Archaetnos Culture & Cultural
Resource Consultants
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A REPORT ON A HERITAGE IMPACT ASSESSMENT FOR THE SYLVANIA LANNEX TAILINGS DAM ON THE FARM GROOTBOOM ANNEX 335KT, NEAR STEELPOORT, MPUMALANGA PROVINCE

For:

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REPORT: **AE1008**

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DISCLAIMER:

Although all possible care is taken to identify all sites of cultural importance during the survey of study areas, the nature of archaeological and historical sites are as such that it always is possible that hidden or subterranean sites could be overlooked during the study. Archaetnos and its personnel will not be held liable for such oversights or for costs incurred as a result thereof.

SUMMARY

Archaetnos cc was appointed by Prescali Environmental Consultants (Pty) Ltd, on behalf of SAMANCOR Eastern Chrome Lannex Section, to conduct a heritage impact assessment on the farm Grootboom Annex 335 KT, near Steelpoort in Mpumalanga Province. The development of the Sylvania Lannex Tailings Dam is being proposed.

In the area impacted upon by the proposed development a number of sites of some cultural heritage significance were found, dating to the Stone Age period. The report gives a discussion of these sites (scatters of eroded out stone tools) and also gives an indication of the methodology followed. It also indicates how to deal with any archaeological material that may be unearthed during quarrying activities in the future.

The sites are of medium cultural significance. Mitigation measures to minimize the impact of the development on these sites, or occurrences, are put forward at the end of this report. Once these are implemented the proposed development may continue and the sites may be demolished.

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1. INTRODUCTION

Archaetnos cc was appointed by Prescali Environmental Consultants (Pty) Ltd, on behalf of SAMANCOR Eastern Chrome Lannex Section, to conduct a heritage impact assessment on the farm Grootboom Annex 335 KT, near Steelpoort in Mpumalanga Province. The development of the Sylvania Lannex Tailings Dam is being proposed.

In the area impacted upon by the proposed development a number of sites of some cultural heritage significance were found, dating to the Stone Age period.

The client, represented by Mr. Charles Mathoma, the Environmental Manager, indicated the boundaries of the area to be investigated and the survey was confined to this area. He was also informed of the findings after the survey.

2. TERMS OF REFERENCE

The Terms of Reference for the survey were to:

1. Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located in the area of the proposed tailings dam (see Appendix A).

2. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value (see Appendix B).

3. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions.

4. Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources.

5. Review applicable legislative requirements.

3. CONDITIONS & ASSUMPTIONS

The following conditions and assumptions have a direct bearing on the survey and the resulting report:

1. Cultural Resources are all non-physical and physical man-made occurrences, as well as natural occurrences associated with human activity. These include all sites, structure and artifacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development. Graves and cemeteries are included in this.

2. The significance of the sites, structures and artifacts is determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. The various aspects are

not mutually exclusive, and the evaluation of any site is done with reference to any number of these aspects.

3. Cultural significance is site-specific and relates to the content and context of the site. Sites regarded as having low cultural significance have already been recorded in full and require no further mitigation. Sites with medium cultural significance may or may not require mitigation depending on other factors such as the significance of impact on the site. Sites with a high cultural significance require further mitigation (see Appendix B).

4. The latitude and longitude of any archaeological or historical site or feature, is to be treated as sensitive information by the developer and should not be disclosed to members of the public.

5. All recommendations are made with full cognizance of the relevant legislation.

6. It has to be mentioned that it is almost impossible to locate all the cultural resources in a given area, as it will be very time consuming. Developers should however note that the report should make it clear how to handle any other finds that might be found.

7. In this particular case certain areas had a thick grass cover which made archaeological visibility difficult.

4. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural resources are dealt with mainly in two acts. These are the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998).

4.1 The National Heritage Resources Act

According to the above-mentioned law the following is protected as cultural heritage resources:

a. Archaeological artifacts, structures and sites older than 100 years
b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography
c. Objects of decorative and visual arts
d. Military objects, structures and sites older than 75 years
e. Historical objects, structures and sites older than 60 years
f. Proclaimed heritage sites
g. Grave yards and graves older than 60 years
h. Meteorites and fossils
i. Objects, structures and sites or scientific or technological value.

Archaeology, palaeontology and meteorites

Section 35(4) of this act states that no person may, without a permit issued by the responsible heritage resources authority:

a. destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
c. trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
d. bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.
e. alter or demolish any structure or part of a structure which is older than 60 years as protected.

The above mentioned may only be disturbed or moved by an archaeologist, after receiving a permit from the South African Heritage Resources Agency.

4.2 The National Environmental Management Act

This act states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

5. METHODOLOGY

5.1 Survey of literature

A survey of literature was undertaken in order to obtain background information regarding the area. Sources consulted in this regard are indicated in the bibliography.

5.2 Field survey

The survey was conducted according to generally accepted HIA practices and was aimed at locating all possible objects, sites and features of cultural (archaeological and historical) significance in the area of proposed development. If required, the location/position of any site is determined by means of a Global Positioning System (GPS), while photographs are also taken where needed.

The survey was undertaken on foot.

5.3 Oral histories

People from local communities are interviewed in order to obtain information relating to the surveyed area. It needs to be stated that this is not applicable under all circumstances. When applicable, the information is included in the text and referred to in the bibliography.

5.4 Documentation

All sites, objects, features and structures identified were documented according to the general minimum standards accepted by the archaeological profession. Co-ordinates of individual localities were determined by means of the Global Positioning System (GPS).The information was added to the description in order to facilitate the identification of each locality.

6. DESCRIPTION OF THE AREA

The SAMANCOR Eastern Chrome Lannex Section is situated on the farm Grootboom Annex 335 KT, a few kilometers east of Steelpoort (in the Steelpoort Valley). The tailings dam is located east of the R555 running towards Steelpoort.

Fairly dense grass and tree cover made visibility difficult, and very little of the original vegetation has been disturbed. Large scale erosion occurs.

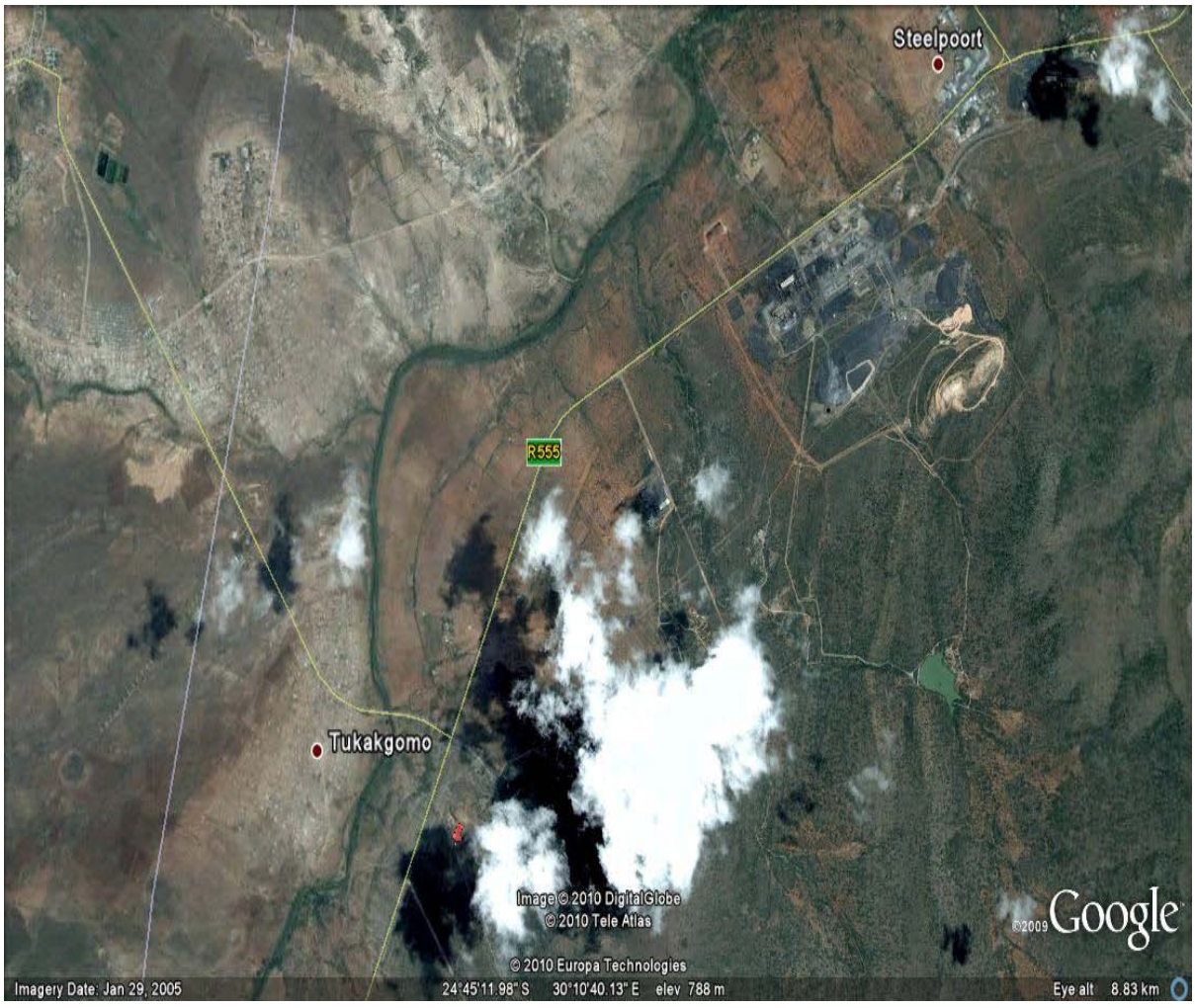

Figure 1: Location of the Lannex Mine.

Figure 2: General view of the area.
The existing mining is visible in the background.

Figure 3: Another view of the area.

7. DISCUSSION

During the survey two sites of cultural (archaeological) heritage significance was located in the area of the proposed tailings dam. In order to enable the reader to understand archaeological objects, features and sites that could possibly be unearthed and disturbed during development, it is necessary to give a background regarding the different phases of human history.

7.1 Stone Age

The Stone Age is the period in human history when lithic (stone) material was mainly used to produce tools (Coertze & Coertze 1996: 293). In South Africa the Stone Age can be divided in three periods. It is however important to note that dates are relative and only provide a broad framework for interpretation. The division for the Stone Age according to Korsman & Meyer (1999: 93-94) is as follows:

Early Stone Age (ESA) 2 million – 150 000 years ago
Middle Stone Age (MSA) 150 000 – 30 000 years ago
Late Stone Age (LSA) 40 000 years ago – 1850 - A.D.

The two sites located during the survey date to this period, and more specifically to the MSA and LSA phases.

7.2 Iron Age

The Iron Age is the name given to the period of human history when metal was mainly used to produce artifacts (Coertze & Coertze 1996: 346). In South Africa it can be divided in two separate phases according to Van der Ryst & Meyer (1999: 96-98), namely:

Early Iron Age (EIA) 200 – 1000 A.D.
Late Iron Age (LIA) 1000 – 1850 A.D.

Huffman (2007: xiii) however indicates that a Middle Iron Age should be included. His dates, which now seem to be widely accepted in archaeological circles, are:

Early Iron Age (EIA) 250 – 900 A.D.
Middle Iron Age (MIA) 900 – 1300 A.D.
Late Iron Age (LIA) 1300 – 1840 A.D.

Early Iron Age sites are known to exist in the larger Steelpoort Valley area (Pistrorius 2006: 10). During a Phase 1 HIA study carried out by Pistorius for the mine a number of Early Iron Age potsherds, dating according to him to between AD300 and AD800, were identified (Pistorius 2006: 12-15). These potsherds were found out of any context, and were deemed not significant by the author of that report. No Iron Age occurrences were identified during the 2010 study for the proposed tailings dam.

7.3 Historical Age

The historical age started with the first recorded oral histories in the area. It includes the moving into the area of people that were able to read and write.

The first Europeans to travel close to this area were the group of Schoon in 1836 (Bergh 1999: 13).

7.4 Discussion of sites identified during the survey

Site 1

Site 1 (and 2) contains a fairly large number of stone tools and flakes scattered in an erosion donga. The tools probably date to between the Middle and Late Stone Age, based on their size and mode of production. These artifacts are evidence of the presence of people in the area for at least 150 000 years.

The tools are being eroded out by water, and although they might be out of context, the site is deemed as fairly significant (medium significance) because of the relatively large number of artifacts identified here. Mitigation measures will have to be implemented.

GPS: **S 24. 77060 E 30.16669**

Figure 4: General view of Site 1.

Figure 5: MSA/LSA tools and flakes from Site 1.

Site 2

Site 2 is similar to Site 1 and contains a number of stone tools and flakes scattered in an erosion donga. The sites are located very close to each other, and probably formed part of a larger Stone Age activity area, such as the manufacturing of stone tools over a long period of time.

The site is once again deemed as fairly significant (medium significance) because of the relatively large number of artifacts identified here. Mitigation measures will have to be implemented.

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Stone tools are also found scattered throughout the area, especially in portions where erosion is taking place.

Figure 6: More MSA/LSA stone tools found in the area.

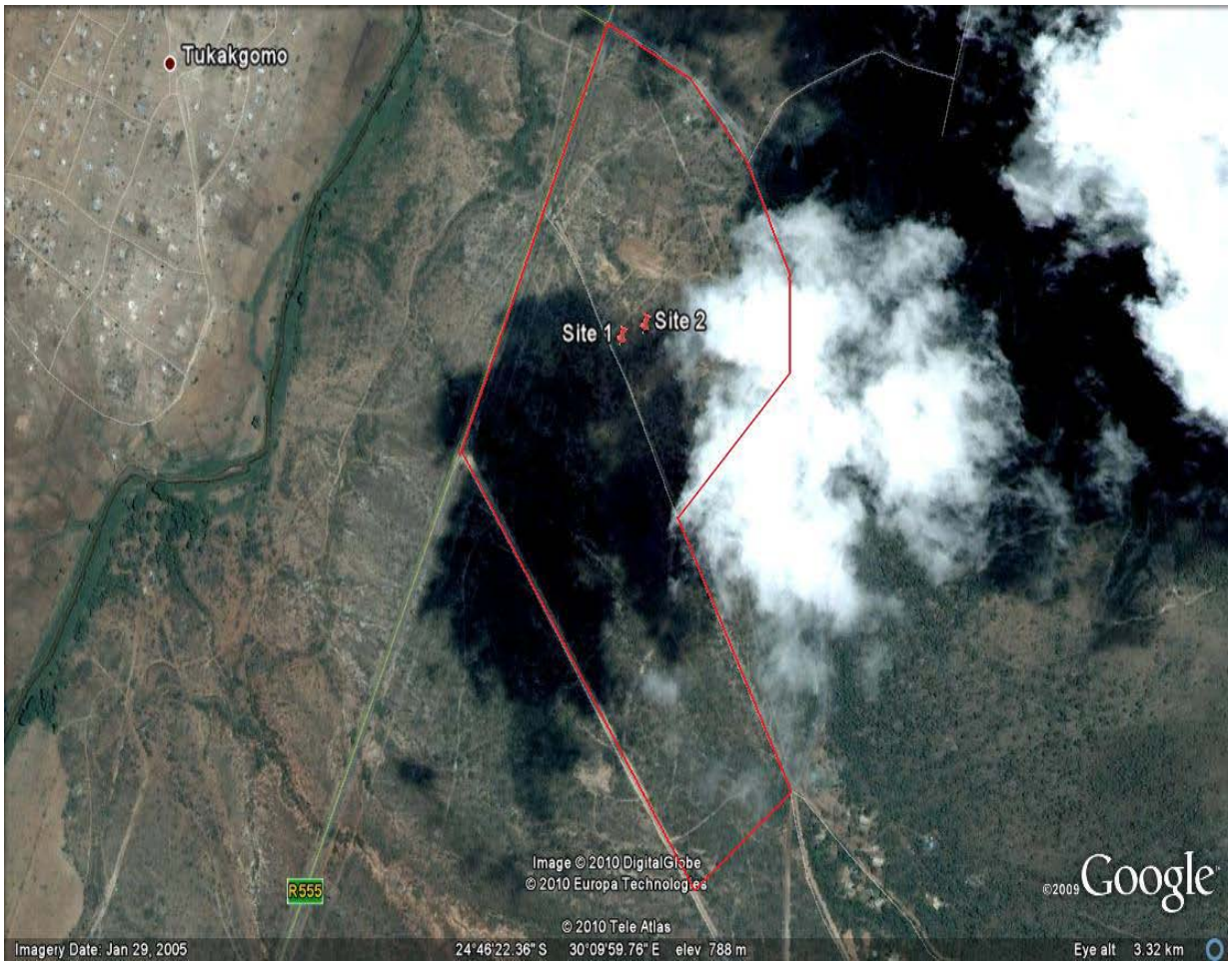

Figure 7: Location of Sites 1 and 2 on the surveyed portion. The tailings dam area is indicated in red

8. CONCLUSIONS AND RECOMMENDATIONS

In conclusion it can be stated that the assessment of the area was conducted successfully. Two sites were identified, while a number of stone tools were also recorded scattered throughout the area. The sites date to the MSA and LSA periods of the Stone Age, evidence of people's presence and activity in the area for at least 150 000 years. The Stone Age occurrences are located within erosion areas in the surveyed area, and are deemed as of medium significance. **Mitigation measures needs to be implemented to minimize the impact of the proposed tailings dam on the heritage resource, before the development can continue.**

The recommendations regarding this are as follows:

- **That the Stone Age sites be recorded and documented in detail**
- **This will entail mapping and plotting the various sites and stone tool scatters and collection of a representative sample of the stone tools for archaeological investigation and curation at a recognized institution.**
- **It should be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts are always a distinct possibility. Care should therefore be taken during an development activities that if any of these are accidentally discovered, a qualified archaeologist be called in to investigate.**
- **Because of the dense grass cover, visibility was difficult. Any features, objects or sites could therefore have been missed. This includes low, stone-packed, graves.**

9. REFERENCES

Location of development and Sites: Images © Google Earth

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APPENDIX A

Definition of terms:

Site: A large place with extensive structures and related cultural objects. It can also be a large assemblage of cultural artifacts, found on a single location.

Structure: A permanent building found in isolation or which forms a site in conjunction with other structures.

Feature: A coincidal find of movable cultural objects.

Object: Artifact (cultural object).

(Also see Knudson 1978: 20).

APPENDIX B

Cultural significance:

- Low — A cultural object being found out of context, not being part of a site or without any related feature/structure in its surroundings.

- Medium — Any site, structure or feature being regarded less important due to a number of factors, such as date and frequency. Also any important object found out of context.

- High — Any site, structure or feature regarded as important because of its age or uniqueness. Graves are always categorized as of a high importance. Also any important object found within a specific context.