A SURVEY OF CULTURAL RESOURCES IN THE PROPOSED LESITELE DAM SITE, LETSITELE RIVER

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REPORT: 96KH11

Date of survey: September 1996 Date of report: September 1996

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SUMMARY

A survey of cultural resources in the proposed Lesitele Dam Site, Letsitele River

A survey to establish the nature, extent and significance of cultural resources was done in the proposed Letsitele Dam Site, Letsitele River, Northern Province.

No sites, objects or structures of archaeological, historical and cultural importance that would be impacted upon by the development of the dam to an extent that it would prevent the building of the dam, or require modification of the project design, were found within the area that was surveyed.

CONTENTS

A SURVEY OF CULTURAL RESOURCES IN THE PROPOSED LESITELE DAM SITE, LETSITELE RIVER

1. AIMS OF THE SURVEY

The National Cultural History Museum was requested by **Consultburo** to survey a section of the Letsitele River, located in Northern Province. The aim was to locate, identify, evaluate and document sites, objects and structures of archaeological, historical and cultural importance within the boundaries of the dam. The boundary of the area surveyed was taken as the maximum level of the dam, which is based on the 660 metre contour line.

2. TERMS OF REFERENCE

The **Terms of Reference** for this study are

2.1 Identify all sites, occurrences and structures of an archaeological or historical nature (cultural resources) located on the proposed dam site.
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.

3. CONDITIONS AND ASSUMPTIONS

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

- **Cultural resources** are taken to include all non-physical and physical human-made 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 values in relation to their

uniqueness, condition of preservation and research potential. It must be kept in mind that these 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 related to the content and context of that site. Those 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.

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.

4.1.2 Data sources
The **Archaeological Data Recording Centre** (ADRC), housed at the National Cultural History Museum in Pretoria, was consulted.

4.1.3 Other sources
The relevant topocadastral and other maps were studied.

4.2 Field survey

The next step was to visit the area to be surveyed. 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 dividing the whole area into blocks, making use of natural and human-made topographical elements. Within each block, all areas considered to have a 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.

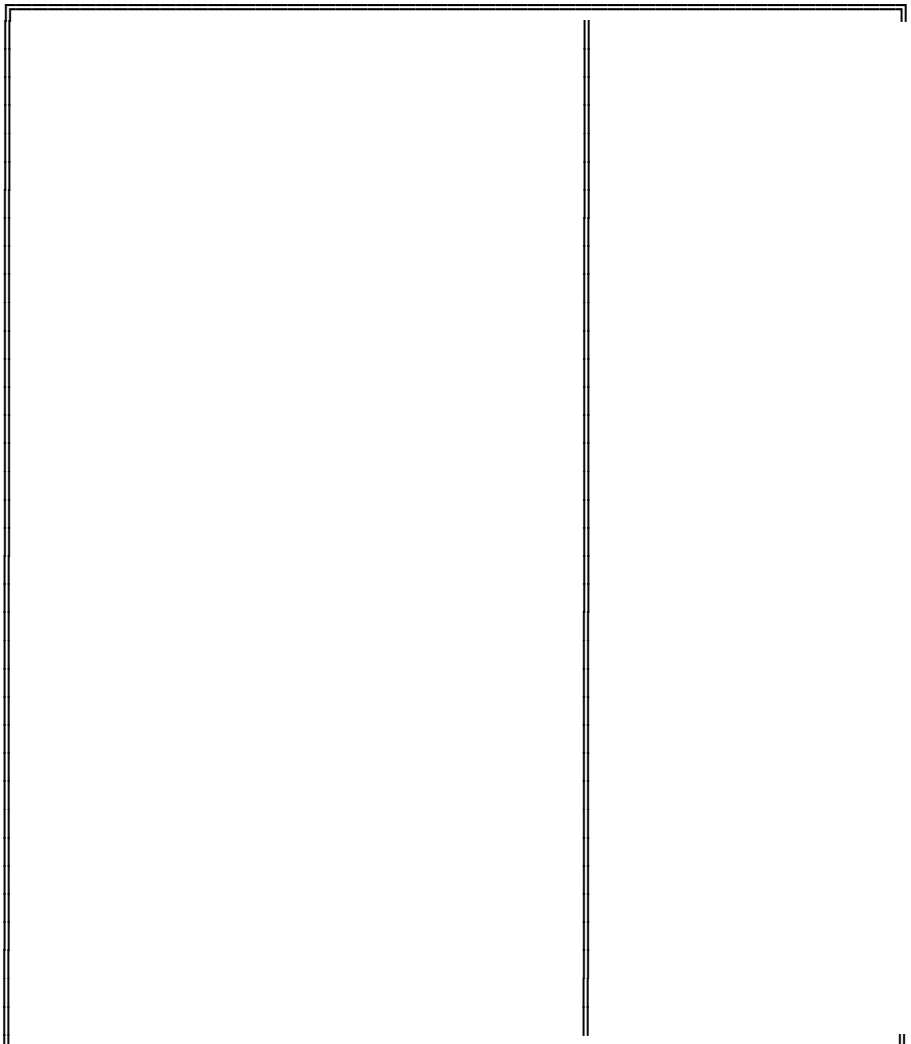

Figure 1: Map showing the location of the area investigated

4.3 Documentation

All sites, objects and structures identified were documented according to the general minimum standard accepted by the archaeological profession. The specific coordinates of the locality were determined by means of the Global Positioning System (GPS)[1] and plotted on a map. This information was added to the description 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 is taken. This presents an overview of human occupation and land use in the area to the reader and thus helps him/her to better understand and facilitate the potential impact of the development.

5. DESCRIPTION OF THE AREA SURVEYED

The area surveyed is located on the farms Coombe Bank 649LT, Tubb's Hill 650LT, Litswalo 642LT and Craighead 643LT, in the Letaba 1 district of Northern Province (see map in Fig. 1).

Two geological formations are found in the area. The largest of these belongs to the Novengilla Suite of the Rooiwater Complex of the Randium Erathem and consists of grabbo and magnetite. The second formation, found in the area of Litswalo 642LT, is a younger intrusive leucocratic biotite granite, belonging to the Vaalian Erathem.

The area falls on the border of two veld types: North-Eastern Mountain Sourveld and Lowveld Sour Bushveld. The North-Eastern Mountain Sourveld consists of remnants of tropical forests on the mountain slopes and in the valleys. The Lowveld Sour Bushveld forms, according to Acocks (1975:27-28), a transition between the Lowveld and the North-Eastern Mountain Sourveld. It is open parkland, with tall, well-formed trees well spaced in the tall grassveld. Belts of forest occur along the rivers.

6. DISCUSSION

In this section, the results of the survey are presented. A total of 2 sites have been identified and are discussed in Appendix 2 and summarized in Table 1.

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[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.

Table 1: Summary of impact description and assessment of the Letsitele dam site (see Appendix 2)

Site no.	Type of site	Significance of impact	Certainty of prediction	Status of impact	Recommended management action	Legal requirement
D2330CC01	Historic	Low	Definite	Negative	Relocation of graves	Dept of Health
D2330CC02	Stone Age	Low	Definite	Neutral	None	

6.1 Stone Age (Appendix 3)

A number of Early and Middle Stone Age tools were found. All of these are open surface finds (in contrast to stratified sites in shelters). In some cases the artifacts are disturbed completely out of context due to agricultural and road making activities or soil erosion. Most of the artifacts were made from quartz or quartzite.

No Stone Age sites of significance were found.

6. 2 Iron Age (Appendix 3)

No Iron Age site of significance was found in the area investigated. A few potsherds were found within the limits of the full capacity line of the dam. These were, however, too small and few in number to be of any significance. Furthermore, it is doubtful if Iron Age communities would have settled in the area. Though the definition might not have been known to these people, the concept of a floodline would be familiar to them. It is therefore doubtful that any Iron Age settlement would be found in the area to be directly impacted upon by the development of the dam.

6.3 Historic (Appendix 3)

Nothing could be found in the available literature on the recent history of the area, and no monuments are known to exist in the area.

Although a number of abandoned settlements were located, they were not plotted as they are of very recent origin.

A cemetery, containing approximately 20 graves, were located. This will have to be relocated if the development is to take place.

7. CONCLUSIONS AND RECOMMENDATIONS

Though a number of cultural resources that will be impacted upon by the development were located in the area, such as Stone Age tools and a cemetery, it is our viewpoint that there is nothing known at present that will prevent the building of the dam.

One should, however, keep the nature of archaeological sites in mind. Many of them are below ground level and will only be revealed once development, such as road construction, excavations, etc. takes place. It is therefore recommended that all personnel be briefed to be on the lookout for sites, features and objects of archaeological importance once such activities start to take place.

It is further recommended that, if the large trees are to be drowned by the water, local crafts people be given to opportunity to 'harvest' these trees before they drown.

8. REFERENCES

8.1 Unpublished sources

8.1.1 Data base:

Archaeological Data Recording Centre, (former) Tvl section, National Cultural History Museum, Pretoria.

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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71-83.
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Holm, S.E. 1966. Bibliography of South African Pre- and Protohistoric Archaeology. Pretoria: J.L. van Schaik.
Junod, H.A. 1927. The Life of a South African Tribe, Vol. I & II. London: MacMillan & Co.
Klapwijk, M. 1973. An Early Iron Age site near Tzaneen, N.E. Transvaal. South African Journal of Science 69:324.
Mason, R. 1962. Prehistory of the Transvaal. Johannesburg: Witwatersrand University Press.
Van Riet Lowe, C. n.d. The distribution of Prehistoric rock engravings and paintings in South Africa. Archaeolo

gical Survey, Archaeological Series No. 7.
Van Warmelo, N.J. 1977. Anthropology of Southern Africa in Periodicals to 1950. Pretoria: Government Printer.

8.2.2 Maps

1:50 000 Topocadastral map	- 2330CC
1:250 000 Geological map	- 2330 Tzaneen, 2430A Wolkberg
1:10 000 Ortho photographs	- 2330CC23, 2330CC24

9. PROJECT TEAM

J van Schalkwyk - project leader
S Moifatswane
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

Legal requirements:
Identify and list the specific legislation and permit requirements which potentially could be infringed upon by the proposed project

APPENDIX 2: SURVEY RESULTS

1. Site number: D2330CC01
Description: Cemetery consisting of approximately 21 graves, indicated by stone cairns and grave goods.
Location: Coombe Bank 649LT: 23°58'26.5" S; 30°10'25.3" E [X 2652453.657; Y 84107.616]
Discussion: These grave are still being visited by descendants of the people buried here. It is located next to the river and will be covered by the water if the dam is built.
Significance of impact: Low
Certainty of prediction: Definite
Status of impact: Negative
Recommended management action: These graves will have to be relocated. This is a matter of obtaining permission from descendants (directly), or advertising in the newspapers about the pending move. This must be followed by permission, probably from the Department of Health and the Premier of the Province. The work is usually undertaken by a professional firm of undertakers. The status of the impact is viewed as negative, as it will cost money for these actions to take place.

2. Site number: D2330CC02
Description: Some ESA - artifacts, cores and flakes - eroding out in small donga.
Location: Craighead 643LT: 23°58'48" S; 30°10'25" E [X 2653099.748; Y 84103.829]
Discussion: This site falls outside the expropriation line of the dam, but should be kept in mind if development takes place.
Significance of impact: Low
Certainty of prediction: Definite
Status of impact: Neutral
Recommended management action: None necessary as the site is already fully documented.

APPENDIX 3: GLOSSARY

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	1 500 000 - 150 000 Before Present
Middle Stone Age	150 000 - 30 000 BP
Late Stone Age	30 000 - until c. AD 200

IRON AGE

Early Iron Age	AD 200 - AD 1000
Late Iron Age	AD 1000 - AD 1830

HISTORICAL PERIOD

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