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## **FIRST PHASE ARCHAEOLOGICAL AND HERITAGE ASSESSMENT OF THE PROPOSED IRON ORE MINING DEVELOPMENTS ON PORTION 2 OF THE FARM DEMANENG 546, KURUMAN, NORTHERN CAPE**

### **EXECUTIVE SUMMARY**

Iron ore mining developments are planned on Portion 2 of the farm Demaneng 546 near Kathu, in the district of Kuruman, Northern Cape.

Previous archaeological investigations indicated that Early Stone Age archaeological material of exceptional technological skills occur in the form of hand axes and pointed flakes in the red sand deposits of the area. The distribution of these artefacts could be fairly general and widespread in the surroundings of Kathu.

While exhilarating finds had been made in the red sand deposits around Kathu, it appears that the geology has changed rapidly towards the present area of investigation. The deep red sand deposit transformed into the more hilly area with a rich iron ore accumulation.

Although no stone tools or flakes were visible on the surface at Demaneng, it might be possible that these stone tools could appear. The impact of the proposed mining developments on the cultural heritage of the site should be handled with caution.

Other historical remnants occur in the form of ruined buildings, which could be the remains of old manganese mining activities of many years ago. These old buildings could possibly be older than sixty years. The farmer's father bought the farm in 1963, when they found the buildings there. The structures are in a dilapidated state and there is no obvious function or practical use to restore and to preserve these features of unknown origin.

I recommend that the proposed developments and planning of the site may proceed, provided that caution should be taken during the excavations. In the case of the discovery of any stone flakes or tools, the work should immediately be stopped and reported to the archaeologist or to officials at the McGregor Museum, Kimberley.

The extension of the mine should also be clarified with the local branch of the Northern Cape Provincial Heritage Resources Agency in Kimberley (Department of Sport, Arts & Culture, Kimberley).

## **INTRODUCTION AND DESCRIPTION**

### **Scope and Limitations**

The investigation provided an opportunity to examine the proposed mining area.

Dense thorn veld vegetation presented difficult circumstances during the investigation of area, either by vehicle or on foot. Limitations were experienced in some cases where the bush became difficult to penetrate and detours had to be taken.

### **Methodology**

1. The different points were reached by vehicle and the area inspected on foot.
2. GPS points were taken and the surroundings and features recorded on camera.
3. The site is compared with other archaeological sites in the region.

## **INVESTIGATION**

Iron ore mining activities will be extended to include Portion 2 of the farm Demaneng 546, near Kathu in the district of Kuruman. Northern Cape. The site was visited on 19 and 20 October 2010. Karien van der Merwe, Environmental Consultant from Kimberley, gave directions to the site and an official of the mine accompanied me at the farm.

The site was examined for any possible traces of cultural and historical remains to establish the potential impact of the developments on any archaeological and cultural historical material. The Heritage Impact Assessment (HIA) is done in terms of the National Heritage Resources Act (NHRA), (25 of 1999) and under the Environmental Conservation Act, (73 of 1989).

The report aims to explain and evaluate the significance of cultural heritage sites, archaeological material, manmade structures older than 60 years, and sites associated with oral histories and graves that might be affected by the proposed developments.

Geological and palaeontological deposits are not included as a subject of this report.

## LOCALITY

The farm Demaneng 546 is located to the south of Kathu along the N14 main road, to Upington in the Northern Cape (Map 1). The proposed area of development stretches from the N14 towards the east (Map 2).

Vegetation cover can be described as Thorn Veld, which consists mainly of Swarthaak (*Acacia mellifera*) and Driedoring (*Rhigozum trichotomum*), with a scatter of young Kameeldoring trees (*Acacia erioloba*) and Vaalbos (*Tachonanthus camphorathus*). The farm lies outside the official Erioloba belt (Map 3).

GPS coordinates (Cape scale) were taken to establish the layout of the land (Map 4).

A 27°48'16"S. 023°03'38"E Altitude 1227m (Figs.1- 3).

RUINS 27°51'06"S. 023°02'04"E Altitude 1356m (Figs .8-13).

GAMAGARA 27°51'42"S. 023°02'31"E Altitude 1210m (F ig.17)

RESERVOIR DAM 27°49'32"S. 023°03'47"E Altitude 1265 m (Figs.18-20)

D 27°51'28"S. 023°01'25"E Altitude 1374m (Figs.4- 7).

## RESULTS

### FINDS

From previous archaeological investigations, researchers are aware that Early Stone Age archaeological material of exceptional technological skill occur in the form of hand axes and pointed flakes in the red sand deposits of the area (Figs.20&21). The distribution of these artefacts could be fairly general and widespread in the surroundings of Kathu (Beaumont 1990, 2007 Dreyer 2006, 2008a).

After several seasons of excavations at Kathu Pan and elsewhere near Kathu, Beaumont (1990) has designated the importance of the Early Stone Age lithic material. Investigations at Kathu cemetery (Beaumont 1990, 2007) and at Hartsnoll (Dreyer 2006) and Bestwood 459RD (Dreyer 2008a), produced Early Stone Age hand axes and pointed flakes (Figs.20&21) in abundance. Test trenches at Bestwood did not deliver any artefacts, but tools were collected in an old sand borrow pit from a layer about 2m below the surface level (Dreyer 2008a).

While exhilarating finds had been made in the red sand deposits with significant stands of *Erioloba* trees (Fig.17) around Kathu, it appears that the geology has changed rapidly towards the present area of investigation at Demaneng. The deep red sand deposits transform into hills, which produce the rich iron ore accumulations (Figs.4-7).

Historical remains occur in the form of ruined buildings (Figs.8-12), which could be the remnants of old manganese mining activities of many years ago. The walls were constructed out of concrete blocks (Fig.8), with concrete lintels (Fig.10), of which some are very low (Fig.8) and wooden doorframes and windowpanes (Figs.10&11). A concrete lined pit with dividing wall down the centre (Fig.12) was found in close association with one of the building clusters. Several old and well-used wheelbarrows were dumped into the pool (Fig.13). The purpose of this feature below ground level is uncertain.

A single glass soft drink bottle from Sullivan's in Kimberley (Fig.14), and baked bricks from New Castle (Fig.16) gave no indication of the age of the occupation of the site.

It is speculated that the old buildings could be older than sixty years. The structures are in a dilapidated state and there is no obvious function or practical purpose to restore and to preserve these features of unknown origin.

No sign of any other cultural or historical material was found in the proposed area of development on Demaneng 546.

## **IMPACT ASSESSMENT**

I anticipate that due to the wide and general distribution of the stone artefacts in the Kathu area, there is a slight possibility that the new mining activities at the farm Demaneng 546 could also encounter some of the Early Stone Age material.

Although no stone tools or flakes were visible on the surface, it might be possible that these stone tools could likewise appear at Demaneng. The impact of the proposed mining developments on the cultural heritage of the site should be handled with caution.

## **RECOMMENDATIONS**

Judging from the geology and the rapid soil change, there are no obvious reasons to delay the commencement of further planning and development of the site.

I recommend that the proposed developments and planning of the site may proceed, provided that caution should be taken during the excavations. In the case of the discovery of any stone flakes or tools, the work should immediately be stopped and reported to the archaeologist or to officials at the McGregor Museum, Kimberley.

The extension of the mine should also be clarified with the local branch of the Northern Cape Provincial Heritage Resources Agency in Kimberley (Department of Sport, Arts & Culture, Kimberley).

## **MITIGATION**

Concerning the area for the proposed developments, mitigation measures will be required in case of the discovery of stone tools and flakes.

Every archaeological and historical site is unique and should be treated as a non-renewable commodity. All efforts should be made to avoid any unnecessary disturbance or destruction of any cultural remains. I stress, therefore, that in case of the discovery of any human skeletal material, stone tools, pottery or other archaeological or historical material during the course of the work, all activities should temporarily be stopped and stabilised in the specific area. The archaeologist should be notified for an in situ inspection by officials and specialists from the McGregor Museum, Kimberley.

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