

DESCRIPTION OF ALTERNATIVES

1 IDENTIFYING ALTERNATIVES

The IEM procedure (Department of Environmental Affairs) stipulates that an environmental investigation needs to consider feasible alternatives for proposed developments.

This means that for any project that is proposed, there should be a number of possible proposals or alternatives for accomplishing the same objectives or meeting the same need. The developer should be encouraged to consider alternatives that would still meet the objectives of the original proposal, but which would also have an acceptable impact on the environment (referring to physical, biological, socio-economic and aesthetic/visual).

2 REASONABLE RANGE OF ALTERNATIVES

Possible alternatives were identified through discussions with authorities, discussions with I&AP's, reviewing of existing environmental data bases and the client (Vodacom).

Alternatives can be categorized into the following:

- Location alternatives;
- Activity alternatives;
- The "no-action" alternative.

a) Location alternatives

According to baseline information that was collected by the environmental consultant, it will not be necessary to consider location alternatives on account of the possibility that biological components might be disturbed significantly. Two proposed locations have been identified on erf 5596, Pietersburg Extension 11 (Public open space located between Adonis and Gemini Streets, Sterpark, Polokwane), Polokwane Municipality area.

Motivation for not assessing other alternative site locations located on a different property is therefore given as follows:

- Vodacom intends to erect a 25m-tree type mast with a container housing the electronic equipment. The size of the base station will measure approximately 10m x 10m (100m²) in extent. The area to be disturbed is therefore relatively small.
- The erection of a 25m mast is required to improve the cellular coverage and capacity in the surrounding area (residential area of Sterpark, nearby primary school and pre-schools as well as motorists travelling on the R81).
- The proposed mast will also provide opportunity for co-using (share sites) with other cellular companies.
- The proposed site is located in a park between Adonis and Gemini Streets, Sterpark, Polokwane. The site consists of grass and is located in an open area in order that no trees in the park will need to be removed. The site is therefore ideal, as no trees will need to be disturbed.

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- No rare or endangered fauna or flora species were identified during the site visit.
- The size of the affected property measure approximately 2 hectares. There is therefore enough space for the proposed base station.
- The site is located adjacent to Adonis Street and will not negatively affect any activities on the property (people walking through the park and children playing at the playground).
- The preferred alternative site is also located adjacent to an electricity substation on the property which will assist to lessen the visual impact.
- The proposed site is therefore the most suitable site for the proposed base station on the property.
- The location of the mast is determined by the area that it is intended to provide cellular coverage for.
- The current site is located in the middle of the area or the “cell” where Vodacom intends to provide cellular coverage.
- Alternative positions not located on the property was investigated but was found not to be feasible as the surrounding area mainly consists of residential areas (houses) where there is not sufficient space for the base station.
- Electricity is already available in the vicinity of the site.
- No road construction will be necessary to the proposed site.
- Due to the fact that the infrastructure in question will be located in Sterpark, Polokwane on a park erf, is it deemed important that the visual impact be minimized. The proposed mast will be a tree type mast. This will assist to lessen the visual impact as there are several trees in park.
- Unnecessary stressing/impacting of the environment can be mitigated through the implementation of the recommendations contained in the BAR. The impact on the environment will therefore not be significant. Other alternative sites are thus not feasible as the impact of the base station is bound to have the same environmental impact, no matter where the mast is located.

b) Activity alternatives

The proposed mast, in itself, represents an alternative to the conventional telephone lines. Cell phone networks reduce the number of poles significantly, and circumvent the theft of copper wires.

Activity alternatives that were investigated include the type of mast to be constructed i.e. monopole and lattice type mast versus a tree type mast.

It was decided to camouflage the mast as a tree in order to minimize the visual impact of the mast. Vodacom will implement elements of good visual design. There are also several trees located near the site and a tree type mast will blend in best with the surrounding environment.

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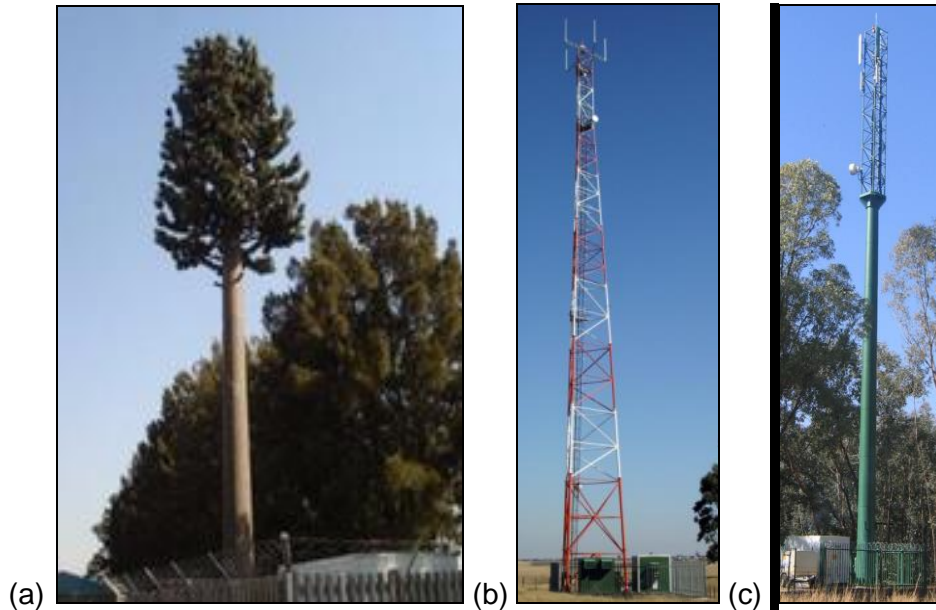


Figure1: Different Mast types investigated: (a) Tree type mast (b) Lattice mast (c) Monopole

The preferred alternative is therefore that of a tree type structure as this type of mast will have the lowest visual impact.

c) No action alternative

The Department of Environmental Affairs stresses the consideration of the “no development/no-action” option in cases where a proposed development is envisaged to have significant negative environmental impacts, or where such impacts cannot be mitigated against effectively or satisfactorily. The IEM procedure suggests that the “no action” option should be considered as an alternative. This option is normally considered during a full EIA where significant negative environmental impacts are expected or if the proposed site is considered to be ecologically sensitive or unique.

The site is located in a park in Sterpark, Polokwane. Due to the extremely limited extent of the proposed mast site (100m²), the impact upon the biological environment will be minimal.

The cell phone coverage will remain problematic in the surrounding area (residential area of Sterpark, nearby primary school and pre-schools as well as motorists travelling on the R81) should this activity not take place. Should the mast not be built on the proposed site, an alternative site must be planned which will be difficult to identify as the surrounding area consists of residential areas with limited available space for the construction of the base station.