

Appendix D

Specialist Reports

SPECIALIST REPORT

HERITAGE STUDY



Archaetnos Culture & Cultural
Resource Consultants
BK 98 09854/23

**A REPORT ON A BASIC ASSESSMENT RELATING TO CULTURAL HERITAGE
RESOURCES FOR THE PROPOSED ESKOM MALELANE – KHANYAZWE
PROJECT, MPUMALANGA PROVINCE**

For:

Wandima Environmental Services

REPORT: AE01247V

By:

*Dr. A.C. van Vollenhoven (L.AKAD.SA.)
Accredited member of ASAPA
Professional member of SASCH*

August 2012

Archaetnos
P.O. Box 55
GROENKLOOF
0027
Tel: **083 2916104**
Fax: 086 520 4173
E-mail: antonyv@archaetnos.co.za

Managing Director: AC van Vollenhoven BA, BA (Hons), DTO, NDM, MA (Archaeology) [UP], MA (Culture History) [US], DPhil (Archaeology) [UP], Man Dip [TUT], D Phil (History) [US]

**©Copyright
Archaetnos**

The information contained in this report is the sole intellectual property of Archaetnos CC. It may only be used for the purposes it was commissioned for by the client.

DISCLAIMER:

Although all possible care is taken to identify all sites of cultural importance during the survey of study areas, the nature of archaeological and historical sites are as such that it always is possible that hidden or subterranean sites could be overlooked during the study. Archaetnos and its personnel will not be held liable for such oversights or for costs incurred as a result thereof.

The South African Heritage Resources Agency (SAHRA) or one of its subsidiary bodies needs to comment on this report and clients are advised not to proceed with any action before receiving these. It is the responsibility of the client to submit this report to the relevant heritage authority.

SUMMARY

Archaetnos cc was appointed by Wandima Environmental Services to conduct a basic assessment relating to cultural heritage resources for the proposed Eskom power lines between Malelane and Buffelspruit, also called the Khayazwe Project. This is situated to the east of Malelane, in the Mpumalanga Province. Two options for the route were surveyed as well as areas for new substations at Malelane and Buffelspruit.

The fieldwork undertaken revealed no sites of cultural heritage significance. The area is largely disturbed by past human activities such as different agricultural fields. However there are certain areas that need a more detailed survey once the fixed position of the power lines are known as these have natural vegetation.

From a heritage point of view it is proposed that route alternative 1 be used. This route is shorter and the chances of finding heritage sites here are therefore less. Also it covers an area more disturbed than that of route alternative 2. A detailed survey is needed once the route has been finalized.

CONTENTS

	Page
SUMMARY.....	3
CONTENTS.....	4
1. INTRODUCTION.....	5
2. TERMS OF REFERENCE.....	5
3. CONDITIONS AND ASSUMPTIONS	5
4. LEGAL REQUIREMENTS	6
5. METHODOLOGY	9
6. DESCRIPTION OF THE AREA.....	10
7. DISCUSSION.....	19
8. CONCLUSIONS AND RECOMMENDATIONS	21
9. REFERENCES	21
APPENDIX A – DEFENITION OF TERMS.....	23
APPENDIX B – DEFINITION/ STATEMENT OF SIGNIFICANCE.....	24
APPENDIX C – SIGNIFICANCE AND FIELD RATING	25
APPENDIX D – PROTECTION OF HERITAGE RESOURCES.....	26
APPENDIX E – HERITAGE MANAGEMENT IMPACT ASSESSMENT PHASES	27

1. INTRODUCTION

Archaetnos cc was appointed by Wandima Environmental Services to conduct a basic assessment relating to cultural heritage resources for the proposed Eskom Gutshwa Project. This is situated to the east of White River, in the Mpumalanga Province.

Two options for the route were surveyed as well as two options for the new Gutshwa substation. 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 do a basic assessment 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 and C).
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, structures 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 and C).
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 vegetation cover in certain areas was very high. As a result the archaeological visibility is very limited. In certain instances access was limited due to fences.

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 of 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. The different phases during the HIA process are described in Appendix E. 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.

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

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)**.

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 a physical survey via vehicle and on foot.

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 south-east of the town of Malelane in the Mpumalanga Province (Figure 1-4). A new switching station is planned at Malelane, the latter to be called the Khayazwe Switching Station. The line ends at the Buffelspruit substation.

The environment of the area shows different characteristics (Figure 5-16). It starts in the north-west at the Khayazwe Switching Station. Here the area has mostly been disturbed by agriculture. It includes sugar cane, mango and orange orchards and other agricultural products in. Along both routes, here and there are areas with dense natural vegetation, but more so along route alternative 2. At the site of the Buffelspruit substation the area has been disturbed. Here the line will also follow existing lines. Archaeological visibility is difficult in the areas with dense vegetation. Access to the site also was not possible in all cases due to the fencing thereof.

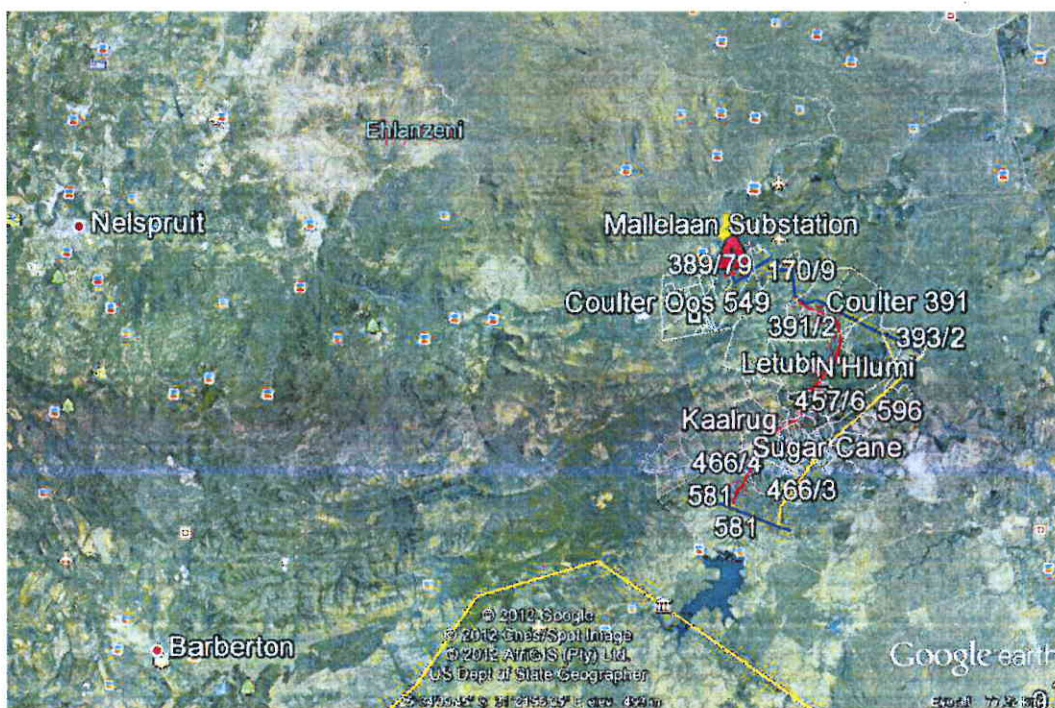


Figure 1 Location of the surveyed area.

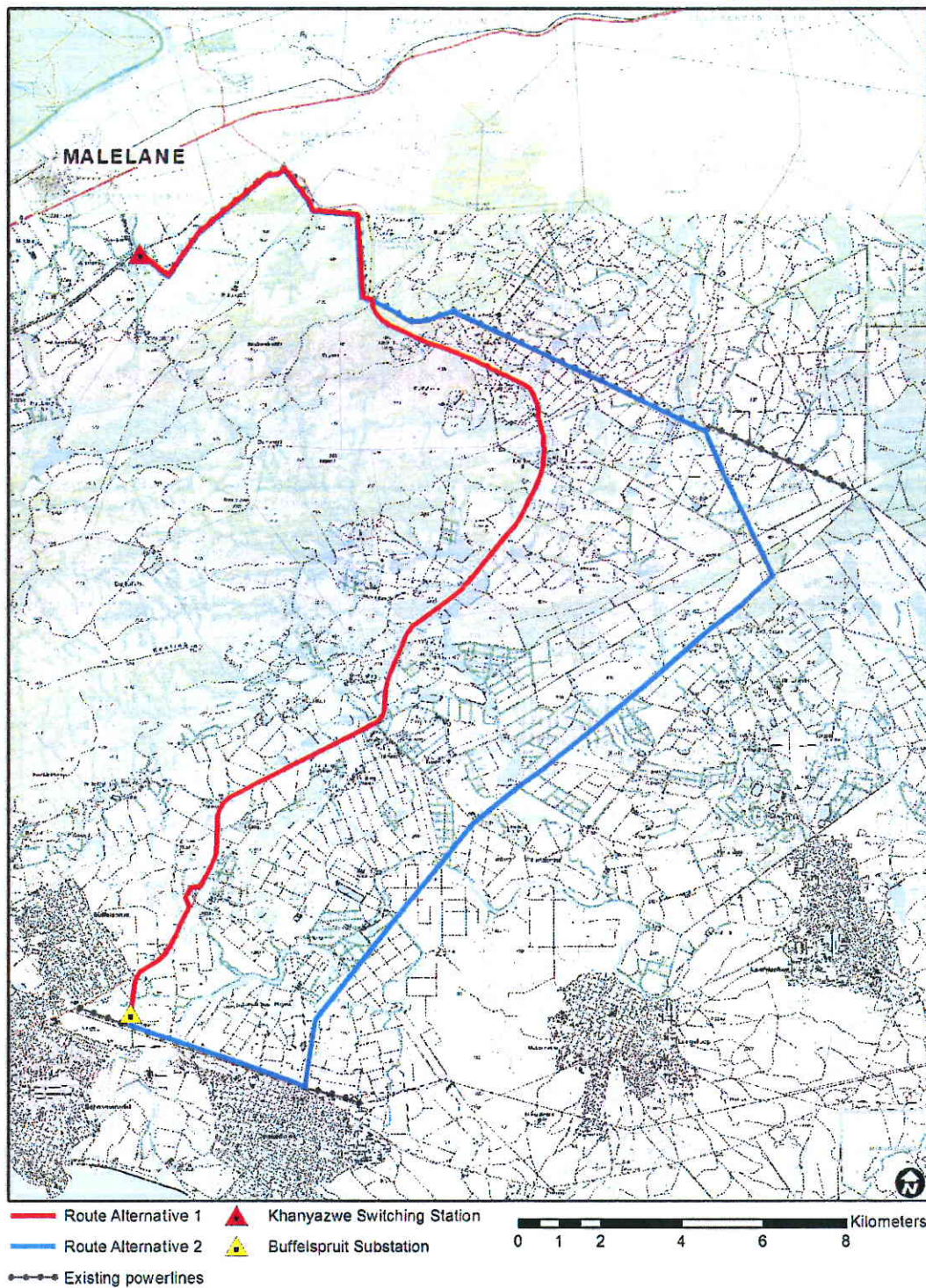


Figure 2 Map of the surveyed area showing the route alternatives.



Figure 3 Google image indicating the two route alternatives(1-red; 2-blue).

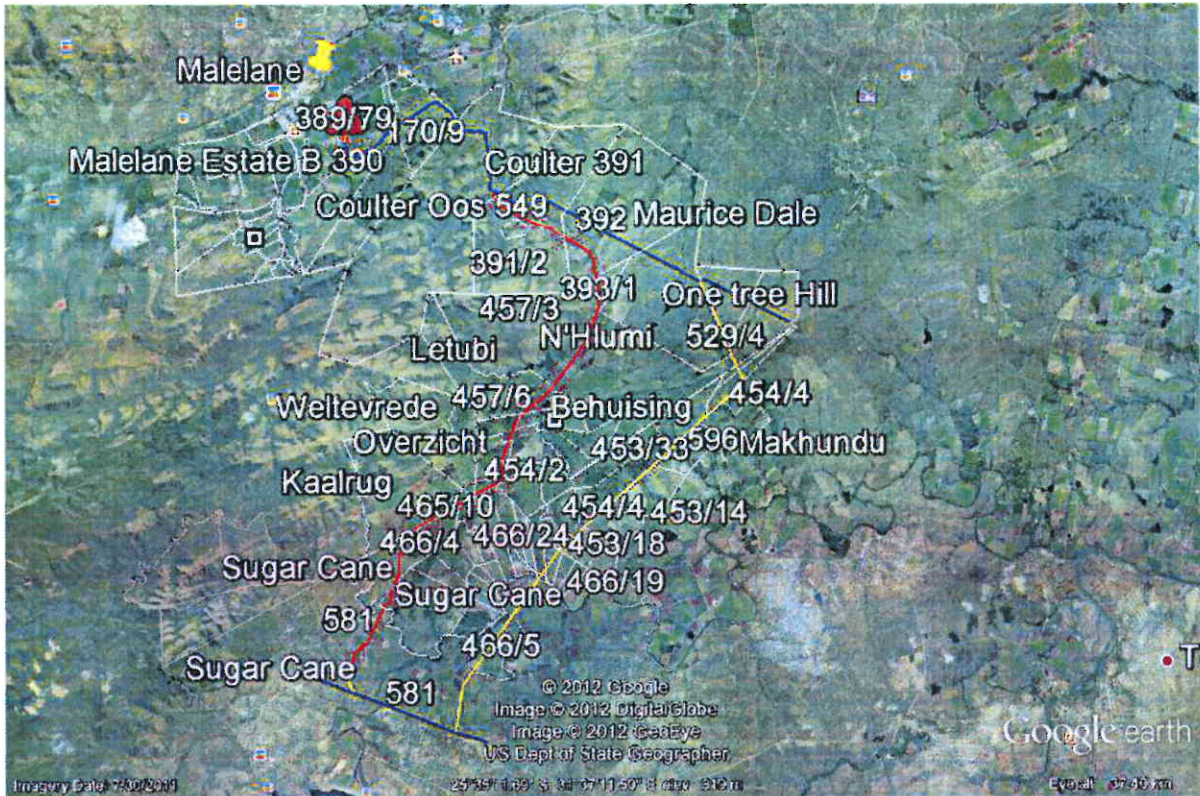


Figure 4 This Google image indicates the farm names and agricultural usage along the two route alternatives.



Figure 5 The Malelane substation where the proposed Khanyazwe Switching station will be erected.



Figure 6 Sugar cane fields along the start of the route where both alternatives run together.



Figure 7 Dense vegetation along route alternative 2.



Figure 8 Mango trees along route alternative 2.



Figure 9 Dense vegetation along route alternative 2.

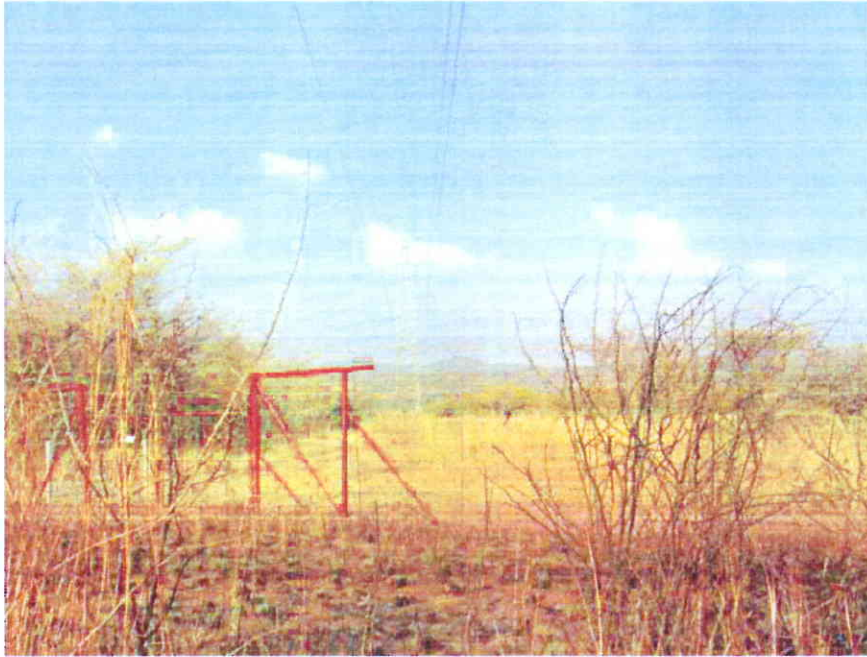


Figure 10 Disturbed area along route alternative 2.



Figure 11 Another area with dense natural vegetation along route alternative 2.



Figure 12 This hill along route alternative 1 has dense natural vegetation.



Figure 13 Banana plantation along route alternative 1.

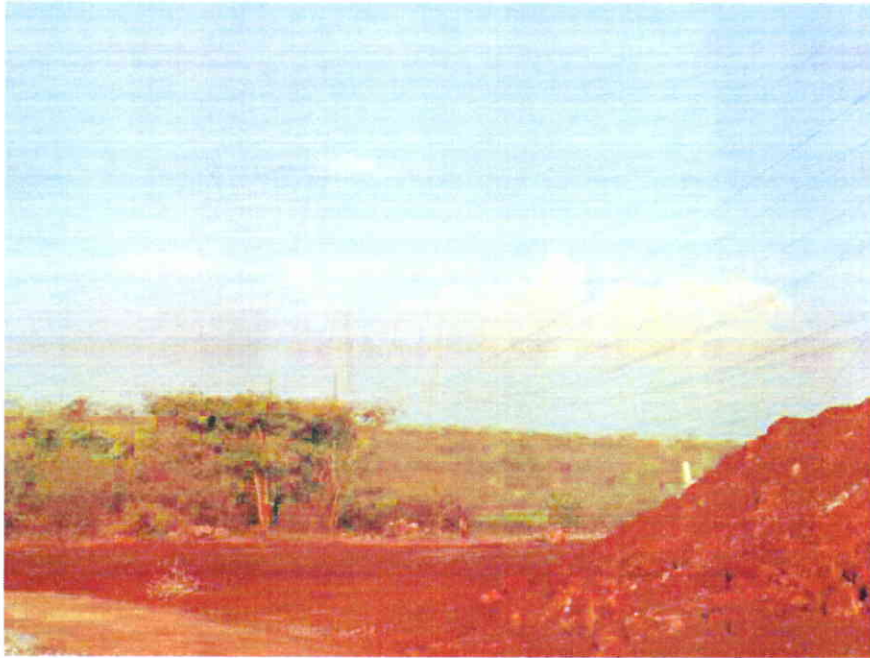


Figure 14 Disturbed area at the Buffelspruit substation.



Figure 15 Area with natural vegetation showing some disturbance along route alternative 1.



Figure 16 Disturbed area close to the Buffelspruit substation.

7. DISCUSSION

During the survey no sites of cultural heritage significance was located in the area to be developed. However, a detailed assessment once the route had been finalized may reveal such sites. Such sites need to be dealt with in accordance with the legislation discussed above. Therefore and 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.

No Stone Age sites are indicated close to Gutshwa on a map contained in a historical atlas of this area. The closest known Stone Age occurrence is that of Late Stone Age sites close to Barberton (Bergh 1999: 4). However many rock art sites are shown around Nelspruit (Bergh 1999: 5). This comes as no surprise as the surveyed area shows mountains which may include caves and rock shelters.

The few sites indicated should however rather be seen as a lack of research in the area and not as an indication that such features does not occur. The close vicinity of water sources and ample grazing would have made it a prime spot for hunting and obtaining water during the past. Therefore one may assume that Stone Age people probably would have moved through the area.

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 closest Early Iron Age site to Gutshwa is that of the Plaston site (Bergh 1999: 6). This is reasonably close to the surveyed area.

Many Late Iron Age sites have been identified around the Nelspruit area (Bergh 1999: 7). One of the sites identified during they survey dates to the Late Iron Age.

The good grazing and access water in the area would have provided a good environment for Iron Age people. Coupled with this there also is ample building material.

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.

At the beginning of the 19th Century some Sotho groups, the Pai and Pulana lived to the north of the Crocodile River and the Swazi to the south thereof (Bergh 1999: 10). During the Difaquane they fled to the north from the Ndebele of Mzilikazi and the Swazi moved into this area (Bergh 1999: 11).

White farmers only settled here after 1845 (Bergh 1999: 16, 130). Many grave yards are known from the wider geographical area (Archaetnos Database).

8. CONCLUSIONS AND RECOMMENDATIONS

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

The final recommendations are as follows:

- From a cultural historical perspective there is no real distinction between route alternative 1 and 2. However, route alternative 1 is the preferred route as the area seems to be the more disturbed than the other one and therefore the risk of identifying heritage sites is lower.
- 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.
- A detailed survey is needed on the final route once a decision has been made. This is needed since access was not possible in all areas along the current two proposed alternatives.
- Due to constraints indicated above it may be possible that certain sites were not identified. In such a case an archaeologist should also be called in to investigate.

9. REFERENCES

- Archaeos Database.
- Bergh, J.S. (red.). 1999. **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies.** Pretoria: J.L. van Schaik.
- Coertze, P.J. & Coertze, R.D. 1996. **Verklarende vakwoordeboek vir Antropologie en Argeologie.** Pretoria: R.D. Coertze.
- Huffman, T.N. 2007. **Handbook to the Iron Age: The Archaeology of Pre-Colonial Farming Societies in Southern Africa.** Scottsville: University of KwaZulu-Natal Press.
- Knudson, S.J. 1978. **Culture in retrospect.** Chicago: Rand McNally College Publishing Company.
- Korsman, S.A. & Meyer, A. 1999. Die Steentydperk en rotskuns. Bergh, J.S. (red.). **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies.** Pretoria: J.L. van Schaik.
- Republic of South Africa. 1980. **Ordinance on Excavations** (Ordinance no. 12 of 1980). The Government Printer: Pretoria.
- Republic of South Africa. 1983. **Human Tissue Act** (Act 65 of 1983). The Government Printer: Pretoria.
- Republic of South Africa. 1999. **National Heritage Resources Act** (No 25 of 1999). Pretoria: the Government Printer.
- Republic of South Africa. 1998. **National Environmental Management Act** (no 107 of 1998). Pretoria: The Government Printer.

Van der Ryst, M.M. & Meyer, A. 1999. Die Ystertydperk. Bergh, J.S. (red.).
Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies. Pretoria: J.L.
van Schaik.

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/ STATEMENT OF HERITAGE 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

SIGNIFICANCE AND FIELD RATING:

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

Field ratings:

- i. National Grade I significance should be managed as part of the national estate
- ii. Provincial Grade II significance should be managed as part of the provincial estate
- iii. Local Grade IIIA should be included in the heritage register and not be mitigated (high significance)
- iv. Local Grade IIIB should be included in the heritage register and may be mitigated (high/medium significance)
- v. General protection A (IV A) site should be mitigated before destruction (high/medium significance)
- vi. General protection B (IV B) site should be recorded before destruction (medium significance)
- vii. General protection C (IV C) phase 1 is seen as sufficient recording and it may be demolished (low significance)

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

APPENDIX E

HERITAGE IMPACT ASSESSMENT PHASES

1. Pre-assessment or scoping phase – establishment of the scope of the project and terms of reference.
2. Baseline assessment – establishment of a broad framework of the potential heritage of an area.
3. Phase I impact assessment – identifying sites, assess their significance, make comments on the impact of the development and makes recommendations for mitigation or conservation.
4. Letter of recommendation for exemption – if there is no likelihood that any sites will be impacted.
5. Phase II mitigation or rescue – planning for the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.
6. Phase III management plan – for rare cases where sites are so important that development cannot be allowed.