ARCHAEOLOGICAL AND CULTURAL HERITAGE EMPr WALKDOWN SPECIALIST REPORT FOR THE PROPOSED MAHIKENG MAIN TRANSMISSION SUBSTATION AND 1X400kV PLUTO-MAHIKENG POWERLINE WITHIN THE MERAFONG, DITSOBOTLA, RAMATSHERE, MOILAO, JB MARKS AND MAHIKENG LOCAL MUNICIPALITIES IN THE NORTH WEST AND GAUTEND PROVINCES

07 May 2026

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DECLARATION

ABILITY TO CONDUCT THE PROJECT

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INDEPENDENCE

We, Philisiwe Phillip and Alvord Nhundu declare that this report has been prepared independently of any influence as may be specified by all relevant departments, institutions and organizations. We act as independent specialists in this application and will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favorable to the applicant. We declare that there are no circumstances that may compromise my objectivity in performing such work, we vow to comply with all relevant Act, Regulations and applicable Legislation. Furthermore, Afro, which is a company we represent in this application, is an independent service provider and apart from fair remuneration for services rendered, it has no financial interest or vested interest in the proposed project.

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EXECUTIVE SUMMARY

Introduction and Background

Afro Conserva Integration was appointed by Vhubvo Consultancy on behalf of NTCSA to undertake a Phase I Archaeological and Cultural Heritage Walkdown for the proposed Mahikeng Main Transmission Substation and the associated 1 × 400kV Pluto–Mahikeng powerline traversing parts of the North-West and Gauteng Provinces. The primary objective of the walkdown survey was to verify and corroborate the archaeological and heritage resources previously identified during the Phase I Archaeological Impact Assessment conducted by Mlilo (2018). In addition, the study aimed to identify and document any previously unrecorded heritage resources within the final development footprint. These include archaeological sites, cultural resources, sites linked to oral histories, burial grounds and graves, cultural landscapes, and structures of historical significance that may be affected by the proposed development. The walkdown assessment was also conducted to address and satisfy the recommendations made in the earlier Phase I study. This process assists the developer in implementing appropriate conservation and mitigation measures in compliance with the National Heritage Resources Act. The findings of the present cultural heritage walkdown study are consistent with, and support, the conclusions and recommendations outlined in the Phase I Archaeological Impact Assessment undertaken by Mlilo (2018).

Need of the project

The proposed Pluto–Mahikeng 400 kV Power Line and Mahikeng Main Transmission Substation are required to address capacity constraints and reliability issues within the existing electricity transmission network in the North-West Province. The current 275 kV system supplying the Watershed Substation has reached its capacity due to the integration of approximately 900 MW of generation, limiting further connections and affecting system performance under N-1 conditions. To resolve these constraints, a higher-capacity 400 kV transmission system is proposed, including a new transmission line and substation infrastructure to strengthen the network and support future energy integration. As the project involves the construction of a linear development exceeding 300 metres in length, as well as associated infrastructure, it triggers Section 38(1) of the National Heritage Resources Act (Act 25 of 1999).

Receiving environment

The proposed Pluto–Mahikeng 400 kV transmission powerline is located within the Gauteng and North-West Provinces of South Africa. The transmission line traverses several local municipalities, namely Merafong Local Municipality, JB Marks Local Municipality, Ditsobotla Local Municipality, and Mahikeng Local Municipality. The project area encompasses a diverse range of landscapes, including predominantly flat and open grassland plains, cultivated agricultural fields, and areas characterized by mixed bushveld vegetation. The alignment also passes through farmsteads, dispersed rural settlements, and zones associated with existing infrastructure. Notably, sections of the proposed transmission line follow established transmission corridors and, in some

instances, will run parallel to existing powerline infrastructure. This alignment approach reduces the extent of new disturbance within previously undisturbed areas and contributes to limiting potential environmental and heritage impacts.

Methodology and Approach

The study method refers to the SAHRA Policy Guidelines for impact assessment, 2012. As part of the walkdown; the following processes were followed:

Literature Review

A comprehensive desktop study was undertaken to establish the archaeological and historical context of the study area. This included a review of previous archaeological and heritage impact assessment reports conducted within and around the proposed development area, accessed through the South African Heritage Resources Information System (SAHRIS), and in particular the study by Mlilo (2018).

Field Survey

A detailed field survey (walkdown) was conducted between 16 and 27 March 2026 by a qualified archaeologist from Afro Conserva Integration. The survey covered approximately 252 km along the proposed transmission line alignment and was undertaken within the 55 m servitude corridor, including areas associated with proposed tower positions and span sections. The purpose of the field survey was to:

- Verify previously recorded heritage resources
- Identify any previously undocumented archaeological and cultural heritage sites
- Assess the current condition and significance of identified resources

Data Recording and Assessment

All identified heritage resources were recorded and documented using standard archaeological recording methods, including GPS mapping and photographic documentation. The resources were then assessed in terms of established heritage impact assessment criteria, including their cultural significance, integrity, and sensitivity. This phase also included:

- Mapping of identified sites
- Compilation of site inventories
- Evaluation of potential impacts
- Development of appropriate mitigation measures and recommendations

The applicable maps, tables, and figures are included as stipulated in the NHRA (Act No 25 of 1999), the National Environmental Management Act (NEMA) (Act No 107 of 1998) and the Minerals and Petroleum Resources Development Act (MPRDA) (Act No. 28 of 2002).

Restrictions and Assumptions

As with any archaeological field survey, it is important to acknowledge that subsurface heritage resources may not be visible during a walkdown assessment. Archaeological materials, features, or burial sites may remain buried and therefore undetected until exposed during construction activities. Considering this limitation, the possibility exists that previously unidentified archaeological resources or graves may be encountered during the construction phase. Should any such resources be uncovered, all work in the immediate vicinity must cease immediately, and the Environmental Control Officer (ECO) and a qualified heritage specialist must be notified without delay. No further disturbance of the identified find may take place until a formal assessment has been conducted by the heritage specialist and appropriate mitigation measures have been determined in accordance with the National Heritage Resources Act. It is the responsibility of the contractor to ensure that any discovered heritage resources are adequately protected. This includes securing the site and preventing unauthorised access or exposure to the public and media until such time as formal assessments and required procedures have been completed.

Survey Findings

The primary aim of the Archaeological Walkdown Survey was to identify heritage resources within the footprints of the proposed pylon positions. These included sites associated with oral histories, burial grounds and graves, cultural landscapes, and structures of historical significance. A further objective was to provide appropriate mitigation measures where necessary and, where applicable, to support NTCSA in obtaining the required permits in terms of the National Heritage Resources Act. The findings of this walkdown study were informed by the Phase I Archaeological Impact Assessment conducted by Mlilo (2018), as well as detailed physical surveys of the proposed pylon positions and their immediate surroundings along the 400kV Pluto–Mahikeng transmission line. The study identified several archaeological resources and burial sites of high significance within the proposed servitude, with some located in close proximity to proposed pylon positions. However, none of these heritage
resources are considered to be of such significance as to preclude the proposed development from proceeding. Importantly, the following are relevant:

- No identified heritage resources require relocation or demolition.
- All resources can be adequately protected through avoidance strategies.
- Appropriate mitigation measures can effectively reduce potential impacts.

A detailed summary of findings and associated recommendations is provided in tabular format (refer to Pages 59–60 of the main report). The study identified the following heritage resources and considerations within the proposed servitude:

- Burial Sites:

  Burial sites identified during the survey are of high heritage significance and may be vulnerable to disturbance if not properly managed.

- Other Heritage Features:

  Stone walling, derelict structures, farmsteads, water reservoirs, and stone cairns were identified. These features are generally located at a distance from proposed pylon positions and are unlikely to be directly impacted.
- Archaeological Material:

  Isolated Middle Stone Age (MSA) stone tools were identified. These artefacts are out of context and likely displaced through natural processes such as erosion. As such, they are considered to be of low significance.
- Subsurface Potential:

  There remains a possibility that additional archaeological material may be present below the surface and could be exposed during construction activities.

Recommendations

Based on the findings of this study, the following recommendations must be implemented:

- A minimum of 30m buffer zone must be established around all identified burial sites;
- Construction personnel must be made aware of the locations and significance of heritage resources;
- Indirect impacts (e.g., from machinery movement) must be carefully managed; and
- A Chance Finds Procedure must be implemented and strictly adhered to during construction.

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ABBREVIATIONS

AIA	Archaeological Impact Assessment
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ESA	Early Stone Age
HIA	Heritage Impact Assessment
HMP	Heritage Management Plan
LIA	Late Iron Age
LSA	Late Stone Age
MIA	Middle Iron Age
MSA	Middle Stone Age
NASA	National Archives of South Africa
NHRA	National Heritage Resources Act
NTCSA	National Transmission Company South Africa
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.

Artefact: 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. These include intangible resources such as 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 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, and organic and environmental remains, as residues of past human activity

1. Introduction

Afro Conserva Integration has been appointed by Vhubvo Consultancy on behalf of NTCSA to conduct an Archaeological and Cultural Heritage Phase I EMPr Walk down for the proposed Mahikeng main transmission substation and 1x400kV Pluto–Mahikeng powerline transversing the North-West and Gauteng provinces. The aim of the study was to corroborate archaeological and heritage sites that were recorded during the Phase I Archaeological Impact Assessment conducted by Mlilo (2018), and also to identify and document any 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 of the transmission. The walkdown survey was undertaken in accordance with the recommendations of the Phase I Archaeological Impact Assessment (Mlilo, 2018), which recommended the verification of previously identified heritage resources and the assessment of the final development footprint prior to construction. The findings of the walkdown survey provide site-specific heritage information to inform project planning and ensure compliance with the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA). According to Section 38 (1) of the NHRA, an Impact Assessment is undertaken in case where a listed activity is triggered. Such activities include:

(a) the construction of a linear development exceeding 300m in length, which is the triggered activity in this proposal.
(b) the construction of a bridge exceeding 50 m in length; and
(c) any development or other activity which will change the character of an area of land,
(d) the re-zoning of a site exceeding 10 000 m2 in extent;
(e) any other category of development provided for in regulations by SAHRA or PHRA.

2. Nature of the Proposed Project

The proposed Pluto–Mahikeng 400 kV transmission line and Mahikeng Main Transmission Substation form part of a broader strategic initiative to strengthen and expand the electricity transmission network within the North-West Province of South Africa. The project is intended to address existing capacity constraints within the 275 kV network currently supplying the Watershed Substation, which has reached its operational limits due to increased generation connections. The introduction of a 400 kV transmission system will significantly enhance network reliability, improve system resilience, and accommodate future energy generation-particularly from renewable sources, thereby supporting a stable and secure electricity supply in the region. The proposed development comprises the construction of a high-voltage transmission line and associated substation infrastructure. The key components include:

- Construction of approximately 252 km of a 400 kV transmission line between Pluto Substation and Mahikeng
- Establishment of the Mahikeng Main Transmission Substation:
    - designed to accommodate up to 3 × 500 MVA (400/132 kV) transformers
    - Installation of 2 × 315 MVA (400/88 kV) transformers and associated infrastructure
    - Development of a 400 kV busbar, including two feeder bays with provision for future expansion
    - Establishment of an 88 kV busbar with multiple feeder bays to support distribution networks and renewable energy integration
    - Provision for additional feeder bays to accommodate future network expansion and integration of new energy generation sources

3. Location and Description

The project area is located within the Gauteng and North-West Provinces of South Africa and extends across several local municipalities, including Merafong City Local Municipality, JB Marks Local Municipality, Ditsobotla Local Municipality, and Mahikeng Local Municipality. The proposed Pluto Main Transmission Substation (MTS) is situated near Carletonville in Gauteng, while the proposed Mahikeng Main Transmission Substation will be located near Miga, outside Mahikeng in the North-West Province. The transmission line will extend between these two substations in a generally north-westerly direction over an approximate distance of 252 km. The Mahikeng MTS will occupy an area of approximately 10 ha. The transmission line corridor will traverse predominantly rural landscapes, characterised by a combination of agricultural land, natural vegetation, and scattered farmsteads. The route crosses multiple farm portions and, in certain sections, aligns with existing infrastructure corridors, including roads and transmission lines. The surrounding landscape is largely open, supporting a mix of farming activities and dispersed rural settlements. Larger urban centres, such as Carletonville and Mahikeng, are located near the southern and northern extents of the proposed development, respectively. The location of the proposed project is illustrated on Figures 1 and 2. Table 1 gives a general description of the tower locations and these have been grouped according to the landscape characteristics.

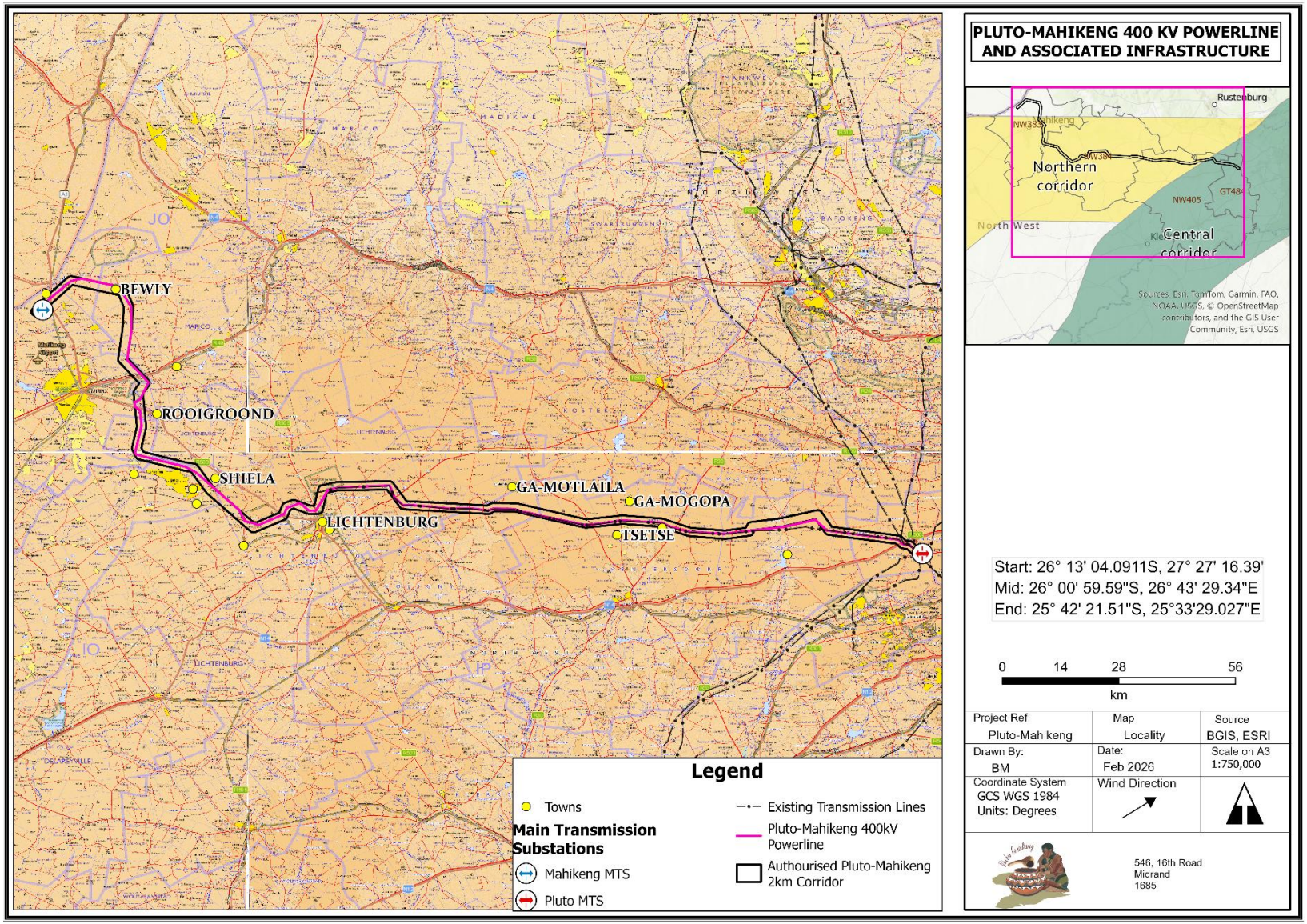


Figure 1: Locality map of the study area.

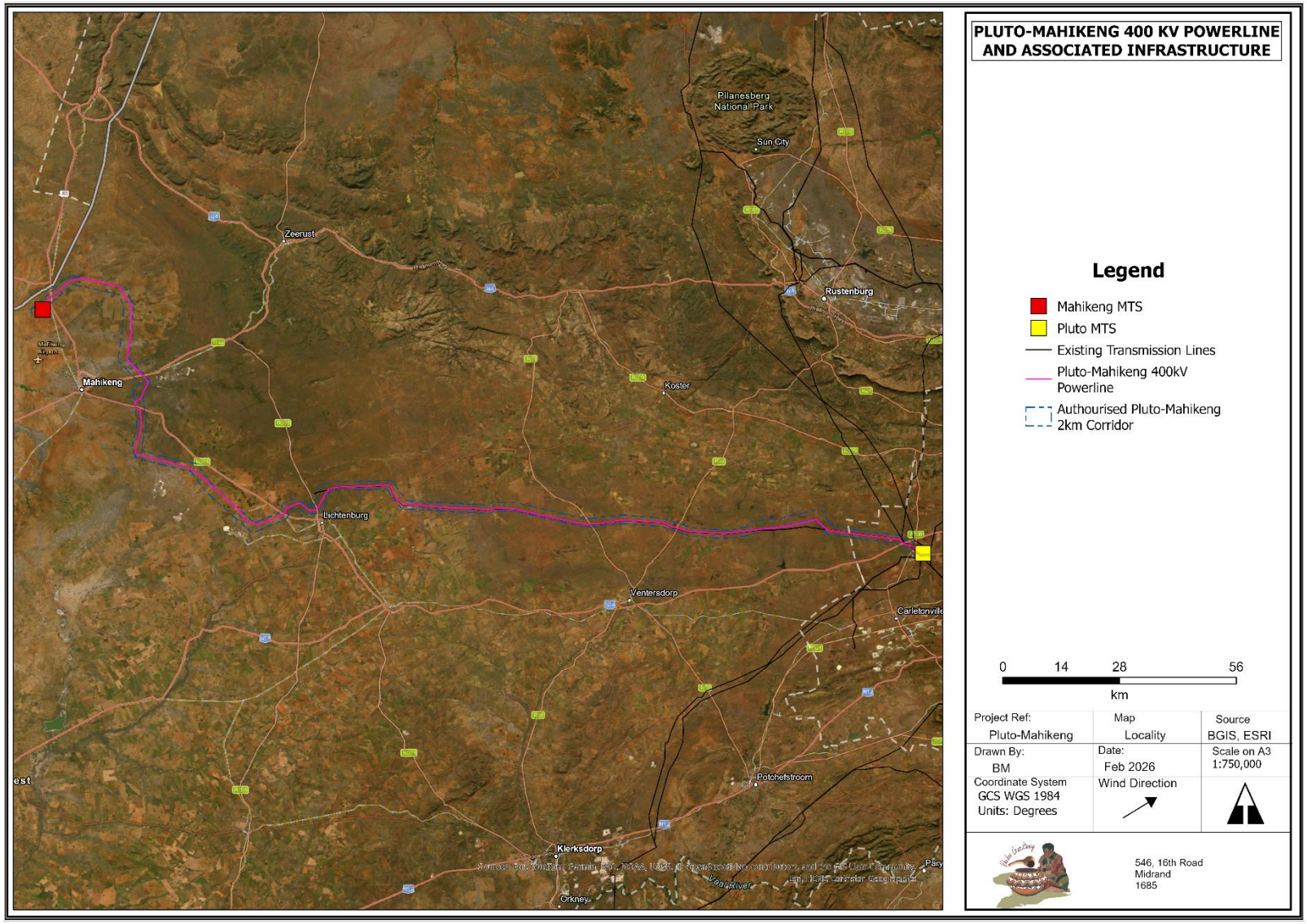


Figure 2: Aerial map for the area proposed for construction.

Table 1: Summary of Tower Positions by Landscape Character.

Landscape Type	Tower Range	Description	Depiction
Disturbed Land	T1–T2	The proposed pylon positions are located near a substation within a modified landscape.	
	T9–T10	The proposed pylon positions are located near a tarred road and railway line within a grassland setting.	
	T227–T228	The proposed pylon positions are located near a tarred road within a grassland area.	
	T480	The proposed pylon positions are located within a grassland area close to illegal mining activity.	
	T497, T580–T583	The proposed pylon positions are located near infrastructure and substation areas characterised by disturbed conditions.	

Open Grassland (Dominant)	T1–T10, T13–T17	The proposed pylon positions are located on flat grassland with scattered camel thorn trees and thick grass cover.	
	T35–T100	The proposed pylon positions are located along a long stretch of flat grassland characterised by scattered trees and grazing land.	
	T101–T135	The proposed pylon positions are located within grassland areas characterised by red sandy soils, scattered trees, and thick grass cover.	
	T151–T214	The proposed pylon positions are located within extensive grassland areas with secondary grass and occasional bushy vegetation.	
	T351–T411, T421–T479	The proposed pylon positions are located within extensive flat grassland areas characterised by thick grass cover and limited tree density.	

Agricultural Land	T11–T24, T32–T34	The proposed pylon positions are located within active agricultural land, including maize, sunflower, and nut farming.	
	T150, T215, T223–T229	The proposed pylon positions are located within cultivated fields characterised by clay soils and modified vegetation.	
	T313–T315, T441–T444	The proposed pylon positions are located within active crop fields on flat terrain with clay soils.	
	T552–T558, T566	The proposed pylon positions are located within maize fields characterised by sandy soils.	
Bushveld / Dense Vegetation	T136–T149	The proposed pylon positions are located within dense bushveld areas characterised by thick vegetation.	

	T265–T279	The proposed pylon positions are located within a game farm characterised by short grass and scattered vegetation.	
	T520–T540	The proposed pylon positions are located within areas characterised by dense bushes and grassland vegetation.	
	T559–T565, T567–T574	The proposed pylon positions are located within grassland areas with thick vegetation pockets and scattered trees.	
Wetlands / Drainage Areas	T27	The proposed pylon positions are located along a drainage line with erosion features.	
	T230–T238	The proposed pylon positions are located within areas characterised by dense grass cover and wetland-like conditions.	

	T319–T329	The proposed pylon positions are located within wetlands and were assessed using drone imagery.	
	T339–T350	The proposed pylon positions are located along wetland margins with grassland vegetation.	
	T436, T575	The proposed pylon positions are located near wetland areas characterised by flat terrain and short grass.	
Rocky / Undulating Terrain	T281–T291	The proposed pylon positions are located on undulating terrain with short grass and scattered shrubs.	
	T412–T420	The proposed pylon positions are located on rocky terrain with gritty sand and sparse vegetation.	

4. Purpose of the Cultural Heritage Study

The purpose of this Archaeological and Cultural Heritage Study is to identify, document, and assess heritage resources that may be affected by the proposed construction of the approximately 252 km Pluto–Mahikeng 400 kV transmission line. These heritage resources include archaeological sites, cultural resources, sites associated with oral histories, burial grounds and graves, cultural landscapes, and structures of historical significance. The outcomes of this study are intended to support the developer in implementing appropriate conservation and management measures in accordance with the National Heritage Resources Act. Heritage Impact Assessments play a critical role in identifying potential risks to heritage resources and informing their effective management, conservation, monitoring, and long-term protection within the context of development. Therefore, this study involves the following:

- Identify and record heritage resources that may be affected by the proposed development
- Assess the significance of identified heritage resources within the project area
- Recommend a shifting of pylon movement from an archaeological and heritage perspective, where applicable
- Provide practical mitigation measures to safeguard identified heritage resources
- Establish procedures for managing chance finds during the construction phase

5. Methodology and Approach

5.1 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;
2) Field survey; and
3) Report compilation taking into account the information gained during the desktop study and field survey.

5.1.1 Literature Review

The desktop study was undertaken through SAHRIS for previous Cultural Heritage Impact Assessments conducted in the region of the proposed development, and also for research that has been carried out in the area over the past years, as well as historical aerial maps located in the Deeds Office. This literature was used to screen the proposed area and to understand the baseline of heritage sensitivities.

5.1.2 Physical survey

The field survey was conducted from 16th to 27th of March 2026 by an archaeologist from Afro Conserva Intergration.

5.1.3 Documentation

The general project area was documented by. taking photographs using a 14.1 mega-pixel Sony Cybershort Digital Camera. Recording of finds was done by a Garmin etrex Venture HC.

5.2 Restrictions and Assumptions

As with any archaeological field survey, it is acknowledged that subsurface heritage resources may not be visible during the assessment. Archaeological materials, features, or burial sites may remain buried and therefore undetected until exposed during construction activities. Consequently, there is a possibility that previously unidentified archaeological resources or graves may be encountered during the construction phase. Should any such resources be discovered, all work in the immediate vicinity must cease immediately, and the Environmental Control Officer (ECO) together with a qualified heritage specialist must be notified without delay. No further disturbance may take place until the heritage specialist has assessed the find and provided recommendations in accordance with the National Heritage Resources Act. The contractor is responsible for ensuring that any identified heritage resources are adequately protected. This includes securing the site and preventing unauthorised access or exposure to the public and media until all necessary assessments and procedures have been completed. It is further assumed that the Public Participation Process may lead to the identification of intangible heritage resources (e.g., sites of cultural or spiritual significance) within the project servitude. Should such resources be identified, they will need to be appropriately assessed and incorporated into the heritage management and mitigation framework.

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 (Act No. 107 of 1998); Mineral Amendment Act (Act No 103 of 1993); Tourism Act (Act No. 72 of 1993); Cultural Institution Act (Act No. 119 of 1998), and the National Heritage Resources Act (Act No. 25 of 1999). Section 38 (1) of the National Heritage Resources Act requires that where relevant, an Impact Assessment is undertaken in the 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 m² 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 m2 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 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 formation 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).

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 to the region. The following table is used to grade heritage resources.

Table 2: Grading Systems for identified heritage resources in terms of the National Heritage Resources Act (Act 25 of 1999).

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

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 in Phase 2 of the project.

High

- This is a 'do not touch' situation, alternatives 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 the appropriate heritage authority has issued a permit. The following table is used to determine the rating system in the receiving environment.

8. Discussion of (Pre-) History of the Study Area

The proposed Pluto–Mahikeng 400 kV transmission powerline traverses' parts of Gauteng and North-West Provinces, including the Merafong, JB Marks, Ditsobotla, and Mahikeng Local Municipalities. Nearby urban centres include Carletonville, Potchefstroom, Lichtenburg, and Mahikeng. Archaeological evidence indicates that the study area has been occupied continuously from the Early Stone Age through to the Historical Period, reflecting a long and diverse record of human activity.

Early Stone Age (ESA)

The Early Stone Age (c. 1.7 million – 300 000 years ago) represents the earliest phase of human occupation, associated with hominins such as Homo erectus. This period is characterised by large stone tools, including handaxes and cleavers, typically found near water sources and cave systems. The Gauteng portion of the study area lies near the Cradle of Humankind, a globally significant archaeological region where important fossil discoveries such as "Mrs Ples" and "Little Foot" have been made. Although these sites are not within the development footprint, they highlight the broader sensitivity of the region.

Middle Stone Age (MSA)

The Middle Stone Age (c. 200 000 – 40 000 years ago) is associated with the emergence of anatomically modern humans (Homo sapiens) and more advanced stone tool technologies, including blades and points. Most MSA sites occur as open surface scatters, often displaced by natural processes, and are therefore generally of lower archaeological context. These communities were mobile and relied on hunting and gathering, often occupying riverine and sheltered environments.

Later Stone Age (LSA)

The Later Stone Age (c. 40 000 – 2 000 years ago) is associated with hunter-gatherer groups ancestral to the San. This period is characterised by microlithic tools and symbolic cultural expressions, including rock art. Evidence of LSA activity in the North-West Province includes stone tool scatters and rock art sites, reflecting a deep understanding of the landscape and its resources.

Iron Age

The Iron Age marks the arrival of agro-pastoralist communities, particularly Bantu-speaking groups, who introduced farming, livestock herding, pottery production, and ironworking. These communities established permanent settlements, often near fertile land and water sources. Archaeological evidence includes:

- Stone-walled settlements
- Pottery assemblages
- Livestock enclosures

Later developments, particularly among Sotho-Tswana-speaking groups, include complex settlement layouts such as the Central Cattle Pattern, reflecting organised social and political structures.

Historical Period

The Historical Period is characterised by increased interaction between indigenous communities and European settlers from the late 18th century onwards. In Gauteng, development was strongly influenced by mining and urbanisation following the discovery of gold on the Witwatersrand in 1886. In contrast, the North-West Province is characterised by agricultural land use and rural settlement patterns.

9. Findings and Discussions

The Archaeological and Cultural Heritage walkdown survey conducted along the proposed Pluto–Mahikeng 400 kV transmission powerline and Mahikeng substation footprint identified a range of heritage resources within the study area. These include stone tools, stone cairns, stone-walled structures, farmsteads, and historical structures. Collectively, these findings demonstrate that the landscape has been shaped by prolonged human occupation, reflecting activities ranging from Stone Age tool production to more recent historical farming practices. The most significant feature recorded during the survey is a burial site (MBS01), comprising more than twelve graves, including infant burials. The graves are marked with inscribed granite headstones and show evidence of visitation and ongoing ritual activity. Burial sites are regarded as highly significant in terms of the National Heritage Resources Act, as they embody cultural, historical, and spiritual values. As such, they are legally protected and must be treated with dignity and respect.

Several stone-walled structures were also recorded along the transmission corridor. These include both circular and rectangular features, some exceeding 2 metres in height and partially overgrown by vegetation. In certain instances, stone walling occurs in association with features such as water reservoir foundations and cement-plastered drinking troughs, suggesting the presence of former farmsteads or organised agricultural activities. Some of these structures may have functioned as residential units or livestock enclosures (kraals) and are consistent with both historical farming landscapes and Iron Age settlement patterns in the interior of South Africa.

In addition, a number of derelict and dilapidated structures were identified along the proposed servitude. These structures, often lacking roofs and overgrown with vegetation, likely served as farm worker residences or storage facilities. A cattle ramp associated with some of these structures

indicates livestock handling activities. The presence of farmsteads and associated infrastructure reflects sustained agricultural land use within the region.

Stone cairns were recorded at several locations within the study area. These features, typically consisting of piled stones within agricultural fields, are most likely the result of land clearing activities. However, their origin could not be definitively confirmed during the survey, and in some cases, such features may be associated with burial practices or other cultural activities. In contrast, limited archaeological material was identified during the survey. This includes isolated Middle Stone Age (MSA) stone tools, such as a blade and a sharp-edged flake, found out of context and likely displaced by natural processes such as erosion. A single potsherd was also recorded; however, it lacked diagnostic attributes necessary for detailed interpretation. The isolated and disturbed nature of these finds suggests low archaeological integrity within the surveyed areas.

In summary, the study indicates that most identified heritage resources are of low to medium significance, with the exception of the burial site, which is of high significance due to its cultural and social value. Notwithstanding their assessed significance, all heritage resources are protected under the National Heritage Resources Act and may not be altered or removed without the necessary permits. The recommendations provided in this report should therefore be implemented with due consideration to ensure the protection and conservation of archaeological and cultural heritage resources within the study area.

Table 3: Attributes of noted materials and respective significance.

TOWER POSITION	LATITUDE	LONGITUDE	DESCRIPTION	PERIOD	RANKING	MITIGATION
T011	25°39'41.40"S	25°35'0.9"E	A burial site located 250 m from proposed tower position 11, with approximately 12 graves.	Burial Ground	Medium IIIB	The burial site is at a safe distance, however monitoring during construction is recommended.
T50-T51	25°39'16.20"S	25°43'45.90"E	A cluster of derelict structures between towers 50 and 51; the exact age of the structures could not be confirmed.	Buildings and Structures	Low	The structures must be demarcated and must be monitored by ECO during construction.
T163	26°01'01.70"S	25°49'17.30"E	A collapsed circular stone wall, over 2 m in height, overgrown by vegetation. Located approximately 200 m from Tower 163.	Buildings and Structures	Low	Monitoring by ECO during construction.
T163	26°01'1.60"S	25°49'18.50"E	A 5 m radial circular water reservoir foundation, overgrown by vegetation, located 200 m from Tower 163.	Buildings and Structures	Low	No mitigation needed.
T163	26°01'03.20"S	25°49'16.40"E	A cement-plastered drinking trough. Buildings and Structures	Buildings and Structures	Low	No mitigation needed.
T351	26°07'17.0"S	26°46'46.40"E	A cluster of dilapidated structures, located 250 m from a tower position. These may have served as farm workers residence, now overrun by vegetation with the roof and other fixtures vandalised. The stone walled structure is a rectangular structure that may have served as a residency at the farm. The structure is located under a big eucalyptus tree. The site also has rusted water reservoirs and a stone walled cattle ramp.	Buildings and Structures	Low	No direct impact is anticipated, monitoring during construction is recommended.

TOWER POSITION	LATITUDE	LONGITUDE	DESCRIPTION	PERIOD	RANKING	MITIGATION
T421	26° 9'6.92"S	26°46'47.77"E	A cluster of derelict stone walled structures, at approximate 250 m from a tower point.	Buildings and Structures	Medium IIIB	No direct impact is anticipated, monitoring during construction is recommended.
T449	26° 9'31.30"S	26°54'35.5"E	A Potsherd identified out of context and isolated.	Archaeological Cultural Material	Low	No mitigation needed.
T558	26° 11'13.6"S	27°22'58,.6"E	Stone tools identified out of context, with no matrix or provenance; possibly deposited by erosion, about 300 m from T558.	Archaeological Cultural Material	Low	No mitigation needed.
T581	26°12'55.93"S	27°27'9.32"E	A cluster of derelict stone-walled structures approximately 250 m from a tower point. Buildings and Structures	Buildings and Structures	Medium IIIB	Monitoring by ECO during construction.
T579	26°12'52.28"S	27°26'41.65"E	Stone walled structures with a gabled roof however the roof covering are missing. The identified features are located outside the 100m servitude.	Buildings and Structures	Medium IIIB	No mitigation needed.

Portrait of Documented Stone Implements and other Heritage Resource

Figures 4 to 33 show the findings recorded within and near the servitude



Figure 3: Collapsed stone-walled structure displaying circular walling, heavily overgrown by vegetation. The form and construction suggest possible association with Iron Age settlement patterns. The degree of collapse indicates long-term abandonment.



Figure 4: Dilapidated structure consisting of which appears to not have been in use for an extended period and is associated with historical farming activities.



Figure 5: Abandoned structure without a roof, indicating advanced structural deterioration, sowing prolonged weathering and neglect.



Figure 6: General view of multiple derelict structures within the study area, reflecting historical settlement and agricultural land use patterns.



Figure 7: Alternate view of an abandoned homestead, illustrating layout and spatial arrangement typical of rural farmsteads.



Figure 8: Burial site (MBS01) comprising more than twelve graves, including infant burials. The presence of inscribed granite headstones and evidence of visitation indicates ongoing cultural and social significance.



Figure 9: Alternate view of the burial site (MBS01), illustrating spatial arrangement and density of graves.



Figure 10: Water reservoir within the study area, likely associated with historical or current agricultural activities.



Figure 11: Collapsed stone walling associated with historical agricultural settlement features.



Figure 12: Rusted metal water reservoir, indicating disuse and deterioration of agricultural infrastructure.



Figure 13: Collapsed foundation of a former water reservoir, suggesting earlier infrastructure that is no longer functional.



Figure 14: Rusted metal water reservoir mounted on a concrete base, representing more recent agricultural infrastructure.



Figure 15: Additional view of derelict structures, showing varying states of preservation and structural decay.



Figure 16: Cluster of dilapidated structures lacking roofing, indicating long-term abandonment.



Figure 17: Collapsed stone-walled structure within the study area, showing construction techniques typical of Iron Age.



Figure 18: Additional graves identified within the study area, indicating the presence of dispersed burial practices.



Figure 19: General view of the burial grounds from a different perspective, highlighting landscape context and setting.

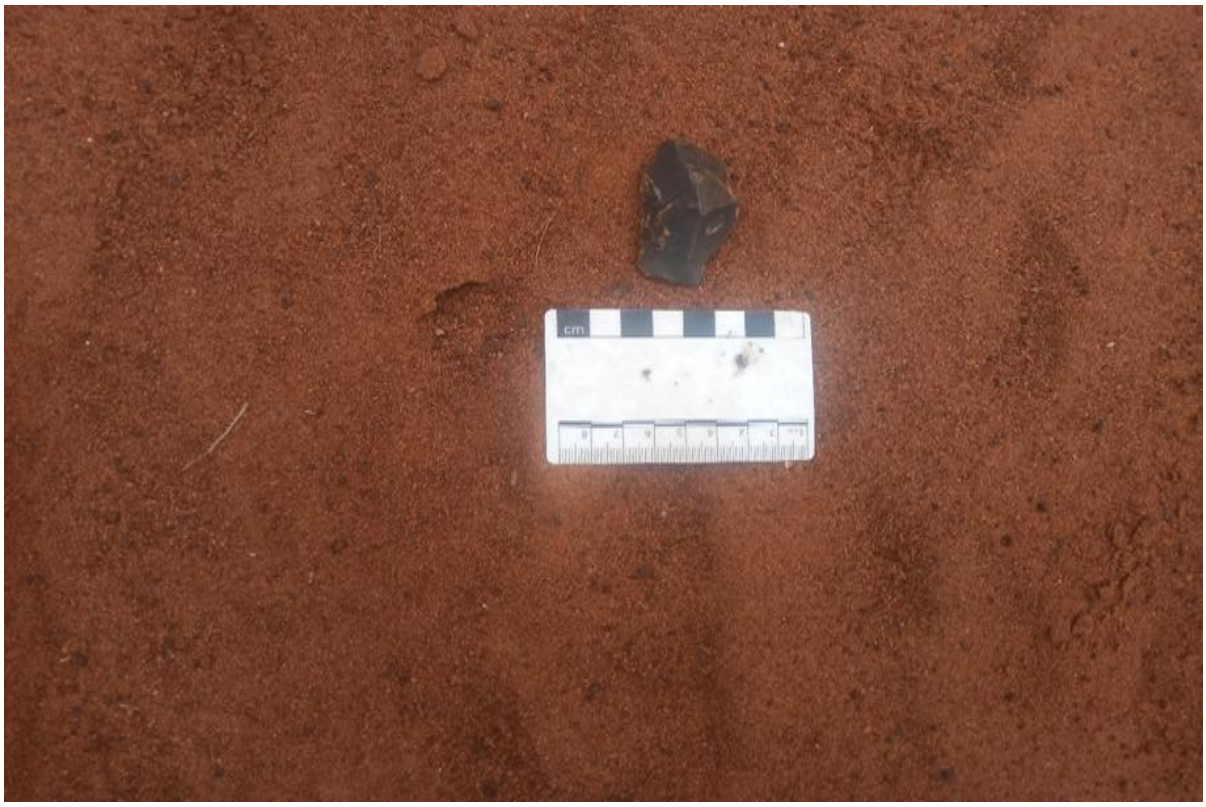


Figure 20: View of an MSA blade found in the vicinity of Tower Point 558.



Figure 21: Stone tool identified near Tower Point 558, representing typical lithic material found in the region.



Figure 22: Stone tool showing a degree of symmetry, indicating deliberate shaping and tool production techniques.



Figure 23: Stone tool displaying sharp working edges, suggesting use in cutting or processing activities.



Figure 24: Decorated potsherd identified near Tower Point 449. Although non-diagnostic, it indicates the presence of ceramic-producing communities.



Figure 25: Stone cairns identified within the study area. These are likely the result of agricultural land clearing.



Figure 26: Farmstead comprising both residential and agricultural structures, illustrating continued land use and occupation.



Figure 27: Dilapidated structure located outside the Pluto Substation footprint, indicating historical land use beyond the immediate development area.



Figure 28: Collapsed structure recorded during the survey, with remaining wall sections indicating former use as a dwelling or storage facility.



Figure 29: Cattle ramp associated with livestock handling, reflecting agricultural practices in the area.



Figure 30: Dilapidated structure near Tower Point 581, heavily overgrown by vegetation, suggesting prolonged abandonment.



Figure 31: Barn-like structure likely associated with agricultural storage or livestock management, reflecting continued farming activity in the area.



Figure 32: Farmhouses located near Tower Point 578, representing more recent or still-utilised agricultural infrastructure.

10. Recommendations

In accordance with the National Heritage Resources Act, no active or ongoing development activities were observed within the proposed project area at the time of the walkdown survey.

It is important to emphasise that the absence of visible archaeological materials (e.g., pottery, stone tools, stone walling, graves, or fossils) does not imply their absence within the subsurface. Archaeological resources may remain buried and could be uncovered during construction activities. The developer is therefore required to exercise due caution during all ground-disturbing activities.

Pre-Construction Education and Awareness Training

Prior to the commencement of construction, all contractors and construction personnel must undergo heritage awareness training. This training should be conducted by a qualified heritage specialist and must include:

- Basic identification of archaeological and heritage resources
- Understanding of legal obligations in terms of heritage legislation
- Procedures to follow in the event of a chance find

Training should include visual and practical guidance on recognising potential heritage indicators.

Indicators of Archaeological Material

Construction personnel should be made aware of the following possible indicators of archaeological or heritage resources:

- Flaked stone tools, bone tools, or fragments of worked stone
- Ash deposits and charcoal concentrations
- Bone remains and shell fragments
- Artefacts such as beads, pottery, or hearth remains
- Packed or arranged stones that may indicate buried structures or graves

Chance Finds Procedure

In the event that any suspected archaeological material or burial sites are uncovered during construction:

- All work must cease immediately in the affected area
- The area must be clearly demarcated and secured (e.g., using danger tape)
- The Environmental Control Officer (ECO) and a qualified archaeologist must be notified
- Where required, the South African Heritage Resources Agency must be informed
- No further work may resume until the find has been assessed and clearance has been granted

Protection of Heritage Resources

- The contractor is responsible for ensuring that any identified heritage resources are protected from damage, theft, or unauthorised access
- Any exposure of heritage finds to the public or media must be strictly controlled until formal assessment and permitting processes are completed
- Any attempt to conceal, remove, or collect archaeological material is illegal and constitutes an offence under heritage legislation
- No person may exhume, relocate, or interfere with burial sites without the appropriate permits issued by SAHRA.

11. Conclusions

No significant archaeological sites were identified within the immediate footprints of the proposed pylon positions during the walkdown survey. However, a number of heritage resources were recorded within the broader study area. These include a burial site, isolated stone tools, stone-walled structures, and historical features such as derelict buildings and farmsteads. The identified burial site is considered to be of high heritage significance, while the remaining resources are generally of low to medium significance. Although most of these heritage resources are located outside the direct development footprint, there remains a potential risk of indirect impacts during construction activities, particularly from site clearing, vehicle movement, and associated disturbances. It is therefore recommended that monitoring be undertaken during the construction phase in areas where heritage resources are known to occur. Provided that the recommended mitigation measures, such as the establishment of appropriate buffer zones around sensitive features and the implementation of a Chance Finds Procedure are effectively applied, the proposed Pluto–Mahikeng 400 kV transmission powerline and associated infrastructure can proceed from a heritage perspective.

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Appendix I: 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?

Appendix II: Chance Find Procedure

Introduction

The purpose of this document is to provide NTCSA and their contractors with the appropriate response guidelines (extracted and adapted from the National Heritage Resources Act (Act No. 25 of 1999) Regulations Reg No. 6820, GN: 548, taking into consideration international best practice based on World Bank, Equator Principles and the International Finance Corporation Performance Standards, 1972 UNESCO Convention on the Protection of World Cultural and Natural Heritage (World Heritage Convention), that should be implemented in the event of chance discovery of heritage resources. These guidelines or chance find procedures (CFPs) can be incorporated into Eskom's policies that may have relevance during construction and operational phases. The CFPs aim to avoid and/or reduce project risks that may result due to chance finds, whilst considering international best practice.

Purpose of ACFP

The aim of this Archaeological Chance Find Procedure (ACFP) are to protect previously unexposed heritage resources that are yet unknown although might be encountered during the project operation or construction phase. This document serves to provide best practices to manage accidental exposed heritage resource during the development. The procedures are given to the client/applicant/contracts in order to prevent and minimize negative impact on heritage resources encountered by accident. Thus, the heritage specialist(s) compiled this chance find document with a purpose to give instructions based on relevant and appropriate actions in line with the NHRA and best guidelines to protect the chance finds on the proposed site. In significant, the ACFP stand in place to promote the preservation of heritage resources and present mitigation measure to avoid disturbance on heritage resources.

ACFP for Heritage Resources

The following procedures must be followed when heritage resources are encountered during the operational or construction phase:

- All construction/clearance activities in the vicinity of the heritage resources found by accident on site must cease immediately to avoid further damage to the chance finds
- Immediately report the chance finds to the supervisor/site manager or if they are unavailable, report to the project Environmental Officer (EO) who will provide further instructions.

- Record (note taking, photograph with a scale, GPS coordinates) of all the chance find exposed during the activity.
- All remains are to be stabilised in situ.
- Secure (e.g., barricade) the area to prevent further disturbance on heritage resources.
- The EO must contact the qualified archaeologist registered with the association for Association for Southern African Professional Archaeologist (ASAPA) or South African Heritage Resources Agency (SAHRA).
- The project archaeologist will conduct the inspection and assess the significance of the chance finds under SAHRA guidelines, give recommendation and mitigation measures.

SPECIALIST CV

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PERSONAL DETAILS

Full Names	: Alvord Nhundu
Birth date	: 15 November 1978
Nationality	: Zimbabwe
Gender	: Male

ACADEMIC ACHIEVEMENTS

Qualification	: Masters of Arts in Archaeology
Institution	: University of Pretoria
Obtained	: 2018
Qualification	: Honours in Archaeology (cum laude)
Institution	: Wits University
Obtained	: 2009
Qualification	: Bachelor of Geography & Archaeology
Institution	: University of Zimbabwe
Obtained	: 2002

CURRENT EMPLOYMENT

Organization	: AfroConserva Intergration
Position held	: Heritage Practitioner
Duration	: 2020 - present
Duties	: Conducting archaeological and cultural heritage impact assessment Facilitating social impact assessment and public participation Overseeing resettlement action plan

PAST WORK EXPERIENCE

From: May 2017 to June 2019. **Employer:** National Museums and Monuments of Zimbabwe-Zimbabwe Museum of Human Sciences (Harare).**Position held**: Curator in Archaeology

Duties

(1) Archaeology Department-documentation and retrieval of data
(2) National surveys-documents analysis
(3) Historical buildings-assessment, inspection, condition reports
(4) Monuments-inspection and reports
(5) Ethnography-documentation, and inventory analysis
(6) Heritage education-gallery interpretation
(7) Fieldwork-assist in impact assessments and exhumations

From: 2016 to April 2017. **Employer:** Probe Market Research (part time) **Position held**: Field researcher. Have conducted 7 projects for the past 2 years.

From: February 2014 to November 2014. **Employer**: University of Pretoria. **Position held:** Teaching assistant for 3rd year archaeology students.

From: January 2010 to February 2013. **Employer**: Cornway College. **Position held:** High school teacher, teaching Form 1 to 6 Geography, teacher in charge of girls' hockey.

From: February 2009 to November 2009. **Employer**: University of Witwatersrand. Position held: Tutor for 1st year students (as part of a postgraduate merit award).

From: January 2007 to December 2008. **Employer**: Cornway College. **Position held:** High school teacher taught Geography and Science, Form 1 to 4, teacher in charge of girls' hockey.
From: January 2003 to December 2006. **Employer**: Government. **Position held**: High school teacher, taught Geography Form 1 to 6, trained hockey and soccer.

ACCREDITATION

- Association of Southern African Professional Archaeologists (Member No: 466)

FIELD AND SKILLS BASED EXPERIENCE

	NAME	PROVINCE	YEAR	TIME	TYPE OF SITE	FIELD WORK UNDERTAKEN	PROJECT HEAD
RESEARCH PROJECTS	Drakensberg	KwaZulu-Natal	2008	7 days	RA	Mapping of rock art	Ben Smith
	Cederberg	Western cape	2009	14 days	RA	Conservation and intervention	Janette Deacon
	Mapungubwe	Limpopo	2009	30 days	MIA and LIA	Survey, and Excavation	Tom Huffman
	Giyani	Limpopo	2014	1day	CRM	Exhumation/Reburial	Munyadziwa Magoma

PUBLICATIONS

- Published a paper: Nhundu, A. 2015. The effects of global warming on the rock art in the uKhahlamba-Drakensburg Park World Heritage Site (UDP) in South Africa. In J. Runge (ed.) Changing climates, Ecosystems and Environments within Arid Southern Africa and Adjoining regions: **Palaeoecology of Africa volume** 33: 191-208. London: Routledge.
- An unpublished report: Mokwena, G & Nhundu, A. **The state of Kridouwkrans rock art site in Cederberg in the Western Cape Province**, South Africa