

**PHASE ONE HERITAGE IMPACT ASSESSMENT
OF THE PROPOSED COAL-LINK, NZALO
(MQABE) NEAR VRYHEID, KZN.**



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21 February 2014

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LIST OF ABBREVIATIONS AND ACRONYMS

EIA	Early Iron Age
ESA	Early Stone Age
HISTORIC PERIOD	Since the arrival of the white settlers - c. AD 1820 in this part of the country
IRON AGE	Early Iron Age AD 200 - AD 1000 Late Iron Age AD 1000 - AD 1830
LIA	Late Iron Age
LSA	Late Stone Age
MSA	Middle Stone Age
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998 and associated regulations (2006).
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999) and associated regulations (2000)
SAHRA	South African Heritage Resources Agency
STONE AGE	Early Stone Age 2 000 000 - 250 000 BP Middle Stone Age 250 000 - 25 000 BP Late Stone Age 30 000 - until c. AD 200

EXECUTIVE SUMMARY

A heritage survey of the proposed Coal-Link Nzalo (Mqwabe) Powerline near Vryheid, KwaZulu-Natal identified five heritage sites. These sites include one Later Iron Age Site, and four Grave Sites. A buffer of at least 50m must be maintained around each Site. The developer may therefore have to shift the trajectory of the proposed power line in the near vicinity of these sites in order to maintain this buffer zone. A second phase heritage impact assessment will be required should the developer decide to request mitigation in order to continue development within these buffer zones. A second phase heritage impact assessment will include the application of a permit from Amafa the rescue excavation of the Iron Age Site and the possible exhumation of relevant graves. Attention is drawn to the South African Heritage Resources Act, 1999 (Act No. 25 of 1999) and the KwaZulu-Natal Heritage Act (Act no 4 of 2008) which, requires that operations that expose archaeological or historical remains should cease immediately, pending evaluation by the provincial heritage agency.

1 BACKGROUND INFORMATION ON THE PROJECT

Table 1. Background information

Consultant:	Frans Prins (Active Heritage cc) for Sivest
Type of development:	Rebuild the 88kV powerline. A powerline alternative has also been proposed. The alternative pertains to the 88kV powerline route options. The first option pertains to the powerlines running in the same servitude. The second option pertains to running the in- and out- 88kV powerlines in separate (already proposed) servitudes. It was thus far assumed that the in- and out- 88kV powerlines would run side-by-side in <u>either</u> the south or north route option. The second option includes the running of one 88kV powerline in the north route alternative and one in the south alternative as well. At Nzalo specifically, the consultants investigated the option of running one 88kV line each in Route Alternative 1 and 2A (north option) or running one 88kV line each in Route Alternative 2B and 2C (south option).
Rezoning or subdivision:	Rezoning
Terms of reference	To carry out a Heritage Impact Assessment
Legislative requirements:	The Heritage Impact Assessment was carried out in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) and following the requirements of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA) and the KwaZulu-Natal Heritage Act, 1997 (Act No. 4 of 2008)

1.1. Details of the area surveyed:

The project area is located approximately 15km north east of Vryheid (Fig 1). The coordinates of the project area are: 27° 36' 27.22" S 30° 52' 20.42" and 27° 38' 14.13" S 30° 52' 31.27" E respectively. The footprint comprises of two power stations with associated proposed powerlines (Fig 2). It comprises mainly rural communal area which is intercepted by planted fields, open areas, woodlands, and overgrazed grassland areas. Dongas and sheet erosion scars occur to the north and south of the band. Some contemporary Zulu homesteads occur within the bands along the proposed trajectories of the powerlines. Activities associated with small-scale subsistence farming are evident in and around these homesteads.

BACKGROUND TO ARCHAEOLOGICAL HISTORY OF AREA

Portions of the greater Vryheid and Nqutu areas have been systematically surveyed for archaeological and heritage sites in the past. These were mostly conducted by archaeologists attached to the then Natal Museum as well as by Amafa staff. Sixty sites are recorded in the data base of the KwaZulu-Natal Museum. These include fourteen Early Stone Age sites, eight Middle Stone Age sites, ten Later Stone Age sites, three rock painting sites, and forty Later Iron Age sites. The majority of the Early Stone Age sites occur in open air context in large dongas. Middle and Later Stone Age sites occur in context in four rock shelters. Two of these shelters also contain typical San fineline paintings. The majority of the known Later Iron Age sites are situated to the south east of Nqutu. They were located during a large scale survey of the area by archaeologists who were interested in the Later Iron Age ecology of Zululand (Hall 1980). They are demarcated by characteristic stone walling. Three stone walling typologies have been identified in the area namely Type A, C, and D (ibid).

The San were the owners of the land for almost 30 000 years but the local demography started to change soon after 2000 years ago when the first Bantu-speaking farmers crossed the Limpopo River and arrived in South Africa. Around 800 years ago, if not earlier, Bantu-speaking farmers also settled in the greater Vryheid area. Although some of the sites constructed by these African farmers consisted of stone walling not all of them were made from stone. Sites located elsewhere in the

KwaZulu-Natal show that many settlements just consisted of wattle and daub structures. These Later Iron Age sites were most probably inhabited by Nguni-speaking groups who were the direct ancestors of the Zulu (Bryant 1965). However after 1840 some Southern Sotho-speaking Tlokwe people also settled in the area towards Nqutu. With the expansion of the Zulu kingdom of King Shaka in the early 1820's the study area became firmly incorporated into this pre-capitalist kingdom. It is not surprising that this area played such a central part in the colonial period history of KwaZulu-Natal. The Battle of Blood River, between Boer and Zulu, took place to the immediate west of the study area in 1838 (Derwent 2006). In addition, the Anglo-Zulu War of 1879 was also acted out in large areas adjacent to the study area (ibid). These battle field sites as well as associated graves and buildings of the era are proclaimed heritage sites and are protected by legislation.

2 BACKGROUND INFORMATION OF THE SURVEY

2.1 Methodology

A desktop study was conducted of the archaeological databases housed in the KwaZulu-Natal Museum. The SAHRIS website was consulted for previous heritage surveys and heritage site data covering the project area. In addition, the available archaeological and heritage literature covering the greater Vryheid area was also consulted.

A ground survey, following standard and accepted archaeological procedures, was conducted. Particular attention was focused on the contemporary Zulu homesteads situated within the proposed mining band in order to locate graves and other features of heritage significance.

2.2 Restrictions encountered during the survey

2.2.1 Visibility

Visibility was good.

2.2.2 Disturbance

No disturbance of any potential heritage features was noted.

2.3 Details of equipment used in the survey

GPS: Garmin Etrek

Digital cameras: Canon Powershot A460

All readings were taken using the GPS. Accuracy was to a level of 5 m.

3 DESCRIPTION OF SITES AND MATERIAL OBSERVED

3.1 Locational data

Province: KwaZulu-Natal

Town: Vryheid

3.2 Description of the general area surveyed

Five sites were located during the survey. These include one Late Iron Age Site and four Grave Sites. The Iron Age Site as well as the Grave Sites are protected by heritage legislation as they all appear to be older than 60 years.

A more detailed description of the context of these sites is presented in Table 2.

Table 2. Heritage sites located during the ground survey.

No	Heritage site category	Brief description	Significance (Table 3)	Mitigation	GPS Latitude and Longitude
1	Grave Site 1	A rural cemetery covering an area of approximately 10m x 15m. It contains approximately 12 individual graves all arranged in vertical rows. The graves are unmarked and consist of soil and stone heaps of	Many of the graves in this cemetery appear to be older than 60 years. They are therefore protected by heritage legislation. It is therefore rated as of high significance locally (Table 3).	Strictly maintain a 20m buffer zone around the cemetery. No disturbance is allowed within the buffer zone. It would be possible to shift the trajectory of the powerline in order to accommodate the buffer zone.	S 27° 39' 0.61" E 30° 51' 36.59"

		approximately 2m x 3m each (Figs 3 & 4).		However, should the developers decide that this option is not possible then a second phase heritage impact assessment must be called for. This phase must be conducted by a grave relocation expert. A community consultation process will have to be initiated to arrange for potential grave exhumation and reburial (Appendix 1).	
2	Grave Site 2	A small informal graveyard consisting of 5 individual graves (Figs 3 & 5). The graves are arranged in two vertical rows. Each grave covers an area of approximately 2m x 3m. They consist of unmarked soil and stone heaps. The graves appear to be older than 60 years old (Figs 3 & 5).	The graveyard is rated as of medium significance locally (Table 3).	Strictly maintain a 20m buffer zone around the graveyard. This would be possible by shifting the trajectory of the powerline slightly. However, should the developers decide that this first option is not possible then a second phase heritage impact assessment must be called for. This phase must be conducted by a grave relocation expert. A comprehensive community consultation process will have to be initiated to arrange for potential grave exhumation and reburial (Appendix 1).	S 27° 39' 7.60" E 30° 50' 31.06"
3	Grave Site 3	Four informal graves (Figs 3 & 6). The	The Grave Site is rated as of medium	Strictly maintain a 20m buffer zone	S 27° 36' 36.11" E 30°

		graves consist of unmarked soil and stone heaps. Each grave covers an area of approximately 1.5m x 2.8m. The graves appear to be older than 60 years old.	significance locally (Table 3).	around the Grave Site. It would be possible to shift the powerline trajectory slightly in order to accommodate this option. However, should the developers decide that it is not possible to adhere to option1 then a second phase heritage impact assessment must be called for. This phase must be conducted by a grave relocation expert. A comprehensive community consultation process will have to be initiated to arrange for potential grave exhumation and reburial (Appendix 1).	50' 42.04"
4	Grave Site 4	Five informal graves attached to an existing Zulu homestead (Figs 3 & 6). The graves consist of unmarked soil and stone heaps. Each grave covers an area of approximately 1.5m x 2.8m. The graves appear to be older than 60 years old.	The Grave Site is rated as of medium significance locally (Table 3).	Strictly maintain a 20m buffer zone around the Grave Site. It would be possible to shift the powerline trajectory slightly in order to accommodate this option. However, should the developers decide that it is not possible to adhere to option1 then a second phase heritage impact assessment must be called for. This phase must be conducted by a grave relocation expert. A comprehensive community	S 27° 36' 42.66" E 30° 50' 51.01"

				consultation process will have to be initiated to arrange for potential grave exhumation and reburial (Appendix 1	
5	Later Iron Age Site	Three stone circles of approximately 5m x 8m each. The site appears to be the remains of an ancient homestead. Similar sites were built by early Nguni-speaking agropastoralists in KwaZulu-Natal in the late 18 th century and early to middle 19 th century (Figs 3 & 7).	These sites are protected by provincial and national heritage legislation. This site is rated as of medium significance (Table 3). It may not be altered or destroyed under any circumstances.	Strictly maintain a 50m buffer zone around this site. It would be possible to shift the powerline trajectory slightly in order to accommodate this buffer zone However, a second phase heritage impact assessment will be called for, to arrange for mitigation, should the developers decide to expand into this area.	S 27° 36' 43.55" E 30° 50' 58.34"

4 STATEMENT OF SIGNIFICANCE (HERITAGE VALUE)

4.1 Field Rating

The Grave Sites are rated as of medium to high significance locally. The Later Iron Age Site is rated as Generally Protected A. It is rated as of high to medium significance and is protected by heritage legislation.

Table 3. Field rating and recommended grading of sites (SAHRA 2005)

Level	Details	Action
National (Grade I)	The site is considered to be of National Significance	Nominated to be declared by SAHRA
Provincial (Grade II)	This site is considered to be of Provincial significance	Nominated to be declared by Provincial Heritage Authority
Local Grade IIIA	This site is considered to be of HIGH significance locally	The site should be retained as a heritage site
Local Grade IIIB	This site is considered to be of HIGH significance locally	The site should be mitigated, and part retained as a heritage site
Generally Protected A	High to medium significance	Mitigation necessary before destruction
Generally Protected B	Medium significance	The site needs to be recorded before destruction
Generally Protected C	Low significance	No further recording is required before destruction

5 RECOMMENDATIONS

The proposed development may proceed but under the following conditions:

- A buffer zone of 50m must be strictly maintained around the Later Iron Age Site. No development or removal and alternation of items or features may take place within this buffer zone.
- A buffer zone of 20m must be maintained around the identified Grave Sites. No development or removal and alternation of items or features may take place within this buffer zone. Should the developer expand within 20m from the grave sites then a fence with an entrance gate must be erected around the site.
- Should the developer wish to expand within the buffer zones then mitigation measures must be initiated under the auspices of the local heritage agency Amafa (Table 4). This will include a second phase heritage impact assessment, the application for a permit, and the possible exhumation of certain graves (Appendix 1).

- Apart from these concerns there is no archaeological reason why the proposed mining expansion may not take place on the project area as planned. It should, however, be pointed out that the KwaZulu-Natal Heritage Act requires that operations exposing archaeological and historical residues should cease immediately pending an evaluation by the heritage authorities. It is also possible that community consultation, may indicate contemporary graves that were not visible during the initial heritage survey of the project area. These must also be evaluated during a second phase heritage impact assessment.

Table 4. Impact of proposed development on heritage resources

HERITAGE	
HERITAGE	Five heritage sites occur on the footprint. These include four Grave Sites and one Later Iron Age Site.
EXTENT (GEOGRAPHICAL)	Localised
DURATION	Not applicable
PROBABILITY	Not applicable
REVERSIBILITY	Not possible to reverse damage or destruction to heritage sites
IRREPLACEABLE LOSS OF RESOURCES	Yes, once the heritage site is destroyed is not possible to restore to former condition.
CUMULATIVE IMPACTS	None
SIGNIFICANCE RATING - PRE MITIGATION	High rating in terms of SAHRA rating standards
MITIGATION MEASURE	<ul style="list-style-type: none"> • Shift the powerline trajectory in order to accommodate the proposed buffer zones (first and preferred option) • Call for a second phase Heritage Impact Assessment This may entail application for a permit to allow for a rescue excavation or the exhumation and translocation of graves (second option)(Appendix 1).
SIGNIFICANCE - POST MITIGATION	Not applicable

6 MAPS AND FIGURES

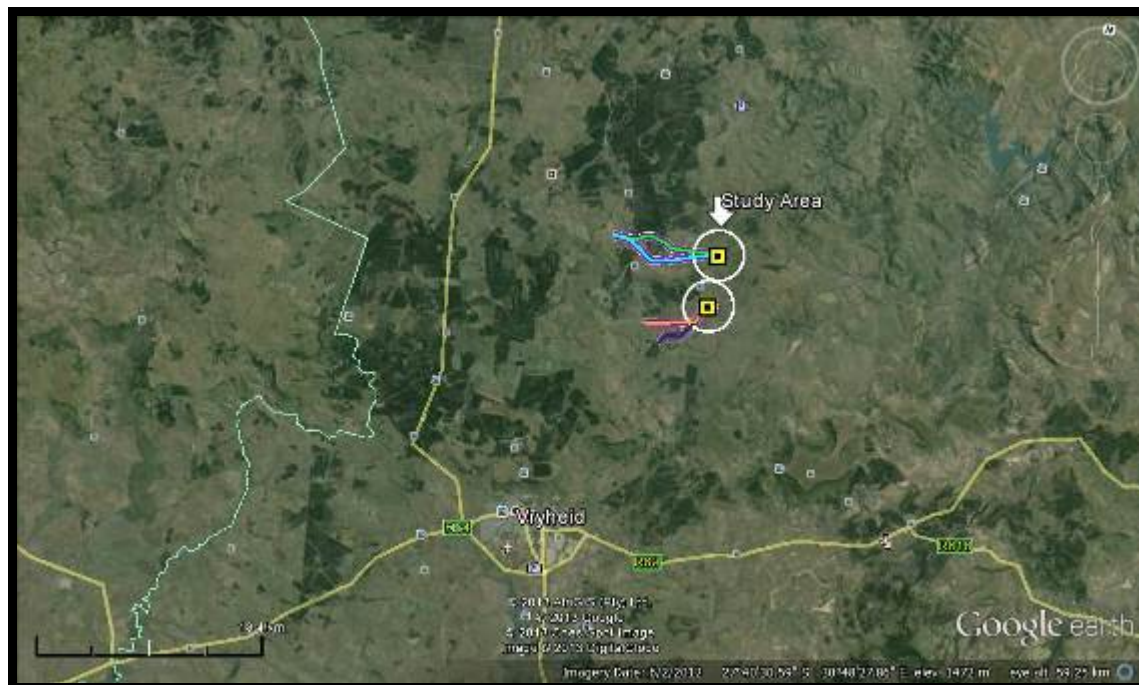


Figure 1. Google aerial photograph showing the location of the Study Area, near Vryheid KwaZulu-Natal.



Figure 2. Google aerial photograph showing the location of the power stations and proposed powerlines. Heritage sites are identified by the red polygons.

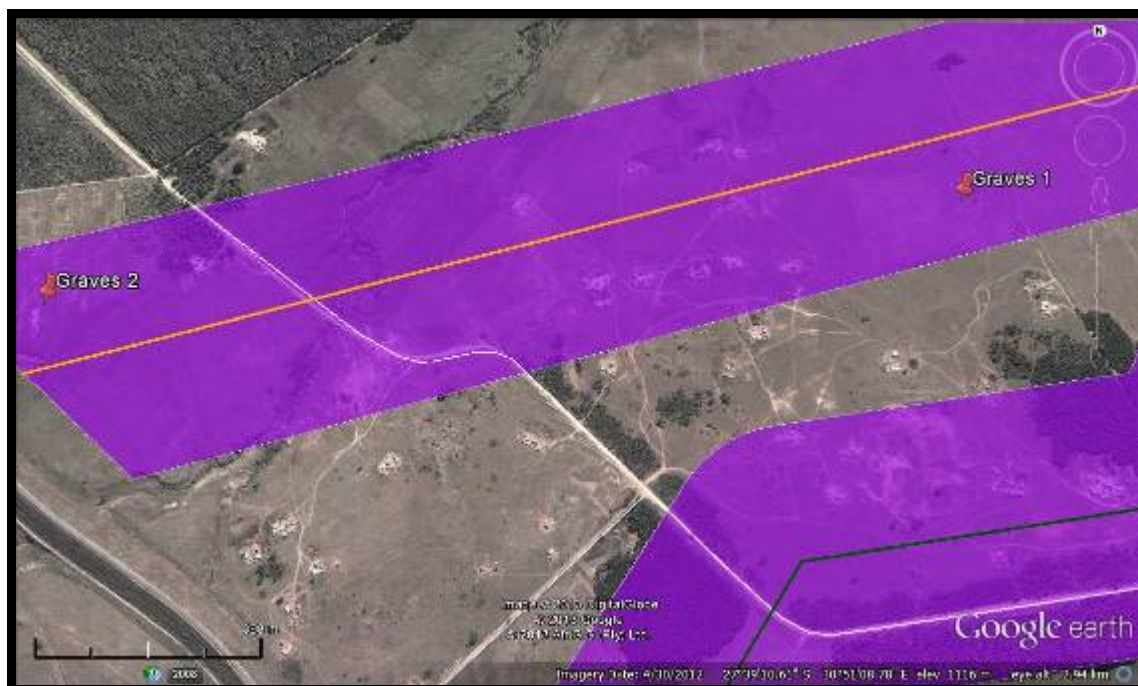


Figure 3. Google aerial photograph showing the location of Grave Sites 1 and 2.

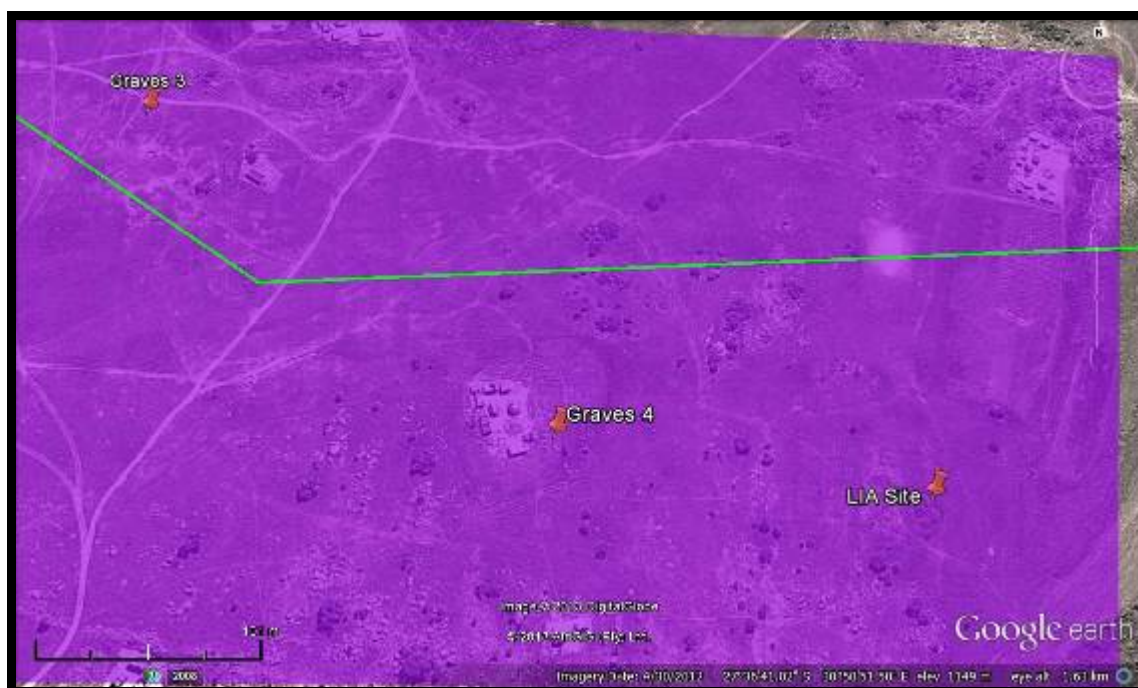


Figure 4. Google aerial photograph showing the location of Grave Sites 3 and 4 and the Later Iron Age Site.



Figure 5. Grave Site 1



Figure 6. Grave Site 2



Figure 7. Grave Site 3.



Figure 8. Grave Site 4.



Figure 9. Later Iron Age Site.

7 REFERENCES

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APPENDIX 1

RELOCATION OF GRAVES

Burial grounds and graves are dealt with in Article 36 of the NHR Act, no 25 of 1999. Below follows a broad summary of how to deal with grave in the event of proposed development.

- If the graves are younger than 60 years, an undertaker can be contracted to deal with the exhumation and reburial. This will include public participation, organising cemeteries, coffins, etc. They need permits and have their own requirements that must be adhered to.
- If the graves are older than 60 years old or of undetermined age, an archaeologist must be in attendance to assist with the exhumation and documentation of the graves. This is a requirement by law.

Once it has been decided to relocate particular graves, the following steps should be taken:

- Notices of the intention to relocate the graves need to be put up at the burial site for a period of 60 days. This should contain information where communities and family members can contact the developer/archaeologist/public-relations officer/undertaker. All information pertaining to the identification of the graves needs to be documented for the application of a SAHRA permit. The notices need to be in at least 3 languages, English, and two other languages. This is a requirement by law.
- Notices of the intention needs to be placed in at least two local newspapers and have the same information as the above point. This is a requirement by law.
- Local radio stations can also be used to try contact family members. This is not required by law, but is helpful in trying to contact family members.
- During this time (60 days) a suitable cemetery need to be identified close to the development area or otherwise one specified by the family of the deceased.
- An open day for family members should be arranged after the period of 60 days so that they can gather to discuss the way forward, and to sort out any problems. The developer needs to take the families requirements into account.

This is a requirement by law.

- Once the 60 days has passed and all the information from the family members have been received, a permit can be requested from SAHRA. This is a requirement by law.
- Once the permit has been received, the graves may be exhumed and relocated.
- All headstones must be relocated with the graves as well as any items found in the grave

