



## **Dynamic Integrated Geo-Environmental Services**

**ARCHAEOLOGICAL AND CULTURAL HERITAGE PHASE I EMP WALK  
DOWN SPECIALIST REPORT FOR THE PROPOSED 400KV POWER LINE  
FROM ARIADNE SUBSTATION TO VENUS SUBSTATION WITHIN  
UTHUKELA AND UMGUNGUNDLOVU DISTRICT MUNICIPALITY OF  
KWAZULU NATAL PROVINCE.**

**October/ 2014**

### **Vhubvo Archaeo-Heritage Consultants**

83 Eden Village  
746 Ciliaris Road  
Dorandia  
Pretoria North  
0182  
Tel: 012 771 3488  
Fax: 086 566 8079

### **Dynamic Integrated Geo-Environmental Services**

Midrand Suite No. 2  
546 16<sup>th</sup> Road  
1685  
Tel: 011 312 2878  
Fax: 011 312 7824

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## DECLARATION

### ABILITY TO CONDUCT THE PROJECT

Munyadziwa Magoma is a professional archaeologist, having obtained his BA degree in Archaeology and Anthropology at University of South Africa (UNISA), an Honours degree at the University of Venda (UNIVEN), and a MA at the University of Pretoria (UP). He is an accredited Cultural Resource Management (CRM) member of the Association for southern African Professional Archaeologists (ASAPA) and Amafa aKwaZulu-Natali. Munyadziwa is further affiliated to the South African Archaeological Society (SAAS), the Society of Africanist Archaeologists (SAfA), and the International Council of Archaeozoology (ICAZ). He has more than seven years' experience in heritage management, having worked for different CRM organisations and government heritage authorities. As a CRM specialist, Munyadziwa has completed well over hundred Archaeological Impact Assessments (AIA) for developmental projects situated in several provinces of the Republic of South Africa. The AIAs projects he has been involved with are diverse, and include the establishment of major substation, upgrade and establishment of roads, establishment and extension of mines. In addition, he has also conducted Heritage Impact Assessments (HIAs) for the alteration to heritage buildings and the relocation of graves. His detailed CV is available on request.

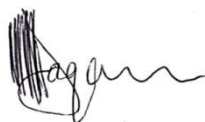
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### INDEPENDENCE

I, MunyadziwaMagoma, declare that this report has been prepared independently of any influence as may be specified by all relevant department, institution and organisation.

### AUTHOR AND CONTACT DETAILS:

MunyadziwaMagoma,



Cell: 082 535 6855

Tel: 012 7713488

Fax: 086 566 8079

E-mail: [munyadziwa@vhubvo.co.za](mailto:munyadziwa@vhubvo.co.za)

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### CLIENT CONTACT DETAILS:

 Dynamic Integrated Geo-Environmental Services

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Ms. Brenda Makanza,

Cell: 082 075 6685

Fax: 011 312 7824

Tel: 011 312 2878

E-mail: [brendam@diges.co.za](mailto:brendam@diges.co.za)

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## EXECUTIVE SUMMARY

### **Introduction, background and methodology**

Vhubvo Archaeo-Heritage Consultant Cc has been requested by Dynamic Integrated Geo-Environmental Services to conduct Archaeological and Cultural Heritage Phase I EMP Walk down for the proposed 400KV power line from Ariadne substation to Venus substation within uMgungundlovu and uThukela Districts of KwaZulu-Natal Province. The aim of the study was to entirely corroborate archaeological and heritage sites that were recorded during the Phase I Archaeological Impact Assessment conducted by (2011), and also to identify and document archaeological sites, cultural resources, sites associated with oral histories, graves, cultural landscapes, and any structure of historical significance that may be affected by the proposed construction, these will in turn assist the developer in ensuring proper conservation measure in line with with the KwaZulu-Natal Heritage Act No.10 of 1997 (amended to Act 4 of 2008) and the National Heritage Resources Act No. 25 of 1999.

The findings of this cultural study have been informed by desktop study and field survey. The desktop study was undertaken through SAHRIS for previous Cultural Heritage Impact Assessments conducted in the region of the proposed development, and also for researches that have been carried out by the Natal Museum and Amafa staff over the past years. From these studies, it became clear that the landscape stretching from Estcourt to Pietermaritzburg is affluent of archaeological and historical sites and it covers a long span of human history. In fact, over 400 cultural heritage (archaeological and historical) sites and hundreds of graves are known to exist in the wider area proposed for Ariadne-Venus project.

In order to assertion that the proposed development do not negatively impact on archaeological, graves and historical sites, the walk down of all the area proposed for pylon position and servitudes was conducted, with emphasis on potential area that can yield archaeological and graves sites. Thus, the walk down constitutes walking the line corridor, tower position, as well as the area that will be used to provide access road. The area on which attention was intended included rocky outcrops and mountainous areas, erosion dongas and unnatural clusters of trees. Archaeological and historical sites are known to exist in those areas. The field survey lasted from the 8<sup>th</sup> to the 24<sup>th</sup> of September 2014. Archaeologists from Vhubvo, along with other specialists and Eskom personnel conducted the survey. Of particular significance was the availability of Ariadne-Venus Eskom engineer and designer team, their presence on site allowed for certain decisions to be engaged on site, and thus change certain pylon positions to avoid impacting on archaeological/ and or graves, were possible. As a supplement to the survey, oral interview was initiated with community members, farm owners as well as farm employees. The oral interviews aim to understand the cultural landscapes and/ or intangible heritage in the area.



The proposed 400 kV Powerline stretches for approximately 130km from the Venus substation near Estcourt and went pass major towns such as Mooiriver, Nottingham Road, Howick and it crossways until it reach its destination at Ariadne substation near Pietermaritzburg - KwaZulu Natal. This power line will traverses over a range of landscapes, including mountainous, flat and open plains, old and new agricultural fields, mixed bushveld, dense forest, built-up area and prospecting/ mining activities. It also transverses over several rivers, Transnet railway line and the N3 Highway. It is important to note that it will mostly transverse parallel other existing power lines. Most of these activities highlighted have impacted negatively on the area, and subsequently destroyed or disturbed archaeological and historical sites that might have existed in the past. It was also noted that the process of bush clearing has also disturbed several archaeological sites in the area. Notwithstanding such, a fairly large number of sites, features and graves of high significance were identified and recorded during the walk down phase. For easy reference, a table detailing the findings and recommendations have been offered on Page 28.

### **Restrictions and Assumptions**

As with any survey, archaeological materials may be under the surface and therefore unidentifiable to the surveyor until they are exposed once construction resume. As a result, should any archaeological/ or grave site be observed during construction, a heritage specialist monitoring the development must immediately be notified. In the mean time, no disturbance may be made until such time as the heritage specialist has been able to make an assessment of the find in question. It is the responsibility of the contractor to protect the site from publicity (i.e., media) until all assessments are made. Several houses located on the line servitudes were noted, and will have to be relocated. Most of the people in the area proposed for development bury their loved one at home. The relocation of people will thus also affect graves, henceforth graves will also have to be relocated. Graves located in houses were not accessed, since these people are yet to be notified about the possibility that they may be relocated. An assessment of graves located in domicile which are on the servitudes will have to be made, since this cannot be done at this stage.

**Note:** This study excludes the assessment of additional access roads. Should the developer decide to construct new additional roads besides what was decided on site, these will need to be assessed.

### **Discussion of Survey Findings:**

#### **Introduction**

The majority of the area proposed for development can only be accessed through an appointment. As aforementioned, sections of the project area are heavily disturbed by activities related to past/ current farming activities and other setups. Although attempt was made to avoid impacting on archaeological/ and graves, certain sites could not be avoided and would have to be mitigated before construction began.



As such, several sites as highlighted below should be considered. In fact, the recommendation in this report should be perceived with responsiveness.

### **Stone Age**

The first and longest part of human history is the Stone Age, which began with the appearance of early humans around 3-2 million years ago. Stone Age people were hunters, gatherers and scavengers who were nomadic. Their stone tools are found in most places in southern Africa.

Late Stone Age 30 000 - until c. AD 200

Middle Stone Age 150 000 - 30 000 BP

Early Stone Age 2 000 000 - 150 000

- Despite that the area of the proposed development is compatible for rock art sites, no significant site was identified by this study on the exact pylon position or line servitudes. The noted scatters of Late Stone Age (LSA) materials cannot be characterised as a site. These scatters which were documented in the line corridor, are out of context and occurred in very low densities. Hence, the very few materials dating to this period are viewed to be of low significance, and do not constitute a site since they occurred in low densities and also on a disturbed landscape, which was previously used for cultivation purposes. No manufacturing camp or stratified sites were identified anywhere within the proposed area that has been identified for line corridor or pylon position.

### **Iron Age**

Period covering the last 1800 years, when new people brought a new way of life to southern Africa. They established settled villages, cultivated domestic crops such as sorghum, millet and beans, and they herded cattle as well as sheep and goats. Since they produced their own iron tools, archaeologists call this the Iron Age.

Early Iron Age AD 200 - AD 900

Middle Iron Age AD 900 - AD 1300

Late Iron Age AD 1300 - AD 1830

- Late Iron Age stone walled features were noted in the area proposed for development, most of these are related to Nguni-speaking people. Some of these are located in the exact pylon position, and will have to be mitigated before construction began, while others are located on the line's servitudes and monitoring will be recommended.

### **Historical Period**

Since the arrival of the white settlers - c. 1840s - in this part of the country.

- Although the area at large is affluent of historical structures, no historical structure associated with early missionary (or travellers) will be negatively impacted by the proposed 400 kV Power line from the Venus substation to Ariadne substation.



## **Graves**

Several graveyards were identified in the area of the proposed power line. This includes community graveyard, private (family) graveyard, farm graveyard and isolated graves. Graves are often the focus of emotional and ethical sentiments by their relation to people. Henceforth attempt were made to shift pylon position to avoid impacting on these graves, however, in other instances it was impracticable to modify the pylon position, and mitigation appears inevitable. In fact, in other instances, houses are within the servitudes, and relocation will have to be implemented. Most of the community in the area still bury at home, or very close to their residence. These graves will thus have to be relocated with their proprietor.

The noted graves are varied in terms of age, and thus protected by Section 3 of the National Heritage Resource Act, 1999 (Act 25 of 1999) and the Human Tissues Act, 1983 (Act 65 of 1983) as amended. Section 36 (3) of the NHRA 25 of 1999 further protects these graves against any alterations. Dealing with human remains thus requires the highest ethical standards, Section 36 (3) of the NHRA states that, no person may, without a permit issued by SAHRA or a provincial heritage resources authority (Amafa): destroy, damage, alter, exhume, 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. In addition, The World Archaeological Congress (WAC) has set international ethical standards for the treatment of human remains, these includes:

- Respect for the mortal remains of the dead shall be accorded to all, irrespective of origin, race, religion, nationality, custom and tradition,
- Respect for the wishes of the dead concerning disposition shall be accorded whenever possible, reasonable and lawful, when they are known or can be reasonably inferred,
- Respect for the wishes of the local community and of relatives or guardians of the dead shall be accorded whenever possible, reasonable and lawful,
- Respect for the scientific research value of skeletal, mummified and other human remains (including fossil hominids) shall be accorded when such value is demonstrated to exist
- Agreement on the disposition of fossil, skeletal, mummified and other remains shall be reached by negotiation on the basis of mutual respect for the legitimate concerns of communities for the proper disposition of their ancestors, as well as the legitimate concerns of science and education,
- The express recognition that the concerns of various ethnic groups, as well as those of science are legitimate and to be respected, will permit acceptable agreements to be reached and honoured,



### **Recommendations and Conclusions:**

It should be noted that most of the sites in the area proposed for development are located in close proximity to the river, and also in mountainous area. The proposed power line transverses mostly close to the river banks and on mountainous area. As a result, caution should be exercised at all times. Despite that the proposed area is generally disturbed by several activities as mentioned above, experience has taught us that archaeological material may still be encountered during secondary development work. If any chance archaeological or previously unknown grave (s), be exhumed or discovered during the course of construction work, activities on the affected tower position should be deactivated, and a heritage specialist monitoring the project be notified immediately.

A number of sites dating to the Late Iron Age, as well as graves were identified and recorded. Some of the sites (especially the LIA stone walled sites and settlements) are highly significant and would have to be mitigated before construction began. Most of these will be negatively impacted on by the proposed construction of pylon or access roads. Hence, mitigation measures will have to be implemented to avoid or minimize these impacts. These sites were assessed and subsequently mitigation measures suggested. If such mitigation measures are implemented successfully, there would be no objection to the development of the proposed 130 km - 400 kV power line constructions from Ariadne to Venus substation.

**N.B. It should be noted that the process of grave relocation is done at the expense of the developer, and time delay may result while family members are being sought/ and or negotiated with. In addition, Amafa requires up to three month period for advertisement and communication. Henceforth it is recommended that this resume promptly, avoiding time impediment with construction.**





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## ACRONYMS AND ABBREVIATIONS

AIA	Archaeological Impact Assessment
EMP	Environmental Management Plan
HIA	Heritage Impact Assessment
LIA	Late Iron Age
MIA	Middle Iron Age
EIA	Early Iron Age
HMP	Heritage Management Plan
LSA	Late Stone Age
MSA	Middle Stone Age
ESA	Early Stone Age
NASA	National Archives of South Africa
NHRA	National Heritage Resources Act
PHRA	Provincial Heritage Resources Authority
SAHRA	South African Heritage Resources Agency



## GLOSSARY OF TERMS

The following terms used in this Archaeology are defined in the National Heritage Resources Act [NHRA], Act Nr. 25 of 1999, South African Heritage Resources Agency [SAHRA] Policies as well as the Australia ICOMOS Charter (*Burra Charter*):

**Archaeological Material:** remains resulting from human activities, which are in a state of disuse and are in, or on, land and which are older than 100 years, including artifacts, human and hominid remains, and artificial features and structures.

**Artifact:** Any movable object that has been used, modified or manufactured by humans.

**Conservation:** All the processes of looking after a site/heritage place or landscape including maintenance, preservation, restoration, reconstruction and adaptation.

**Cultural Heritage Resources:** refers to physical cultural properties such as archaeological sites, palaeontological sites, historic and prehistorical places, buildings, structures and material remains, cultural sites such as places of rituals, burial sites or graves and their associated materials, geological or natural features of cultural importance or scientific significance. This include intangible resources such religion practices, ritual ceremonies, oral histories, memories indigenous knowledge.

**Cultural landscape:** “the combined works of nature and man” and demonstrate “the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both internal and external”.

**Cultural Resources Management (CRM):** the conservation of cultural heritage resources, management, and sustainable utilization and present for present and for the future generations

**Cultural Significance:** is the aesthetic, historical, scientific and social value for past, present and future generations.



**Chance Finds:** means Archaeological artefacts, features, structures or historical cultural remains such as human burials that are found accidentally in context previously not identified during cultural heritage scoping, screening and assessment studies. Such finds are usually found during earth moving activities such as water pipeline trench excavations.

**Compatible use:** means a use, which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.

**Conservation** means all the processes of looking after a place so as to retain its cultural significance.

**Expansion:** means the modification, extension, alteration or upgrading of a facility, structure or infrastructure at which an activity takes place in such a manner that the capacity of the facility or the footprint of the activity is increased.

**Grave:** A place of interment (variably referred to as burial), including the contents, headstone or other marker of such a place, and any other structure on or associated with such place.

**Heritage impact assessment (HIA):** Refers to the process of identifying, predicting and assessing the potential positive and negative cultural, social, economic and biophysical impacts of any proposed project, plan, programme or policy which requires authorisation of permission by law and which may significantly affect the cultural and natural heritage resources. The HIA includes recommendations for appropriate mitigation measures for minimising or avoiding negative impacts, measures enhancing the positive aspects of the proposal and heritage management and monitoring measures.

**Historic Material:** remains resulting from human activities, which are younger than 100 years, but no longer in use, including artifacts, human remains and artificial features and structures.

**Impact:** the positive or negative effects on human well-being and / or on the environment.



***In situ material:*** means material culture and surrounding deposits in their original location and context, for instance archaeological remains that have not been disturbed.

**Interested and affected parties Individuals:** communities or groups, other than the proponent or the authorities, whose interests may be positively or negatively affected by the proposal or activity and/ or who are concerned with a proposal or activity and its consequences.

**Interpretation:** means all the ways of presenting the cultural significance of a place.

**Late Iron Age:** this period is associated with the development of complex societies and state systems in southern Africa.

**Material culture** means buildings, structure, features, tools and other artefacts that constitute the remains from past societies.

**Mitigate:** The implementation of practical measures to reduce adverse impacts or enhance beneficial impacts of an action.

**Place:** means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.

**Protected area:** means those protected areas contemplated in section 9 of the NEMPAA and the core area of a biosphere reserve and shall include their buffers.

**Public participation process:** A process of involving the public in order to identify issues and concerns, and obtain feedback on options and impacts associated with a proposed project, programme or development. Public Participation Process in terms of NEMA refers to: a process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to specific matters.



**Setting:** means the area around a place, which may include the visual catchment.

**Significance:** can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. intensity, duration and likelihood). Impact significance is the value placed on the change by different affected parties (i.e. level of significance and acceptability). It is an anthropocentric concept, which makes use of value judgments and science-based criteria (i.e. biophysical, physical cultural, social and economic).

**Site:** a spatial cluster of artefacts, structures, organic and environmental remains, as residues of past human activity.



## 1. Introduction

At the request of Dynamic Integrated Geo-Environmental Services, Vhubvo Archaeo-Heritage Consultant Cc has been requested to conduct Archaeological and Cultural Heritage Phase I EMP Walk down for the proposed 400KV power line from existing Ariadne substation to existing Venus substation within uMgungundlovu and uThukela Districts of KwaZulu Natal Province. The survey was conducted in accordance with the KwaZulu-Natal Heritage Act No.10 of 1997 (amended to Act 4 of 2008), the National Heritage Resources Act No. 25 of 1999, and follows a methodical survey as suggested by Burke and Smith (2004).

## 2. Sites location and description

The proposed 400 kV Power line is located in section of the area (s) of Estcourt, Mooiriver, Nottingham Road, Howick and Pietermaritzburg in the KwaZulu-Natali Province, and extends for approximately 130 kilometres. There are existing transmission power lines between these two substations (i.e. two 275kV lines and one 400kV line). In terms of hectares, the study area covers approximately 322,543.01 ha. The proposed power line will traverse over a variety of landscapes, including mountainous, flat and open plains, old and new agricultural fields, mixed bushveld, dense forest, built-up area and mining activities (for a concise view of the proposed area see figures 1 - 4. It also transverses over several rivers, Transnet railway line and the N3 Highway. It is important to note that it will mostly transverse parallel other major existing power lines. Most of these activities highlighted have impacted negatively on the area, and subsequently destroyed or disturbed archaeological and historical sites that might have existed in the past. During survey, it was also noted that the process of bush clearing has also disturbed several archaeological sites in the area. Below is a concise description of the proposed area:

### Summary of Project Location Details

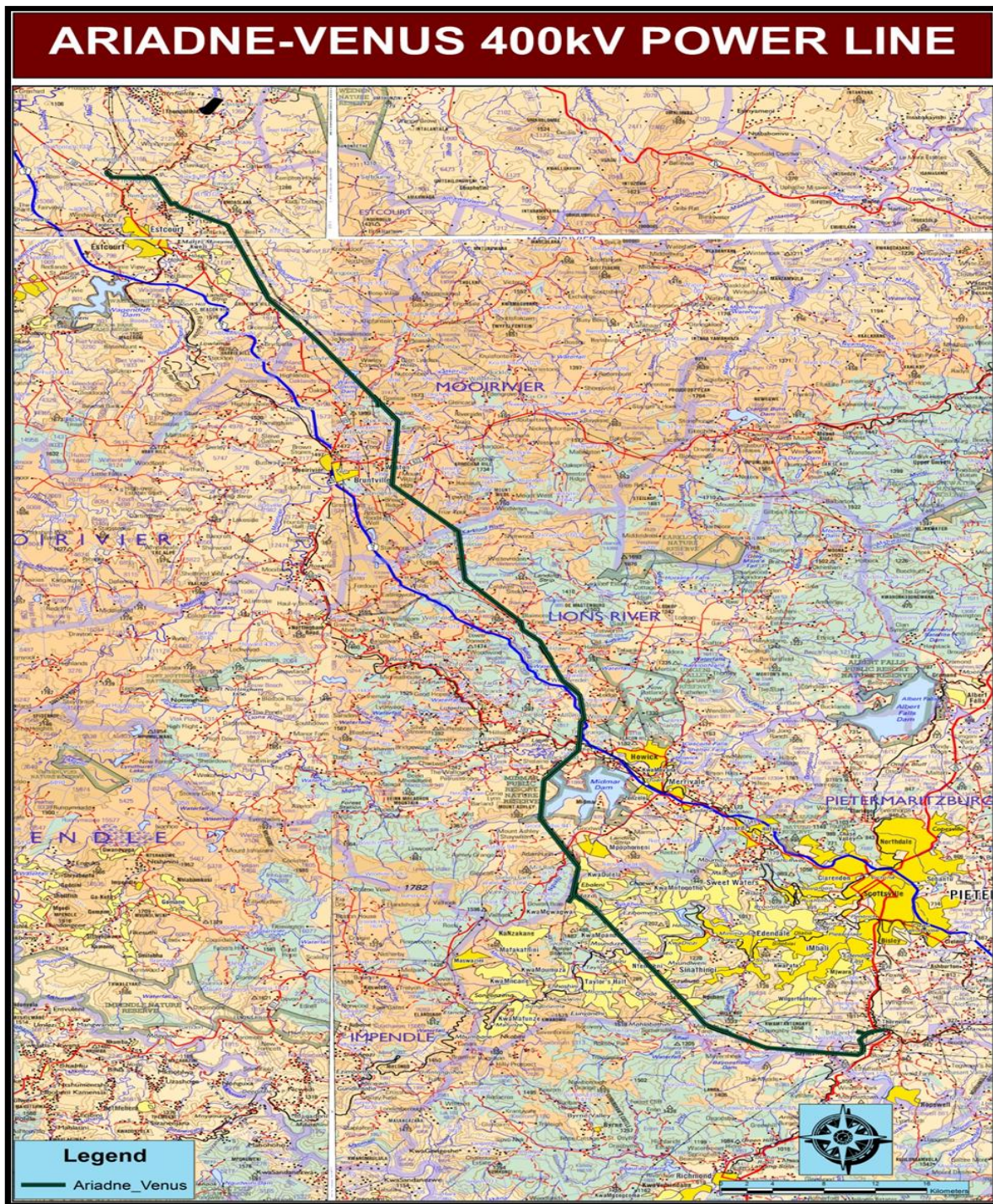
Province:	KwaZulu-Natali
Local Municipalities:	uMtshezi, Mpofana, uMngeni and Msunduzi
District Municipalities:	uThukela and uMgungundlovu
Description of proposed development:	Power line





➤ **Current land use**

The area to be developed is active and currently utilised for activities related to farming, mining and occupancy.



**Figure 1:** An overview of the topographical map of the proposed area as indicated by the





greenish colour.



**Figure 2:** View of some of the area where the pylon position will be positioned.



**Figure 3:** View of section where the power line will transverse.







**Figure 4:** Note some of the houses that are located on the line servitudes, these houses will have to be relocated.



**Figure 5:** View of some of the area where the power line will transverse.







**Figure 6:** View of the area where the power line will transverse over mining area.



**Figure 7:** View of some of the section which were inspected to understand underground archaeological context.



### 3. Nature of the proposed project

The proposed second Ariadne-Venus 400kV line project entails the following activities:

- Construction of one new 400kV power line from Ariadne to Venus Substations
- Extension of both Ariadne and Venus Substations
- Adding 400kV feeder bays at both Ariadne and Venus Substations

### 4. Purpose of the Cultural Heritage Study

The purpose of this Archaeological and Cultural Heritage Phase I EMP Walk down Cultural Heritage Impact Assessment study was to corroborate archaeological and heritage sites that were recorded during the Phase 1 Archaeological Impact Assessment conducted by Pelsler (2011), and also to identify and document other archaeological sites, cultural resources, sites associated with oral histories, graves, cultural landscapes, and any structure of historical significance that may be affected by the proposed construction. Impact assessments highlight many issues facing sites in terms of their management, conservation, monitoring and maintenance, and the environment in and around the site. Therefore, this study involves the following:

- Identification and recording of heritage resources that maybe affected by the proposed 400KV pylon position of the power line,
- Providing recommendations on how best to appropriately safeguard identified heritage sites. Mitigation is an important aspect of any development on areas where heritage sites have been identified.

### 5. Methodology and Approach

#### *Background study introduction*

The methodological approach is informed by the 2012 SAHRA Policy Guidelines for impact assessment. As part of this study, the following tasks were conducted: 1) literature review, with specific reference to Pelsler (2011) 3), consultations with the developer and appointed consultants, 4), completion of a field survey and 5), analysis of the acquired data, leading to the production of this report.

#### *Physical survey*



The walk down of all the area proposed for pylon position and servitudes was conducted successfully, emphases were directed on potential area that can yield archaeological and graves sites. The walk down therefore constitutes walking the line corridor, as well as the area that will be used to provide access road. All the 398 tower position were individually surveyed, assessed and described. However, for the purpose of this study, only pylon position were archaeological/ historical material were documented will be engaged. Attention was also intended on rocky outcrops and mountainous areas, erosion dongas and unnatural clusters of trees. Archaeological and historical sites are known to exist in those areas, in his report, Pelsler (2011) recommended that such area should be investigated. The field survey lasted from the 8<sup>th</sup> to the 24<sup>th</sup> of September 2014. Archaeologists from Vhubvo, along with other specialists and Eskom personnel conducted the survey. Of particular significance was the availability of Ariadne-Venus Eskom engineer and designer team, their presence on site allowed for certain decisions to be engaged on site, and thus change certain pylon positions to avoid impacting on archaeological/ graves, were possible.

#### *Documentation*

The general project area was documented. This documentation included taking photographs using cameras a 10.1 mega-pixel Sony Cybershort Digital Camera. Plotting of finds was done by a Garmin etrex Venture HC.

#### *Oral interview*

Oral interview was initiated with community members, farm owners as well as farm employees. The oral interviews aim to understand the cultural landscapes and/ or intangible heritage of the area.

#### *Restrictions and Assumptions*

As with any survey, archaeological materials may be under the surface and therefore unidentifiable to the surveyor until they are exposed once construction resume. As a result, should any archaeological/ or grave site be observed during construction, a heritage specialist monitoring the development must immediately be notified. In the mean time, no disturbance may be made until such time as the heritage specialist has been able to make an assessment of the find in question. It is the responsibility of the contractor to protect the site from publicity (i.e., media) until all assessments are made. Several houses located on the line servitudes were noted, and will have to be relocated. Most of the people in the area proposed for development bury their loved one at home. The relocation of people will thus also affect





graves, henceforth graves will also have to be relocated. Graves located in houses were not accessed, since these people are yet to be notified about the possibility that they may be relocated. An assessment of graves located in domicile which are on the servitudes will have to be made, since this cannot be done at this stage.

**Note:** This study excludes the assessment of additional access roads. Should the developer decide to construct new additional roads besides what was decided on site, these will need to be assessed.

## 6. Applicable heritage legislation

Several legislations provide the legal basis for the protection and preservation of both cultural and natural resources. These include the National Environment Management Act (No. 107 of 1998); Mineral Amendment Act (No 103 of 1993); Tourism Act (No. 72 of 1993); Cultural Institution Act (No. 119 of 1998), and the National Heritage Resources Act (Act 25 of 1999).

Section 38 (1) of the National Heritage Resources Act requires that where relevant, an Impact Assessment is undertaken in case where a listed activity is triggered. Such activities include:

- (a) *the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;*
- (b) *the construction of a bridge or similar structure exceeding 50 m in length; and*
- (c) *any development or other activity which will change the character of an area of land, or water -*
  - (i) *exceeding 5 000 m<sup>2</sup> in extent;*
  - (ii) *involving three or more existing erven or subdivisions thereof; or*
  - (iii) *involving three or more erven or divisions thereof which have been consolidated within the past five years; or*
  - (iv) *the costs of which will exceed a sum set in terms of regulations by SAHRA or a Provincial Heritage Resources Authority;*
- (d) *the re-zoning of a site exceeding 10 000 m<sup>2</sup> in extent; or*
- (e) *any other category of development provided for in regulations by SAHRA or a Provincial Heritage Resources Authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.*

Section 3 of the National Heritage Resources Act (25 of 1999) lists a wide range of national resources protected under the act as they are deemed to be national estate. When conducting a Heritage Impact Assessment (HIA) the following heritage resources have to be identified:

- (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 natural features of cultural significance*
- (e) *Geological sites of scientific or cultural importance*
- (f) *Archaeological and paleontological sites*



- (g) *Graves and burial grounds including-*
- (i) *ancestral graves*
  - (ii) *royal graves and graves of traditional leaders*
  - (iii) *graves of victims of conflict*
  - (iv) *graves of individuals designated by the Minister by notice in the Gazette*
  - (v) *historical graves and cemeteries; and*
  - (vi) *other human remains which are not covered by in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983)*
- (h) *Sites of significance relating to the history of slavery in South Africa*
- (i) *moveable objects, including -*
- (i) *objects recovered from the soil or waters of South Africa, including archaeological and paleontological objects and material, meteorites and rare geological specimens*
  - (ii) *objects to which oral traditions are attached or which are associated with living heritage*
  - (iii) *ethnographic art and objects*
  - (iv) *military objects*
  - (v) *objects of decorative or fine art*
  - (vi) *objects of scientific or technological interest; and*
  - (vii) *books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1 of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).*

Section 3 of the National Heritage Resources Act (No. 25 of 1999) also distinguishes nine criteria for places and objects to qualify as ‘part of the national estate if they have cultural significance or other special value ...’ These criteria are the following:

- (a) *Its importance in the community, or pattern of South Africa’s history*
- (b) *Its possession of uncommon, rare or endangered aspects of South Africa’s natural or cultural heritage*
- (c) *Its potential to yield information that will contribute to an understanding of South Africa’s natural or cultural heritage*
- (d) *Its importance in demonstrating the principal characteristics of a particular class of South Africa’s natural or cultural places or objects*
- (e) *Its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group*
- (f) *Its importance in demonstrating a high degree of creative or technical achievement at particular period*
- (g) *Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons*
- (h) *Its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and*
- (i) *Sites of significance relating to the history of slavery in South Africa.*

***Other sections of the Act with a direct relevance to the AIA are the following:***



**Section 34(1)** *No person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.*

**Section 35(4)** *No person may, without a permit issued by the responsible heritage resources authority:*

- *destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite*

**Section 36 (3)** *No person may, without a permit issued by SAHRA or a provincial heritage resources authority:*

- *destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside formal cemetery administered by a local authority; or*
- *bring onto or use at a burial ground or grave any excavation equipment, or any equipment which assists in detection or recovery of metals.*

## 7. Degree of significance

This category requires a broad, but detailed knowledge of the various disciplines that might be involved. Large sites, for example, may not be very important, but a small site, on the other hand, may have great significance as it is unique for the region.

### Significance rating of sites

(i) High

(ii) Medium

(iii) Low

This category relates to the actual artefact or site in terms of its actual value as it is found today, and refers more specifically to the condition that the item is in. For example, an archaeological site may be the only one of its kind in the region, thus its regional significance is high, but there is heavy erosion of the greater part of the site, therefore its significance rating would be medium to low. Generally speaking, the following are guidelines for the nature of the mitigation that must take place as Phase 2 of the project.

### High

- This is a ‘do not touch’ situation, alternative must be sought for the project, examples would be natural and cultural landscapes like the Mapungubwe Cultural Landscape World Heritage Site, or the house in which John Langalibalele resided.
- Certain sites, or features may be exceptionally important, but do not warrant leaving entirely alone. In such cases, detailed mapping of the site and all its features is imperative, as is the collection of diagnostic artefactual material on the surface of the site. Extensive excavations must be done to retrieve as much information as possible





before destruction. Such excavations might cover more than half the site and would be mandatory; it would also be advisable to negotiate with the client to see what mutual agreement in writing could be reached, whereby part of the site is left for future research.

### Medium

- Sites of medium significance require detailed mapping of all the features and the collection of diagnostic artefactual material from the surface of the site. A series of test trenches and test pits should be excavated to retrieve basic information before destruction.

### Low

- These sites require minimum or no mitigation. Minimum mitigation recommended could be a collection of all surface materials and/ or detailed site mapping and documentation. No excavations would be considered to be necessary.

In all the above scenarios, permits will be required from the South African Heritage Resources Agency (SAHRA) or the appropriate PHRA as per the legislation (the National Heritage Resources Act, no. 25 of 1999). Destruction of any heritage site may only take place when a permit has been issued by the appropriate heritage authority. The following table is used to grade heritage resources.

Level	Significance	Possible action
<b>National (Grade I)</b>	Site of National Value	Nominated to be declared by SAHRA
<b>Provincial (Grade II)</b>	Site of Provincial Value	Nominated to be declared by PHRA
<b>Local Grade (IIIA)</b>	Site of High Value Locally	Retained as heritage
<b>Local Grade (IIIB)</b>	Site of High Value Locally	Mitigated and part retained as heritage
<b>General Protected Area A</b>	Site of High to Medium Value	Mitigation necessary before destruction
<b>General Protected Area B</b>	Medium Value	Recording before destruction
<b>General Protected Area C</b>	Low Value	No action required before destruction

**Table 1:** Grading systems for identified heritage resources in terms of National Heritage Resources Act (Act 25 of 1999).



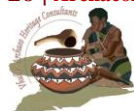
## 8. Discussion of (Pre-) History of the area around the site

### *Introduction*

South Africa has one of the longest sequences of human development in the world. The prehistory and history of South Africa span the entire known life span of human on earth. It is thus difficult to determine exactly where to begin, a possible choice could be the development of genus *Homo* millions of years ago. South African scientists have been actively involved in the study of human origins since 1925 when Raymond Dart identified the Taung child as an infant halfway between apes and humans. Dart called the remains *Australopithecus africanus*, southern ape-man, and his work ultimately changed the focus of human evolution from Europe and Asia to Africa, and it is now widely accepted that humankind originated in Africa (Robbins *et al.* 1998). In many ways this discovery marked the birth of palaeoanthropology as a discipline. Nonetheless the earliest form of culture known in South Africa is the Stone Age. This prehistoric period during which humans widely used stone for tool-making, stone tools were made from a variety of different sorts of stone. For example, flint and chert were shaped for use as cutting tools and weapons, while basalt and sandstone were used for ground stone. Stone Age can be divided into Early, Middle and Late, it is argued that there are two transitional period. The time frame used for Stone Age period is an approximate and differ from researcher to researcher (see Korsman and Meyer 1999, Mitchell 2002, Robbins *et al.* 1998).

### *Stone Age*

Although a long history of research on the Early Stone Age period of southern Africa has been conducted (Mason 1962, Sampson 1974, Klein 2000, Chazan 2003), it still remains a period where little is known about. These may be due to many factors which includes, though not limited to retrieval techniques used, reliance on secondary, at times unknown sources, and the fact that few fauna from this period have been analysed (Chazan 2003). According to Robbins *et al.* (1998) the Stone Age is the period in human history when stone was mainly used to produce tools. This period began approximately 2.5 million years ago and ended around 200 000 years ago. During this period human beings became the creators of culture and was basically hunters and gatherers, this era is identified by large stone artefacts, such as the pear-shaped hand-axe, cleavers and core tools (Deacon and Deacon, 1999). These tools



were probably used to exploit large animals that had died from natural causes, and are usually found near sites where they were manufactured.

The Middle Stone Age overlap with the EIA and possibly began around 100 000 to about 200 000 years ago and extends up to around 35 000 years ago. This period is marked by smaller tools than in ESA. MSA people made a wide range of stone tools from both coarse- and fine-grained rock types, and included prepared cores, parallel-sided blades and triangular points hafted to make spears. Sometimes the rocks used for tools were transported from considerable distances, presumably in bags or other containers, as such tool assemblages from some MSA sites tend to lack some of the preliminary cores and contain predominantly finished products like flakes and retouched pieces. During this period there is also evidence of seeking shelters in caves by MSA people, suggesting enduring or semi-enduring settlement in caves, there possibility of making fire in some of these caves have also been suggested.

Microlithic Later Stone Age period began around 35 000 and extend to the later 1800 AD, during this period humans were classified as *Homo sapiens* which means this people had thinking capabilities equal to that of modern people. According to Deacon (1984), LSA is a period when human being refined small blade tools, conversely abandoning the prepared-core technique. Refined artefacts such as convex-edge scrapers, borers and segments are associated with this period, as well as large quantity of art and ornaments and the practice of purposeful burials with ornaments. The bearer of the rock art sites are probably the ancestors of the San people and are found throughout southern Africa, including KwaZulu-Natal wherein Stone Age (Early, Middle and Late), as well as rock art sites are eminent. Due to poor preservation, open air sites are mostly of less as compared to rock shelters, which are mostly well preserved. Rock paintings and engravings are generally found in the lager area of the proposed power line. In fact, about 50 rock art sites are known to exist in the larger area of the proposed 400 kV Power line from Venus to Ariadne substations.

### *Iron Age*

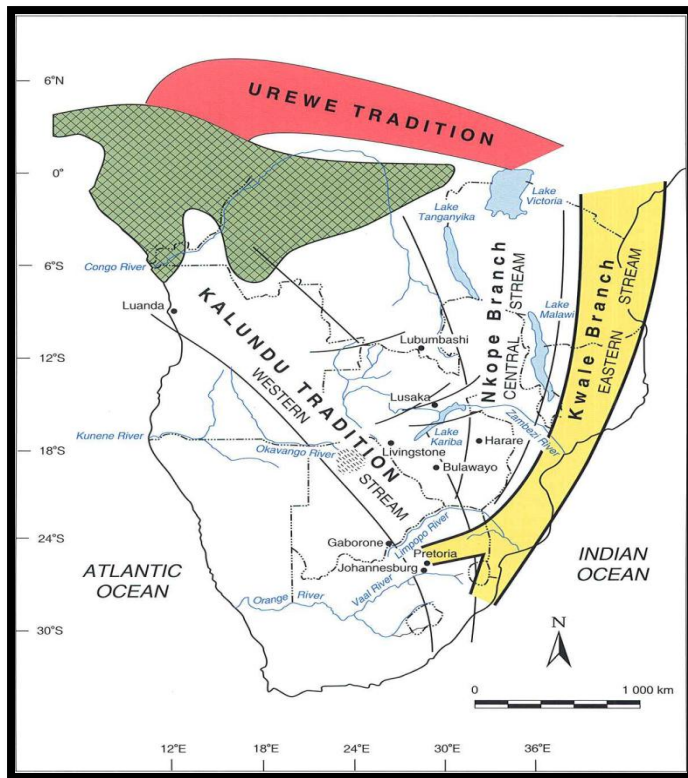
The Iron Age is the name given to the period of human history when metal was mainly used to produce artefacts. Recently, they have been a debate about the use of the name. Other archaeologist have argued that the word “Iron Age” is problematic and does not precisely



explain the event of what happen in southern Africa, as such, the word farming communities has been proposed (Segobye 1998). Nonetheless, in southern Africa this period can be divided into two phases. Early (200 - 1000 A.D) and Late Iron Age (1000 - 1850 A.D). Huffman (2007) has indicated that a Middle Iron Age (900 - 1300 A.D) should be included. According to Huffman (2007:361), until the 1960s and 1970s most archaeologists had not yet recognised a Middle Iron age. Instead they began the Late Iron Age at AD 1000. The Middle Iron Age (A.D. 900 - 1300) is characterised by extensive trade between the Limpopo Confluence and the East Coast of Africa. This has been debated, with other researchers, arguing that the period should be restricted to Shashe-Limpopo Confluence.

The Iron using peoples practiced agriculture and kept domestic animals such as dogs, cattle, goats, sheep and chicken. There is however evidence that sheep spread across southern Africa a few centuries before the arrival of Early Iron Age farmers (Sadr 2004). According to Huffman (2007) there were two streams of Early Iron Age (EIA) expansion in southern Africa, one referred to as the Urewe-Kwale Tradition (or the eastern stream) and another called the Kalundu Tradition (or western stream). The Iron Age people reached KwaZulu-Natal at around AD250. River valleys and flat areas with good cultivated soil were preferred. Henceforth settlements are mostly found in these area, these settlement were often large in size and housed hundreds of people. Archaeological assessments conducted in the area have documented several circular stone cattle-pens associated with Nguni-speaking people. Sites such as Ndongondwane, Ntsekane and Moor Park facies which belong to the Kalundu Tradition and the Urewe Tradition are known to exist in the larger geographical area.





**Figure 8:** View of the spread of the Early Iron Age movements, namely Urewe-Kwale and Kalundu traditions in southern Africa (From Huffman 2007:122).

### *Historical Period*

Since the arrival of the white settlers - c. AD 1800 - in this part of the country, these settlers were largely self-sufficient, relying on cattle/sheep farming and also hunting. Few towns were established and farming remains the most dominant economy.

## **9. Summary of Survey Findings**

The majority of the area proposed for power line can only be accessed through an appointment. As aforementioned, sections of the project area will run across most of the degraded section of land which is heavily disturbed by activities related to past/ current farming activities and other activities. Although attempt was made to avoid impacting on archaeological/ and graves, certain sites could not be avoided and would have to be mitigated before construction began. As such, several sites as highlighted in the table below should be considered. In fact, the recommendation in this report should be perceived with responsiveness. In accordance with the National Heritage Legislation, no activity related to



the project was conducted by the applicant (Eskom) prior to this archaeological assessment. Below is the account of materials noted, as well as their significance and suggested mitigation measures.

Tower	Coordinates	Description	Significance	Relation to line	Mitigation
367	S 28° 56' 32.8" E 29° 50' 44.1"	Stone assemblages were noted next to an aloe species. Aloe might indicate historical graves, since other people plant one after conducting burial. The poor visibility hampered further assessment of the site.	Medium (due to the possibility of grave)	This assemblage is located on the servitudes between tower number 367 and 368.	Archaeological monitoring during clearing is recommended.
366	S 28° 56' 34.7" E 29° 50' 57.5"	Stone assemblages were noted on the proximity of tower position no. 366. These stones are rectangular in shape and appear to be of historical era.	Medium (due to the possibility of grave)	These stones, which might be grave dressing, are on the exact pylon position.	Archaeological monitoring during the first construction stage is recommended. Should significant material be exposed, further mitigation work may be required.
365	S 28° 56' 35.2" E 29° 51' 10.7"	A collapse stone walling that is about 300mX300m in length, and probably dates to the historical era was documented. This walling is	Low to Medium	This walling is proximate the eastern foot of the tower position, and will be negatively impacted.	Application for a destruction permit to have the section of the walling destroyed. Mapping and documentation of the structure should also be conducted.



		constructed by reasonably larger stones, and appears disturbed.			
363	S 28° 56' 36.6" E 29° 51' 50.5"	A circular stone structure which might be an indication of the grave was noted. This extends for about 1.3m by 60cm. It is isolated and no other materials were noted.	Medium (due to the possibility of grave)	The site is located 200m to the east of tower 363. It appears unlikely that it will be impacted upon by the proposed construction.	Eskom must be conscious of the site and its exact position and ensure that no negative impact on the site take place during construction. A danger tape around the site is recommended during activities on tower 363.
359	S 28 56' 36.4" E 29 52' 24.7"  S 28 56' 36.9" E 29 52' 26.5"  S 28 56' 37.0" E 29 52' 27.6"	Two circular stone enclosures and foundation remains of a circular structures possibly dating to the historical era or recent period were noted. The only associated artefact noted is iron rod, as well as other zinc materials.	Low	These sites are located west of tower no. 359, at approximately 70m, 100m and 150m respectively from the tower position.	Eskom must be conscious of these sites and their exact positions and ensure that no negative impacts on these sites take place during construction. A danger tape around the site is recommended during activities on tower 359.
359	S28 56' 37.5" E29 52' 30.8"  S28 56' 36.7" E29 52' 30.0"	Circular stone enclosure possibly dating to the Iron Age was noted, this structure is made by refined small	Low to medium	The first site is located about 5m to tower 359 position, while the other is about 20m from the tower. Amafa	Application for a destruction permit to have the first structure destroyed, this should also be subject to





		stones and has collapsed. Also noted south eastern is another stone structure. This stone structure may have been the remains of hut foundations.		requires at least 25m between a heritage site and any development. Hence, these structures are within the buffer zone.	detail mapping and excavation. Archaeological monitoring must be undertaken by an archaeologist during construction of tower no. 359 to ensure that no chance materials are destroyed.
358	S28 56' 44.2" E29 52' 34.1"  S28 56' 44.6" E29 52' 34.0"  S28 56' 44.7" E29 52' 34.2"	Three rounded stone enclosures possibly dating to the Late Iron Age were noted in close proximity to tower no. 358, these were marked by unnatural thick vegetation, possibly planted during the time when these structures were used.	Medium	These structures are approximately 130m to the north western section of tower no. 358. All these are on the power line servitudes, and inadvertent negative impact may result from ignorance or other human errors.	An educational programme to construction workers is essential. However, if Eskom decides to clear the vegetation around these sites, such should be done under the supervision by an archaeologist.
357	S 28° 57' 01.3" E 29° 55' 43.9"	A very big circular stone structure was noted, this was most likely livestock enclosure, and probably dates to the Late Iron Age.	Medium	This structure is on the power line servitudes between tower no. 357 and 358. It is located about 110m to the north-west of tower 357.	If Eskom decides to clear the vegetation around this site, such should be done under an archaeologist's supervision.
356 355 354	S 28° 57' 16.0" E 29° 52' 50.7"  S 28° 57' 27.4"	A collapse stone walling which extends for about 30m	Low to Medium	These structures are on the power line servitudes,	Archaeological monitoring must be undertaken by





	E 29° 52' 56.0" S 28° 57' 39.3" E 29° 53' 01.9"	was noted, this is in association with another collapse circle stone enclosure, as well as another very large stone enclosure. It appears these are the remains of a historic homestead comprising a number of hut and a kraal. The power-line will transverse over these structures.		and about 50m north west of tower number 356, 80m north west of tower 355 and 200m of tower 354.	an archaeologist during activities and construction of tower no. 354, 355 and 356 to ensure that no negative impact result on the noted structures.
354	S 28° 57' 44.6" E 29° 53' 05.4"	An assemblages of stones were noted, these are assembled in the manner of that of the grave.	Medium (due to the possibility of graves to be located here)	The site is located on the exact footprint of tower number 354. As a result, the tower will negatively impact on the site.	Local residents must be consulted with regarding the possibility of this being a grave. If locals are not aware of this, then a foundation must be tested by using archaeological test excavation techniques to establish whether this is a grave, or not.
353	S 28° 57' 51.2" E 29° 53' 08.7"  S 28° 57' 52.1" E 29° 53' 09.2"	A site characterised by two abandoned circular stone kraals. The first one is circular, and	Medium	The site is located on the power line servitudes, and about 150m north west of tower no. 353	Eskom must take note of the site and its position and ensure that no negative impact take place during



		there is a walling which extends outwards. The second one is also circular, but is subdivided into three sections. It appears animals of different sizes were kept here.			construction. A danger tape around the site is recommended during activities on tower 353.
353	S 28° 57' 55.7" E 29° 53' 10.8"  S 28° 57' 55.6" E 29° 53' 10.8"  S 28° 57' 55.5" E 29° 53' 12.4"	Three graves marked by stone packed were noted. Although the site is overgrown, it appears old, and uncared of. All these graves are rectangular in shape. No grave goods are evident on the graves and none of the graves have formal headstones.	High	The first two graves are located south west and about 10m of tower 353, and the other one is about 30m south east of the tower position. The development will negatively impact on these graves.	Phase 2 archaeological mitigation of the graves should be partitioned. This will be subject to consultation with descendants and permit application.
352	S 28° 58' 05.6" E 29° 53' 17.9"	An informal grave yard containing approximately 120 graves were noted. The dressings of these graves are stone packed, and the site is well cared, and appears to be of recent	High	These graves are about 10 meters from the tower position, and will thus be negatively impacted on.	Relocation of these graves should be partitioned. This will be subject to consultation with descendants and permit application with relevant departments and respective



		period. No formal headstones on these graves (see figure 11).			municipalities.
349	S 28° 58' 20.6" E 29° 53' 49.0"	Three graves where noted next to a small dam overlooking the main road. These graves are oval and comprise stone lined dressings with soil in the middle.	High	These graves are about 20m south east of tower no. 349, and will thus be negatively impacted by construction of the pylon.	The tower position must be moved further away from the graves, or Phase 2 archaeological mitigation of the graves should be partitioned.
346	S 28° 58' 32.9" E 29° 54' 15.6"	An ellipsoidal stone structure foundation, possibly dating to the Late Iron Age was noted.	Low to Medium	The site is located on the power line servitudes, and about 50m south east of tower no. 346	Eskom must take note of the site and its position and ensure that no negative impact take place during construction. A danger tape around the site is recommended during activities on tower 346.
344-343	S28°58' 51.19" E29°54' 51.34"  S28°58' 50.31" E29°54' 52.90"  S28°58' 50.05" E29°54' 55.37"	Several stone enclosures where noted between tower 344 and 343. However, no impact is expected here, since the area will not be cleared. In fact, the power line will be connected to the existing	Medium	These stone enclosures are scattered across the area between these two towers.	Eskom must take note of the sites and their positions and also ensure that no negative impact take place during construction. A danger tape around the site is recommended during construction of



		power line, minimising impacts on land.			tower 344 and 343.
343	S 28 58' 55.8", E 29 55' 00.3"	Middle to Late Stone artefacts were noted on the river basin. These stones are out of context, and appear to have been brought to the area by erosion.	Low to Medium	These artefacts are located north west of tower 343, and about 200m away.	Eskom must take note of the area and its position and ensure that no negative impact take place during construction.
342-341	S 28 59' 07.4", E 29 55' 25.3"  S 28 59' 08.0", E 29 55' 26.7"  S 28 59' 14.4", E 29 55' 35.9"	A grave which is marked by an aloe tree, and comprise oval shaped stone dressing was noted on the power line servitudes. Few metres from the grave, there is a stone enclosure. It is possible that the grave and stone enclosure might be related. Schotia brachypetala tree was also noted along the power line servitudes. This plant is used by traditional healers to treat heartburn, dysentery and diarrhoea. It is clear that it is	Grave - High Structure – Low to Medium Tree – Medium	This grave and enclosure are located on the power line servitudes and 100m north west of tower no. 342. The tree is located 40m and north west of tower 341.	Archaeological monitoring must be undertaken by an archaeologist during activities and construction of tower no. 342 and 341 to ensure that no negative impact result on the noted cultural heritage materials.



		used, since it bears lots of cuts, some appears very old (see figure 11).			
338	S28°59' 44.10" E29°55' 50.42"  S28°59' 46.52" E29°55' 51.80"	Two circular stone enclosures dating to the Late Iron Age were noted.	Medium to Low	The first enclosure is located on the northern section, while the other is on the southern section. Both are within 50m range to tower 338.	An archaeological monitoring must be undertaken during construction of tower no. 339 to ensure that no negative impact result on the noted cultural heritage materials.
335	S 29° 00' 21.3" E 29° 56' 06.2"	A foundation of a circular collapsed cattle kraal, possibly dating to the Late Iron Age was documented.	Low to Medium	This enclosure is located on the exact area of tower no. 335.	Phase 2 archaeological mitigation of the site. In addition, a destruction permit must be sought to destroy the site.
332	S 29° 01' 02.5" E 29°56' 24.0"  S 29° 01' 02.6" E 29°56' 23.8"  S 29° 01' 03.1" E 29°56' 24.6"  S 29° 01' 03.3" E 29°56' 24.4"	Four assemblages of stones were noted adjacent to each other. Their context is not clear at this stage. However, these might have been graves.	High if graves	These assemblages are on the line servitudes, approximately 100m south of tower 332.	The foundations of these structures must be tested by means of acceptable archaeological test excavation techniques to establish whether they are graves or not.
330	S 29° 01' 25.3" E 29°56' 33.0"	The site comprises a circular stone	Low to Medium	This structure is located on the power line	Phase 2 archaeological mitigation of



		structure constructed with reasonable large stones.		servitudes, and about 70m north of tower 331.	the site. In addition, a destruction permit must be sought to destroy the site.
327	S 29° 02' 05.3" E 29°56' 52.0"	Foundation of a collapse Late Iron Age cattle enclosure was noted.	Low to Medium	This foundation is located north east of tower position number 326, and approximately 150m away.	Eskom must take note of the site and its position and ensure that no negative impact take place during construction. A danger tape around the site is recommended during activities on tower 326.
317-318	S29°03' 47.40" E29°57' 46.93"  S29°03' 47.91" E29°57' 46.71"  S29°03' 48.33" E29°57' 47.70"  S29°03' 47.92" E29°57' 48.31"  S29°03' 50.71" E29°57' 49.20"	Remains of a Late Iron Age homestead comprising stone foundations, and other yet to be defined circular assemblages of stones were noted in this area.	Low to Medium	These sites are scattered on the line servitudes between tower no. 317 and 318.	An archaeological monitoring must be undertaken during construction of tower no. 317 and 318 to ensure that no negative impact result on these sites.
311-313	S29°04' 53.70" E29°58' 45.00"  S29°04' 54.80" E29°58' 49.80"  S29°04' 58.20" E29°58' 47.50" (Graves)	Remnants of historic homestead comprising several stone foundations, of varying shape, including oval and rectangular were noted, also noted is a	High	These materials are located on the servitudes of the power line, between tower 311, 312 and 313.	Monitoring is however, required during construction of tower position 311, 312 and 313. This will safeguard any chance archaeological materials that



		fairly large lined stone walling. In addition, four graves were also noted in association with this homestead, and it is possible that these are related.			might be exposed during construction phase. Should any impacts be identified, Phase 2 archaeological mitigation may be required.
310	S 29° 05' 02.3" E 29° 58' 52.0"	A single grave was noted in the area, this grave might be related to activities mentioned above on tower (s) 311-313.	High	This grave is located on the power line servitudes, and approximately 200m north of tower no. 310.	Eskom must take note of the site and its position and ensure that no negative impact take place during construction. A danger tape around the grave is recommended during construction.
310	S 29° 05' 02.3" E 29° 58' 52.0"	A circular stone enclosure dating to either Historical Period or Late Iron Age was noted.	Low to Medium	This structure is located 10m south of tower no. 310.	Application for a destruction permit to have the section of the structure destroyed. Mapping and proper documentation of the structure should also be made.
210-211	S 29° 21' 47.4" E 30° 08' 10.7"  S 29° 21' 52.9" E 30° 08' 19.3"	Two stone walling were documented. The first one extends for about 500m, while the second one	Medium	These two stone walling are located between tower 209 and 210.	Monitoring is required during construction of tower position 209 and 210. This monitoring should be



		extends for about 300m. The power line will transverse over these walling since they are located in the servitudes.			instrumental in ascertaining that the power line construction activity does not negatively impact on the walling.
168	S 29°26'48.65" E 30°10'28.59"	There is a stone walling structure, probably dating to the historical period. This walling is impacted by the fence, and not in good condition.	Low	This walling is located between tower 169 to 165, and it forms part of the farm's fencing.	Destruction permit must be sought with Amafa to disturb the site.
122	S 29° 34' 57.2" E 30° 10' 20.4"	Oval stone assemblages which might possibly be a grave was documented.	Medium	This assemblage is located 20m north of tower no. 122.	Local community must be consulted with regarding the possibility of the cairns being graves or not. If its context cannot be verified with the local community, archaeological test excavation must be conducted. This will require a permit from Amafa.
120	S 29 35' 24.8" E 30 10' 13.5"	An isolated elongated stone in association with an aloe tree was	Medium if a memorial	This stone is on the power line servitudes, and might be impacted by the proposed	Eskom must take note of the site and its position and ensure that no negative





		documented. This appears to be some sorts of memorial or a grave. Its context appears to be of important to the community nearby.		project.	impact take place during construction. In addition, the proprietor of this stone must be looked and notified about this proposed development which might impact on their insignia.
117	S 29 35' 49.4" E 30 10' 11.6"	Isolated decorated and undecorated potsherds, as well as stone tools scatters were documented.	Low	The site is located 100m north of tower 117.	Monitoring during construction of tower no. 117 to determine if whether the density of these potsherds are consistently low, or not.
104-105	S 29 36' 39.5" E 30 10' 35.3"	Stone walling which extends for about 3km long was noted, this walling is arguably the longest isolated stone walling in South Africa. Although section of it is disturbed, it is still in generally good shape (see figure 10).	High	The power line will transverse over section of the stone walling, parallel to tower no. 104 and 105.	Monitoring is strictly required during construction of tower position 105 and 106. This monitoring should be instrumental in ascertaining that construction of the power line activity does not negatively impact on the stone walling. In addition, Eskom should not use the current access road that connects tower



					104 and 105. This access roads cut across the walling, and it is causing damage to the stone walling.
105	S 29 38' 13.4" E 30 11' 51.7"	A stone walling in association with seven graves were documented on the area which is fairly close to the stone walling mentioned above.	High	These graves are located about 100m north of tower 105.	Eskom must take note of the site and its position and ensure that no negative impact take place during construction. A danger tape around the site is recommended during construction activities.
92	S 29 38' 46.6" E 30 12' 11.8"	A stone walling which is about 150m in length was noted, this walling appears to have dated to the historical era.	Low to High	This stone walling is adjacent tower no. 92.	Permit application to destroy section of the stone walling should be sought before construction began.
76 - 64		A decision in relation to relocation of houses located between tower no. 64 and 76 is pending negotiation. Henceforth tower positions might be shifted, if such shifting is granted,	High for graves	These graves are within residential stands, which are located on the power line servitudes.	Permit application will have to be applied for, in order to relocate these graves.



		<p>owners should be consulted in relation to graves in their domicile. Although these could not be assessed, several graves were observed in the residence. If these people are to be relocated, then their graves will likewise have to be relocated.</p>			

**Table 2:** Attributes of noted materials and respective co-ordinates.



**Figure 9:** View of some of the stone enclosure noted in the proposed area.







**Figure 10:** View of some of the Stone tools and decorated potsherds that were noted in the proposed area.



**Figure 11:** View of some of the stone walling documented in the proposed area.







**Figure 12:** View of some of the many graves that will be impacted by the proposed power line.



**Figure 13:** View of the isolated stone which might be marking an insignia.







**Figure 14:** View of the tree which is used by traditional practitioner as a medication.

## 10. Recommendations and Conclusions

It should be noted that most of the sites in the KwaZulu-Natal are located in close proximity to the river, and also in mountainous area. The proposed power line transverses mostly close to the river banks and on mountainous area. As a result, caution should be exercised at all times. Despite that the proposed area is generally disturbed by several activities as mentioned above, experience has taught us that archaeological material may still be encountered during secondary development work. If any chance archaeological or previously unknown grave (s), be exhumed or discovered during the course of construction work, activities on the affected tower positions should be deactivated, and a heritage specialist monitoring the project be notified immediately.

A number of sites dating to the Late Iron Age, as well as graves were identified and recorded. Some of the sites (especially the LIA stone walled sites and settlements) are highly significant and would have to be mitigated before construction began. Most of these will be negatively impacted on by the proposed construction of pylon or access roads. Hence, mitigation measures will have to be implemented to avoid or minimize these impacts. These sites were assessed and subsequently mitigation measures suggested. If such mitigation



measures are implemented successfully, there would be no objection to the development of the proposed 130 km - 400 kV power line construction from Ariadne to Venus substation.

**N.B. It should be noted that the process of grave relocation is done at the expense of the developer, and time delay may result while family members are being sought/ and or negotiated with.**



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## APPENDIX 1: SITE SIGNIFICANCE

The following guidelines for determining site *significance* were developed by SAHRA in 2003. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.

### (a) Historic value

- Is it important in the community, or pattern of history?
- Does it have strong or special association with the life or work of a person, group or organization of importance in history?
- Does it have significance relating to the history of slavery?

### (b) Aesthetic value

- Is it important in exhibiting particular aesthetic characteristics valued by a community or cultural group?

### (c) Scientific value

- Does it have potential to yield information that will contribute to an understanding of natural or cultural heritage?
- Is it important in demonstrating a high degree of creative or technical achievement at a particular period?

### (d) Social value

- Does it have strong or special association with a particular community or cultural group for social, cultural or spiritual reasons?

### (e) Rarity

- Does it possess uncommon, rare or endangered aspects of natural or cultural heritage?

### (f) Representivity

- Is it important in demonstrating the principal characteristics of a particular class of natural or cultural places or objects?
- What is the importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as being characteristic of its class?



- Is it important in demonstrating the principal characteristics 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?

