



## forestry, fisheries & the environment

Department:  
Forestry, Fisheries and the Environment  
**REPUBLIC OF SOUTH AFRICA**

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### **SPECIALIST DECLARATION FORM – AUGUST 2023**

Specialist Declaration form for assessments undertaken for application for authorisation in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations)

#### **REPORT TITLE**

HERITAGE IMPACT ASSESSMENT STUDY FOR THE PROPOSED CONSTRUCTION OF THE 6KM IMPALA ZIRCON TEMPORARY BY-PASS 132KV POWERLINE WITH ASSOCIATED INFRASTRUCTURE WITHIN THE UMHLATHUZE MUNICIPALITY,  
KWA-ZULU NATAL PROVINCE

#### **Kindly note the following:**

1. This form must always be used for assessment that are in support of applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting, where this Department is the Competent Authority.
2. This form is current as of August 2023. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at <https://www.dffe.gov.za/documents/forms>.
3. An electronic copy of the signed declaration form must be appended to all Draft and Final Reports submitted to the department for consideration.
4. The specialist must be aware of and comply with 'the Procedures for the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of the act, when applying for environmental authorisation - GN 320/2020', where applicable.

#### **1. SPECIALIST INFORMATION**

|                                        |                                                               |
|----------------------------------------|---------------------------------------------------------------|
| Title of Specialist Assessment         | Archaeology                                                   |
| Specialist Company Name                | Vhubvo Consultancy                                            |
| Specialist Name                        | Munyadziwa Magoma                                             |
| Specialist Identity Number             | 7906165511081                                                 |
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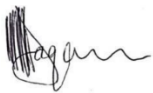
## SPECIALIST DECLARATION FORM – AUGUST 2023

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### 2. DECLARATION BY THE SPECIALIST

I, Munyadziwa Magoma declare that –

- I act as the independent specialist in this application;
- I am aware of the procedures and requirements for the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of the National Environmental Management Act (NEMA), 1998, as amended, when applying for environmental authorisation which were promulgated in Government Notice No. 320 of 20 March 2020 (i.e. “the Protocols”) and in Government Notice No. 1150 of 30 October 2020.
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing –
  - any decision to be taken with respect to the application by the competent authority; and;
  - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 48 and is punishable in terms of section 24F of the NEMA Act.



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Signature of the Specialist

Vhubvo Consultancy

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Name of Company:

21 May 2026

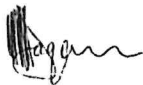
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Date

## SPECIALIST DECLARATION FORM – AUGUST 2023

### 3. UNDERTAKING UNDER OATH/ AFFIRMATION

I, Munyadziwa Magoma, swear under oath / affirm that all the information submitted or to be submitted for the purposes of this application is true and correct.



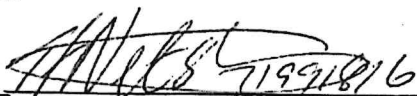
Signature of the Specialist

Vhubvo Consultancy

Name of Company

21 May 2026

Date



Signature of the Commissioner of Oaths

21 May 2026

Date





**PHASE I CULTURAL HERITAGE IMPACT ASSESSMENT (HIA)  
FOR THE PROPOSED CONSTRUCTION OF THE IMPALA  
ZIRCON TEMPORARY BY-PASS 132KV POWERLINE,  
ASSOCIATED INFRASTRUCTURE AND THE MAINTENANCE  
OF THE EXISTING IMPALA ZIRCON 132KV MAIN LINE  
WITHIN UMHLATHUZE LOCAL MUNICIPALITY OF KING  
CETSHWAYO DISTRICT, KWAZULU-NATAL**

**26 March 2026**

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## **DECLARATION**

### **ABILITY TO CONDUCT THE PROJECT**

Philisiwe Phillip is a qualified archeologist, having obtained a BA degree in Archaeology and Anthropology at the University of Pretoria (UP), an Honours degree in Archaeology at the University of Pretoria (UP) focusing on testing the reliability of microfauna analysis as a proxy in paleoenvironmental reconstruction using barn owl pellets. Philisiwe has experience in Heritage Management, involving Heritage Research and has volunteered as an archeological Field and Lab Technician at the University of Pretoria, which further developed her technical skills. She has undertaken Archaeological Impact Assessments and relocation of graves project and is a member of the Association for southern African Professional Archaeologists (ASAPA).

Munyadziwa Magoma is a professional archaeologist, having obtained his BA degree in Archaeology and Anthropology at University of South Africa (UNISA), an Honours degree at the University of Venda (UNIVEN), and a master's degree at the University of Pretoria (UP). He is an accredited Cultural Resource Management (CRM) member of the Association for southern African Professional Archaeologists (ASAPA) and KwaZulu-Natal Amafa and Research Institute. Munyadziwa is further affiliated to the South African Archaeological Society (SAAS), the Society of Africanist Archaeologists (SAfA), Historical Association of South Africa (HESA); Anthropology Southern Africa (ASnA); International Association for Impact Assessment (IAIAsa); International Council on Monuments and Sites (ICOMOS) and the International Council of Archaeozoology (ICAZ). He has more than fifteen years' experience in heritage management, having worked for different CRM organisations and government heritage authorities. As a CRM specialist, Munyadziwa has completed well over 3000 Archaeological Impact Assessments (AIA) for developmental projects situated in several provinces of the Republic of South Africa. The AIAs projects he has been involved with are diverse, and include the establishment of major substations, upgrading and establishment of roads, establishment and extension of mines. In addition, he has also conducted Heritage Impact Assessments (HIAs) for the alteration to heritage buildings and the relocation of graves. His detailed CV is available on request.

### **INDEPENDENCE**

We, Munyadziwa Magoma and Philisiwe Phillip 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, Vhubvo Consultancy Cc, 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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## Acknowledgements

The author and the team of Vhubvo Consultancy Cc would like to acknowledge Selahle Consultancy & Projects (Pty) Ltd for their assistance in relation to the undertaking of this project, also Deeds of Office and Google Earth.



## Report Outline

Appendix 6 of the GNR 326 EIA Regulations published on 7 April 2017 provides the requirements for specialist reports undertaken as part of the environmental authorisation process. In line with this, Table 1 provides an overview of Appendix 6 together with information on how these requirements have been met.

| Requirement from Appendix 6 of GN 326 EIA Regulation 2017                                                                                                                                                                                                                                                                                                                                                                                        | Chapter                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| (a) Details of -<br>(i) the specialist who prepared the report; and<br>(ii) the expertise of that specialist to compile a specialist report including a curriculum vitae                                                                                                                                                                                                                                                                         | Section A                                      |
| (b) Declaration that the specialist is independent in a form as may be specified by the competent authority                                                                                                                                                                                                                                                                                                                                      | Declaration of Independence                    |
| (c) Indication of the scope of, and the purpose for which, the report was prepared                                                                                                                                                                                                                                                                                                                                                               | Section 4                                      |
| (cA) an indication of the quality and age of base data used for the specialist report                                                                                                                                                                                                                                                                                                                                                            | Section 5                                      |
| (d) Duration, Date and season of the site investigation and the relevance of the season to the outcome of the assessment                                                                                                                                                                                                                                                                                                                         | Section 5                                      |
| (e) Description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used                                                                                                                                                                                                                                                                                             | Section 5                                      |
| (f) details of an assessment of the specific identified sensitivity of the site related to the proposed activity or activities and its associated structures and infrastructure, inclusive of site plan identifying site alternatives                                                                                                                                                                                                            | Section 8                                      |
| (g) Identification of any areas to be avoided, including buffers                                                                                                                                                                                                                                                                                                                                                                                 | Section 10                                     |
| (h) Map superimposing the activity including the associated structures and infrastructure On the environmental sensitivities of the site including areas to be avoided, including Buffers                                                                                                                                                                                                                                                        | Section 10                                     |
| (I) Description of any assumptions made and any uncertainties or gaps in knowledge                                                                                                                                                                                                                                                                                                                                                               | Section 5                                      |
| (j) a description of the findings and potential implications of such findings on the impact of the proposed activity including identified alternatives on the environment or activities                                                                                                                                                                                                                                                          | Section 9                                      |
| (k) Mitigation measures for inclusion in the EMPr                                                                                                                                                                                                                                                                                                                                                                                                | Section 10                                     |
| (I) Conditions for inclusion in the environmental authorisation                                                                                                                                                                                                                                                                                                                                                                                  | Section 10                                     |
| (m) Monitoring requirements for inclusion in the EMPr or environmental authorisation                                                                                                                                                                                                                                                                                                                                                             | Section 10                                     |
| (n) Reasoned opinion -<br>(i) as to whether the proposed activity, activities or portions thereof should be authorised;<br>(iA) regarding the acceptability of the proposed activity or activities; and<br>(ii) if the opinion is that the proposed activity, activities or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan | Section 10                                     |
| (o) Description of any consultation process that was undertaken during the course of preparing the specialist report                                                                                                                                                                                                                                                                                                                             | Section 5                                      |
| (p) A summary and copies of any comments received during any consultation process and where applicable all responses thereto; and                                                                                                                                                                                                                                                                                                                | Refer to the EIA report                        |
| (q) Any other information requested by the competent authority                                                                                                                                                                                                                                                                                                                                                                                   | No other information is requested at this time |



## EXECUTIVE SUMMARY

### Introduction

Vhubvo Consultancy CC has been appointed by Selahle Consultancy & Projects (Pty) Ltd to conduct a Phase 1 Cultural Heritage Impact Assessment (HIA) for the proposed construction of the Impala–Zircon temporary bypass 132 kV powerline with associated infrastructure, and the maintenance of the existing Impala–Zircon 132 kV main line within the uMhlathuze Municipality in KwaZulu-Natal Province. The study was conducted with the main objective of investigating the availability of archaeological sites, cultural resources, sites associated with oral histories, graves, cultural landscapes, and any structures of historical significance that may be affected by the proposed construction. Furthermore, the study aims to recommend a viable option from a cultural heritage perspective and advise on mitigation measures should any sites be impacted, these mitigations will, in turn, assist the developer in making decisions on the most appropriate option (s) in line with the National Heritage Resources Act, 1999 (Act 25 of 1999). To reach a defensible recommendation, both a desktop study and a field survey were conducted. The desktop study was undertaken through the South African Heritage Resources Information System (SAHRIS) for previous Archaeological Impact Assessments conducted in the region of the proposed development, and for research that has been carried out in the wider area over past years. The field survey was conducted to verify and supplement the findings of the desktop assessment.

### Need for the Project

The proposed project involves the maintenance and refurbishment of the existing Impala–Zircon 132 kV powerline within the uMhlathuze Municipality in KwaZulu-Natal. Due to its proximity to the coast, the powerline has been exposed to coastal and industrial pollution, resulting in corrosion and deterioration of some tower foundations. In order to undertake the required maintenance without interrupting electricity supply to the surrounding areas, a temporary 132 kV bypass powerline of approximately 6.01 km is proposed, which will run parallel to the existing line on temporary wooden poles. As the proposed development constitutes linear infrastructure exceeding 300 m in length, it triggers Section 38(1) of the National Heritage Resources Act (Act 25 of 1999), and a Heritage Impact Assessment (HIA) is therefore required to identify and assess potential impacts on heritage resources within the development area.

### Impact Statement

The overall impact of the proposed development on archaeological resources and burial sites is assessed as low. This rating is based on the absence of identified heritage resources within the surveyed development footprint, as well as the generally transformed nature of the study area, which reduces the likelihood of intact archaeological deposits on the surface. Although the potential for subsurface archaeological materials,



including graves or fossil remains, cannot be entirely excluded, the probability of encountering such resources is considered low. Furthermore, the scale and nature of the proposed activities, which are largely confined to existing servitudes and disturbed areas, further minimise the potential for significant heritage impacts. With the implementation of standard mitigation measures, including adherence to a Chance Find Procedure during construction, any unforeseen heritage resources that may be encountered can be appropriately managed. Therefore, the proposed development is considered acceptable from a cultural heritage perspective, with no significant constraints anticipated.

## Methodology and Approach

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

- Literature Review: To understand the background of the area, a background study was undertaken, and relevant institutions were consulted. These studies entail review of archaeological and heritage impact assessment studies that have been conducted around the proposed area thorough SAHRIS. In addition, E-journal platforms such as JSTOR, Google Scholar and History Resource Centre were searched.
- Oral Interview: The determination of heritage values relies mostly on direct consultation with individuals in the community. Individuals with knowledge of heritage resources (graves) in the study area were contacted. Consultation was designed to elicit information which may facilitate understanding of heritage values and identification of character-defining elements on the site; and
- The final step involved the recording and documentation of relevant heritage resources, as well as the assessment of resources in terms of the heritage impact assessment criteria and report writing, mapping and constructive recommendations.

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

## Restrictions and Assumptions

As with all archaeological surveys, this assessment was limited to the identification of surface-visible heritage resources. It is therefore acknowledged that archaeological materials and features may be present below ground and remain undetected until exposed during construction activities. In the event that any archaeological materials, including burial sites or human remains, are encountered during the construction phase, all work in the immediate vicinity of the find must cease immediately. A qualified heritage specialist responsible for monitoring the development must be notified without delay to assess the significance of the find and to recommend appropriate mitigation measures. No further disturbance of the area may occur until



such time as a formal assessment has been completed and clearance has been granted. During this period, it is the responsibility of the contractor to ensure that the site is adequately protected from further disturbance, unauthorised access, and public exposure, including media attention, until all necessary assessments and decisions have been finalised.

## Survey Findings

The primary objective of the Archaeological and Cultural Heritage Impact Assessment was to systematically identify and evaluate heritage resources within the proposed development footprint. This included, but was not limited to, archaeological sites, features associated with oral traditions, burial grounds and graves, cultural landscapes, and any structures or features of historical significance located along the proposed construction of the Impala–Zircon temporary by-pass 132 kV powerline with associated infrastructure, and the maintenance of the existing Impala–Zircon 132 kV main line. In addition to identifying such resources, the study sought to assess their significance and determine the potential impacts that the proposed development may have on them. Where necessary, appropriate mitigation measures were to be recommended in order to minimise or avoid adverse impacts on heritage resources. Furthermore, where mitigation would be required, Selahle Consultancy & Projects would be supported in obtaining the necessary permits in compliance with the provisions of the National Heritage Resources Act (Act No. 25 of 1999). The field survey, supported by the desktop study and stakeholder engagement, revealed that the proposed development area is largely disturbed due to agricultural activities and existing infrastructure, therefore, this does not exhibit clear evidence of intact or significant archaeological deposits on the surface. No Stone Age or Iron Age archaeological sites were identified within the surveyed corridor that would warrant mitigation prior to the commencement of development activities. Similarly, no burial grounds, graves, or structures of historical significance were observed within the immediate footprint of the proposed powerline and associated infrastructure. While the absence of visible archaeological material suggests a low heritage sensitivity for the study area, it is important to acknowledge that subsurface archaeological deposits may still exist but remain undetected due to the limitations of surface survey methods. However, based on the available evidence, the overall impact of the proposed development on archaeological and cultural heritage resources is considered to be low. In conclusion, the assessment determined that there are no identified Stone Age or Iron Age sites within the proposed development area that require mitigation prior to construction. The project may therefore proceed from a heritage perspective, subject to the implementation of standard chance-find procedures during the construction phase to ensure that any previously unidentified heritage resources are appropriately managed.



## Recommendation

Although no archaeological materials or heritage resources were identified during the field survey, it is important to note that the absence of visible evidence does not necessarily confirm the absence of such resources within the subsurface. Archaeological materials, including pottery fragments, stone tools, remnants of stone walling, burial sites, and fossil remains, may still be present below ground and could be uncovered during construction activities. The client is therefore advised to ensure that all contractors and construction personnel are made aware of the potential for encountering such materials. Workers should be informed about the types of heritage resources that may be present and the importance of protecting these resources if discovered. Furthermore, it is recommended that caution be exercised during all ground-disturbing activities associated with the proposed development. Should any suspected archaeological or heritage materials be uncovered, work in the immediate area should cease and a qualified heritage specialist should be notified to assess the find and provide guidance on appropriate mitigation measures.

### Pre-construction education and awareness training

Prior to construction, workers should be given training on how to identify and protect archaeological remains that may be discovered during project. The pre-construction training should include some limited site recognition training for the types of archaeological sites that may occur in the construction areas. Below are some of the indicators of archaeological sites that may be found during construction:

- ✚ Flaked stone tools, bone tools and loose pieces of flaked stone.
- ✚ Ash and charcoal.
- ✚ Bones and shell fragments.
- ✚ Artefacts (e.g., beads or hearths).
- ✚ Packed stones which might be uncouneted underground and might indicate a grave or collapsed stone walling.

### Chance Find Procedure:

In the event that any of the above indicators, or any other suspected heritage materials, are uncovered during construction, the following procedures must be strictly followed:

- All construction activities within a minimum radius of 10 metres from the find must cease immediately;
- The area must be clearly demarcated and secured using danger tape or appropriate barriers;
- A qualified archaeologist or a representative of the KwaZulu-Natal Amafa and Research Institute (Amafa) must be notified without delay;
- No materials may be removed, disturbed, or tampered with under any circumstances;
- The contractor is responsible for protecting the site from unauthorised access and public exposure (including media) until formal assessment and guidance have been provided.

It must be noted that any attempt to conceal, remove, or collect archaeological material without the necessary permits constitutes a violation of the National Heritage Resources Act (Act No. 25 of 1999) and is punishable



by law. Similarly, no individual may exhume or interfere with human remains without formal authorisation from Amafa.

### Conclusions

A comprehensive desktop study, stakeholder consultation process, and field survey were undertaken for the proposed development, and the findings were documented in accordance with the relevant South African Heritage Resources Agency (SAHRA) guidelines. The assessment concluded that the proposed development area is of low archaeological and cultural heritage sensitivity, with no significant heritage resources identified within the development footprint that would preclude the project from proceeding. Based on the findings of this study, there are no heritage-related constraints that would prevent the proposed development from being authorised. It is therefore recommended that the project be allowed to proceed, provided that all recommendations outlined in this report are fully implemented. In particular, the following condition of authorisation must be strictly adhered to:

- ✚ The implementation of a Chance Find Procedure during all phases of construction to ensure that any previously unidentified heritage resources are appropriately managed and protected.



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## Impala-Zircon 132kV Powerline

### ABBREVIATIONS

|       |                                                |
|-------|------------------------------------------------|
| AIA   | Archaeological Impact Assessment               |
| Amafa | The KwaZulu-Natal Amafa and Research Institute |
| EIA   | Early Iron Age                                 |
| EMPr  | 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                |
| 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 No. 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. This includes intangible resources such religion practices, ritual ceremonies, oral histories, memories indigenous knowledge.

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

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

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

**Chance Finds:** Archaeological artefacts, features, structures or historical cultural remains such as human burials that are found accidentally in context previously not identified during cultural



## Impala-Zircon 132kV Powerline

heritage scoping, screening and assessment studies. Such finds are usually found during earth during ground disturbance activities.

**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, 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.



## Impala-Zircon 132kV Powerline

**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).



## Impala-Zircon 132kV Powerline

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



## **1. Introduction**

Vhubvo Consultancy CC has been appointed by Selahle Consultancy & Projects (Pty) Ltd to conduct a Phase 1 Cultural Heritage Impact Assessment (HIA) for the proposed construction of the Impala–Zircon temporary by-pass 132 kV powerline with associated infrastructure, and the maintenance of the existing Impala–Zircon 132 kV main line within the uMhlathuze Municipality in KwaZulu-Natal Province. The study was conducted with the main objective of investigating the availability of archaeological sites, cultural resources, sites associated with oral histories, graves, cultural landscapes, and any structures of historical significance that may be affected by the proposed construction. The aims of the study are to identify the 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 development and to advise on mitigation measures should any be affected and these will, in turn, assist the developer in planning on the most appropriate options in line with the National Heritage Resource Act (NHRA), 1999 (Act 25 of 1999). According to Section 38 (1) of the NHRA, an Impact Assessment is undertaken in case a listed activity is triggered. Such activities include:

- (a) the construction of a linear development exceeding 300m in length.
- (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, or water -
  - (i) exceeding 5 000 m<sup>2</sup> in extent.
  - (ii) involving three or more existing erven or subdivisions thereof; or
  - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
  - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a Provincial Heritage Resources Authority.
- (d) the re-zoning of a site exceeding 10 000 m<sup>2</sup> in extent; or
- (e) any other category of development provided for in regulations by SAHRA or PHRA

The proposal triggered the conduction of an impact Assessment because the proposed construction of the Impala–Zircon temporary by-pass 132 kV powerline exceeds 300m in extent. The findings of this Assessment have been informed by desktop studies and field surveys. The desktop study was undertaken through SAHRIS for previous Cultural Heritage Impact Assessments conducted in the region of the proposed development, and for research that has been carried out in the area over the past years. The survey was conducted in accordance with the SAHRA Minimum Standards for Archaeology and Paleontology. The minimum standards specify



## **Impala-Zircon 132kV Powerline**

the required contents of this report. The management and protection of heritage resources is a requirement of the National Environmental Management Act No.107 of 1998 (NEMA) as amended in terms of the NEMA 2010 regulations and Section 38 of the National Heritage Resources Act (NHRA - Act No. 25 of 1999). The purpose of the HIA procedures is to identify and describe the following:

- Description of the activity and its location.
- Description of affected environment.
- Identify heritage sites.
- Identify archaeological sites.
- Determine whether the heritage or archaeological remains will be affected by the proposed development.
- Methods used to assess risk.
- Summary of heritage risk assessment; and
- Mitigation and/or precautionary measures.

The purpose of the report is to inform the applicant/client about the heritage resources and their significance, while making appropriate recommendations regarding the management thereof. It is also essential that it provides the KwaZulu-Natal Amafa and Research Institute (Amafa) with the necessary information to make an informed decision regarding the following:

- Whether it has objections about the development.
- The conditions upon which such developments might proceed.
- The sites to which permits for destruction are required are required.
- Whether the sites require mitigation and what it should comprise of; and
- The measures that should/can be put in place to protect sites that should be conserved.

## **2. Site Location and Description**

The proposed Impala–Zircon temporary bypass 132 kV powerline is situated within the uMhlathuze Local Municipality, which forms part of the King Cetshwayo District Municipality in the KwaZulu-Natal Province of South Africa. The project area falls within a region characterised by a mix of industrial, agricultural, and peri-urban land uses, reflecting the broader economic activities associated with the Richards Bay and Empangeni areas. The alignment of the proposed temporary bypass powerline will run parallel to the existing Impala–Zircon 132 kV transmission line, within or adjacent to the established servitude. The route traverses a varied landscape that includes cultivated agricultural land (notably sugarcane fields, see figures 3 & 4), plantation forestry (see figures 5 & 6), and sections of disturbed and semi-natural vegetation (see figure 7). In certain



## **Impala-Zircon 132kV Powerline**

areas, the alignment also passes in proximity to residential settlements and local access roads, indicating a moderately transformed environment. The topography of the area is generally gently undulating, with low-lying areas interspersed with slight elevations. The vegetation is largely modified due to ongoing agricultural and forestry practices, although patches of natural or secondary vegetation may still occur. The surrounding region is well-developed in terms of infrastructure, with existing powerlines, road networks, and service corridors already established.



## Impala-Zircon 132kV Powerline

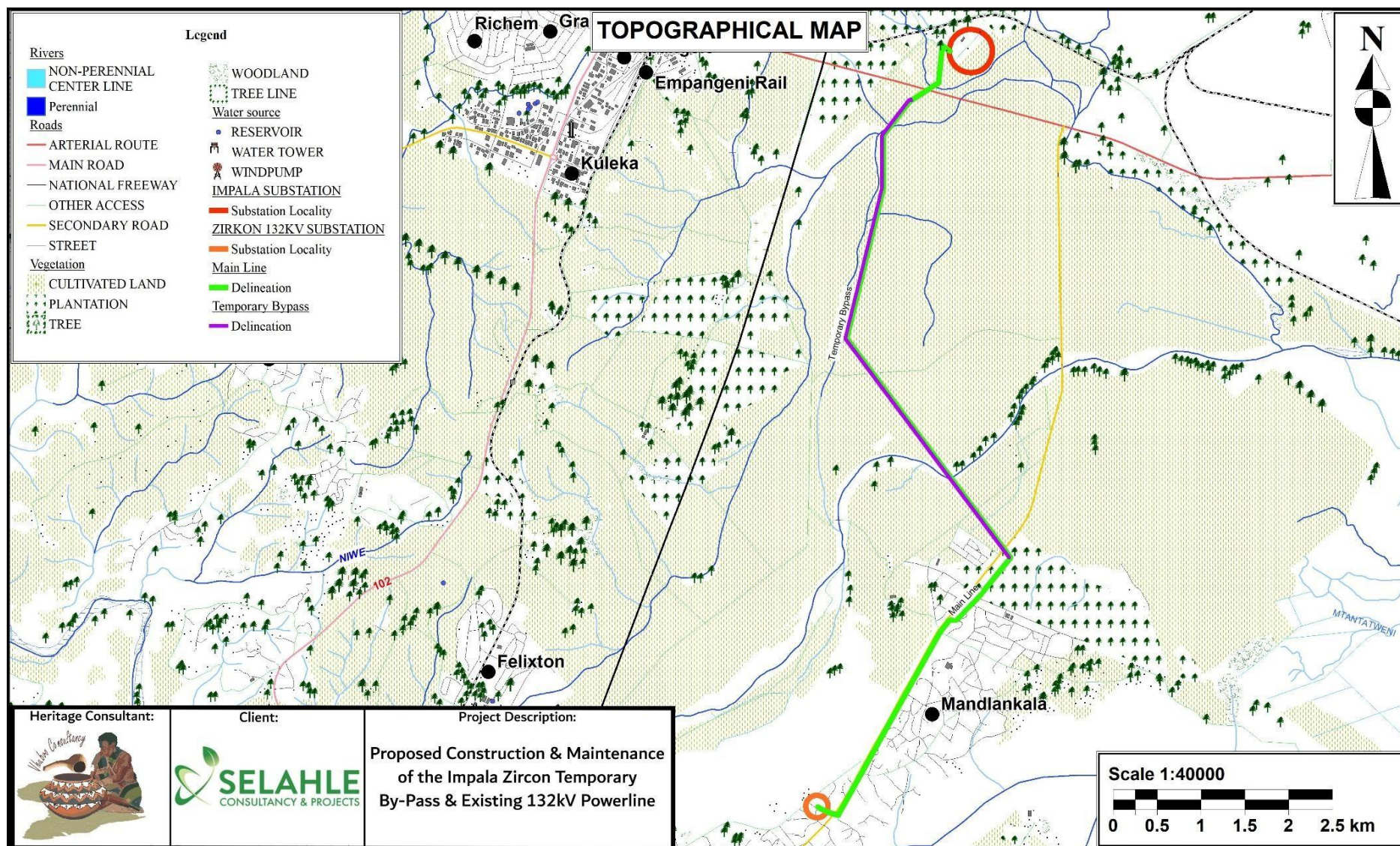


**Figure 1:** Topographical map of the study area proposed for construction of the proposed Impala-Zircon temporary by-pass powerline.

## Impala-Zircon 132kV Powerline

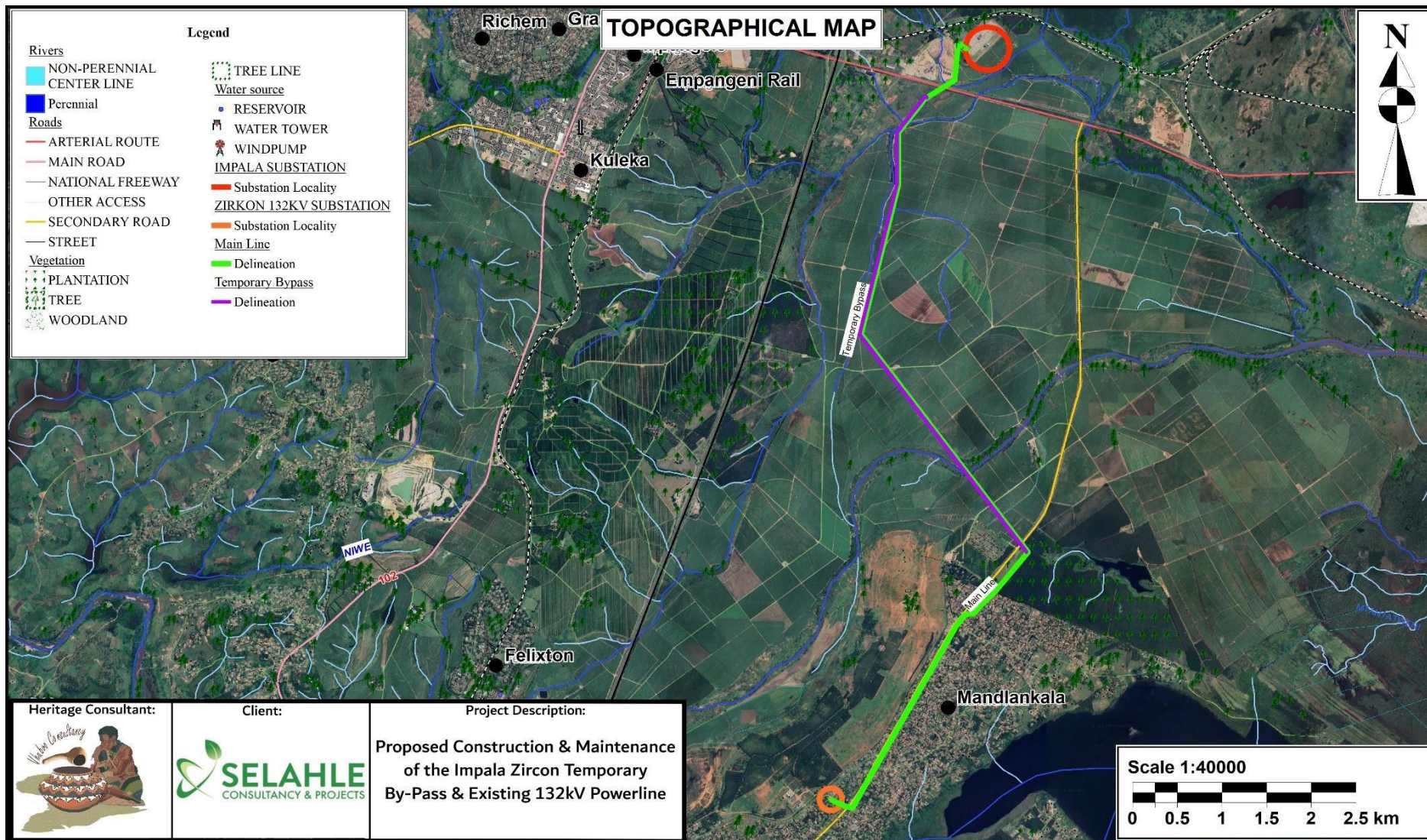


**Figure 2:** Aerial view map of the study area proposed for construction of the proposed Impala–Zircon temporary by-pass powerline.





**Figure 3:** General view of the proposed development area along the alignment of the planned powerline.



**Figure 4:** View of the sugarcane fields within the study area that will be traversed by the proposed powerline alignment.



**Figure 5:** Section of the proposed powerline route passing adjacent to a pine tree stand, indicating surrounding vegetation conditions.





**Figure 6:** Section of the proposed alignment where the powerline will cross the landscape, illustrating existing ground conditions.



**Figure 7:** View of a section along the proposed powerline corridor, showing the terrain to be traversed.





**Figure 8:** Section of the proposed alignment traversing a residential area, indicating proximity to existing structures.

### 3. Nature of the Proposed Project

The proposed development involves the maintenance, refurbishment, and temporary augmentation of the existing Impala–Zircon 132 kV powerline located within the uMhlathuze Municipality, KwaZulu-Natal Province. The primary objective of the project is to ensure the continued reliability and operational efficiency of the existing transmission infrastructure while minimising disruptions to electricity supply during maintenance activities. To facilitate uninterrupted power delivery, a temporary bypass powerline, approximately 6.01 km in length, will be constructed parallel to the existing Impala–Zircon 132 kV line. This temporary infrastructure will serve as an alternative transmission route, allowing maintenance and refurbishment work to be undertaken on the main line without affecting service provision to consumers.

The project comprises both permanent and temporary components, with construction activities confined to the existing servitude and adjacent areas where necessary. Upon completion of the maintenance works, all temporary infrastructure will be dismantled, and affected areas will be rehabilitated in accordance with environmental management requirements.

The key activities associated with the proposed development include the following:



### **Maintenance and Refurbishment of Existing Infrastructure:**

Inspection, repair, and upgrading of the existing Impala–Zircon 132 kV powerline, including replacement of worn or damaged components to ensure compliance with current operational standards.

### **Construction of Temporary Bypass Powerline:**

Installation of an approximately 6.01 km temporary 132 kV bypass line, aligned parallel to the existing powerline, to maintain electricity supply during maintenance operations.

### **Installation of Temporary Support Structures:**

Erection of temporary wooden poles and associated electrical infrastructure required to support the bypass powerline. These structures will be designed for short-term use and minimal environmental disturbance.

### **Operational Use of the Bypass Line:**

Temporary diversion of electrical transmission to the bypass line for the duration of maintenance and refurbishment activities on the main powerline.

### **Decommissioning and Rehabilitation:**

Removal of the temporary bypass powerline, including all poles and associated infrastructure, following completion of maintenance works. Disturbed areas will be rehabilitated and restored to their original or acceptable condition, in line with environmental and heritage management guidelines.

## **4. Methodology and Approach**

### **4.1 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) Consultations with community members.
- 3) Completion of a field survey; and
- 4) Documentation and analysis of the acquired data, leading to the production of this report.



### ***4.1.1 Literature Review***

A comprehensive desktop study was undertaken using the South African Heritage Resources Information System (SAHRIS) to review previous Cultural Heritage Impact Assessments conducted within and around the proposed development area. Additional sources included historical aerial imagery and cadastral information obtained from the Deeds Office, as well as other relevant academic and archival materials. These sources were analysed to establish a baseline understanding of the archaeological and cultural heritage sensitivity of the study area, identify previously recorded heritage resources, and inform the planning and execution of the field survey. The literature review also provided valuable contextual information regarding past human occupation and land use patterns within the region.

### ***4.1.2 Oral interview***

Oral interviews were conducted with members of the local community to supplement the desktop and field-based investigations. The purpose of these engagements was to gather information on cultural landscapes, sites of local significance, and intangible heritage resources that may not be visible or recorded in existing literature. This process contributed to a more comprehensive understanding of the cultural context of the study area and assisted in identifying any heritage resources of social or cultural importance.

### ***4.1.3 Physical survey***

A systematic field survey of the proposed development area was conducted on 24 March 2026 by a qualified archaeologist from Vhubvo Consultancy CC. The survey focused on identifying visible archaeological and cultural heritage resources within the proposed development footprint. Ground conditions, vegetation cover, and levels of disturbance were also assessed to determine site visibility and the likelihood of encountering heritage resources. The survey followed standard archaeological field methods and was informed by the findings of the desktop study.

### ***4.1.4 Documentation***

The study area was comprehensively documented during the field survey. This included the photographic recording of the general landscape and any features of interest using a 10.1-megapixel Sony Cybershot digital camera. Spatial data collection and the recording of site coordinates were undertaken using a Garmin eTrex Venture HC GPS device. All observations and findings were recorded and mapped to support analysis and reporting.

## **4.2 Restrictions and Assumptions**

The assessment was completed successfully, and adequate information was captured to successfully complete the report. It is important to note that this assessment was only limited to cultural heritage



assessment and did not include any form of subsurface analysis. As with any survey, archaeological materials may be under the surface and therefore unidentifiable to the surveyor and may be exposed during the course of construction. As a result, should any archaeological/ or grave site be observed during construction stage, a heritage specialist monitoring the development/ and or SAHRA official must immediately be notified. It is the responsibility of the contractor to protect the site from publicity (i.e., media) until all assessments are made. Several heritage impact assessments have previously been conducted within and around the broader study area. These studies provide important contextual information regarding the types of heritage resources that may occur within the region. A previous heritage assessment by Vollenhoven (2014) within the project area recorded Late Iron Age/historical stone walling and graveyards. These sites are located far from the currently proposed powerline corridor.

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## 5. Applicable Heritage Legislation

Several legislations provide the legal basis for the protection and preservation of both cultural and natural resources. These include the Tourism Act (No. 72 of 1993); Cultural Institution Act (No.



119 of 1998). However, there are two legislations which are most relevant regarding the conduction of Phase 1 Heritage Impact Assessment, and these are the following:

- National Heritage Resources Act (NHRA), Act No. 25 of 1999); and
- National Environmental Management Act (NEMA), Act No. 107 of 1998.

A Phase 1 HIA is an obligatory for development in South Africa as prescribed by SAHRA and stipulated by legislation. The overall purpose of heritage specialist input is to:

- Identify any heritage resources.
- Evaluate the nature and degree of significance of such resources.
- Assess the negative and positive impact of the development on these resources; and
- Propose recommendations for the appropriate heritage management of these impacts.

**Other sections of the National Heritage Resource Act with direct relevance to the Heritage Assessment 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.

**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 cultural significance
- (e) Geological sites of scientific or cultural importance
- (f) Archaeological and palaeontological 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).*

Human remains older than 60 years are protected by the National Heritage Resources Act, with reference to Section 36. Graves older than 60 years, but younger than 100 years fall under Section 36 of Act 25 of 1999 (National Heritage Resources Act), as well as the Human Tissues Act (Act 65 of 1983) and are the jurisdiction of SAHRA. The procedure for Consultation Regarding Burial Grounds and Graves (Section 36[5]) of Act 25 of 1999) is applicable to graves older than 60 years that are situated outside a formal cemetery administrated by a local authority. Graves in this age category, located inside a formal cemetery administrated by a local authority, require the same authorisation as set out for graves younger than 60 years, in addition to SAHRA authorisation. If the grave is not situated inside a formal cemetery, but is to be relocated to one, permission from the local authority is required and all regulations, laws and by-laws, set by the cemetery authority, must be adhered to.

Human remains that are less than 60 years old are protected under Section 2(1) of the Removal of Graves and Dead Bodies Ordinance (Ordinance No. 7 of 1925), as well as the Human Tissues Act (Act 65 of 1983) and are the jurisdiction of the National Department of Health and the relevant Provincial Department of Health and must be submitted for final approval to the office of the relevant Provincial Premier. This function is usually delegated to the Provincial MEC for Local Government and Planning; or in some cases, the MEC for Housing and Welfare. Authorisation for exhumation and reinternment must also be obtained from the relevant local or regional council where the grave is situated, as well as the relevant local or regional council to where the grave is being relocated. All local and regional provisions, laws and by-laws must also be adhered to. To



handle and transport human remains, the institution conducting the relocation should be authorised under Section 24 of Act 65 of 1983 (Human Tissues Act).

## **6. Discussion of (Pre) History of KwaZulu-Natal Province**

The proposed Impala–Zircon temporary by-pass 132 kV powerline is located within the Umhlathuze Local Municipality, which forms part of the King Cetshwayo District Municipality in KwaZulu-Natal province. The town of Empangeni is the closest town to the project area, and it was established in 1851, when the Norwegian Missionary Society founded a station there, although the modern town site was officially established in 1931 and it was declared a borough in 1960. The town is situated approximately 157 km from Durban. Archaeological surveys from the broader uMhlathuze Local Municipality suggest that human occupation in the region dates back to the Early, Middle, Later Stone Ages, and Historical period.

### **The Early Stone Age (ESA)**

The Early Stone Age dates back to approximately 1.7 million and 300 000 years ago. This period is associated with the early hominins such as *Homo erectus* and *Homo ergaster*, who were among the first communities to produce systematically shaped stone tools, such as handaxes, cleavers, picks, and large flakes. The artefacts assemblages from this period have been recovered from river terraces and alluvial deposits (Davies, 1950s–1960s; Kuman et al., 1997). The early communities in the ESA relied mostly on stone technology for survival, however as the time progressed and human cognition advanced, these early technologies gradually evolved into more refined and specialized tool traditions, marking the beginning of the Middle Stone Age.

### **The Middle Stone Age (MSA)**

The Middle Stone Age dates back to approximately 200 000 to 40 000 years ago, and is represented by blades, points and flakes, thus marking the emergence of human evolution and technological innovation. This period followed the Acheulian tradition of the Early Stone Age but introduced more technology advanced stone tools techniques, thus showing the cognitive and cultural development of modern humans (*Homo sapiens*). Archaeological investigations in KwaZulu-Natal, have identified MSA artefacts on elevated river terraces and open-air sites near reliable water sources. These locations were strategically chosen for their access to both fresh water and raw materials such as quartzite, and dolerite, used in tool manufacture. The distribution of artefacts in the region suggests that the MSA communities were highly mobile hunter-gatherers, moving seasonally to



exploit wild animals, wild plants and other natural resources. Therefore, we can conclude that the technological and behavioural advances of the MSA laid the foundation for later innovations of the Later Stone Age, whereby tool manufacturing increased symbolic expression, and regional cultural diversity became more pronounced. The Middle and Later Stone Age assemblages, which include flakes, scrapers, and microlithic tools, have been found in shelters and open-air sites throughout the greater Durban region (Maggs & Whitelaw, 1991).

### **The Later Stone Age (LIA)**

The Later Stone Age dates back to between 40 000 and 2 000 years ago, marking the final phase of Stone Age Occupation in Southern Africa and is closely associated with the ancestor of the San (Bushman). In contrast to the Early and Middle Stone Age large stone tools, LSA communities manufactured more specialised small tools, such small scrapers and finely crafted arrowheads. These tools were often mounted on wooden shafts or handles so you could hunt and process small and medium game more efficiently. The subsistence strategies combined hunting of small and large game with collecting wild plants, bulbs and fruits, showing a deep understanding of the local ecosystem. The introduction of the bow and arrow, sometimes with poison, was a technological innovation that made hunting much more efficient than earlier Stone Age ways.

### **The Iron Age**

The Iron Age is marked by the introduction of farming, pottery and metal which started around AD 250 in KwaZulu-Natal. This is a big shift in cultural and economic systems, from hunter-gatherer to agropastoral way of life. The earliest farming communities in the area were the Bantu-speaking agropastoralists who migrated from southwards central Africa. The Iron Age occupation in the broader eThekweni area marks the arrival of agro-pastoralist communities around 1 700 years ago. These agropastoral communities introduced the knowledge of crop cultivation, livestock management, and iron metallurgy, thus established permanent settlements along fertile river, with keen preference in alluvial or colluvial soils below the 1000 m contour due to their suitability for both farming and grazing (Maggs 1989; Huffman 2007).

The distinct ceramic traditions define these communities and serve as key chronological markers for archaeologists. The Msuluzi (AD 500-700), Ndondondwane (AD 700-800) and Ntshekane (AD 800-900) styles of pottery were not just useful for everyday activities, but also give us a glimpse of a complex social structure, including initiation ceremonies, different levels of community leadership



and economies that centred around cattle. Cattle were more than just a valuable resource, they were the key to wealth, status and a big part of the ritual life of these communities. They underpinned the whole social and economic system that held Early Iron Age society together. Archaeological evidence shows that Early Iron Age settlements were located to exploit riverine resources and the adjacent grasslands which provided seasonal grazing and supplementary wild foods. These sites show a gradual but profound cultural shift from the Earlier Later Stone Age communities, how indigenous knowledge and environmental adaptation combined with new technology to shape the Iron Age lifestyle (Maggs 1989:31; Huffman 2007:325–462).

### **The Later Iron Age (LSA)**

The Later Iron Age (after AD 1000) introduced the development of smaller, more dispersed settlements on ridges and plateaus. Excavations and surveys by Dr Tim Maggs in the 1970s–1980s and subsequent work by Gavin Whitelaw, Gavin Anderson, and Len van Schalkwyk revealed sites along the Umngeni Valley near Howick and Ottos Bluff near Albert Falls Dam. These sites represent the ancestors of later Nguni-speaking groups, including the Zulu, Nyavu, Dlanyawo, and Njilo communities (Bryant 1965; Wright 1988). The Zulu people are direct descendants of these Later Iron Age cultures (Huffman, 2007). By the early 19th century, much of the region fell under Shaka's expanding Zulu Kingdom, with groups such as the Nyavu maintaining partial independence until after the Anglo-Zulu War (1879) and the Bambatha Rebellion (1911).

### **Brief Historical Period and/or Colonial Period**

The town of Empangeni is relatively very young since its declaration as a permanent settlement. However, the history of the area provides broad historical developments that shaped the settlement, governance and the local economy. Initially, most of the population lived inland, in the rolling hills near Empangeni and along the uMhlathuze Valley, where King Shaka maintained his royal kraal near Eshowe. During this period (1820-1851), the consolidation of the Zulu Kingdom involved centralised political authority and maintained military regiments, while the economy relied on very small-scale farming, livestock herding, hunting, and the spoils of warfare. During Shaka's reign, the British trade posts were established in Durban and elsewhere in the Zululand, and Shaka himself created a royal kraal near Stanger, close to one such trade post. Shaka's rule ended through a conspiracy by his half-brother Dingane, who moved the royal kraal to uMgungundhlovu. During Dingane's reign, increased numbers of European missionaries and traders settled in the region. Subsequent conflicts with the Voortrekkers culminated in the assassination of Dingane and the



succession of Mpande, under whose rule the Norwegian Missionary Society founded a mission station in 1851 near the eMpangeni River.

Subsequently, during the early 19<sup>th</sup> century, colonial interest intensified in the area, particularly after the influence of the Zulu Kingdom under King Shaka kaSanzangakhona. This period brought about the social and political consolidation among the Nguni-speaking communities, as well as early contact with the European traders. Although direct contact with the European trader was limited at this stage, the British and other colonial authorities were greatly drawn to the regions' coastal access and natural harbour potential. Furthermore, by the late 19<sup>th</sup> Century, colonial regime in the region worsened, particularly after the Anglo-Zulu war in 1879. In addition, throughout the 20<sup>th</sup> century, especially under the apartheid, the region of uMhlathuze was greatly transformed. During the 1960s, the government made a decision to develop Richards Bay (a town under uMhlathuze) into a deep-water harbour, this marked the beginning of rapid industrialization in the region. The construction of the harbour began in the early 1970s and it officially opened in 1976, establishing what became one of South Africa's largest export hubs. However, this development came at the cost of local communities, as the apartheid spatial policies enforced racial segregation, whereby white suburbs were developed near the coast, while Black, Indian, and Coloured communities were relocated to peripheral townships. Overall, the colonial and apartheid eras in the region collectively reshaped the landscape of uMhlathuze by displacing indigenous communities, altering natural ecosystems and replacing traditional land use methods with industrial and urban infrastructure. (South African Cities Network-Umhlathuze).

## 7. Degree of Significance

This category requires a broad, but detailed knowledge of the various disciplines that might be involved. It must be borne in mind that the significance of a site from an archaeological perspective does not necessarily depend on the size of the site but more on the uniqueness of the site within a region. The following table is used to grade heritage resources.



**Table 1:** Grading systems for identified heritage resources in terms of 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

These categories relate 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, and will thus be considered to be of high regional significance, however; should there be heavy erosion of the greater part of the site, its significance rating would be medium to low. The following are guidelines for the nature of the mitigation that must take place as Phase 2 of the project.

### High

This is a 'do not touch' situation, 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 guarantee 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 made 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 rating system on the receiving environment.

**Table 2:** Rating and evaluating criteria of impact assessment.

| THE STATUS OF THE IMPACT                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The impacts are assessed as either having a:<br>negative effect (i.e., at a 'cost' to the environment),<br>positive effect (i.e., a 'benefit' to the environment),<br>or Neutral effect on the environment.                                                                              |
| <b>Extent of the Impact</b><br>(1) Site (site only),<br>(2) Local (site boundary and immediate surrounds),<br>(3) Regional (within the three local municipalities),<br>(4) National, or<br>(5) International.                                                                            |
| <b>Duration of the Impact</b><br>The length that the impact will last for is described as either:<br>(1) Immediate (<1 year)<br>(2) Short term (1-5 years),<br>(3) Medium term (5-15 years),<br>(4) Long term (ceases after the operational life span of the project),<br>(5) Permanent. |
| <b>Magnitude of the Impact</b><br>The intensity or severity of the impacts is indicated as either:<br>(0) None,<br>(2) Minor,<br>(4) Low,                                                                                                                                                |



- (6) Moderate (environmental functions altered but continue),
- (8) High (environmental functions temporarily cease), or
- (10) Very high / Unsure (environmental functions permanently cease).

## Probability of Occurrence

The likelihood of the impact actually occurring is indicated as either:

- (0) None (the impact will not occur),
- (1) Improbable (probability very low due to design or experience)
- (2) Low probability (unlikely to occur),
- (3) Medium probability (distinct probability that the impact will occur),
- (4) High probability (most likely to occur), or
- (5) Definite.

## Reversibility

The degree to which an impact is reversible:

- (1) Completely reversible
- (2) Partly reversible
- (3) Barely reversible
- (4) Irreversible

## Significance of the Impact

This rating is formulated by adding the sum of the numbers assigned to extent (E), duration.

(D) and magnitude (M) and multiplying this sum by the probability (P) of the impact.  $S=(E+D+M)$  The

significance ratings are given below.

**Table 3:** Legend for Impact Significance

|         | Significance | Description of Significance                                                                                                                                                   |
|---------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (<30)   | Low          | The activity will have a low impact in the environment. This impact would not have a direct influence on the decision to develop in the area.                                 |
| (30-60) | Medium       | Medium Impact – the activity will have a medium impact on the environment. The impact could influence the decision to develop in the area unless it is effectively mitigated. |
| (>60)   | High         | The activity will have a high impact on the environment. The impact must have an influence on the decision process to develop in the area.                                    |



## **8. Findings and Discussions**

The primary objective of the survey was to identify and evaluate potential archaeological and cultural heritage resources within the boundaries of the proposed development areas, and to determine whether any constraints exist that could preclude or significantly influence the proposed development. This included the identification of heritage resources such as archaeological sites, burial grounds, cultural landscapes, and features of historical significance. The Phase I Archaeological and Cultural Heritage Impact Assessment undertaken for the proposed construction of the Impala–Zircon temporary bypass 132 kV powerline, including associated infrastructure and the maintenance of the existing Impala–Zircon 132 kV main line, did not identify any heritage resources within the surveyed development footprint. The study area is therefore considered to be of low archaeological and cultural heritage sensitivity based on current surface observations. However, it is important to note that the absence of identified heritage resources during the survey does not necessarily imply their absence within the subsurface. There remains a possibility that buried archaeological materials, graves, or fossil remains may be present but were not detectable during the surface survey.

### **8.1 Impact Assessment**

This section outlines the assessment of potential impacts associated with the proposed development, with specific reference to archaeological and cultural heritage resources that may occur within the study area. These may include materials and features associated with the Stone Age, Iron Age, and Historical periods. The impact assessment has been conducted in accordance with established heritage assessment criteria (refer to Table 2). The study area is situated within a predominantly rural landscape characterised by gently undulating plains. Vegetation cover consists mainly of grassland, interspersed with scattered trees and modified areas associated with agricultural and forestry activities. The generally transformed nature of the landscape reduces the likelihood of intact surface heritage resources; however, subsurface deposits may still occur.

#### **8.1.1 Construction Phase**

The construction phase of the proposed development will involve activities such as vegetation clearing, stripping of topsoil, excavation for pole foundations, and the installation of associated infrastructure for the transmission line. These activities are inherently intrusive and have the potential to disturb or destroy previously unidentified subsurface heritage resources. Although no heritage resources were identified during the field survey, there remains a risk that buried archaeological materials, graves, or fossil remains could be encountered during ground-disturbing



activities. Such impacts would be considered of moderate significance if sensitive resources are present, particularly in areas that have not been extensively disturbed. To mitigate these potential impacts, it is essential that a Chance Find Procedure be implemented during construction, ensuring that any heritage resources encountered are appropriately managed in accordance with relevant legislation.

### **8.1.2 Operation Phase**

No direct impacts on archaeological or cultural heritage resources are anticipated during the operational phase of the proposed development. This phase will not involve significant ground disturbance, and the infrastructure will remain largely static within the established servitude. Indirect impacts, such as visual intrusion or restricted access to certain areas, are expected to be minimal given the existing presence of similar infrastructure within the landscape.

### **8.1.3 Decommissioning Phase**

No significant impacts on heritage resources are anticipated during the decommissioning phase, particularly as the temporary bypass infrastructure will be removed following completion of maintenance activities. However, should decommissioning involve ground disturbance, there remains a potential, albeit low, for impacting subsurface heritage resources. In such cases, the same precautionary measures applicable during the construction phase should be implemented, including adherence to a Chance Find Procedure and consultation with relevant heritage authorities where necessary.



**Table 4:** Anticipating impact rating on cultural sites.

| Issue              | Corrective Measures                                                                                                                                                                                                                                                                                                                                                                                                                                     | Impact Rating Criteria |        |          |           |             | Significance |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------|----------|-----------|-------------|--------------|
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Nature                 | Extent | Duration | Magnitude | Probability |              |
| Archaeology        | No                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Negative               | 1      | 2        | 4         | 2           | Low          |
|                    | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Negative               | 1      | 2        | 4         | 2           | Low          |
| Corrective Actions | <ul style="list-style-type: none"> <li>Should any archaeological material be discovered accidentally during the construction phase, Amafa should be alerted immediately, and construction activities be stopped within a radius of at least 10m of such indicator; and</li> <li>Prior to construction, contractors should be given training on how to identify and protect archaeological remains that may be discovered during construction</li> </ul> |                        |        |          |           |             |              |



## 9. Recommendations

Despite that no archaeological objects were observed during the survey, and that the area is disturbed, the client is reminded that unavailability of archaeological material does not mean absentee, archaeological material might be hidden underground. It is thus the responsibility of the developer to notify contractors and workers about archaeological material (e.g., pottery, stone tools, remnants of stonewalling, graves, etc) and fossils that may be located underground. Furthermore, the client is reminded to take precautions during construction.

### **Pre-construction education and awareness training**

Prior to construction, contractors should be given training on how to identify and protect archaeological remains that may be discovered during the project. The pre-construction training should include some limited site recognition training for the types of archaeological sites that may occur in the construction areas. Below are some of the indicators of archaeological site that may be found during construction:

- + Flaked stone tools, bone tools and loose pieces of flaked stone;
- + Ash and charcoal;
- + Bones and shell fragments;
- + Artefacts (e.g., beads or hearths);
- + Packed stones which might be uncultured underground, and might indicate a grave or collapse stone walling.

In the event that any of the above are unearthed, all construction within a radius of at least 10m of such indicator should cease and the area be demarcated by a danger tape. Accordingly, a professional archaeologist or Amafa officer should be contacted immediately. In the meantime, it is the responsibility of the contractor to protect the site from publicity (i.e., media) until a mutual agreement is reached. Noteworthy that any measures to cover up the suspected archaeological material or to collect any resources is illegal and punishable by law. In the same manner, no person may exhume or collect such remains, whether of recent origin or not, without the endorsement by Amafa.

## 10. Conclusions

A thorough background study and survey of the proposed construction of the Impala–Zircon temporary by-pass 132 kV powerline with associated infrastructure, and the maintenance of the existing Impala–Zircon 132 kV main line project was conducted in line with SAHRA guidelines. As



per the recommendations above, there are no major heritage reasons why the proposed development could not be allowed to proceed. Thus, it is recommended that the proposed development proceed on condition that the above recommendations are adhered to. The following conditions of authorisation as highlighted in this report must be strictly adhered to:

- ✚ Implementation of a Chance Find Procedure during construction.



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## Data bases

Chief Surveyor General

Environmental Potential Atlas, Department of Environmental Affairs and Tourism. Heritage Atlas Database, Pretoria.

National Archives of South Africa



## 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 Selahle and the 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 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 minimise 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 Provincial Heritage Resources Authority Gauteng.
- The project archaeologist will conduct the inspection and assess the significance of the chance finds under SAHRA guidelines, give recommendation and mitigation measures.

