Integrated Specialist Services (Pty) Ltd

PHASE 1 ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT FOR PROPOSED 132 KV TAYLORS HALT POWERLINE AND SUBSTATION IN MSUNDUZI LOCAL MUNICIPALITY, UMGUNGUNDLOVU DISTRICT KWAZULU NATAL PROVINCE.

Trust Mlilo

DOCUMENT SYNOPSIS (EXECUTIVE SUMMARY)

Item	Description
Proposed development and location	Proposed Taylors Halt Powerline and Substation in, Msunduzi Local Municipality in the KwaZulu Natal Province
Purpose of the study	The Phase 1 Archaeological Impact Assessment is for the Proposed Taylors Halt powerline and Substation in the KwaZulu Natal Province
1:50 000 Topographic Map	2828BC
Municipalities	Msunduzi Local Municipality
Predominant land use of surrounding area	Rural residential and Blue Gum Plantation
Applicant	Eskom Holdings SOC Ltd
EAP	Setala Environmental (Pvt) Ltd PO Box 36593, Menlo Park Pretoria, 0102 fax 086 675 4026; mobile 082 568 6344 ria@setalaenvironmental.co.za
Heritage Practitioner	Integrated Specialist Services (Pty) Ltd Cell: 071 685 9247 Email: trust@issolutions.co.za
Authors	Trust Mlilo
Date of Report	10 December 2022

This report serves to inform and guide the applicant and contractors about the possible impacts that the proposed substation and powerline development may have on heritage resources (if any) located in the study area. In the same light, the document must also inform Amafa aKwaZulu Natal and Research Institute about the presence, absence and significance of heritage resources located along the proposed powerline route and substation site. This report is submitted in terms of Section 41 (2) of the Amafa aKwaZulu Natal and Research Institute of 2018 read together with Section 38 (8) of the National Heritage Resources Act 25 of 1999 as part of the Environmental authorisation for Eskom Holdings SOC Ltd powerline project in the KwaZulu Natal Province. The purpose of this study is to identify, record and if necessary, salvage the irreplaceable heritage resources that may be impacted upon by the proposed powerline and substation project. In compliance with these laws, Setala Environmental (Pvt) Ltd tasked Integrated Specialist Services (Pty) Ltd on behalf of Eskom Holdings to conduct a Phase 1 Archaeological and Heritage Impact Assessment (AIA/HIA) for proposed powerline and substation project. Desktop studies, drive-throughs and fieldwalking were conducted in order to identity heritage landmarks along the proposed powerline route and substation site. The study site is not on pristine ground, having seen significant transformations owing to previous and current agricultural activities (see Plate 1 to 10). The general project area is known for occurrence of archaeological and historical sites. In terms of the built environment the structures along the proposed powerline were confirmed to be younger than 60 years old. The study identified one burial site located approximately120m from the centre of the proposed powerline route. Although the burial site falls within the 500m wide study area, it can safely be avoided without realigning the powerline route. It should be noted that archaeological material and unmarked graves may still exist and when encountered during construction, work must be stopped forth-with, and the finds must be reported to the South African Heritage Resource Agency (SAHRA) or the heritage practitioner. This report must be submitted to Amafa akwaZulu Natal and Research Institute for review in terms of Section 38 (4) of the NHRA.

The report makes the following observations:

- The findings of this report have been informed by desktop data review, field survey and impact assessment reporting which include recommendations to guide heritage authorities in making decisions with regards to the proposed powerline and substation project.
- Most sections of the proposed powerline route are accessible.
- The immediate project area is predominantly communal agriculture fields and rural residential
- Some sections on the proposed site are severely degraded from previous and current agriculture activities.

- The study did not record any archaeological site within the proposed powerline route and substation site.

The report sets out the potential impacts of the proposed powerline development on heritage matters and recommends appropriate safeguard and mitigation measures that are designed to reduce the impacts where appropriate. The Report makes the following recommendations:

1. It is recommended that SAHRA endorse the report as having satisfied the requirements of Section 41 (2) of the Amafa aKwaZulu Natal and Research Institute of 2018 read together with Section 38 (8) of the National Heritage Resources Act 25 of 1999.
2. It is recommended that SAHRA decide in terms of Section 38 (4) of the NHRA to approve the proposed substation and powerline route on condition that the planners for the project provide a 30m buffer zone from the recorded burial site.
3. From a heritage perspective supported by the findings of this study, the project is supported. However, construction activities should be approved under observation that the dimensions do not extend beyond the area considered in this report.
4. Should chance archaeological materials or human remains be exposed during activities on any section of the electricity supply project site, work should cease on the affected area and the discovery must be reported to the heritage authorities immediately so that an investigation and evaluation of the finds can be made. The overriding objective, where remedial action is warranted, is to minimize disruption of the project scheduling while recovering archaeological and any affected cultural heritage data as stipulated by the NHRA regulations.
5. Subject to the recommendations herein made and the implementation of the mitigation measures and adoption of this heritage report, there are no significant cultural heritage resources barriers to the proposed electricity supply project. SAHRA may approve the project as planned with special commendations to implement the recommendations here in made.

This report concludes that the impacts of the proposed electricity supply project on the cultural environmental values are not likely to be significant on the entire site if the EMP includes recommended safeguard and mitigation measures identified in this report.

NATIONAL LEGISLATION AND REGULATIONS GOVERNING THIS REPORT

This is a specialist report' and is compiled in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2014.

DECLARATION OF INDEPENDENCE

In terms of Chapter 5 of the National Environmental Management Act of 1998 specialists involved in Impact Assessment processes must declare their independence.

I, **Trust Mlilo**, do hereby declare that I am financially and otherwise independent of the client and their consultants, and that all opinions expressed in this document are substantially my own, notwithstanding the fact that I have received fair remuneration from the client for preparation of this report.

Expertise:

Trust Mlilo, PhD *cand* (Wits), MA. (Archaeology), BA Hons, PDGE and BA & (Univ. of Pretoria) ASAPA (Professional affiliation member) and more than 15 years of experience in archaeological and heritage impact assessment and management. Mlilo is an accredited member of the Association for Southern African Professional Archaeologists (ASAPA), Amafa akwaZulu Natali and Eastern Cape Heritage Resources Agency (ECPHRA). He has conducted more than hundred AIA/HIA Studies, heritage mitigation work and heritage development projects over the past 15 years of service. The completed projects vary from Phase 1 and Phase 2 as well as heritage management work for government, parastatals (Eskom) and several private companies such as BHP Billiton and Rhino Minerals.

Independence

The views expressed in this document are the objective, independent views of Mr Trust Mlilo and the survey was carried out under Integrated Specialist Services (Pty) Ltd. The company has no business, personal, financial or other interest in the proposed powerline development apart from fair remuneration for the work performed.

Conditions relating to this report

The content of this report is based on the author's best scientific and professional knowledge as well as available information. Integrated Specialist Services (Pty) Ltd reserves the right to modify the report in any way deemed fit should new, relevant or previously unavailable or undisclosed information become known to the author from on-going research or further work in this field or pertaining to this investigation.

This report must not be altered or added to without the prior written consent of the author and Integrated Specialist Services (Pty) Ltd. This also refers to electronic copies of the report which are supplied for the purposes of inclusion as part of other reports, including main reports. Similarly, any recommendations, statements or conclusions drawn from or based on this report must refer to this

report. If these form part of a main report relating to this investigation or report, this report must be included in its entirety as an appendix or separate section to the main report.

Authorship: This AIA/HIA Report has been prepared by Mr Trust Mlilo (Professional Archaeologist). The report is for the review of the Heritage Resources Agency (PHRA).

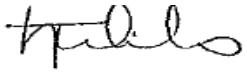
Geographic Co-ordinate Information**:** Geographic co-ordinates in this report were obtained using a hand-held Garmin Global Positioning System device. The manufacturer states that these devices are accurate to within +/- 5 m.

Maps**:** Maps included in this report use data extracted from the NTS Map and Google Earth Pro.

Disclaimer**:** The Authors are not responsible for omissions and inconsistencies that may result from information not available at the time this report was prepared.

The Archaeological and Heritage Impact Assessment Study was carried out within the context of tangible and intangible cultural heritage resources as defined by the SAHRA Regulations and Guidelines as to the approval of the proposed powerline development being proposed by Eskom.

Signed by



10/ 12/ 2022

ACKNOWLEDGEMENTS

The authors acknowledge Setala Environmental (Pvt) Ltd staff for their assistance with the site visit and responding to technical queries related to the project.

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ABBREVIATIONS

AIA Archaeological Impact Assessment

ASAPA Association of South African Professional Archaeologists

EIA Environmental Impact Assessment

EIA Early Iron Age *(EIA refers to both Environmental Impact Assessment and the Early Iron Age but in both cases the acronym is internationally accepted.*

EIAR Environmental Impact Assessment Report

ESA Early Stone Age

GPS Global Positioning System

HIA Heritage Impact Assessment

ICOMOS International Council of Monuments and Sites

LIA Late Iron Age

LFC Late Farming Community

LSA Late Stone Age

MIA Middle Iron Age

MSA Middle Stone Age

NEMA National Environmental Management Act 107 of 1998

NHRA National Heritage Resources Act 25 of 1999

PHRA Provincial Heritage Resource Agency of Free State

SAHRA South African Heritage Resources Agency

ToR Terms of Reference

KEY CONCEPTS AND TERMS

Periodization

Periodization Archaeologists divide the different cultural epochs according to the dominant material finds for the different time periods. This periodization is usually region-specific, such that the same label can have different dates for different areas. This makes it important to clarify and declare the periodization of the area one is studying. These periods are nothing a little more than convenient time brackets because their terminal and commencement are not absolute and there are several instances of overlap. In the present study, relevant archaeological periods are given below.

Early Stone Age (~ 2.6 million to 250 000 years ago)

Middle Stone Age (~ 250 000 to 40-25 000 years ago)

Later Stone Age (~ 40-25 000, to recently, 100 years ago)

Early Iron Age (~ AD 200 to 1000)

Late Iron Age (~ AD1100-1840)

Historic (~ AD 1840 to 1950, but a Historic building is classified as over 60 years old)

Definitions

Definitions Just like periodization, it is also critical to define key terms employed in this study. Most of these terms derive from South African heritage legislation and its ancillary laws, as well as international regulations and norms of best practice. The following aspects have a direct bearing on the investigation and the resulting report:

Cultural (heritage) resources are all non-physical and physical human-made occurrences, and natural features that are associated with human activity. These can be singular or in groups and include significant sites, structures, features, ecofacts and artefacts of importance associated with the history, architecture, or archaeology of human development.

Cultural significance is determined by means of aesthetic, historic, scientific, social, or spiritual values for past, present, or future generations.

Value is related to concepts such as worth, merit, attraction or appeal, concepts that are associated with the (current) usefulness and condition of a place or an object. Although significance and value are not mutually exclusive, in some cases the place may have a high level of significance but a lower level of value. Often, the evaluation of any feature is based on a combination or balance between the two.

Isolated finds are occurrences of artefacts or other remains that are not in-situ or are located apart from archaeological sites. Although these are noted and recorded, but do not usually constitute the core of an impact assessment, unless if they have intrinsic cultural significance and value.

In-situ refers to material culture and surrounding deposits in their original location and context, for example an archaeological site that has not been disturbed by farming.

Archaeological site/materials are remains or traces of human activity that are in a state of disuse and are in, or on, land and which are older than 100 years, including artefacts, human and hominid remains, and artificial features and structures. According to the National Heritage Resources Act (NHRA) (Act No. 25 of 1999), no archaeological artefact, assemblage or settlement (site) and no historical building or structure older than 60 years may be altered, moved or destroyed without the necessary authorisation from the South African Heritage Resources Agency (SAHRA) or a provincial heritage resources authority.

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

Chance finds means archaeological artefacts, features, structures or historical remains accidentally found during development.

A grave is a place of interment (variably referred to as burial) and includes the contents, headstone or other marker of such a place, and any other structure on or associated with such place. A grave may occur in isolation or in association with others where upon it is referred to as being situated in a cemetery (contemporary) or burial ground (historic).

A site is a distinct spatial cluster of artefacts, structures, organic and environmental remains, as residues of past human activity.

Heritage Impact Assessment (HIA) refers to the process of identifying, predicting and assessing the potential positive and negative cultural, social, economic and biophysical impacts of any proposed project which requires authorisation of permission by law, and which may significantly affect the cultural and natural heritage resources. Accordingly, an HIA must include recommendations for appropriate

mitigation measures for minimising or circumventing negative impacts, measures enhancing the positive aspects of the proposal and heritage management and monitoring measures.

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

Mitigation is the implementation of practical measures to reduce and circumvent adverse impacts or enhance beneficial impacts of an action.

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

Study area or '**project area'** refers to the area where the developer wants to focus its development activities (refer to plan).

Phase I studies refer to surveys using various sources of data and limited field walking in order to establish the presence of all possible types of heritage resources in any given area.

Assumptions and disclaimer

The investigation has been influenced by the unpredictability of buried archaeological remains (absence of evidence does not mean evidence of absence) and the difficulty in establishing intangible heritage values. It should be remembered that archaeological deposits (including graves and traces of mining heritage) usually occur below the ground level. Should artefacts or skeletal material be exposed along the proposed powerline route during construction activities, such activities should be halted immediately, and a competent heritage practitioner and SAHRA must be notified in order for an investigation and evaluation of the find(s) to take place (see NHRA (Act No. 25 of 1999), Section 36 (6). Recommendations contained in this document do not exempt the applicant from complying with any national, provincial, and municipal legislation or other regulatory requirements, including any protection or management or general provision in terms of the NHRA. Integrated Specialist Services (Pty) Ltd assumes no responsibility for compliance with conditions that may be required by SAHRA in terms of this report.

1 INTRODUCTION

Integrated Specialist Services (Pty) Ltd was requested by Setala Environmental (Pvt) Ltd on behalf of Eskom Holdings SOC Ltd to carry out a Phase 1 AIA/ HIA for the proposed 132KV Taylors Halt Powerline and Substation in the uMgungundlovu District, Municipality of KwaZulu Natal Province. Environmental Authorisation for the construction of 132kv. This study was conducted in terms Section 41 (2) of the Amafa aKwaZulu Natal and Research Institute of 2018 read together with Section 38 (8) of the National Heritage Resources Act 25 of 1999as part of environmental authorisation for the proposed powerline and substation. The purpose of this heritage study is to identify, assess any heritage resources that may be located along the proposed powerline route and substation site in order to make recommendations for their appropriate management. To achieve this, we conducted background research of published literature, maps, and databases (desktop studies) which was then followed by ground-truthing by means of drive-through surveys and field walking. Desktop studies revealed that the general project area is rich in Late Iron Age (LIA) and historical sites. It should be noted that while heritage resources may have been located in the entire study area, previous and current agriculture activities have either obliterated these materials or reduced them to isolated finds that can only be identifiable as chance finds during construction. The proposed powerline and substation development may be approved subject to adopting recommendations and mitigation measures proposed in this report. Based on the findings there is no archaeological and heritage reasons why the proposed substation and powerline cannot be approved, taking full cognizance of clear procedures to follow in the event of chance findings.

1.1 Terms of Reference (ToR)

The Integrated Specialist Services (Pty) Ltd was requested by Setala Environmental (Pvt) Ltd to conduct an AIA/HIA study addressing the following issues:

- Archaeological and heritage potential of the proposed powerline route and substation site including any known data on affected areas.
- Provide details on methods of study; potential and recommendations to guide the SAHRA to make an informed decision in respect of authorisation of the proposed powerline and substation development.
- Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located along the proposed powerline route and substation site.

- Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value;
- Describe the possible impact of the electricity supply project site on these cultural remains, according to a standard set of conventions;
- Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources; and
- Review applicable legislative requirements.

1.2 Project Location

The proposed powerline development is located on Zwaart Kop 4669 FT Portion 0, in the Msunduzi Local Municipality, uMgungundlovu District, near Pietermaritzburg in KwaZulu Natal Province. LPI Code N0FT00000000466900000. (The final power line route alignment is to be confirmed).

Figure 1: Locality map of the proposed powerline and substation

Figure 2: Location of Taylors Halt Substation site (in red block)

Figure 3: Location of the proposed powerline

Figure 4: Location of the proposed powerline route and tracklogs (Mlilo 2022)

1.3 Project description

Eskom Holdings SOC Ltd is mandated by the South African Government to ensure the provision of reliable and affordable power to South Africa. Eskom's core business is in the generation, transmission (transport), trading and retail of electricity. The reliable provision of electricity by Eskom is critical for development and related employment in South Africa.

The proposed construction of a ± 2,5km 132kV powerline is initiated by Eskom to ensure the reliability and quality of supply of the network. Edendale 132/22kV, Elandskop 88/11kV and Mpophomeni 88/11kV transformers are currently loaded above 95% of their nameplate ratings. With the expected load growth, these transformers will exceed their nameplate rating. Also, Edendale NBEM, Edendale NBEC, Vulindlela NB57 and Mpophomeni NB54 are overloaded.

Taylors Halt 132/22kV substation will de-load the two transformers at Edendale and Mpophomeni as it will split the four networks (Edendale NBEM, Edendale NBEC, Vulindlela NB57 and Mpophomeni NB54).

Scope of Work Description

1) Taylors Halt 132/22kV Substation

A 132/22kV substation called Taylors Halt SS will be established complete with earthworks, drainage, access road, fencing & gates, earthmat & foundations. In addition, 132/22kv transformers and 2 x 132kv line bays to loop in and out of Ariadne/Elandskop 132kv line will be installed.

2) Ariadne/Elandskop Taylors Halt 132kv line (loop in & out)

A 2,5km 132kv power line will T-off from Ariadne/Elandskop 132kv line and Loop in Loop Out to Taylors Halt 132kv/22kv Substation on double circuit structures.

The current Application for Authorisation is for the construction of the following:

- Construct a ± 2,5km overhead 132kv line outside an urban area from the T-off with the 132kV Ariadne/Elandskop line to the proposed Taylor Halt substation.
- Construct 132/22kV Taylors Halt Substation.
- Clearance of an area of ± 3,5 hectares (175m X 200m = 35 000m^2) for Taylors Halt substation and a temporary laydown area on ± 50 x 50 metres inside the substation site. An additional laydown area of 60m by 60m might be required for the powerline construction.
- Construct power line structures within 32 meters of a waterbody along the 132kV feeder line and excavate more than 10 cubic metres of soil and rock from a watercourse.
- Develop access roads of wider than 4 metres to construct the power line in (viii) Critical biodiversity areas.
- Clear more than 300 square metres of indigenous vegetation to construct the substation and the temporary laydown area on an area of 3,5ha (v) in a Critical Biodiversity Area.

2 LEGISLATIVE CONTEXT

Three main pieces of legislations are relevant to the present study and there are presented here. Under KwaZulu Natal Amafa and Research Institute Act No. 05 of 2018), the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA) and the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended (NEMA), an AIA or HIA is required as a specialist sub-section of the Basic Assessment (BA) process.

General protection for Structures,

37.(1)(a) No structure which is, or which may reasonably be expected to be, older than 60 years, may be demolished, altered or added to without the prior written approval of the Institute having been obtained on written application to the Institute.

(b) Where the Institute does not grant approval, the Institute must consider special protection in terms of sections 44, 45, 46, 47 and 49 of Chapter 9.

(2) The Institute may, by notice in the Gazette, exempt –

(a) a defined geographical area; or

(b) defined categories of sites within a defined geographical area,

from the provisions of subsection (1) where the Institute is satisfied that heritage resources falling in the defined geographical area or category have been identified and are adequately protected in terms of sections 44, 45, 46, 47 and 49 of Chapter 9.

(3) A notice referred to in subsection (2) may, by notice in the Gazette, be amended or withdrawn by the Institute.

General protection: Graves of victims of conflict

38. No person may damage, alter, exhume, or remove from its original position –

(a) the grave of a victim of conflict.

(b) a cemetery made up of such graves; or

(c) any part of a cemetery containing such graves, without the prior written approval of the Institute having been obtained on written application to the Institute and in terms of the Regulations to this Act

General protection: Graves of victims of conflict

39. (1) No grave or burial ground older than 60 years, or deemed to be of heritage significance by a heritage authority –

(a) not otherwise protected by this Act; and

(b) not located in a formal cemetery managed or administered by a local authority,

may be damaged, altered, exhumed, inundated, removed from its original position, or otherwise disturbed without the prior written approval of the Institute having been obtained on written application to the Institute.

(2) The Institute may only issue written approval once it is satisfied that –

(a) the applicant has provided evidence of efforts to consult with communities or descendants who may have an interest in the grave, using the guidelines and criteria for consultation set out in regulations; and

(b) the applicant and the relevant communities or descendants have reached agreement regarding the grave

General protection: Battlefield sites, archaeological sites, rock art sites, palaeontological sites, historic fortifications, meteorite or meteorite impact sites

40.(1) No person may destroy, damage, excavate, alter, write or draw upon, or otherwise disturb any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, meteorite or meteorite impact site without the prior written approval of the Institute having been obtained on written application to the Institute.

(2) Upon discovery of archaeological or palaeontological material or a meteorite by any person, all activity or operations in the general vicinity of such material or meteorite must cease forthwith and a person who made the discovery must submit a written report to the Institute without delay.

(3) The Institute may, after consultation with an owner or controlling authority, by way of written notice served on the owner or controlling authority, prohibit any activity considered by the Institute to be inappropriate within 50 metres of a rock art site.

(4) No person may exhume, remove from its original position or otherwise disturb, damage, destroy, own or collect any object or material associated with any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, meteorite or meteorite impact site without the prior written approval of the Institute having been obtained on written application to the Institute

(5) No person may bring any equipment which assists in the detection of metals and archaeological and palaeontological objects and material, or excavation equipment onto any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, or meteorite impact site, or use similar detection or excavation equipment for the recovery of meteorites, without the prior written approval of the Institute having been obtained on written application to the Institute.

(6)(a) The ownership of any object or material associated with any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, meteorite or meteorite impact site, on discovery, vests in the Provincial Government and the Institute is regarded as the custodian on behalf of the Provincial Government.

(b) The Institute may establish and maintain a provincial repository or repositories for the safekeeping or display of –

(i) archaeological objects;

(ii) palaeontological material;

(iii) ecofacts;

(iv) objects related to battlefield sites;

(v) material cultural artefacts; or

(vi) meteorites.

(7) The Institute may, subject to such conditions as the Institute may determine, loan any object or material referred to in subsection (6) to a national or provincial museum or institution.

(8) No person may, without the prior written approval of the Institute having been obtained on written application to the Institute, trade in, export or attempt to export from the province –

(a) any category of archaeological object;

(b) any palaeontological material;

(c) any ecofact;

(d) any object which may reasonably be regarded as having been recovered from a battlefield site;

(e) any material cultural artefact; or

(f) any meteorite.

(9)(a) A person or institution in possession of an object or material, referred to in paragraphs (a) - (f) of subsection (8), must submit full particulars of such object or material, including such information as may be prescribed, to the Institute.

(b) An object or material referred to in paragraph (a) must, subject to paragraph (c) and the directives of the Institute, remain under the control of the person or institution submitting the particulars thereof.

(c) The ownership of any object or material referred to in paragraph (a) vests in the Provincial Government and the Institute is regarded as the custodian on behalf of the Provincial Government.

Heritage resources management

41.(1) Any person who intends to undertake a development categorised as –

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

(b) the construction of a bridge or similar structure exceeding 50 m in length;

(c) any development or other activity which will change the character of a site –

(i) exceeding 5 000 m2 in extent;

(ii) involving three or more existing erven or subdivisions thereof;

(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;

(d) the rezoning of a site exceeding 10 000 m2 in extent; or

(e) any other category of development provided for in regulations,

must, at the very earliest stages of initiating such a development, notify the Institute and furnish it with details regarding the location, nature and extent of the proposed development.

(2) The Institute must, within 14 days of receipt of a notification in terms of subsection (1) –

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

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

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

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

(b) an assessment of the significance of such resources in terms of the heritage assessment criteria set out in regulations;

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

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

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

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

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

(4) The report must be considered timeously by the Institute which must, after consultation with the person proposing the development, decide –

(a) whether or not the development may proceed;

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

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

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

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

(5) The Institute must not make any decision under subsection (4), with respect to any development which impacts on a heritage resource protected at national level, unless it has consulted the heritage resources authority.

(6) The applicant may appeal against the decision of the Institute to the responsible Member of the Executive Council, who –

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

(b) may, at his or her discretion –

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

(ii) consult the National Heritage Resources Agency; and

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

(7) The provisions of this section do not apply to a development described in subsection (1) affecting any heritage resource formally protected by the National Heritage Resources Agency unless the Institute decides otherwise.

(8) The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the Environment Conservation Act, 1989 (Act No. 73 of 1989), or the integrated environmental management guidelines issued by the Department of Environment Affairs and Tourism, or the Minerals Act, 1991 (Act No. 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that –

(a) the evaluation fulfils the requirements of the Institute in terms of subsection (3); and

(b) any comments and recommendations of the Institute with regard to such development have been taken into account prior to the granting of the consent.

(9) The Institute, with the approval of the responsible Member of the Executive Council, may, by notice in the Provincial Gazette, exempt from the requirements of this section any place specified in the notice.

(10) Any person who has complied with the decision of the Institute in subsection (4) or of the responsible Member of the Executive Council in terms of subsection (6) or other requirements referred to in subsection (8), is exempted from compliance with all other protections in terms of this Part, but any existing heritage agreements made in terms of section 42 continue to apply

Table 1: Evaluation of the proposed development as guided by the criteria in NHRA and NEMA

ACT	Stipulation for developments	Requirement details
NHRA Section 38(8)	The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the Environment Conservation Act, 1989 (Act No. 73 of 1989), or the integrated environmental management guidelines issued by the Department of Environment Affairs and Tourism, or the Minerals Act, 1991 (Act No. 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority regarding such developments have been taken into account prior to the granting of the consent	yes
NHRA Section 34	Impacts on buildings and structures older than 60 years	Non recorded
NHRA Section 35	Impacts on archaeological and palaeontological heritage resources	Subject to identification during Phase 1
NHRA Section 36	Impacts on graves	Subject to identification during Phase 1
NHRA Section 37	Impacts on public monuments	Subject to identification during Phase 1
Chapter 5 (21/04/2006) NEMA	HIA is required as part of an EIA	Yes
Section 39(3)(b) (iii) of the MPRDA	AIA/HIA is required as part of an EIA	No, it is not a mining project

3 METHODOLOGY

This document aims at providing an informed heritage-related opinion about the proposed powerline development in the UMgungundlovu District, KwaZulu Natal Province. This is usually achieved through a combination of a review of any existing literature and a site inspection. As part of the desktop study, published literature and cartographic data, as well as archival data on heritage legislation, the history and archaeology of the area were studied. The desktop study was followed by field surveys. The field assessment was conducted according to generally accepted AIA/HIA practices and aimed at locating all possible objects, sites, and features of cultural significance on the development footprint. Initially a drive-through was undertaken around the project area as a way of acquiring the archaeological impression of the general area. This was then followed by a walk down survey along the proposed powerline route, with a handheld Global Positioning System (GPS) for recording the location/position of each possible site. Detailed photographic recording was also undertaken where relevant. The findings were then analysed in view of the proposed electricity supply project in order to make recommendations to the competent authority. The result of this investigation is a report indicating the presence/absence of heritage resources and how to manage them in the context of the proposed powerline development.

3.1 The Fieldwork survey

The fieldwork survey was undertaken on the 10th of November 2022. The focus of the survey involved a pedestrian survey which was conducted within the electricity supply site. The pedestrian survey focused on parts of the project area where it seemed as if disturbances may have occurred in the past, for example bald spots in the grass veld; stands of grass which are taller that the surrounding grass veld; the presence of exotic trees; evidence for building rubble, existing buildings and ecological indicators such as invader weeds.

The literature survey suggests that prior to the 20th century modern residential developments; the general area would have been a rewarding region to locate heritage resources related to Iron Age and historical sites (Bergh 1999: 4). However, the situation today is completely different. The study area now lies on a clearly modified landscape that is dominated by residential developments, agriculture and associated infrastructure developments (see Figures 2 and 3).

3.2 Visibility and Constraints

Most sections of the proposed powerline route are accessible although visibility was partially impeded by vegetation cover. It is conceded that due to the subterranean nature of cultural remains this report should not be construed as a record of all archaeological and historic sites in the area.

3.3 Consultations

The Basic Assessment (BA) Public Participation process is conducted by the EAP. The study team consulted residents about the heritage character of the study area. The BA Public Participation Process will also invite and address comments from affected communities and any registered heritage bodies on any matter related to the proposed project including heritage concerns that may arise relating to construction activities. The heritage issues and concerns raised by the public will also be included in the Final Basic Assessment Report.

The following photographs illuminate the nature and character of the Project Area.

Plate 1: showing proposed powerline route cutting through agriculture fields

Plate 2: showing proposed substation site within blue gum plantation

Plate 3: showing proposed substation site and powerline route.

Plate 4: showing proposed substation site.

Plate 5: showing proposed powerline route.

Plate 6: showing proposed powerline route cutting across railwayline

Plate 7: showing proposed powerline route.

Plate 8: showing proposed powerline route

Plate 9: showing proposed powerline route

Plate 10: showing proposed powerline route.

Plate 11: showing proposed powerline route.

Plate 12: showing proposed powerline route.

Plate 13: showing proposed powerline route

Plate 14: showing proposed powerline route

Plate 15: showing terminal position of the proposed powerline route

Plate 16: showing transformer near proposed pole number 83

Plate 17: showing proposed powerline route.

Plate 18: showing proposed powerline route.

Plate 19: showing proposed powerline route.

Plate 20: showing proposed powerline route.

Plate 21: showing proposed powerline route.

Plate 22: showing proposed powerline route.

4 ARCHAEOLOGICAL CONTEXT

4.1 Archaeology

The archaeological and history of KwaZulu-Natal and the Msunduzi area (Pietermaritzburg) in particular dates to over 2 million years, which marks the beginning of the Stone Age (Maggs 1988). The Stone Age in KwaZulu- Natal was extensively researched by Oliver Davies formerly of the Natal Museum (see for example Davies, 1976, 1952). Abundant evidence of Stone Age archaeology of the KZN region are recorded amongst others at Sibudu Cave on the coast of KwaZulu-Natal and Drakensberg Mountains. Archaeological evidence at Sibudu Cave shows early forms of cognitive human behavioural patterns in the MSA of South Africa some 40 000 years BP (e.g., Wadley, 2005; Wadley et al, 2004; Wadley, 2001). Border Cave also has abundant evidence of the Stone Age material culture (Fourie, 2003).

KwaZulu Natal is also known to have been occupied by the San people who mainly resided in caves, plains, valleys and foothills. Evidence for San occupation includes numerous of rock art sites, predominantly in the form of rock paintings and material culture recorded in areas such as the Giants Castle and Kamberg in the Drakensburg Mountains located south and east of the province of KwaZulu-Natal (Vinnicombe 1976).

The greater Pietermaritzburg area was extensively researched by KwaZulu-Natal Museum archaeologists. The KwaZulu-Natal Museum heritage site inventories, indicates that the greater Pietermaritzburg area has abundant evidence of the ESA, MSA and LSA material. Most of these sites are situated close to water, such as the Msunduzi River, Slangspruit, Foxhilll Spruit, and Mkhondeni, as well as in open air context or adjacent to exposed dongas or road cuttings. The archaeological remains probably date between 300 000 and 1.7 million years ago. The MSA blades and flakes recorded in the project area are associated with the first anatomically modern people i.e. Homo Sapiens Sapiens.

The LSA flakes identified in the Msunduzi area are associated with the San (Bushmen) and their direct ancestors. These LSA tools most probably dates back to between 200 and 20 000 years ago. Most of the ESA and MSA sites were also recorded by the Olivier Davies in the 1950's and 1960's, Farden in the 1960s and 1970's and Aron Mazel in the 1980's.

The Iron Age of the KwaZulu Natal region dates back to the 5th Century AD when the Early Iron Age (EIA) proto-Bantu-speaking farming communities began arriving in this region, which was then occupied by hunter-gatherers. These EIA communities are archaeologically referred to as the Kwale branch of the Urewe EIA Tradition (Huffman, 2007: 127-9). The Iron Age communities occupied the foot-hills and valley lands introducing settled life, domesticated livestock, crop production and the use of iron (also see Maggs 1984a; 1984b; Huffman 2007). Alongside the Urewe Tradition was the Kalundu Tradition whose EIA archaeological sites have been recorded along the KwaZulu Natal region.

The second period of occupation in KwaZulu-Natal was during the Early and Middle Iron Age; an occupation of the KwaZulu-Natal region by the Bantu speakers who migrated from as far as the Great Lakes regions of Congo and Cameroon. The site of Mzonjani, near Durban is the oldest known Iron Age site in KwaZulu-Natal, dating to the 3rd Millennium AD (Huffman, 2010). The Mzonjani Facies is the type of pottery most likely to be found within the study area. This pottery is characterized by punctures on the rim and spaced motifs on the shoulder (see Huffman 2007). The Early Iron Age sites typically occur on the alluvial and colluvial soils in the large river valleys below 700m above sea level. Some have been located along the Msunduzi River as well as in the Ashburton area. Later Iron Age sites occur in similar contexts as well as on ridges or plato's in the existing grassland. Some impressive Later Iron Age sites occur in the Umngeni River Valley close to Howick as well as in the Ottos Bluff area near Albert Falls Dam.

From about 15 00 AD the region was occupied by new coming groups of Late Iron Age farmers of the Kalundu Tradition (ibid). The region was the centre of immigration and migration of different African groups some of which are ancestors of the contemporary Zulu predominant in the region. The

archaeological evidence of the Iron Age people in the region is represented through distinct ceramic traditions, stone walls and other structural features such as grain bins and hut floor remains, kraal remains, vitrified cattle dung slugs, iron implements, bellows and furnaces. The earliest known type of stonewalling that characterises the Central Cattle Pattern in KwaZulu Natal region (KZN) is known as Moor Park, which dates from 14th to 16th Centuries AD (Huffman, Whitelaw, Davis 1974). This type of stonewalling can be found in defensive position on hilltops in the Midlands of KZN (Huffman, 2010 & 2007). Archaeologists have concluded that the function of these structures was to serve mainly defensive purposes - the site of Moor Park is "located on the spurs and ends of hills, stone walls cut the settlement off from remaining terrain perimeter walls enclose about two thirds of the settlement, leaving the back free" (Huffman, 2007). However, it has to be noted that the Central Cattle Pattern and other forms of Iron Age stonewalling features are not unique to the eastern Bantu Speaking language groups (Nguni) (Huffman's 2007).

Other than stone walled structures, the other form of Iron Age structures are the 'beehive huts'- documented in many of historical records dating as far back as the colonial times. Beehive structures presents a challenge to the archaeological study of Iron Age in the province because they are often not adequately preserved in the archaeological record. Huffman (2007) argues that the archaeology of the KwaZulu-Natal is not as prominent as is in other parts of the country because most of the structures were built of thatch material that do not preserve well. The same is true for their ceramic traditions. The type site of Moor Park therefore presents a unique view of the Iron Age in this region and is worth a mention in this report.

Historians argues that communities existed in numerous small-scale political units of different sizes, population numbers and political structures (Wright & Hamilton, 1989). During the second half of the eighteenth century, stronger chiefdoms and paramountcies emerged (Wright &Hamilton 1989). A more centralized political system emerged in the 1780's. This shift was mainly characterized by population growth and geographical expansion of states. The most important and largest and strongest states at the time were the Mabhudu, Ndwandwe and Mthethwa. However, other smaller states, also established themselves in the greater Tugela Region. These included in the south the Qwabe, Bhaca, Mbo, Hlubi, Bhele, Ngwane and many others (Wright & Hamilton, 1989). As such the Late Iron Age in KwaZulu-Natal and other parts of southern Africa this period was characterised by a variety of expansionists' battles fought by different chiefdoms, culminating in the pre-colonial southern African war called Imfecane (Ommer-Cooper, 1993).

Throughout the middle of the 1800s the region witnessed the Mfecane migrations and displacements linked to Tshaka's expansionist policy. One of the prominent chiefdoms that was conquered was the Ndwandwe chiefdom of Zwide kaLanga which were situated north of King Shaka's territory around the modern day kwaNongoma (Knight, 1998). Shaka managed to achieve his ideal kingdom by strategically expanding the traditional amabutho system. King Shaka's reign as the Zulu King did not last long as he was assassinated by his younger brothers in September 1828. One of them, Dingane KaSenzangakhona later became the king of Zulu. King Shaka moved the royal homestead to KwaDukuza in Stanger, south of upper Thukela River before his assassination by Dingane (and Mpande) who later re-relocated and rebuilt it at eMgungundlovu. Umgungundlovu is 'The Place Surrounding the Elephant' in the emaKhosini valley where King Shaka and King Dingane's forefathers are buried. It has been suggested that one important reason for the relocation of the royal homestead back to uMgungundlovu- north of the upper Thukela River was the growing influence of the white community at Port Natal (settlers) and the encroaching Trek Boers who crossed uKhahlamba Mountains into Natal in the 1837 (Knight, 1998). Dingane, then King of the Zulus died in February 1840 under the defeat of his brother Mpande with the assistance of the Voortrekkers in the battle on the Maqongqo Hills. Mpande had initially assisted Dingane to assassinate Shaka.

In Msunduzi area two tribal groups established themselves in an area that subsequently became known as the Swartkop Location in the 1830's (Wright 1988). These were the Mpumuza and a section of the Nxamalala (or Zuma). Fear of the Zulu under Dingane had led them to separate from their respective parent chiefdoms and to migrate southwards together. Slightly later arrivals were the Zondi (or Nadi) who moved from near the Mooi-Thukela confluence. All these groups still have a presence in the study area today (Wright 1988).

European settlement of the area started soon after 1838 when the first Voortrekker settlers marked out large farms in the area. The Voortrekkers arrived in Natal regions in the shadow of the weakened African kingdoms and chiefdoms in the aftermath of the Mfecane. This effectively ushered in new era of colonial occupation by succeeding Afrikaans and British colonial administration authorities through the last half of the 1800s and into the last 1900s. By 1850s the region witnessed the influx of more settler communities which triggered settler wars between the African chiefdoms and the incoming Afrikaner settlers. Some of these colonial wars and battles lasted into Anglo-Boer wars of 1899-1902. A great number, led by Piet Retief, crossed the Drakensburg into Natal. They encountered the Zulu people who lured them into a trap and brutally massacred the entire group. This is said to be one of the many failures of the white settler expeditions in the frontiers and when the shocking news reached the Cape, more groups were sent to the interior for revenge. A series of battles were fought but the most notable

was the Battle of Blood River in 1838 where the Boers defeated the Zulus. This ended the Zulu threat to the white settlers and a permanent and formal settlement in the former Natal Colony was established. However, the Republic of Natalia was annexed by the British in 1845 (Wright & Hamilton, 1989). There after the region was subsequently annexed by the British and effectively placed the majority of African communities under the Union of South Africa in 1910, which eventually ended with the establishment of the new South Africa in 1994.

Historic Period

The Pietermaritzburg is famous also its colonial heritage especially architecture. The original Voortrekker route, later to become the transport route into the interior, passes through Worlds View which is currently a suburb in western Pietermaritzburg. The route was originally established by the Voortrekker leader Piet Retief and his party in 1838. The site at Worldsview is a provincial landmark that is protected by heritage legislation (Oberholser 1972). The colonial heritage of Pietermaritzburg also includes various buildings associated with the first Dutch settlers (Voortrekkers) after 1837 as well as the latter Victorian and Edwardian heritage of the area associated more closely with the British occupancy of Natal after 1845 (Laband & Hasswell 1988; Derwent 2006).

Pietermaritzburg is arguably the greatest Victorian city in the southern hemisphere and finest remaining urban environments in South Africa. The city's colonial heritage consists of built structures, mostly buildings, which are of great architectural (and also historical) significance (Laband & Haswell 1988; Oberholser 1972; Derwent 2006). A number of the buildings located within the Pietermaritzburg Central Business District (CBD) are constructed out of red-clay bricks, such as the Pietermaritzburg City Hall, giving the city a recognisably unique architectural style. Most of the architectural resources are concentrated within the Pietermaritzburg CBD and adjacent areas such as Georgetown in Edendale. These resources largely consist of buildings constructed in Voortrekker, British-Colonial, Indian and traditional African styles dating back to the late 1800s and early 1900s. There are fine examples of architecture from as early as the 1840s that still exist within Pietermaritzburg CBD and its vicinity for example Hollingwood and further afield at Fort Nottingham. Fine post World War 2 architecture is also abundant in the city.

The Georgetown area in Edendale contains a number of unique buildings consisting of a mixture of traditional African styles of architecture with British- Colonial and Indian influences. Some of the earliest buildings in Georgetown date back to the 1850s and consist of rectangular houses of unfired mud brick, and brick and shale houses covered by lime plaster. Georgetown also provides rare examples of wood and iron buildings, while this building style was common in the 1900s, few examples still exist today.

Some interesting building styles also occur further afield at Merrivale Station. The upper reaches of Sweetwaters, in the immediate vicinity of the study area, were originally a farm demarcated by the Voortrekker leader Andries Pretorius. During the British colonial administration of Natal after 1845 this area was declared an African Reserve. It became known as the Swartkop Location after the prominent hill in the area.

The city is also renowned for its multiple religious establishments and a variety of places of worship depicting the demographic pluralism in the study area. There are several Christian churches, chapels and mission stations throughout the Msunduzi Municipality area. Several of these structures are Provincial and Heritage Landmarks (e.g. the Christian Science Church and Old St Mary's Anglican Church in Pietermaritzburg) and are architecturally historically significant. There are also a number of Mosques and Hindu Temples located within the greater Pietermaritzburg, these buildings hold value in terms of both their architectural style and cultural significance. These include the Soorti Sunni Mosque in Church Street and the Stri Siva Soobramoniar and Marriamen Temples in Longmarket (Langalibalele) Street in Pietermaritzburg, amongst others.

There are a number of cemeteries that are of cultural and historical significance. These include the Jewish and Muslim cemetery off Roberts Road in the Clarendon area, the Old Commercial Road Cemetery and the Fort Napier Military Cemetery in the Signal Hill area. Graves from the Anglo-Boer War, including those of concentration camp victims, are located within the Commercial Road Cemetery. Graves from both the First and Second World Wars are located in the Commercial Road Cemetery and the Fort Napier Military Cemetery. The Commercial Road Cemetery also contains the graves of individuals spanning the early history of Pietermaritzburg including original Voortrekkers, Germans interned during the First World War, members of the Natal Mounted Police, prominent colonial figures and early Indian Christian converts.
The Percy Taylor Rockeries in Scottsville are important natural feature as well as a significant historical resource; and the Pietermaritzburg Railway Station located off Church Street is architecturally, historically and culturally significant. The site is associated with the 1893 incident that sparked Mahatma Gandhi's strategy of passive resistance, occurred (KwaZulu-Natal Museum).

The city hosts several struggle heritage sites which include the Old Prison in Pietermaritzburg, the Gandhi statue opposite the Colonial Building, various houses and places of significance within the Sobantu township as well as the Edendale/Mbali sub-route. Of special interest in this region is the Mandela Capture site, near Howick, and the Alan Paton Centre and struggle archives at the University of KwaZulu-Natal in Pietermaritzburg. The Centre houses the famed author of 'Cry, the Beloved

Country', and founder of the Liberal Party, Alan Paton's literary works, and documents relating to other institutions. The historical heritage is protected by the NHRA and KwaZulu Natal Heritage Act no. 4 of 2008. The proposed development will not impact on any of the mentioned heritage monuments, buildings and structures.

SAHRIS Database and Impact assessment reports in the proposed project area

According to SAHRIS Database, several archaeological and heritage studies were conducted in the project area. The studies include HIA for solar plants, powerline, roads and other infrastructure development projects were completed by SRK (2006), Whitelaw, (2007a &b), Whelan (2007); Prins (2013a, 2013b, 2013c), Van Schalkwyk (2013), Anderson (2015), Brikholtz (2016). These studies recorded LSA, MSA and LSA sites, burial sites and historical buildings and structures of varying significance. Most importantly the initial HIA study for the proposed project (Seleane 2014) is key to the findings of this report. These finding provided insights regarding the heritage potential of the study sites.

4.2 Intangible Heritage

As defined in terms of the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage (2003) intangible heritage includes oral traditions, knowledge and practices concerning nature, traditional craftsmanship and rituals and festive events, as well as the instruments, objects, artefacts and cultural spaces associated with group(s) of people. Thus, intangible heritage is better defined and understood by the particular group of people that uphold it. In the present study area, very little intangible heritage remains because no historically known groups occupied the study area and most of the original settler descendants moved away from the area.

5 RESULTS OF THE FIELD STUDY

5.1 Archaeology

The site was scanned for archaeological remains and no remains were identified during the survey. Based on the field study results and field observations, the receiving environment for electricity supply project site is low to medium potential to yield previously unidentified archaeological remains during construction. Literature review also revealed that no Stone Age sites are not shown on a map contained in a historical atlas of this area. This, however, should rather be seen as a lack of research in the area and not as an indication that such features do not occur.

5.2 Burial grounds and Graves

Human remains and burials are commonly found close to archaeological sites and abandoned settlements; they may be found in abandoned and neglected burial sites or occur sporadically anywhere because of prehistoric activity, victims of conflict or crime. It is often difficult to detect the presence of archaeological human burials on the landscape as these burials, in most cases, are not marked at the surface and concealed by dense vegetation cover. Human remains are usually identified when they are exposed through erosion, earth moving activities and construction. In some instances, packed stones or bricks may indicate the presence of informal burials. If any human bones are found during the course of construction, then they should be reported to an archaeologist and work in the immediate vicinity should cease until the appropriate actions have been carried out by the archaeologist. Where human remains are part of a burial, they would need to be exhumed under a permit from either SAHRA (for pre-colonial burials as well as burials later than about AD 1500) or Department of Health for graves younger than 60 years.

The field survey identified one burial site approximately 120m from the centre of the proposed powerline route and on the other side there is a stream. The burial site is located at GPS Coordinates 29º 41' 09"S 30º 09' 27"E (see Figure 2 & Plate 23&24). The burial site is fenced and gated, and the fence is approximately 20m x 20m. There are 3 graves that are marked by tombstones, and the site is well maintained. We did not manage to establish the names inscribed on the tombstones. But they seem to be younger than 60 years. It seems the site is a family cemetery. The burial site is known to the local community, and it can be safely avoided without changing the layout plan of the proposed powerline route. It should be noted that burial grounds and gravesites are accorded the highest social significance threshold (see Appendix 3). They have both historical and social significance and are

considered sacred. Wherever they exist or not, they may not be tempered with or interfered with without a permit from SAHRA. The possibility of encountering human remains during subsurface earth moving activities anywhere on the landscape is ever present. Although the possibility of encountering previously unidentified burial sites is low within project site, should such sites be identified during construction, they are still protected by applicable legislations, and they should be protected. The proposed powerline development may be approved without any further investigation and mitigation in terms of Section 36 of the NHRA read together with the Human Tissue Act of 1983 and SAHRA Regulations of 2020.

Plate 23: showing 2 graves located near the proposed powerline route

Plate 24: showing two graves at the informal burial site

5.3 Public Monuments and Memorials

The study did not record any public memorials and monuments along the proposed substation and powerline route that require protection during construction. As such the proposed powerline development may be approved without any further investigation and mitigation in terms of Section 27 & 9 of the NHRA.

5.4 Buildings and Structures

The study did not record any buildings or structures within the proposed substation and powerline route. As such, the proposed powerline development may be approved without any further investigation and mitigation in terms of Section 34 of the NHRA.

5.5 Impact Statement

The main cause of impacts to archaeological sites is direct, physical disturbance of the archaeological remains themselves and their contexts. It is important to note that the heritage and scientific potential of an archaeological site is highly dependent on its geological and spatial context. This means that even though, for example a deep excavation may expose buried archaeological sites and artefacts, the

artefacts are relatively meaningless once removed from their original position. The primary impacts are likely to occur during clearance and digging of tower foundations, indirect impacts may occur during movement of heavy construction vehicles and machinery during installation of powerline towers and stringing. Any additional clearance of access roads will result in the relocation or destruction of all existing surface heritage material (if any are present).

Since heritage sites, including archaeological sites, are non-renewable, it is important that they are identified, and their significance assessed prior to construction. It is important to note that due to the localised nature of archaeological resources, that individual archaeological sites could be missed during the survey, although the probability of this is very low along the proposed powerline route. Further, archaeological sites and unmarked graves may be buried beneath the surface and may only be exposed during surface clearance. The purpose of the AIA is to assess the sensitivity of the area in terms of archaeology and to avoid or reduce the potential impacts of the proposed powerline development by means of mitigation measures (see appended Chance Find Procedure). It is the considered opinion of the author that the chances of recovering significant archaeological materials is very low along the proposed powerline route.

Table 2: Summary of Findings

Heritage resource	**Status/Findings**
Buildings, structures, places and equipment of cultural significance	None recorded along the proposed substation and powerline route
Areas to which oral traditions are attached or which are associated with intangible heritage	None exist
Historical settlements and townscapes	None survives in the proposed area
Landscapes and natural features of cultural significance	None
Archaeological and palaeontological sites	None recorded along the substation and proposed powerline route
Graves and burial grounds	One burial site was recorded approximately 250m from the proposed powerline centre line
Movable objects	None
Overall comment	The surveyed area has no confirmable archaeological

	remains. The proposed powerline development is supported from a heritage perspective subject to ensuring that the identified burial site is protected during construction.

5.6 Assessment of development impacts

An impact can be defined as any change in the physical-chemical, biological, cultural, and/or socio-economic environmental system that can be attributed to human activities related to the project site under study for meeting a project need. The significance of the impacts of the process will be rated by using a matrix derived from Plomp (2004) and adapted to some extent to fit this process. These matrixes use the consequence and the likelihood of the different aspects and associated impacts to determine the significance of the impacts.

The significance of the impacts will be assessed considering the following descriptors:

Table 3: Criteria Used for Rating of Impacts

Nature of the impact (N)		
Positive	+	Impact will be beneficial to the environment (a benefit).
Negative	-	Impact will not be beneficial to the environment (a cost).
Neutral	0	Where a negative impact is offset by a positive impact, or mitigation measures, to have no overall effect.
`Magnitude(M)		
Minor	2	Negligible effects on biophysical or social functions / processes. Includes areas / environmental aspects which have already been altered significantly and have little to no conservation importance (negligible sensitivity*).
Low	4	Minimal effects on biophysical or social functions / processes. Includes areas / environmental aspects which have been largely modified, and / or have a low conservation importance (low sensitivity*).
Moderate	6	Notable effects on biophysical or social functions / processes. Includes areas / environmental aspects which have already been moderately modified and have a medium conservation importance (medium sensitivity*).
High	8	Considerable effects on biophysical or social functions / processes. Includes areas / environmental aspects which have been slightly modified and have a high conservation importance (high sensitivity*).
Very high	10	Severe effects on biophysical or social functions / processes. Includes areas / environmental aspects which have not previously been impacted upon and are pristine, thus of very high conservation importance (very high sensitivity*).
Extent (E)		
Site only	1	Effect limited to the site and its immediate surroundings.

Local	2	Effect limited to within 3-5 km of the site.
Regional	3	Activity will have an impact on a regional scale.
National	4	Activity will have an impact on a national scale.
International	5	Activity will have an impact on an international scale.
Duration (D)		
Immediate	1	Effect occurs periodically throughout the life of the activity.
Short term	2	Effect lasts for a period 0 to 5 years.
Medium term	3	Effect continues for a period between 5 and 15 years.
Long term	4	Effect will cease after the operational life of the activity either because of natural process or by human intervention.
Permanent	5	Where mitigation either by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient.
Probability of occurrence (P)		
Improbable	1	Less than 30% chance of occurrence.
Low	2	Between 30 and 50% chance of occurrence.
Medium	3	Between 50 and 70% chance of occurrence.
High	4	Greater than 70% chance of occurrence.
Definite	5	Will occur, or where applicable has occurred, regardless or in spite of any mitigation measures.

Once the impact criteria have been ranked for each impact, the significance of the impacts will be calculated using the following formula:

Significance Points (SP) = (Magnitude + Duration + Extent) x Probability

The significance of the ecological impact is therefore calculated by multiplying the severity rating with the probability rating. The maximum value that can be reached through this impact evaluation process is 100 SP (points). The significance for each impact is rated as High (SP≥60), Medium (SP = 31-60) and Low (SP<30) significance as shown in the below.

Table 4: Criteria for Rating of Classified Impacts

Significance of predicted NEGATIVE impacts		
Low	0-30	Where the impact will have a relatively small effect on the environment and will require minimum or no mitigation and as such have a limited influence on the decision
Medium	31-60	Where the impact can have an influence on the environment and should be mitigated and as such could have an influence on the decision unless it is mitigated.
High	61-100	Where the impact will definitely have an influence on the environment and must be mitigated, where possible. This impact will influence the decision regardless of any possible mitigation.
Significance of predicted POSITIVE impacts		
Low	0-30	Where the impact will have a relatively small positive effect on the environment.

Medium	31-60	Where the positive impact will counteract an existing negative impact and result in an overall neutral effect on the environment.
High	61-100	Where the positive impact will improve the environment relative to baseline conditions.

Table 5: Operational Phase

Impacts and Mitigation measures relating to the proposed project during Operational Phase														
Activity/Aspect	**Impact /**	**Aspect**	**Nature**	**Magnitude**	**Extent**	**Duration**	**Probability**	**Impact before mitigation**	**Mitigation measures**	**Magnitude**	**Extent**	**Duration**	**Probability**	**Impact after mitigation**
Clearing and construction	Destruction of archaeological remains	Cultural heritage	-	2	1	1	2	8	• Use chance find procedure to cater for accidental finds	2	1	1	2	8
	Disturbance of graves	Cultural heritage	-	6	2	2	2	20	• Provide for at least 30m buffer zone from the recorded burial site • Use appended Chance find procedure to cater for accidental finds.	2	1	1	1	4
	Disturbance of buildings and structures older than 60 years old	Operational	-	2	1	1	1	4	• Mitigation is not required	2	1	1	1	4
Haulage	Destruction public monuments and plaques	Operational	-	2	1	1	1	4	• Mitigation is not required because there are no public monuments within the project site	2	1	1	1	4

5.7 Cumulative Impacts

Cumulative impacts as are defined as Impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project. Therefore, the assessment of cumulative impacts for the proposed development is considered the total impact associated with the site when combined with other past, present, and reasonably foreseeable future development projects. An examination of the potential for other projects to contribute cumulatively to the impacts on heritage resources from this site was undertaken during the preparation of this report. The total impact arising from the powerline development (under the control of the applicant), other activities (that may be under the control of others, including other developers, local communities, government) and other background pressures and trends which may be unregulated.

The impacts of the proposed powerline project site were assessed by comparing the post-project situation to a pre-existing baseline. Where projects can be considered in isolation, this provides a good method of assessing a project's impact. However, in this case there are several infrastructure developments, including residential, road networks, commercial infrastructure where baselines have already been affected, the proposed development will add to the existing impacts in the project area. As such increased development in the project area will have a number of cumulative impacts on heritage resource whether known or covered in the ground. For example, during construction phase there will be increase in human activity and movement of heavy construction equipment and vehicles that could change, alter or destroy heritage resources within and outside the electricity supply project site given that archaeological remains occur on the surface. Cumulative impacts that could result from a combination of this project and other actual or proposed future developments in the broader study area include site clearance and the removal of topsoil which could result in damage to or the destruction of heritage resources that have not previously been recorded for example abandoned and unmarked graves.

Heritage resources such as burial grounds and graves, archaeological as well as historical sites are common occurrences within the greater study area. These sites are often not visible and as a result, can be easily affected or lost. Furthermore, many heritage resources in the greater study area are informal, unmarked and may not be visible, particularly during the wet season when grass cover is dense. As such, workers may not see these resources, which results in increased risk of resource damage and/or loss. Earth moving and extraction of gravel have the potential to interact with archaeology, architectural and cultural heritage.

No specific paleontological resources were found in the project area during the time of this study; however, this does not preclude the fact that paleontological resources may exist within the greater study area. As such, the proposed powerline development has the potential to impact on possible paleontological resources in the area. Sites of archaeological, paleontological, or architectural significance were not specifically identified, and cumulative effects are not applicable. The nature and severity of the possible cumulative effects may differ from site to site depending on the characteristics of the sites and variables.

Cumulative impacts that need attention are related to the impacts of clearances, digging tower foundations, access roads and impacts to buried heritage resources. Allowing the impact of the proposed powerline development to go beyond the surveyed area would result in a significant negative cumulative impact on sites outside the surveyed area. A significant cumulative impact that needs attention is related to stamping by especially construction vehicles at the site. Movement of heavy construction machinery must be monitored to ensure they do not drive beyond the approved sites. No significant cumulative impacts, over and above those already considered in the impact assessment, are foreseen at this stage of the assessment process.

5.8 Mitigation

Mitigation for the proposed substation and powerline development is required for the protection of the recorded burial site approximately 250m from the proposed powerline route. The site must be clearly marked to avoid any accidental damage to graves. A copy of the chance finds procedure must be kept at the site office to ensure appropriate management of any accidental finds at the project site.

6 ASSESSING SIGNIFICANCE

The Guidelines to the SAHRA Guidelines and the Burra Charter define the following criterion for the assessment of cultural significance:

6.1 Aesthetic Value

Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture, and material of the fabric; sense of place, the smells and sounds associated with the place and its use.

6.2 Historic Value

Historic value encompasses the history of aesthetics, science, and society, and therefore to a large extent underlies all the terms set out in this section. A place may have historic value because it has influenced, or has been influenced by, an historic figure, event, phase, or activity. It may also have historic value as the site of an important event. For any given place, the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment.

6.3 Scientific value

The scientific or research value of a place will depend upon the importance of the data involved, on its rarity, quality, or representativeness, and on the degree to which the place may contribute further substantial information. Scientific value is also enshrined in natural resources that have significant social value. For example, pockets of forests and bushvelds have high ethnobotany value.

6.4 Social Value

Social value embraces the qualities for which a place has become a focus of spiritual, religious, political, local, national, or other cultural sentiment to a majority or minority group. Social value also extends to natural resources such as bushes, trees and herbs that are collected and harvested from nature for herbal and medicinal purposes.

7 DISCUSSION

Various archaeological and heritage specialist studies were conducted in the general project area since 2002. The current study should be read in conjunction with previous Phase 1 Impact Studies conducted in the general project area. These studies recorded sites of varying significance for example Prins (2012, 2014, 2017, 2019) and Beater (2017, 2019) which testify that the project area is a cultural landscape with medium to high potential to yield significant Iron Age sites. The study noted that the substation site and powerline route are located within a degraded area and have reduced sensitivity for the presence of high significance physical cultural site remains on some already disturbed sections. The study did not yield any confirmable archaeological sites that require protection before the construction activities commence. The study noted that the absence of confirmable and significant archaeological cultural heritage sites is not evidence in itself that such sites did not exist within the substation site and powerline route. There is potential of recovering significant archaeological remains beneath the surface. In addition, some sections were not easily accessible due to the steep nature of the powerline route as well as dense vegetation cover at the substation site. Significance of the sites of Interest is not limited to presence or absence of physical archaeological sites.

The findings by archaeological and heritage specialist attest to the fact that the project area may have been located within a rich LIA landscape. As such there is potential for encountering subsurface LIA remains ranges from low to medium on the proposed substation site and powerline route (See the appended Chance find procedure for handling of chance finds). Visibility was affected during the current survey is thought to be a result of previous clearance, and blue gum plantation that may have destroyed surface remains. In addition, surface visibility was compromised by thick vegetation cover. It should be noted that significance of the site is not limited to presence or absence of physical archaeological sites.

Based on the significance assessment criterion employed for this report, the site was rated **low to medium** from an archaeological perspective, However, it should be noted that significance of the sites of Interest is not limited to presence or absence of physical archaeological sites. Significant archaeological remains may be unearthed during development (see appended chance find procedure). The absence of significant archaeological remains may be due to the following factors:

1. That the substation site is located within a heavily degraded area and have reduced sensitivity for the presence of high significance physical cultural site remains due previous agriculture activities.

2. Limited ground surface visibility on sections of the proposed substation site may have impended the detection of other physical cultural heritage site remains or archaeological signatures within the substation site. This factor is exacerbated by the fact that the study was limited to general survey without necessarily conducting any detailed inspection of specific locations that will be affected by the proposed development.

Based on the significance assessment criterion employed for this report, the electricity supply project site was rated **low** from an archaeological perspective. However, it should be noted that significance of the sites of interest is not limited to presence or absence of physical archaeological sites. Significant archaeological remains may be unearthed during construction. (See appended chance find procedure).

8 RECOMMENDATIONS

1. It is recommended that SAHRA endorse the report as having satisfied the requirements of Section 38 (8) of the NHRA requirements
2. It is recommended that Amafa aKwaZulu Natal and Research institute decide in terms of Section 38 (4) of the NHRA to approve the proposed substation and powerline route as submitted by Eskom Holdings SOC Ltd.
3. The planners of the project must ensure that they provide at 30m buffer zone from the recorded burial site.
4. The recorded burial site must be clearly marked to avoid any accidental damage during construction
5. From a heritage perspective supported by the findings of this study, the proposed substation and powerline development is supported. However, it should be approved under observation that the project dimensions do not extend beyond the area considered in this report.
6. Should chance archaeological materials or human remains be exposed during construction on any section of the electricity supply project site, work should cease on the affected area and the discovery must be reported to the heritage authorities immediately so that an investigation and evaluation of the finds can be made. The overriding objective, where remedial action is warranted, is to minimize disruption in project scheduling while recovering archaeological and any affected cultural heritage data as stipulated by the NHRA regulations.
7. Subject to the recommendations herein made and the implementation of the mitigation measures and adoption of the project EMP, there are no significant cultural heritage resources barriers to the proposed electricity supply project. The Heritage authority may approve the proposed electricity supply project as planned without investigation and mitigation.

9 CONCLUSIONS

Integrated Specialist Services (Pty) Ltd was tasked by Setala Environmental (Pvt) Ltd on behalf of Eskom Holdings SOC Ltd to carry out HIA for the proposed Taylors Halt Substation and the construction of 132kv powerline located on Zwaart Kop 4669 FT Portion 0, in the UMgungundlovu District Municipality of KwaZulu Natal Province. Desktop research revealed that the project area is rich in Late Iron Age and historical sites, however, the field study did not identify any sites along the proposed powerline route. In terms of the archaeology, there are no obvious 'Fatal Flaws' or 'No-Go' areas. However, the potential for chance finds, remains and the applicant and contractors are urged to be diligent and observant during topsoil clearance at the site. The procedure for reporting chance finds has clearly been laid out and if this report is adopted by SAHRA, then there are no archaeological reasons why the proposed powerline development cannot be approved.

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APPENDIX 1: CHANCE FIND PROCEDURE FOR PROPOSED 132KV TAYLORS HALT SUBSTATION AND POWERLINE IN THE UMGUNGUNDLOVU DISTRICT MUNICIPALITY OF THE KWAZULU NATAL PROVINCE

10 DECEMBER 2022

ACRONYMS

BGG	Burial Grounds and Graves
CFPs	Chance Find Procedures
ECO	Environmental Control Officer
HIA	Heritage Impact Assessment
ICOMOS	International Council on Monuments and Sites
NHRA	National Heritage Resources Act (Act No. 25 of 1999)
SAHRA	South African Heritage Resources Authority
SAPS	South African Police Service
UNESCO	United Nations Educational, Scientific and Cultural Organisation

10.1 CHANCE FIND PROCEDURE

10.1.1 Introduction

An Archaeological Chance Find Procedure (CFP) is a tool for the protection of previously unidentified cultural heritage resources during construction. The main purpose of a CFP is to raise awareness of all construction workers and management on site regarding the potential for accidental discovery of cultural heritage resources and establish a procedure for the protection of these resources. Chance Finds are defined as potential cultural heritage (or paleontological) objects, features, or sites that are identified outside of or after Heritage Impact studies, normally as a result of construction monitoring. Chance Finds may be made by any member of the project team who may not necessarily be an archaeologist or even visitors. Appropriate application of a CFP on development projects has led to discovery of cultural heritage resources that were not identified during archaeological and heritage impact assessments. As such, it is considered to be a valuable instrument when properly implemented. For the CFP to be effective, the site manager must ensure that all personnel on the proposed development site understand the CFP and the importance of adhering to it if cultural heritage resources are encountered. In addition, training or induction on cultural heritage resources that might potentially be found on site should be provided. In short, the Chance find procedure details the necessary steps to be taken if any culturally significant artefacts are found during construction.

10.1.2 Definitions

In short, the term 'heritage resource' includes structures, archaeology, meteors, and public monuments as defined in the South African National Heritage Resources Act (Act No. 25 of 1999) (NHRA) Sections 34, 35, and 37. Procedures specific to burial grounds and graves (BGG) as defined under NHRA Section 36 will be discussed separately as this require the implementation of separate criteria for CFPs.

10.1.3 Background

The proposed powerline project is located in the uMgungundlovu District Municipality of KwaZulu Natal Province is subject to heritage survey and assessment at planning stage in accordance with Section 38(8) of NHRA. These surveys are based on surface indications alone and it is therefore possible that sites or significant archaeological remains can be missed during surveys because they occur beneath the surface. These are often accidentally exposed in the course of construction or any associated construction work and hence the need for a Chance Find Procedure to deal with accidental finds. In this case an extensive Archaeological Impact Assessment was completed by Mlilo (2022) on the proposed powerline route. The

AIA/HIA conducted was very comprehensive covering the entire site. The current study (Mlilo 2022) did not record any significant archaeological or heritage resources along the proposed powerline route.

10.1.4 Purpose

The purpose of this Chance Find Procedure is to ensure the protection of previously unrecorded heritage resources along the proposed powerline route. This Chance Find Procedure intends to provide the applicant and contractors with appropriate response in accordance with the NHRA and international best practice. The aim of this CFP is to avoid or reduce project risks that may occur as a result of accidental finds whilst considering international best practice. In addition, this document seeks to address the probability of archaeological remains finds and features becoming accidentally exposed during construction and movement of construction equipment. The proposed powerline development has the potential to cause severe impacts on significant tangible and intangible cultural heritage resources buried beneath the surface or concealed by tall grass cover. Integrated Specialist Services (Pty) Ltd developed this Chance Find Procedure to define the process which govern the management of Chance Finds during construction. This ensures that appropriate treatment of chance finds while also minimizing disruption of the construction schedule. It also enables compliance with the NHRA and all relevant regulations. Archaeological Chance Find Procedures are to promote preservation of archaeological remains while minimizing disruption of construction scheduling. It is recommended that due to the low to moderate archaeological potential of the project area, all site personnel and contractors be informed of the Archaeological Chance Find procedure and have access to a copy while on site. This document has been prepared to define the avoidance, minimization and mitigation measures necessary to ensure that negative impacts to known and unknown archaeological remains as a result of project activities and are prevented or where this is not possible, reduced to as low as reasonably practical during construction.

Thus, this Chance Finds Procedure covers the actions to be taken from the discovering of a heritage site or item to its investigation and assessment by a professional archaeologist or other appropriately qualified person to its rescue or salvage.

10.2 GENERAL CHANCE FIND PROCEDURE

10.2.1 General

The following procedure is to be executed in the event that archaeological material is discovered:

- All construction/clearance activities in the vicinity of the accidental find/feature/site must cease immediately to avoid further damage to the find site.
- Briefly note the type of archaeological materials you think you have encountered, and their location, including, if possible, the depth below surface of the find
- Report your discovery to your supervisor or if they are unavailable, report to the project ECO who will provide further instructions.
- If the supervisor is not available, notify the Environmental Control Officer immediately. The Environmental Control Officer will then report the find to the Site Manager who will promptly notify the project archaeologist and SAHRA.
- Delineate the discovered find/ feature/ site and provide 30m buffer zone from all sides of the find.
- Record the find GPS location, if able.
- All remains are to be stabilised *in situ.*
- Secure the area to prevent any damage or loss of removable objects.
- Photograph the exposed materials, preferably with a scale (a yellow plastic field binder will suffice).
- The project archaeologist will undertake the inspection process in accordance with all project health and safety protocols under direction of the Health and Safety Officer.

- **Finds rescue strategy**: All investigation of archaeological soils will be undertaken by hand, all finds, remains and samples will be kept and submitted to a museum as required by the heritage legislation. In the event that any artefacts need to be conserved, the relevant permit will be sought from the SAHRA.
- An on-site office and finds storage area will be provided, allowing storage of any artefacts or other archaeological material recovered during the monitoring process.
- In the case of human remains, in addition, to the above, the SAHRA Burial Ground Unit will be contacted and the guidelines for the treatment of human remains will be adhered to. If skeletal remains are identified, an archaeological will be available to examine the remains.
- The project archaeologist will complete a report on the findings as part of the permit application process.
- Once authorisation has been given by SAHRA, the Applicant will be informed when construction activities can resume.

10.2.2 Management of chance finds

Should the Heritage specialist conclude that the find is a heritage resource protected in terms of the NRHA (1999) Sections 34, 36, 37 and NHRA (1999) Regulations (Regulation 38, 39, 40), Integrated Specialist Services (Pty) Ltd will notify SAHRA and/or PHRA on behalf of the applicant. SAHRA/PHRA may require that a search and rescue exercise be conducted in terms of NHRA Section 38, this may include rescue excavations, for which ISS will submit a rescue permit application having fulfilled all requirements of the permit application process.

In the event that human remains are accidently exposed, SAHRA Burial Ground Unit or ISS Heritage Specialist must immediately be notified of the discovery in order to take the required further steps:

a. Heritage Specialist to inspect, evaluate and document the exposed burial or skeletal remains and determine further action in consultation with the SAPS and Traditional authorities:

b. Heritage specialist will investigate the age of the accidental exposure in order to determine whether the find is a burial older than 60 years under the jurisdiction of SAHRA or that the exposed burial is younger than 60 years under the jurisdiction of the Department of Health in terms of the Human Tissue Act.

c. The local SAPS will be notified to inspect the accidental exposure in order to determine where the site is a scene of crime or not.

d. Having inspected and evaluated the accidental exposure of human remains, the project Archaeologist will then track and consult the potential descendants or custodians of the affected burial.

e. The project archaeologist will consult with the traditional authorities, local municipality, and SAPS to seek endorsement for the rescue of the remains. Consultation must be done in terms of NHRA (1999) Regulations 39, 40, 42.

f. Having obtained consent from affected families and stakeholders, the project archaeologist will then compile a Rescue Permit application and submit to SAHRA Burial Ground and Graves Unit.

g. As soon as the project archaeologist receives the rescue permit from SAHRA he will in collaboration with the company/contractor arrange for the relocation in terms of logistics and appointing of an experienced undertaker to conduct the relocation process.

h. The rescue process will be done under the supervision of the archaeologist, the site representative and affected family members. Retrieval of the remains shall be undertaken in such a manner as to reveal the stratigraphic and spatial relationship of the human skeletal remains with other archaeological features in the excavation (e.g., grave goods, hearths, burial pits, etc.). A catalogue and bagging system shall be utilised that will allow ready reassembly and relational analysis of all elements in a laboratory. The remains will not be touched with the naked hand; all Contractor personnel working on the excavation must wear clean cotton or non-powdered latex gloves when handling remains in order to minimise contamination of the remains with modern human DNA. The project archaeologist will document the process from exhumation to reburial.

i. Having fulfilled the requirements of the rescue/burial permit, the project archaeologist will compile a mitigation report which details the whole process from discovery to relocation. The report will be submitted to SAHRA and to the client.

Note that the relocation process will be informed by SAHRA Regulations and the wishes of the descendants of the affected burial.

11 APPENDIX 2: HERITAGE MANAGEMENT PLAN FOR PROPOSED POWERLINE AND SUBSTATION SITE EMP

Objective	• Protection of archaeological sites and land considered to be of cultural value. • Protection of known physical cultural property sites against vandalism, destruction and theft; and • The preservation and appropriate management of new archaeological finds should these be discovered during construction.							
No.	Activity	Mitigation Measures	Duration	Frequency	Responsibility	Accountable	Contacted	Informed
Pre-Construction Phase								
1	Planning	Ensure all known sites of cultural, archaeological, and historical significance are demarcated on the site layout plan and marked as no-go areas.	Throughout Project	Weekly Inspection	Contractor [C] CECO	SM	ECO	EA EM PM
Construction Phase								
1	Emergency Response	Should any archaeological or physical cultural property heritage resources be exposed during excavation for the purpose of construction, construction in the vicinity of the finding must be stopped until heritage authority has cleared the development to continue.	N/A	Throughout	C CECO	SM	ECO	EA EM PM
		Should any archaeological, cultural property heritage resources be exposed during excavation or be found on development site, a registered heritage specialist or PHRA official must be called to site for inspection.		Throughout	C CECO	SM	ECO	EA EM PM
		Under no circumstances may any archaeological, historical or any physical cultural property heritage material be destroyed or removed form site;		Throughout	C CECO	SM	ECO	EA EM PM
		Should remains and/or artefacts be discovered on the development site during earthworks, all work will cease in the area affected and the Contractor will immediately inform the Construction Manager who in turn will inform Amafa aKwaZulu Natal and Research Institute		When necessary	C CECO	SM	ECO	EA EM PM
		Should any remains be found on site that is potentially human remains, the Amafa aKwaZulu Natal and Research Institute and South African Police Service should be contacted.		When necessary	C CECO	SM	ECO	EA EM PM
Rehabilitation Phase								
		Same as construction phase.						
Operational Phase								
		Same as construction phase.						

12 APPENDIX 4: LEGAL PRINCIPLES OF HERITAGE RESOURCES MANAGEMENT IN SOUTH AFRICA

Extracts relevant to this report from the National Heritage Resources Act No. 25 of 1999, (Sections 5, 36 and 47):

General principles for heritage resources management

5. (1) All authorities, bodies and persons performing functions and exercising powers in terms of this Act for the management of heritage resources must recognise the following principles:

(a) Heritage resources have lasting value in their own right and provide evidence of the origins of South African society and as they are valuable, finite, non-renewable and irreplaceable they must be carefully managed to ensure their survival;

(b) every generation has a moral responsibility to act as trustee of the national heritage for succeeding generations and the State has an obligation to manage heritage resources in the interests of all South Africans.

(c) heritage resources have the capacity to promote reconciliation, understanding and respect, and contribute to the development of a unifying South African identity; and

(d) heritage resources management must guard against the use of heritage for sectarian purposes or political gain.

(2) To ensure that heritage resources are effectively managed

(a) the skills and capacities of persons and communities involved in heritage resources management must be developed; and

(b) provision must be made for the ongoing education and training of existing and new heritage resources management workers.

(3) Laws, procedures and administrative practices must

(a) be clear and generally available to those affected thereby;

(b) in addition to serving as regulatory measures, also provide guidance and information to those affected thereby; and

(c) give further content to the fundamental rights set out in the Constitution.

(4) Heritage resources form an important part of the history and beliefs of communities and must be managed in a way that acknowledges the right of affected communities to be consulted and to participate in their management.

(5) Heritage resources contribute significantly to research, education and tourism and they must be

developed and presented for these purposes in a way that ensures dignity and respect for cultural values.

(6) Policy, administrative practice and legislation must promote the integration of heritage resources conservation in urban and rural planning and social and economic development.

(7) The identification, assessment and management of the heritage resources of South Africa must—

(a) take account of all relevant cultural values and indigenous knowledge systems;

(b) take account of material or cultural heritage value and involve the least possible alteration or loss of it;

(c) promote the use and enjoyment of and access to heritage resources, in a way consistent with their cultural significance and conservation needs;

(d) contribute to social and economic development;

(e) safeguard the options of present and future generations; and

(f) be fully researched, documented and recorded.

12.1 Burial grounds and graves

36. (1) Where it is not the responsibility of any other authority, SAHRA must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit.

(2) SAHRA must identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with the grave referred to in subsection (1), and must maintain such memorials.

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

(a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;

(b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or

(c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.

(4) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the

responsible heritage resources
authority.
(5) SAHRA or a provincial heritage resources authority may not issue a permit for any activity under subsection (3)(b) unless it is satisfied that the applicant has, in accordance with regulations made by the responsible heritage resources authority
(a) made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground; and
(b) reached agreements with such communities and individuals regarding the future of such grave or burial ground.
(6) Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority
(a) carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and
(b) if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-interment of the contents of such grave or, in the absence of such person or community, make any such arrangements as it deems fit.
(7) (a) SAHRA must, over a period of five years from the commencement of this Act, submit to the Minister for his or her approval lists of graves and burial grounds of persons connected with the liberation struggle and who died in exile or as a result of the action of State security forces or agents provocateur and which, after a process of public consultation, it believes should be included among those protected under this section.
(b) The Minister must publish such lists as he or she approves in the Gazette.
(8) Subject to section 56(2), SAHRA has the power, with respect to the graves of victims of conflict outside the Republic, to perform any function of a provincial heritage resources authority in terms of this section.
(9) SAHRA must assist other State Departments in identifying graves in a foreign country of victims of conflict connected with the liberation struggle and, following negotiations with the next of kin, or relevant authorities, it may re-inter the remains of that person in a prominent place in the capital of the Republic.

12.2 General policy

47. (1) SAHRA and a provincial heritage resources authority—

(a) must, within three years after the commencement of this Act, adopt statements of general policy for the management of all heritage resources owned or controlled by it or vested in it; and

(b) may from time to time amend such statements so that they are adapted to changing circumstances or in accordance with increased knowledge; and

(c) must review any such statement within 10 years after its adoption.

(2) Each heritage resources authority must adopt for any place which is protected in terms of this Act and is owned or controlled by it or vested in it, a plan for the management of such place in accordance with the best environmental, heritage conservation, scientific and educational principles that can reasonably be applied taking into account the location, size and nature of the place and the resources of the authority concerned, and may from time to time review any such plan.

(3) A conservation management plan may at the discretion of the heritage resources authority concerned and for a period not exceeding 10 years, be operated either solely by the heritage resources authority or in conjunction with an environmental or tourism authority or under contractual arrangements, on such terms and conditions as the heritage resources authority may determine.

(4) Regulations by the heritage resources authority concerned must provide for a process whereby, prior to the adoption or amendment of any statement of general policy or any conservation management plan, the public and interested organisations are notified of the availability of a draft statement or plan for inspection, and comment is invited and considered by the heritage resources authority concerned.

(5) A heritage resources authority may not act in any manner inconsistent with any statement of general policy or conservation management plan.

(6) All current statements of general policy and conservation management plans adopted by a heritage resources authority must be available for public inspection on request.