

Appendix K: Specialist Report: Archaeology

Hazelmere Dam Raising Feasibility Study.

Archaeological Survey.

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DWAF Report No.: PBU300-0901

UW Report No.: U3/O2F/22

Date: January 2002.

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1. INTRODUCTION

The Institute for Cultural Resource Management (ICRM) was appointed by Umgeni Water to undertake an archaeological survey of the area that may be affected by the proposed raising of the Hazelmere Dam.

One archaeological site was recorded and one scatter of pottery sherds was noted. The original construction of the Hazelmere Dam has probably inundated other archaeological sites as is evident with the pottery scatter on the edges of the dam.

The archaeological site will require mitigation before the raising of the dam Full Supply Level (FSL). Department of Water Affairs and Forestry will need to apply to KwaZulu-Natal Heritage/Amafa aKwaZulu-Natali for a permit to damage the archaeological site⁹. The onus is on DWAF to obtain such a permit.

2. METHODOLOGY

The Natal Museum archaeology database was scanned for known archaeological sites within the affected area. No sites have been previously recorded in this area. However, there is a consistent pattern of Early Iron Age sites occurring river valleys (Maggs 1984; Whitelaw 1994).

The affected area was surveyed by foot, however the dense vegetation in places made some areas unsurveyable. To counter this, we surveyed along the tracks and paths on either side of the dense vegetation. The area to be affected by the new FSL was surveyed and is indicated in figure 1. The archaeological sites were recorded with a GPS **and** marked on the provided orthophoto.

The definition of an archaeological site, its significance, and how these are assessed requires explanation. These definitions determine the way in which the survey is undertaken and are important as they explain why sites are significant later on in the main text.

Small scatters of artefacts are usually not regarded as a site. Significance is generally determined by several factors. Each site is also assessed in terms of other sites in the specific region and to the broader regional context.

3. DEFINING SIGNIFICANCE

Archaeological sites vary according to significance and different criteria relate to each type of site. However, several criteria allow for a general significance assessment of archaeological sites.

These criteria are:

State of preservation of:

- Organic remains:

⁹ The permit application is specifically categorised as a 'damage permit', even if the FSL damage is flooding.

- Faunal
- Botanical
- Presence of a cultural deposit
- Features:
- Ash Features
- Graves
- Middens
- Cattle pens
- Houses/Structures

Spatial arrangements:

- Internal housing arrangements
- Intra-site settlement patterns
- Inter-site settlement patterns

Features of the site:

- Are there any unusual, unique or rare artifacts at the site?
- Is it a type-site?
- Does the site have a good example of a specific time period, feature, or artifact?

Research:

- Providing information on current research projects
- Salvaging information for potential future research projects

Inter- and intra-site variability

- Can this particular site yield information regarding intra-site variability, i.e. spatial relationships between various features and/or artifacts?
- Can this particular site yield information about a community's social relationships within itself, or between other communities?

Archaeological Experience:

- The personal experience and expertise of the CRM practitioner should not be ignored. Experience can indicate sites that have potentially significant aspects, but need to be tested prior to any conclusions.

Educational:

- The educational value of a site can only be fully determined after initial test-pit excavations and/or full excavations.
- Educational value is in terms of display at a Heritage institution or local site museum.

4. RESULTS

One archaeological site was recorded and one scatter of artefacts was recorded.

The artefact scatter occurs on the sand embankment between the existing FSL and grass verges of the dam just below the manager's office at the Hazelemere Reserve

(see Figure 1). This scatter consists of five pottery sherds and one upper grinding stone over a ± 40 m distance. The sherds belong to thin-walled vessels and probably date to the Late Iron Age or Historical Period. These sherds are too few to be defined as an archaeological site. However, they do indicate that sites probably existed in the area prior to the Hazelmere Dam.

The archaeological site (named HZM1) dates to the Mzonjani Phase of the Early Iron Age, although one Middle Stone Age flake was noted. The site occurs in a similar topographical location as other Early Iron Age sites in KwaZulu-Natal. The location is mainly in large river valleys, and nearby a main water source. The sites tend to be just above a main river and its flood plain, and on a relatively flat surface. No Early Iron Age sites have been previously recorded near the Mdloti River. HZM1 will be affected by the new FSL.

HZM1 extends for over 150m – a more precise size could not be ascertained, as the vegetation was too dense. The artefacts were observed in the dirt road cutting and in cleared areas just above the Mdloti River. These artefacts included many sherds, a few upper grinding stones and one fragment of a daga floor.

An archaeological deposit exists at the site and it appears that the artefacts are ± 30 –50 cm below the current surface.

The decorated sherds are defined as follows:

Lip:

Flat

Rim:

Everted

Diagonal incisions

Horizontal incisions

Band of alternating triangles

Neck-shoulder-body:

Hanging pendant motifs, including possible quadrilaterals

Significance

HZM1 is of medium archaeological significance and further mitigation is required. The site is significant in that it is the first recorded Early Iron Age site along the Mdloti River Valley. The pottery decorations may provide important comparisons for inter-site decorations. The Inanda Dam material and those excavated near Westbrook Beach and the Ohlanga River may yield information regarding ceramic stylistic differences, or similarities, between sites. A spatial component may also occur at the site, in terms of pits and cattle byres. The fragment of a daga floor fragment suggests that more may occur.

Although this site is of medium significance, it should not impede further development.

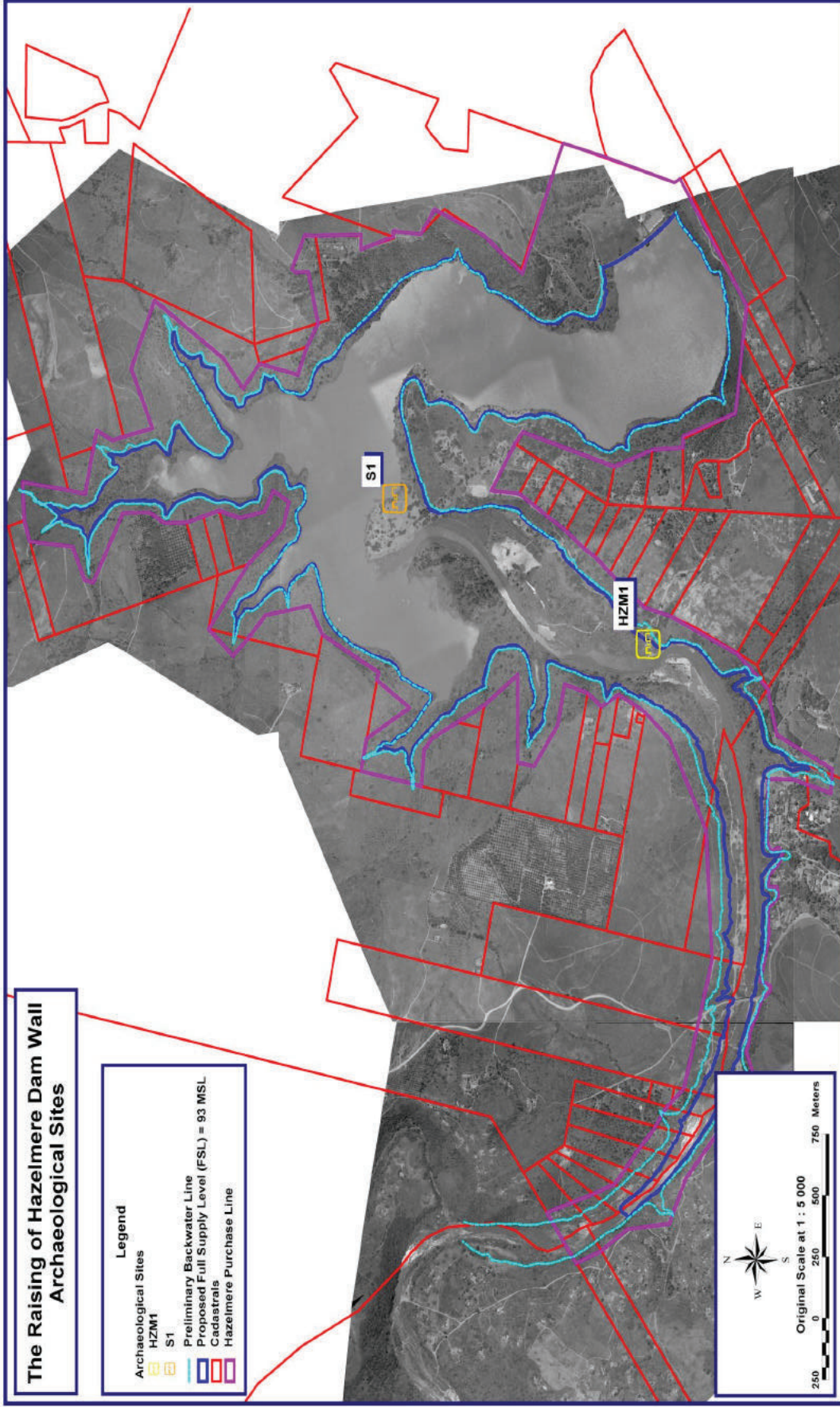


FIGURE 1: Map of Hazelmere Dam Archaeological Sites.

5. PROPOSED MITIGATION

Mitigation should be undertaken in a two phased approach. Phase 1 should limit itself to several small excavations to determine the full value of the site. These excavations may determine the full range of decorated ceramics, spatial component and possible preservation of organic remains (costs are given in Appendix A). If the first phase yields results that suggest further information may be obtained from the site, then further excavation will be required.

Phase 1 would occur over a five-day period and place excavation at various parts of the site. The primary aim of these excavations will be test the occurrence of a spatial component at the site and the range of ceramic decorations. From these limited excavations a more precise time schedule can be made should phase 2 be required.

The material from the excavations will be curated and stored at the Natal Museum for future research and display purposes.

I do not believe that the site is of such great importance that it should prevent the raising of the Hazelmere Dam. In this case, I argue for salvage excavations instead of restricting the development.

One criterion prior to excavations is that the vegetation surrounding the site needs to be cleared. At the moment the vegetation is extremely dense and would hinder the excavations of the site. The excavations need to determine the extent of the site which cannot be undertaken unless a general area is cleared. To determine the extent of the site, I would need to note areas of artefactual density, which in turn yields spatial information. Thus it would be more cost-effective (in terms of archaeological time and money) if the area of the site can be cleared prior to the excavations and new FSL. The archaeologist and DWAF will need to discuss this matter closer to the time of excavations.

6. CONCLUSION

The archaeological survey of the Hazelmere Dam located and recorded one archaeological site and a scatter of artefacts. The archaeological site is of medium significance and requires further mitigation. The occurrence of the archaeological site is not of such importance that it should be restrictive for the program to raise the water level in Hazelmere Dam.

7. REFERENCES

Maggs, T. 1984. Ndongodwane: a preliminary report on an Early Iron Age site on the lower Tugela River. *Annals of the Natal Museum* **26(1)**: 71-94.

Whitelaw, G. 1994. KwaGandaganda: settlement patterns in the Natal Early Iron Age. *Natal Museum Journal of Humanities* **6**: 1-64

APPENDIX A**ESTIMATED COSTS FOR PHASE 1 ARCHAEOLOGICAL EXCAVATIONS¹⁰**

Company: Umgeni Water
Contract name: Hazelmere Dam
Excavations

| Item | | No. | Total |
|-----------------------|--------------------------|------------|-----------------|
| Consultation | R200/hour | 40 | 8000.00 |
| Assistants | 1@R250/day;1@R150/day | 8 | 2000.00 |
| Labour | | | 850.00 |
| Report costs | (incl. copies and time) | 24 | 4950.00 |
| Minimal Analyses | R200/hour | 8 | 1600.00 |
| Admin. | | | 1000.00 |
| Transport | R2.29/km | 1000 | 2290.00 |
| Subsistence | R70/day/person | 5 | 2100.00 |
| Tolls | | | 20.00 |
| Accommodation | R450/night | 5 | 2250.00 |
| Curation of Materials | R130/box | 10 | 1300.00 |
| Photography | | | 200.00 |
| Equipment costs | R7/day | 5 | 35.00 |
| Subtotal | | | 26595.00 |
| VAT | | | 3723.30 |
| TOTAL | | | 30318.30 |

¹⁰ These costs are valid for 3 months from the date of the report.