



Archaetnos Culture & Cultural
Resource Consultants
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**A REPORT ON A CULTURAL HERITAGE IMPACT ASSESSMENT FOR THE
PROPOSED MIDDELBURG EASTERN BYPASS ROUTE (AS REVISED),
MIDDELBURG, MPUMALANGA PROVINCE**

For:

WANDIMA ENVIRONMENTAL SERVICES

REPORT: **AE01231V**

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Signed



Date 12 June 2012

SUMMARY

Archaetnos cc was requested by Wandima Environmental Consultants to conduct a cultural heritage impact assessment (HIA) for the proposed Middelburg Eastern bypass in the Mpumalanga Province during 2011. As some changes were made to the first proposed route, another HIA was done in 2012.

The Middelburg Eastern Bypass consists of two sections. Section 1 will connect the P154-4 road to Belfast with the R555 to Stoffberg and Section 2 will connect the R555 to Stoffberg with the N11 to Groblersdal. The client indicated the areas where the proposed development is to take place and the survey was confined to this area. A survey of the available literature was also undertaken in order to obtain background information regarding the area.

During the first survey two sites of cultural heritage significance were located in the indicated areas. During the second survey no such sites were identified. One of the sites is of high cultural significance and the other of medium cultural significance. However, due to the changes in the route these are mostly not to be directly impacted on. Therefore no mitigation is required.

The proposed development may therefore continue, but care should be taken that the two sites are not disturbed in any way. It should also be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts is always a distinct possibility. Care should therefore be taken when work on site commences that if any of these are discovered, a qualified archaeologist be called in to investigate.

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1. INTRODUCTION

Archaetnos cc was requested by Wandima Environmental Consultants to conduct a cultural heritage impact assessment for the proposed Middelburg Eastern Bypass. This is at the town of Middelburg in the Mpumalanga Province.

The Middelburg Eastern Bypass consists of two sections (Figure 1-2). Section 1 of the bypass will connect the P154-4 road to Belfast with the R555 to Stoffberg and Section 2 will connect the R555 to Stoffberg with the N11 to Groblersdal. The proposed bypass will link the R555 and the N11 in order to provide an eastern bypass for heavy vehicles to prevent them from going through the residential areas of the town.

The connection point with the R555 is proposed to the south of two water reservoirs in the area, approximately 500m from Renoster Street which is the most northern street in the suburb of Kanonkop. From the connection point on the R555 the alignment is proposed to the south-west of the farm Middelburg Town and Townlands 287-JS in order to have a safe distance between the bypass, Kanonkop and Dennesig neighbourhoods. The proposed route joins the N11 (Groblersdal) road at the intersection of the Keerom road R2464.

The client indicated the areas where the proposed development is to take place and the survey was confined to this area.

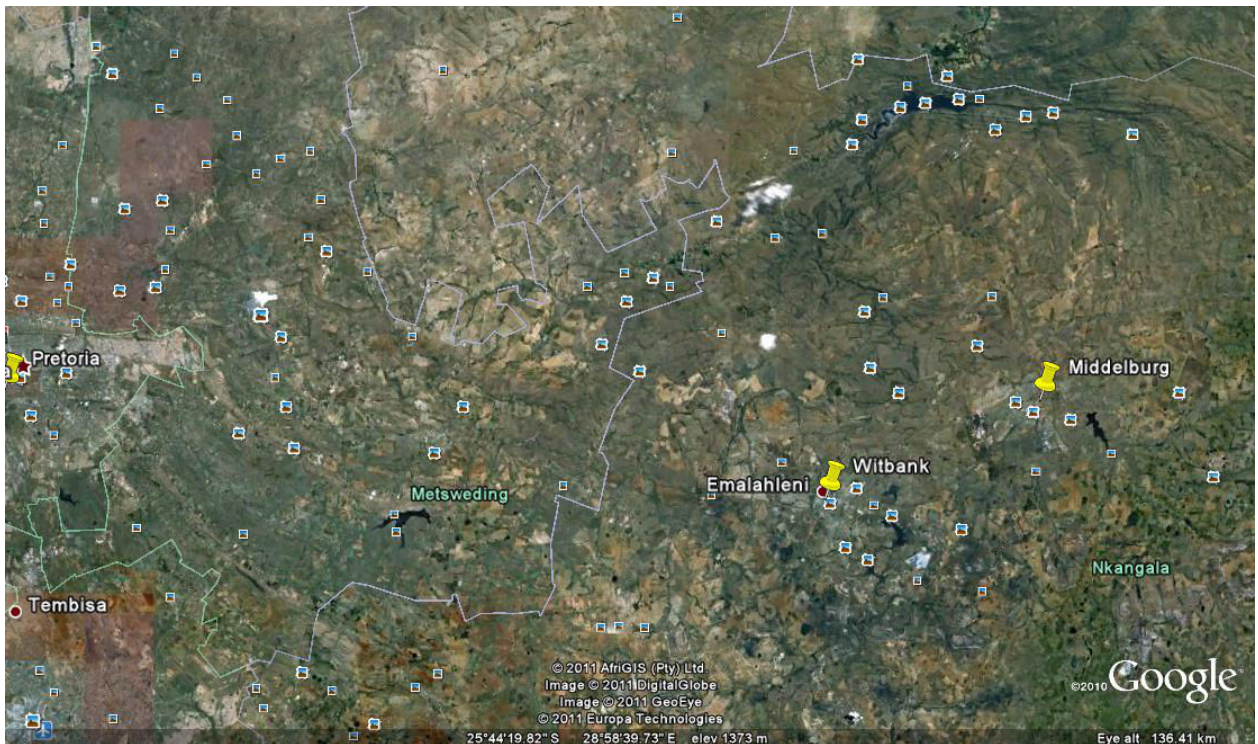


Figure 1 Location of the town of Middelburg, Mpumalanga.

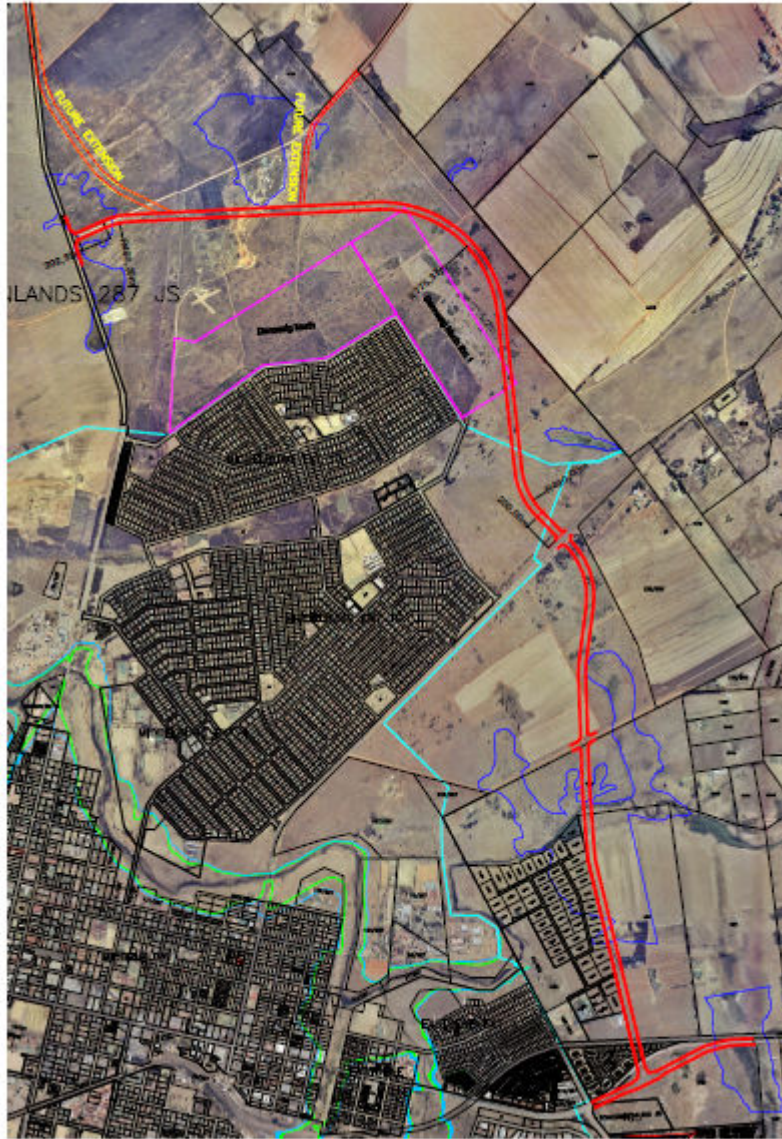


Figure 2 Map indicating the proposed new route alignment.

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. Review applicable legislative requirements.

3. METHODOLOGY

3.1 Survey of literature

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

3.2 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 on foot and via an off-road vehicle.

3.3 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.

3.4 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 a Global Positioning System (GPS). The information was added to the description in order to facilitate the identification of each locality.

3.5 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.

4. CONDITIONS AND 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).
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 dense making archaeological visibility extremely difficult.
8. Although care was taken to give a comprehensive background on the history of the area, it has to be stated that it is impossible to give a complete indication on human activities of the past as sources are not always readily available. The information given in the report should however give a fair reflection of the past.
9. It also is impossible without co-ordinates to know exactly where a proposed route runs through veld and mealie fields. Therefore a wider area is surveyed and sites identified may not be impacted on directly.

5. 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).

5.1 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. 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.

5.2 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.

6. LOCATION AND DESCRIPTION OF THE AREA

As indicated above, the Middelburg Eastern Bypass consists of two sections. These are both to the east and northeast of the town of Middelburg, Mpumalanga Province.

The routes have been mostly disturbed by past human activities, mainly agricultural activities and the grazing of livestock (Figure 3-11). These consist of maize crops in certain areas, roads and a railway line, and areas where small scale excavations were done. Some large

natural rocks are found in the northern section of section 2, but these had no cultural significance. In certain areas the grass cover was quite high, making archaeological visibility extremely difficult.

The topography in section 1 runs from down from south to north where a river is situated. From here it runs up again towards section 2 in a northern direction. From the two reservoirs it again runs down to the west.

Farm houses and other farm related structures were found throughout the area. These were however either not older than 60 years, have been changed to such an extent that it has no heritage value or is in too much of a deteriorated stage to be considered as having any heritage value.



Figure 3 **General view of the surveyed area at section 2.**



Figure 4 **Maize fields in section 2.**



Figure 5 **General view of section1.**



Figure 6 General view of section 1 close to the railway line.



Figure 7 General view of the southern section (section 1) where the route will go through.



Figure 8 Disturbed area due to excavations in section2.



Figure 9 View of western section of section 2.



Figure 10 General view of old fields and maize fields in section 1.



Figure 11 Grassland in the surveyed area.

7. DISCUSSION

During the survey two sites of cultural heritage significance were located in the area to be developed. This report indicates suitable mitigation measures in this regard. In order to

enable the reader to better understand this, 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 on a map contained in a historical atlas of this area (Bergh 1999: 4). The closest known Stone Age occurrence is that of rock art close to the Olifants River to the south of Witbank (Bergh 1999: 5). This however should rather be seen as a lack of research in the area and not as an indication that such features does not occur.

However, no natural shelters were seen during the survey and therefore it is possible that these people did not stay here for long times. 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. In fact, some Middle Stone Age artifacts were identified out of context, within the study 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.

No Iron Age sites are indicated in a historical atlas around the town of Middelburg, but this may only indicate a lack of research. The closest known Iron Age occurrences to the surveyed area are Late Iron Age sites that have been identified to the west of Bronkhorstspuit and in the vicinity of Bethal (Bergh 1999: 7-8). Late Iron Age sites were however identified during a previous survey on the farm Middelburg Town and Townlands 287 JS (Van Vollenhoven & Pelsler 2009: 11-19).

The good grazing and access water in the area would have provided a good environment for Iron Age people although building material seem to be reasonably scarce. One would therefore expect that Iron Age people may have utilized the area. This is the same reason why white settlers moved into this environment later on.

One of the sites identified during the survey previous survey is an Iron Age site (see Van Vollenhoven & Pelsler 2011).

7.3 Historical Age

The Historical Age started with the first recorded oral histories in the area. It includes the immigration of people that were able to read and write.

The first white people to move through this area were the party of the traveler, Robert Scoon who passed through during 1836 (Bergh 1999: 13). Although the Voortrekkers moved across the Vaal River during the 1830's, it seems as if white people only settled here after 1850 (Bergh 1999: 14-15).

The town of Middelburg was established in 1872 (Bergh 1999: 20). During the Anglo-Boer War (1899-1902) both the Boer and British forces occupied the town, but no skirmishes took place close thereto (Bergh 1999: 51). There was however concentration camps for both white and black people during this time at Middelburg (Bergh 1999: 54).

One of the sites found during the first survey date to the historical age (see Van Vollenhoven & Pelsler 2011. This is discussed below.

7.4 Discussion of sites identified during the survey

Although no sites were identified during the second survey on the new alignment of the route, the two sites identified during the previous survey are included here. This creates a more comprehensive background of the area.

Site 1

This site was found on Section 2 of the route, close to the water reservoirs. It is a Late Iron Age/ Historical site consisting of very low stone walls, semi-circular walls and heaps of stones (Figure 12-13). Some of the heaps may indicate graves although this is not clear at this stage. Some upper grinding stones were also found.

GPS: 25°43'58,7"S
29°29'52,3"E



Figure 12 Heaps of stones at site no 1.



Figure 13 Another heap of stones that may indicate a grave.

The site is far enough to the east of the new alignment for the route that it will not be directly impacted on. The site is only of **medium** cultural significance. The heaps of stones probably do not represent graves, although this cannot be proved at this stage. Should it be graves, the site will have a **high** cultural significance.

With graves it usually is best to leave it in situ. The developer should ensure that the site is not impacted on by the construction work for the new route. It would therefore be best to temporarily fence the site in during construction work, in order to make it easy for construction vehicles and activities to steer clear thereof.

Site 2

This is the remains of a blockhouse (small fortification) dating from the Anglo-Boer War (1899-1902). It is situated on section 2 of the route, even closer to the reservoirs than site no 1. There also is a large stone walled enclosure nearby which was probably used for horses or as a protective wall for the tents of the garrison (Figure 14-16).

GPS: 25°44'08,8"S
29°29'50,0"E

The site has a **high** cultural significance as very few remains of the block houses are still to be found in situ. Blockhouses were built by the British during the War in order to make it difficult for Boer commandos to move around and to protect strategic routes. This one probably guarded the route between Stoffberg and Middelburg.

Two types of blockhouses were built, namely masonry and corrugated iron ones. The latter was called Rice pattern blockhouses and was prefabricated in Cape Town, Pretoria and Middelburg, Mpumalanga (Van Vollenhoven 1992: 180). The one found here, are the stone basis on which such a Rice pattern blockhouse would have been placed.

Other stones were also placed here recently. These probably came from the building of the reservoirs, but these can clearly be distinguished from the stones of the blockhouse. The trigonometric beacon is also placed on top of the remains of the blockhouse.

The site may not be demolished. It however is further away from the new alignment for the route than what was the case with the previous alignment. Therefore there is no impact, but the developer should make sure that construction vehicles and activities steer well clear of the site. Again, as indicated above, a temporary fence could be erected during construction work in order to prevent any damage to the site.



Figure 14 Stone enclosure at the blockhouse consisting of two parallel walls filled in with stones, very typical of military structures.



Figure 15 Close up of a wall that forms part of the basis of the blockhouse.



Figure 16 The basis of the blockhouse. The lighter colored stones in the front were placed there much later.

8. CONCLUSION AND RECOMMENDATIONS

The propose new alignment route for the Middelburg Eastern Bypass was surveyed successfully. The sites identified during the first survey are indicated in figure 17.

The rating of the sites is as follows:

- Site 1

Nature: Neutral
Extent: Medium
Duration: High
Intensity: Medium
Potential for impact on irreplaceable resources: Low
Consequence: High
Probability: Low
Significance: Medium

- Site 2

Nature: Negative
Extent: Medium
Duration: High

Intensity: High
Potential for impact on irreplaceable resources: Low
Consequence: High
Probability: Low
Significance: High

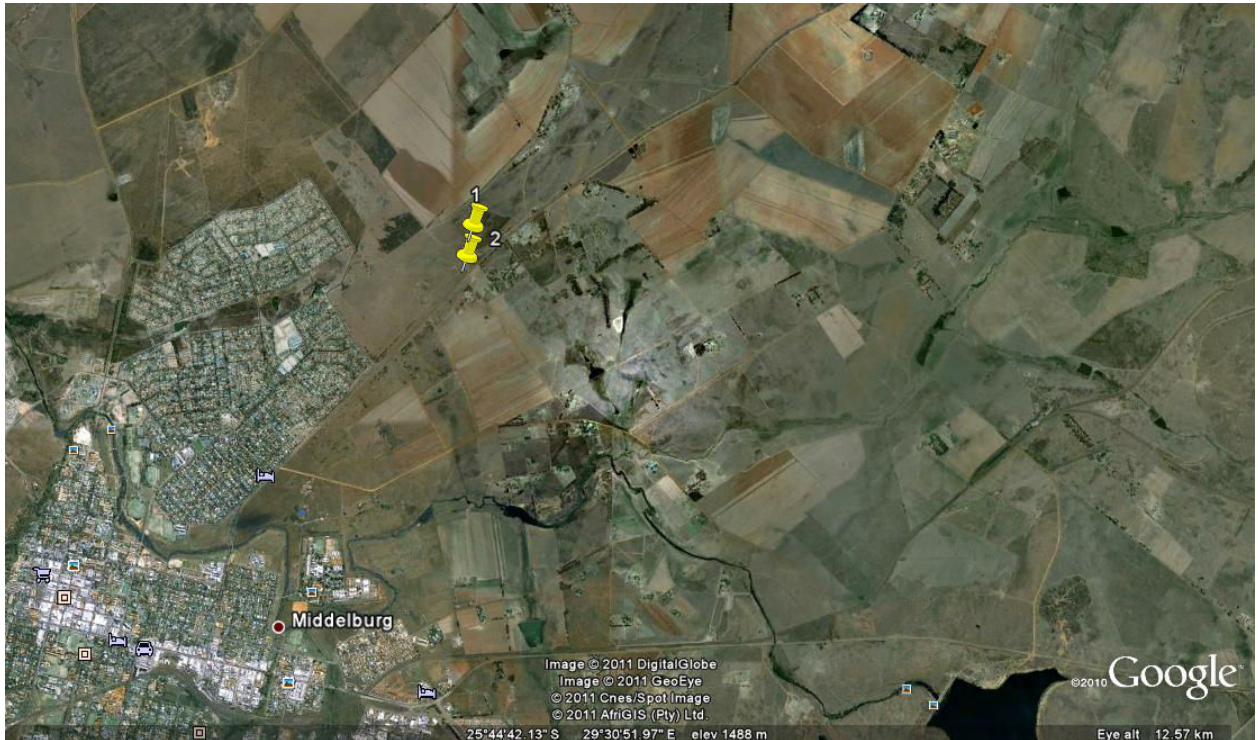


Figure 17 Location of the two sites found during the first survey of the area.

The following is recommended with regards to the mitigation of sites found during the survey:

- Site number 1 is of **medium** cultural significance. It will not be impacted on directly, but the developer needs to ensure that they do steer clear thereof during work on site. The heaps of stones probably do not represent graves, although this cannot be proved at this stage. Should it be graves, the site will have a **high** cultural significance.
- It would be best to temporarily fence the site in during construction of the route. This would ensure that it is dealt with appropriately whatever the circumstances.
- Site no 2 has a **high** cultural significance as very few remains of the block houses are still to be found in situ. The site may not be demolished.
- The new alignment clearly is quite far from the site. The developer should however ensure that they steer clear from the site during construction activities.
- It therefore is recommended that the site be fenced in temporarily during work on site in order to prevent any possible damage thereto.

- It should be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts is always a distinct possibility. Sites may also be hidden by the current long grass in the area. This includes graves. Care should therefore be taken when development commences that if any of these are discovered, a qualified archaeologist be called in to investigate the occurrence.
- The proposed development may continue.

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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