

**A SURVEY OF CULTURAL RESOURCES ON THE
METSEMOTLHABA-KOPONG-LENTSWELETAU ROAD,
NORTH OF GABORONE, BOTSWANA**

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SUMMARY

A survey of cultural resources on the Metsemotlhaba-Kopong-Lentsweletau road, north of Gaborone, Botswana

A survey to establish the nature, extent and significance of cultural resources was made on the road from Metsemotlhaba, via Kopong to Letsweletau, Botswana.

A number of sites of cultural significance were identified. It is judged that they would not be impacted upon by the proposed development, and it is therefore recommended that the development can continue. However, a number of recommendations are put forward in section 7 of this report.

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1. AIMS OF THE SURVEY

The National Cultural History Museum was requested by **Ekokonsult Inc** to survey a road north of Gaborone, Botswana. It is planned to upgrade the existing road, which is currently a dirt and gravel road, by tarring it. The aim of the survey was to locate, identify, evaluate and document the sites, objects and structures of cultural importance found within the boundaries of the road.

2. TERMS OF REFERENCE

The **Terms of Reference** for the study were to:

- 2.1 Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural resources) located in the area of the proposed development.
- 2.2 Assess the significance of the cultural resources in terms of their historical, social, religious, aesthetic and scientific value.
- 2.3 Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions.
- 2.4 Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources.

We were informed by the client that the road plus its reserve, will not be more than a total of 12 metres wide. The survey was to be confined to this area, ie. the existing road and its immediate borders/shoulders. However, the route was surveyed within its larger geographical context. We were not informed about the location of possible borrow pits.

3. CONDITIONS AND ASSUMPTIONS

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

- Cultural resources** are all nonphysical and physical human-made occurrences, as well as natural occurrences that are associated with human activity. These include all sites, structures and artifacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development.
- The **significance** of the sites 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. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.
- Significance is site-specific and relates to the content and context of the site. Sites regarded as having low significance have already been recorded in full and require no further mitigation. Sites with medium to high significance require further mitigation.
- The latitude and longitude of an archaeological site is to be treated as sensitive information by the developer, and should not be disclosed to members of the public.
- All recommendations are made with full cognisance of the relevant legislation, in this case the Monuments and Relics Act (1970).

4. METHODOLOGY

4.1 Preliminary investigation

4.1.1 Survey of the literature

A survey of all relevant literature was conducted with the aim of reviewing the previous research done and determining the potential of the area. In this regard, various anthropological, archaeological and historical sources were consulted - see list of references below.

4.1.2 Data sources

The **Archaeological Data Recording Centre (ADRC)**, housed at the National Museum and Art Gallery, Gaborone, was consulted.

4.1.3 Other sources

The relevant topocadastral and other maps were studied - see list of references below.

An interview was also conducted with the head of the archaeology section at the museum in Gaborone - see list of references below.

4.2 Field survey

The survey was conducted according to generally accepted archaeological practices, and was aimed at locating all possible sites, objects and structures. This was done by the researcher leaving the vehicle at a point next to the road and then walking down one side of the road for a kilometre or two. The researcher then crossed the road and walked back down the other side towards the vehicle. Areas with potential for human use were investigated. Special attention was given to outcrops, cliffs were inspected for rock shelters, while stream beds and unnatural topographical occurrences such as trenches, holes and clusters of exotic and indigenous trees were investigated.

4.3 Documentation

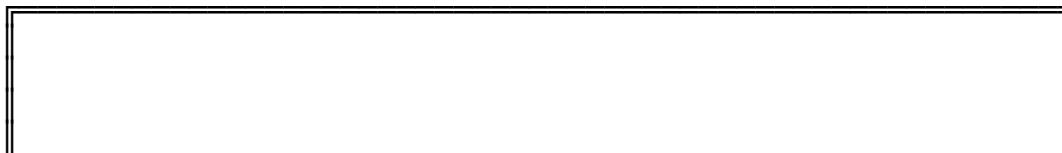
All sites, objects and structures identified were documented according to the general minimum standards accepted by the archaeological profession. Coordinates of individual localities were determined by means of the **Global Positioning System (GPS)**¹ and plotted on a map. The information was added to the description in order to facilitate the identification of each locality.

4.4 Presentation of the information

In discussing the results of the survey, a chronological rather than a geographical approach was followed in the presentation of an overview of human occupation and land use in the area. This helps the reader to better understand and facilitate the potential impact of the development. Information on the individual objects, sites, occurrences and structures is presented in Appendix 2 and summarised in Table 1.

5. DESCRIPTION OF THE AREA SURVEYED

The area that was surveyed, is indicated in Figure 1, below. The topography is, basically, gently rolling plains, with the most dominant geographical feature being a series of hills located halfway between Kopong and Lentsweletau. Most river beds are dry and carry water only during heavy rains. No other open water sources were noticed.



¹ ¹ According to the manufacturer a certain deviation may be expected for each reading. Care was, however, taken to obtain as accurate a reading as possible, and then correlate it with reference to the physical environment before plotting it on the map.



The geology along the road is made up in the following manner. The southern part of the road, up to the hills halfway between Kopong and Lentsweletau, consists of granite and felsite, with the latter forming the foothills of a range of hills which separates the granites from the Waterberg sediments in the north. The Waterberg sediments occur

as this range of hills. North of these hills the Waterberg sediments are covered with a mantle of Kalahari sand.

The vegetation seems to follow the geological subdivisions to some extent. In many areas, agricultural use and overgrazing has changed the original vegetation and densification of scrub bush has taken place. The main vegetation type of the area concerned seems to be Kalahari Thornveld, which generally occurs in deep, loose sand. However, it is possible to distinguish other types of vegetation in the study area as well: Arid Sweet Bushveld and Mixed Bushveld.

6. DISCUSSION

Though a lot of archaeological research has been done in the eastern parts of Botswana (see list of references below), little has been done in the area of this particular survey. The closest to this area is that done by Caister (1982), which covers the area around Molepolole, and that done by Denbow (1981) around Gaborone.

6.1 Stone Age

The various phases of the Stone Age are well represented in most parts of Botswana (see Hitchcock 1982).

A limited number of Middle Stone Age tools were identified throughout the southern section of the road that was surveyed. This is to be expected with felsite being found in the area. The artifacts, which were located next to the road, are in all probability disturbed out of context. Small numbers of similar artifacts were also located on the banks of the streams that cross the road, as well as in the stream beds themselves. The chances of these objects also being disturbed out of context are also quite good. It is possible that Late Stone Age sites might be located in the hills between Kopong and Lentsweletau, but none were identified in the vicinity of the road.

6.2 Iron Age

A few small potsherds, showing Early Iron Age characteristics, were identified. These were too few in number to make any positive identification, and no sites *per se* were identified. In all probability these might be related to the Toutswe (Denbow 1982, 1984), or Broadhurst (Denbow 1981) traditions.

A site with large quantities of potsherds, iron slag and possible rudimentary stone walling was located in the hills between Kopong and Lentsweletau. From the pottery, it seems as if this might be a Late Iron Age site. This fits in with information of Caister (1982) that Late Iron Age settlements are found on many hills in this area.

6.3 Historic

Although this road is taken to be of some historical age, being used by early travellers to go to Shoshong (Walker, 1997 - personal comments), nothing was noticed during the survey that could confirm this.

A cemetery was identified on the outskirts of Kopong.

7. CONCLUSIONS AND RECOMMENDATIONS

Three sites of cultural significance were found in the area of the proposed development. Within the scope of the proposed development, it is judged that they would not be impacted upon by the development and will therefore not prevent the development from continuing, or require modification of the project design. If, however, the alignment of the road is changed for some reason or other, these sites will have to be considered and mitigationary steps taken.

The following recommendations are made:

7.1 We recommend that the development can continue. It is, however, suggested that the developers be notified that archaeological sites might still be exposed during the construction activities. If anything is noticed, it should be reported immediately to a museum, preferably one at which an archaeologist is available, so that an investigation and evaluation of that find can be made.

7.2 As we do not know the exact position of the borrow pits, we recommend that existing pits and old quarries (such as the one across the road from the entrance to **Arne's Horse Safari**) be used.

7.3 If borrow pits are to be made in different locations, we recommend that they be investigated by an archaeologist beforehand. In this regard, we refer especially to the range of hills located roughly, from the entrance to **Arne's Horse Safari**, northwards to where the plain starts again. Enough archaeological indicators were found in this area to suggest that this might be an archaeologically sensitive area.

7.4 It seems as if the deviation that is planned for the road to bypass the village of Kopong, did not take recent settlement into consideration, as quite a number of new houses will be impacted upon by the road as it is indicated on the map

supplied. If the deviation is realigned, it is recommended that this realignment be investigated by an archaeologist.

7.5 Quite a number of trees, such as marula (*Sclerocarya caffra*) and leadwood (*Combretum imberbe*) are growing close to the side of the road and will eventually be cut down. It is recommended that local craftspeople be given the opportunity to 'harvest' these trees. The softer woods are used in making craft articles such as bowls, milk pails, drums, etc. Harder wood is used for making mortars and pestles.

8. REFERENCES

8.1 Unpublished sources

8.1.1 Data base

Archaeological Data Recording Centre, National Museum and Art Gallery, Gaborone, Botswana.

8.1.2 Interviews

Dr N Walker - Department of Archaeology, National Museum, Gaborone, Botswana

8.2 Published sources

8.2.1 Books and journals

Acocks, J.P.H. 1975. **Veld Types of South Africa**. Memoirs of the Botanical Survey of South Africa, No. 40. Pretoria: Botanical Research Institute.

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8.2.2 Maps

1: 50 000 Topocadastral maps - 2425D2; 2425B4

9. PROJECT TEAM

J van Schalkwyk - project leader
S Smith

APPENDIX 1: STANDARDIZED SET OF CONVENTIONS USED TO ASSESS THE IMPACT OF PROJECTS ON CULTURAL RESOURCES

Significance of impact:

- low where the impact will not have an influence on or require to be significantly accommodated in the project design
- medium where the impact could have an influence which will require modification of the project design or alternative mitigation
- high where it would have a "no-go" implication on the project regardless of any mitigation

Certainty of prediction:

- Definite: More than 90% sure of a particular fact. Substantial supportive data to verify assessment
- Probable: Over 70% sure of a particular fact, or of the likelihood of that impact occurring
- Possible: Only over 40% sure of a particular fact, or of the likelihood of an impact occurring
- Unsure: Less than 40% sure of a particular fact, or the likelihood of an impact occurring

Status of the impact:

With mitigation and the resultant recovery of material, a negative impact can be turned positive. Describe whether the impact is positive (a benefit), negative (a cost) or neutral

Recommended management action:

For each impact, the recommended practically attainable mitigation actions which would result in a measurable reduction of the impact, must be identified. This is expressed according to the following:

- 1 = no further investigation necessary
- 2 = controlled sampling of the site necessary
- 3 = test excavation to determine if further work is necessary
- 4 = preserve site if possible, otherwise extensive salvage excavation necessary
- 5 = preserve site at all costs

Legal requirements:

Identify and list the specific legislation and permit requirements which potentially could be infringed upon by the proposed project, if mitigation is necessary

APPENDIX 2: SURVEY RESULTS

[See Appendix 1 for explanation of the conventions used in assessing of the cultural remains]

1. Site number: 2425B4/1

Description: An Iron Age site with potsherds, iron slag and (?) rudimentary stone walling. Very few potsherds are identifiable (ie. having decorations). However, they show characteristics that are compatible with Late Iron Age pottery. The site is very eroded.

Location: The site is located east of the road, roughly on the south western slope of a hill forming part of a low mountain range. 24° 21' 57.2" S; 25° 50' 25.9" E [UTM 382399; 7304771]

Discussion: Although some material was found on the western (down slope) side of the road, the site seems to be located on the eastern side of the road. The material is most probably washed down, across the road. It is doubtful if excavation will reveal much more information. The site is most probably linked to other settlements located much further from the road.

Significance of impact: Medium - no borrow pits can be made in this area without prior investigation.

Certainty of prediction: Definite

Status of impact: Neutral

Recommended management action: (1) - none necessary as the site is already fully documented.

2. Site number: 2425B4/2

Description: Small pieces of pottery showing Early Iron Age characteristics are found in places alongside the road.

Location: 24° 22' 46.5" S; 25° 50' 14.2" E [UTM 382082; 7303253]

Discussion: It is quite likely that this material is washed down from sites located higher up the slope, towards the east of the road.

Significance of impact: Medium - no borrow pits can be made in the area without prior investigation.

Certainty of prediction: Probable

Status of impact: Neutral

Recommended management action: (1) - none necessary as none of the potsherds can be said to be found on a primary site.

3. Site number: 2425B4/3

Description: A number of Middle Stone Age artifacts found on the bank of a stream, as well as in the stream bed.

Location: 24° 26' 02.7" S; 25° 52' 01.5" E [UTM 385154; 7297242]

Discussion: It is doubtful that this material is still in a primary context. Natural erosion and the fact that a borrow pit was made on the north western side of the bridge, must have disturbed most of this material out of context.

Significance of impact: Low

Certainty of prediction: Definite

Status of impact: Neutral

Recommended management action: (1) - none necessary as the site is already fully documented.

4. Site number: 2425B4/4

Description: A contemporary cemetery, containing approximately 50 graves.

Location: Situated west of the road, on the outskirts of Kopong - 24° 27' 55.1" S; 25° 53' 27.9" E [UTM 387615; 7293805]

Discussion: As this site is still in use, it is known to everybody and the chance of it being impacted upon by the development is very low.

Significance of impact: Low

Certainty of prediction: Definite

Status of impact: Neutral

Recommended management action: (1) - none necessary as the site is already fully documented.

APPENDIX 3: GLOSSARY AND ABBREVIATIONS

This section is included to give the reader some necessary background. It must be kept in mind, however, that these dates are all relative and serve only to give a very broad framework for interpretation.

STONE AGE

Early Stone Age (ESA) 2 000 000 - 150 000 Before Present

Middle Stone Age (MSA) 150 000 - 30 000 BP

Late Stone Age (LSA) 30 000 - until c. AD 200

IRON AGE

Early Iron Age (EIA) AD 200 - AD 1000

Late Iron Age (LIA) AD 1000 - AD 1830

HISTORICAL PERIOD

Since the arrival of the white settlers - c. AD 1830 in this part of the country