



**PHASE I HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED  
DEVELOPMENT OF BORUTHO - SILIMELA 150KM, 400KV POWERLINE  
AND ASSOCIATED INFRASTRUCTURE, WITHIN SEKHUKHUNE AND  
WATERBERG DISTRICT MUNICIPALITIES IN THE LIMPOPO PROVINCE**

**Date: July 2024**

**Archaeology and Heritage Services**

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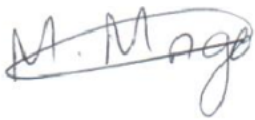
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## **DECLARATION OF INDEPENDENCE**

This report has been compiled by Makhosazana Mngomezulu, principal archaeologist and heritage consultant. The views expressed in this report are independent of the author and no other interest was displayed during the decision-making process for the proposed Highveld North-West and Lowveld Strengthening Project (Borutho-Silimela) 400 KV power line and associated infrastructure.

SIGNATURE:

A handwritten signature in blue ink, appearing to read 'M. Mngomezulu', is written over a horizontal line.

## TERMINOLOGY

<b>BP</b>	Before Present
<b>EIA</b>	Early Iron Age
<b>MIA</b>	Middle Iron Age
<b>LIA</b>	Late Iron Age
<b>ESA</b>	Early Stone Age
<b>MSA</b>	Middle Stone Age
<b>LSA</b>	Late Stone Age
<b>ya</b>	years ago
<b>Ibid</b>	<i>Ibidem</i> , Latin word meaning same as the previous source
<b>HIA</b>	Heritage Impact Assessment
<b>LPHRA</b>	Limpopo Provincial Heritage Resources Authority
<b>SAHRA</b>	South African National Resources Agency
<b>NHRA</b>	National Heritage Resources Act
<b>SAPS</b>	South African Police Services

## DEFINITIONS

ESA dates between 2 million ya to 2 00 000 BP. Industries associated with this period includes Oldowan, Acheulean and Fauresmith. ESA stone tools include hammer stones, flakes, cores, handaxes and cleavers (Pelser 2009).

MSA dates between 2 00 000 and 25 000 to 20 000 BP, this varies with location. Industries associated with this period includes the Howieson's Poort. The stone tools which characterize this period include scrapers, blades, points, and flakes.

LSA which dates between 25 000 and 20 000 to 2 000 BP. Stone tools of this period are characterized by their small size; this includes backed knives and borers (Pelser 2009).

EIA dates to AD 200 – 900 (Huffman 2007).

MIA dates to AD 900 – 1300 (ibid).

LIA dates to AD 1300 – 1840 (ibid).

## EXECUTIVE SUMMARY

Eskom Holdings Limited SOC (State Owned Company) Ltd (“Eskom”) intends to undertake the Basic Assessment process for Highveld North-West and Lowveld Strengthening Project (Borutho-Silimela) 400 KV power line and associated infrastructure. This is in line with Eskom’s Transmission Development Plan for the Highveld North-West and Lowveld North Reinforcement-Phase 2.

During the physical survey conducted on 04 January 2024, no other heritage resources were found on the proposed route; even cemeteries in the vicinity and a dilapidated structure were still outside the proposed 250m corridor. The proposed site is viable for the proposed project in terms of heritage; provided the proposed mitigation measures are adhered to.

The report will be submitted to the Relevant Heritage Resources Authority through SAHRIS (South African Resources Information System) for comments and for a decision as per the National Heritage Resources Act, 1999 (Act No 25 of 1999). The proposed project can proceed from a heritage perspective pending a decision from South African Heritage Resources Agency (SAHRA).

### Project Structure

<b>Introduction</b>	<ul style="list-style-type: none"><li>• Report background</li><li>• Methodology used in compiling this report</li></ul>
<b>Project locality</b>	<ul style="list-style-type: none"><li>• Location (include mapping)</li><li>• Heritage Background</li></ul>
<b>Findings</b>	<ul style="list-style-type: none"><li>• Types of findings</li><li>• Level of significance</li><li>• Possible impacts</li></ul>
<b>Recommendations &amp; conclusion</b>	<ul style="list-style-type: none"><li>• Mitigation measures</li></ul>
<b>Additional Information</b>	<ul style="list-style-type: none"><li>• Applicable Legislation</li></ul>

## TABLE OF CONTENTS

1. Introduction .....	8
2. Terms of Reference (ToR) .....	8
3. Methodology .....	9
3.1 Assumptions .....	13
3.2 Limitations .....	13
4. Locality Area .....	13
5. Historical Background of the study area .....	17
5.1 Stone Age Archaeology: .....	17
5.2 Iron Age Archaeology.....	17
5.3 HISTORY.....	18
6. Previously conducted HIA .....	18
7. Findings .....	19
8. Impact Assessment .....	23
8.1 Construction Phase.....	26
8.1.1 <i>Impact</i> .....	26
8.1.2 <i>Mitigation measure</i> .....	26
8.2 Operational Phase.....	26
8.2.1 <i>Impact</i> .....	26
8.2.2 <i>Mitigation measure</i> .....	26
8.3 Decommissioning Phase.....	26
8.3.1 <i>Impact</i> .....	26
8.3.2 <i>Mitigation measure</i> .....	26
8.4 Cumulative impacts.....	27
8.4.1 <i>Impact</i> .....	27
8.4.2 <i>Mitigation measure</i> .....	27
8.5 Site Significance .....	27
9. Recommendations and Chance findings .....	28
10. Conclusion .....	29
11. Images of the proposed study area .....	30
12. References.....	31
13. Legislation .....	33

13.1	Section 3 of the NHRA 25 of 1999.....	33
13.2	Section 36 of NHRA 25 of 1999.....	35
13.3	Section 38 of NHRA 25 of 1999.....	37

## LIST OF FIGURES

Figure 1:	Locality map of the study area. ....	15
Figure 2:	Tracklog of some of the areas that could be accessed. ....	16
Figure 3:	Map of heritage resources found in the vicinity of the proposed route. ....	20
Figure 4:	Close view of grave sites found in the vicinity. ....	21
Figure 5:	Cemetery in Mokopane (Graves 1).....	22
Figure 6:	Cemetery in Mahwelereng (Graves 2).....	22
Figure 7:	Cemetery in Tsamahansi (Graves 3).....	22
Figure 8:	Dilapidated structure and plaque found. ....	23
Figure 9:	(Left) Silimela substation; (right) northwest view after exiting Silimela substation. ....	30
Figure 10:	(Left) line route west of the dilapidated structure; (right) north of R573 next to the proposed route.....	30
Figure 11:	(Left) North view next to graves 3; (right) south view next to graves 3 in Tshamahansi.....	30
Figure 12:	Southeast view towards Borutho substation; (right) Borutho substation. ....	31

## LIST OF TABLES

Table 1:	Site significance rating according to SAHRA. ....	9
Table 2:	The significance weighing for each potential impact are as follows: .....	12
Table 3:	Rating of the heritage resource found on study area.....	23
Table 4:	Evaluation of the impacts of the project on the heritage resource WITHOUT mitigation measures. ....	24
Table 5:	Evaluation of the impacts of project on the structures WITH mitigation measures.....	25

## 1. INTRODUCTION

Vungandze Projects was appointed by NTC Environmental (Pty) Ltd to conduct a Phase I Heritage Impact Assessment for the proposed construction of the Borutho-Silimela 400kV powerline and its associated infrastructure. The length of the powerline is approximately 150km. The construction of the power line will aid Eskom in strengthening the power supply within Limpopo Province. The proposed project falls within the EGI corridor of 50m wide.

Transmission scope of work:

- Extend Borutho Substation to accommodate 1 x 400kV feeder bay for Silimela Line 1
- Extend Silimela Substation to accommodate 1 x 400kV feeder bay for Borutho Line 1
- Build approximately 150km 400kV line from Borutho Substation to Silimela Substation, with associated extensions at the terminal substations.

Below is the heritage act with reference to the proposed project and why a heritage impact assessment should be conducted:

Based on Section 38 under Heritage Resources Management of the National Heritage Act 25 of 1999 the heritage resources in South Africa should be managed in the following:

“(1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as—

(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length...”

The aim of this report is to provide a guideline on the heritage resources that may be found in the proposed area. Furthermore, it will provide anticipated impacts of the proposed project on such findings and mitigation measures as a way forward.

## 2. TERMS OF REFERENCE (TOR)

The approach used for this report was:

- Undertake a Phase I Heritage Impact Assessment (HIA) in accordance with the National Heritage Resources Act, 1999 (Act no. 25 of 1999);



- Identify heritage resources in the area affected and surroundings, as defined in Section 3 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), including archaeological sites on or close (within 100m) to the proposed area;
- Assess the significance of any identified resources in terms of the heritage assessment criteria as set out in the SAHRA regulations;
- Provide mitigation measures to safeguard heritage resources identified on site; and
- Comply with specific requirements and guidelines of the Limpopo Provincial Heritage Resources Authority (LPHRA) and the South African Heritage Resources Agency (SAHRA).

### 3. METHODOLOGY

The physical survey was conducted and completed on 04 January 2024. This report was prepared according to the National Heritage Resources Act, 1999 (Act No 25 of 1999). Background research of the study area was conducted using literature such as books, journals, previously conducted Heritage Impact Assessments (HIAs) on the study area and the internet.

Heritage resource means any place or object of cultural significance [NHRA1999 Act No. 25 of 1999]. The National Heritage Resources Act 1999 (Act No. 25 of 1999) was used as a source of reference to identify what is known as a heritage resource (see Appendix A Section 3 for list of heritage resources).

The following table from SAHRA Regulations is used to grade the significance and evaluate the level of impact on the heritage resources identified on site.

*Table 1: Site significance rating according to SAHRA.*

FIELD RATING	GRADE	SIGNIFICANCE	RECOMMENDED MITIGATION
National Significance (NS)	Grade 1	-	Conservation; National Site nomination
Provincial Significance (PS)	Grade 2	-	Conservation; Provincial Site nomination

FIELD RATING	GRADE	SIGNIFICANCE	RECOMMENDED MITIGATION
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)	-	High / Medium Significance	Mitigation before destruction
Generally Protected B (GP.B)	-	Medium Significance	Recording before destruction
Generally Protected C (GP.A)	-	Low Significance	Destruction

The determination of the effects of environmental impact on an environmental parameter is determined through a systematic analysis of the various components of the impact. This is undertaken using information that is available to the environmental practitioner through the process of the EIA. The impact evaluation of predicted impacts was undertaken through an assessment of the significance of the impacts. This is in line with specialist requirements as required by the client. For example, the request that: -

The impact methodology (should) concentrate on addressing key issues. This methodology to be employed in the report thus results in a circular route, which allows for the evaluation of the efficiency of the process itself.

***The following Assessment Criteria is used for Impact Assessment***

Impacts can be defined as any change in the physical-chemical, biological, cultural and or socio-economic environmental system that can be attributed to humans. The significance of the aspects/impacts of the process will be rated by using a matrix derived from Plomp (2004) and adapted to some extent to fit this process. These matrixes use the consequence and the likelihood of the various aspects and associated impacts to determine the significance of the

impacts.

***The significance of the impacts will be determined through a synthesis of the criteria below:***

**Probability:** describes the likelihood of the impact occurring

- **Improbable:** the possibility of the impact occurring is extremely low, due to the circumstances, design or experience.
- **Probable:** there is a probability that the impact will occur to the extent that provision must be made therefore.
- **Highly probable:** it is most likely that the impact will occur at some stage of the development.
- **Definite:** the impact will take place regardless of any prevention plans and there can only be relied on mitigation measures or contingency plans to contain the effect.

**Duration:** the lifetime of the impact

- **Short Term:** the impact will either disappear with mitigation or will be mitigated through natural processes in a time span shorter than any of the phases.
- **Medium Term:** the impact will last up to the end of the phases, where after it will be negated.
- **Long Term:** the impact will last for the entire operational phase of the project but will be mitigated by direct human action or by natural processes thereafter.
- **Permanent:** the impact is non-transitory. Mitigation either by man or natural processes will not occur in such a way or in such a time span that the impact can be considered transient.

**Scale:** the physical and spatial size of the impact

- **Local:** the impacted area extends only as far as the activity, e.g., footprint
- **Site:** the impact could affect the whole or measurable portion of the above-mentioned property.
- **Regional:** the impact could affect the area including the neighboring residential areas.

**Magnitude/Severity: Does the impact destroy the environment, or alter its function**

- **Low:** the impact alters the affected environment in such a way that natural processes are not affected.
- **Medium:** the affected environment is altered, but functions and processes continue in a modified way.

- **High:** function or process of the affected environment is disturbed to the extent where it temporarily or permanently ceases.

**Significance: This is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required.**

- **Negligible:** the impact is non-existent or unsubstantial and is of no or little importance to any stakeholder and can be ignored.
- **Low:** the impact is limited in extent, has low to medium intensity; whatever its probability of occurrence is, the impact will not have a material effect on the decision and is likely to require management intervention with increased costs.
- **Moderate:** the impact is of importance to one or more stakeholders, and its intensity will be medium or high; therefore, the impact may materially affect the decision, and management intervention will be required.
- **High:** The impact could render development options controversial or the project unacceptable if it cannot be reduced to acceptable levels; and/or the cost of management intervention will be a significant factor in mitigation.

The significance is calculated by combining the criteria in the following formula:

Sum (Duration, Scale, Magnitude) x Probability (*Table -2*)

S = Significance weighting; Sc = Scale; D = Duration; M = Magnitude; P = Probability

*Table 2: The significance weighing for each potential impact are as follows:*

Aspect	Description	Weight
Probability	Improbable	1
	Probable	2
	Highly Probable	4
	Definite	5
Duration	Short term	1
	Medium term	3
	Long term	4

Aspect	Description	Weight
	Permanent	5
Scale	Local	1
	Site	2
	Regional	3
Magnitude/Severity	Low	2
	Medium	6
	High	8
Significance	Sum (Duration, Scale, Magnitude) x Probability	
	Negligible	≤20
	Low	>20≤40
	Moderate	>40≤60
	High	>60

### 3.1 Assumptions

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It was assumed based on the aerial view from Google Earth and literature review that the study area might yield heritage resources as some areas were not previously disturbed.

### 3.2 Limitations

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Limitations on site included accessibility (the Borutho Substation). Some area could not be accessed as they are private properties. Furthermore, network coverage was extremely poor especially going north, resulting in loss of GPS signal, and tracking the route.

## 4. LOCALITY AREA

The proposed power line is located between the Borutho Substation on farm Gillimberg 861 in Mokopane and runs south to the Silimela Substation on farm Loskop Noord 12, near Marble Hall within the Lepelle-Nkumpi, Mogalakwena, Modimolle-Mookgophong and Ephraim Mogale Local

Municipalities, Limpopo Province. The route traverses through areas that are mostly agricultural fields and while some areas have dense vegetation.



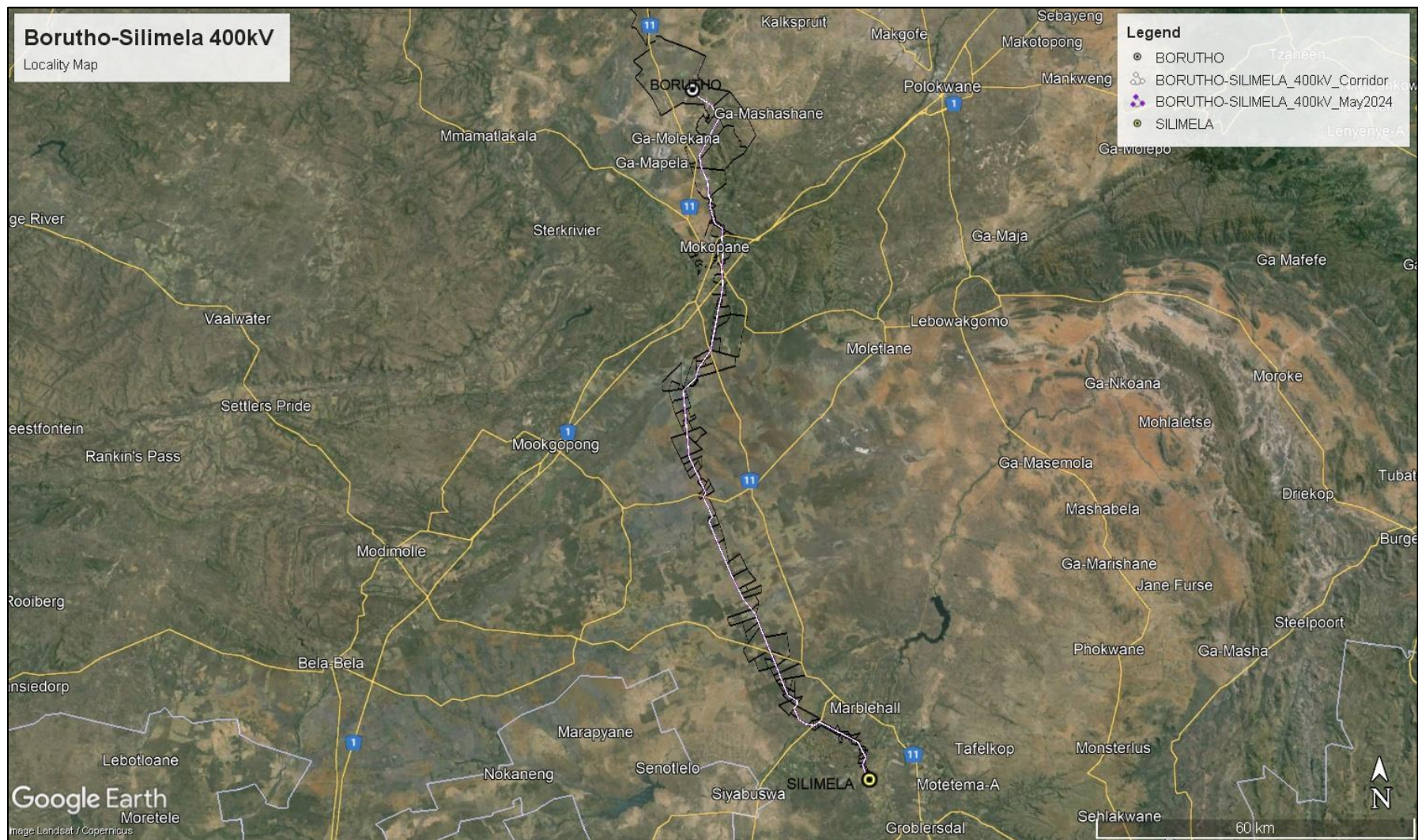
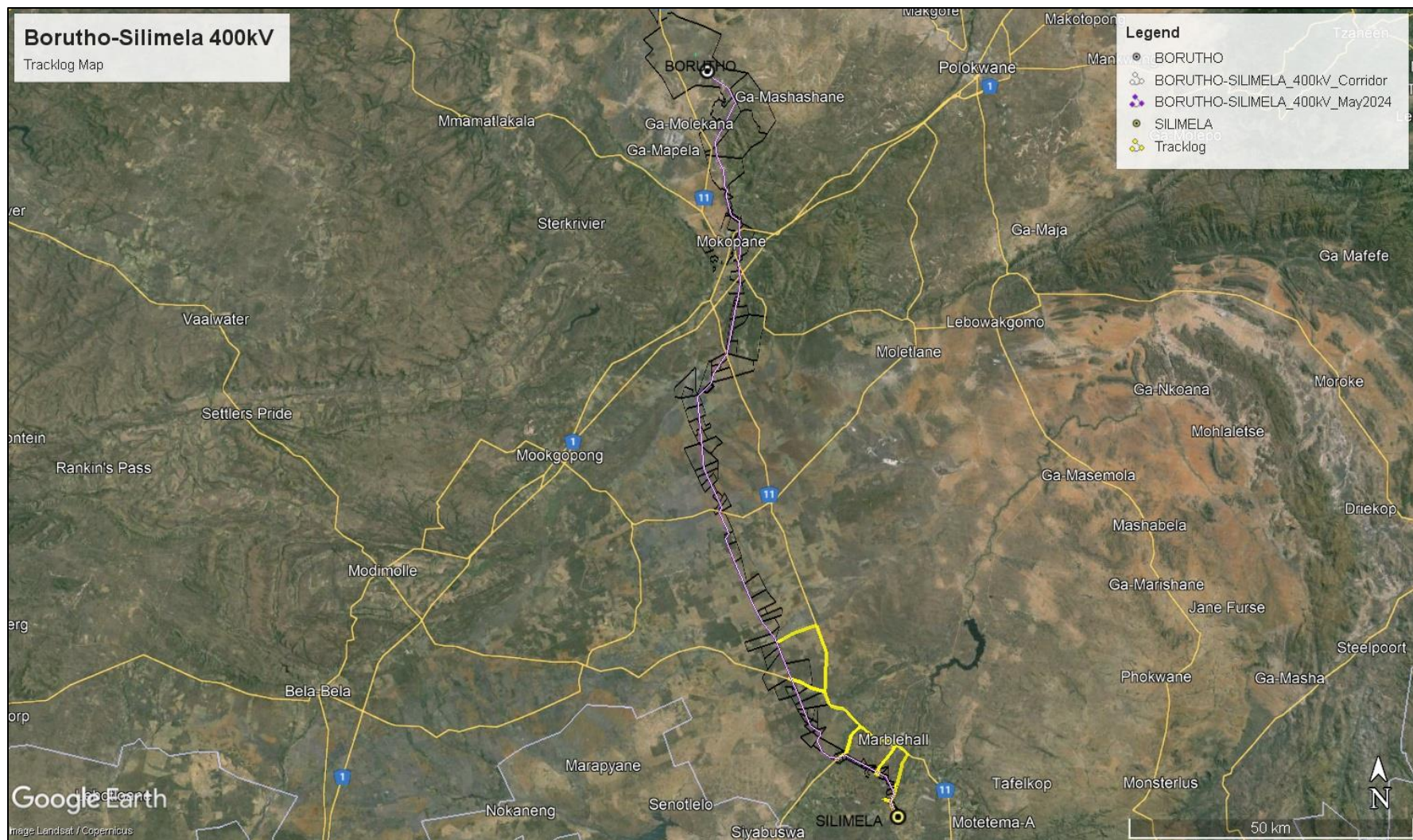


Figure 1: Locality map of the study area.





*Figure 2: Tracklog of some of the areas that could be accessed.*



## **5. HISTORICAL BACKGROUND OF THE STUDY AREA**

History of human activity in South Africa, as in all parts of the world, dates to millions of years. It is important to elaborate as far back in time to enable the reader to understand what is meant by archaeological material and why it is declared a heritage resource. Archaeological materials are divided into two periods, the Stone Age, and the Iron Age. Late Iron Age marks the transition between prehistory and history, a period of colonial era until recent.

### **5.1 Stone Age Archaeology:**

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The Stone Age is a period that dates between 2 million years ago (ya) to 2000 ya. Due to the vast character found within stone tools of this period, it was then divided into three phases; Early Stone Age (ESA), Middle Stone Age (MSA) and the Late Stone Age (LSA). ESA dates between 2 million ya and 200 000 Before Present (BP). Industries associated with this period include Oldowan, Acheulean and Fauresmith. ESA stone tools include hammer stones, flakes, cores, handaxes and cleavers (Pelser 2009). The more refined stone tools appeared during the MSA. MSA dates between 200 000 and 25 000 to 20 000 BP, this varies with location. Industries associated with this period includes the Howieson's Poort. The stone tools which characterize this period include scrapers, blades, points, and flakes. Lastly is the LSA which dates between 25 000 and 20 000 to 2 000 BP. Stone tools of this period are characterized by their small size; this includes backed knives and borers (Pelser 2009).

Based on the research conducted there are no Stone Age tools or sites recorded within the proposed area.

### **5.2 Iron Age Archaeology**

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According to Huffman (2007) Iron Age marks the early evidence of farming community in Southern Africa. Animal husbandry, crop farming, pottery and metal working were introduced which liberated hunter gatherers to change their way of life, which is less mobile (Carruthers 1990). Due to vast technological discrepancies and settlement pattern within this period, it was divided into three. The Early Iron Age (EIA) dates to AD 200 – 900, Middle Iron Age (MIA) dates to AD 900 – 1300, and the Late Iron Age (LIA) dates to AD 1300 – 1840 (Huffman 2007).

Based on the research conducted, there are no Iron Age tools or sites recorded within the proposed area.

### **5.3 HISTORY**

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Historically Mokopane is known for the rich heritage resources found in Makapans Valley, east of Mokopane town. The valley is one of the only two Stone Age sites in the world that offered up an unbroken sequence of artefacts from the Earlier Stone Age to the Iron Age. Among the historic caves is the Cave of Gwasa, which later became known as Makapan's Cave in 1854, after the great chief Makapan who, with several thousand members of the Kekana tribe, tried to hide there from Boers. According to Swanepoel, Esterhysen & Bonner (2008: 192) "The people who took refuge in Makapan Cave in 1854 were principally Kekana Northern Ndebele but include Sotho Tswana sub-chiefs and their followers. Many perished during the siege, so amongst materials that were recovered are strings of beads and a small piece of beadwork on leather."

Makapans Valley was declared part of the Cradle of Humankind World Heritage Site in 2005 and it is one of 15 sites that make up the Cradle of Humankind World Heritage Site. Makapan Cave is situated +/-15km east of the proposed route on the north. Another type of beads was found in Maleoskop, a BaKopa (Pedi) community that lived west of Groblersdal between 1840-1864 when the village was destroyed in a joint Boer/Swazi attack (Boshoff et al 2007; as cited in Swanepoel et al 2008).

## **6. PREVIOUSLY CONDUCTED HIA**

According to the existing report of this project, which was compiled in 2009 by van Schalkwyk, large sections of the study area have not yet been subjected to archaeological surveys, creating huge gaps in available knowledge. Furthermore, most information that was generated in other areas is based on impact assessments done for the purpose of development projects of some sort. It is therefore covered these regions only selectively. However, based on the available information, this study has revealed that a variety of heritage resources occur in the study area and therefore, there is a likelihood that the development activities would have an impact on some of them.

Heritage resources manifest in a wide variety of forms, ranging from stone tools found as surface scatters, rock shelters, some of which may contain rock art, to stratified sites showing long

sequences of occupation, and sites containing structures such as stone walling or buildings, cemeteries, and places to which cultural significance is attached. These resources were contextualised in this study. In terms of Section 7 of the NHRA, all the sites currently known, or which are expected to occur in the study area are evaluated to have Grade III significance.

According to the report by van der Walt (2017) whose study area is situated  $\pm 5$  km SE and another portion  $\pm 20$  km NW of the proposed site, 27 heritage features were recorded. These include cemeteries, Late Iron Age stone walled sites and find spots, stone walled ruins, stone cairns of unknown purpose and an African church classified as living heritage. Furthermore, low density scatters of isolated Stone Age artefacts were noted in the study area, and these can be classified as Middle Stone Age (MSA). Furthermore, Rossouw (2017) states that Tshamahanzi, which is the township next to the study area, is located on unfossiliferous Bushveld Complex granites. Paleontologically sensitive cave breccias are not anticipated in the study area as opposed to the Malmani dolomites, which hosts the paleontologically significant Makapansgat Valley.

According to Roodt and Stegmann (2017) no heritage remains were recorded in all five (5) proposed borrow pits, including borrow 4 which is located west of the study area with coordinate reading of  $-24,0595156^{\circ}$   $28,972794^{\circ}$ .

According to Gaigher (2021) Four clusters of grave sites were observed within the study area. It is recommended that a permit be obtained, and the graves be relocated to a Municipal Cemetery to avoid damage. Some occupational remains such as concrete water troughs and hut foundations were noted. According to a local informant these date from the early 1980's when people were relocated to new townships in the area and therefore do not warrant protection under the NHRA.

## 7. FINDINGS

During the physical survey, no heritage resources were found within the of the proposed route, however, three (3) cemeteries were found in less than 1km from the route (figure 2 – 6). Furthermore, a dilapidated structure was found in proximity of the route. It was a church, as evidence of commemorative plaque inside the structure was found. The structure was built with bricks made of clay and no roof (Figure 1 & 7).





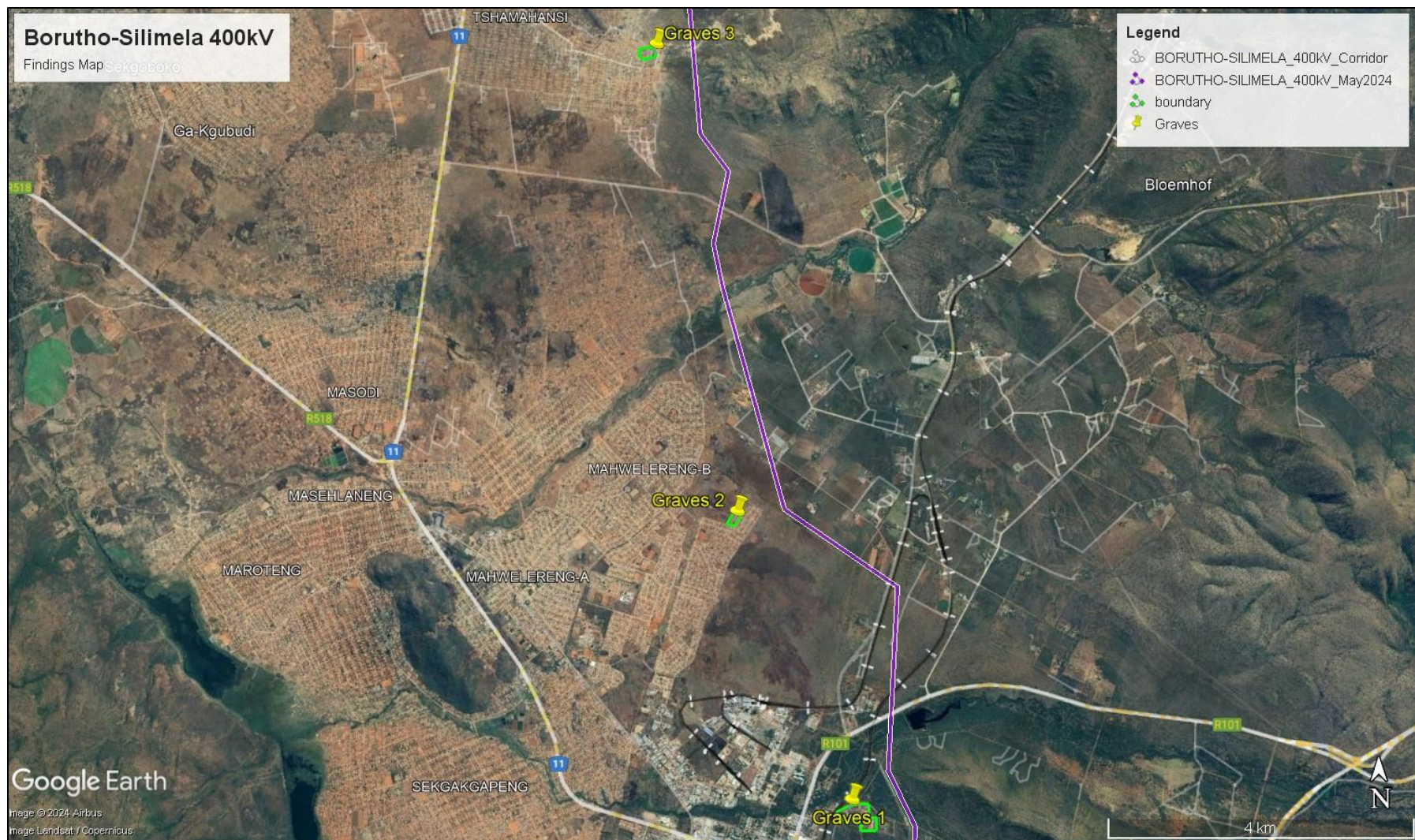


Figure 4: Close view of grave sites found in the vicinity.

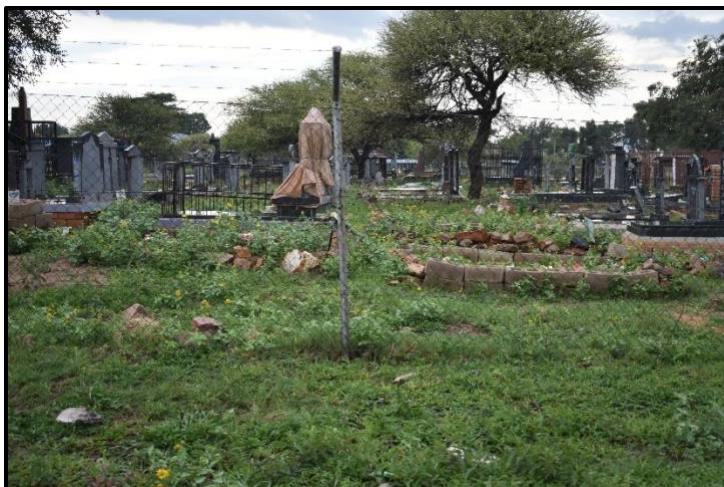




*Figure 5: Cemetery in Mokopane (Graves 1).*



*Figure 6: Cemetery in Mahwelereng (Graves 2).*



*Figure 7: Cemetery in Tsamahansi (Graves 3).*



Figure 8: Dilapidated structure and plaque found.

## 8. IMPACT ASSESSMENT

The proposed establishment of the powerline and its associated infrastructure) has a Low chance of impacting the heritage resources found on the proposed near the proposed route. This section evaluates the extent of the impact WITH and WITHOUT mitigation measures in relation to the project under study.

Using table 1 from the methodology, which is now labelled table 3, the heritage resources identified on site can be rated as follows:

Table 3: Rating of the heritage resource found on study area.

Heritage Resource Identified	Field Rating & Grading	Significance	Recommended Mitigation	Coordinates	Distance from powerline
Burial grounds and graves	Generally Protected A	High/Medium	Mitigation before destruction	24°10'27.05"S 29° 1'19.38"E	+/- 460m
				24° 8'25.57"S 29° 0'27.23"E	+/- 580m
				24° 4'59.20"S 28°59'49.43"E	+/- 538m

Dilapidated structure	Generally Protected C (GP.A)	Low	Destruction	25° 1'12.36"S 29°15'50.37"E	+/- 73 m
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Table 4: Evaluation of the impacts of the project on the heritage resource **WITHOUT** mitigation measures.

Aspect	Description	Weight
<b>Probability</b>	Improbable	1
	Probable	2
	Highly Probable	4
	Definite	5
<b>Duration</b>	Short term	1
	Medium term	3
	Long term	4
	Permanent	5
<b>Scale</b>	Local	1
	Site	2
	Regional	3
<b>Magnitude/Severity</b>	Low	2
	Medium	6
	High	8
<b>Significance</b>	Sum (Duration, Scale, Magnitude) x Probability	
	Negligible	≤20
	Low	>20≤40
	Moderate	>40≤60
	High	>60

Results:  $5+3+8 \times 5 = 80$  i.e. >60



This means without mitigation measures; the heritage resources will be impacted, and its impact may render the project unacceptable.

Table 5: Evaluation of the impacts of project on the structures **WITH** mitigation measures.

Aspect	Description	Weight
<b>Probability</b>	Improbable	1
	Probable	2
	Highly Probable	4
	Definite	5
<b>Duration</b>	Short term	1
	Medium term	3
	Long term	4
	Permanent	5
<b>Scale</b>	Local	1
	Site	2
	Regional	3
<b>Magnitude/Severity</b>	Low	2
	Medium	6
	High	8
<b>Significance</b>	Sum (Duration, Scale, Magnitude) x Probability	
	Negligible	≤20
	Low	>20≤40
	Moderate	>40≤60
	High	>60

**Results:  $4+1+6 \times 1 = 11$  i.e. ≤20**

The impact is non-existent or unsubstantial and is of no or little importance to any stakeholder and can be ignored.

## **8.1 Construction Phase**

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### **8.1.1 Impact**

Discovery of heritage resources such as burial grounds and graves, and archaeological material in areas that could not be accessed is a probability and/or cannot be ruled out during construction phase; this is due to ground disturbance because of excavations.

### **8.1.2 Mitigation measure**

Should potential human remains and/or archaeological material such as stone tools, iron age material and structural foundations be found on site, the contractor should cease construction immediately and the South African Police Service and the client should be contacted for human remains, and a professional archaeologist for the archaeological material.

## **8.2 Operational Phase**

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### **8.2.1 Impact**

No heritage impacts are anticipated during the operational phase.

### **8.2.2 Mitigation measure**

No mitigation measure proposed.

## **8.3 Decommissioning Phase**

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### **8.3.1 Impact**

No heritage impacts are anticipated during the operational phase.

### **8.3.2 Mitigation measure**

No mitigation measure proposed.

## 8.4 Cumulative impacts

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### 8.4.1 Impact

Activities such as vegetation clearance and soil removal, excavations and even duty vehicles have the potential of exposing archaeological materials and unknown graves and/or human skeletal remains, and might cause runoff of exposed unknown human remains if any.

### 8.4.2 Mitigation measure

During the aforementioned activities, heritage resources should be on the looked out for to prevent any damage.

## 8.5 Site Significance

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The level of significance of the site and the cultural resources varies between social, historical, spiritual, scientific, and aesthetic value.

**Social value** is when a place has become a focus of spiritual, political, national, or other cultural sentiments to a majority or minority group. This may be because the site is accessible and well known, rather than particularly well preserved or scientifically important (SAHRA Regulations). The proposed route has no social value.

**Historical value** refers to areas where historical events took place, and such events have high significance either locally, regionally, provincially, or nationally. The proposed route does not traverse in areas of historical significance.

**Scientific value** refers to the importance of the study area for research purposes. The proposed route has no scientific value.

**Aesthetic value** refers to the unique beauty of the site. No aesthetic value found on the proposed route.

Based on the level of significance, the proposed route traverse in areas of low heritage significant from a heritage perspective.

## 9. RECOMMENDATIONS AND CHANCE FINDINGS

- During the construction phase, the contractor should keep within the proposed parameters of the site to avoid impacting on any heritage resources found outside of the proposed project site, this may include unknown burial grounds and graves;
- The contractor should induct all employees on the importance of heritage sites and resources that they should not be impacted in any way. This is to ensure that even if any heritage resources are found during the construction phase or exposed due to construction activities, should by no means be impacted or destroyed.
- Should any other heritage resources be found on site during the construction phase, be it archaeological artefacts such as stone tools and pottery; burial grounds and graves and structures; the contractor should cease construction immediately and contact the client. A heritage expert should be called to assess the site and the significance of the archaeological artefacts and the impacts of the proposed activities on such artefacts, and then provide mitigation measures.
- The possibility of uncovering unearthed human remains or shallow graves should not be ruled out. Should potential human remains be found on site, the contractor should cease construction immediately and the South African Police Service and the client should also be contacted. Should the remains be below 60 years old since time of death, it is considered a forensic case and further investigations will be conducted by the police and should the remains be above 60 years old since time of death, it becomes a South African Heritage Resources Agency case. This means an archaeologist should be called on site to remove the remains at the expense of the client.
- Following the latter point, Eskom may decide whether to incorporate the heritage resources found within the proposed project or exhumate and relocate; and this is at the expense of the developer. Should the developer choose to incorporate the findings within the proposed boundary, the following is recommended:
  - The graves must be left *in situ* and be incorporated into the development by barricading/fencing off with an entrance to ensure that they are protected while allowing access for the family. This is recommended as graves will remain protected and conserved.

Should Eskom choose to relocate the findings within the proposed boundary, the following is recommended:

- A Phase 2 HIA will have to be conducted whereby a process of relocation will be conducted, and this include tracing the families (public participation) and reburial of the remains to another place as recommended by relevant family. All of which will be under the expense of the client. This should be conducted by a professional archaeologist.
- It should be noted that no heritage resources should be removed on site without a permit from SAHRA.

## 10. CONCLUSION

In conclusion, no other heritage resources were found on the proposed route. Even cemeteries in the vicinity and a dilapidated structure were still outside the proposed 250m corridor. Some portions of the route have been previously disturbed by the existing power line. As such, the proposed route has low significance from a heritage perspective given that no other heritage resources may be found in areas that could not be accessed. Chances of finding burial grounds and graves and/or any other archaeological material on the proposed route should not be ruled out especially during construction phase. The proposed project may proceed provided mitigation measures and recommendations provided are adhered to and implemented.

The final report will be uploaded on SAHRIS to the relevant heritage authority for review and for a decision. Furthermore, subject to approval from SAHRA we recommend the approval to proceed with the proposed Borutho-Silimela 400kV powerline.

## 11. IMAGES OF THE PROPOSED STUDY AREA



Figure 9: (Left) Silimela substation; (right) northwest view after exiting Silimela substation.



Figure 10: (Left) line route west of the dilapidated structure; (right) north of R573 next to the proposed route.



Figure 11: (Left) North view next to graves 3; (right) south view next to graves 3 in Tshamahansi.





Figure 12: Southeast view towards Borutho substation; (right) Borutho substation.

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## 13. LEGISLATION

National Heritage Resources Act 25 of 1999

### 13.1 Section 3 of the NHRA 25 of 1999

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According to Section 3 under **National Estate** of the National Heritage Act 25 of 1999 the heritage resources in South Africa includes the following:

“(1) For the purposes of this Act, those heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations must be considered part of the national estate and fall within the sphere of operations of heritage resources authorities.

(2) Without limiting the generality of subsection (1), the national estate may include –

(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 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) 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(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).

(3) Without limiting the generality of subsections (1) and (2), a place or object is to be considered part of the national estate if it has cultural significance or other special value because of –

(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 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 organisation of importance in the history of South Africa; and
- (i) sites of significance relating to the history of slavery in South Africa.”

### **13.2 Section 36 of NHRA 25 of 1999**

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According to Section 36 under **Burial grounds and graves** of the National Heritage Act 25 of 1999 the graves in South Africa are protected as follows:

- (1) ~~OBJ~~ Where it is not the responsibility of any other authority, SAHRA must conserve and care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit.
- (2) ~~OBJ~~ SAHRA must identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with the grave referred to in subsection (1) and must maintain such memorials.
- (3)(a) ~~OBJ~~ No person may, without a permit issued by SAHRA or a provincial heritage resources authority—
  - (a) destroy, damage, alter, exhume, or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
  - (b) destroy, damage, alter, exhume, remove from its original position, or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
  - (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.
- (4) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation

and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.

- (5) ~~(5)~~ SAHRA or a provincial heritage resources authority may not issue a permit for any activity under subsection (3)(b) unless it is satisfied that the applicant has, in accordance with regulations made by the responsible heritage resources authority—
- (a) made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground; and
  - (b) reached agreements with such communities and individuals regarding the future of such grave or burial ground.
- (6) Subject to the provision of any other law, any person who in the course of development or any other activity discovers 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 resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority—
- (a) carry out an investigation for the purpose of obtaining information on whether such grave is protected in terms of this Act or is of significance to any community; and
  - (b) 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 arrangements as it deems fit.
- (7)(a) SAHRA must, over a period of five years from the commencement of this Act, submit to the Minister for his or her approval lists of graves and burial grounds of persons connected with the liberation struggle and who died in exile or as a result of the action of State security forces or agents provocateur and which, after a process of public consultation, it believes should be included among those protected under this section.
- (b) The Minister must publish such lists as he or she approves in the Gazette.

- (8) [OBJ] Subject to section 56(2), SAHRA has the power, with respect to the graves of victims of conflict outside the Republic, to perform any function of a provincial heritage resources authority in terms of this section.
- (9) [OBJ] SAHRA must assist other State Departments in identifying graves in a foreign country of victims of conflict connected with the liberation struggle and, following negotiations with the next of kin, or relevant authorities, it may re-inter the remains of that person in a prominent place in the capital of the Republic.

### 13.3 Section 38 of NHRA 25 of 1999

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According to Section 38 under **Heritage resources management** of the National Heritage Act 25 of 1999 the heritage resources in South Africa should be managed in the following:

“(1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as—

- (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;
- (c) any development or other activity which will change the character of a site—
  - (i) exceeding 5 000 m<sup>2</sup> in extent; or
  - (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.

(2) The responsible heritage resources authority must, within 14 days of receipt of a notification in terms of subsection (1)—

(a) if there is reason to believe that heritage resources will be affected by such development, notify the person who intends to undertake the development to submit an impact assessment report. Such report must be compiled at the cost of the person proposing the development, by a person or persons approved by the responsible heritage resources authority with relevant qualifications and experience and professional standing in heritage resources management; or

(b) notify the person concerned that this section does not apply.

(3) The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a): Provided that the following must be included:

(a) The identification and mapping of all heritage resources in the area affected;

(b) an assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;

(c) an assessment of the impact of the development on such heritage resources;

(d) an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;

(e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;

(f) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and

(g) plans for mitigation of any adverse effects during and after the completion of the proposed development.

(4) The report must be considered timeously by the responsible heritage resources authority which must, after consultation with the person proposing the development, decide—

(a) whether or not the development may proceed;

(b) any limitations or conditions to be applied to the development;

(c) what general protections in terms of this Act apply, and what formal protections may be applied, to such heritage resources;

(d) whether compensatory action is required in respect of any heritage resources damaged or destroyed because of the development; and

(e) whether the appointment of specialists is required as a condition of approval of the proposal.

(5) A provincial heritage resources authority shall not make any decision under subsection (4) with respect to any development which impacts on a heritage resource protected at national level unless it has consulted SAHRA.

(6) The applicant may appeal against the decision of the provincial heritage resources authority to the MEC, who—

(a) must consider the views of both parties; and

(b) may at his or her discretion—

(i) appoint a committee to undertake an independent review of the impact assessment report and the decision of the responsible heritage authority; and

(ii) consult SAHRA; and

(c) must uphold, amend, or overturn such decision.

(7) The provisions of this section do not apply to a development described in subsection (1) affecting any heritage resource formally protected by SAHRA unless the authority concerned decides otherwise.

(8) The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the Environment Conservation Act, 1989 (Act No. 73 of 1989), or the integrated environmental management guidelines issued by the Department of Environment Affairs and Tourism, or the Minerals Act, 1991 (Act No. 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority with regard to such development have been taken into account prior to the granting of the consent.

(9) The provincial heritage resources authority, with the approval of the MEC, may, by notice in the Provincial Gazette, exempt from the requirements of this section any place specified in the notice.

(10) Any person who has complied with the decision of a provincial heritage resources authority in subsection (4) or of the MEC in terms of subsection (6) or other requirements referred to in subsection (8), must be exempted from compliance with all other protections in terms of this Part, but any existing heritage agreements made in terms of section 42 must continue to apply.