

# **PHASE 1 ARCHAEOLOGICAL/HERITAGE IMPACT ASSESSMENT**

**FOR THE PROPOSED RIVERBANKS  
REHABILITATION AT DRIEL BARRAGE  
GOVERNMENT WATERWORKS, OKHAHLAMBA  
LOCAL MUNICIPALITY, KWA-ZULU NATAL  
PROVINCE.**

**AIA/HIA Study**

**INTEGRATED SPECIALIST SERVICES (PTY) LTD**

**NOVEMBER 19, 2020**

**AUTHORED BY: TRUST MLILO PROFESSIONAL ARCHAEOLOGIST AND HERITAGE MANAGEMENT  
SPECIALIST (ASAPA)**

## DOCUMENT SYNOPSIS (EXECUTIVE SUMMARY)

Item	Description
Proposed development and location	Proposed riverbanks rehabilitation at Driel Barrage Dam Government Waterworks, oKhahlamba Local Municipality, Kwa-Zulu Natal Province.
Purpose of the study	The Phase 1 Archaeological Impact Assessment is to determine the presence of cultural heritage sites and the impact of the proposed project on these resources within the area demarcated for the proposed riverbanks rehabilitation.
1:50 000 Topographic Map	
Coordinates	28°45'47.03"S, 29°17'30.27"E.
Municipalities	Okhahlamba Local Municipality.
Predominant land use of surrounding area	Agricultural, dam and residential
EAP	<p><b>Ruvimbo Group (Pty) Ltd</b></p> <p>P.O. Box 58</p> <p>Highlands North, Johannesburg, 2037</p> <p>Tel: 010 492 4330,</p> <p>Fax: 086 652 9774,</p> <p>E-mail: <a href="mailto:moses@ruvimbo.co.za">moses@ruvimbo.co.za</a>.</p> <p>Website: <a href="http://www.ruvimbo.co.za">www.ruvimbo.co.za</a></p>
Applicant	<p><b>Department of Water and Sanitation</b></p> <p>1st Floor Praetor Forum Building</p> <p>267 Lillian Ngoyi Street</p> <p>Pretoria, 0001</p>
Heritage Practitioner	<p><b>Integrated Specialist Services</b></p> <p>Constantia Park, Building 16-2, 546, 16th Road, Midrand, 1685</p> <p>Cell: 0716859247, Fax: 086 652 9774</p> <p>E-mail: <a href="mailto:trust.mlilo@gmail.com">trust.mlilo@gmail.com</a></p>
Authors	Trust Miilo
Date of Report	19 November 2020

This report serves to inform and guide the applicant and contractors about the possible impacts that the proposed riverbank rehabilitation may have on heritage resources (if any) located in the study area. In the same light, the document must also inform KwaZulu Natal Amafa and Research Institute about the presence, absence and significance of heritage resources located in the study area. This report is required in terms of Section 38 of the NHRA and Section 41 of KwaZulu Natal Amafa and Research Institute Act No. 05 of 2018). The proposed development requires a pre-development archaeology and Heritage assessment by a competent heritage practitioner in order to identify record and if necessary, salvage the irreplaceable heritage resources that may be impacted upon by the proposed development. In compliance with these laws Ruvimbo Group (Pty) Ltd retained Integrated Specialist Services to conduct a Phase 1 Archaeological and Heritage Impact Assessment (AIA/HIA) of the proposed riverbanks rehabilitation. Desktop studies and fieldwalking were conducted in order to identify heritage landmarks within the site earmarked for development. The study site is not on pristine ground, it within the riverbank has been significantly altered by river flooding. (See Figure 1). The general project area is known for historical and Late Iron Age occurrences. The project area was extensively researched by several archaeologists such Beater 2019; Magoma (2019), Prins (2017,2018a ,2018b; 2018c, 2019) and several others. In terms of the built environment of the project area, structures older than 60 years of age do not occur within the proposed project site. In addition, sub-surface 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 Amafa aKwaZulu Natali and Research Institute for review.

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 project.
- Most sections of the project area are accessible, and the field survey was effective enough to cover significant sections of the project receiving environs. However, surface visibility was compromised by overgrown vegetation.
- The immediate project area is predominantly agricultural.
- The study did not record any archaeological site within the proposed development site.

The report sets out the potential impacts of the proposed 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:

- Buildings and structures that are older than 60 years old must not be destroyed or altered without a permit from Amafa aKwaZulu Natali and Research Institute.
- Construction workers must be inducted on the possibility of encountering archaeological resources that may be accidentally exposed during subsurface construction prior to commencement of work on the site in order to ensure appropriate mitigation measures and that course of action is afforded to any chance finds.
- If archaeological materials are uncovered, work must cease immediately and the Amafa aKwaZulu Natali and Research Institute be notified and activity should not resume until appropriate management provisions are in place.
- The findings of this report, with approval of the Amafa aKwaZulu Natali and Research Institute, may be classified as accessible to any interested and affected parties within the limits of the legislations.

This report concludes that the impacts of the proposed rehabilitation on the cultural environmental values are not likely to be significant on the entire development 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 Research Institute 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 Ruvimbo Group (Pty) Ltd. Integrated Specialist Services has no any business, personal, financial or other interest in the proposed 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 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 Ruvimbo Group (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 make reference 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 KwaZulu Natal Amafa and Research Institute and SAHRA Regulations and Guidelines as to the authorisation of the proposed riverbanks rehabilitation being proposed by DWS

Signed by

A handwritten signature in black ink, appearing to be 'H. P. ...'.

19/ 11/ 2020

## ACKNOWLEDGEMENTS

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The authors acknowledges Ruvimbo Group (Pty) Ltd and Department of Water and Sanitation for their assistance with project information, and the associated project BID as well as responding to technical queries related to the project.

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## ABBREVIATIONS

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<b>AIA</b>	: Archaeological Impact Assessment
<b>ASAPA</b>	: Association of South African Professional Archaeologists
<b>EIA</b>	: Environmental Impact Assessment
<b>EIA</b>	: Early Iron Age ( <i>EIA refers to both Environmental Impact Assessment and the Early Iron Age but in both cases the acronym is internationally accepted. This means that it must be read and interpreted within the context in which it is used.</i> )
<b>EIAR</b>	: Environmental Impact Assessment Report
<b>ESA</b>	: Early Stone Age
<b>GPS</b>	: Global Positioning System
<b>HIA</b>	: Heritage Impact Assessment
<b>ICOMOS</b>	: International Council of Monuments and Sites
<b>LIA</b>	: Late Iron Age
<b>LFC</b>	: Late Farming Community
<b>LSA</b>	Late Stone Age
<b>MIA</b>	: Middle Iron Age
<b>MSA</b>	: Middle Stone Age
<b>NEMA</b>	: National Environmental Management Act, 1998 (Act No.107 of 1998)
<b>NHRA</b>	: National Heritage Resources Act, 1999 (Act No. 25 of 1999)
<b>PHRA-NW</b>	: Provincial Heritage Resource Agency of North West
<b>SAHRA</b>	: South African Heritage Resources Agency
<b>ToR</b>	: Terms of Reference

## KEY CONCEPTS AND TERMS

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### 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, eco-facts 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, 1998 (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 revealed within the development site during construction, such activities should be halted immediately, and a competent heritage practitioner and KwaZulu Natal Amafa and Research Institute must be notified in order for an investigation and evaluation of the find(s) to take place (see KwaZulu Natal Amafa and Research Institute Act, 2018 (Act No. 05 of 2018)). Recommendations contained in this document do not exempt the developer/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 KwaZulu Natal Amafa and Research Institute Act, 2018 (Act No. 05 of 2018), ISS assumes no responsibility for compliance with conditions that may be required by KwaZulu Natal Amafa and Research Institute in terms of this report.

## 1. INTRODUCTION

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Integrated Specialist Services (ISS) was retained by Ruvimbo Group (Pty) Ltd to carry out a Phase 1 AIA/ HIA of the proposed riverbanks rehabilitation at Driel Barrage Dam Government Waterworks, Okhahlamba Local Municipality in KwaZulu Natal Province. The proposed development is gazetted in terms of section 38 (1) of the NHRA and Section 41 of KwaZulu Natal Amafa and Research Institute Act, 2018 (Act No. 05 of 2018), (see Figure 1). This HIA study forms part of the Basic Assessment that is submitted in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended (NEMA). The overall purpose of this heritage report is to identify, assess any heritage resources that may be located in the study area and evaluate the positive and negative impacts of the proposed rehabilitation on these resources 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 field walking. Desktop studies revealed that the general project area is rich in Late Iron Age (LIA), historical buildings and graves outside municipal cemeteries. It should be noted that while heritage resources may have been located in the entire study area, subsequent developments such as agriculture and infrastructure development work have either obliterated these materials or reduced them to isolated finds that can only be identifiable as chance finds during construction. The proposed riverbanks rehabilitation works may be permitted subject to adopting recommendations and mitigation measures proposed in this report, there is no archaeological and heritage reason why the development cannot proceed, taking full cognizance of clear procedures to follow in the event of chance findings.

### 1.1 Terms of Reference (ToR)

The author was requested by Ruvimbo Group to conduct an AIA/HIA study addressing the following issues:

- Archaeological and heritage potential of the proposed development site including any known data on affected areas;
- Provide details on methods of study; potential and recommendations to guide the KwaZulu Natal Amafa and Research Institute to make an informed decision in respect of authorisation of the proposed development
- Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located within the proposed riverbanks rehabilitation 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 proposed development 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 project is located on the Portion of the Remaining Extent of the Farm The Bend 8646 located 7km South-west of Bergville within Okhahlamba Local Municipality, KwaZulu Natal Province. The proposed project site is located within the approved dam site. Approximate center of the study site is 28°45'47.03"S, 29°17'30.27"E.



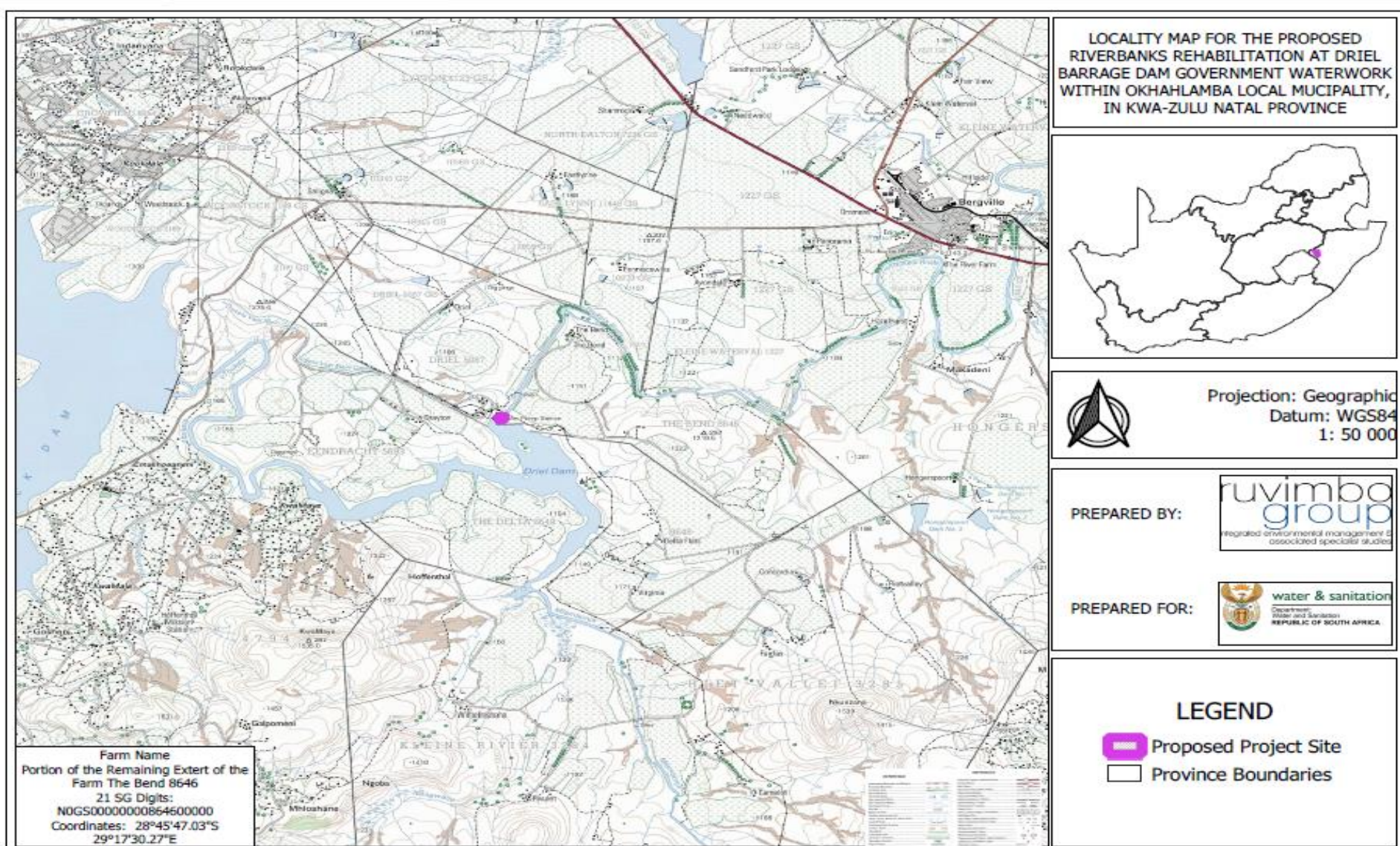


Figure 1: Location of the proposed project site (Ruvimbo, 2020)

PROPOSED RIVERBANKS REHABILITATION AT DRIEL BARRAGE GOVERNMENT WATERWORKS, OKHAHLAMBA LOCAL MUNICIPALITY, KWA-ZULU NATAL PROVINCE.



Figure 2: Layout plan for the proposed riverbanks rehabilitation (DWS, 2020)

### 1.3 Project Background and description

The Driel Barrage Dam is the main diversion structure from the Tugela River for the Tugela-Vaal Transfer Scheme. The dam wall is 22.6m high and is located 7km South-west of Bergville in KwaZulu Natal Province. It was designed and constructed by the Department of Water and Sanitation. In terms of the Dam Safety Regulations, the dam has been classified as a Category III dam with a high hazardous potential.

The Driel Barrage forms part of the Drakensburg Pumped Storage Scheme where water is pumped from Driel Pump station to Kilburn Pump station at 11m<sup>3</sup>/s. Water is then pumped from Kilburn Pump station to Kilburn dam. The water is then pumped by the Eskom Hydro-Power Station, during low electricity demand, to Driekloof Dam and from there into the Sterkfontein Dam. During high electricity demand, the water from Driekloof dam is used to generate electricity. The hydro-Power Station has an installed capacity of 1000 megawatt. From Sterkfontein Dam the water flows to the Vaal Dam. Thus, Sterkfontein Dam becomes a buffer for the Gauteng Region.

Part of the right-hand side riverbank eroded with time and thus threatening the stability of the dam wall. An assessment was undertaken, and recommendations made to rehabilitate the eroded river bank and finish with adequate erosion protection measures.

The proposed works will consist of the following:

- a) Construction of approximately 3.5 metres by 2.0 metres Gabions Retaining wall;
- b) Dredging and infilling of approximately 3500m<sup>3</sup> of sand, pebbles or rock; and
- c) Including the rehabilitation of any impacted areas.

## 2. LEGISLATIVE CONTEXT

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Three main pieces of legislations are relevant to the present study and there are presented here. Under KwaZulu Natal Amafa and Research Institute Act, 2018 (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 m<sup>2</sup> 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 m<sup>2</sup> 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

This document falls under the Basic Assessment phase of the AIA/HIA and therefore aims at providing an informed heritage-related opinion about the proposed riverbanks rehabilitation in KwaZulu Natal Province. This is usually achieved through a combination of a review of any existing literature and a basic 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 proposed development site as a way of acquiring the archaeological impression of the general area. This was then followed by a walk down survey around the proposed rehabilitation site, 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 development in order to suggest further action. 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 development.

### 2.1. The Fieldwork survey

The fieldwork survey was undertaken on the 28<sup>th</sup> of October 2020. The desktop studies were followed by intensive and extensive field walking. As a result of advances in technology, it is possible to survey large tracts of land on the desktop. A scoping survey was thus conducted for the entire dam site. The desktop scoping survey in Google Earth and Ortho-rectified satellite imagery did not identify any confirmable heritage artifacts. 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; strands of grass which are taller than the surrounding grass veld; the presence of exotic trees; evidence of building rubble, existing buildings and ecological indicators such as invader weeds.

The literature survey suggests that prior to the 20<sup>th</sup> century modern residential and on-going infrastructure developments; the general area where the proposed development is located would have been a rewarding region to locate heritage resources related to Stone Age and particularly 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 agricultural infrastructure and developments.

### 2.2. Visibility and Constraints

The proposed rehabilitation site falls within the riverbanks which from an archaeological perspective the site is considered to be very degraded to yield any significant archaeological remains. Even archaeological remains were to be found within the river they will be of low significance since they lack provenance.

### 2.3. Consultations

The Public Participation process is conducted by the EAP. The 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 as a result of the proposed development. The issues raised by the public with respect to heritage resources within the proposed riverbanks rehabilitation development site will also be included in the final BAR.

PROPOSED RIVERBANKS REHABILITATION AT DRIEL BARRAGE GOVERNMENT WATERWORKS, OKHAHLAMBA LOCAL MUNICIPALITY, KWA-ZULU NATAL PROVINCE.

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



Plate 1: Shows the downstream side of the river



Plate 2: showing proposed project site.

PROPOSED RIVERBANKS REHABILITATION AT DRIEL BARRAGE GOVERNMENT WATERWORKS, OKHAHLAMBA LOCAL MUNICIPALITY, KWA-ZULU NATAL PROVINCE.

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Plate 3: showing river bank to undergo rehabilitation.



Plate 4: Showing riverbank to undergo rehabilitation

PROPOSED RIVERBANKS REHABILITATION AT DRIEL BARRAGE GOVERNMENT WATERWORKS, OKHAHLAMBA LOCAL MUNICIPALITY, KWA-ZULU NATAL PROVINCE.

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Plate 5: Showing Driel Barrage Water works treatment plant.



Plate 6: Showing proposed project site is cleared and eroded reducing the chances of recovering archeological material



Plate 7: showing riverbanks to be rehabilitated and the dam structures.

### 3. ARCHAEOLOGICAL CONTEXT

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KwaZulu-Natal has a rich and diverse archaeological record spanning over a long history of human habitation. KwaZulu Natal is rich in Stone Age, Iron Age, and the historical period which was mainly associated with King Shaka and the Mfecane and the subsequent invasion by colonial settlers which led to several battles which left a trail of battle fields, burial ground monuments. Some of the intriguing stories of KwaZulu-Natal that shed light to the history and archaeology of the province include but not limited to the famous story of King Shaka Zulu and the rock art paintings found in the Drakensberg Mountains. The Drakensberg Region is a diverse cultural landscape with spectacular San Rock art, Late Iron Age and Historical sites associated with the descendants of the Zulu, Xhosa, Sotho and more recently Griqua and Anglo Boer descendants. The cultural heritage of the Drakensberg is diverse and highly fragile (Magoma 2019). Approximately 1 300 Later Stone Age sites are known within the South African side of the Drakensberg. The Drakensberg Mountain is not only associated with the San people but also different cultural groups such as the southern Sotho, the Zulu-speaking and Xhosa-speaking groups, and, more recently, the Griqua and Anglo-Boer descendants.

#### **Stone Age**

The Stone Age is the period in human history where lithic (stone) material was mainly used to produce tools (Coertze & Coertze 1996). In South Africa, this period is divided into 1) Early Stone Age (More than 2 million years ago - 250 000 years Ago), 2) Middle Stone Age (250 000 years ago – 25 000 years ago) 3) and Late Stone

Age respectively (25 000 years ago - AD 200). Sites falling within this period in the Drakensberg are mostly characterized by a few surface scatters and individual stone tools, typically found in the close vicinity of water. The tools made were most likely manufactured by *Homo erectus*, a predecessor of modern humans (*Homo sapiens*).

The Middle Stone Age (MSA) times spanning to some (C. 150 000 – 30 000 BP) saw people become more mobile, occupying areas formerly avoided. The MSA is a period that remains somewhat vague, as much of the MSA lies beyond the limits of conventional radiocarbon dating. However, the concept of the MSA remains useful as a means of identifying a technological stage characterized by flakes and flake-blades with facets. Middle Stone Age sites in the Drakensberg region occur in both Lesotho and South African side. The MSA sites occur as surface scatters as well as deep cave deposits. Prime archaeological deposits, however, occur in the Eastern Cape and Free State sections of the region. Archaeological excavations at Strathallan Cave in the Eastern Cape Province indicate that the Middle Stone Age persisted in the Eastern Cape Drakensberg until around 22 000 years ago (Mitchell 2002).

Later Stone Age (LSA) people preferred to occupy rock shelters and caves close to water sources. Later Stone Age tools are commonly much smaller but also more diversified than the earlier toolkits. It was during this period that composite tools such as the bow and arrow were used extensively. The advancement in their tool kit ensured effective exploitation of their environments. Hundreds of LSA sites including rock art sites were recorded in the Drakensberg region. Most of the rock art sites in the region are associated with San who left a huge footprint in this region. The earliest evidence for LSA occupation of the Maloti Drakensberg comes from Sehonghong Cave in south eastern Lesotho and from Strathallan Cave in the Eastern Cape section of the region. Here a specific LSA period called the Robberg Industry has been dated to approximately 20 000 years ago. In contrast, evidence from Good Hope shelter 1 near the bottom of Sani Pass suggests that the earliest archaeological evidence for San people in the KwaZulu-Natal portion of the Drakensberg dates back to approximately 8 000 years ago. Whereas most parts of the Maloti Drakensberg were only seasonally occupied by San hunter-gatherers for the larger part of the last 20 000 years, the situation started to change during the latter part of the Holocene around 5 000 years ago. This was compounded by the arrival of immigrant black farmers in the region soon after 1600 AD and European colonialism around 1834 AD (Wright & Mazel 2007).

The coming of Late Iron Age Farmers and colonial settlers in the Drakensberg Region disrupted the lifeways of the San. The Maloti Drakensberg and adjacent mountainous areas became the last stronghold for various southern San groups such as the Baroa, //Xegwi, ! Ga!ne, //Kx'au, and //Ku//ke. Their Later Stone Age way of life finally came to an end during the late 19th century when they were displaced from their cultural landscapes. Most San descendants were either displaced or assimilated by their more powerful neighbours and in the process, they



lost their language, life ways and identity. Many place names within the region still retain their original San pronunciations such as the Inxu, Sehonghong, Qomoqomong and Qhoasing rivers, and the Qeme, Qhuqhu, Qhalasi, and Qholaqhoe mountains.

### **Rock Art in the Region**

The Maloti Drakensberg region is famous for the occurrence of some of the most spectacular and complex rock art in the world. The rock art mainly depicts human beings such as eland and rhebuck are common. These figures are believed to represent trance induced visions during San religious rites (Lewis-Williams 2003). According to some researchers, the celebrated Rosetta Panel at Game Pass Shelter is key to our understanding of all San rock art in the sub-Saharan region of Africa. However, this interpretation is not supported by all rock art researchers. The Maloti Drakensberg is also one of the areas with the highest density of prehistoric rock art in the world and certainly contains the highest concentration of prehistoric art south of the Sahara in Africa. Although the scientific dating of these paintings is still under researched, recent research suggests that the oldest paintings may date to approximately 4000 years ago (Wright & Mazel 2007). Some of the rock painting in the region are fairly recent for example paintings at two sites in the southern portion of the region were created as recently as 1920 (Prins 2009). The communal areas of amaNgwane and amaZizi that is part of the greater Mnweni triangle contains approximately 300 rock painting sites (Prins 2018). These are similar in style and context to the better-known art of the Ukhahlamba Drakensberg World Heritage Site.

### **Iron Age Period**

Iron Age period is the name given to the period of human history when metal was mainly used to produce artifacts (Coertze & Coertze 1996). Around 1250 AD certain agriculturists started occupying the higher altitude, grassland areas. The IA periods in KwaZulu-Natal are referred to as Moor Park settlements and they typically occupy hilltops with a low stone walling effect. By 1600 AD, groups such as the amaZizi reached the foothills of the northern Drakensberg near Winterton (Wright and Mazel 2007). 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 foothills 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. From about 1500 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. Early Iron Age sites of Mzuluzi (AD500-700), Ndongondwane (AD

700-800) and Ntshekane (AD 800 -900) (Maggs 1989:31, Huffman 2007:325-462. LIA farmers arrived in the Vryheid area around 800 yrs ago (Bryant 1965)

Groups such as the amaZizi reached the foothills of the northern Drakensberg near Winterton (Wright and Mazel 2007). Various splinter groups of the amaZizi left KwaZulu Natal and also settled in parts of Lesotho where, over time, they adopted a Sotho identity. The baPhuti of south eastern Lesotho are perhaps the best known of these early immigrants. By the early 1700s various other Sotho and Nguni-speaking groups moved into the area and established chieftaincies in those areas below the 1 800 m contour. Impressive Iron Age sites belonging to this period and built in typical Sotho-style occur near Harrismith and Phuthaditjhaba in the Eastern Free State. Nguni-style sites of this period have also been found in KwaZulu-Natal and the Eastern Cape parts of the Drakensberg. The expansion of the Zulu kingdom around 1818 had a major impact on Iron Age settlement in the region. Various chieftaincies were attacked, and their routed remnants typically traversed the Maloti Drakensberg region in search of better settlement elsewhere. Bandits often hid out in the mountains, and a number allegedly practised cannibalism. Perhaps the most significant development during this period was the founding of the Southern Sotho nation under King Moshoeshoe I. Various sites in Lesotho belong to this period – some of them, like Thaba Bosiu, are typically mountain strongholds. Almost 2 000 Iron-Age sites have been identified in the Maloti Drakensberg region, and most occur in altitudes lower than 1 800 m contour. Some sites belonging to the ancestors of the amaZizi and amaNgwane, the present ethnic groups to live in the study area, have been recorded in the nearby Didima Nature Reserve in the south and near Bergville (Maggs 1987). In fact, there is evidence for Later Iron Age occupation in the foothills of the northern Drakensberg, in the near vicinity of the project area, from about 1400 AD (Huffman 2007).

### **Historical Era**

Since the arrival of the white settlers - c. AD 1800s - in this part of the country, these settlers were largely self-sufficient, relying on cattle/sheep farming and also hunting. Few towns were established, and farming was the most dominant economic activity. Throughout the middle of the 1800s the region witnessed the Mfecane migrations and displacements linked to Tshaka's expansionist policy. 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.

The proposed Driel Dam rehabilitation is located approximately 8km from Bergville town. Bergville is a small town situated in the foothills of the Drakensberg Mountains, KwaZulu-Natal in South Africa. It was established as

Bergville Mountain Village in 1897 by a retired sea captain. British forces built a blockhouse in the settlement two years later at the onset of the Anglo-Boer War. The building is currently used as a Monument and Museum within the grounds of the Bergville Court House.

### 3.1. 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.

### 3.2. SAHRIS Data Base and Impact Assessment Reports in the project area

The SAHRIS website was consulted for previous heritage surveys and heritage site data covering the project area. Various heritage surveys have been conducted in the region. Prins (2012, 2013, 2017, 2018, 2019) Beater (2017, 2019), Magoma (2019)) conducted HIA studies for infrastructure developments in the Okahlamba Municipal area. The studies confirmed the occurrence of archaeological and heritage sites Spanning from the LSA to the historical period. These studies did not indicate any heritage sites or features on the footprint of the proposed development site. Several colonial battles and skirmishes between the Boers and British, the Boers and the Zulu and the British and Zulu were fought in the project area. Traces of these battles and skirmishes are still visible and protected by KwaZulu Natal Amafa and Research Institute in collaboration with Natal Museum.

## 4. RESULTS OF THE FIELD STUDY

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### 4.1. Archaeology

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. This case applies to the rehabilitation site which is within a flowing river. Not much is expected from an archaeological perspective.

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 within the proposed riverbanks rehabilitation site. 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 development by means of mitigation measures (see appended Chance Find Procedure). The following section presents results of the archaeological and heritage survey conducted within the proposed development project site. The field study did not record any confirmable archaeological sites within the proposed rehabilitation site. Based on the field study results and field observations, the receiving environment for the proposed rehabilitation is low to medium potential to yield previously unidentified archaeological sites during subsurface excavations and construction work associated with the proposed riverbanks rehabilitation.

#### 4.2. 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 thick vegetation cover. Human remains are usually identified when they are exposed through erosion, earth moving and excavation activities. 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 work, 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 KwaZulu Natal Amafa and Research Institute (for pre-colonial burials as well as burials later than about AD 1500) or Department of Health for graves younger than 60 years.

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. In addition, graves are important in providing evidence for communities seeking land restitution. Wherever they exist or not, they may not be tampered with or interfered with during any development without a permit from KwaZulu Natal Amafa and Research Institute. The site has no potential for occurrence of a burial site from a practical perspective. As such the study team did not expect to record any graves within the river. As such the proposed rehabilitation can proceed without any further investigation and mitigation.

#### 4.3. Public Monuments and Memorials

The study did not record any public memorials and monuments within the rehabilitation site.

#### 4.4. Buildings and Structures

Section 34 of the NHRA and Section 37 KwaZulu Natal Amafa and Research Institute Act, 2018 (Act No. 05 of 2018), protects buildings and structures older than 60 years. The Driel dam wall and associated infrastructure are

older than 60 years, however the proposed riverbanks rehabilitation will not interfere with the dam infrastructure. As such the proposed rehabilitation does not trigger Section 34 of the NHRA and Section 37 of KwaZulu Natal Amafa and Research Institute Act No. 05 of 2018). The proposed riverbanks rehabilitation may proceed without further investigation or mitigation

Table 1: Summary of findings

Heritage resource	Status/Findings
Buildings, structures, places and equipment of cultural significance	None located on the site
Areas to which oral traditions are attached or which are associated with intangible heritage	None exist
Historical settlements and townscapes	None located on the site
Landscapes and natural features of cultural significance	None
Archaeological and palaeontological sites	None
Graves and burial grounds	
Movable objects	None
Overall Remarks	The surveyed area has no confirmable archaeological and heritage resources. The project may proceed without further investigation nor mitigation

#### 4.5. Assessment of Construction 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.

## 5. Methodology Adapted in Assessing the Impacts

Table 2: 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 heritage 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 heritage 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 heritage 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 heritage 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 heritage 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:

$$\text{Significance Points (SP)} = (\text{Magnitude} + \text{Duration} + \text{Extent}) \times \text{Probability}$$

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 3: Criteria for Rating of Classified Impacts

Significance of predicted <b>NEGATIVE</b> 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 <b>POSITIVE</b> 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 4: Operational Phase

Impacts and Mitigation measures relating to the proposed project during Operational Phase														
Activity/Aspect	Impact /	Aspect	Nature	Magnitude	Extent	Duration	Probability	Significance before mitigation	Mitigation measures	Magnitude	Extent	Duration	Probability	Significance after mitigation
Clearing and construction	Destruction of archaeological remains	Cultural heritage	-	2	1	1	1	4	<ul style="list-style-type: none"> <li>Mitigation not required because the study did not record any confirmable sites</li> <li>Use chance find procedure to cater for accidental finds</li> </ul>	4	1	1	1	4
	Disturbance of graves	Cultural heritage	-	2	1	1	1	4	None required	2	1	1	1	4
	Disturbance of buildings and structures older than 60 years old	Operational	-	2	1	1	1	4	None required because there are no structures within the site	2	1	1	1	4
Haulage	Destruction public monuments and plaques	Operational	-	2	1	1	1	4	<ul style="list-style-type: none"> <li>Mitigation is not required because there are no public monuments within the proposed development site</li> </ul>	2	1	1	4	Low



## 5.1. Cumulative Impacts

Cumulative impacts are 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 riverbanks rehabilitation is considered the total impact associated with the proposed development when combined with other past, present, and reasonably foreseeable future developments projects. An examination of the potential for other projects to contribute cumulatively to the impacts on heritage resources from this proposed development was undertaken during the preparation of this report. The total impact arising from the proposed riverbanks rehabilitation project (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 rehabilitation of riverbanks 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 the site falls below the dam wall and it has been heavily eroded over the past years. The area is mainly surrounded by commercial agriculture fields and there is bulk water supply infrastructure and roads in the vicinity of the proposed project site, in this case the proposed project seeks to reduce the impacts of the dam to the affected riverbanks. 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 the construction phase they 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 development sites given that archaeological remains occur on the surface. Cumulative impacts that could result from a combination of the proposed development and other actual or proposed future developments in the broader study area include site clearance and the removal of topsoil could result in damage to or the destruction of heritage resources that have not previously been recorded for example abandoned and unmarked graves.

No specific palaeontological 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 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.

A significant cumulative impact that needs attention is related to movement of heavy haulage vehicles 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.

Cumulative impacts can be significant, if construction, haulage vehicles and construction equipment are not monitored to avoid driving through undetected heritage resources.

## 5.2. Mitigation

The proposed rehabilitation of riverbanks may proceed without any further investigation and mitigation from an archaeological and heritage perspective

## 6. ASSESSING SIGNIFICANCE

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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

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A number of archaeologists conducted several Phase 1 Archaeological/ Heritage studies for various infrastructure developments and agriculture in the project area since 2006. The current study should be read in conjunction with previous Phase 1 Impact Studies conducted in the proposed project area. Although these studies recorded sites of significance for example. Prins (2012, 2013, 2017, 2018, 2019) Beater (2017, 2019), Magoma (2019). These studies did not record any significant heritage sites within the vicinity of the proposed project. The lack of confirmable archaeological sites recorded during the current survey is thought to be a result of limited ground surface visibility on sections of the proposed development site impeded the detection of other physical cultural heritage site remains or archaeological signatures. It should be borne in mind that the absence of confirmable and significant archaeological cultural heritage site is not evidence in itself that such sites did not exist within the proposed project site. Based on the significance assessment criterion employed for this report, the proposed riverbanks rehabilitation site was rated very low from an archaeological and heritage perspective. It is not likely that any significant archaeological or heritage resources may be found within the proposed development site. Even if archaeological remains were to be found within the riverbanks site, they will still be rated of very low significance because they will be lacking provenance. As such the proposed project may be allowed to proceed without further investigation nor mitigation.

## 8. RECOMMENDATIONS

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1. The proposed rehabilitation of riverbanks may be approved without further investigation nor mitigation since no heritage resources are not likely to be affected by the project.
2. The footprint impact of the proposed development and associated infrastructure should be kept to a minimal to limit the possibility of encountering chance finds.
3. Construction workers must be inducted on the possibility of encountering archaeological resources that may be accidentally exposed during subsurface construction prior to commencement of work on the site in order to ensure appropriate mitigation measures and that course of action is afforded to any chance finds.
4. Should chance archaeological materials or human remains be exposed during subsurface construction work on any section of the proposed rehabilitation sites, 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 construction 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 the project EMP, there are no significant cultural heritage resources barriers to the proposed development. The Heritage authority may approve the proposed riverbanks rehabilitation to proceed as planned with special commendations to implement the recommendations here in made.

## 9. CONCLUSIONS

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Integrated Specialist Services was tasked by Ruvimbo Group to carry out HIA for the proposed riverbanks rehabilitation at Driel Barrage Government Waterworks, KwaZulu Natal Province. Desktop research revealed that the project area is rich in LIA sites and historical site although not extensively researched. Prins (2017, 2018a, 2018b, 2018c, 2018d) Beater (2017, 2019), and Magoma (2019). The field study confirmed that there are no heritage sites that can be recovered from the proposed development site. Although the dam wall is older than 60 years, the proposed riverbanks rehabilitation will not interfere with the dam wall and associated infrastructure. Thus, the proposed rehabilitation of riverbanks will not trigger Section 34 of the NHRA and Section 37 of the KwaZulu Natal Amafa and Research Institute Act No. 05 of 2018). In terms of the archaeology and heritage, there are no obvious 'Fatal Flaws' or 'No-Go' areas on the site earmarked for development, the potential for chance finds, remains and DWS and contractors are advised to be diligent and observant during all construction activities on the site. The procedure for reporting chance finds has clearly been laid out and if this report is adopted by KwaZulu Natal Amafa and Research Institute, then there are no archaeological reasons why the proposed development cannot proceed.

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## APPENDIX 1: CHANCE FIND PROCEDURE FOR THE PROPOSED RIVERBANKS REHABILITATION AT DRIEL BARRAGE GOVERNMENT WATERWORKS, OKHAHLAMBA LOCAL MUNICIPALITY IN KWAZULU NATAL PROVINCE.

November 2020

### ACRONYMS

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

## CHANCE FIND PROCEDURE

### 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.

### 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 as well as KwaZulu Natal Amafa and Research Institute Act No. 05 of 2018. 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.

### Background

The proposed riverbanks rehabilitation is located in Okhahlamba Local Municipality in the KwaZulu Natal Province. The development site is subject to heritage survey and assessment at planning stage in accordance with the 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 T. Mlilo (2020) on the proposed development site. The AIA/HIA conducted was very comprehensive covering the entire site. The current study (Mlilo 2020) did not record any significant archaeological or heritage resources along the proposed project site.

### Purpose

The purpose of this Chance Find Procedure is to ensure the protection of previously unrecorded heritage resources along the proposed project site. 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 digging of foundations and movement of construction equipment. The proposed rehabilitation activities have the potential to cause severe impacts on significant tangible and intangible cultural heritage resources buried beneath the surface or concealed by tall grass cover. ISS developed this Chance Find Procedure to define the process which governs 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.

## CHANCE FIND PROCEDURE

### 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 KwaZulu Natal Amafa and Research Institute.
- Delineate the discovered find/ feature/ site and provide 25m 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 KwaZulu Natal Amafa and Research Institute.
- 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 KwaZulu Natal Amafa and Research Institute will be contacted and the guidelines for the treatment of human remains will be adhered to. If skeletal remains are identified, an archaeologist 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 KwaZulu Natal Amafa and Research Institute, the Applicant will be informed when construction activities can resume.

### 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), ISS will notify KwaZulu Natal Amafa and Research Institute on behalf of the applicant. KwaZulu Natal Amafa and Research Institute Act No. 05 of 2018 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 accidentally exposed, KwaZulu Natal Amafa and Research Institute 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 KwaZulu Natal Amafa and Research Institute 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 KwaZulu Natal Amafa and Research Institute
- f. Having obtained consent from affected families and stakeholders, the project archaeologist will then compile a Rescue Permit application and submit to KwaZulu Natal Amafa and Research Institute.
- g. As soon as the project archaeologist receives the rescue permit from KwaZulu Natal Amafa and Research Institute 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 KwaZulu Natal Amafa and Research Institute and to the company.

Note that the relocation process will be informed by KwaZulu Natal Amafa and Research Institute Regulations and the wishes of the descendants of the affected burial.

## APPENDIX 2: HERITAGE MANAGEMENT PLAN INPUT INTO THE PROPOSED RIVERBANKS REHABILITATION APPLICATION EMP

Objective								
<ul style="list-style-type: none"> <li>Protection of archaeological sites and land considered to be of cultural value.</li> <li>Protection of known physical cultural property sites against vandalism, destruction and theft; and</li> <li>The preservation and appropriate management of new archaeological finds should these be discovered during construction.</li> </ul>								
No.	Activity	Mitigation Measures	Duration	Frequency	Responsibility	Accountable	Contacted	Informed
<b>Pre-Construction Phase</b>								
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
<b>Construction Phase</b>								
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 KwaZulu Natal Amafa and Research Institute 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 from 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 KwaZulu Natal Amafa 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 KwaZulu Natal Amafa and Research Institute and South African Police Service should be contacted.		When necessary	C CECO	SM	ECO	EA EM PM
<b>Rehabilitation Phase</b>								
		Same as construction phase.						
<b>Operational Phase</b>								
		Same as construction phase.						





### APPENDIX 3: HERITAGE MITIGATION MEASURES TABLE

SITE REF	HERITAGE ASPECT	POTENTIAL IMPACT	MITIGATION MEASURES	RESPONSIBLE PARTY	PENALTY	METHOD STATEMENT REQUIRED
Chance Archaeological and Burial Sites	General area where the proposed project is situated is a historic landscape, which may yield archaeological, cultural property, remains. There are possibilities of encountering unknown archaeological sites during subsurface construction work which may disturb previously unidentified chance finds.	<p>Possible damage to previously unidentified archaeological and burial sites during construction phase.</p> <ul style="list-style-type: none"> <li>• Unanticipated impacts on archaeological sites where project actions inadvertently uncovered significant archaeological sites.</li> <li>• Loss of historic cultural landscape.</li> <li>• Destruction of burial sites and associated graves</li> <li>• Loss of aesthetic value due to construction work</li> <li>• Loss of sense of place</li> </ul> <p>Loss of intangible heritage value due to change in land use</p>	<p>In situations where unpredicted impacts occur construction activities must be stopped, and the heritage authority should be notified immediately. Where remedial action is warranted, minimize disruption in construction scheduling while recovering archaeological data. Where necessary, implement emergency measures to mitigate.</p> <ul style="list-style-type: none"> <li>• Where burial sites are accidentally disturbed during construction, the affected area should be demarcated as no-go zone by use of fencing during construction, and access thereto by the construction team must be denied.</li> <li>• Accidentally discovered burials in development context should be salvaged and rescued to safe sites as may be directed by relevant heritage authority. The heritage officer responsible should secure relevant heritage and health authorities permits for possible relocation of affected graves accidentally encountered during construction work.</li> </ul>	<ul style="list-style-type: none"> <li>• Contractor /</li> <li>• Project Manager</li> <li>• Archaeologist</li> <li>• Project EO</li> </ul>	Fine and or imprisonment under the PHRA Act & NHRA	<p>Monitoring measures should be issued as instruction within the project EMP.</p> <p>PM/EO/Archaeologists Monitor construction work on sites where such development projects commence within the farm.</p>

## 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.

### **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.

### **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.

