

**A SURVEY OF CULTURAL RESOURCES IN THE
SWAZILAND SECTION OF THE DRIEKOPPIESDAM**

For:

HUMAN SCIENCES RESEARCH COUNCIL

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REPORT: 96KH12

Date of survey: August 1996

Date of report: September 1996



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SUMMARY

A survey of cultural resources in the Swaziland section of the Driekoppies Dam

A survey to establish the nature, extent and significance of cultural resources was done in the Swaziland section of the Driekoppies Dam, located in the Lomati River, Mpumalanga 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.

A number of recommendations are put forward in Section 7 of this report.

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A SURVEY OF CULTURAL RESOURCES IN THE SWAZILAND SECTION OF THE DRIEKOPPIES DAM

1. AIMS OF THE SURVEY

The National Cultural History Museum was requested by the **Human Sciences Research Council** to survey the Swaziland section of the Driekoppies Dam, located in the Lomati River, Mpumalanga Province. The aim was to locate, identify, evaluate and document sites, objects and structures of archaeological, historical and cultural importance within the boundaries of this section of the dam. The boundary of the area surveyed was taken as the expropriation line, which is based on the 100 year flood 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.

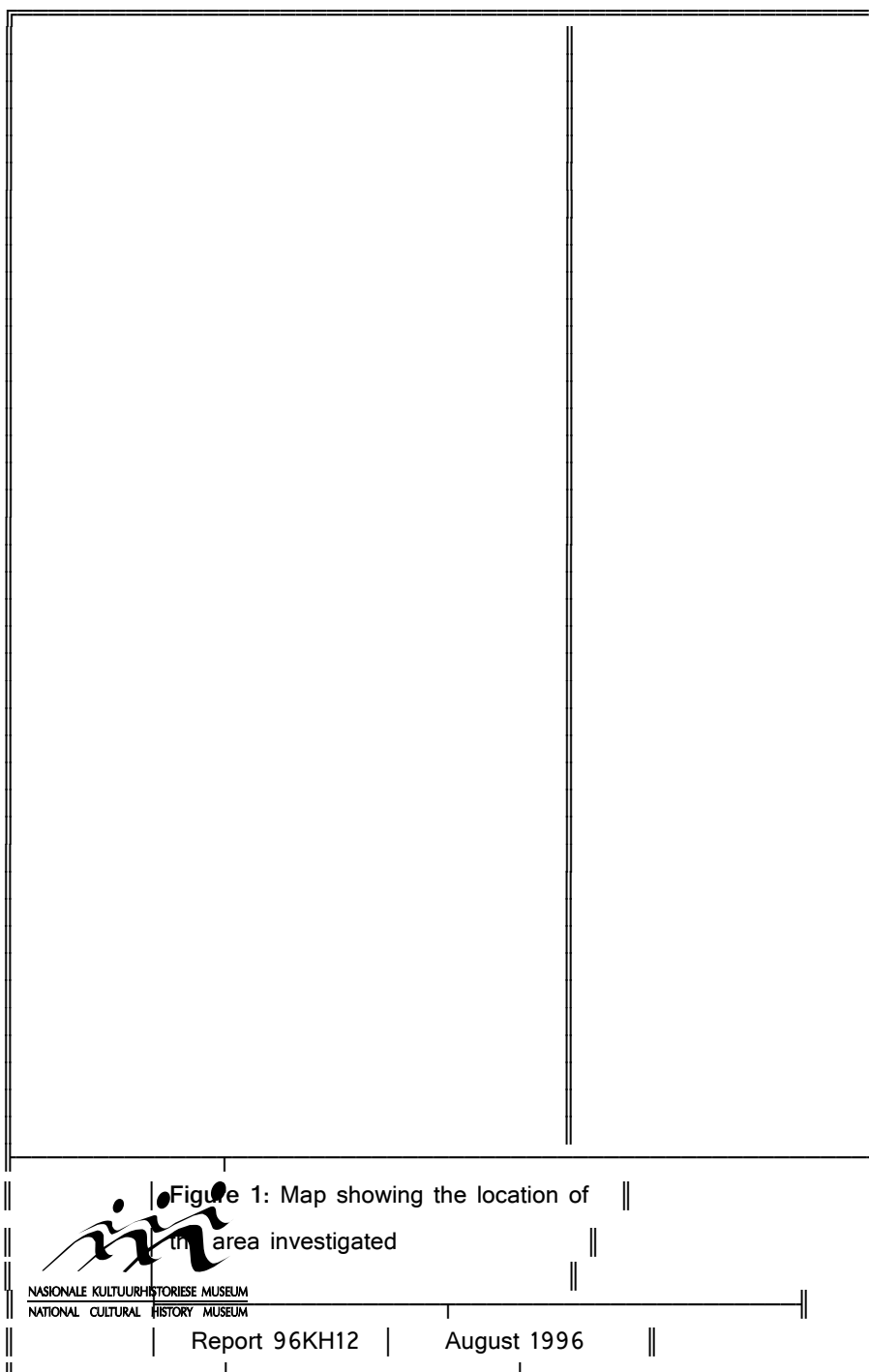
4.1.3 Other sources

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.

Two local field workers accompanied the archaeologist, assisting him as guides.



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 indicated in Figure 1. The vegetation of this area is classified by Acocks (1975:27-28) as Lowveld Sour Bushveld. This is transitional 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.

From a geological point of view, the area under investigation falls on the border between the Swaziland System and the Old Granite Basement. The former locally consists of the Jamestown Group (talcose, hornblendic and allied basic schists) and the Fig Tree Group (slates, graywacks, banded chert and banded iron stones and quartzites) of the Barberton Sequence. The Older Granites consists of granite, gneissic granite and allied rocks (Haughton 1969:39-62).

6. DISCUSSION

In this section, the results of the survey are presented. A total of 7 sites have been identified and are discussed in Appendix 2 and summarized in Table 1.

6.1 Stone Age (Appendix 4)

A number of sites with Early, Middle and Late Stone Age material, in the form

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 Swaziland section of Driekoppies Dam (see Appendix 2)

Site no.	Type of site	Significance of impact	Certainty of prediction	Status of impact	Recommended management action	Legal requirement
D2531CD03	Historic	Low	Definite	Neutral	None	
D2531CD04	Stone Age	Low	Probable	Neutral	None	
D2531CD05	Historic	Low	Definite	Negative	Relocation of graves	Health Dept
D2531CD06	Stone Age	Low	Probable	Neutral	None	
D2531CD07	Historic	Low	Definite	Negative	Relocation of graves	Health Dept
D2531CD08	Stone Age	Low	Probable	Neutral	None	
D2531CD09	Historic	Low	Definite	Negative	Relocation of graves	Health Dept

of tools, cores and flakes, were found. All of these sites are open surface sites (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, quartzite and chert. This latter material (probably deriving from the Fig Tree Group) is very hard and as a result is also very brittle, easily producing flakes and use patterns on the flakes under natural circumstances. This makes recognition of chert artifacts very difficult.

No Stone Age sites of significance were found.

6.2 Iron Age (Appendix 4)

No Iron Age site of significance was found in the area investigated. A few potsherds were found within the limits of the expropriation 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 4)

Although a number of settlements of recent origin were located, they were not plotted as they were already documented by the local field workers. On the other hand, a number of cemeteries, although also already known, were plotted as these are usually sensitive and emotive areas.

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.

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 number of cemeteries, it is our viewpoint that there is nothing known at present that will prevent the building of the dam.

If money is available, it is recommended that some of the Stone Age material be collected. This can be utilised in a number of ways, eg. at an information centre at the dam wall, or be made available to local schools in small information boxes. A permit from the Swaziland government will be most probably be necessary for this

collection to take place.

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 the opportunity to 'harvest' these trees before they drown.

8. REFERENCES

8.1 Unpublished sources

Archaeological Data Recording Centre (ADRC), (former) Transvaal section,

National
Cultural
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Museum,
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8.2 Published sources

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8.3 Maps

1:50 000 - 2531CD Shiyalongubo

9. PROJECT TEAM

J van Schalkwyk
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 an 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: D2531CD03

Description: Cemetery consisting of approximately 27 graves, indicated by stone cairns

Location: 25°45'48.7" S; 31°28'49.6" E [X 2850501.070; Y -48208.971]

Discussion: These graves have already been located and documented by the field workers

Significance of impact: Low

Certainty of prediction: Definite

Status of impact: Neutral

Recommended management action: The status of the impact is viewed as neutral, as this particular cemetery falls outside the expropriation line of the dam

2. Site number: D2531CD04

Description: MSA material, as indicated by tools, cores and flakes, eroding out in the road

Location: 25°45'54.7" S; 31°28'58.1" E [X 2850686.325; Y -48431.674]

Discussion: Most of the material here is not in primary context any more due to erosion taking place

Significance of impact: Low

Certainty of prediction: Probable

Status of impact: Neutral

Recommended management action: None necessary as the site is already fully documented. The specific site falls outside the area that will be impacted upon, and is listed here solely to indicate to what extent this type of material can be expected in the area

3. Site number: D2531CD05

Description: Cemetery consisting of approximately 16 graves, indicated by stone cairns

Location: 25°45'55.7" S; 31°29'07.0" E [X 2850718.212; Y -48681.900]

Discussion: These graves have already been located and documented by the field workers

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. 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.

4. Site number: D2531CD06

Description: MSA material, as indicated by tools, cores and flakes eroding out in a donga

Location: 25°47'27.9" S; 31°28'51.4" E [X 2853547.629; Y -48225.720]

Discussion: As with the other Stone Age site mentioned above, most of the material here is not in primary context any more due to the erosion taking place

Significance of impact: Low

Certainty of prediction: Probable

Status of impact: Neutral

Recommended management action: None necessary as the site is already fully documented. This site falls just outside the expropriation line of the dam

5. Site number: D2531CD07

Description: Cemetery consisting of approximately 17 graves, as indicated by stone cairns

Location: 25°46'29.9" S; 31°29'03.4" E [X 2851764.059; Y -48566.595]

Discussion: These graves have already been located and documented by the field workers

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. 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.

6. Site number: D2531CD08

Description: LSA material, as indicated by tools and flakes eroding out in the road

Location: 25°46'01.9" S; 31°29'14.5" E [X 2850903.668; Y -48904.142]

Discussion: As with the other Stone Age sites mentioned above, most of the material here is not in primary context any more due to the erosion taking place

Significance of impact: Low

Certainty of prediction: Probable

Status of impact: Neutral

Recommended management action: None necessary as the site is already fully documented.

7. Site number: D2531CD09

Description: Cemetery consisting of approximately 6 graves, as indicated by stone cairns

Location: 25°46'16.7" S; 31°28'56.3" E [X 2851363.304; Y -48373.015]

Discussion: These graves have already been located and documented by the field

workers

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. 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.

APPENDIX 3: ARCHAEOLOGICAL SITES IN A 25 KM RADIUS OF THE PROPOSED DRIEKOPPIES DAM SITE

The following is a list of known archaeological sites in the vicinity of the proposed development, but outside the area of investigation. It is based on information contained in the Archaeological Data Recording Centre (ADRC) housed at the National Cultural History Museum. It must be stated that this is based on incidental reporting, and that no systematic survey was ever conducted in the area. Other sites might also be contained in different data bases. This list serves as an indication of the frequency of archaeological sites in the area. Future land use patterns, eg. rerouting of roads or relocating of settlements that arise due to the proposed development, might therefore have an impact on unknown sites in the area.

0219: D2531CD1	- Swaziland: near Wildsdale Mine	- Stone Age: Late
0174: D2531CD2	- Swaziland: Lomati Bridge	- Stone Age: Early
0222 D25031DC1	- Swaziland: near Ntabinzimpisi	- Stone Age: Late
0175: D2531DA1	- Kamhlushwa: Vlakhult	- Stone Age: Undiff.
0176: D2531DA2	- Baberton: Lomati	- Stone Age: Early
0177: D2531DA3	- Kamhlushwa: Middelplaats	- Stone Age: Early
0459: D2531DA4	- Kamhlushwa: Middelplaats	- Stone Age: Late

APPENDIX 4: 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 white settlers - c. AD 1850 in this part of the country