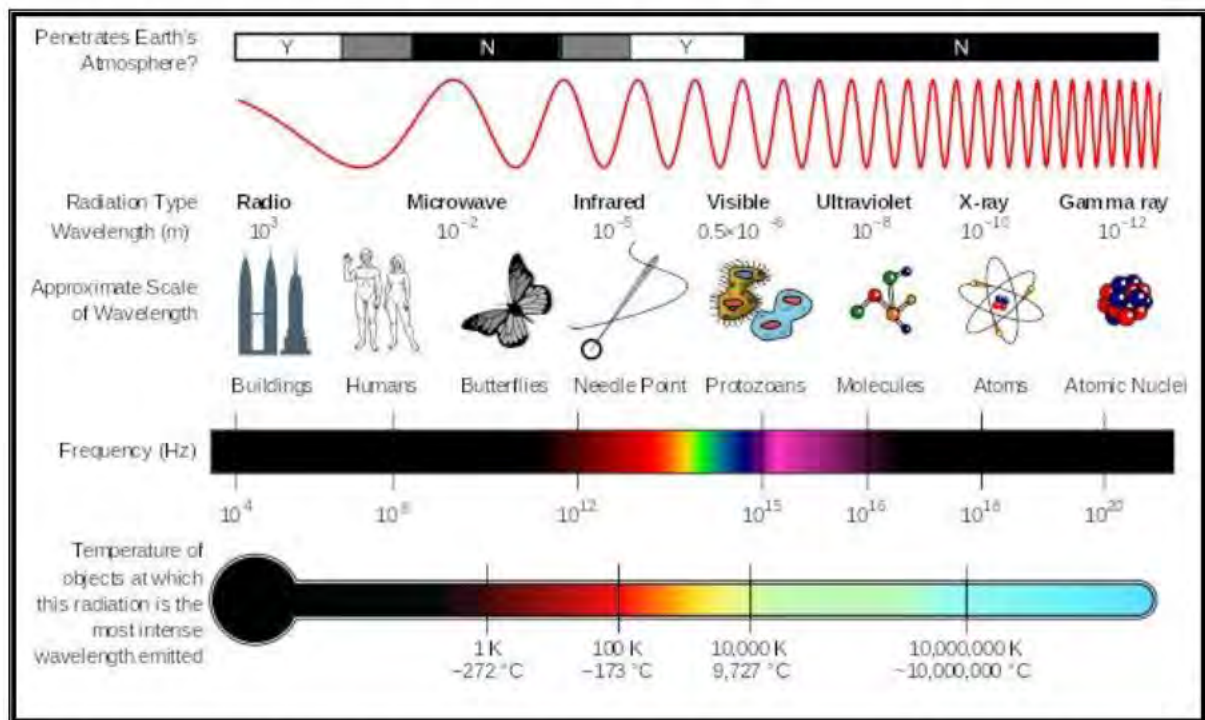


Figure 6: Diagram of the electromagnetic spectrum, showing various properties across the range of frequencies and wavelengths.

The current scientific understanding is that electromagnetic waves up to the visible light spectrum are unlikely to be harmful to human health below certain power thresholds.

Electromagnetic fields that run at frequencies higher than that of ultraviolet light are known as ionising. Ionising electromagnetic radiation, such as that caused by x-rays and gamma rays, can damage DNA and are known to cause cancers. Non-ionising radiation does not cause DNA damage as ionising radiation does, but it may be harmful to human health at high enough power levels. For example, microwave ovens use electromagnetic waves with frequencies around 2.45 gigahertz (GHz). This is in the same vicinity as technologies like Wi-Fi and Bluetooth.

The difference is that microwave ovens emit these waves at a much higher power level, measured in Watt (W), compared to Wi-Fi and Bluetooth devices. Hertz is a measurement of how many times a wave oscillates every second, whereas Watt is a measure of the wave's power.

The ICNIRP defines safe reference levels for the public at the following power densities. As the frequency of the electromagnetic wave increases, the safe power density increases:

- 900MHz — 4.5 W/m²
- 1.8GHz — 9 W/m²
- 1.9GHz — 9.5 W/m²
- 2.0GHz+ — 10 W/m²

To get a sense of the ambient electromagnetic radiation we are exposed to, we took a baseline reading outside, in a suburban neighbourhood. The measurement varied from about 0.002W/m² to 0.004W/m². We then took measurements at varying distances from a cell phone tower, and the highest reading we got was 0.004W/m² — entirely within what is considered normal.

Our researcher said it wasn't possible to get a proper reading from the tower due to the "inverse-square law." As seen above and recently proven, there are no reasons to be concerned with regards to 5G cellular infrastructure. (Source: MyBroadband Newsletter. We measured the radiation from a microwave and compared it to a 5G tower. Online.)

The Directorate: Radio Control, within the South African Health Products Regulatory Authority (SAHPRA) is the responsible authority regulating cellular base-station effects on health and they confirmed that there are no health dangers related to freestanding base telecommunication station / cell masts. Please see attached letter "SAHPRA Letter on Health Effect_2022" (**SAHPRA Letter on Health Effect submitted**).

It is proven that the proposed cell mast development and every other freestanding base telecommunication station utilise **non-ionising** radiation. The health of the public will not be in danger as the 50m Safety Zone is in effect to make sure that there are no one in direct line with the antennas of the mast.

The promulgated City of Cape Town telecommunications policy thoroughly addresses health concerns by the implementation of public safety exposure zones. Objective 10.3 reads as follows:

"OB. 10.3 except for the Minor Freestanding Base Telecommunication Stations, antennas will be located and positioned so that no habitable structures are within a zone of 50m directly in front of the antennas at the same height. The following diagram illustrates acceptable and unacceptable positioning of antennas."

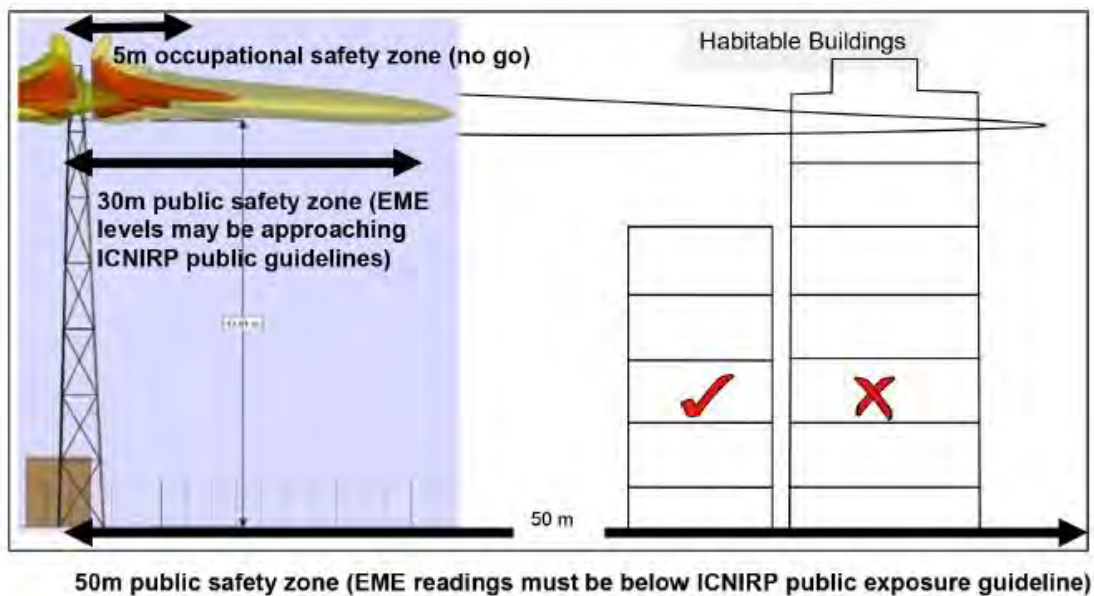


Figure 7 – 50m Health Radius (City of Cape Town Mast Infrastructure Policy)

The placement of the antennas on the freestanding base telecommunication station will be of sort that there will be no building in line within a 50m range thus falling in line with the 50m safety zone. As seen above, the proposal is in line with both the 5m and 50m public exposure zones as indicated in the above-mentioned policy and we therefore do not anticipate any health risks. The applicable legislation clearly stipulates and defines the 50m Safety Zone and the effect on all buildings outside this buffer is considered as very low as it falls outside this area

Need and Desirability

General comments on this development usually centres around the question as why develop in populated areas or areas well known as tourist destinations. It is important to note that this project is driven by both our client to provide a solution to the communities to promote growth and that the various networks take strain during the peak seasons each year. Therefore, alternative sites which share characteristics in terms of size and unused land portions in the subjects does not exist. Other open spaces in close vicinity to the proposed development is either used for recreational purposes or holds significant development potential. See the alternatives tab for information regarding who was approached for this proposed development.

This subject area is increasingly becoming more popular due to Belhar and its proximity to social and economic amenities. Amenities in this sense refer to public schools, employment

opportunities and transport options and Tourism attractions. An increase in popularity has a knock-on effect on the population size and the subsequent larger demand for effective voice- and data coverage. An increase in demand for voice- and data services causes high levels of cellular congestion which ultimately result in more dropped calls and failure to access internet-intensive applications on personal computers and handheld devices. The importance of sufficient coverage relates to the enhanced level of health and safety (access to emergency services i.e. ambulances, police, fire departments etc.), social amenities (access to social media i.e. WhatsApp, Facebook, Instagram, YouTube etc.) and economic opportunities (accessibility to faster, efficient and reliable internet and communication options to local businesses and individuals).

The current roll out of telecommunication infrastructure by cellular network providers is undertaken to upgrade and improve network coverage and quality to all customers. Telecommunication networks experience peak demand in the evenings between 18:00 and 23:00. During these times people are at their homes and use internet-intensive devices. Thus, a large portion of the network upgrade is aimed at residential areas. Business and other activity areas have been prioritised over the past 20 years, for commercial reasons and given the fact that legislation and policies steered proposals of this nature, towards non-residential areas.

Our client Eagle Towers SA pride themselves in ensuring that a positive impact is created in terms of the social, environmental and economic wellbeing of the area. Since the introduction of LTE in South Africa in 2012 there has been greater need for access to faster data, due to the higher penetration of LTE data in commercial and business areas, this has led to lower subscription fees which provide economic sustainability and development. LTE will ultimately address high data traffic requirements and the surrounding community will be the main beneficiary. The construction and maintenance phase of the proposal will provide a positive economic and social impact by ensuring job creation effecting the surrounding community in a positive way.

The increase of individuals in the Belhar area created a high demand for effective voice and data requirements. The commissioning of the proposed telecommunication base station will alleviate the congestion experienced by cellular operator customers and ensure that their needs are accommodated. When choosing a site for a telecommunication base station, service providers are guided by nominal points indicating the areas where poor signal is being experienced.

The following illustrations describe the “Fresnaye Effect” in which the desirability for this site is supported the more people relocate to Belhar and the snowball effect it will have on the coverage network.

f.1 Choice of site

These nominal points are selected because of an increase of customer complaints, within an area. When there is an increase in the number of users in an area. The coverage provided by the existing network decreases, leading to dropped calls and lack of data services. Figures 8 - 10 strive to explain how the need for an increase in cellular infrastructure evolves in a typical urban area.

f.2 Cellular infrastructure explained:

Figure 8 is an illustration of optimum network and data coverage. This is explained by envisioning the octagonal shape of a honeycomb (cells). As network users increase, the cells shrink which leads to voids within this network of cells. This leads to dropped calls, weak/ limited signal and the failure to access the latest technologies in communication innovations (Figure 9). Voids between cells require new/additional telecommunication base stations to be placed in these voids to retain good network coverage. Locations for telecommunication infrastructure are primarily chosen within areas where a need exists for coverage (refer to Figure 10). If a need for coverage does not exist in a specific area, no company would invest capital to build a telecommunication base station in the said area. The fact that there are only a few telecommunication base stations in the surrounding area supports the statement that there is a clear need for coverage in the area.

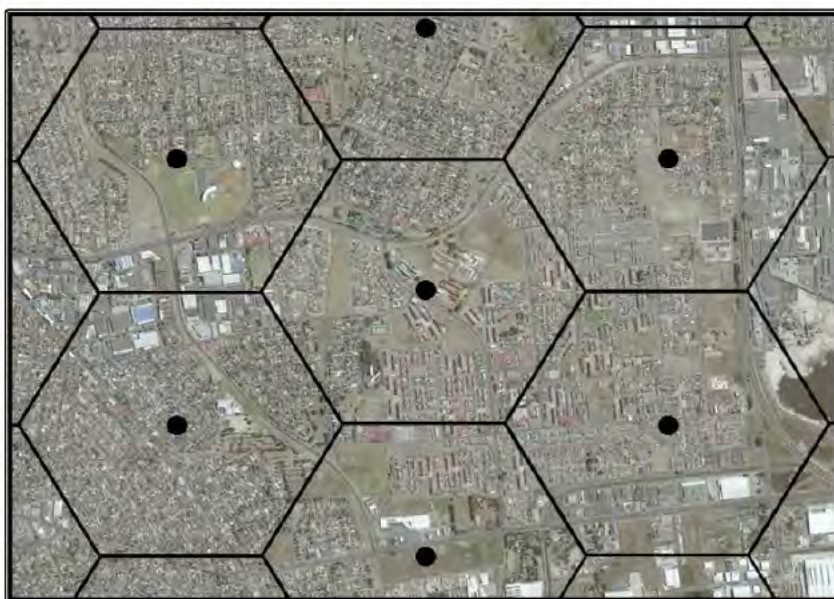


Fig 8 - Initial coverage (cell) provided by Telecommunication Base Stations

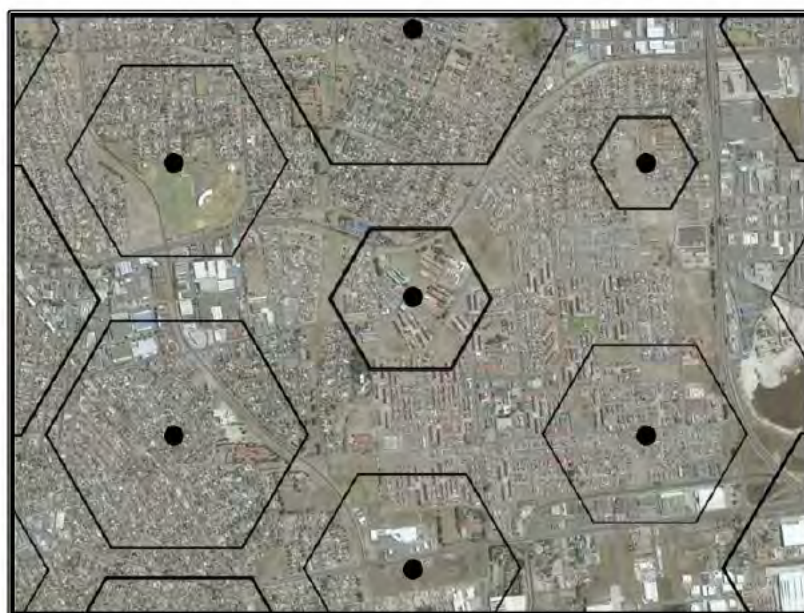


Fig 9 - Coverage decreases due to increase in network users – cell size decreases

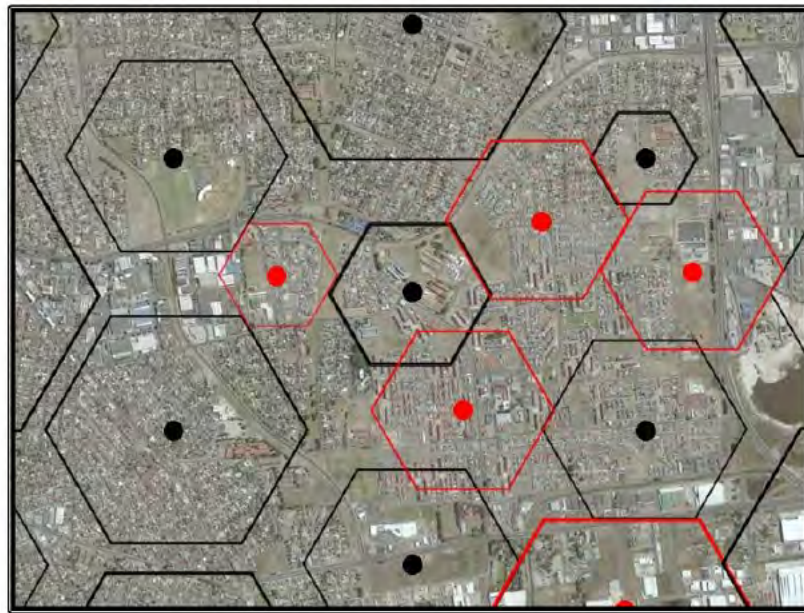


Fig 10 - Additional telecommunication base stations required to fill the voids

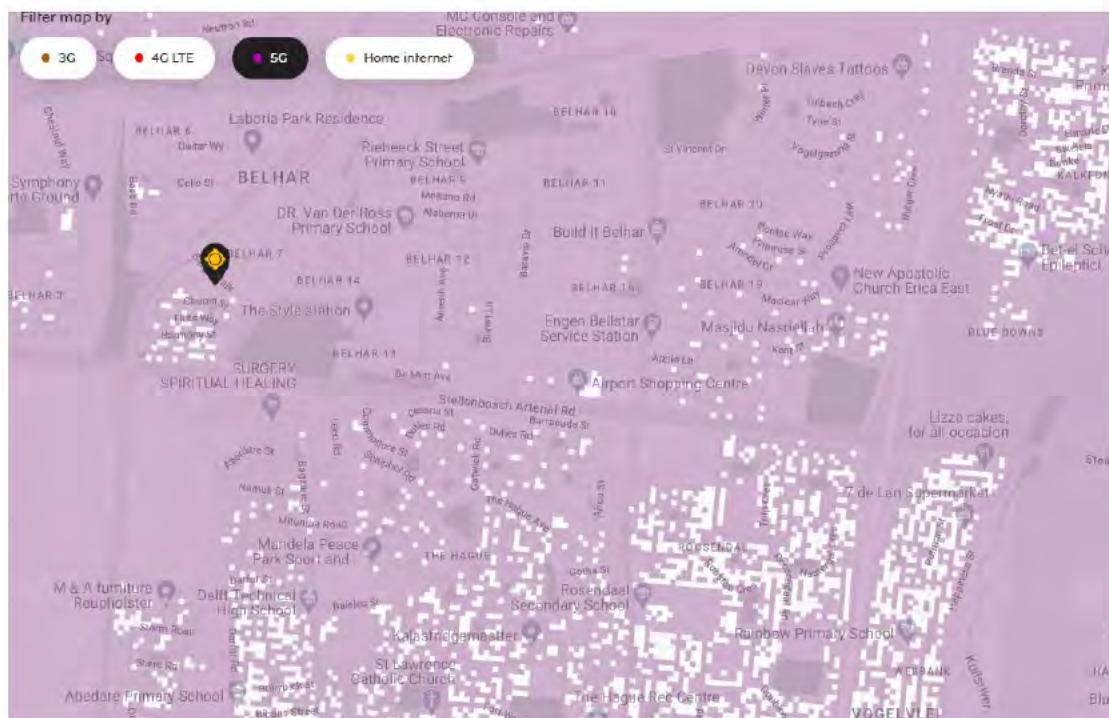


Fig 11 – MTN 5G connectivity in the area of Belhar – MTN logo indicates the location of the site

(Source: <https://www.mtn.co.za/home/coverage/>)

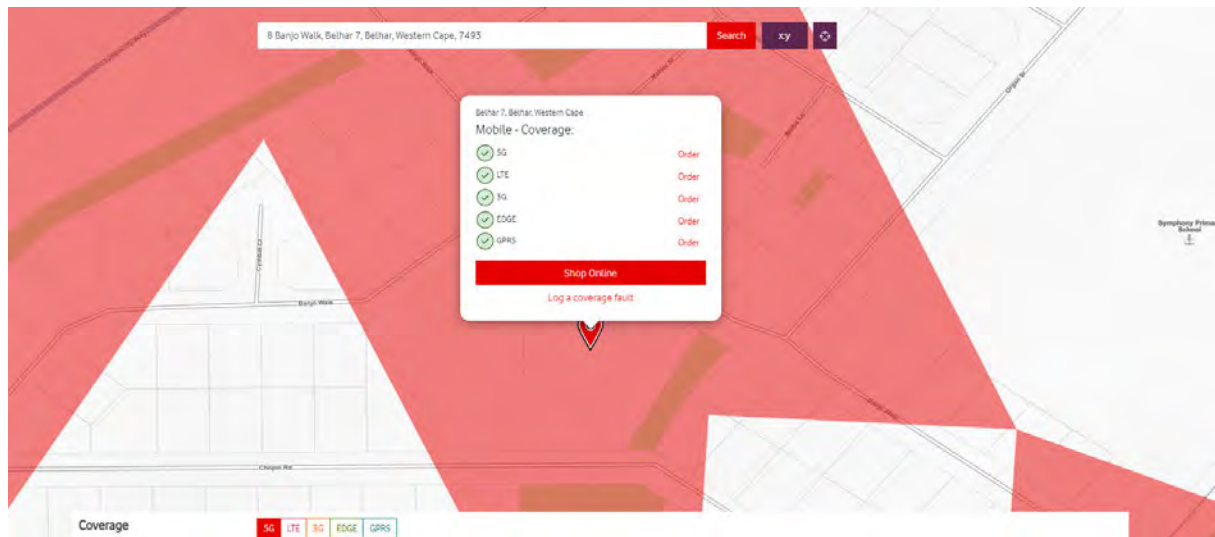


Fig 12 – Vodacom 5G connectivity in the area of Belhar – Vodacom marker indicates the location of the site (Source: <https://vccoverage.afrigis.co.za/#/>)

Figure 11 and 12 illustrates the current MTN and Vodacom 5G coverage in Belhar. It should be noted that some areas have very limited 5G. Therefore, a freestanding telecommunication base station as proposed in this application will increase the amount of coverage in this area. The aim is also not to just increase coverage, but also to strengthen it. For example, Vodacom has mostly sufficient 3G but will likely look to increase their coverage by covering the voids as seen above.

Electricity

As per the CoCT telecommunications policy the electricity supply to TI (Telecommunications Infrastructure) must, where practically possible, make use of underground cables. All electrical installations must be as per ESKOM or City of Cape Town Electrical Department requirements and standards. Our client will ensure that the proposal will be in line with the above-mentioned electrical supply requirements.

Alternative Sites

Cognizance needs to be taken of the fact that our client received coordinates of possible mast locations from the registered service providers (MTN, Vodacom, Rain, etc). In this instance it was also mentioned that the site was chosen by the service provider with the help of the Moravian

Church in Belhar. The following sites (refer to the red stars on **Figure 13**) were investigated as alternative sites but could not be pursued: Erf 18012 (Symphony Primary School), Erf 17891 and abutting Erf 18054. The owners of the following two erven were not interested in the proposal therefore these sites could not be pursued: Erf 18012 (Symphony Primary School) and Erf 17891 (Accordion Street Primary School). Erf 18054 is not yet developed and thus its primary rights which is that of Community Zone are not yet established. Therefore, our client could not consider this site. (**Figure 13**).



Figure 13: Alternative sites considered

Visual Impact

Special consideration has been given to the placement of the proposed freestanding base station to minimise the visual impact as far as possible however this is challenging at times. The implemented Cape Town Telecommunication Mast Infrastructure Policy encourages the co-location or sharing of telecommunications infrastructure to minimize the visual impact (see co-location below).

No habitable buildings will be within 50m from the proposed mast at the height of the antennas as per the TMIP's requirement. Should the relevant departments within the city council require an altered design the client would be willing and forthcoming to the proposal. The proposal will not impact on the current land use.

Co-Locating

The Municipal Development By-laws principle of sustainable and efficient development encourages co-location. Highwave Consultants can confirm that the proposed development not only support co-location but also encourages it. The list of operators that will be able to install their antennas on the mast are:

- Rain,
- Vodacom,
- MTN,
- Cell C,
- Telkom.

As seen above, we cater for all the operators and encourage co-location. The proposed erection of a 25m monopole will offer the opportunity for operators to collocate resulting in the reduction of future telecommunication towers. Our client Eagle Towers SA has selected to erect a monopole mast design to be in fitting with the urban environment.

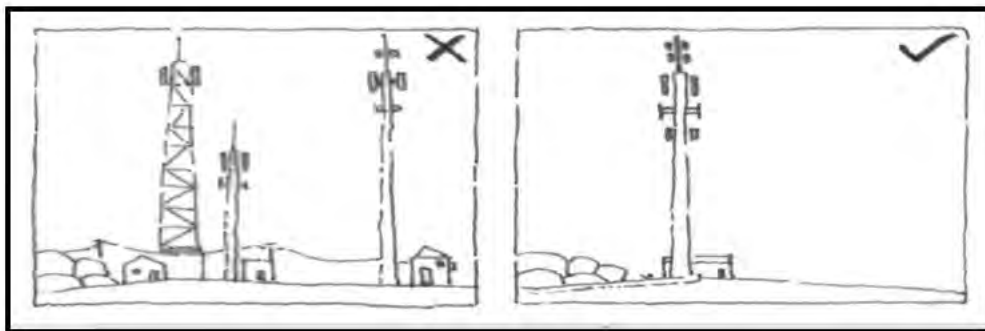


Fig15- Sharing of Infrastructure

The goal by allowing all the operators on is to prohibit the proliferation of cell masts as indicated in the illustration above. The development of this mast will ensure that the community of Belhar

will not see any other masts within a 500m radius from this mast. Figure 16 shows a 500m radius from the proposed site as a red circle. There are no existing sites within this circle and the red arrows show existing sites outside the 500m radius circle.



Figure 16: 500m Radius from proposed site and existing towers (red arrows)

The current speed of development of cell mast technology is astonishing and the aim of this mast is to keep up with the current and foreseeable future technological improvements. The coordinates were given to Highwave Consultant by the Radio Frequency engineers of the Client who expertly identified the site by utilising the following principles:

- Property offers the optimal position situated between existing and planned base stations to provide efficient data and voice coverage.
- Surrounding geographical aspects are in line with the requirements.
- Minimized physical, natural and visual impact.
- Ability to reduce the number of base stations in the surrounding areas.
- Ability to provide sufficient security to the equipment.
- Capacity to share infrastructure with majority of the operators.
- Property position will address the complaints received in the area.
- Sufficient space to erect a freestanding base telecommunications station.

To achieve the optimal data and voice coverage objectives base stations in these specific areas need to be approximately 500m apart on average, this is due to the density of the surrounding areas as well as geographical and physical features. The fresnaye effect (see f.2 above) also influences the quality of the voice and data coverage caused by the amount of steel and concrete of the buildings in the surrounding area, this results in a reduced coverage area.

Access and Traffic considerations

Erf 18055, Bellville is easily accessible, and access to the site will be obtained from Chopin Street. This road has a low traffic volume, but cognizance needs to be taken of the fact that this development will not affect traffic negatively and will not cause any additional traffic volume to the area.

Section 99: Criteria for deciding application

Section 99 of the City of Cape Town Municipal Planning By-Law elaborates on the criteria on which the application may be refused if the information provided are deemed insufficient or it does not comply with the criteria as set out by this Section. Subsection (2) (g) states that other considerations prescribed in the relevant national or provincial legislation, which includes the development principles as contained in section 7 of the Spatial Planning and Land Use Management Act, 2013 (Act. 16 of 2013). The proposed development on the Property complies with the land development principles (Chapter 2, SPLUMA, 2013). The following table outlines how this proposed development complies with the principles:

Table 2: Compliance with SPLUMA Chapter 2 Principles

HOW DOES THIS APPLICATION COMPLY WITH THIS PRINCIPLE?	
<p><u>Principle</u> <u>7a: Spatial Justice</u></p>	<p>In a broader sense, spatial justice refers to an intentional incorporation of spatial (geographical) aspects. This refers to the fair and equally distributed services and enhanced accessibility of these services.</p> <p>The aim of this proposal is to provide excellent communication service to the inhabitants of the area of Belhar.</p>
<p><u>Principle</u> <u>7b: Spatial Sustainability</u></p>	<p>Spatial sustainability is an explicit concept which describe the relations between environmental and socio-economical facets related to a societal environment. Enhanced signal in an area will promote all three the dimensions of sustainability (economic, social and environmental facets). Economically, businesses in the area will benefit from enhanced connectivity. The social facet is addressed as more people will have access to emergency services (e.g. Healthcare, Police, Fire response etc.). The third dimension (Environmental facets) will be promoted as the sensible placement of telecommunication base stations and the possibility of co-location will limit the number of base stations should there be sufficient signal in an area.</p>
<p><u>Principle</u> <u>7c: Spatial Efficiency</u></p>	<p>Spatial efficiency relates to the concept of minimum distance to be travelled between a specific location and intended destination. Telecommunication Infrastructure is placed in an area (optimally situated between planned and existing stations) with a reason. This reason is to incorporate various factors (e.g. number of users, quality of service etc.) when considering the placement to promote effectiveness and is not merely placed by random.</p>
<p><u>Principle</u> <u>7d: Spatial Resilience</u></p>	<p>Spatial resilience can be defined as the ability of a region to withstand possible arising shocks (e.g. economic crisis, social disruptions etc.). However, Telecommunication Infrastructure will be a service that will always be necessary. In a state of crisis, communication plays an integral role in a societal environment.</p>

<i>Principle</i> <i>Ze: Good</i> <i>administra</i> <i>tion</i>	This installation will be lawful and reasonable, following an equal and fair public participation process to incorporate the views and opinions of all relevant parties.
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The following considerations are relevant to the assessment under subsection (1)(c) and subsection (2)(d) of the extent to which, the proposed land use would be desirable. In terms of Section 99 (3) of the City of Cape Town Municipal Planning By-Law, 2015 below please find a desirability analysis:

SOCIO-ECONOMIC IMPACT: The socio-economic consideration of the said criteria is based on the approval of the application which will provide short term employment during the construction phase and then medium to long term employment during the maintenance phase of the project ensuring internal and outsourced employment opportunities to the following industries:

- Professional Services
- Maintenance Services
- Construction and Building Services
- Property Administration Services
- Telecommunications Industry

The proposed project provides an additional passive income to the owner of Erf 18055, Bellville in Belhar which provide services to the surrounding community. The socio impact referred to above will focus on the broader socio impact of the said socio-economic impact by ensuring the following:

- Ensured increased ability to tele-communicate in an ITC driven generation.
- Availability of a fast and stable telecommunications network ensures increased productivity and investment in educational, economic, security, public and health services.
- Ensures increased job creation
- Increased availability of telecommunications infrastructure reduces need for traveling and assists with carbon footprint reduction.
- Provides and sense of safety and security.
- Increased telecommunication infrastructure reduces cost of telecommunication devices and termination fees.

Cognizance needs to be taken of the fact the proposed development aims not to just provide short term solutions but also to provide long term support for the community.

COMPATIBILITY WITH SURROUNDING USES:

Due to previous precedents set with applications already approved and accepted on various properties with similar characterizing as well as surrounding related land-uses in the area the proposed development is compatible with surrounding land uses.

IMPACT ON THE EXTERNAL ENGINEERING SERVICES:

Public Services Impact – None

Private Services – Positive, ensuring stable network availability to surrounding area.

IMPACT ON SAFETY, HEALTH AND WELLBEING OF THE SURROUNDING COMMUNITY:

None as supported by South African Department of Health Memorandum issued. Please refer to detailed motivation report and the SAHPRA letter on health.

IMPACT ON HERITAGE:

Minimal – As the development is contained in the northern section of the property and not impacting on a heritage area, minimal impact is foreseen.

IMPACT ON THE BIOPHYSICAL ENVIRONMENT:

Positive – additional landscaping could be added if deemed necessary. Scale of the development will have a minimal impact on biophysical environment, no trees are to be removed.

TRAFFIC IMPACTS, PARKING, ACCESS AND OTHER TRANSPORT RELATED CONSIDERATIONS:

Construction phase – Minimal, 2 x extra trips for approximately 3 weeks

No additional trips anticipated during maintenance phase.

WHETHER THE IMPOSITION OF CONDITIONS CAN MITIGATE AN ADVERSE IMPACT OF THE PROPOSED LAND USE:

Yes, a mitigating factor have been provided.

6. EXISTING POLICY FRAMEWORKS

City of Cape Town Integrated Development Plan (2022-2027)

An objective of the IDP (2022-2027) which relates to this application is that every business, industry, entrepreneur, and ordinary working resident needs world-class basic services to survive and thrive. Our client, Eagle Towers SA strive to provide a world-class service to their clients.

Another objective of this theme includes ensuring well-managed and modernised infrastructure to support economic growth. The City of Cape Town IDP aligns with the following policies: the National Development Plan (NDP), Integrated Urban Development Framework (IUDF) and the Provincial Strategic Plan 2019–2024 and Recovery Plan 2021. Cape Town’s Municipal Spatial Development Framework (MSDF) is required by law to translate the vision and strategy of the IDP of the city into a desired spatial form for the municipality. The spatial vision of the City of Cape Town is supported by the following spatial strategy in the MSDF namely a Spatial Strategy: Plan for Employment and Improvement of the Accessibility and Access to Economic Opportunities. If this application for a telecommunication station is approved the telecommunication in Belhar will be improved which will result in improved access of economic opportunities in the area.

City of Cape Town Municipal Spatial Development Framework (2023)

The MSDF (2023) shows that targeting investment is important to realise the spatial vision of the City. All private and public landowners are motivated to follow this investment approach to ensure we have a well-functioning city. Spatial transformation areas (STAs) where the government and the private sector should invest should focus on places where investment will benefit the most people at the same time. The spatial transformation areas are identified at a citywide scale (refer to chapters 4 and 5 of the MSDF) to give effect to the inward growth approach. The STAs identified are amongst others the Urban Inner Core (blue on the map below). The subject property falls within this area.

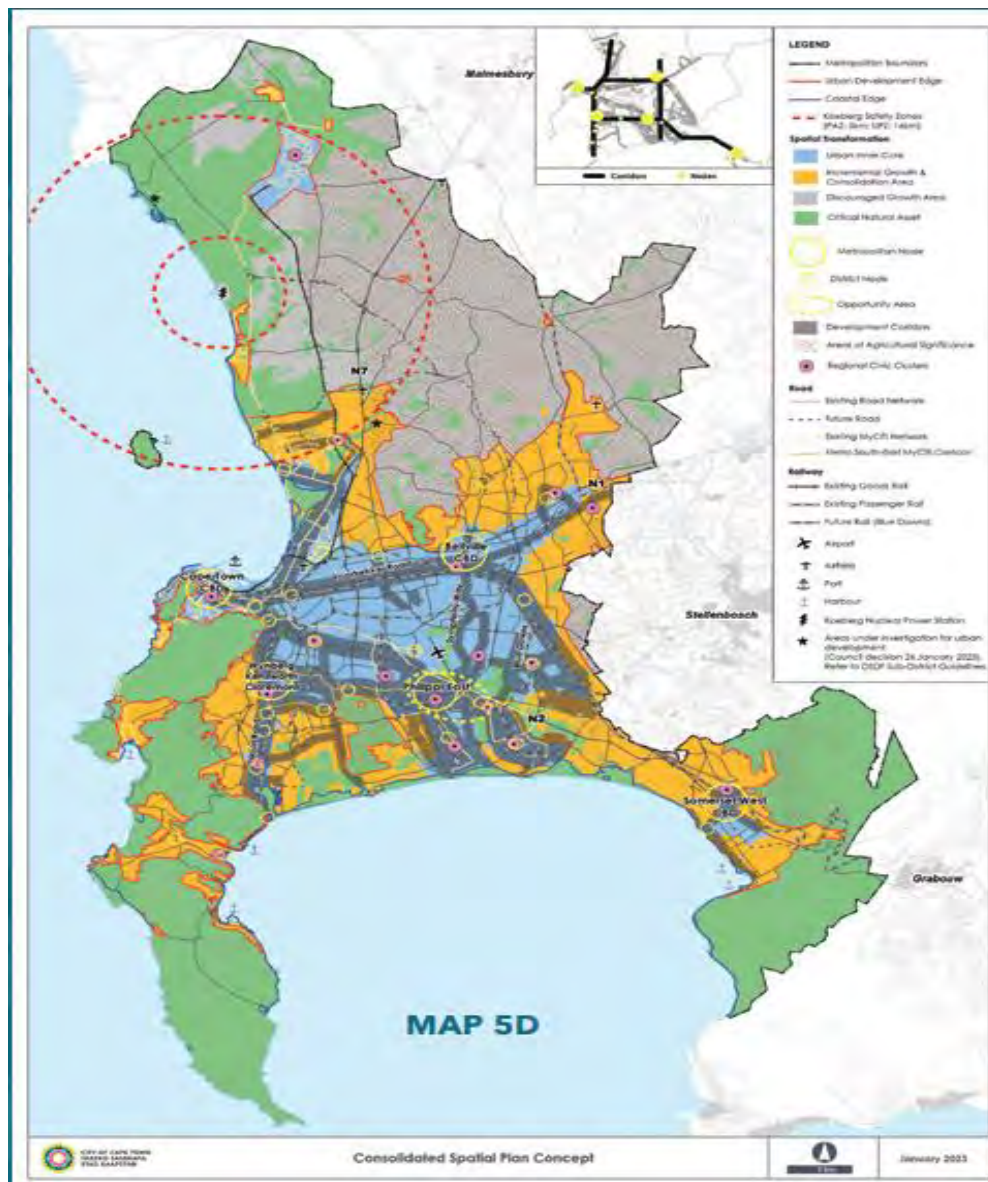


Figure 17 : City of Cape Town Municipal Spatial Development Framework (2023)

Other main ideas from the MSDF (2023) relevant to this application include:

Inward growth

Thinking about how to grow the city in and up not out and down. This application facilitates greater mix of land, provides access to economic opportunities and social facilities (through advanced accessibility to voice- and data coverage). As higher-density residential development is encouraged, a greater need for voice- and data coverage will follow. This application is therefore proactive in providing such infrastructural services.

Intensification and densification

Thinking about how land is optimally used with a focus on land use densification and diversification. This development will allow for residents to have access to faster and more reliable internet matched with less dropped calls. This development will further assist citizens who work-from-home. Therefore, this development is in-line with this spatial strategy. This specific development aims at providing sufficient coverage for residents of Belhar.

Development edges and growth directions

Thinking about the growth direction and to build within the urban development. Without proper voice- and data coverage, access to economic opportunities is significantly inhibited. Effective voice- and data coverage allows for small local businesses to have access to internet which provides vital components of a business i.e. email, websites, market research etc. Jobseekers utilise the internet as a means for job-hunting.

This application facilitates a greater mix of land uses, provides access to economic opportunities and social facilities (through advanced accessibility to voice- and data coverage). As higher- density residential development is encouraged, a greater need for voice- and data coverage will follow. This application is therefore proactive in providing such infrastructural services.

City of Cape Town Municipal Planning By-Law (2022) – containing all amendments

We wish to reiterate that the proposed development is in-line with the City of Cape Town Municipal Planning By-Law (2022). With reference to Figure 1 (and the description following) we can confirm that the area is mainly used for residential purposes which are found near the proposed development, while Erf 18055 Belhar is used as a place of worship.

When read together with the discussion on the spatial strategies as set out in the Municipal Spatial Development Framework (2023) – *discussed in the section above* – we believe that this application is consistent with these spatial strategies. Therefore, it is our opinion that it will not be necessary to deviate from the provision of the municipal

spatial development framework this application is also in-line with the Municipal Planning By- Law (2022).

City of Cape Town Telecommunication Mast Infrastructure Policy (2015)

The following application adheres to the following objectives as depicted in the City of Cape Town TMIP promulgated in 2015:

Objective 1. To improve and maintain communication: The application ensures the availability of highly desirable voice and data coverage for all operators. The telecommunication network is comprehensive and accessible. This application is in line with this objective as it aims at providing the residents, local businesses, and new residents to Belhar and Athlone, which is experiencing an influx of commuters, with effective and efficient voice, data coverage and accessibility to new technology such as 5G, LTE and Optic Fibre Connectivity. The existing masts are already operating at capacity and the proposed site is ideally located in terms of providing improved coverage to the residents of that area and the passers-by.

Objective 2: TMI to be placed in the best possible position: The proposed development has been assessed by various subject matter experts and the best possible position has been identified by proposing the installation of a 20m monopole mast in the southern portion of the property. The base station will provide coverage to the Belhar area where there is currently a lack of coverage. The proposal is situated on a community allocated property and seems fitting with the definition. Subject to all other relevant criteria TMI should preferably be located within areas where they have the least visual impact. However, the proposed location of the mast is preferred by the property owner. At this position, the mast will be out of the way and will not create dead spaces on the property. The reduced height and footprint of the mast makes it perfect to fit into unutilised space. At this position, an MNO can provide sufficient coverage for the area as an infill site. The position of the tower is situated outside of the street building line which has guided the decision for tower placement.

All possible site location alternatives were explored, as discussed below, early in the planning process to minimize the impact of the TMI, rather than relying only on mitigation measures to reduce the impact. The proposed site is not in stark open fields, nor on hill crests.

Objective 3. Ensuring collocation or sharing of TMI: The proposal will ensure co-location of major telecommunications providers currently operating in the borders of the RSA and existing and future potential for co-location of TMI were considered. The benefits of co-location were weighed up, as discussed in this motivation, against any possible negative effects, i.e., co-location should not be adhered to at the expense of all other considerations. As the proposed mast is an infill site our client, Eagle Towers SA aims at providing low impact infill telecommunication infrastructure which can provide space for network operators.

Objective 4: Retaining visual integrity: It is proposed to implement a FSBTS with a monopole design as this is referred to the most neutral accommodative design, however the design could be altered to various alternative that would be addressed during the comments and objection period. Additional landscaping could also be implemented. The mast has been designed to the specification provided by the Municipal Planning Amendment By-Law, 2022 for a mast. The grey colour of the mast will blend in with the colour of the church and skyline which will assist in mitigating the visual impact of the said development. In addition to the mast the applicant will plant trees along the erf boundary, to mitigate the impact of the mast.

Attention was not only be paid to the design of the mast, but also to the treatment of ancillary structures and mechanical equipment. Access roads, power lines and fencing were all assessed to adhere to title deed conditions. Cables will be placed underground (drawings attached) and there would be a mitigated impact on visual amenity.

There will be now newly constructed access roads and advertising signs will be submitted for approval in terms of the City of Cape Town Outdoor Advertising and Signage Bylaw. Signage will be limited to small signs and not be larger than 0,2m², displayed at ground storey level to identify the site/property/owner, as required, and to warn of any danger.

Lighting will be energy efficient, fully shielded and tilted downwards and screens will be placed around these lights to prevent vandalism.

Objective 5: To design with the landscape and use modern mitigation measures to reduce impact: The client proposed a monopole design mast, the proposed mast will be situated in an area dominated by a hardened urban landscape various options exist to reduce the

visual impact and thereby ensure the design is in line with the surrounding landscape. Should it be deemed necessary landscaping could be implemented. Like objective 2 and 4, the placement of the mast at an unused portion of the property will significantly mitigate the visual impact of the development.

This is not a heritage area; the buildings are not older than 60 years and a RBTS is not proposed. The equipment room will be fenced as appropriate in the context as explained above. Should council request landscaping/tree planting and maintenance thereof as a measure to reduce the visual impact of TMI, even if only to screen the base of any towers and ancillary structures, and to draw attention away from the structure our client will comply.

Objective 6: To retain and improve environmental and heritage quality: It is of our opinion that the proposed development does not encroach onto property with heritage value. It is not proposed to remove any trees. No newly constructed access roads were proposed. A base station site is required and if excavation works are to be undertaken no mature trees or vegetation must be removed. On termination of use of TMI, the move all equipment from the site the area will be rehabilitated to the satisfaction of Council. Council may impose conditions regarding post-decommissioning rehabilitation of the site.

Objective 7: To preserve areas of environmental or heritage significance: The subject property does not have any heritage or environmental significance. Surrounding vegetation will be retained as far as possible. There is no proposed removal of trees. As proved above (Physical Characteristics pp13-15), the slope is not greater than 1 in 3, but actually 1:0001.

Objective 8: Interference with other utility functions: The proposed development will not interfere with any utility functions. Electricity supply to TMI will make use of underground cables. All electrical installations will be as per ESKOM or City of Cape Town Electrical Department requirements and standards. Cabling will be placed in a properly sealed metal Channelling (**drawings submitted**). Power supply will not interfere with existing radio equipment installed in the vicinity. The existing electricity supply to the site is sufficient.

Objective 9: TMO to be placed on existing structures: There are no other structures in close

proximity of the proposed development to allow for the installation of TMI with the apex of the nearest building being approximately 6-8m above EGL, which would be insufficient and would necessitate a new FSBTS in the future.

Objective 10: Protect the health, safety and wellbeing of the surrounding inhabitants This installation will contribute to health and safety of the inhabitants of the Belhar area as less drop calls will be experienced leading to accessibility to emergency services e.g. ambulances, fire brigade and police. There are no conclusive studies linking emissions at these levels (height above building) to any health effects and scientific research that may reveal such a link is ongoing. (Please refer to the Health Issues – ICNIRP and World Health Organisation - section in this motivation).

Tygerberg District Plan (January 2023)

The District Spatial Development Framework plan for the above-mentioned framework stated that the high growth rate between 2001- 2011 may be attributed to developments in areas such as Delft in general and the N2 Gateway Project in particular. The highest concentration of population in the district is located mostly south of Voortrekker Road in areas such as Delft. This plan reflects those areas such as Delft have the highest population densities. However, despite Delft being a large residential development internet coverage for these residents is insufficient (**Figure 11 & 12**). This application is therefore in line with the identified priorities of the Tygerberg DSDF.

In addition, the Tygerberg District Plan also stated (2023) that the areas with the highest unemployment rates, of approximately 40% and more are the newer parts. These employment seekers need internet access to search and access employment opportunities.

7. CONCLUSION

The proposed application for the consent use and removal of restrictive title deed conditions to allow a freestanding base telecommunications station on the subject property will not have any

negative impacts on the surrounding uses, heritage, environment or health and safety. Nor will it have any adverse effects on any of the criteria mentioned in Section 99 of the City of Cape Town Municipal Planning By-Laws. As supported by various policies and legislation the proposal will have a positive economic and social impact ensuring that the surrounding community benefits from optimal and effective voice and data coverage. The development will not have an impact on parking, building lines, coverage or the floor factor ratio.

Notwithstanding the above, the construction of a Freestanding Base Telecommunication Station will provide an additional passive income to the landowner which in turn can utilise the additional income to uplift the surrounding area.

Considering the above the application has been proven to be desirable and it is hereby kindly requested that the City of Cape Town provide their support for the following application hereby made on behalf of our client Eagle Towers SA to allow the following on Erf 18055, Bellville in Belhar:

- **Rezoning application** in terms of Section 42(a) of the Cape Town Municipal Planning By-Law, 2015 to allow the rezoning of Erf 18055, Bellville from Single Residential 1 to Community Zone 1 to allow the main use as that of a place of worship and a proposed consent use of a Freestanding Base Telecommunication station with a 25m Monopole Mast, and
- **Consent use application** in terms of Section 42(i) of the Cape Town Municipal Planning By-Law, 2015 for the purpose to allow the additional use of a Freestanding Base Telecommunication station with a 25m Monopole mast.
- **Building line Departure** application in terms of Section 42(b) of the Cape Town Municipal Planning By-Law, 2015 to allow the relaxation of the street boundary building line, shared with Chopin Street; from 6.0m to 1.0m; and the relaxation of the common boundary building line shared with Erf 18054 from 6.0m to 1.0m to allow the placement of the proposed development.

MORAVIAN CHURCH BELHAR



Site Name & BS Number:			
MORAVIAN CHURCH BELHAR			
Revision:	Date:	Drawn By:	Reason for Revision:
A	26/06/24	T.E.	ISSUED FOR PROPOSAL

NOTES:

Lats: -33.949892°	Longs: 18.629831°
Region:	
WESTERN CAPE	
Property Description:	
8 BANJO WALK ERF - 18055, BELLVILLE BELHAR	
Project:	
GREENFIELD 25m MONO POLE HASL 57m	

Task:	Initial:	Signature:	Date:
Draughtsperson:	T.E.		26/06/24
Design Approval:	T.E.		26/06/24
Technical Approval:			
Approved for Issue:			

Scale: NTS	Drawing Reference:
LOCALITY MAP SHEET 1 OF 4	ETSA-01195 REVISION: A

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MORAVIAN CHURCH BELHAR



Site Name & BS Number: MORAVIAN CHURCH BELHAR			
Revision:	Date:	Drawn By:	Reason for Revision:
A	26/06/24	T.E.	ISSUED FOR PROPOSAL
NOTES:			

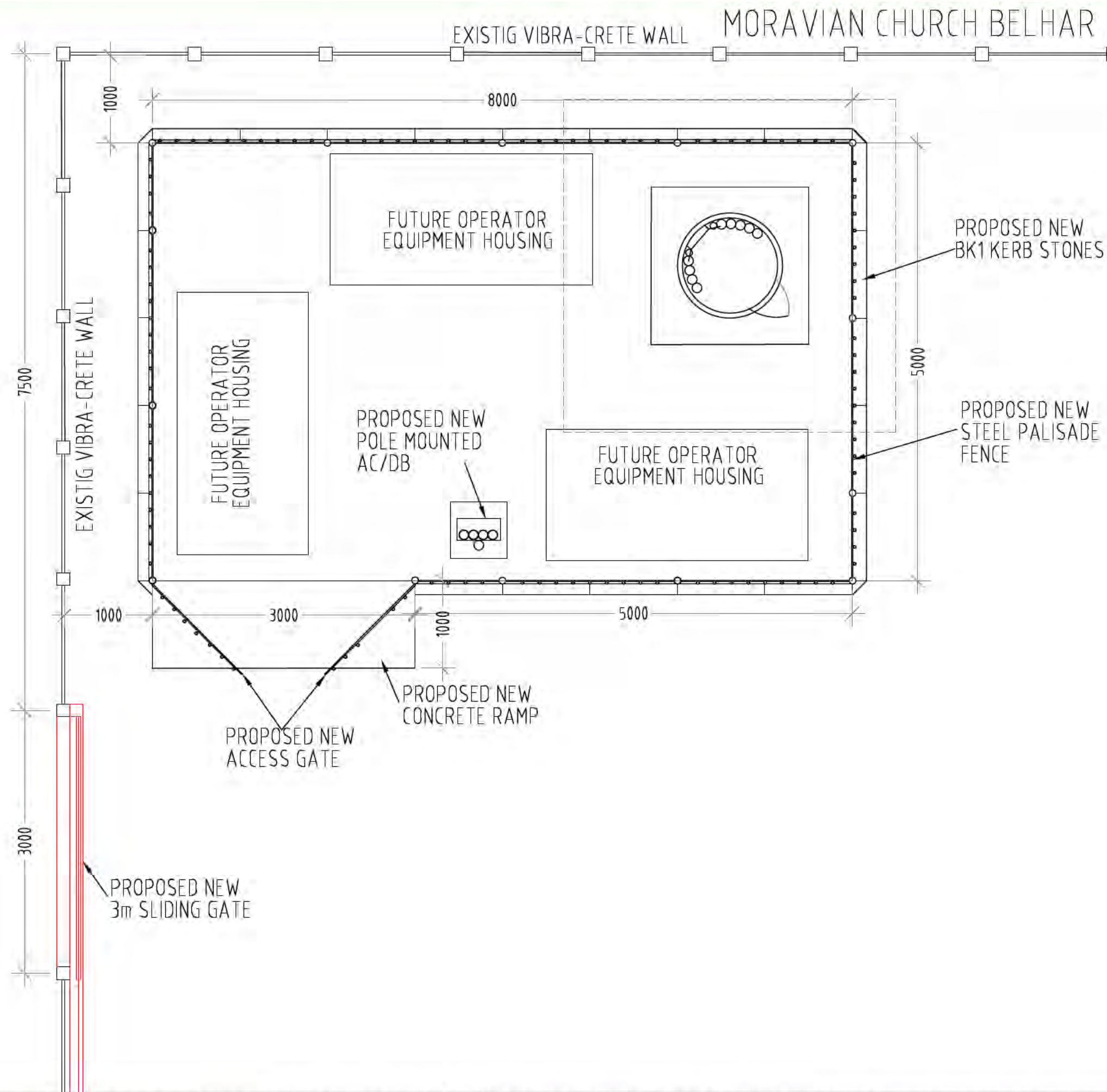
Lats: -33.949892°	Longs: 18.629831°
Region: WESTERN CAPE	
Property Description: 8 BANJO WALK ERF - 18055, BELLVILLE BELHAR	
Project: GREENFIELD 25m MONO POLE HASL 57m	

Task:	Initial:	Signature:	Date:
Draughtsperson:	T.E.		26/06/24
Design Approval:	T.E.		26/06/24
Technical Approval:			
Approved for Issue:			

Scale: NTS	Drawing Reference: ETSA-01195 REVISION: A
GENERAL LAYOUT SHEET 2 OF 4	



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Site Name & BS Number:
MORAVIAN CHURCH BELHAR

Revision:	Date:	Drawn By:	Reason for Revision:
A	26/06/24	T.E.	ISSUED FOR PROPOSAL

NOTES:

LEGEND	
	POWER CABLE
	FEEDER CABLE
	EARTH CABLE
	TRANSMISSION

Lats: -33.949892° Longs: 18.629831°

Region:
WESTERN CAPE

Property Description:
8 BANJO WALK
ERF - 18055, BELLVILLE
BELHAR

Project:
GREENFIELD
25m MONO POLE
HASL 57m

Task:	Initial:	Signature:	Date:
Draughtsperson:	T.E.		26/06/24
Design Approval:	T.E.		26/06/24
Technical Approval:			
Approved for Issue:			

Scale: NTS Drawing Reference:

ETSA-01195
REVISION: A

ACTUAL LAYOUT
SHEET 3 OF 4

KARINDAL



Site Name & BS Number:			
MORAVIAN CHURCH BELHAR			
Revision:	Date:	Drawn By:	Reason for Revision:
A	26/06/24	T.E.	ISSUED FOR PROPOSAL

NOTES:

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Property Description:	
8 BANJO WALK ERF - 18055, BELLVILLE BELHAR	
Project:	
GREENFIELD 25m MONO POLE HASL 57m	

Task:	Initial:	Signature:	Date:
Draughtsperson:	T.E.		26/06/24
Design Approval:	T.E.		26/06/24
Technical Approval:			
Approved for Issue:			

Scale: NTS	Drawing Reference:
EARTHING LAYOUT SHEET 6 OF 9	ETSA-01195 REVISION: A

KARINDAL



Site Name & BS Number:			
MORAVIAN CHURCH BELHAR			
Revision:	Date:	Drawn By:	Reason for Revision:
A	26/06/24	T.E.	ISSUED FOR PROPOSAL

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Draughtsperson:	T.E.		26/06/24
Design Approval:	T.E.		26/06/24
Technical Approval:			
Approved for Issue:			

Scale: NTS	Drawing Reference:
POWER LAYOUT SHEET 7 OF 9	ETSA-01195 REVISION: A

KARINDAL



Site Name & BS Number:			
MORAVIAN CHURCH BELHAR			
Revision:	Date:	Drawn By:	Reason for Revision:
A	26/06/24	T.E.	ISSUED FOR PROPOSAL

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Project:	
GREENFIELD 25m MONO POLE HASL 57m	

Task:	Initial:	Signature:	Date:
Draughtsperson:	T.E.		26/06/24
Design Approval:	T.E.		26/06/24
Technical Approval:			
Approved for Issue:			

Scale: NTS	Drawing Reference:
TRANSMISSION LAYOUT	ETSA-01195
SHEET 8 OF 9	REVISION: A