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PRELIMINARY ARCHAEOLOGICAL  
IMPACT ASSESSMENT

For a Telkom Mast Site at Wakkerstroom

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PRELIMINARY ARCHAEOLOGICAL IMPACT ASSESSMENT OF THREE  
PROPOSED SITES FOR A TELKOM MAST AT WAKKERSTROOM,  
MPUMALANGA

## 1. Introduction

Archeo-Info Northern Province was commissioned by Tekplan Environmental Analysis Services to perform a Preliminary Archaeological Impact Assessment (PAIA) in Wakkerstroom, Mpumalanga. Three identified areas were surveyed and evaluated during the first phase archaeological investigation. The PAIA was conducted in accordance with the newly approved National Heritage Resources Act no 25 of 1999. The three proposed study areas consisted each of an estimated 20m x 20m site, which was investigated.

## 2. Aim

A first phase archaeological investigation was performed to determine the archaeological sensitivity of the three proposed sites. The three proposed locations for the mast were surveyed to determine the viability of the placement of the mast and to assess the impact the development will have on possible archaeological sites and finds. The aim was further to advise the client on the best location or alternative location for the mast in order to protect the cultural resources of the study areas as prescribed in Act 25 of 1999.

## 3. Fieldwork

Members of Archeo-Info met with Mr. T. Kotze of Tekplan on Saturday May 27, 2000 in Wakkerstroom, Mpumalanga. After initial reconnaissance of the three sites with Mr. Kotze, the survey of the three study areas was performed by two professional archaeologists.

#### 4. Geographical / Environmental Setting

The proposed mast will be situated on one of three proposed sites situated on the south-eastern fringes of the town of Wakkerstroom, Mpumalanga (1:50000 map 2730 AC). These sites are situated on the western, lower slopes of Ossewa- or Voortrekkerkop within a sponge area with intermittent marches. Site 1 is situated at 27° 21' 46" S, 30° 09' 02" E and Site 2 at 27° 21' 44" S, 30° 09' 04" E and Site 3 at 27° 21' 38" S, 30° 09' 06" E.

#### 5. Previous Archaeological Investigations

Numerous historical studies have been performed in the former Northern Natal and South-eastern Transvaal. Historians have focussed their attention on sites and events connected to the Zulu war and the Anglo-Boer wars of the late 19<sup>th</sup> century and early 20<sup>th</sup> century. According to Mr. Chris Smit (a long time resident and previous town clerk) of Wakkerstroom, no previous archaeological investigations were performed on the proposed development sites. Relevant archaeological publications by T.M.O.C. Maggs such as *Iron Age Communities in the Southern Highveld* and *Iron age patterns and Sotho history on the southern highveld* were consulted beforehand.

#### 6. Methodology

The area was surveyed using standard archaeological surveying methods. The area was divided into blocks which were subsequently surveyed by foot. The blocks were surveyed by walking in parallel lines covering as much of the area as possible. This technique has proven to result in the maximum coverage of an area. Parts of the slopes of the hill on different sides of each proposed site, were also surveyed in an effort to cover a larger area to determine the extent of the archaeological evidence found.

Standard archaeological documentation formats were employed in the description of sites. Using standard site documentation forms as comparable medium, it enabled the surveyors to evaluate the relative importance of sites found. Furthermore GPS

(Global Positioning System) readings of all finds and sites were taken. This information was then plotted using a *Magellan 2000 XL* GPS (*Cape datum*).

Indicators such as surface finds, plant growth anomalies, local information and topography were used in identifying sites of possible archaeological importance. Test probes were done at intervals to determine sub-surface occurrence of archaeological material. The importance of sites was assessed by comparisons with published information as well as comparative collections. All sites or possible sites found were classified using a hierarchical system wherein sites are assessed using a scale of one to five on the basis of their importance. These categories are as follows;

**Category 1.** Sites in this category are of such great international and/or national importance in terms of cultural heritage that they can not be disturbed or altered at any cost. No development will be allowed in such an area. It should be noted that sites in this category are very rare - e.g. - *Great Zimbabwe, Swartkrans, Mapungubwe*

**Category 2.** Although these sites are not unique in terms of their culture they are of such archaeological value that any decision concerning their destruction can only be taken after full scale excavations have been undertaken - e.g. -

*Thulamela*

**Category 3.** These sites are of lesser importance than the first two categories, but should be fully documented before they are destroyed. This documentation would entail the excavation of certain parts of the site - e.g. - *Masorini*

**Category 4.** Sites in this category consist of scattered evidence of archaeological occupation. Sometimes dilapidated stone walling can occur. Surface scatters of cultural material are evident. A limited number of test trenches should be excavated in order that the cultural affinity and importance of the site can be established.

**Category 5.** Areas that consist only of very loose scattering of cultural material on the surface. No structures are visible and little archaeological deposits are evident. The occurrence of cultural material could for example be due to erosion. Apart from the surface collection of cultural material, no further work needs be done on such sites.

## **7. Site descriptions**

The results of the survey and the description of the site will be discussed in the following section. A G.P.S. (Global Positioning System) co-ordinate was given for the site as well as a short description.

### **7.1. Site 1**

GPS     27° 21' 46" S

          30° 09' 02" E

Photo 1

#### **Description**

Nothing of any archaeological interest or value was found at this site.

### **7.2. Site 2**

GPS     27° 21' 44" S

          30° 09' 04" E

Photo 2

**Description**

The remains of the old military shooting range's shooting stand was found at this site. The shooting stand was constructed of cement and bricks and measured approximately 3m x 20m. According to Mr. Chris Smit of Wakkerstroom the shooting range was in use from 1937 until 1972. Since 1957 no new additions or construction took place on the shooting range. The shooting range stand is in a very dilapidated state and overgrown with weeds and grass.

**7.3. Site 3**

GPS 27° 21' 38" S

30° 09' 06" E

Photo 3

**Description**

This area has been recently disturbed on its western side by the construction of a gravity pipeline from the newly constructed reservoir higher up the slope of the hill. To the east, the site is severely eroded with deep dongas. Approximately 30 metres to the south, of the site the remains of the old water purification plant can be found. This plant consisted of a subterranean holding tank to the south with numerous catchment channels running from the 5 respective fountains in the hill (photo 4). These channels collect run-off water in the holding tank from where it is transferred to the purification plant for filtration. The filtration plant consisted of a brick and cement building on the north with the main trickle filter running north. The building also served as a control room for the distribution of clean water to the residents of Wakkerstroom. A single room two storied space served this function. The remains of the valves and sluices are still found in the building. According to Mr. Chris Smit the water purification plant was constructed in 1906 and was in operation until 1976 when it was closed down due to rusting pipes. The area covered by the purification plant and the collection system is approximately 70m x 20m.

## **8. Interpretations and Recommendations**

The sites were attributed a category as described in the section on methodology and the interpretation and recommendations for each site are as follows.

### **8.1. Site 1**

Category 5

Nothing of any archaeological value was found. No further archaeological work is necessary.

### **8.2. Site 2**

Category 5

The remains of the shooting range stand does not have significant archaeological value to justify its protection. A permit for destruction is however needed from the South African Heritage Resource Agency if it is decided to erect the mast on top of the shooting range stand. The shooting stand originates from 1927 (Smit *pers. comm.*) and is therefore older than 60 years and protected under Act 25 of 1999. Archaeo-Info recommends that the mast should be erected 20m south-west from the disused shooting stand.

### **8.3. Site 3**

Category 4

The purification plant holds historic value for the area and should be preserved if possible. The proposed site next to the old reservoir should however not intrude on this site. A safety area of 20 metres from the structures themselves should be adhered to. This will include the collection trenches to the west of the area. The developer should however include public consultation, through the social consultant



for the project, to determine the community's opinion on the placement of the mast close to a historical building. The construction of any access roads to the construction site should also adhere to the 20 metre safety zone. Should this site be chosen for development it is recommended that an archaeologist be on site to indicate where access roads can be placed as well as the safety zone around the purification works.

## **9. Conclusion**

The proposed sites for the placement of the mast does not contain any sites of significant archaeological value and provided the recommendations are followed no mitigation is necessary for the project.