



Archaetnos Culture & Cultural
Resource Consultants
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**A SECOND REPORT ON A BASIC ASSESSMENT RELATING TO CULTURAL
HERITAGE RESOURCES FOR THE PROPOSED CONSTRUCTION OF THE
BULGE-DORSET 132Kv POWER LINE, LIMPOPO PROVINCE**

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REPORT: AE1160

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SUMMARY

Archaetnos cc was appointed by Texture Environmental Consultants to conduct a basic assessment relating to cultural heritage resources for the proposed construction of the Bulge-Dorset 132kV power line. This is close to Vaalwater in the Limpopo Province. Four options for the route were surveyed.

The fieldwork undertaken revealed no sites of cultural heritage significance. The main reason for this is the inaccessibility of farms used for game farming. However the area was also surveyed via helicopter.

From a heritage point any of the four alternatives may be used. It may however be necessary to survey certain areas, especially those with a high probability of having cultural sites. The proposed development may continue bearing in mind the possibility of finding chance sites.

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1. INTRODUCTION

Archaetnos cc was appointed by Texture Environmental Consultants to conduct a cultural heritage impact assessment for the proposed construction of the Bulge-Dorset 132kV power line. The line starts at the proposed Bulge substation, close to the Bulge River, and runs east through Witfontein and then north-east to Dorset. The line starts to the west of the town of Vaalwater in the Limpopo Province, but ends to the north-east thereof.

Four options for the route were surveyed. The client indicated the area where the proposed development is to take place, and the survey was confined to this area.

2. TERMS OF REFERENCE

The Terms of Reference for the survey were to:

1. Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the property (see Appendix A).
2. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value (see Appendix B).
3. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions.
4. Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources.
5. Recommend suitable mitigation measures should there be any sites of significance that might be impacted upon by the proposed development.
6. Review applicable legislative requirements.

3. CONDITIONS & ASSUMPTIONS

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

1. Cultural Resources are all non-physical and physical man-made occurrences, as well as natural occurrences associated with human activity (Appendix A). These include all sites, structure and artifacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development. Graves and cemeteries are included in this.
2. The significance of the sites, structures and artifacts is determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. The various aspects are

not mutually exclusive, and the evaluation of any site is done with reference to any number of these aspects.

3. Cultural significance is site-specific and relates to the content and context of the site. Sites regarded as having low cultural significance have already been recorded in full and require no further mitigation. Sites with medium cultural significance may or may not require mitigation depending on other factors such as the significance of impact on the site. Sites with a high cultural significance require further mitigation (see Appendix B).
4. The latitude and longitude of any archaeological or historical site or feature, is to be treated as sensitive information by the developer and should not be disclosed to members of the public.
5. All recommendations are made with full cognizance of the relevant legislation.
6. It has to be mentioned that it is almost impossible to locate all the cultural resources in a given area, as it will be very time consuming. Developers should however note that the report should make it clear how to handle any other finds that might occur.
7. It should be noted that in this particular case the grass cover in certain areas was very high and certain areas inaccessible due to game fences. As a result some areas could not be surveyed properly.

4. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural resources are dealt with mainly in two acts. These are the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998).

4.1 The National Heritage Resources Act

According to the above-mentioned act the following is protected as cultural heritage resources:

- a. Archaeological artifacts, structures and sites older than 100 years
- b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography
- c. Objects of decorative and visual arts
- d. Military objects, structures and sites older than 75 years
- e. Historical objects, structures and sites older than 60 years
- f. Proclaimed heritage sites
- g. Grave yards and graves older than 60 years
- h. Meteorites and fossils
- i. Objects, structures and sites or scientific or technological value.

The national estate (see Appendix D) includes the following:

- a. Places, buildings, structures and equipment of cultural significance

- b. Places to which oral traditions are attached or which are associated with living heritage
- c. Historical settlements and townscapes
- d. Landscapes and features of cultural significance
- e. Geological sites of scientific or cultural importance
- f. Archaeological and palaeontological importance
- g. Graves and burial grounds
- h. Sites of significance relating to the history of slavery
- i. Movable objects (e.g. archaeological, palaeontological, meteorites, geological specimens, military, ethnographic, books etc.)

A Heritage Impact Assessment (HIA) is the process to be followed in order to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment only looks at archaeological resources. An HIA must be done under the following circumstances:

- a. The construction of a linear development (road, wall, power line canal etc.) exceeding 300m in length
- b. The construction of a bridge or similar structure exceeding 50m in length
- c. Any development or other activity that will change the character of a site and exceed 5 000m² or involve three or more existing erven or subdivisions thereof
- d. Re-zoning of a site exceeding 10 000 m²
- e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

Structures

Section 34 (1) of the mentioned act states that no person may demolish any structure or part thereof which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

A structure means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

Alter means any action affecting the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or the decoration or any other means.

Archaeology, palaeontology and meteorites

Section 35(4) of this act deals with archaeology, palaeontology and meteorites. The act states that no person may, without a permit issued by the responsible heritage resources authority (national or provincial):

- 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 that assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.
- e. alter or demolish any structure or part of a structure which is older than 60 years as protected.

The above mentioned may only be disturbed or moved by an archaeologist, after receiving a permit from the South African Heritage Resources Agency (SAHRA). In order to demolish such a site or structure, a destruction permit from SAHRA will also be needed.

Human remains

Graves and burial grounds are divided into the following:

- a. ancestral graves
- b. royal graves and graves of traditional leaders
- c. graves of victims of conflict
- d. graves designated by the Minister
- e. historical graves and cemeteries
- f. human remains

In terms of Section 36(3) of the National Heritage Resources Act, no person may, without a permit issued by the relevant heritage resources authority:

- a. destroy, damage, alter, exhume or remove from its original position of 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 or 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, or any equipment which assists in the detection or recovery of metals.

Human remains that are less than 60 years old are subject to provisions of the Human Tissue Act (Act 65 of 1983) and to local regulations. Exhumation of graves must conform to the standards set out in the **Ordinance on Excavations (Ordinance no. 12 of 1980)** (replacing the old Transvaal Ordinance no. 7 of 1925).

Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (i.e. where the graves are located and where they are to be relocated) before exhumation can take place.

Human remains can only be handled by a registered undertaker or an institution declared under the **Human Tissues Act (Act 65 of 1983 as amended)**.

Unidentified/unknown graves are also handled as older than 60 until proven otherwise.

4.2 The National Environmental Management Act

This act (Act 107 of 1998) states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

Environmental management should also take the cultural and social needs of people into account. Any disturbance of landscapes and sites that constitute the nation's cultural heritage should be avoided as far as possible and where this is not possible the disturbance should be minimized and remedied.

5. METHODOLOGY

5.1 Survey of literature

A survey of literature was undertaken in order to obtain background information regarding the area. Sources consulted in this regard are indicated in the bibliography.

5.2 Field survey

The survey was conducted according to generally accepted HIA practices and was aimed at locating all possible objects, sites and features of cultural significance in the area of proposed development. If required, the location/position of any site was determined by means of a Global Positioning System (GPS), while photographs were also taken where needed.

The survey was undertaken by flying over the route with a helicopter during the summer months. This was followed by doing a physical survey via vehicle and on foot, once during the summer and once during the winter.

5.3 Oral histories

People from local communities are interviewed in order to obtain information relating to the surveyed area. It needs to be stated that this is not applicable under all circumstances. When applicable, the information is included in the text and referred to in the bibliography.

5.4 Documentation

All sites, objects features and structures identified were documented according to the general minimum standards accepted by the archaeological profession. Co-ordinates of individual localities were determined by means of the Global Positioning System (GPS).The information was added to the description in order to facilitate the identification of each locality.

5.5 Evaluation of Heritage sites

The evaluation of heritage sites is done by using the following criteria:

- The unique nature of a site
- The integrity of the archaeological deposit
- The wider historic, archaeological and geographic context of the site
- The location of the site in relation to other similar sites or features
- The depth of the archaeological deposit (when it can be determined or is known)
- The preservation condition of the site
- Uniqueness of the site and
- Potential to answer present research questions.

6. DESCRIPTION OF THE AREA

The area where the planned power line will be erected is situated to the west, north and north-west of the town of Vaalwater in the Limpopo Province (Figure 1-3). The specific farms influenced by the development are Bulgerivier 198 KQ, Mooifontein 150 KQ, Manamane 201 KQ, Bergsig 202 KQ, Malmaniesrivierdrift 199 KQ, Hermanusdoorns 600 KQ, Hermanusdoorns 205 KQ, Welgevonden 186 KQ, Welgevonden 180 KQ, Groenfontein 207 KQ, Keerom 208 KQ, Hanover 181 KQ, Grootwater 176 KQ, Kafferfontein 178 KQ, Roodekop 172 KQ, Schuinskloof 175 KQ, Witfontein 6 KR, Blaauwbank 2 KR, Blaauwbank 3 KR, Rietbokhoek 4 KR, Zeekgat 5 KR, Rietgat 8 KR, Steenbokfontein 9 KR, Vischgat 64 KR, Dwarsfontein 51 KR and Brakfontein 16 KR. The lines mostly run along the borders of these farms.

GPS co-ordinates taken are as follows:

At Bulge substation - 24°07'03,9"S; 27°40'09,4"E

At Witfontein - 24°08'57,2"S; 27°46'25,2"E

At Vischgat - 24°08'57,1"S; 27°46'25,3"E

At Dorset - 24°04'15,2"S; 28°09'24,7"E

At point where alternatives 3 and 4 deviates from alternative 1 and 2 - 24°05.820S;
27°58.829E

The environment of the area (Figure 4-9) consists of bushveld vegetation and it mostly seems undisturbed. Disturbance are limited to field used for grazing, some old agricultural fields and a few currently used agricultural fields. The topography of the area is basically flat with some hills and rock outcrops here and there. The route starts in the west at the Bulge River which flows from south to north. It crosses a number of streams and rivers on its way to the north-east. Accordingly some marshy areas are found along the route.

During the survey the veldt was extremely wet due to the good rainfall of the current season. The vegetation was quite dense in certain areas, but the biggest problem is the lack of access through game fences. However, flying over the area countered that to some extent. As a result the archaeological visibility was fair. However, one would not for instance be able to spot a Stone Age site from the air and this has to be borne in mind.

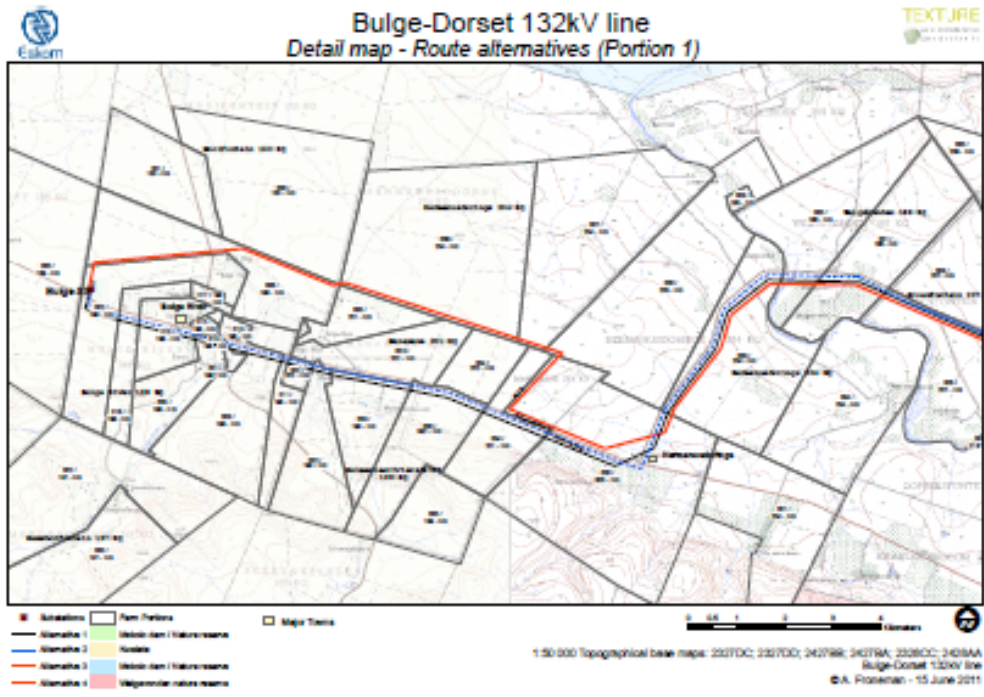


Figure 1 Map of portion 1 of the surveyed area. The black line represents route alternative 1, the dotted blue line route alternative 2, the red line route alternative 3 and the dotted red line route alternative 4.

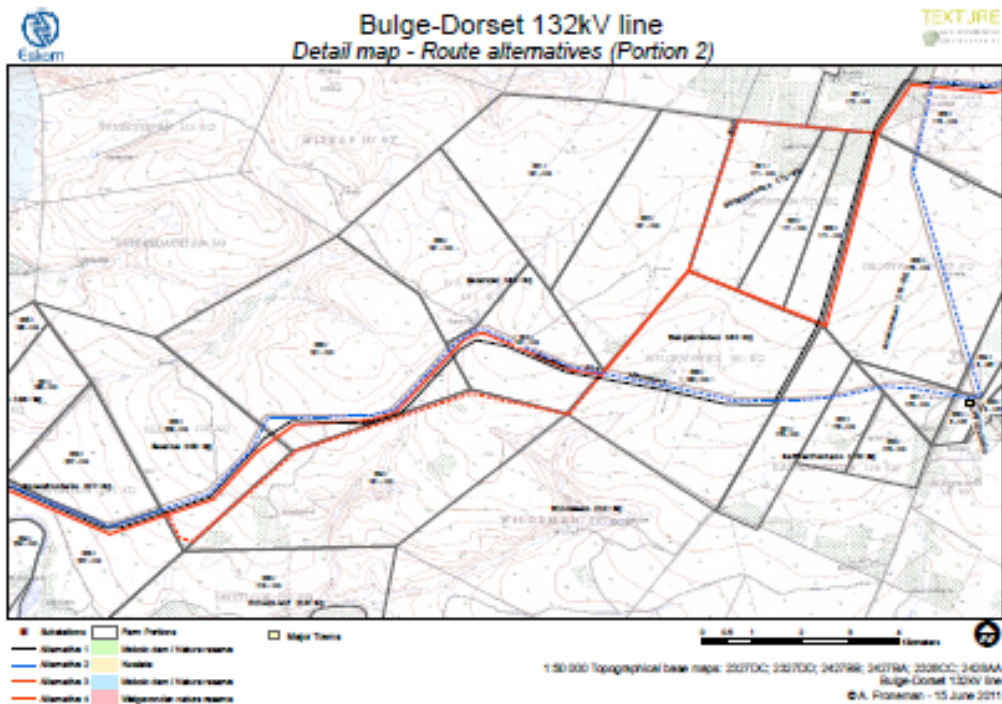


Figure 2 Map of portion 2 of the surveyed area. The black line represents route alternative 1, the dotted blue line route alternative 2, the red line route alternative 3 and the dotted red line route alternative 4.

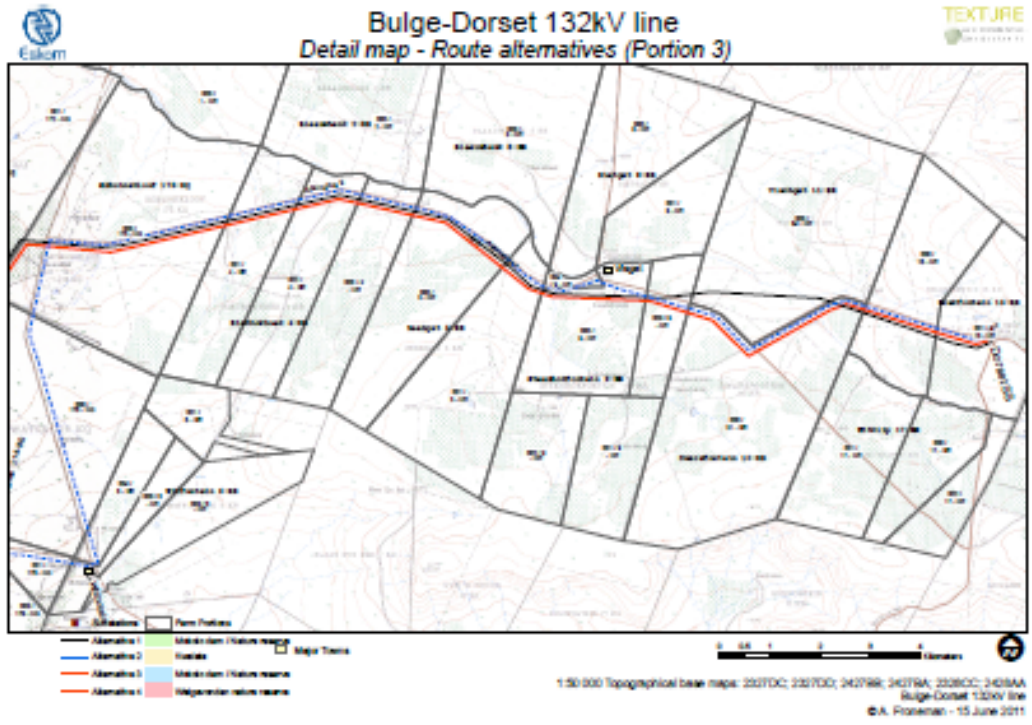


Figure 3 Map of portion 3 of the surveyed area. The black line represents route alternative 1, the dotted blue line route alternative 2, the red line route alternative 3 and the dotted red line route alternative 4.



Figure 4 **General view of the area showing dense vegetation.**



Figure 5 General view of certain areas showing riverine vegetation.



Figure 6 View of route alternative 3 on the farm Welgevoden.



Figure 7 View of route alternative 4 on the farm Keerom.



Figure 8 View of route alternative 4 on the farm Goudfontein.



Figure 9 Another view of route alternative 4 on the farm Goudfontein.

7. DISCUSSION

During the survey no site of cultural heritage significance was located in the area to be developed. Although the report is seen as ample mitigation in this regard it needs to be considered that sites may become known later and that those need to be dealt with in accordance with the legislation discussed above. In order to enable the reader to better understand possible archaeological and cultural features that may be unearthed during construction activities, it is necessary to give a background regarding the different phases of human history.

7.1 Stone Age

The Stone Age is the period in human history when lithic material was mainly used to produce tools (Coertze & Coertze 1996: 293). In South Africa the Stone Age can be divided

in three periods. It is however important to note that dates are relative and only provide a broad framework for interpretation. The division for the Stone Age according to Korsman & Meyer (1999: 93-94) is as follows:

Early Stone Age (ESA) 2 million – 150 000 years ago
Middle Stone Age (MSA) 150 000 – 30 000 years ago
Late Stone Age (LSA) 40 000 years ago – 1850 - A.D.

Not many Stone Age sites are known in the western part of Limpopo, but this probably only reflect the lack of research in the past. The nearest sites to the surveyed area are Middle and Late Stone Age sites to the east of Lephalale. Rock art sites are found in abundance in the Waterberg (Bergh 1999: 4-5). These are mostly associated with the San people of the Later Stone Age.

The surveyed area does contain rock outcrops and small hills which could have provided shelter and material for the manufacture of stone tools. The abundance of water and good vegetation would have lured game to the area and it would therefore have been the perfect hunting ground for these people. However no indication of the Stone Age was found during the survey.

7.2 Iron Age

The Iron Age is the name given to the period of human history when metal was mainly used to produce metal artifacts (Coertze & Coertze 1996: 346). In South Africa it can be divided in two separate phases according to Van der Ryst & Meyer (1999: 96-98), namely:

Early Iron Age (EIA) 200 – 1000 A.D.
Late Iron Age (LIA) 1000 – 1850 A.D.

Huffman (2007: xiii) however indicates that a Middle Iron Age should be included. His dates, which now seem to be widely accepted in archaeological circles, are:

Early Iron Age (EIA) 250 – 900 A.D.
Middle Iron Age (MIA) 900 – 1300 A.D.
Late Iron Age (LIA) 1300 – 1840 A.D.

The Early Iron Age has not been well researched. Accordingly only one site was identified close to the surveyed area. This is a site called Diamant, which lies to the west of the surveyed area (Bergh 1999: 6).

Many Late Iron Age sites were identified around the investigated area, although none are known from the specific area (Bergh 1999: 7). Again this may only indicate a lack of research. It also seems as if the known earliest trade routes did not reach this area (Bergh 1999: 9).

The type of environment in the project area definitely is suitable for human habitation. There are ample water sources, good grazing, ample fuel and building material. However the flat relief of the land may have prevented people from settling here. One would therefore expect

that Iron Age people have utilized the area. This is the same reason why white settlers later on moved into this environment.

It does seem as if this area may not have been inhabited at the beginning of the 19th century. It also seems as if the Difaquane did not really have an influence on the settlement of people here (Bergh 1999: 10-11).

Accordingly no indication of Iron Age settlement was identified during the survey.

7.3 Historical Age

The historical age started with the first recorded oral histories in the area. It includes the moving into the area of people that were able to read and write.

The first white travelers to visit these surroundings were Dr Andrew Cowan and Lieutenant Donovan in 1808. David Hume followed in 1825. Between 1830 and 1847 other travellers visited the areas surrounding Lephale and Thabazimbi, but none seem to have entered the surveyed area (Bergh 1999: 12-13). The first white farmers only settled here during 1841-1850 (Bergh 1999: 15).

No sites dating to the historical age were found during the survey.

8. CONCLUSIONS AND RECOMMENDATIONS

In conclusion it can be stated that the assessment of the area was conducted successfully. In the surveyed area no sites of cultural significance have been found.

The final recommendations are as follows:

- From a cultural historical perspective there is no specific preference for any of the four route alternatives.
- Regardless of the option chosen it should be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts are always a distinct possibility. Care should therefore be taken when development work commences that if any of these are accidentally discovered, a qualified archaeologist be called in to investigate.
- Due to constraints indicated above it may be possible that certain sites were not identified. If archaeological sites are therefore identified during construction activities, an archaeologist should also be called in to investigate.

9. REFERENCES

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APPENDIX A

Definition of terms:

Site: A large place with extensive structures and related cultural objects. It can also be a large assemblage of cultural artifacts, found on a single location.

Structure: A permanent building found in isolation or which forms a site in conjunction with other structures.

Feature: A coincidental find of movable cultural objects.

Object: Artifact (cultural object).

(Also see Knudson 1978: 20).

APPENDIX B

Definition of significance:

- Historic value: Important in the community or pattern of history or has an association with the life or work of a person, group or organization of importance in history.
- Aesthetic value: Important in exhibiting particular aesthetic characteristics valued by a community or cultural group.
- Scientific value: Potential to yield information that will contribute to an understanding of natural or cultural history or is important in demonstrating a high degree of creative or technical achievement of a particular period
- Social value: Have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.
- Rarity: Does it possess uncommon, rare or endangered aspects of natural or cultural heritage.
- Representivity: Important in demonstrating the principal characteristics of a particular class of natural or cultural places or object or a range of landscapes or environments characteristic of its class or 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.

APPENDIX C

Cultural significance:

- Low A cultural object being found out of context, not being part of a site or without any related feature/structure in its surroundings.
- Medium Any site, structure or feature being regarded less important due to a number of factors, such as date and frequency. Also any important object found out of context.
- High Any site, structure or feature regarded as important because of its age or uniqueness. Graves are always categorized as of a high importance. Also any important object found within a specific context.

Heritage significance:

- Grade I Heritage resources with exceptional qualities to the extent that they are of national significance
- Grade II Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate
- Grade III Other heritage resources of local importance and therefore worthy of conservation

APPENDIX D

Protection of heritage resources:

- Formal protection

National heritage sites and Provincial heritage sites – grade I and II

Protected areas - an area surrounding a heritage site

Provisional protection – for a maximum period of two years

Heritage registers – listing grades II and III

Heritage areas – areas with more than one heritage site included

Heritage objects – e.g. archaeological, palaeontological, meteorites, geological specimens,
visual art, military, numismatic, books, etc.

- General protection

Objects protected by the laws of foreign states

Structures – older than 60 years

Archaeology, palaeontology and meteorites

Burial grounds and graves

Public monuments and memorials