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Archaetnos Culture & Cultural  
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BK 98 09854/23

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**A REPORT ON A HERITAGE IMPACT ASSESSMENT FOR A PROPOSED  
DEVELOPMENT ON THE REMAINING EXTENT OF PORTION 1 OF THE  
FARM DOORNHOEK 329 JQ AND PLUMARI RANCH 595 JQ,  
HEKPOORT, GAUTENG**

For:

***ROUTE TRANSPORT STRATEGIES  
P.O.BOX 67823  
CENTURION  
0169***

**REPORT: AE868**

by:

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***November 2008***

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## SUMMARY

Archaetnos cc was requested by Route 2 Strategies, on behalf of Plumari Game Lodge, to conduct a Heritage Impact Assessment for a proposed commercial /residential development on the remaining extent of Portion 1 of the farm Doornhoek 329 JQ and Plumari Ranch 595 JQ.

The fieldwork undertaken revealed a number of objects, features and sites of archaeological heritage significance on the property. Some of these could be impacted on, albeit indirectly, by the proposed development and subsequent increase in visitor numbers. **The proposed development can continue, although a number of mitigation measures to minimize the impact on these resources, put forward in the conclusions and recommendations, needs to be implemented.**

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## **1. INTRODUCTION**

Archaetnos cc was requested by Route 2 Strategies, on behalf of Plumari Game Lodge, to conduct a Heritage Impact Assessment for a proposed commercial/residential development on the remaining extent of Portion 1 of the farm Doornhoek 329 JQ and Plumari Ranch 595 JQ.

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 of 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 literature, to place the archaeological sites identified during the survey in context, was undertaken in this case.

### **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, while the area's parameters were determined by vehicle.

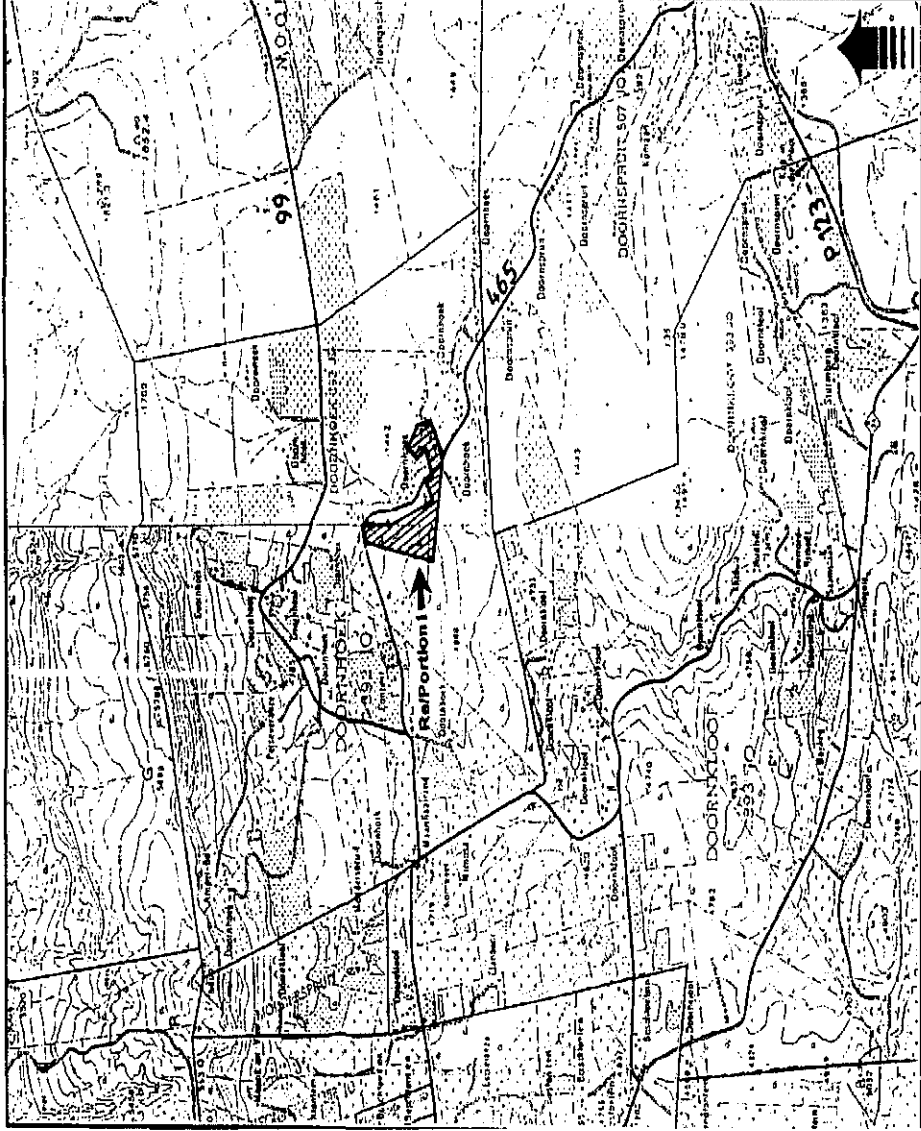
### **5.3 Documentation**

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 area is located on the remainder of Portion 1 of the farm Doornhoek 329 JQ and on the farm Plumari Ranch 595 JQ, in the Hekpoort area of Gauteng (**Figure 1**).

A small portion of the area have been disturbed through agricultural activities in the recent past (cattle grazing), although the largest portion of the area still contains its natural vegetation (Mixed Bushveld?)[**Figure 2**].



**LOCALITY PLAN**

REMAINDER OF PORTION 1 OF THE FARM  
DOORNSHOEK 329 - JQ

SCALE: 1: 50 000

E 30.4

**PLAN -  
ENVIRO CC**

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## 7.1 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 sites in the vicinity of Hekpoort are known as the Magaliesberg Research Area. It consists of nine sites including rock shelters in the Magaliesberg Mountains. These date back to the Middle and Late Stone Age (Bergh 1999: 4; Korsman & Meyer 1999: 94-95).

Rock art and rock engraving sites have also been identified close to Hekpoort. These date back to the Late Stone Age (Bergh 1999: 5).

No rock shelters or any other indication of living areas were found. Scatters of stone tools were identified throughout the area, while rock engravings associated with the San is located in numbers on the properties.

## 7.2 Iron Age

The Iron Age is the name given to the period of human history when metal was mainly used to produce tools and weapons (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.

Previous research indicates that one of the few Early Iron Age sites that have been properly researched, are situated at Broederstroom, a site to the east of Hekpoort (Bergh 1999: 6). The site is dated to 350 AD and apart from hut remains indications of iron smelting was also found (Van der Ryst & Meyer 1999: 98).

Late Iron Age sites have been identified in the area around the town of Brits. 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). This area includes Hekpoort.

During earlier times and in the 19<sup>th</sup> century it seems as if this area was not inhabited, due to better climatic conditions in the Magaliesberg Mountain (Bergh 1999: 10-11). During the Difaqane the Ndebele of Mzilikazi moved through this area, followed by a commando of Voortrekkers in 1937 (Bergh 1999: 11).

### 7.3 Historical Age

The historical age started with the first recorded oral histories in the area. Early travelers moved through this part of the Northwest Province. This included David Hume in 1825, Robert Schoon and William McLuckie in 1829 and Dr Robert Moffat and Reverend James Archbell later in 1829 (Bergh 1999: 12, 117-119). The Voortrekkers moved into this area in the 1830's (Bergh 1999: 15).

The expedition of Dr Andrew Smith traveled through this area in 1835 and William Cornwallis Harris in 1836. The well known explorer Dr David Livingston passed through this area in 1847 (Bergh 1999: 13, 119-122).

The area around Hekpoort also saw some action during the Anglo-Boer War. Blockhouses were erected by the British at Kommandonek, Pampoennek, Olifantsnek, Silkaatsnek, Broederstroom, Kalkheuwel, Nooitgedacht and Hekpoort (Van Vollenhoven & Van den Bos 1997: 107-128).

There also was a skirmish at Silkaatsnek in the Magaliesberg Mountain nearby on 11 July 1900 (Bergh 1999: 51). Other skirmishes in the vicinity of Hekpoort include the Battles of Buffelspoort on 3 December 1900, Nooitgedacht on 13 December 1900 and Vlakfontein on 29 May 1901 (Bergh 1999: 54).

#### *Site 1 – San Rock Engravings*

A large number of rock engravings are present in the area, and were indicated to us by a guide employed by the client (Plumari Ranch). A few new ones were also identified during the survey. The engravings are located over a wide area, between **25.89463 S 27.49934 E & 25.89576 S 27.49220 E**. The site is situated on the farm Doornhoek.

At least 9 identifiable animal engravings were identified, while a number of other unidentifiable and feint ones were also located. The animal engravings include a number of rhino (white rhino), eland, gemsbok, zebra and other antelope (See **Figure 4-8**). All the engravings are fine-line and not pecked. The engravings are located on a hill overlooking the property (**Figure 3**).

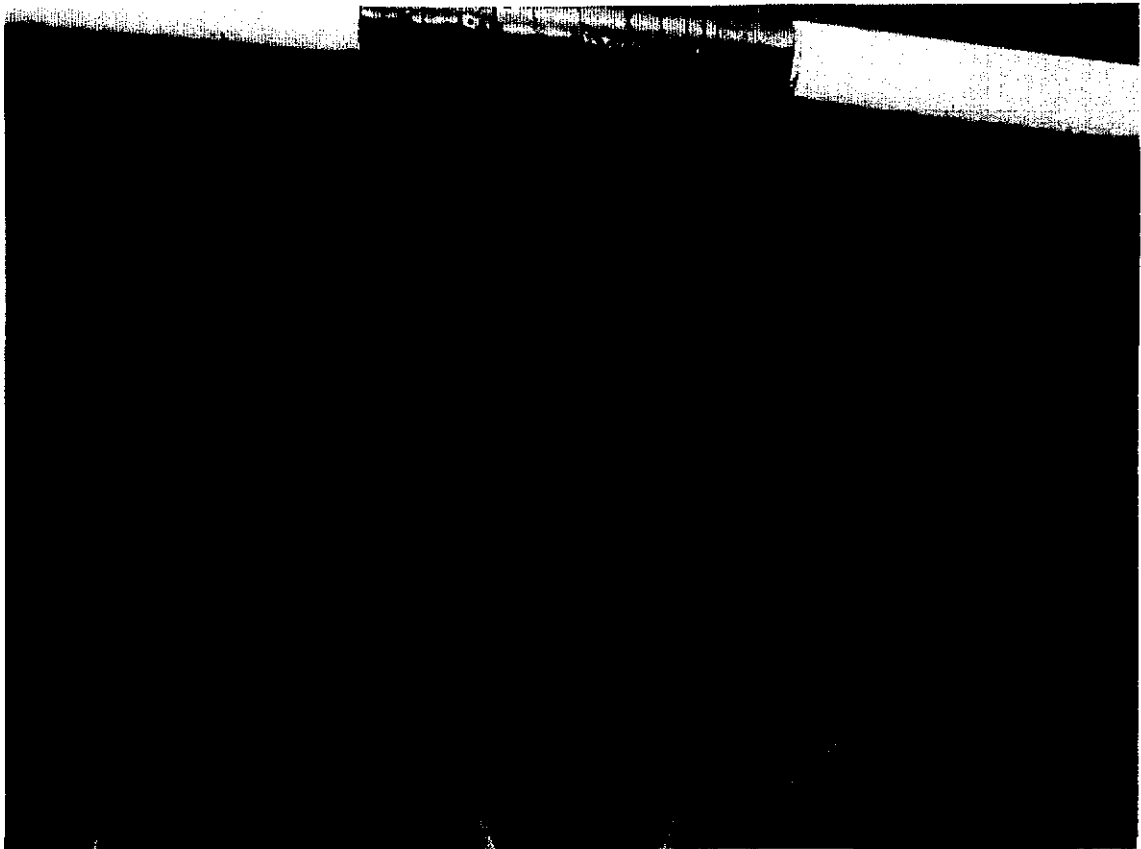
The engravings are located on a hiking-trail where visitors are taken on a guided-tour of the area and are therefore well-known and frequently visited. This in itself could create a management problem, an aspect that will be discussed later on in the report. A number of the engravings have been vandalized with graffiti scratched on and over some of them. Some rocks also have modern engravings and graffiti on them.

According to lodge Manager, Mr. Marino Codevilla, other engravings also exist in the area, although these are in portions of the property that will not be impacted on by development and were therefore not surveyed. The rock engravings are a valuable asset to the Lodge, and

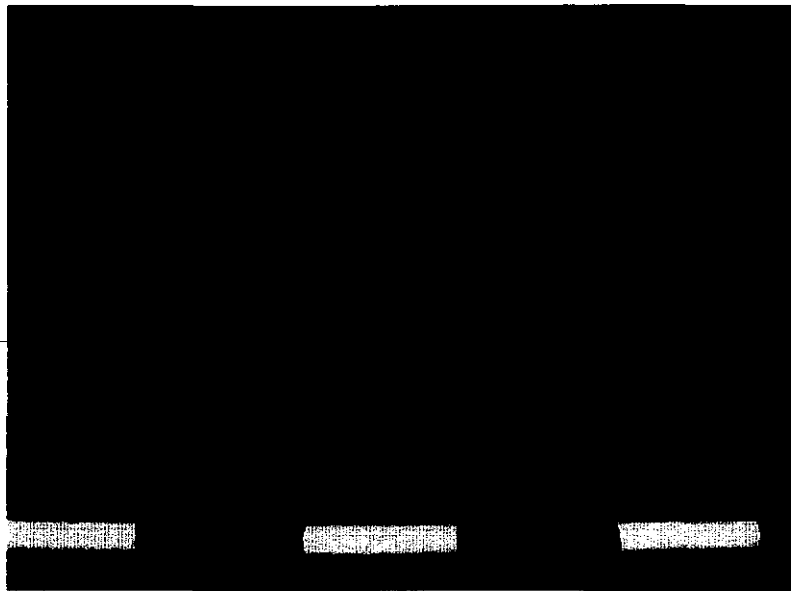
have a high significance in terms of their research and tourist potential. They therefore need to be protected and managed accordingly. Mitigation measures will be put forward at the end of the report. Currently development in close vicinity of the engraving site includes the building of a dam/reservoir, while increased visitor numbers to the area due to the further development of lodge facilities and residences could also impact to some degree on them.



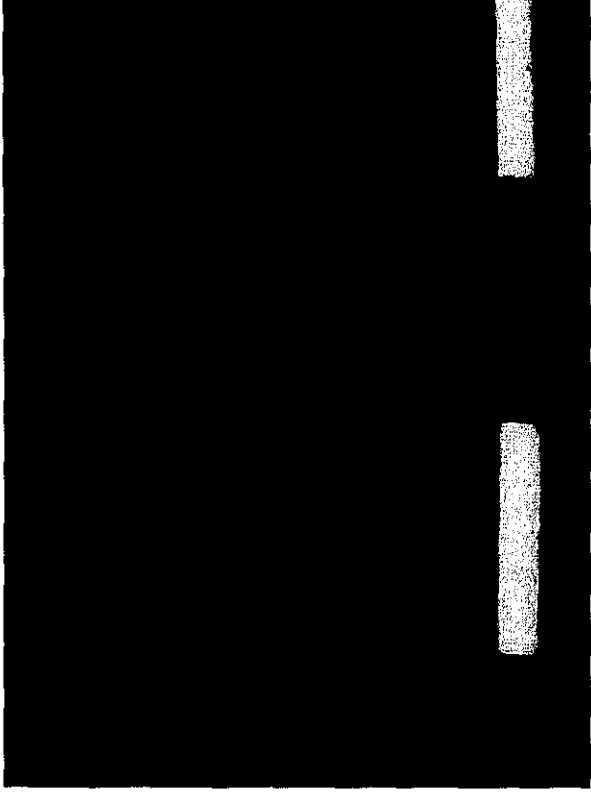
**Figure 3: The hill site where the engravings are located**



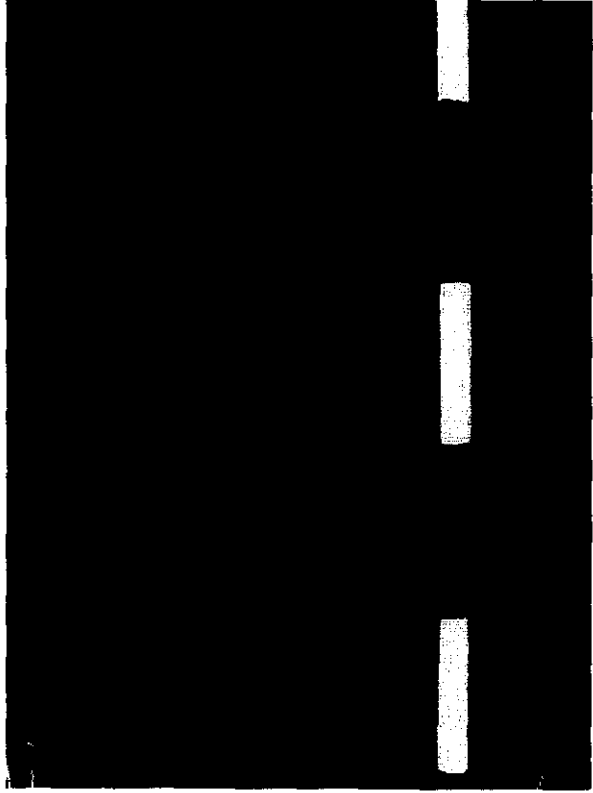
**Figure 4: Feint engraving of an unidentified antelope**



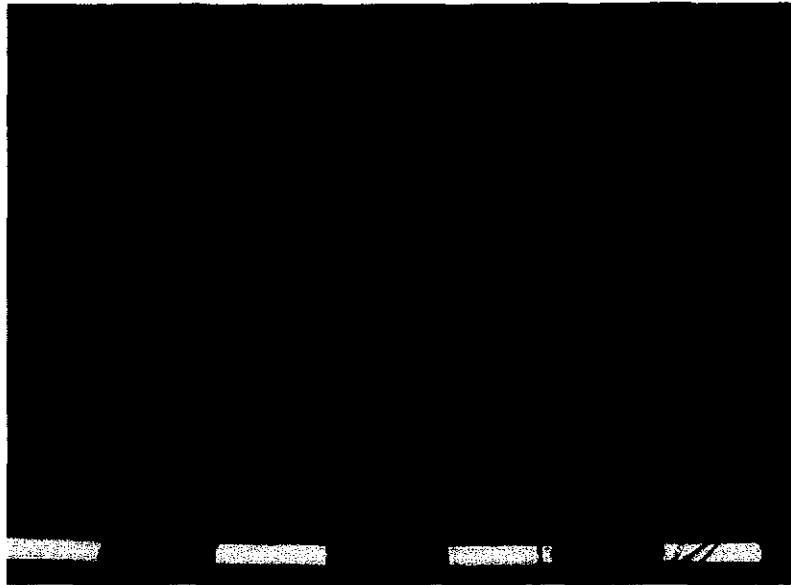
**Figure 5: Eland engraving**



**Figure 6: Engraving of a zebra**



**Figure 7: Gemsbok engraving**



**Figure 8: Engraving of a rhino. Note the graffiti on the rock**

***Site 2 – LIA Stone walled site***

This is a Late Iron Age (LIA) stone walled site with a surrounding wall, incorporating livestock enclosures and hut bays (Figure 9). It is located at **25.89544 S & 27.49079 E**.

The site, as well other similar sites on the property, probably belongs to the later part of the Late Iron Age, dating to between the mid 17<sup>th</sup> and mid 19<sup>th</sup> centuries. They could have been abandoned by their inhabitants (Tswana speakers) when Mzilikazi and his Ndebele moved through the Magaliesberg area during the early 1830's.



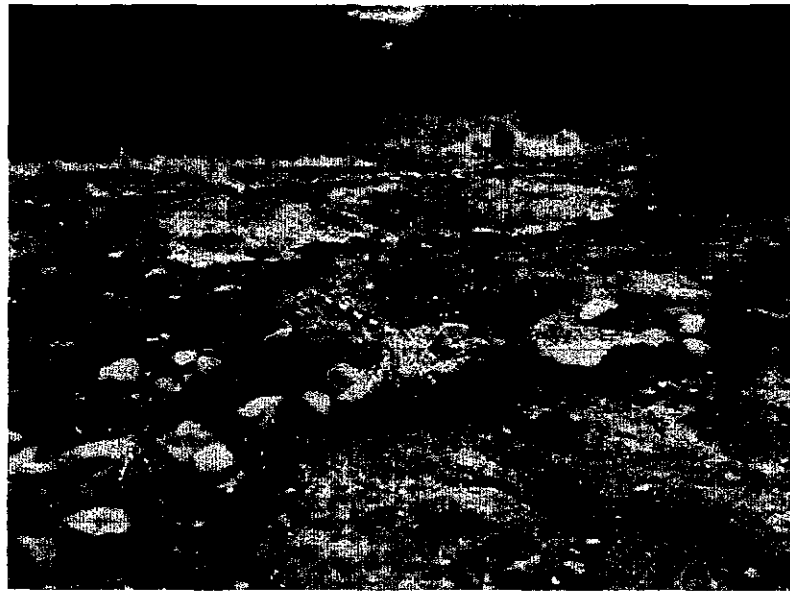
**Figure 9: Part of the surrounding wall of LIA Site 2**

*Site 3 – LIA Stone walled site*

This site is similar to Site 2, and probably part of the same settlement complex. It is located at **25.89402 S & 27.49667 E**.

*Site 4 – LIA Stone walled site and terracing*

This is another stone walled Late Iron Age site, similar to the other ones on the property, although it is much larger and more complex. Besides the number of circular enclosures (including livestock enclosures, hut bays and granary stands, there are also an extensive system of agricultural terraces visible on the site (**Figure 10**). The site covers quite a large area, and is located between **25.89308 S 27.49675 E & 25.89129 S 27.49848 E**. The site is situated close to a marker, which according to our guide Mr. Elias Rasepukula (2008/11/07) that indicates the position of a new residential development. The site might therefore be impacted on by the development.



**Figure 10: Agricultural terraces on LIA Site 4**

*Site 5 – Farm Labour structure*

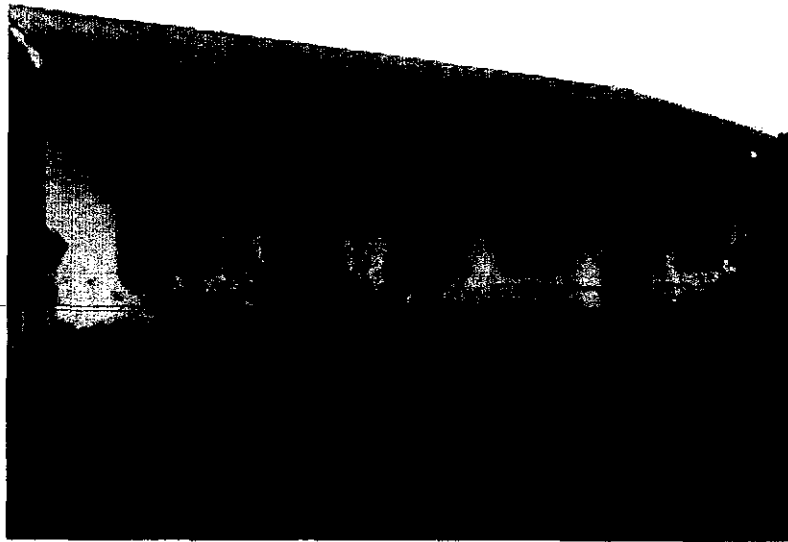
This is one of two similar structures located on the property. It consists of a plastered clay brick and cement, 4-roomed structure, with surrounding stone packed wall (**Figure 11**). It also has a verandah. Other related unidentified features were also identified around the site. The structure could date to around the early to mid 20<sup>th</sup> century. The site is located at **25.88863 S & 27.50014 E**.



**Figure 11: Site 5 – Remains of farm labour structure**

***Site 6 – Old School***

This structure (Figure 12) was used as an old school according to our guide, although it probably had an earlier function. It is relatively well preserved, and has wooden floors according to Mr. Rasepukula. The structure could however not be accessed. It is located at 25.88680 S & 27.50002 E. It possibly dates to between the 1920's & 1940's.



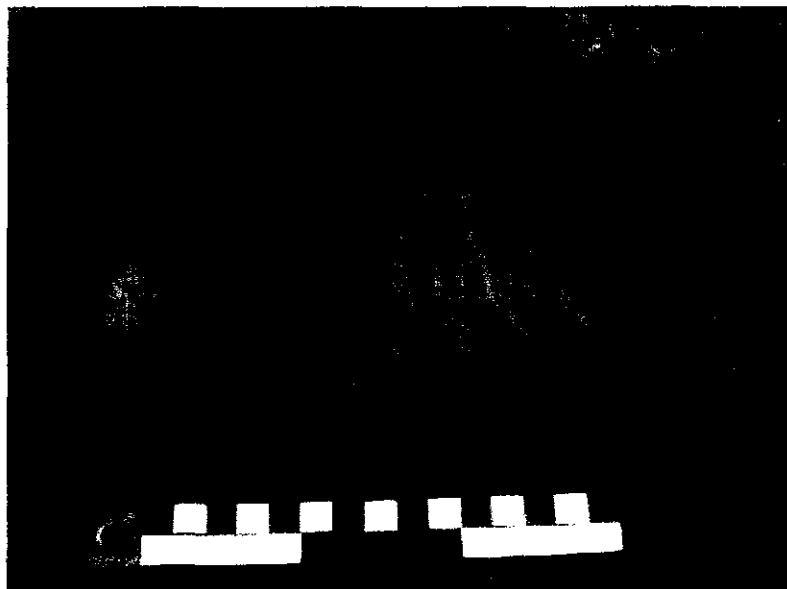
**Figure 12: Old school building on Site 6.**



*Site 7 – Scatter of stone tools*

Although this can technically not qualify as a site per se, we decided to mark it to indicate the range of archaeological and historical (cultural) heritage resources present on the property. A number of Middle Stone Age (MSA) stone tools were found on this site (**Figure 13**).

The stone tools are located at **25.88793 S & 27.50951 E**.



**Figure 13: Some of the MSA stone tools found on Site 7**

*Site 8 & 9 – LIA Stone walled site*

These sites are located in the same vicinity, and are probably related to the same settlement complex. Site 8 contains a number of stone walled enclosures for livestock, as well as a number of hut circles demarcated with upright stones (**Figure 14**). The sites are located between **25.88643 S 27.51253 E & 25.88258 S 27.51127 E**.



**Figure 14: Hut circle on LIA Site 8**

***Site 10 – Farm Labour structure***

This site is similar to the one recorded on Site 5, although it might be slightly older. It is L-shaped and has at least 3 rooms with a surrounding wall and verandah. It is a stone and clay construction (**Figure 15**). The site is located at **25.89316 S & 27.50361 E**.



**Figure 15: Farm labour structure on Site 10**

**8. CONCLUSIONS AND RECOMMENDATIONS**

In conclusion it is possible to say that the assessment of the area was conducted successfully. A number of sites of archaeological and historical significance were identified, including San

rock engravings, LIA stone walled settlement sites and farm labour structures. Scatters of MSA stone tools were also identified.

The proposed development could impact on some of these walled sites, and because of their significance some mitigation measures will have to be implemented to minimize these impacts. These are the following:

- (a) **Rock engravings:** (1) A Management Plan should be drafted to ensure that they are properly looked after and to minimize the threat of vandalism that is already evident on some of them (2) A detailed survey of the site and area should be undertaken in order to record and identify all possible engravings in detail (3) the hiking trail that exists could be developed further to include possible information plaques on several stops on the route (4) the proper training of the guide to help him/her to interpret the engravings correctly for visitors and to sensitize the guide not to touch the engravings
- (b) **LIA Stone walled sites 2-5:** (a) if the sites can be avoided it is proposed that they be fenced in and that a Management Plan for the sites be drafted to preserve them (b) if the sites are to be threatened by development plans (especially Site 4&5), they should be mapped & drawn and test excavations conducted to obtain as much information as possible for research and preservation purposes
- (c) **Old school:** it could be considered to renovate this building and then to use it as an Interpretation Centre on the hiking trail where visiting groups to Plumari Ranch can learn about the history of the area
- (d) **Farm labour structures:** these sites can be mapped and drawn if they are threatened by any developments. However, the documentation conducted during the survey can be considered sufficient mitigation at this stage

All the information obtained during subsequent research and mitigation can also be incorporated into the existing small museum on the property, in the form of an exhibition and display panels and possibly information brochures.

**It is therefore recommended that the proposed development can continue once the recommended mitigation measures have been conducted. However, the subterranean presence of archaeological or historical objects, features or sites should also always be considered. If any of these are uncovered during any construction work or other development activities a professional archaeologist should be called in to investigate.**

## REFERENCES

1:50 000 Topographical Map locations of development: Map provided by client (Route 2 Strategies) and produced by Plan Enviro cc

**Aerial view of location of development area and Site distribution (Appendix C): produced on 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 coincidental 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 – Aerial view of the location of the survey area and Site distribution**

