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**HERITAGE IMPACT ASSESSMENT OF MASHASHANE DAM,  
POLOKWANE,  
LIMPOPO PROVINCE, SOUTH AFRICA**



Assessment and report by



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### **Management summary**

eThembeni Cultural Heritage was appointed by Cave Klapwijk & Associates to undertake a heritage impact assessment of proposed upgrades to the Mashashane Dam in Limpopo Province, in terms of the South African Heritage Resources Management Act No 25 of 1999. Two eThembeni staff members visited the proposed upgrade site on 4 October 2006 and completed a controlled-exclusive surface survey, as well as a database and literature search.

We identified no heritage resources of significance within the proposed upgrade area.

The landscape consists of the residences of Mashashane village, with extensive areas used for livestock grazing. It will not be affected negatively by the proposed dam upgrade, which is limited in scope and impact.

We recommend that this project may proceed with no further heritage resource mitigation and have submitted this report to the South African Heritage Resources Agency in fulfilment of Section 38(3) of the South African Heritage Resources Management Act. The client may contact Mary Leslie at SAHRA's Cape Town office (telephone 021 462 4502) in due course to ascertain their decision.

If permission is granted for the development to proceed, the client is reminded that the Act requires that a developer cease all work immediately and notify the South African Heritage Resources Agency should any heritage resources, as defined in the Act, be discovered during the course of development activities.

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## Introduction and legislation

eThembeni Cultural Heritage was appointed by Cave Klapwijk & Associates to undertake a heritage impact assessment of the area affected by a proposed dam upgrade in Limpopo Province, in terms of the South African Heritage Resources Management Act No 25 of 1999.

Section 38(1) of the Act requires a heritage impact assessment in case of:

- (a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
- (b) the construction of a bridge or similar structure exceeding 50 m in length;
- (c) any development or other activity which will change the character of a site –
  - (i) exceeding 5 000 m<sup>2</sup> in extent; or
  - (ii) involving three or more existing erven or subdivisions thereof; or
  - (iii) involving three or more erven or subdivisions thereof which have been consolidated within the past five years; or
- (d) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
- (e) the re-zoning of a site exceeding 10 000m<sup>2</sup> in extent; or
- (f) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority.

A heritage impact assessment is not limited to archaeological artefacts, historical buildings and graves. It is far more encompassing and includes intangible and invisible resources such as places, oral traditions and rituals. The Act defines a heritage resource as any place or object of cultural significance i.e. of aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. This includes the following wide range of places and objects:

- (a) places, buildings, structures and equipment;
- (b) places to which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and palaeontological sites;
- (g) graves and burial grounds, including -
  - (i) ancestral graves,
  - (ii) royal graves and graves of traditional leaders,
  - (iii) graves of victims of conflict,
  - (iv) graves of important individuals,
  - (v) historical graves and cemeteries older than 60 years, and
  - (vi) other human remains which are not covered under the Human Tissues Act, 1983 (Act No.65 of 1983 as amended);
- (h) sites of significance relating to the history of slavery in South Africa;
- (i) movable objects, including -
  - (i) objects recovered from the soil or waters of South Africa including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
  - (ii) ethnographic art and objects;
  - (iii) military objects;
  - (iv) objects of decorative art;
  - (v) objects of fine art;
  - (vi) objects of scientific or technological interest;
  - (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings; and
  - (viii) any other prescribed categories, but excluding any object made by a living person.

Other sections of the Act with relevance are:

### **Structures**

**34** (1) No person may alter or demolish any structure or part of a structure which is older than sixty years without a permit issued by the relevant provincial heritage resources authority.

(2) Within three months of the refusal of the provincial heritage authority to issue a permit, consideration must be given to the protection of the place concerned in terms of one of the formal designations provided for in Part 1 of this Chapter.

(3) The provincial heritage resources authority may at its discretion, by notice in the Provincial Gazette, make an exemption from the requirements of subsection (1) within a defined geographical area, or for certain defined categories of site within a defined geographical area, provided that it is satisfied that heritage resources falling into the defined area or category have been identified and are adequately provided for in terms of the provisions of Part 1 of this Chapter.

(4) Should the provincial heritage resources authority believe it to be necessary it may, following a three-month notice period published in the Provincial Gazette, withdraw or amend a notice under subsection (3).

### **Definitions**

**2** (xxxii) “place” includes –

- (a) a site, area or region;
- (b) a building or other structure which may include equipment, furniture, fittings and articles associated with or connected with such building or other structure;
- (c) a group of buildings or other structures which may include equipment, furniture, fittings and articles associated with or connected with such group of buildings or other structures;
- (d) an open space, including a public square, street or park; and
- (e) in relation to the management of a place, includes the immediate surroundings of a place.

The South African Heritage Resources Agency (SAHRA) has no specific guidelines for the management of places at present, but advises heritage practitioners to refer to various sections of the Act to guide management recommendations:

### **Preamble**

This legislation aims to promote good management of the national estate, and to enable and encourage communities to nurture and conserve their legacy so that it may be bequeathed to future generations. Our heritage is unique and precious and it cannot be renewed. It helps us to define our cultural identity and therefore lies at the heart of our spiritual well-being and has the power to build our nation. It has the potential to affirm our diverse cultures, and in doing so shape our national character.

Our heritage celebrates our achievements and contributes to redressing past inequities. It educates, it deepens our understanding of society and encourages us to empathise with the experience of others. It facilitates healing and material and symbolic restitution and it promotes new and previously neglected research into our rich oral traditions and customs.

### **General principles for heritage resources management**

**5** (1) All authorities, bodies and persons performing functions and exercising powers in terms of this Act for the management of heritage resources must recognise the following principles:

- (a) heritage resources have lasting value in their own right and provide evidence of the origins of South African society and as they are valuable, finite, non-renewable and irreplaceable they must be carefully managed to ensure their survival;
- (b) every generation has a moral responsibility to act as trustee of the national heritage for succeeding generations and the State has an obligation to manage heritage resources in the interests of all South Africans;
- (c) heritage resources have the capacity to promote reconciliation, understanding and respect, and contribute to the development of a unifying South African identity; and
- (d) heritage resources management must guard against the use of heritage for sectarian purposes or political gain.

(4) Heritage resources form an important part of the history and beliefs of communities and must be managed in a way that acknowledges the right of affected communities to be consulted and to participate in their management.

(5) Heritage resources contribute significantly to research, education and tourism and they must be developed and presented for these purposes in a way that ensures dignity and respect for cultural values.

(6) Policy, administrative practice and legislation must promote the integration of heritage resources conservation in urban and rural planning and social and economic development.

- (7) The identification, assessment and management of the heritage resources of South Africa must –
- (a) take account of all relevant cultural values and indigenous knowledge systems;
  - (b) take account of material or cultural heritage values and involve the least possible alteration or loss of it;
  - (c) promote the use and enjoyment of and access to heritage resources, in a way consistent with their cultural significance and conservation needs;
  - (d) contribute to social and economic development;
  - (e) safeguard the options of present and future generations; and
  - (f) be fully researched, documented and recorded.

### **Nature and description of proposed activity**

Mashashane Dam is a Category II dam that consists of an earth embankment with an uncontrolled by-wash spillway. The Department of Water Affairs and Forestry has determined that this dam requires the following upgrades:

- Complete a hydrological (flood) investigation and report;
- Conduct a formal geological investigation (with separate report);
- If necessary, upgrade flood-handling capacity;
- Address erosion (benching) of upstream slope, with provision of suitable protection against future erosion;
- Investigate and refurbish outlet works, if necessary;
- Update operation and maintenance manual, if required;
- Compile an emergency preparedness plan.

## Site description and environmental issues

Mashashane Dam is located approximately 40 kilometres southeast of Polokwane in Limpopo Province, at S23° 54' 46"; E29° 09' 36". Road access from Polokwane is along the road to Ga-Mashashane / Percy Fyfe. At the T-junction turn right and continue over the crossroads into Utjane village. Follow the tracks through the village to the dam.

Soils are sandy erodible soils on granite and gneiss. Vegetation is bushveld on granite soils that have suffered overgrazing and timber removal for fire. Surrounding land use is grazing for the livestock of Mashashane village.

## Methodology

Two eThembeni staff members inspected the area on 4 October 2006. Soil surface visibility was good and we completed a controlled-exclusive surface survey, where 'sufficient information exists on an area to make solid and defensible assumptions and judgements about where [heritage resource] sites may and may not be' and 'an inspection of the surface of the ground, wherever this surface is visible, is made, with no substantial attempt to clear brush, turf, deadfall, leaves or other material that may cover the surface and with no attempt to look beneath the surface beyond the inspection of rodent burrows, cut banks and other exposures that are observed by accident' (King 1978).

No excavations or sampling were undertaken, since a permit from the South African Heritage Resources Agency is required to disturb a heritage resource. We assessed the value and significance of heritage resources, as defined in the South African Heritage Resources Management Act of 1999 and the criteria contained in Appendix A. Culturally significant landscapes were assessed according to the criteria in Appendix B.

The client has provided maps of the area, which we have submitted to SAHRA as hard copies. We consulted various provincial databases, including historical, archaeological and geological sources and undertook a limited literature review. However, we presented that information to SAHRA as part of a desktop study dated 10 April 2006 and have not reproduced it here.

Geographic coordinates were obtained with a handheld Garmin GPS72 global positioning unit. Photographs were taken with a Hulett Packard digital camera and submitted to SAHRA on a compact disc.

## Observations and recommendations

No construction activities associated with the proposed project had begun prior to our visit, in accordance with provincial heritage legislation.

⇒ [Places, buildings, structures and equipment](#)

None will be affected.

⇒ [Places to which oral traditions are attached or which are associated with living heritage](#)

The granite boulder koppie adjacent to the dam is a sacred place; it is likely that other areas around the dam are associated with oral traditions. However, these places will not be affected negatively by the proposed dam upgrade, which is limited in scope and impact.

⇒ [Historical settlements and townscapes](#)

None will be affected.

⇒ [Landscapes and natural features](#)

The landscape consists of the residences of Mashashane village, with extensive areas used for livestock grazing. It will not be affected negatively by the proposed dam upgrade, which is limited in scope and impact.

⇒ [Geological sites of scientific or cultural importance](#)

None will be affected.

⇒ [Archaeological and palaeontological sites](#)

None will be affected.

⇒ [Graves and burial grounds](#)

None will be affected.

⇒ [Sites of significance relating to the history of slavery in South Africa](#)

None will be affected.

⇒ [Movable objects excluding any object made by a living person](#)

None will be affected.

**Summary of findings in terms of the South African Heritage Resources Management Act of 1999  
Section 38(3)**

**(a) the identification and mapping of all heritage resources in the area affected**

None.

**(b) an assessment of the significance of such resources in terms of the heritage assessment criteria set out in regulations**

Not applicable.

**(c) an assessment of the impact of development on such heritage resources**

Not applicable.

**(d) an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development**

Not applicable.

**(e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources**

The client has undertaken such consultation in terms of statutory requirements and retains the relevant documentation.

**(f) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives**

Not applicable.

**(g) plans for mitigation of any adverse effects during and after completion of the proposed development**

If permission is granted for the development to proceed, the client is reminded that the Act requires that a developer cease all work immediately and notify SAHRA should any heritage resources, as defined in the Act, be discovered during the course of development activities.

**Conclusion**

We recommend that this project may proceed with no further heritage resource mitigation and have submitted this report to the South African Heritage Resources Agency in fulfilment of Section 38(3) of the South African Heritage Resources Management Act. According to Section 38(4) of the Act:

The report must be considered timeously by the responsible heritage resources authority which must, after consultation with the person proposing the development, decide—

- (a) whether or not the development may proceed;
- (b) any limitations or conditions to be applied to the development;
- (c) what general protections in terms of this Act apply, and what formal protections may be applied, to such heritage resources;
- (d) whether compensatory action is required in respect of any heritage resources damaged or destroyed as a result of the development; and
- (e) whether the appointment of specialists is required as a condition of approval of the proposal.

The client may contact Mary Leslie at SAHRA's Cape Town office (telephone 021 462 4502) in due course to ascertain their decision.

## **Reference**

King, T. F. 1989. The archaeological survey: methods and uses. Quoted in Canter, L. W. 1996. Environmental impact assessment. Second Edition. New York: McGraw-Hill, Inc.

## APPENDIX A

### SIGNIFICANCE AND VALUE OF HERITAGE RESOURCE SITES

The following guidelines for determining site significance were developed by the South African Heritage Resources Agency in 2003. We use them in conjunction with tables of our own formulation when considering intrinsic site significance and significance relative to development activities, as well as when recommending mitigatory action.

#### Type of Resource

Place

Structure

Archaeological Site

Palaeontological Site

Geological Feature

Grave

#### Type of Significance

##### 1. Historical Value

It is important in the community, or pattern of history

- Importance in the evolution of cultural landscapes and settlement patterns
- Importance in exhibiting density, richness or diversity of cultural features illustrating the human occupation and evolution of the nation, Province, region or locality.
- Importance for association with events, developments or cultural phases that have had a significant role in the human occupation and evolution of the nation, Province, region or community.
- Importance as an example for technical, creative, design or artistic excellence, innovation or achievement in a particular period

It has strong or special association with the life or work of a person, group or organisation of importance in history

- Importance for close associations with individuals, groups or organisations whose life, works or activities have been significant within the history of the nation, Province, region or community.

It has significance relating to the history of slavery

- Importance for a direct link to the history of slavery in South Africa.

##### 2. Aesthetic Value

It is important in exhibiting particular aesthetic characteristics valued by a community or cultural group

- Importance to a community for aesthetic characteristics held in high esteem or otherwise valued by the community.
- Importance for its creative, design or artistic excellence, innovation or achievement.
- Importance for its contribution to the aesthetic values of the setting demonstrated by a landmark quality or having impact on important vistas or otherwise contributing to the identified aesthetic qualities of the cultural environs or the natural landscape within which it is located.
- In the case of an historic precinct, importance for the aesthetic character created by the individual components which collectively form a significant streetscape, townscape or cultural environment.

##### 3. Scientific Value

It has potential to yield information that will contribute to an understanding of natural or cultural heritage

- Importance for information contributing to a wider understanding of natural or cultural history by virtue of its use as a research site, teaching site, type locality, reference or benchmark site.
- Importance for information contributing to a wider understanding of the origin of the universe or of the development of the earth.
- Importance for information contributing to a wider understanding of the origin of life; the development of plant or animal species, or the biological or cultural development of hominid or human species.
- Importance for its potential to yield information contributing to a wider understanding of the history of human occupation of the nation, Province, region or locality.

It is important in demonstrating a high degree of creative or technical achievement at a particular period  
 - Importance for its technical innovation or achievement.

4. Social Value

It has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons

- Importance as a place highly valued by a community or cultural group for reasons of social, cultural, religious, spiritual, symbolic, aesthetic or educational associations.
- Importance in contributing to a community's sense of place.

Degrees of Significance  
 Rarity

It possesses uncommon, rare or endangered aspects of natural or cultural heritage  
 - Importance for rare, endangered or uncommon structures, landscapes or phenomena.

Representivity

It is important in demonstrating the principal characteristics of a particular class of natural or cultural places or objects

Importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as being characteristic of its class.

Importance in demonstrating the principal characteristics of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, Province, region or locality.

Sphere of Significance	High	Medium	Low
International	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provincial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Regional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specific Community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What other similar sites may be compared to this site?

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**Southern African Iron Age**

	Significance		
	- low	- medium	- high
Unique or type site			Yes
Formal protection			Yes
Spatial patterning	?Yes	?Yes	?Yes
Degree of disturbance	75 – 100%	25 – 74%	0 – 24%
Organic remains (list types)	0 – 5 / m <sup>2</sup>	6 – 10 / m <sup>2</sup>	11 + / m <sup>2</sup>
Inorganic remains (list types)	0 – 5 / m <sup>2</sup>	6 – 10 / m <sup>2</sup>	11 + / m <sup>2</sup>
Ancestral graves			Present
Horizontal extent of site	< 100m <sup>2</sup>	101 – 1000m <sup>2</sup>	1000 + m <sup>2</sup>
Depth of deposit	< 20cm	21 – 50cm	51 + cm
Spiritual association			Yes
Oral history association			Yes
➤ Research potential			High
➤ Educational potential			High

Please note that this table is a tool to be used by qualified cultural heritage managers who are also experienced site assessors.

## APPENDIX B

The American National Parks Services sets out various criteria for the identification and management of cultural landscapes:

'Cultural landscapes are complex resources that range from large rural tracts covering several thousand acres to formal gardens of less than an acre. Natural features such as landforms, soils and vegetation are not only part of the cultural landscape, they provide the framework within which it evolves. In the broadest sense, a cultural landscape is a reflection of human adaptation and use of settlement, land use, systems of circulation and the natural resources and is often expressed in the way land is organised and divided, patterns of types of structures that are built. The character of a cultural landscape is defined both by physical materials, such as roads, buildings, walls and vegetation, and by use reflecting cultural values and traditions.

'Identifying the character-defining features in a landscape and understanding them in relation to each other and to significant historic events, trends and persons allows us to read the landscape as a cultural resource. In many cases, these features are dynamic and change over time. In many cases, too, historical significance may be ascribed to more than one period in a landscape's physical and cultural evolution.

'Cultural landscape management involves identifying the type and degree of change that can occur while maintaining the character-defining features. The identification and management of an appropriate level of change in a cultural landscape is closely related to its significance. In a landscape significant for its association with a specific style, individual, trend or event, change may diminish its integrity and needs to be carefully monitored and controlled. In a landscape significant for the pattern of use that has evolved, physical change may be essential to the continuation of the use. In the latter case, the focus should be on perpetuating the use while maintaining the general character and feeling of the historic period(s), rather than on preserving a specific appearance.

'A cultural landscape is a geographic area, including both natural and cultural resources, associated with a historic event, activity or person. The National Park Services recognises four cultural landscape categories: historic designed landscapes, historic vernacular landscapes, historic sites and ethnographic landscapes. These categories are helpful in distinguishing the values that make landscapes cultural resources and in determining how they should be treated, managed and interpreted...

'The four cultural landscape categories are not mutually exclusive. A landscape may be associated with a significant event, include designed or vernacular characteristics and be significant to a specific cultural group.'