



**PHASE 1**

**ARCHAEOLOGICAL IMPACT ASSESMENT STUDY**

**RELATING TO THE PROPOSED ESKOM POWER LINE ESTABLISHMENT BETWEEN  
VILJOENSKROON MUNIC SUBSTATION TO SENWESCO SWITCHING STATION ON FARM  
RENDEZVOUS 398,RIETPAN AND JAGTERSPRUIT 362 WITHIN MOQHAKA LOCAL  
MUNICIPALITY OF THE FEZILE DABI DISTRICT,  
FREE STATE PROVINCE.**

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Date of report: 28 September 2016

## EXECUTIVE SUMMARY

Vhufashu Heritage Consultants cc were appointed by Aurecon South Africa Pty (Ltd) on behalf of Eskom Holdings SOC Limited-Free State Operating Unit to undertake an Archaeological Impact Assessment for the proposed construction of 11kV twin Hare power line from Viljoenskroon Munic Substation to Senwesco Substation, Vierfontein Viljoenskroon 88kV line T-Off to Senwesco Substation, Viljoenskroon-Marseilles Switching Station 132kV line, Marseilles 132kV Switching Station and construct new Vierfontein Rural Substation 132/11kV next to the existing one within Moqhaka Local Municipality of the Fezile Dabi District, Free State Province.

To begin with, a detailed desktop study was carried out to understand the framework for assessing archaeological and historical sites. This included reviewing the 1972 Convention, the operational guidelines of 2013, the ICOMOS (International Council of Monuments and Sites, 2011) guidelines, the South African Heritage Resource Act (Act 25 of 1999). Contract archaeology reports, research and academic publications were studied. A base line archaeological survey was conducted in conformity with the National Heritage Resources Act (Act 25 of 1999).

The following conclusions were reached:

- The proposed power lines are scheduled to take place within the existing Eskom servitude and substations.
- Based on the current information obtained for the area during the site visit, the power line routes transverse across farm land that encompasses livestock grazing and cultivated land and an on perennial stream. The survey failed to identify any significant heritage resources which will be impacted during the power lines construction process, however approximately **three (3)** area of heritage significance were geo-referenced outside the proposed development footprint this include: Historical building in association

with grain silos, a single grave and cluster of four graves. The identified sites are not considered to be under immediate threat.

From an archaeological and cultural heritage perspective, there are no objections to the proposed power lines and we recommend to the South African Heritage Resources Authorities (SAHRA) or Provincial Heritage Resource authority to approve the project as planned.

**Acknowledgements of receipt:**

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**PROFESSIONAL DECLARATION**

I, Mr. Ndivhuho Eric Mathoho declare that I do not have financial or personal interest in the proposed development, nor its developers or any of their subsidiaries, apart from the provision of Archaeological Impact Assessment.



.....  
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## 1. INTRODUCTION

Eskom Holdings SOC Limited- Free State Operating Unit commissioned studies for the proposed electrification, refurbishment and strengthening of power lines and substation between Viljoenskroon and Vierfontein. To ensure that the proposed development meets the environmental requirements in line with the National Environmental Management Act 107 of 1998 as amended in 2010, they appointed Aurecon South Africa (PTY) LTD as Independent Environmental Assessment Practitioner who then appointed Vhufahashu Heritage Consultants to undertake archaeological impact assessment of the proposed project. The proposed activities is listed as described in Government gazette Notice R983 to 985, promulgated in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA). The proposed activities could have a substantial detrimental effect on the environment and may not commence without an Environmental Authorization from the competent authority, in this case the National Department of Environmental Affairs (DEA). A NEMA application form was submitted by Aurecon South Africa (PTY) LTD. Archaeological Impact Assessment (AIA) report form part of a series of appendices prepared for Basic Assessment Report (BAR) pursued in accordance with the National Environmental Management Act, 1998 (Act No. 107 of 1998).

In order to comply with above legislation the applicant requires information on the heritage resources that occur within or near the proposed site and their heritage significance in order to inform and guide decision making in minimizing impact on archaeological and heritage sites. Archaeological/ Heritage impact assessment is conducted in line with the National Heritage Resources Act of 1999 (Act No. 25 of 1999). The Act protects heritage resources through formal and general protection. The Act provides that certain developmental activities require consents from relevant heritage resources authorities in this regard the South African Heritage Resources Agency. SAHRA has developed minimum standards for impact assessment, In addition to these local standards, the International Council of Monuments and Sites (ICOMOS) published guideline for assessing impacts. The Burra Charter of 1999, require a caution approach to the management of sites, it set out the need to understand the significance of heritage places, and the significance guide decisions.



The ICOMOS standard principles were applied, in an effective and equitable manner in order to avoid loss and disturbance of heritage sites in the study area. Information presented in this report form the basis of Archaeological resources assessment of the proposed project.

## **2. RELEVANT LEGISLATION**

Two sets of legislation are relevant for this study with regards to the protection of heritage resources and graves.

### **2.1. The National Heritage Resource Act (25 of 1999)**

This Act makes provision of the establishment of the South African Heritage Resource Agency (SAHRA) being the prime custodians of the State heritage resources. It further provides that Heritage Impact Assessment (HIA) or Archaeological Impact Assessment (AIA) for various categories of development are conducted as determined by Section 38 of the Act. It also provides for the grading of heritage resources (Section 7) and the implementation of a three-tier level of responsibility and functions from heritage resources to be undertaken by the State, Provincial and Local authorities, depending on the grade of heritage resources (Section 8)

**In terms of the National Heritage Resource Act 25, (1999) the following is of relevance:**

#### **Historical remains**

**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.

#### **Archaeological remains**

**Section 35(3)** Any person who discover archaeological or Paleontological object or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resource authority or the nearest local authority or museum, which must immediately notify such 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 paleontological site or any meteorite;
- destroy, damage, excavate, remove from its original position, collect or own any archaeological or paleontological material or object or any meteorite;
- trade in ,sell for private gain, export or attempt to export from republic any category of archaeological or paleontological material or object or any meteorite; or
- bring onto or use at an archaeological or paleontological site any excavation equipment or any equipment which assist with the detection or recovery of metal or archaeological material or object or such equipment for the recovery of meteorites.

**Section 35(5)** When the responsible heritage resource authority has reasonable cause to believe that any activity or development which will destroy, damage or alter any archaeological or paleontological site is underway, and where no application for a permit has been submitted and no heritage resource management procedures in terms of section 38 has been followed, it may

- serve on the owner or occupier of the site or on the person undertaking such development an order for the development to cease immediately for such period as is specified in the order
- carry out an investigation for the purpose of obtaining information on whether or not an archaeological or paleontological site exists and whether mitigation is necessary;
- if mitigation is deemed by the heritage resources authority to be necessary, assist the person on whom the order has been served under paragraph (a) to apply for a permit as required in subsection (4); and
- recover the cost of such investigation from the owner or occupier of the land on which it is believed an archaeological or paleontological site is located or from the person proposing to undertake the development if no application for a permit is received within two week of the order being served.

**Subsection 35(6)** the responsible heritage resource authority may, after consultation with the owner of the land on which an archaeological or paleontological site or meteorite is situated;

serve a notice on the owner or any other controlling authority, to prevent activities within a specified distance from such site or meteorite.

### **Burial grounds and graves**

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

- (i) 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; or
- (ii) bring onto or use at a burial ground or grave any excavation equipment, or any equipment which assists in detection or recovery of metals.

**Subsection 36 (6)** Subject to the provision of any person who in the course of development or any other activity discover the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resource authority which must, in co-operation with the South African Police service and in accordance with regulation of the responsible heritage resource authority-

- (l) carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this act or is of significance to any community; and if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-interment of the contents of such grave or, in the absence of such person or community, make any such arrangement as it deems fit.

### **Cultural Resource Management**

**Section 38(1)** Subject to the provisions of subsection (7), (8) and (9), any person who intends to undertake a development\* ...

- must at the very earliest stages of initiating such development notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

**development** means any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of the heritage authority in any way result in a

change to the nature, appearance or physical nature of a place, or influence its stability and future well-being, including:

- (i) Construction, alteration, demolition, removal or change of use of a place or a structure at a place;
- (ii) Any change to the natural or existing condition or topography of land, and
- (iii) Any removal or destruction of trees, or removal of vegetation or topsoil;

**place** means a site, area or region, a building or other structure

**structure** means any building, works, device or other facility made by people and which is fixed to the ground.

## **2.2. The Human Tissue Act (65 of 1983)**

This act protects graves younger than 60 years, these falls under the jurisdiction of the National Department of Health and the Provincial Health Department. Approval for the exhumation and reburial must be obtained from the relevant provincial MEC as well as relevant Local Authorities.

## **3. TERMS OF REFERENCE**

The terms of reference for the study were to undertake an Archaeological Impacts Assessment for the proposed establishment of a power line and associated substation and submit a specialist report, which addresses the following:

- Executive summary, Scope of work undertaken, Methodology used to obtain supporting information, Overview of relevant legislation, Results of all investigations, Interpretation of information, Assessment of impact, Recommendation on effective management measures, References.

## 4. METHODOLOGY

### *Source of information*

Most of the information was obtained through the site visit made on the 17 September 2016 by Richard Munyai where systematic inspections were covered along linear transects which resulted in the maximum coverage of the proposed power line route . Standard archaeological observation practices were followed; Visual inspection was supplemented by relevant written source, and oral communications with local communities from the surrounding area. In addition, the site was recorded by hand held GPS: Garmin Oregon 650 and plotted on 1:50 000 topographical map. Archaeological/historical material and the general condition of the terrain were photographed with a Canon 1200D Camera.

### *Assumption and Limitations*

It must be pointed out that heritage resources can be found in the unexpected places, it must also be borne in mind that survey may not detect all the heritage resources in a given project area. While some remains may simply be missed during surveys (observation) others may occur below the surface of the earth and may be exposed once development (such as the construction of the proposed facilities) commences.

## 5. ASSESSMENTS CRITERIA

This section describes the evaluation criteria used for determining the significance of archaeological and heritage sites. The significance of archaeological and heritage sites were based on the following criteria:

- The unique nature of a site.
- The amount/depth of the archaeological deposit and the range of features (stone walls, activity areas etc.).
- The wider historic, archaeological and geographic context of the site.
- The preservation condition and integrity of the site.
- The potential to answer present research questions.

### 5.1 Site Significance

The site significance classification standards as prescribed in the guideline and endorsed by the South African Heritage Resources Agency (2006) and approved by the Association for Southern African Professional Archaeologists (ASAPA) for the Southern African Development Community (SADC) region, were used as guidelines in determining the site significance for the purpose of this report.

Table 1 The classification index is represented in the Table below.

FIELD RATING	GRADE	SIGNIFICANCE	RECOMMENDED MITIGATION
National Significance (NS)	Grade 1	-	Conservation; National Site nomination
Provincial Significance (PS)	Grade 2	-	Conservation; Provincial Site nomination
Local Significance (LS)	Grade 3A	High Significance	Conservation; Mitigation not advised
Local Significance (LS)	Grade 3B	High Significance	Mitigation (Part of site should be retained)
Generally Protected A (GP.A)	Grade 4A	High / Medium Significance	Mitigation before destruction
Generally Protected B (GP.B)	Grade 4B	Medium Significance	Recording before destruction
Generally Protected C (GP.C)	Grade 4C	Low Significance	Destruction

The significance of an archaeological site is based on the amount of deposit, the integrity of the context, the kind of deposit and the potential to help answer present research questions. Historical structures are defined by Section 34 of the National Heritage Resources Act, 1999, while other historical and cultural significant sites, places and features, are generally determined by community preferences.

*A crucial aspect in determining the significance and protection status of a heritage resource is often whether or not the sustainable social and economic benefits of a proposed development outweigh the conservation issues at stake. Many aspects must be taken into consideration when determining significance, such as rarity, national significance, scientific importance, cultural and religious significance, and not least, community preferences. When, for whatever reason the protection of a heritage site is not deemed necessary or practical, its research potential must be assessed and mitigated in order to gain data / information which would otherwise be lost. Such sites must be adequately recorded and sampled before being destroyed. These are generally sites graded as of low or medium significance.*

### ***Grading and rating systems of heritage resources***

#### ***5.2 Impact Rating***

##### **VERY HIGH**

These impacts would be considered by society as constituting a major and usually permanent change to the (natural and/or cultural) environment, and usually result in severe or very severe effects, or beneficial or very beneficial effects.

**Example:** The loss of a species would be viewed by informed society as being of VERY HIGH significance.

**Example:** The establishment of a large amount of infrastructure in a rural area, which previously had very few services, would be regarded by the affected parties as resulting in benefits with VERY HIGH significance.

## HIGH

These impacts will usually result in long term effects on the social and /or natural environment. Impacts rated as HIGH will need to be considered by society as constituting an important and usually long term change to the (natural and/or social) environment. Society would probably view these impacts in a serious light.

**Example:** The loss of a diverse vegetation type, which is fairly common elsewhere, would have a significance rating of HIGH over the long term, as the area could be rehabilitated.

**Example:** The change to soil conditions will impact the natural system, and the impact on affected parties (e.g. farmers) would be HIGH.

## MODERATE

These impacts will usually result in medium- to long-term effects on the social and/or natural environment. Impacts rated as MODERATE will need to be considered by the public or the specialist as constituting a fairly unimportant and usually short term change to the (natural and/or social) environment. These impacts are real, but not substantial.

**Example:** The loss of a sparse, open vegetation type of low diversity may be regarded as MODERATELY significant.

**Example:** The provision of a clinic in a rural area would result in a benefit of MODERATE significance.

## LOW

These impacts will usually result in medium to short term effects on the social and/or natural environment. Impacts rated as LOW will need to be considered by society as constituting a fairly important and usually medium term change to the (natural and/or social) environment. These impacts are not substantial and are likely to have little real effect.

**Example:** The temporary changes in the water table of a wetland habitat, as these systems are adapted to fluctuating water levels.

**Example:** The increased earning potential of people employed as a result of a development would only result in benefits of LOW significance to people living some distance away.



## **NO SIGNIFICANCE**

There are no primary or secondary effects at all that are important to scientists or the public.

**Example:** A change to the geology of a certain formation may be regarded as severe from a geological perspective, but is of NO SIGNIFICANCE in the overall context.

### ***5.3 Certainty***

*DEFINITE:* More than 90% sure of a particular fact. Substantial supportive data exist to verify the assessment.

*PROBABLE:* Over 70% sure of a particular fact, or of the likelihood of an impact occurring.

*POSSIBLE:* Only over 40% sure of a particular fact, or of the likelihood of an impact occurring.

*UNSURE:* Less than 40% sure of a particular fact, or of the likelihood of an impact occurring.

### ***5.4 Duration***

*SHORT TERM* : 0 – 5 years

*MEDIUM:* 6 – 20 years

*LONG TERM:* more than 20 years

*DEMOLISHED:* site will be demolished or is already demolished

### ***5.5 Mitigation***

Management actions and recommended mitigation, which will result in a reduction in the impact on the sites, will be classified as follows:

- ✓ **A** – No further action necessary
- ✓ **B** – Mapping of the site and controlled sampling required
- ✓ **C** – Preserve site, or extensive data collection and mapping required; and
- ✓ **D** – Preserve site

Table 2 Field rating and recommended grading of sites

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

## 6. A Brief background to the greater study area

### ***Stone Age Background***

The Stone Age is the period in human history when lithic material was mainly used to produce tools (Coertze & Coertze 1996:293). Within the South African context Stone Age industries has been divided in to three period (Korsman & Meyer 1999).

- Early Stone Age (ESA) 2 Million-150 000 years ago
- Middle Stone Age (MSA) 150 000 -30 000 years ago
- Late Stone Age (LSA) 40 000 years ago-1850AD.

In general these tools were simple meant to chop and butcher meat, de- skin animal and probably to smash bones to obtain marrow. The Early stone tools industries were later replaced by the Acheulian stone tool Industry. The Industry is characterized by cutting tools mostly dominated by flakes and blade industries. The last phase of stone tool industry is associated with the use of micro- lithic stone tools. According to Pelsner (2005) Information on the Stone Age industries within the study area is very limited probably due to a lack of research. However few sites close to the Vaal River have been geo-referenced. No stone tools has been found on the study area.

### ***Historical and Late Iron Age***

The 18<sup>th</sup> century's period is marked by the presence of Europeans (W.C Harris transverse the area in 1836) in the interior of southern Africa (Bergh 1999). The region was occupied by the Sotho- Twana speaking, a branch of the Moloko- Thabeng Facies AD 1700-1840 Late Iron Age communities. This communities occupied the flat top ridges and hills as represented by stone walled sites (Huffman 2007). The land was taken from Africans chiefdom and redistributed to the Boers; this was followed by demarcation of portions of land into farms. The first white farms were established along the rivers and tributaries, close to springs. Many of these farms have been in the ownership of families for generations. As a result, they possess a large corpus of information with regarding to the area and its history. A significant number of battles and skirmishes took place in the region (Van Schalkwyk, 2011). Very few structures of the historical time periods we notices outside the proposed development foot print.

## **7. PROJECT SITE LOCATION**

The proposed study area falls within the Viljoenskroon Central Business District (CBD). The entire proposed power line route encompasses livestock grazing and cultivated farmland. The landscape is reasonably flat section of land with no distinctive features, however small dams and a non- perennial stream occur in close proximity of the proposed site. The area is dominated by low tussock grassland with abundant karroid element. Low ground cover is dominated by *Themeda Triandra* with an increase in *Elionus muticus*, *Cymbopogon pospischilii* and *Aristida congesta* due to heavy grazing or erratic rainfall (Mucina & Rutherford, 2006). Above vegetation element falls within the Vaal-vet sandy grassland which stretches from northwest and Free State Province. Generally the geology and soils of the study area is characterized by Aeolian and colluvial sand overlying sand stone, mudstone and shale of the Karoo super group (mostly the Ecca group) as well as older Ventersdorp super group Andersite and basement Gneiss in the north. The soil form are mostly Avalon, Westleigh and Clovelly (Werger, 1978; Thomas & Shaw, 1991; Mucina & Rutherford, 2006).

The proposed project and associated activities are listed below

## 8. PROJECT DESCRIPTION

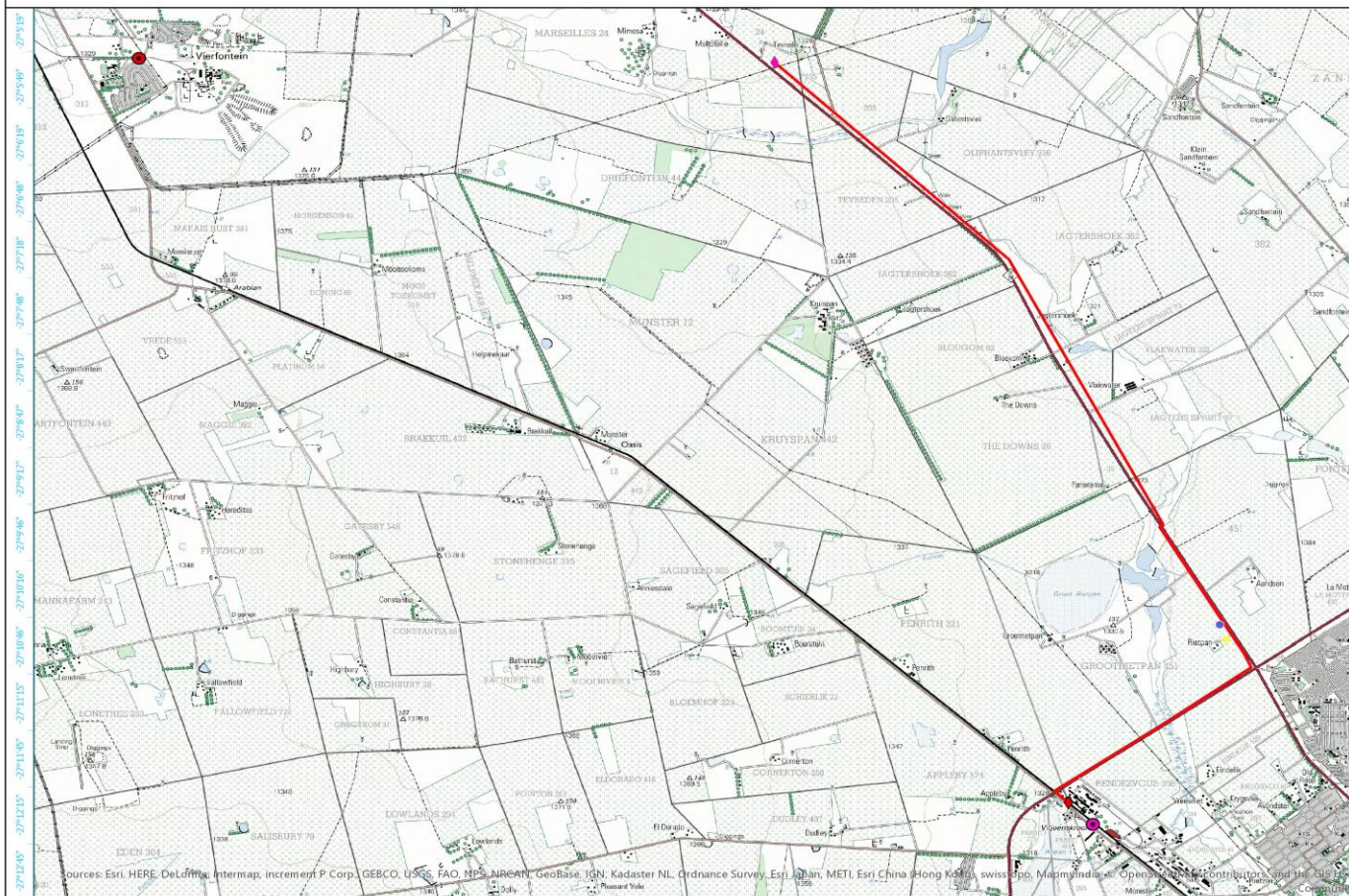
### Viljoenskroon munic substation related projects

- 1) De-commission 1.64km 88kV T-off line that is aligned from the 88kV Vierfontein - Viljoenskroon Munic Substation power line to Senwesco Substation;
- 2) Construct a 17.24km 132kV Single circuit Mono pole single Kingbird conductor line on the eastern side from the new Viljoenskroon Munic Substation aligning next to the tar road until it reaches the Reitzburg 132kV line at the vicinity of E 26° 52' 3.1" and S 27° 5' 40.9";
- 3) Construct a New 132kV Switching Station at a proposed location E 26° 52' 3.1", S 27° 5' 40.9"S and name it Marseilles Switching Station;
- 4) Construct a ±4.6km 11kV twin Hare line from the new Viljoenskroon Munic Substation to the new Senwesco Substation;
- 5) Construct a New Viljoenskroon 132kV substation (E 26° 56' 32.2", S 27° 12' 43.8") next to the existing Viljoenskroon munic substation (E 26° 56' 33.0", S 27° 12' 44.9");
- 6) Construct a New 1x11/6.6kV 10MVA Senwesco substation (E 26° 54' 45.1", S 27° 12' 6.6") next to existing Senwesco substation (E 26° 54' 45.3", S 27° 12' 7.2");
- 7) Disconnect the Vierfontein-Viljoenskroon 88kV Line from the 88/11kV Vierfontein Rural Substation and Decommission the existing 88/11kV Vierfontein Substation;
- 8) Connect the Vierfontein-Viljoenskroon Kingbird line to the new 132kV Viljoenskroon Munic Substation; and
- 9) Decommission the existing 88/11kV Viljoenskroon Munic Substation.

### **Vierfontein substation related projects**

- 1) Construct a new 1.969km 132kV single circuit single Kingbird Mono structure line from the 132kV Grootkop 1 power line, which is near the existing Vierfontein Rural Substation, to the newly constructed 132kV Vierfontein Rural Substation;
- 2) Demolish 4km 132kV Panther line from MERGRO 49 towards the new Marseilles Switching Station;
- 3) Construct a New Vierfontein rural 132/11kV Substation (E 26° 46' 31.0", S -27° 5' 31.6") next to existing substation;
- 4) Connect the Vierfontein-Viljoenskroon Kingbird line to the new 132kV Vierfontein Substation; and
- 5) Decommission the existing 5.96km Vierfontein-Jersey 88kV power line.

PROPOSED POWER LINE ESTABLISHMENT BETWEEN VIJJOENSKROON MUNIC SUBSTATION TO SENWESCO SUBSTATION WITHIN THE MOQHAKA LOCAL MUNICIPALITY OF THE FEZILE DABI DISTRICT, FREE STATE PROVINCE.



Map Legend

- Four Graves
  - Isolated Graves
  - ◆ Proposed Senwesco Substation
  - Senwesco Old Houses
  - Senwesco Substation Silos
  - Vierfontein Rural Substation
  - Viljoenskroon Munc Substation Site
  - ◆ Proposed Marselles Switching Station
  - Line
- 
- National Freeway; National Route.....
  - Arterial Route.....
  - Main Road.....
  - Secondary Road; Bench Mark.....
  - Other Road; Bridge.....
  - Track and Hiking Trail.....
  - Railway; Station or Siding.....
  - Other Railway; Tunnel.....
  - Embankment; Cutting.....
  - Power Line.....
  - Built-up Area (High, Low Density).....
  - Buildings; Ruin.....
  - Post Office; Police Station; Store.....
  - Place of Worship; School; Hotel.....
  - Fence; Wall.....
  - Windpump; Monument.....
  - Communication Tower.....
  - Mine Dump; Excavation.....
  - Trigonometrical Station; Marine Beacon.....
  - Lighthouse and Marine Light.....
  - Cemetery; Grave.....
  - International Boundary and Beacon.....
  - Provincial Boundary.....
  - Protected Area.....
  - Perennial River.....
  - Perennial Water.....
  - Non-perennial River.....
  - Dry Water Course.....
  - Dry Pan.....
  - Marsh and Vlei.....
  - Pipeline (above ground).....
  - Water Tower; Reservoir; Water Point.....
  - Coastal Rocks.....
  - Prominent Rock Outcrop.....
  - Erosion; Sand.....
  - Woodland.....
  - Cultivated Land.....
  - Orchard or Vineyard.....
  - Recreation Ground.....
  - Row of Trees.....

**MUSA** Heritage  
**masaru** consultancy CC  
 Sustainable community development is our speciality



Scale 1:60 000

Map Credits:  
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 081 312 3951/ 082 881 1271

Figure 1: Locality map

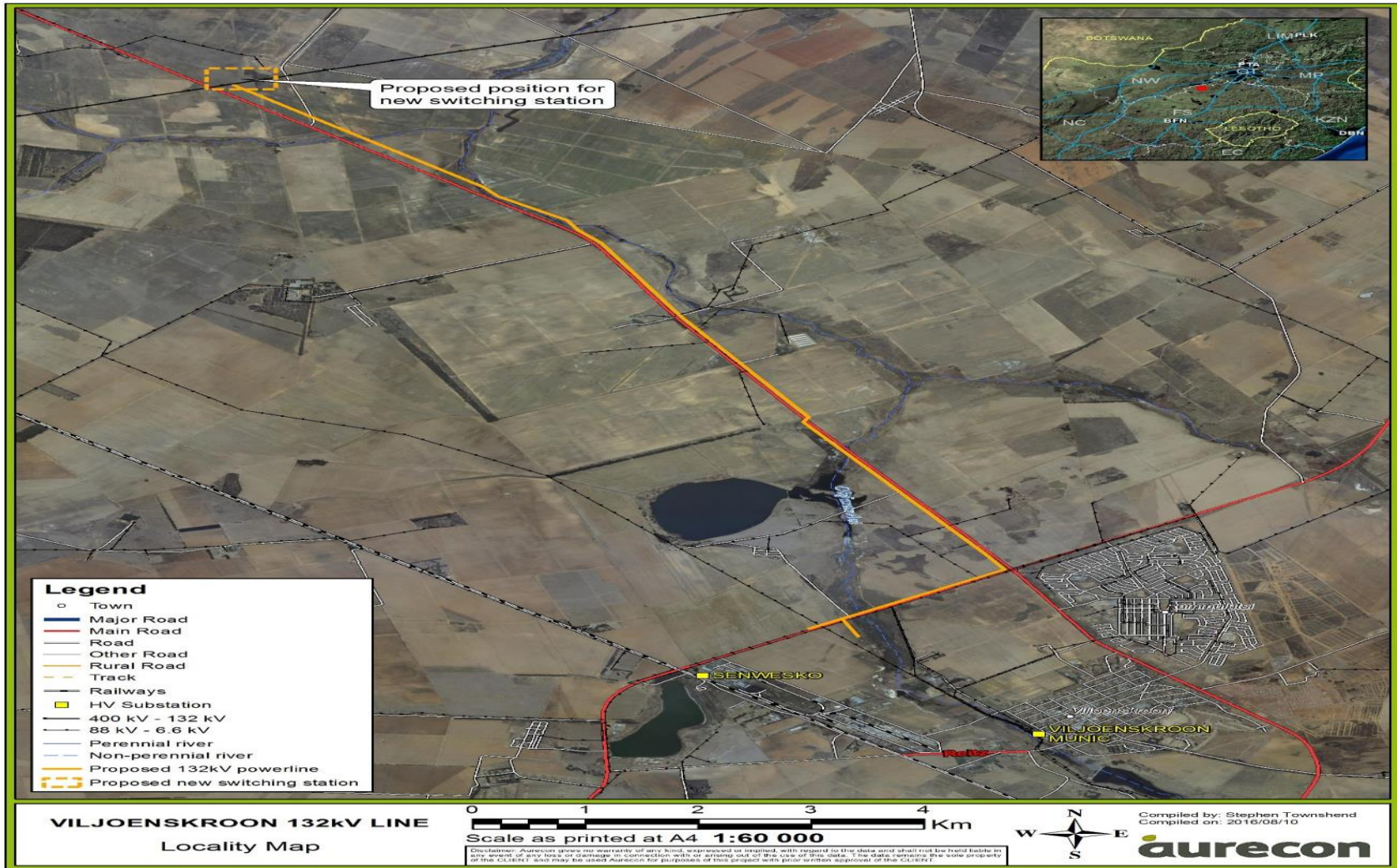


Figure 2: Google image of the study area

Table 3 List of HIA done within the broader geography of the proposed development area

Year of Study & Author	Project Name	Archaeological & Rock Art Sites	Built Environment & Landscape	Grave Site
2016,Hanlie Groenewald	Phase 1 Archaeological Impact Assessment of three proposed new water pipe lines in Frankfort,Fezile Dabi District Municipality,Free State Province.	Iron age	Stone walling	No grave Sites
2007 Zoe Henderson & C Koortzen	Heritage Assessment of report Mercury Substation expansion,Zaai Plaats 190/3, Fezile Dabi District Municipality,Free State Province.	No archaeological Sites	No built Environment	No grave Sites
2008,Karen Van Ryneveld	Phase 1 Archaeological Impact Assessment: Extension to refengkotso township,portions 3&5 of Mooiplaats 581, Deneysville,Fezile Dabi District Municipality,Free State Province.	No archaeological Sites	No built Environment	No grave Sites

## 9. RESULTS OF THE FIELD ASSESMENT

This section contains the results of the field assessment conducted as required in terms of the section 38 of the National Heritage Resource Act (Act 25 of 1999).

- ✓ **Site 1:** Scotched, green painted building in association to the railway train station as well as the Silos structures has been geo-referenced adjacent to the railway line. Based on the visual assessment of the building design as well as building fabrics used to construct the structure, the building and associated infrastructures are over than 60 years of age and qualifies to be protected in terms of Section 34 (1) of the National Heritage Resources Act (Act 25 of 1999).
- ✓ **Site 2:** A single grave indicated by granite tomb stone as grave dressing. A well-constructed low wall outline has been noted around the tombstone an indication that the tombstone was recently constructed. The head rest of the grave has been in scripted: In the loving memory of our grandfather Champion Daniel Mahlatsi, Born 24-01-1884 Died: 25-07-1949, rest in peace



- ✓ **Site 3:** A Cluster of four graves, 3 are marked by soil mound with concrete headrest and only one grave is marked by granite headrest and soil mound as grave dressings. The granite head rest has been in scripted Mosili Maria Malepe, Born 1863, Died 23-6-1953 and one concrete head rest is engraved Samuel Monyela.

Table 4

Sites	GPS co-ordinates	Sensitivity
1. Historical building and associated infrastructures ( grain silos)	GPS S27°.12', 23.03"& E 26°. 55'.03. 01"	Low significance
2. Single grave	GPS S27°.10',42.02"& E 26°.56'.09. 02"	Medium significance
3. A cluster of Four graves	GPS S27°.10',34.01"& E 26°.56'.06. 02"	Medium Significance



**Figure 3:** View of the proposed Viljoenskroon Munic Substation site GPS S27 12'44.5" E26 56'32.3")



**Figure 4:** View of Senwesco Substation (GPS S27 12'07.0" E26 54'43.4")



**Figure 5:** Old Silos on the Southern section of the Senwesco Substation (GPS S27 12'23.3" E26 55'03.1")



**Figure 6:** A building that qualifies to be protected in terms of the National Heritage Resources Act, the house is located south of the Senwesco Substation (GPS S27 12'27.4" E26 55'08.5")



**Figure 7:** Mr. Mahlatsi's grave, indicated by granite tombstone as grave dressings (GPS S27 10'42.2" E26 56'09.2")



**Figure 8:** A cluster of four graves at Grootrietpan farm indicated by soil mound and concrete headrest (GPS S27 10'34.1" E26 56'06.2").



**Figure 9:** View of Vierfontein Rural Substation (GPS S27 05'34.7" E26 46'31.0").



**Figure 10:** General view of the study area

## **10. RECOMMENDATIONS**

The identified three sites are located outside the proposed development foot print and will not be impacted by the proposed Eskom power line project. However the developer should take note of the noted sites with burial grounds. Eskom planning team should ensure that a small management plan is set in place to ensure future safety of these graves.

## **11. CONCLUSION**

The objective of the HIA is to limit primary and secondary impacts on archaeological and cultural heritage in the path of the proposed power line route. The study informs and makes recommendations for any further mitigation that should take place before construction activities commences. It is strongly recommended that aspects such as access routes related to power line should be designed not to disturbed these sites. These areas should be regarded as a “No Go” area by the construction crew. From an archaeological and cultural heritage resources perspective, there are no objections to the proposed power line project and we recommend to South African Heritage Resources Authorities (SAHRA) or Provincial Heritage Resource authority to approve the project as planned.

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## ADDENDUM 1: Terminology

### Terminology

The Heritage impact Assessment (HIA) referred to in the title of this report includes a survey of heritage resources as outlined in the National Heritage resources Act, 1999 (Act No 25 of 1999). Heritage resources, (Cultural resources) include all human-made phenomena and intangible products that are result of the human mind. Natural, technological or industrial features may also be part of heritage resources, as places that have made an outstanding contribution to the cultures, traditions and lifestyle of the people or groups of people of South Africa.

The term 'pre –historical' refers to the time before any historical documents were written or any written language developed in a particular area or region of the world. The historical period and historical remains refer, for the project area, to the first appearance or use of 'modern' Western writing brought South Africa by the first colonist who settled in the Cape in the early 1652 and brought to the other different part of South Africa in the early 1800.

The term 'relatively recent past' refers to the 20<sup>th</sup> century. Remains from this period are not necessarily older than sixty years and therefore may not qualify as archaeological or historical remains. Some of these remains, however, may be close to sixty years of age and may in the near future, qualify as heritage resources.

It is not always possible, based on the observation alone, to distinguish clearly between archaeological remains and historical remains or between historical remains and remains from the relatively recent past. Although certain criteria may help to make this distinction possible, these criteria are not always present, or when they are present, they are not always clear enough to interpret with great accuracy. Criteria such as square floors plans (a historical feature) may serve as a guideline. However circular and square floors may occur together on the same site.



The 'term sensitive remains' is sometimes used to distinguish graves and cemeteries as well as ideologically significant features such as holy mountains, initiation sites or other sacred places. Graves in particular are not necessarily heritage resources if they date from the recent past and do not have head stones that are older than sixty years. The distinction between 'formal' and 'informal' graves in most instances also refers to graveyards that were used by colonists and by indigenous people. This distinction may be important as different cultural groups may uphold different traditions and values with regard to their ancestors. These values have to be recognized and honored whenever graveyards are exhumed and relocated.

The term 'Stone Age' refers to the prehistoric past, although Late Stone Age people lived in South Africa well into the historical period. The Stone Age is divided into an Early Stone Age (3 Million years to 150 000 thousand years ago) the Middle Stone Age (150 000 years ago to 40 years ago) and the Late Stone Age (40 000 years to 200 years ago).

The term 'Early Iron Age' and Late Iron Age respectively refers to the periods between the first and second millenniums AD.

The 'Late Iron Age' refers to the period between the 17<sup>th</sup> and the 19<sup>th</sup> centuries and therefore includes the historical period.

Mining heritage sites refers to old, abandoned mining activities, underground or on the surface, which may date from the pre historical, historical or relatively recent past.

The term 'study area' or 'project area' refers to the area where the developers wants to focus its development activities (refer to plan)

Phase I studies refers to survey using various sources of data in order to establish the presence of all possible types of heritage resources in a given area.

Phase II studies includes in-depth cultural heritage studies such as archaeological mapping, excavating and sometimes laboratory work. Phase II work may include documenting of rock art, engravings or historical sites and dwellings; the sampling of archaeological sites or shipwrecks; extended excavation of archaeological sites; the exhumation of bodies and the relocation of

grave yards, etc. Phase II work may require the input of specialist and require the co-operation and the approval of SAHRA.

**ADDENDUM 2: Types and ranges as outlined by the National Heritage Resource Act (Act 25 of 1999)**

The National Heritage Act (Act No 25 of 1999, Art 3) outlines the following types and ranges of the heritage resources that qualify as part of the national estate, namely:

- (a) Places, buildings structures and equipment of cultural significance;
- (b) Places to which oral tradition are attached or which are associated with living heritage;
- (c) Historical settlement and townscapes
- (d) Landscape and natural features of cultural significance;
- (e) Geological sites of scientific or cultural importance
- (f) Archaeological and paleontological sites
- (g) Graves and burial ground including-
  - (I) Ancestral graves
  - (II) Royal graves and graves of traditional leaders
  - (III) Graves of victim 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) movable objects, including-
  - (I) object recovered from 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) object of scientific or technological interest; and

(VII) books, records, documents, photographs, positive and negatives, graphic, film or video material or sound recording, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No 43 of 1996).

The National Heritage Resource Act (Act No 25 of 1999, Art 3) 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 a 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 organization of importance in the history of South Africa
- (i) Sites of significance relating to the history of slavery in South Africa.