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A REPORT ON A HERITAGE IMPACT ASSESSMENT FOR THE BUFFELSFONTEIN EAST & WEST EXPANSION PROJECT ON THE FARM BUFFELSFONTEIN 465 JQ, NEAR MOOINOOI, NORTH WEST PROVINCE

For:

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REPORT: **AE848**

by:

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SUMMARY

Archaetnos cc was requested by SAMANCOR Western Chrome Mines to conduct a Heritage Impact Assessment on the farm Buffelsfontein 465 JQ as part of Buffelsfontein East and West Mine Expansion Project. The development area is located near the Northwest town of Mooinooi.

The fieldwork undertaken revealed some sites and features of varying archaeological and cultural heritage significance on the property.

Although the development will impact to some degree on these resources, the proposed development can continue, taking into cognizance the conclusions and recommendations put forward at the end of this report.

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1. INTRODUCTION

Archaetnos cc was requested by SAMANCOR Western Chrome Mines to conduct a Heritage Impact Assessment on the farm Buffelsfontein 465 JQ as part of Buffelsfontein East and West Mine Expansion Project. The development area is located near the Northwest town of Mooinooi.

The client indicated the area where the proposed development is to take place, and the survey was confined to this area.

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 on the property (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. Recommend suitable mitigation measures should there be any sites of significance that might be impacted upon by the proposed development.

6. 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 occur.

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.

Human remains

In terms of Section 36(3) of the National Heritage Resources Act, no person may, without a permit issued by the relevant heritage resources authority:

a. destroy, damage, alter, exhume or remove from its original position of otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
b. destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
c. bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation, or any equipment which assists in the detection or recovery of metals.

Human remains that are less than 60 years old are subject to provisions of the Human Tissue Act (Act 65 of 1983) and to local regulations.Exhumation of graves must conform to the standards set out in the **Ordinance on Excavations** (**Ordinance no. 12 of 1980**) (replacing the old Transvaal Ordinance no. 7 of 1925).

Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (i.e. where the graves are located and where they are to be relocated) before exhumation can take place.

Human remains can only be handled by a registered undertaker or an institution declared under the **Human Tissues Act** (**Act 65 of 1983 as amended**).

Unidentified/unknown graves are also handled as older than 60 until proven otherwise.

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 available literature and other reports pertaining to the area was undertaken as a background study.

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 significance in the area of proposed development. If required, the location/position of any site was determined by means of a Global Positioning System (GPS), while photographs were also taken where needed.

The survey was undertaken on foot.

5.3 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 proposed development area is located on the farm Buffelsfontein 465 JQ, approximately 3km north-east of the town of Mooinooi in the Northwest Province. The project site is also situated within the western limb of the Bushveld Igneous Complex. It falls within the summer rainfall region, with an annual average rainfall of between 600 and 900mm.

The regional topography is dominated by the Magaliesberg range, while the topography of the project site itself consists of generally flat plains with a mean altitude of 1200m above the mean sea level. Pre-mining land use was agriculture (crops) and grazing. Very little natural vegetation remains due to past agriculture, fire wood collecting and mining operations. The dominant veld type is Norite Black Turfveld (Acocks 1975).

The development site has already been disturbed to a large extent due to new mining operations, as well as past mining and quarrying (**Figure 1**).

Figure 1: Disturbance of the development area is clearly visible

7. DISCUSSION

The information in the first section of the discussion was obtained from the Scoping Report for the Amendment to the Environmental Management Program Report compiled by MENCO, for SAMANCOR Chrome Limited, dated April 2008.

The Magaliesberg area is known for its rich and diverse range of cultural and heritage resources. These include a wide range of remains dating from the prehistoric period (Stone Age and the Iron Age) right through to the historical (colonial) period.

Colonial farmsteads dating from the second half of the 19th century onwards were established along the southern and northern foot of the Magaliesberg. British blockhouses dating from the Second Anglo-Boer War (1899-1902) occur along the ridge of the Magaliesburg, from Pretoria in the east to Rustenburg in the west. Several of these structures are located in Kommandonek and in Pampoennek in the Magaliesberg, to the south of the project area.

Late Iron Age stone walled sites, such as the one occupied by Mzilikazi's Matabele (Ndebele) near Silkaatsnek in the Magaliesberg, also abound in the area. Even Early Iron Age sites (dating from the first millennium AD) have been found in the Magalies Valley between the southern foot of the Magaliesberg and the northern foot of the Witwatersberge.

Numerous Late Iron Age Tswana and Ndebele clans occupied the Magaliesberg area from the 17th century onwards. Some of the main groups, such as the Kgatla and Kwena, were based near Pretoria, Brits and Marikana, while the Fokeng lived further to the west in Rustenburg. The Bapô, a people whose earliest ancestors were descended from the Amambo Nguni from Kwa Zulu/Natal, arrived in the Magaliesberg during the 16th or 17th centuries. Here they established a sphere of influence to the north of the Magaliesburg. One of their capitals was situated at Tlhogokgolo (Wolhuterskop), a prominent mountain situated approximately 9 km to the east of the project area. Several of the chiefs of this clan, also known as the Kwena

Mogale, were known by the name of Mogale. The name of the Magalies Mountains (Magaliesberg) was derived from the name Mogale.

Since the second half of the 19th century, farmers and workers have occupied the Mooinooi and Marikana areas. Old farm homesteads, agricultural implements and other infrastructure such as tobacco drying sheds still exist on farms adjacent to the project area. What started as small-scale mining activities north of the Magaliesberg during the 20th century was soon eclipsed by the rise of the platinum mining complex near Rustenburg. The establishment of numerous chrome mines in the North West Province of South Africa soon followed the discovery of the Merensky Reef and the accompanying platinum boom.

A cultural heritage assessment undertaken by Dr Julius Pistorius and a socio-economic assessment by Development Planning and Research identified heritage resources in the vicinity of the project site as well. A Late Iron Age (LIA) Complex, identified by Pistorius, consisting of stone walled sites, is found in the area, covering about 640 square kilometers. It is composed of several smaller sites grouped together in one large cluster. It is associated with the ancestors of the Tswana, and dates from the 17th century onwards. The sites were abandoned during the *pre-difaqane and difaqane* wars during the first quarter of the 19th century. This LIA complex has high significance and should be conserved and protected.

In August 2008, a large stone walled site related to this complex was found by Archaetnos cc during a HIA survey for the Elandsdrift Open Cast section (Elandsdrift 467 JQ), a few kilometers to the west of Buffelsfontein. One of the sites found during the HIA on Buffelsfontein is similar and probably related to this as well.

In order to enable the reader to better understand the sites located during the survey, it is necessary to give a background regarding the different phases of human history.

Stone Age

The Stone Age is the period in human history when lithic 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 closest known Stone Age in the vicinity of Mooinooi is known as the Magaliesberg Research Area. It consists of nine sites including rock shelters in the Magaliesberg Mountain. These date back to the Middle and Late Stone Age (Bergh 1999: 4; Korsman & Meyer 1999: 94-95).

The area does not contain shelters or any other indication of living areas. One can therefore assume that Stone Age people would have stayed somewhere in the hills and would have passed this area during their hunting and gathering activities.

Stone Age material is frequently found close to rivers, but none was found during this survey.

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.

Late Iron Age sites have been identified in the area around the town of Mooinooi. In a band stretching roughly from Brits in the east to Zeerust in the west many Iron Age sites have been discovered previously (Bergh 1999: 7-8). These all belong to the Later Iron Age (Bergh 1999: 8-9). A copper smelting site was identified along the Hex River to the northwest of the surveyed area (Bergh 1999: 8).

During earlier times the area was inhabited by a Tswana group, the Fokeng. In the 19th century and even today, this group still inhabits this area with other Tswana groups, the Kwena and the Po (Bergh 1999: 9-10). During the d*ifaqane* these people moved further to the west, but they returned later on (Bergh 1999: 11).

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.

Early travelers have moved through this part of the Northwest Province. This included David Hume in 1825, Robert Scoon and William McLuckie in 1829 and Dr Robert Moffat and Reverend James Archbell in 1829 (Bergh 1999: 12, 117-119).

Hume again moved through this area in 1830 followed by the expedition of Dr Andrew Smith in 1835 (Bergh 1999: 13, 120-121). In 1836 William Cornwallis Harris visited the area. The well known explorer Dr David Livingston passed through this area between 1841 and 1847 (Bergh 1999: 13, 119-122).

The area around Mooinooi, including the surveyed area was inhabited by white pioneers as early as 1839 (Bergh 1999: 15).

Site 1

This site consist of a small one-roomed rectangular structure (**Figure 2**), constructed of granite/norite rocks and cement. This structure could be related to recent quarrying and mining in the area, of which there is clear evidence in the area. **The site and structure is deemed to have very low significance, and the documentation carried out during the field survey is deemed as sufficient mitigation.** The structure is located at **25.72060 ̊S 27.63086 ̊E**.

A single undecorated potsherd, related to the Late Iron Age was also identified in this area (**Figure 3**).

Figure 2: Site 1 – foundations of the small rectangular structure

Figure 3: Small fragment of a Late Iron Age undecorated potsherd near Site 1

Site 2

Although this site might fall just outside the development area (on its western border), it might already have been impacted on by the current mining operations and expansions for Buffelsfontein East and West. It is a fairly extensive stone walled Late Iron Age settlement, comprising circular livestock enclosures (**Figure 4**) and features such as hut enclosures, middens and others. The site is similar to those found on Elandsdrift 467 JQ, and is most probably related to the LIA Stone walled Complex identified by Pistorius

The site is therefore highly significant and will have to be mitigated. Although located just on the western border of the development area that had to be surveyed, we believe that the site will be negatively impacted on by mining operations. Mitigation measures will be put forward in the Recommendations. The site is located between **25.72222 ° S 27.62661 ° E** and **25.72070 ° S 27.62722 ° E**.

Figure 4: Part of Site 2: The stone wall of a livestock (cattle) enclosure is visible

8. CONCLUSIONS AND RECOMMENDATIONS

In conclusion it is possible to say that the assessment of the area was conducted successfully. Two sites of varying cultural heritage significance were recorded, and will be impacted on by the proposed development. Large portions of the area were also disturbed through agricultural activities in the past, possibly disturbing or destroying sites that could have existed here in the past.

Site 1 is of very low significance and the documentation conducted during the field survey is deemed as sufficient enough mitigation.

Site 2 is the stone walled Late Iron Age settlement located on the western border of the development area. This site is deemed as highly significant due to its relation to the LIA

Complex in the area identified by Pistorius and others. Because of current mining operations that already impacted on the site, as well as future expansions, we believe that mitigation measures will have to be implemented. This will comprise the following:

(a) Detailed mapping and drawing
(b) Archaeological excavations in certain sections

A different approach to this would of course be the fencing-in of the site and totally avoiding the area, therefore negating the negative impact of the mining operations. A Management Plan for the site will then have to be drafted. If this is not possible the recommended mitigation measures should be employed.

Should any graves or other historical or archaeological remains be accidentally discovered during the process of development qualified archaeologists should be called in to investigate. The subterranean presence of archaeological and historical objects, features or sites should always be kept in consideration.

It is therefore recommended that the proposed mining expansion for Buffelsfontein East & West can be undertaken once the recommended mitigation actions has been undertaken.

9. REFERENCES

Location and layout of development site: Provided by client

Distribution of sites: produced on Google Earth

Bergh, J.S. (red.). 1999. **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies.** Pretoria: J.L. van Schaik.

Coertze, P.J. & Coertze, R.D. 1996. **Verklarende vakwoordeboek vir Antropologie en Argeologie.** Pretoria: R.D. Coertze.

Huffman, T.N. 2007. **Handbook to the Iron Age: The Archaeology of Pre-Colonial Farming Societies in Southern Africa.** Scotsville: University of KwaZulu-Natal Press.

Knudson, S.J. 1978. **Culture in retrospect.** Chicago: Rand McNally College Publishing Company.

Korsman, S.A. & Meyer, A. 1999. Die Steentydperk en rotskuns. Bergh, J.S. (red.). **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies.** Pretoria: J.L. van Schaik.

Republic of South Africa. 1999. **National Heritage Resources Act** (No 25 of 1999). Pretoria: the Government Printer.

Republic of South Africa. 1998. **National Environmental Management Act** (no 107 of 1998). Pretoria: The Government Printer.

Van der Ryst, M.M. & Meyer, A. 1999. Die Ystertydperk. Bergh, J.S. (red.). **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies.** Pretoria: J.L. van Schaik.

Samancor Chrome Limited: Western Chrome Mines: Mooinooi Section. Scoping Report for the Amendment to the EMPR. Northwest Province. Report by MENCO cc – April 2008

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.

Appendix C – Location of development site and site distribution

Development location and layout

Site distribution