

**Cultural heritage scoping assessment for the
DEVELOPMENT OF SIX DAMS IN THE WATERKLOOF RIDGE NATURE RESERVE,
WATERKLOOF RIDGE, PRETORIA**

CULTURAL HERITAGE SCOPING ASSESSMENT FOR THE DEVELOPMENT OF SIX DAMS IN THE WATERKLOOF RIDGE NATURE RESERVE, WATERKLOOF RIDGE, PRETORIA

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Prepared for:

Interdesign Landscape Architects
Project Manager: Ms T Ntshingila

Postal Address: P O Box 74648, Lynnwood Ridge, 0040
Tel: 012 348 1922
Fax: 012 3487154
E-mail: thuledu@ilaweb.co.za

Prepared by:

J van Schalkwyk (D Litt et Phil), Heritage Consultant
ASAPA Registration No.: 168
Principal Investigator: Iron Age, Colonial Period, Industrial Heritage

Postal Address: 62 Coetzer Avenue, Monument Park, 0181
Mobile: 076 790 6777
Fax: 012 347 7270
E-mail: jvschalkwyk@mweb.co.za

Declaration:

I, J.A. van Schalkwyk, declare that I do not have any financial or personal interest in the proposed development, nor its developers or any of their subsidiaries, apart from the provision of heritage assessment and management services.



J A van Schalkwyk (D Litt et Phil)
Heritage Consultant
March 2014

EXECUTIVE SUMMARY

CULTURAL HERITAGE SCOPING ASSESSMENT FOR THE DEVELOPMENT OF SIX DAMS IN THE WATERKLOOF RIDGE NATURE RESERVE, WATERKLOOF RIDGE, PRETORIA

It is proposed to establish six small dams (ponds) in the Waterkloofspruit in the Waterkloof Ridge Nature Reserve in Pretoria.

An independent heritage consultant was appointed by **Interdesign Landscape Architects** to conduct a Heritage Scoping Assessment to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where it is planned to develop the six dams.

The cultural landscape qualities of the larger region essentially consist of a single component, which is a rural area in which the human occupation is made up of a pre-colonial (Stone Age and Iron Age) and a much later colonial (farmer) component.

- As no sites, features or objects of cultural heritage significance have been identified in the study area, there would be no impact as a result of the proposed development.

Therefore, from a heritage point of view we recommend that the proposed development can continue, on condition of acceptance of the above mitigation measures. We request that if archaeological sites or graves are exposed during construction work, it should immediately be reported to a heritage consultant so that an investigation and evaluation of the finds can be made.



J A van Schalkwyk
Heritage Consultant
March 2014

TECHNICAL SUMMARY

Property details	
Province	Gauteng
Magisterial district	Pretoria
District municipality	City of Tshwane
Topo-cadastral map	2528CC, 2528CD
Closest town	Pretoria
Farm name & no.	Waterkloof 378JR

Development criteria in terms of Section 38(1) of the NHR Act	Yes/No
Construction of road, wall, power line, pipeline, canal or other linear form of development or barrier exceeding 300m in length	No
Construction of bridge or similar structure exceeding 50m in length	No
Development exceeding 5000 sq m	Yes
Development involving three or more existing erven or subdivisions	No
Development involving three or more erven or divisions that have been consolidated within past five years	No
Rezoning of site exceeding 10 000 sq m	No
Any other development category, public open space, squares, parks, recreation grounds	No

Development	
Description	Development of six small dams
Project name	Waterkloof Ridge Nature Valley Dams

Land use	
Previous land use	Farming (grazing/agricultural fields)
Current land use	Vacant

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GLOSSARY OF TERMS AND ABBREVIATIONS

TERMS

Study area: Refers to the entire study area as indicated by the client in the accompanying Fig. 1 & 2.

Stone Age: The first and longest part of human history is the Stone Age, which began with the appearance of early humans between 3-2 million years ago. Stone Age people were hunters, gatherers and scavengers who did not live in permanently settled communities. Their stone tools preserve well and are found in most places in South Africa and elsewhere.

Early Stone Age	2 000 000 - 150 000 Before Present
Middle Stone Age	150 000 - 30 000 BP
Late Stone Age	30 000 - until c. AD 200

Iron Age: Period covering the last 1800 years, when new people brought a new way of life to southern Africa. They established settled villages, cultivated domestic crops such as sorghum, millet and beans, and they herded cattle as well as sheep and goats. As they produced their own iron tools, archaeologists call this the Iron Age.

Early Iron Age	AD 200 - AD 900
Middle Iron Age	AD 900 - AD 1300
Late Iron Age	AD 1300 - AD 1830

Historical Period: Since the arrival of the white settlers - c. AD 1840 - in this part of the country

ABBREVIATIONS

ADRC	Archaeological Data Recording Centre
ASAPA	Association of Southern African Professional Archaeologists
BP	Before Present
CS-G	Chief Surveyor-General
EIA	Early Iron Age
ESA	Early Stone Age
LIA	Late Iron Age
LSA	Later Stone Age
HIA	Heritage Impact Assessment
MSA	Middle Stone Age
NASA	National Archives of South Africa
NHRA	National Heritage Resources Act
PHRA	Provincial Heritage Resources Agency
SAHRA	South African Heritage Resources Agency

CULTURAL HERITAGE SCOPING ASSESSMENT FOR THE DEVELOPMENT OF SIX DAMS IN THE WATERKLOOF RIDGE NATURE RESERVE, WATERKLOOF RIDGE, PRETORIA

1. INTRODUCTION

It is proposed to establish six small dams (ponds) in the Waterkloofspruit in the Waterkloof Ridge Nature Reserve in Pretoria.

South Africa's heritage resources, also described as the 'national estate', comprise a wide range of sites, features, objects and beliefs. According to Section 27(18) of the National Heritage Resources Act (NHRA), Act 25 of 1999, no person may destroy, damage, deface, excavate, alter, remove from its original position, subdivide or change the planning status of any heritage site without a permit issued by the heritage resources authority responsible for the protection of such site.

An independent heritage consultant was appointed by **Interdesign Landscape Architects** to conduct a Heritage Scoping Assessment to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where it is planned to develop the six dams.

2. TERMS OF REFERENCE

This report does not deal with development projects outside of or even adjacent to the study area as is presented in Section 5 of this report. The same holds true for heritage sites, except in a generalised sense where it is used to create an overview of the heritage potential in the larger region.

2.1 Scope of work

The aim of this scoping study, broadly speaking, is to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where it is planned to develop the six dams.

The scope of work for this study consisted of:

- Conducting of a desk-top investigation of the area, in which all available literature, reports, databases and maps were studied.

The objectives were to

- Identify possible archaeological, cultural and historic sites within the proposed development area;
- Evaluate the potential impacts of construction, operation and maintenance of the proposed development on archaeological, cultural and historical resources;

- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural or historical importance.

3. HERITAGE RESOURCES

3.1 The National Estate

The NHRA (No. 25 of 1999) defines the heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations that must be considered part of the national estate to include:

- places, buildings, structures and equipment of cultural significance;
- places to which oral traditions are attached or which are associated with living heritage;
- historical settlements and townscapes;
- landscapes and natural features of cultural significance;
- geological sites of scientific or cultural importance;
- archaeological and palaeontological sites;
- graves and burial grounds, including-
 - ancestral graves;
 - royal graves and graves of traditional leaders;
 - graves of victims of conflict;
 - graves of individuals designated by the Minister by notice in the Gazette;
 - historical graves and cemeteries; and
 - other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
- sites of significance relating to the history of slavery in South Africa;
- movable objects, including-
 - objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
 - objects to which oral traditions are attached or which are associated with living heritage;
 - ethnographic art and objects;
 - military objects;
 - objects of decorative or fine art;
 - objects of scientific or technological interest; and
 - books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).

3.2 Cultural significance

In the NHRA, Section 2 (vi), it is stated that “cultural significance” means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. This is determined in relation to a site or feature’s uniqueness, condition of preservation and research potential.

According to Section 3(3) of the NHRA, a place or object is to be considered part of the national estate if it has cultural significance or other special value because of

- its importance in the community, or pattern of South Africa's history;

- its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- sites of significance relating to the history of slavery in South Africa.

A matrix was developed whereby the above criteria were applied for the determination of the significance of each identified site (see Appendix 1). This allowed some form of control over the application of similar values for similar identified sites.

4. STUDY APPROACH AND METHODOLOGY

4.1 Extent of the Study

This survey and impact assessment covers the area as presented in Section 5 and as illustrated in Figures 2 & 4.

4.2 Methodology

4.2.1 Preliminary investigation

4.2.1.1 Survey of the literature

A survey of the 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, historical sources and heritage impact assessment reports were consulted – see the list of reference in Section 8 below.

- Information on events, sites and features in the larger region were obtained from these sources.

4.2.1.2 Data bases

The *Heritage Atlas Database*, the *Environmental Potential Atlas*, the *Chief Surveyor General (CS-G)* and the *National Archives of South Africa (NASA)* were consulted.

- Database surveys produced a number of sites located in the larger region of the proposed development.

4.2.1.3 Other sources

Aerial photographs and topocadastral and other maps were also studied - see the list of references below.

- Information of a very general nature was obtained from these sources.

5. DESCRIPTION OF THE AFFECTED ENVIRONMENT

5.1 Site location and description

The development site is located in the Waterkloofspruit in the Waterkloof Ridge Nature Reserve in Pretoria. It is situated east and north of the M9 and the N1 motorway and run all the way north towards Club Avenue. For more information, please see the Technical Summary presented above (p. iii).

The geology is made up of quartzite and the original vegetation is classified as Rocky Highveld Grassland. All of this has changed due to urbanization and the vegetation has being replaced by stands of Black Wattle.

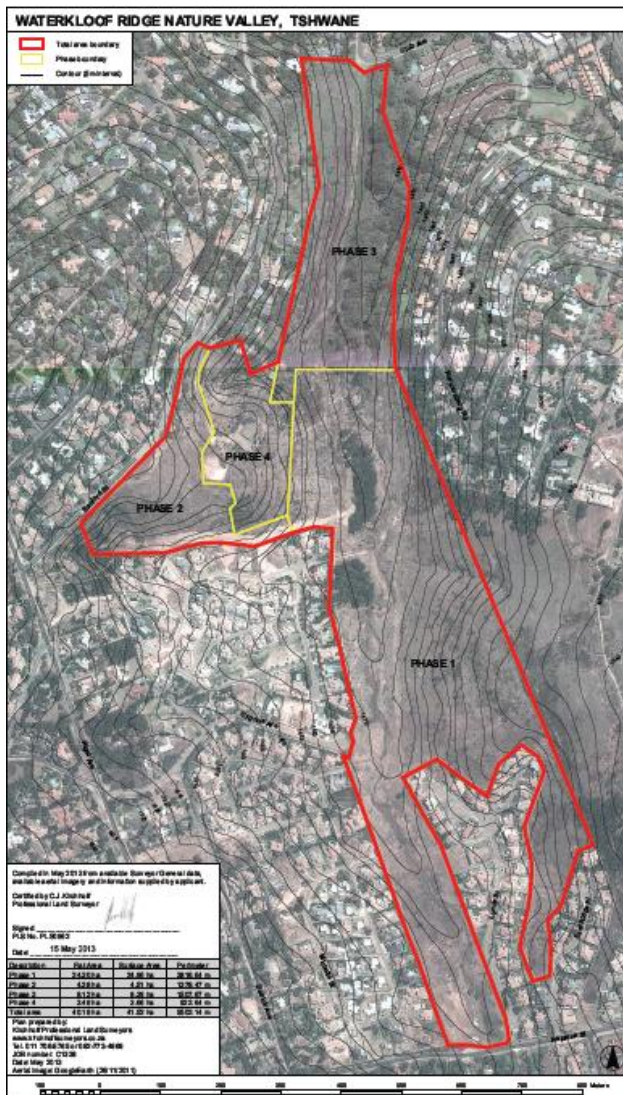


Fig. 1. Location of the proposed development. (Photo: Google Earth)

5.2 Regional overview

Stone Age

Stone Age people occupied the larger area since earliest times. This, for example, is evidenced by the site they used to occupy in the Wonderboom neck, probably dating back as much as 200 000 years ago. Tools derived from these people's habitation of the area are found all over, as well as in the streambed of the Apies River.

Middle and Late Stone Age people also roamed over the area, sheltering close to the river banks, with the latter group usually settling in caves and rock shelters. Similarly, stone tools dating to this period are found all over. In the Garstfontein region a number of quarry sites linked to the Oakhurst tradition have been identified. However, most of these have been destroyed due to the process of urbanization.

Iron Age

Iron Age occupation of the area did not start much before the 1500s. By that time, groups of Tswana and Ndebele speaking people were moving into the area, occupying the different hills and outcrops, using the ample resources such as grazing, game and metal ores.

During the early decades of the 19th century, the Tswana- and Ndebele-speakers were dislodged by the Matabele of Mzilikazi. Internal strife caused Mzilikazi, a general of King Shaka, and his followers to move away from the area between the Thukela and Mfolozi river (KwaZulu-Natal). Eventually, after a sojourn in the Sekhukhuneland area, followed by a short stay in the middle reaches of the Vaal River, they settled north of the Magaliesberg. One of three main settlements established by them, eKungwini, was on the banks of the Apies River, just north of Wonderboompoort (Carruthers 1990). However, no remains of this settlement have ever been identified.

It was during the Matabele's stay along the Apies River that the first white people entered the area: travelers and hunters such as Cornwallis Harris and Andrew Smith, traders Robert Schoon and Andrew McLuckie, and missionaries James Archbell and Robert Moffat. It is known from oral history the Robert Schoon sent Mzilikazi huge quantities of glass trade beads, rather than the guns that the latter coveted so much (Becker 1972).

Historic period

White settlers started to occupy huge tracts of land, claiming it as farms since the late 1840s. Of these, some of the earliest were Lucas Bronkhorst (Groenkloof), David Botha (Hartebeestpoort – Silverton) and Doors Erasmus (Wonderboom) (Van Schalkwyk et al 1992). With the establishment of Pretoria (1850) services such as roads, started to develop. An increase in population also demanded more food, which stimulated development of farming on the alluvial soils on the banks of the Apies River, close to the water.

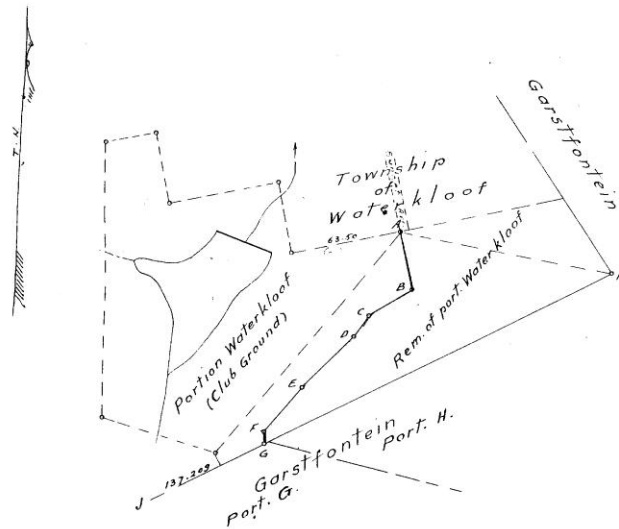
The Deed of Transfer for the farm Waterkloof 378JR (original number = 29) was dated 23 February 1887 in favour of W.R. Keet. It was first surveyed by M.H. Walker in February 1892. When resurveyed in 1921 it shows that the dam that is located on the southern side of the golf course was already in existence. However, this feature falls outside the boundary of the proposed development.

8157

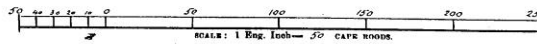
Form B2.—Diagram Form for a Sub-Division of a Farm or portion of a Farm.

S.G. No. A. 1664/21

SIDES	ANGLES	(Y) COORDINATES (X)	Sides	Angles	Coordinates
AB 32.85	A 67.5.10	A - 227.01 - 398.43	AB 34.703	A 67.8.10	A - 227.006 - 398.432
AC 7.3.13	A 118.30.13	A - 260.35 - 200.14	BC 78.13	B 248.59.10	B - 260.810 - 400.282
CD 14.76	C 137.57.17	C - 277.80 - 382.37	CD 14.733	C 187.57.20	C - 277.282 - 382.252
DE 42.37	D 188.38.10	D - 289.86 - 374.28	DE 42.362	D 188.40.10	D - 289.572 - 374.186
EF 34.23	E 178.26.0	E - 321.35 - 346.03	EF 34.148	E 178.26.0	E - 320.938 - 345.800
FG 6.48	F 142.33.20	F - 344.370 - 325.280	FG 6.460	F 128.57.20	F - 348.038 - 324.984
GH 221.801	G 61.25.0	G - 353.033 - 325.577	GH 221.801	G 61.25.0	G - 354.482 - 325.267
HN 123.764	H 38.29.30	H - 247.945 - 519.803	HN 123.161	H 38.29.30	H - 247.945 - 519.803
					J - 420.396 - 204.922



Trans registration under :
 Now registered under :
 No. 378 376
 DEPARTMENT OF AFDLING
 REGISTRATION DIVISION



The above Beacons lettered A B C D E F G define the Western side of a Right of Way, 25 feet Wide, over a portion of the Farm of the Farm **Waterkloof** represents of the Farm

as appears on Diagram S.G. No. A. 1078/92 framed by Surveyor **M. H. Walker** in Feb 1892 relating to Deed of Transfer No. 506/1887, dated 23. 2. 1887 made in favour of **W. R. Keel** situate in the District of **Pretoria** Ward **Witwatersrand** Province of **Transvaal**. Bounded as indicated above

The Beacons were pointed out by **A. J. Verdoorn** and have been properly erected according to law. Surveyed in **May 1921** by me **J. M. Schuur** Land Surveyor.

Framed for the purpose of registering a right of Way

No. **A 1664** Examined. The numerical data of this diagram are sufficiently consistent.

Approved **J. M. Schuur** Surveyor-General.

This diagram belongs to Deed of Transfer No. made this day in favour of

Examiner of Diagrams: **Ernest J. Edwards**

Surveyor-General's Office, Pretoria, 1921

Deeds Office, Pretoria.

Registrar of Deeds.

Published by authority—Groot & Shary, P.O. Box 8404, Johannesburg—25/4/21.

T.P.S. (P.T.A. REGION.)

Fig. 2. Original Deed of Transfer for a section of the farm Waterkloof.

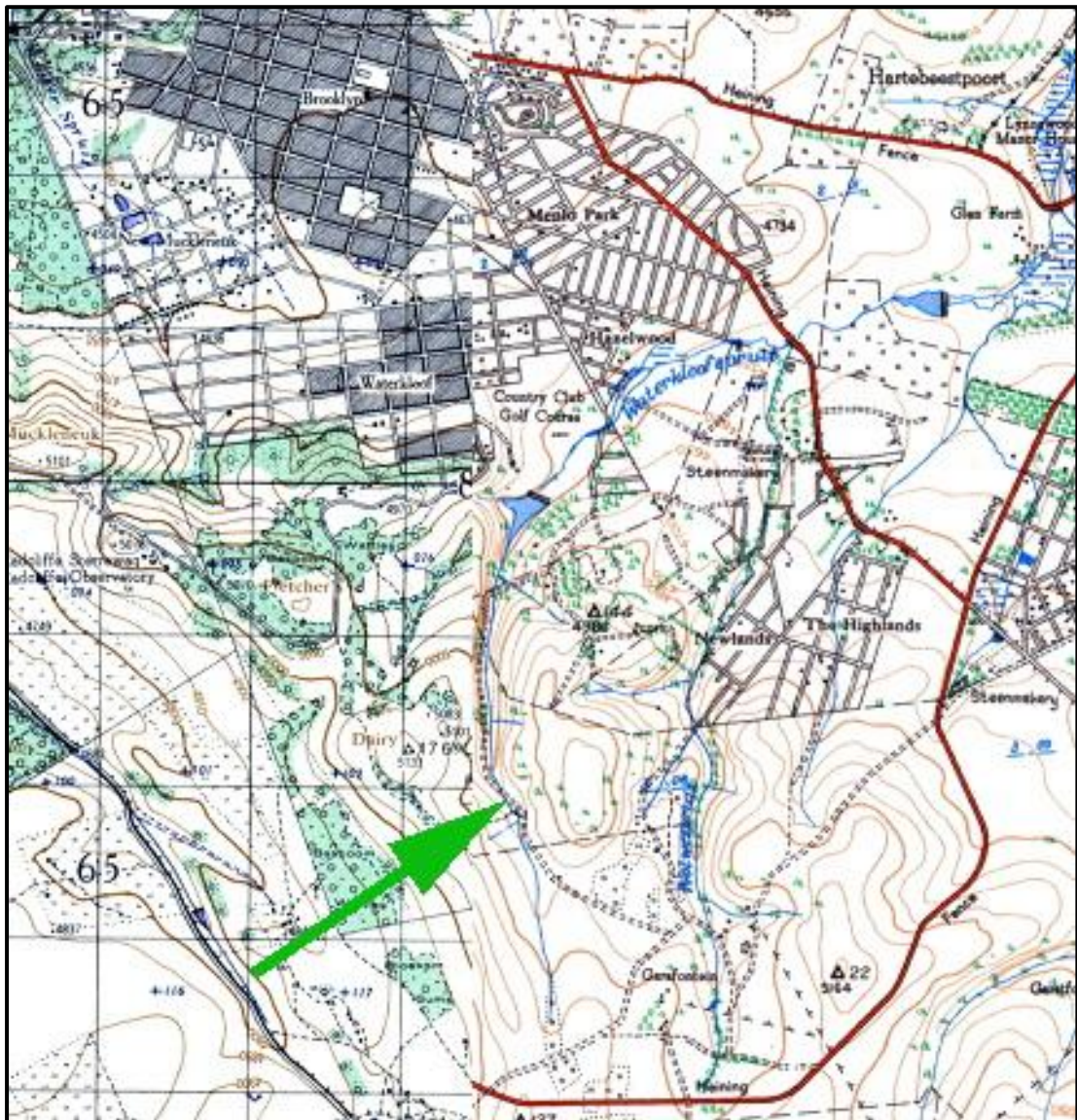


Fig. 3. The 1939 cadastral map indicating the lack of development in the region.

5.4 Identified heritage sites

Based on the above sources, the following heritage sites, features and objects of cultural significance were identified in the proposed development area:

5.4.1 Stone Age

- No sites, features or objects dating to the Stone Age were identified in the study area.

5.4.2 Iron Age

- No sites, features or objects dating to the Iron Age were identified in the study area.

5.4.3 Historic period

- No sites, features or objects dating to the historic period were identified in the study area.

6. SITE SIGNIFICANCE AND ASSESSMENT

6.1 Heritage assessment criteria and grading

The NHRA stipulates the assessment criteria and grading of archaeological sites. The following categories are distinguished in Section 7 of the Act:

- **Grade I:** Heritage resources with qualities so exceptional that they are of special national significance;
- **Grade II:** Heritage resources which, although forming part of the national estate, can be considered to have special qualities which make them significant within the context of a province or a region; and
- **Grade III:** Other heritage resources worthy of conservation on a local authority level.

The occurrence of sites with a Grade I significance will demand that the development activities be drastically altered in order to retain these sites in their original state. For Grade II and Grade III sites, the applicable of mitigation measures would allow the development activities to continue.

6.2 Statement of significance

Impact analysis of cultural heritage resources under threat of the proposed development, are based on the present understanding of the development:

- As no sites, features or objects of cultural heritage significance have been identified in the study area, there would be no impact as a result of the proposed development.

6.3 Impact assessment

Based on current knowledge and understanding of the area, one can evaluate the heritage sites in the area as follows:

7. CONCLUSIONS

The aim of the scoping review was to determine if any sites, objects and structures of cultural significance are known within the area in which it is proposed to develop the six dams.

The cultural landscape qualities of the larger region essentially consist of a single component, which is a rural area in which the human occupation is made up of a pre-colonial (Stone Age and Iron Age) and a much later colonial (farmer) component.

- As no sites, features or objects of cultural heritage significance have been identified in the study area, there would be no impact as a result of the proposed development.

Therefore, from a heritage point of view we recommend that the proposed development can continue, on condition of acceptance of the above mitigation measures. We request that if archaeological sites or graves are exposed during construction work, it should immediately be reported to a heritage consultant so that an investigation and evaluation of the finds can be made.

8. REFERENCES

8.1 Data bases

Chief Surveyor General
Environmental Potential Atlas, Department of Environmental Affairs and Tourism.
Heritage Atlas Database, Pretoria.
National Archives of South Africa

8.2 Literature

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

Becker, P. 1972. *Path of blood*. London: Panther Books.

Carruthers, V. 1990. *The Magaliesberg*. Johannesburg: Southern Book Publishers.

Engelbrecht, S.P., Agar-Hamilton, J.A.I., Pelzer, A.N. & Behrens, H.P.H. (eds) 1955. *Pretoria (1855-1955): History of the City of Pretoria*. Pretoria: The City Council.

Mason, R.J. 1962. *Prehistory of the Transvaal*. Johannesburg: Witwatersrand University Press.

Van Schalkwyk, J.A., Van Vollenhoven, A.C. & Naude, M. 1992. *'n Argeologiese ondersoek van die bouvalle bekend as die Lukas Bronkhorsthuis in die Fonteinedal, Pretoria*. Unpublished report 1992KH01. Pretoria: National Cultural History Museum.

8.3 Maps and aerial photographs

1: 50 000 Topocadastral maps: 2528CC, 2528CD
Google Earth

APPENDIX 1: CONVENTIONS USED TO ASSESS THE SIGNIFICANCE OF HERITAGE RESOURCES

Significance

According to the NHRA, Section 2(vi) the **significance** of heritage sites and artefacts is determined by its aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technical value in relation to the 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.

Matrix used for assessing the significance of each identified site/feature

1. Historic value				
Is it important in the community, or pattern of history				
Does it have strong or special association with the life or work of a person, group or organisation of importance in history				
Does it have significance relating to the history of slavery				
2. Aesthetic value				
It is important in exhibiting particular aesthetic characteristics valued by a community or cultural group				
3. Scientific value				
Does it have potential to yield information that will contribute to an understanding of natural or cultural heritage				
Is it important in demonstrating a high degree of creative or technical achievement at a particular period				
4. Social value				
Does it have strong or special association with a particular community or cultural group for social, cultural or spiritual reasons				
5. Rarity				
Does it possess uncommon, rare or endangered aspects of natural or cultural heritage				
6. Representivity				
Is it 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.				
7. Sphere of Significance		High	Medium	Low
International				
National				
Provincial				
Regional				
Local				
Specific community				
8. Significance rating of feature				
1.	Low			
2.	Medium			
3.	High			

APPENDIX 2. RELEVANT LEGISLATION

All archaeological and palaeontological sites and meteorites are protected by the National Heritage Resources Act (Act no 25 of 1999) as stated in Section 35:

(1) Subject to the provisions of section 8, the protection of archaeological and palaeontological sites and material and meteorites is the responsibility of a provincial heritage resources authority: Provided that the protection of any wreck in the territorial waters and the maritime cultural zone shall be the responsibility of SAHRA.

(2) Subject to the provisions of subsection (8)(a), all archaeological objects, palaeontological material and meteorites are the property of the State. The responsible heritage authority must, on behalf of the State, at its discretion ensure that such objects are lodged with a museum or other public institution that has a collection policy acceptable to the heritage resources authority and may in so doing establish such terms and conditions as it sees fit for the conservation of such objects.

(3) Any person who discovers archaeological or palaeontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority, or to the nearest local authority offices or museum, which must immediately notify such heritage resources authority.

(4) No person may, without a permit issued by the responsible heritage resources authority-

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
- (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
- (c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
- (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.

In terms of cemeteries and graves the following (Section 36):

(1) Where it is not the responsibility of any other authority, SAHRA must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit.

(2) SAHRA must identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with the grave referred to in subsection (1), and must maintain such memorials.

(3) No person may, without a permit issued by SAHRA or a provincial heritage resources authority-

- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- (b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
- (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.

(4) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.