

**ARCHAEOLOGICAL STUDY FOR THE WESTERN LIMB TAILINGS  
RE-TREATMENT PROJECT, RUSTENBURG**

A phase-1 report prepared for Anglo Platinum Management Services

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## **INTRODUCTION**

Rustenburg Platinum Mines - Rustenburg Section intends to re-mine their Waterval and Klipfontein tailings dams near Rustenburg. This reclamation project involves a large new tailings dam and associated topsoil stockpile, return water dam and rock stockpile as well as a concentrator complex, pipeline and rerouted power lines.

As part of the Environmental Management Programme, Anglo Platinum Management Services commissioned Archaeological Resources Management (ARM) to examine the new areas -especially the tailings dam complex - for sites of archaeological and historical significance.

## **METHOD**

Two ARM staff visited the project area on 1, 5 and 7 March 2002. The team first concentrated on the large tailings dam complex, investigating a large portion on foot. They then examined the other areas. Sites were recorded with a GPS instrument, and located on a 1:25 000 map supplied by Anglo Platinum. The sites were then transferred to the 1:50 000 map 2527CB Rustenburg (East).

The significance of an archaeological site was determined by the amount of deposit, site integrity (that is primary versus secondary context), kind of deposit (e.g. middens, burnt structures, furnaces) and the potential to help answer present research questions. Sites were ranked into four categories of significance: none, low, medium and high. Sites with no significance do not require mitigation; low to medium may require mitigation; while sites with high significance should not be disturbed at all.

## RESULTS

Fifty sites and occurrences were noted, ranging from the Middle Stone Age to the Iron Age and recent Historic periods (Figure 1; Table 1). These periods were defined according to the following scheme:

### Historic

Material remains resulting from human activity dating after AD 1850, but no longer in use, including artefacts, human skeletons and structures.

### Iron Age

Material remains dating to the last 2000 years associated with Bantu-speaking people. The Iron Age way of life included the cultivation of sorghum and millets, the raising of domestic livestock and the production of metal items. Iron Age people lived in settled communities that encompassed pole-and-daga (a mixture of mud and dung) houses and grainbins, livestock kraals and underground storage pits. Different groups are recognized by their different ceramic decoration styles.

### Middle Stone Age

Material remains resulting from human activity from ca 250 000 to 25 000 years ago. The Middle Stone Age is associated first with archaic *Homo sapiens* and later *Homo sapiens sapiens*. Material culture includes stone tools with prepared platforms and stone tools attached to wooden handles. Some of these hafted tools were used as spears for hunting.

### ***Tailings Dam Complex***

Middle Stone Age flakes, points and cores were found as isolated occurrences at Sites 3, 14, 27 and 50. Most were highly weathered and probably not *in situ*.

Iron Age pottery occurred in ploughed fields and around exposed outcrops in the majority of sites. In two (Sites 3 & 16) the pottery bore textured decoration, while most others included pottery with red ochre. These features are characteristic of the Olifantspoort facies of the Moloko cluster (made by Sotho-Tswana people) and date the sites to between AD 1450 and 1700.

One Iron Age site (Site 23) also included some unusual engravings (Figure 2). The engravings appear to depict the settlement plan of early stone-walled settlements: an inner circle may represent the central cattle kraal, and an outer circle may represent the boundary wall.

A few sites were marked by stone walling. The walling at Site 28 may be the old type represented in the rock engravings. If this was the case, Site 28 would then date to between AD 1450 and 1700.

The walling at Sites 4, 11, 12, 13, 32, 33 and 37, on the other hand, appear to be more recent, dating to the late 19<sup>th</sup> century. Sites 4, 11 and 37 are in the best condition.

Both types of walling were made by Sotho-Tswana people. It is not possible, however, to be more specific without further investigation.

A few sites (Sites 29, 35 & 38) belong to the recent Historic period. Stands of sisal and other exotic plants, metal, glass, coal cinder and bricks mark the homesteads of farm labourers. These sites were occupied in the 20<sup>th</sup> century, and some appear on the 1968 edition of map 2527CB.

#### Significance

- The Middle Stone Age occurrences are not *in situ* and have no significance.
- Most pottery sites have been disturbed by agricultural activities and have low significance.
- The rock engravings at Site 23 have medium significance.
- Site 4 with well-preserved stone walling lies just outside the tailings dam. Its significance is medium.
- Sites 11 and 37 are well-preserved and therefore have medium significance.
- Site 28, with the oldest walling, has medium significance.
- The remaining stone-walled sites (Sites 12, 13, 32 & 33) have low significance.
- The recent Historic homesteads have low significance.

### ***Concentrator Complex***

A further seven extensive pottery scatters (Sites 39 to 45) occur south of the railway line in the proposed concentrator location. The density of material is higher than similar sites in the tailings dam complex. One site (Site 40) includes a small stone circle on the east side of a prominent rock outcrop.

#### Significance

- The pottery sites (Sites 39-45) have low significance.

### ***Power Line***

The proposed rerouting of the existing powerline crosses two large stone-walled complexes. The first (Site 46) is located south of Site 4 in the next gap in the long range of hills forming the western boundary of the tailings dam. In addition to stone walling, visible remains includes burnt daga, porcelain and pottery associated with Western Sotho-Tswana, such as BaKwena.

The second (Site 47) lies on the western side of the same rocky ridge, opposite Site 4, and all three sites may be connected. At Site 47 walling and middens stretch from the railway line to the exposed outcrop at the base of the main hill.

The existing powerline crosses the main hill before it turns north towards the Turf shaft. This existing line goes through an extensive stone-walled site (Site 48) in the saddle of the hill. The style of walling and location indicate that Site 48 dates to the *difaqane*, the troubled times at the beginning of the 19<sup>th</sup> century.

#### Significance

- Site 46 has low significance.
- Site 47 has medium significance.
- Site 48 has medium significance.

### ***Pipelines***

The slurry delivery pipeline between the concentrator and the Waterval tailings dam will mostly parallel existing roads and railway lines. It crosses new land between the Turf shaft

and the housing complex near Waterval. Two pottery scatters mark Iron Age settlements (Sites 49 & 50) in the area. An isolated Middle Stone Age flake was also noted near Site 50. The other proposed pipelines cross disturbed land and were not examined.

#### Significance

- The Middle Stone Age flake has no significance.
- The pottery sites have low significance.

### **RECOMMENDATIONS**

Most archaeological sites have low significance and do not require further investigation. A few sites, however, are worthy of mitigation.

#### *Tailings Dam Complex*

The rock engravings at Site 23 are unusual and need to be traced. The nearby Site 28 appears to have the oldest walling in the area and should be mapped. The tracing and mapping will help determine whether the two sites are linked.

For record purposes, one of the other stone-walled sites in the tailings dam complex should also be mapped. Site 37 is well preserved and not very large, and therefore suitable for mapping. The other important stone-walled site in this area, Site 11, has considerable amounts of pottery, and so, archaeologists should make a good surface collection. Site 4 on the southwest boundary should be fenced to avoid disturbance from the construction and use of the tailings dam.

#### *Powerline*

The rerouted powerline cannot avoid site 47. It is not necessary, however, to record the entire site. Engineers should determine the best location for the pylons, and then archaeologists can excavate or otherwise record those specific areas.

Finally, the original powerline has already damaged part of Site 48. When the powerline is dismantled, activities should be restricted to the existing servitude to avoid further damage.

The surveys did not locate archaeological sites of high significance, and no aspect of the Re-Treatment Project therefore needs revision. With the provisions for mitigation, there are no archaeological reasons why the project should not proceed.

Table1. Sites located during the survey.

Number	Location		Period	Significance
	South	East		
Tailings Dam Complex				
1	25 40 48.9	27 23 37	IA	low
2	25 40 33	27 23 27.9	IA	low
3	25 40 30.9	27 23 17.4	MSA IA	none low
4	25 40 38.7	27 23 13.5	IA, walling	outside area medium
5	25 40 11.6	27 23 24.4	IA	low
6	25 39 37.2	27 23 23	IA	low
7	25 39 46.6	27 24 01.9	IA	low
8	25 39 37	27 24 04.9	IA	low
9	25 39 35.7	27 24 29.7	IA	low
10	25 39 33.7	27 24 13	IA	low
11	25 39 21.3	27 24 59.7	IA, walling	medium
12	25 39 18-20	27 24 47-49	IA, walling	low
13	25 39 26.7	27 25 03.5	IA, walling	low
14	25 39 42.2	27 24 43.8	MSA IA	none low
15	25 39 53.1	27 24 33	IA	low
16	25 40 49.5	27 23 56.1	IA	low



17	25 40 48.8	27 24 10.6	IA	low
18	25 40 39.8	27 24 05.6	IA	low
19	25 40 41.4	27 23 52.4	IA	low
20	25 40 36.6	27 23 52.9	IA	low
21	25 40 39	27 23 55	IA	low
22	25 40 39	27 23 57	IA	low
23	25 40 33.5	27 24 22.6	IA, engravings	low medium
24	25 40 41	27 24 24.1	IA	low
25	25 40 27	27 24 08.1	IA	low
26	25 40 30.8	27 24 20	IA	low
27	25 40 33.4	27 24 41.2	MSA IA	none low
28	25 40 29.6	27 24 46.8	IA, early walling?	medium
29	25 40 27.3	27 25 01.2	Recent Historic	low
30	25 39 42.9	27 25 13.2	IA	low
31	25 39 37.1	27 25 13.8	Recent Historic	low
32	25 39 38.8	27 25 18.1	IA, walling	low
33	25 39 28.5	27 25 17.3	IA, walling	low
34	25 39 30.2	27 25 36	IA	low
35	25 39 32.5	27 26 01.5	Recent Historic	low
36	25 39 37.7	27 26 13.6	IA	low

37	25 40 14.5	27 25 14.2	IA, walling	medium
38	25 40 39-42	27 25 14-16	Recent Historic	low
Concentrator				
39	25 40 55	27 23 40	IA	low
40	25 41 07	27 23 38	IA	low
41	25 41 13	27 23 40	IA	low
42	25 41 20	27 23 49	IA	low
43	25 41 17	27 23 53	IA	low
44	25 41 05	27 23 50	IA	low
45	25 40 58	27 23 48	IA	low
Powerline				
46	25 40 49	27 23 12	MSA IA, walling	none low
47	25 40 43	27 23 04	IA, walling	medium
48	25 40 23-30	27 23 06-10	IA, walling	medium
Pipeline				
49	25 39 19	27 20 20	IA	low
50	25 39 23	27 20 34	MSA IA	none low