

## **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. The site is located on Portion 15 of the farm Epsom 189 KT next to Confluence Road at the Wild Rivers Nature Reserve, Hoedspruit area).

Motivation for not assessing other alternative site locations is therefore given as follows:

- Vodacom intends to erect a 25m-lattice mast with a container housing the electronic equipment. The size of the base station will measure approximately 10m x 10m (100m<sup>2</sup>) 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 for residents and businesses in the area.
- The proposed mast will also provide opportunity for co-using (share sites) with other cellular companies.

- The proposed site is located on Portion 15 of the farm Epsom 189 KT. No big trees occur on the proposed site. The site is therefore ideal, as limited natural vegetation will need to be disturbed.
- No rare or endangered fauna or flora species were identified during the site visit.
- The proposed site is the most suitable site for the proposed base station on the property.
- The site for the base station is currently vacant and is not being used by the landowner.
- 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.
- 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 next to a power line and it will be surrounded by trees, is it deemed important that the visual impact be minimized. The proposed mast will remain galvanized and this will assist to lessen the visual impact.
- 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 versus lattice type mast.

It was decided that the mast must remain galvanised in order to minimize the visual impact of the mast. Vodacom will implement elements of good visual design. There are also several trees located next to the site which will assist to minimise the visual impact of the mast.

The preferred alternative is therefore that of a galvanised lattice mast and it 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.

Due to the extremely limited extent of the proposed mast site, the impact upon fauna and flora will be minimal.

The cell phone coverage will remain problematic in the area should this activity not take place. Should the mast not be built on the proposed site, an alternative site must be planned.