Archaetnos Culture & Cultural
Resource Consultants
BK 98 09854/23

A REPORT ON A BASIC HERITAGE ASSESSMENT FOR THE PROPOSED ESKOM WARDEN-VREDE 88KV POWER LINE, FREE STATE PROVINCE

For:

Wandima Environmental Services

REPORT: **AE01369V**

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November 2013

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SUMMARY

Archaetnos cc was appointed by Wandima Environmental Services to conduct Basic Heritage Assessment for the Eskom 88 kV power line between Warden and Vrede. This is located in the Free State Province.

A basic assessment entails the establishment of a broad framework of the potential heritage of an area. Two alternatives for the route were investigated.

The fieldwork undertaken revealed six sites of cultural heritage significance. It has to be realized however, that during a basic assessment a detailed survey is not done and therefore these sites only are an indication of what is to be expected. Such sites should rather be avoided during development. If necessary it should be mitigated during construction activities.

From a heritage perspective, it seems as if the preferred alternative, alternative 1, is preferred. This is due to only one site being identified here (as opposed to 5 on alternative 2) and the fact that the line seems to miss the identified heritage site in any case. It is therefore proposed that once a final decision has been made and the pylon positions are known, a full heritage impact assessment be done in order to determine the actual impact.

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 the development 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 appointed by Wandima Environmental Services to conduct Basic Heritage Assessment for the Eskom 88 kV power line between Warden and Vrede. This is located in the Free State Province.

A basic assessment entails the establishment of a broad framework of the potential heritage of an area. Two alternatives for the route were investigated. The line will run between the existing Vrede Municipal Substation and the existing Warden Rural Substation (Figure 1-4).

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

Figure 1 Location of the town of Vrede and Warden. North reference is to the top.

Figure 2 Closer view of the location of the surveyed area.

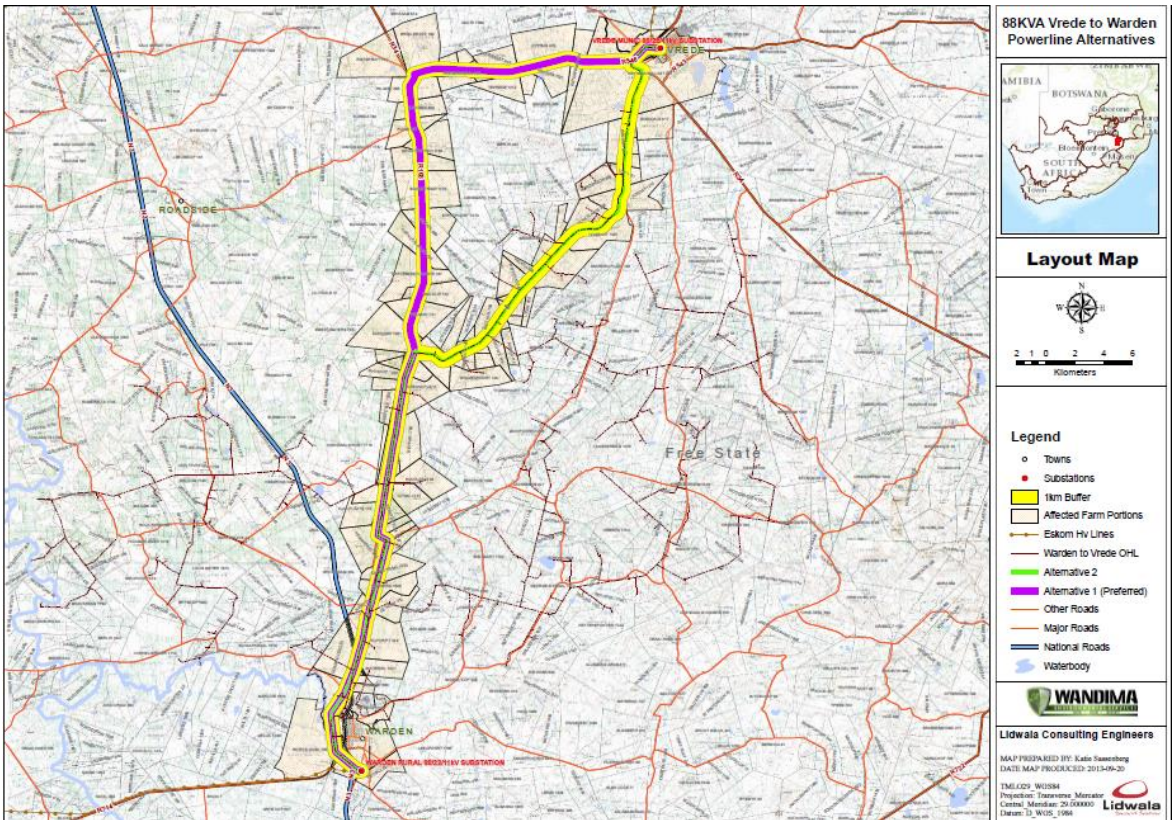

Figure 3 Map indicating the two route alternatives - alternative 2 is shown in purple and yellow and alternative 2 in green and yellow.

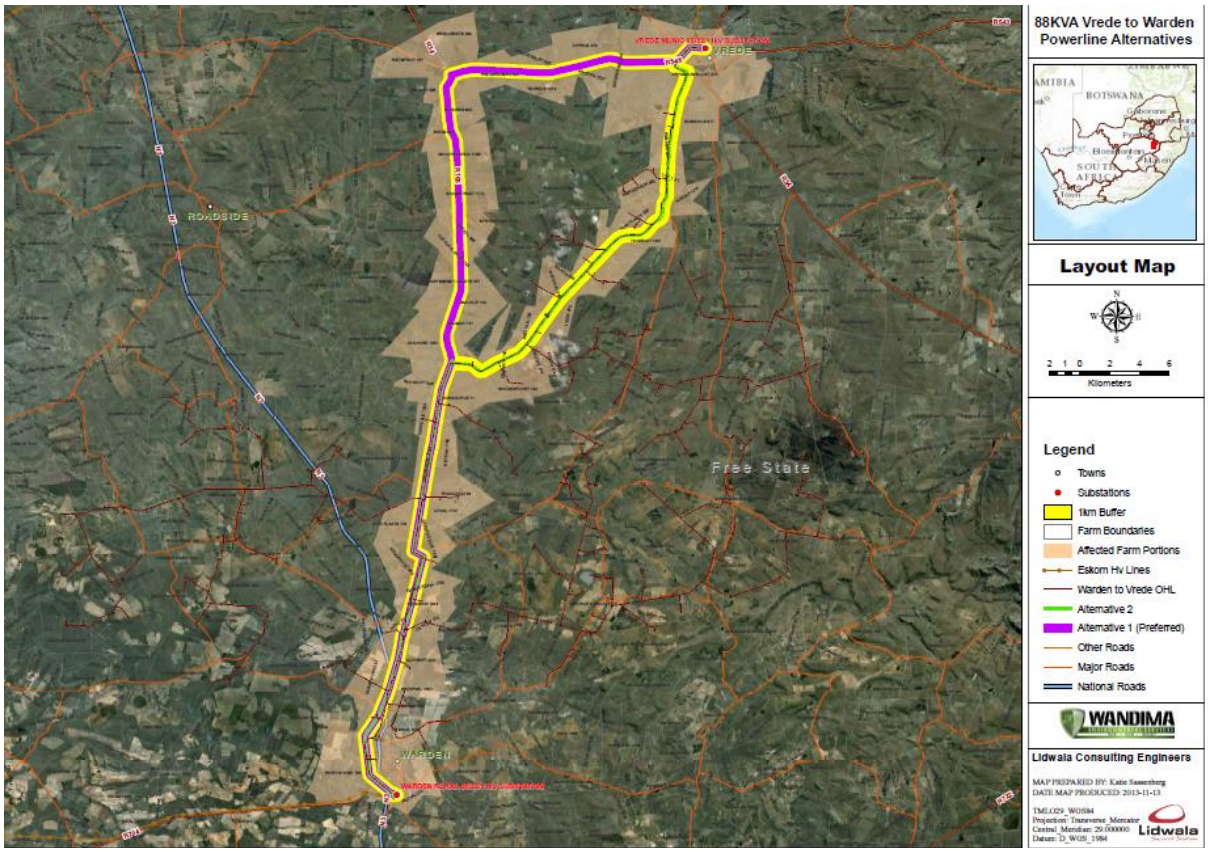

Figure 4 Google image indicating the two alternatives.

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). However, since this was a basic assessment, a detailed survey was not done and therefore these sites only are an indication of what is to be expected

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. In this particular case there were certain areas where the vegetation cover was dense and high, making archaeological visibility difficult.

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 paleontological importance
g. Graves and burial grounds
h. Sites of significance relating to the history of slavery
i. Movable objects (e.g. archaeological, paleontological, 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 000m^2 or involve three or more existing erven or subdivisions thereof

d. Re-zoning of a site exceeding 10 000 m^2
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 paleontological site or any meteorite;
b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or paleontological 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 paleontological material or object, or any meteorite; or
d. Bring onto or use at an archaeological or paleontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and paleontological 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. THE INTERNATIONAL FINANCE CORPORATIONS' PERFORMANCE STANDARD FOR CULTURAL HERITAGE

This standard recognizes the importance of cultural heritage for current and future generations. It aims to ensure that clients protect cultural heritage in the course of their project activities.

This is done by clients abiding to the law and having heritage surveys done in order to identify and protect cultural heritage resources via field studies and the documentation of such resources. These need to be done by competent professionals (e.g. archaeologists and cultural historians). Possible chance finds, encountered during the project development, also needs to be managed by not disturbing it and by having it assessed by professionals.

Impacts on the cultural heritage should be minimized. This include the possible maintenance of such sites in situ, or when impossible, the restoration of the functionality of the cultural heritage in a different location. When cultural historical and archaeological artifacts and structures need to be removed is should be done by professionals and by abiding to the applicable legislation. The removal of cultural heritage resources may however only be considered if there are no technically or financially feasible alternatives. In considering the removal of cultural resources, it should be outweighed by the benefits of the overall project to the effected communities. Again professionals should carry out the work and adhere to the best available techniques.

It is necessary to engage into consultation with affected communities. This entails that access to such communities should be granted to their cultural heritage if this is applicable. Compensation for the loss of cultural heritage should only be given in extra-ordinary circumstances.

Critical cultural heritage may not be impacted on. Professionals should be used to advise on the assessment and protection thereof. Utilization of cultural heritage resources should always be done in consultation with the effected communities in order to be consistent with their customs and traditions and to come to agreements with relation to possible equitable sharing of benefits from commercialization.

6. METHODOLOGY

6.1 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.

6.2 Field survey

The survey was conducted according to generally accepted heritage practices and was aimed at locating a broad overview of the heritage of the area. The aim therefore was to find as much objects, sites and features of cultural significance in the area of proposed development. One regularly looks a bit wider than the demarcated area, as the surrounding context needs to be taken into consideration.

If required, the location/position of any site was determined by means of a Global Positioning System (GPS)[1], while photographs were also taken where needed. The survey was undertaken by a physical survey via off-road vehicle and on foot, but since it was a linear development following existing roads, the foot survey was limited to investigation certain areas where the vegetation seemed to indicate that there may be a disturbance which could be as a result of the presence of a heritage resource (Figure 5). The length of the proposed route is approximately 60 km, but of course more as one needs to take the alternative also into consideration. The field survey was done by one person and took 8 hours to complete.

Figure 5 Track route of the surveyed route.

6.3 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

[1] A Garmin Oregon 550 with an accuracy factor of a few meters.

circumstances. When applicable, the information is included in the text and referred to in the bibliography.

6.4 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.

6.5 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.

7. DESCRIPTION OF THE ENVIRONMENT

The two proposed routes runs through a large number of farms (see Figure 3). Both routes start at the Vrede Substation (Figure 6). Both also more or less have similar environmental characteristics.

Alternative 1 follows the R546 in a western direction, but on the northern side of the road. The environment here mainly consists of agricultural fields (Figure 7) and grazing land (Figure 8) which was reasonably short during the survey, mostly since it is cut to make fodder (Figure 9). The topography of the area is formed by a landscape with rolling hills (Figure 10).

The route then follows the R103 in a southern direction, but to the west of the road. Again the landscape is mostly features by rolling hills, agricultural fields and short grass (Figure 11-12). Here and there the grass cover is longer and more dense (Figure 13) which had a negative effect on archaeological visibility. At Warden the route follows the N3 for a short while and then ends at the Warden Rural Substation, to the south of the town (Figure 14).

Alternative 2 runs from the Vrede substation in a south-western direction along a gravel road. Both sides of the road were surveyed. The first part of the route goes through the town, which of course then is a disturbed landscape (Figure 15). Again the route shows similar signs of disturbance than the first alternative, being agricultural fields (Figure 16). Other sections of the route shows areas with short

grass, used for grazing (Figure 17) as well as sections with longer grass (Figure 18). For a long stretch, the route runs in a servitude (Figure 19). A few farm buildings and associated infrastructure are found along the route. These however mostly have no heritage significance. Most of the heritage sites found during the survey was identified on this section.

The route now turns to the south and follows the R103, but on the eastern side thereof. The topography consists of rolling hills. Again the environmental characteristics are similar to other sections described, consisting of long and short grass as well as agricultural fields (Figure 20-21). The last section of the route also follows the N3. In Warden, a few houses are found along the route (Figure 22), but these have no heritage significance. It ends at the Warden Rural Substation.

Figure 6 The Vrede Substation.

Figure 7 Agricultural fields along the R546, alternative 1.

Figure 8 Area with short grass along alternative 1.

Figure 9 Farm where grass is being made into fodder.

Figure 10 Rolling hills along route alternative 1.

Figure 11 Agricultural fields along route alternative 1 on the R103.

Figure 12 Short grass along route alternative 1.

Figure 13 Long grass along route alternative 1.

Figure 14 The Warden Rural Substation.

Figure 15 Route alternative 2 through the town of Vrede.

Figure 16 Agricultural fields along route alternative 2.

Figure 17 Area with rolling hills and short grass along route alternative 2.

Figure 18 Long grass along alternative 2.

Figure 19 Servitude along the gravel road at alternative 2.

Figure 20 Short grass along alternative 2 on the R103.

Figure 21 Agricultural fields along alternative 2 on the R103.

Figure 22 Houses in the town of Warden along alternative 2.

8. HISTORICAL CONTEXT

During the survey six sites of cultural heritage significance were located along the two proposed routes. However, it needs to be considered that sites may become known later once a detailed survey has been done 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.

Information as to the Stone Age in this area is very limited, probably due to a lack of research. At Florisbad and Erfkroon some Early Stone Age sites were identified. At the latter Middle Stone Age material was also found (Bergh 1999: 4-5).

Many Early Stone Age sites are known from the area around the Vaal River. One of these is at Klipplaattdrif, close to Vanderbijlpark, just on the opposite side of the river. In the Vredefort Dome, to the north-west of the project area, scattered finds of Middle and Late Stone Age tools have been recorded and at Florisbad and Voigtspost Late Stone Age material was uncovered (Mitchell 2002: 73, 110, 138).

Rock engravings were also found between the Vaal and Wilge Rivers, to the north-east of the project area (Bergh 1999: 4-5). These are usually associated with the Late Stone Age.

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. One should therefore be on the lookout for stone tools as 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.

No Early Iron Age sites has been recorded in the project area, but again this probably only relates to the lack of research as the environment definitely is suitable for human habitation. Late Iron Age sites were however identified to the north of Vrede (Bergh 1999: 7). Huffman (2007: 167, 179, 203) indicates that Late Iron Age people lived here between AD 1450 and 1650 and again between AD 1700 and 1840. Late Iron Ages sites are also known from Winburg to the south-west of the surveyed area and Platberg to the west thereof (Huffman 2007: 179, 195). During a survey done by Maggs (1976: 27) many Late Iron Age sites were also identified in the broader geographical area.

These sites are usually located close to high lying hills. The environment is also suitable for Iron Age people due to the good grazing and access water in the area. These would have provided a good environment for Iron Age people although building material seem to be reasonably scarce. One may therefore find cultural artifacts, such as potsherds during construction activities.

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. This era is sometimes called the Colonial era or the recent past.

Due to factors such as population growth and a decrease in mortality rates, more people inhabited the country during the recent historical past. Therefore and because less time has passed, much more cultural heritage resources from this era have been left on the landscape. It is important to note that all cultural resources older than 60 years are potentially regarded as part of the heritage and that detailed studies are needed in order to determine whether these indeed have cultural significance. Factors to be considered include aesthetic, scientific, cultural and religious value of such resources.

During the Difaquane, specifically between 1823 and 1827, the Ndebele of Mzilikazi settled around this area (Bergh 1999: 11). The early white travelers did not move through the northern Free State area. The closest was the hunter WC Harris who moved through the Gatsrand in 1836 (Bergh 1999: 13). During the same year the Voortrekker parties of Louis Tregardt and Hans van Rensburg did however move

through the area (Bergh 1999: 14). Hereafter white farmers started to settle on farms here.

One may therefore expect to find Historical Late Iron Age settlements linked to the indigenous people here. Other possibilities are farm buildings, graves and objects linked to the first white farmers.

9. DISCUSSION OF SITES IDENTIFIED DURING THE SURVEY

9.1 Route Alternative 1

Only one site of note was identified here.

Site 6 – Grave yard

This is a large graveyard. It is the Warden Municipal Graveyard and is very large, and therefore the graves were not counted or dates determined. It is however assumed that most of the graves will be younger than 60 years, but there will likely be a few older than 60 years.

Note that no photograph was taken as it was too dangerous to stop here along the highway.

GPS: 27°51.882'S
28°57.368"E

Due to the sensitivity of this issue, graves are always regarded as having a **high** cultural significance. These graves are of a local significance and are therefore given a field rating of Grade IIIB. It may therefore be mitigated.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a developmentis done.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development. Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved. Unknown graves are handled similarly to heritage graves.

However, it is believed that these graves are far enough from the proposed route north to pose a problem. Should it however be the case and this alternative is chosen, the route will have to be changed in order for the graves not to be impacted on. The power lines will need to be at least 20m from the site.

9.2 Route Alternative 2

Five sites of note were identified here.

Site 1 – Station houses in Vrede

This is a number of 4 houses on the Vrede Station. The houses are dilapidated as it is not in use any more (Figure 23). However they are good examples of the era between the late 19th and early 20th century and made of sandstone. It would be possible to conserve these.

GPS: 27°26.163'S
29°08.984'E

Figure 23 Some of the station houses in Vrede.

The site is regarded as having a medium cultural significance. It is not very unique, but most likely older than 60 years. The field rating thereof is Local Protection, Grade IIIB. It should be included in the heritage register and may not be mitigated.

It means that if this route alternative is chosen, the power lines would have to steer clear of these houses so that there is no impact thereon. It basically means that it would have to be on the opposite (southern) side of the road.

Site 2 – Farm yard

This is a farm yard consisting of a house, a stone packed kraal and 5 outbuildings. Only the kraal is likely older than 60 years, but not very unique (Figure 24). It is still in use.

GPS: 27°28.536'S
29°08.121'E

Figure 24 Farm yard (site 2) along route alternative 2.

The site is regarded as having a low cultural significance. It is not very unique, but the kraal and some of the buildings may be older than 60 years. The field rating thereof is General Protection, Grade C (IVC). It should be included in the heritage register and may be demolished.

It means that if this route alternative is chosen, the farm yard does not really pose a problem. However, it is unnecessary to demolish it, as the route may be moved to the other (northern) side of the road.

Site 3 – graves

This is a site containing at least 30 graves (Figure 25). These are all stone or cement packed and only some have headstones, also made of stone.

None of the graves have any legible information. Therefore only one of the three categories of graves was identified, being those without a date of death (called unknown graves). Unknown graves are handled similarly to heritage graves.

GPS: 27°32.492’S
29°06.535’E

Figure 25 Some of the graves at site no. 3.

Graves are always regarded as having a **high** cultural significance. The field rating thereof is Local Grade III B. It should be included in the heritage register, but may be mitigated.

Two possibilities exist. The first option would be to fence the graves in and have a management plan drafted for the sustainable preservation thereof. This should be written by a heritage expert. This usually is done when the graves are in no danger of being damaged, but where there will be a secondary impact due to the development.

The second option is to exhume the mortal remains and then to have it relocated. This usually is done when the graves are in the area to be directly affected by the mining activities. For this a specific procedure should be followed which includes social consultation. For graves younger than 60 years only an undertaker is needed. For those older than 60 years and unknown graves an undertaker and archaeologist is needed. Permits should be obtained from the Burial Grounds and Graves unit of SAHRA. This procedure is quite lengthy and involves social consultation.

In the case of a power line it however is possible to either move the line to the opposite (Southern) side of the road or to just move the line at least 20m away from the graves. Of course, this only is necessary if alternative 2 is chosen for the power line route.

Site 4 – Farm yard

This is a farm yard consisting of two houses and a few associated structures. The two houses are in a reasonable condition, but still had been damaged much (Figure 26). It is not very unique although it may be older than 60 years.

GPS: 27°35.334'S
29°03.653'E

Figure 26 Farm yard (site 4) along route alternative 2.

The site is regarded as having a low cultural significance. It is not very unique, but the two houses most likely are older than 60 years. The field rating thereof is General Protection, Grade C (IVC). It should be included in the heritage register and may be demolished.

It means that if this route alternative is chosen, the farm yard does not really pose a problem. However, it is unnecessary to demolish it, as the route may be moved to the other (southern) side of the road.

Site 5 – Historical farm house

This is a historical farm house made from sandstone and with a corrugated iron roof. It is older than 60 years and most likely date to the early 20th century (Figure 27). It may not be very unique, but still is in quite a good condition.

GPS: 27°37.241’S
29°00.946’E

Figure 27 Farm yard along route alternative 2.

The site is regarded as having a medium cultural significance. It is not very unique, but in a good condition, although the roof may have been added later on. The field rating thereof is General Protection, Grade A (IVA). It should be included in the heritage register and should be mitigated before it may be may be demolished. However, even if this route alternative is chosen, it is unnecessary to demolish it, as the route may be moved to the other (southern) side of the road.

10. CONCLUSIONS AND RECOMMENDATIONS

In conclusion it can be stated that the assessment of the area was conducted successfully. As indicated six sites of cultural significance has been found (Figure 28). One of these is on route alternative 1 and 5 on route alternative 2.

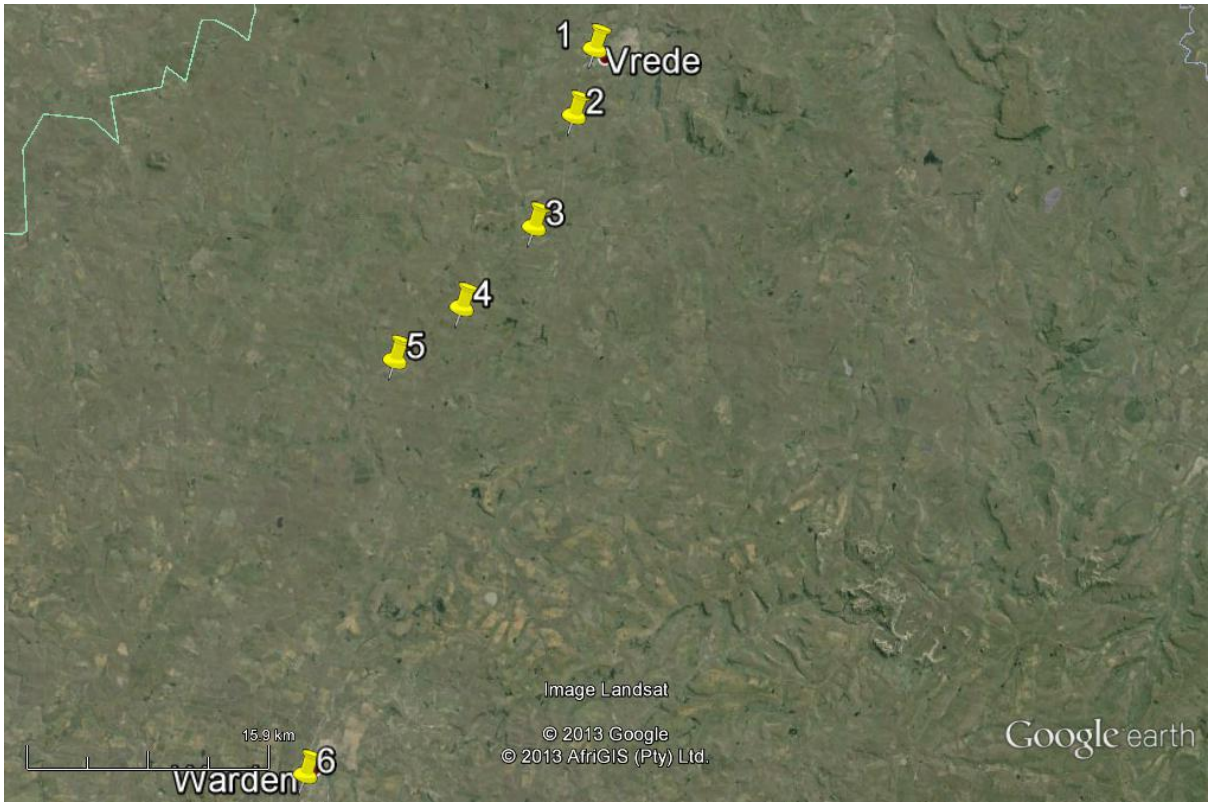

Figure 31 Location of the sites identified during the survey.

The final recommendations are as follows:

- From a heritage perspective it is recommended that alternative 1 be used for the Vrede-Warden power line, since it seems the impact is much less that on alternative 2.

- Whichever of the alternatives are chosen, a detailed Heritage Impact Assessment will still be needed.

- Should alternative 1 be chosen, the power line may not over span the grave site and should steer at least 20 m clear thereof. If possible the route may be aligned much further from the graves.

- As there may be an impact during construction activities, the grave site should be demarcated during this time.

- Should alternative 2 be chosen, the likely impact may be more severe and more deviations to the route will be needed.

- For site 3 (the graves) the power line may not over span the grave site and should steer at least 20 m clear thereof. If possible the route may be aligned much further from the graves. As there may be an impact during construction activities, the grave site should be demarcated during this time.

- For site 1, the station houses, the power lines would have to steer clear of these houses so that there is no impact thereon. It basically means that it would have to be on the opposite (southern) side of the road. It should also be included in the heritage register and may not be mitigated.

- Site 2 and 4, the farm yards, do not really pose a problem. It should be included in the heritage register and may be demolished. However, it is unnecessary to demolish it, as the route may be moved to the other side of the road.

- Site 5, the historical farm house, should also be included in the heritage register and should be mitigated before it may be may be demolished. However, even if this route alternative is chosen, it is unnecessary to demolish it, as the route may be moved to the other (southern) side of the road.

- The proposed development may continue as long as the above mentioned recommendations are adhered to.

- 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.

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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/ 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.
Aestetic 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.