



**MOUNT AYLIFF PERI URBAN WATER TREATMENT WORKS  
AND BULK WATER SUPPLY PIPELINES, UMZIMVUBU LOCAL  
MUNICIPALITY, ALFRED NZO DISTRICT MUNICIPALITY,  
EASTERN CAPE PROVINCE, SOUTH AFRICA**

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**Archaeological Impact Assessment Report**

August 2013

Prepared for: Alfred Nzo District Municipality  
Document version: 2 (Final)  
Compiled by: N. Kruger



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**ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) OF DEMARCATED SURFACE AREAS FOR THE MOUNT AYLIFF PERI URBAN WATER TREATMENT WORKS AND BULK WATER SUPPLY PIPELINES, UMZIMVUBU LOCAL MUNICIPALITY, ALFRED NZO DISTRICT MUNICIPALITY, EASTERN CAPE PROVINCE, SOUTH AFRICA**

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August 2013

Document Version 1

**Conducted on behalf of:**

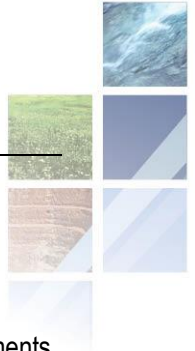
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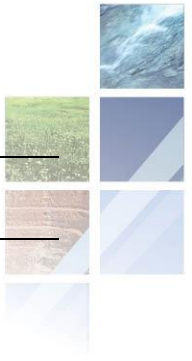


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**DECLARATION**



I, Nelius Le Roux Kruger, declare that –

- I act as the independent specialist;
- I am conducting any work and activity relating to the Mount Ayliff Peri Urban Water Treatment Works and Bulk Water Supply Pipelines Project in an objective manner, even if this results in views and findings that are not favourable to the client;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the relevant Heritage Legislation (National Heritage Resources Act no. 25 of 1999, Human Tissue Act 65 of 1983 as amended, Removal of Graves and Dead Bodies Ordinance no. 7 of 1925, Excavations Ordinance no. 12 of 1980), the Minimum Standards: Archaeological and Palaeontological Components of Impact Assessment (SAHRA and the CRM section of ASAPA), regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have not, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this declaration are true and correct.

**SIGNATURE OF SPECIALIST**

**Company:** AGES Gauteng (Pty) Ltd.

**Date:** 16 August 2013

## NOTATIONS AND TERMS

**Absolute dating:**

Absolute dating provides specific dates or range of dates expressed in years.

**Archaeology:**

The study of the human past through its material remains.

**Archaeological record:**

The archaeological record minimally includes all the material remains documented by archaeologists. More comprehensive definitions also include the record of culture history and everything written about the past by archaeologists.

**Artefact:**

Entities whose characteristics result or partially result from human activity. The shape and other characteristics of the artifact are not altered by removal of the surroundings in which they are discovered. In the southern African context examples of artefacts include potsherds, iron objects, stone tools, beads and hut remains.

**Assemblage:**

A group of artefacts recurring together at a particular time and place, and representing the sum of human activities.

**<sup>14</sup>C or radiocarbon dating:**

The <sup>14</sup>C method determines the absolute age of organic material by studying the radioactivity of carbon. It is reliable for objects not older 70 000 years by means of isotopic enrichment. The method becomes increasingly inaccurate for samples younger than ±250 years.

**Ceramic Facies:**

In terms of the cultural representation of ceramics, a facies is denoted by a specific branch of a larger ceramic tradition. A number of ceramic facies thus constitute a ceramic tradition.

**Ceramic Tradition:**

In terms of the cultural representation of ceramics, a series of ceramic units constitutes as ceramic tradition.

**Context:**

An artefact's context usually consists of its immediate *matrix*, its *provenience* and its *association* with other artefacts. When found in *primary context*, the original artefact or structure was undisturbed by natural or human factors until excavation and if in *secondary context*, disturbance or displacement by later ecological action or human activities occurred.

**Culture:**

A contested term, "culture" could minimally be defined as the learned and shared things that people have, do and think.

**Cultural Heritage Resource:**

The broad generic term *Cultural Heritage Resources* refers to any physical and spiritual property associated with past and present human use or occupation of the environment, cultural activities and history. The term includes sites, structures, places, natural features and material of palaeontological, archaeological, historical, aesthetic, scientific, architectural, religious, symbolic or traditional importance to specific individuals or groups, traditional systems of cultural practice, belief or social interaction.

**Cultural landscape:**

A cultural landscape refers to a distinctive geographic area with cultural significance.

**Cultural Resource Management (CRM):**

A system of measures for safeguarding the archaeological heritage of a given area, generally applied within the framework of legislation designed to safeguard the past.

**Ecofact:**

Non artifactual material remains that has cultural relevance which provides information about past human activities. Examples would include remains or evidence of domesticated animals or plant species.



**Excavation:**

The principal method of data acquisition in archaeology, involving the systematic uncovering of archaeological remains through the removal of the deposits of soil and the other material covering and accompanying it.

**Feature:**

Non-portable artifacts, in other words artifacts that cannot be removed from their surroundings without destroying or altering their original form. Hearths, roads, and storage pits are examples of archaeological features

**GIS:**

Geographic Information Systems are computer software that allows layering of various types of data to produce complex maps; useful for predicting site location and for representing the analysis of collected data within sites and across regions.

**Historical archaeology:**

Primarily that aspect of archaeology which is complementary to history based on the study of written sources. In the South African context it concerns the recovery and interpretation of relics left in the ground in the course of Europe's discovery of South Africa, as well as the movements of the indigenous groups during, and after the "Great Scattering" of Bantu-speaking groups – known as the *mfecane* or *difaqane*.

**Impact:** A description of the effect of an aspect of the development on a specified component of the biophysical, social or economic environment within a defined time and space.

**Iron Age:**

Also known as "Farmer Period", the "Iron Age" is an archaeological term used to define a period associated with domesticated livestock and grains, metal working and ceramic manufacture.

**Lithic:**

Stone tools or waste from stone tool manufacturing found in on archaeological sites.

**Management / Management Actions:** Actions – including planning and design changes - that enhance benefits associated with a proposed development, or that avoid, mitigate, restore, rehabilitate or compensate for the negative impacts.

**Matrix:**

The material in which an artefact is situated (sediments such as sand, ashy soil, mud, water, etcetera). The matrix may be of natural origin or human-made.

**Megalith:**

A large stone, often found in association with others and forming an alignment or monument, such as large stone statues.

**Midden:**

Refuse that accumulates in a concentrated heap.

**Microlith:**

A small stone tool, typically knapped of flint or chert, usually about three centimetres long or less.

**Monolith:**

A geological feature such as a large rock, consisting of a single massive stone or rock, or a single piece of rock placed as, or within, a monument or site.

**Oral Histories:**

The historical narratives, stories and traditions passed from generation to generation by word of mouth.

**Phase 1 CRM Assessment:**

An Impact Assessment which identifies archaeological and heritage sites, assesses their significance and comments on the impact of a given development on the sites. Recommendations for site mitigation or conservation are also made during this phase.

**Phase 2 CRM Study:**

In-depth studies which could include major archaeological excavations, detailed site surveys and mapping / plans of sites, including historical / architectural structures and features. Alternatively, the sampling of sites by collecting material, small test pit excavations or auger sampling is required. Mitigation / Rescue involves planning the protection of significant sites or sampling through excavation or

collection (in terms of a permit) at sites that may be lost as a result of a given development.

**Phase 3 CRM Measure:**

A Heritage Site Management Plan (for heritage conservation), is required in rare cases where the site is so important that development will not be allowed and sometimes developers are encouraged to enhance the value of the sites retained on their properties with appropriate interpretive material or displays.

**Prehistoric archaeology:**

That aspect of archaeology which concerns itself with the development of humans and their culture before the invention of writing. In South Africa, prehistoric archaeology comprises the study of the Early Stone Age, the Middle Stone Age and the greater part of the Later Stone Age and the Iron Age.

**Probabilistic Sampling:**

A sampling strategy that is not biased by any person's judgment or opinion. Also known as statistical sampling, it includes systematic, random and stratified sampling strategies.

**Provenience**

Provenience is the three-dimensional (horizontal and vertical) position in which artefacts are found. Fundamental to ascertaining the provenience of an artefact is *association*, the co-occurrence of an artefact with other archaeological remains; and *superposition*, the principle whereby artefacts in lower levels of a matrix were deposited before the artefacts found in the layers above them, and are therefore older.

**Random Sampling:**

A probabilistic sampling strategy whereby randomly selected sample blocks in an area are surveyed. These are fixed by drawing coordinates of the sample blocks from a table of random numbers.

**Relative dating:**

The process whereby the relative antiquity of sites and objects are determined by putting them in sequential order but not assigning specific dates.

**Remote Sensing:**

The small or large-scale acquisition of information of an object or phenomenon, by the use of either recording or real-time sensing device(s) that is not in physical or intimate contact with the object (such as by way of aircraft, spacecraft or satellite). Here, ground-based geophysical methods such as Ground Penetrating Radar and Magnetometry are often used for archaeological imaging.

**Rock Art Research:**

Rock art can be "decoded" in order to inform about cultural attributes of prehistoric societies, such as dress-code, hunting and food gathering, social behaviour, religious practice, gender issues and political issues.

**Scoping Assessment:** The process of determining the spatial and temporal boundaries (i.e. extent) and key issues to be addressed in an impact assessment. The main purpose is to focus the impact assessment on a manageable number of important questions on which decision making is expected to focus and to ensure that only key issues and reasonable alternatives are examined. The outcome of the scoping process is a Scoping Report that includes issues raised during the scoping process, appropriate responses and, where required, terms of reference for specialist involvement.

**Sensitive:**

Often refers to graves and burial sites although not necessarily a heritage place, as well as ideologically significant sites such as ritual / religious places. *Sensitive* may also refer to an entire landscape / area known for its significant heritage remains.

**Site (Archaeological):**

A distinct spatial clustering of artefacts, features, structures, and organic and environmental remains, as the residue of human activity. These include surface sites, caves and rock shelters, larger open-air sites, sealed sites (deposits) and river deposits. Common functions of archaeological sites include living or habitation sites, kill sites, ceremonial sites, burial sites, trading, quarry, and art sites,

**Slag:**

The material residue of smelting processes from metalworking.





**Stone Age:**

An archaeological term used to define a period of stone tool use and manufacture.

**Stratigraphy:**

This principle examines and describes the observable layers of sediments and the arrangement of strata in deposits

**Stratified Sampling:**

A probabilistic sampling strategy whereby a study area is divided into appropriate zones – often based on the probable location of archaeological areas, after which each zone is sampled at random.

**Systematic Sampling:**

A probabilistic sampling strategy whereby a grid of sample blocks is set up over the survey area and each of these blocks is equally spaced and searched.

**Tradition:**

Artefact types, assemblages of tools, architectural styles, economic practices or art styles that last longer than a phase and even a horizon are describe by the term *tradition*. A common example of this is the early Iron Age tradition of Southern Africa that originated ± 200 AD and came to an end at about 900 AD.

**Trigger:** A particular characteristic of either the receiving environment or the proposed project which indicates that there is likely to be an *issue* and/or potentially significant *impact* associated with that proposed development that may require specialist input. Legal requirements of existing and future legislation may also trigger the need for specialist involvement.

**Tuyère:**

A ceramic blow-tube used in the process of iron smelting / reduction.

**LIST OF ABBREVIATIONS**

Abbreviation	Description
ASAPA	Association for South African Professional Archaeologists
AIA	Archaeological Impact Assessment
BP	Before Present
BCE	Before Common Era
EIA	Early Iron Age (also Early Farmer Period)
EIA	Environmental Impact Assessment
EFP	Early Farmer Period (also Early Iron Age)
ESA	Earlier Stone Age
GIS	Geographic Information Systems
HIA	Heritage Impact Assessment
K2/Map	K2/Mapungubwe Period
LFP	Later Farmer Period (also Later Iron Age)
LIA	Later Iron Age (also Later Farmer Period)
LSA	Later Stone Age
MIA	Middle Iron Age (also Early later Farmer Period)
MRA	Mining Rights Application
MSA	Middle Stone Age
NHRA	National Heritage Resources Act No.25 of 1999, Section 35
SAHRA	South African Heritage Resources Association
YCE	Years before Common Era (Present)

TABLE OF CONTENTS

<b>1</b>	<b>EXECUTIVE SUMMARY .....</b>	<b>9</b>
<b>2</b>	<b>BACKGROUND.....</b>	<b>11</b>
2.1	SCOPE AND MOTIVATION.....	11
2.2	PROJECT DIRECTION .....	11
2.3	TERMS OF REFERENCE .....	11
2.4	CRM: LEGISLATION, CONSERVATION AND HERITAGE MANAGEMENT .....	12
2.4.1	<i>Legislation regarding archaeology and heritage sites.....</i>	<i>12</i>
2.4.2	<i>Background to HIA and AIA Studies.....</i>	<i>13</i>
<b>3</b>	<b>REGIONAL CONTEXT .....</b>	<b>15</b>
3.1	AREA LOCATION .....	15
3.2	AREA DESCRIPTION: RECEIVING ENVIRONMENT .....	16
3.3	SITE DESCRIPTION.....	17
<b>4</b>	<b>METHOD OF ENQUIRY .....</b>	<b>20</b>
4.1	SOURCES OF INFORMATION.....	20
4.1.1	<i>Desktop Study.....</i>	<i>20</i>
4.1.2	<i>Aerial Representations and Survey .....</i>	<i>20</i>
4.1.3	<i>Field Survey.....</i>	<i>20</i>
4.1.4	<i>General Public Liaison .....</i>	<i>20</i>
4.2	LIMITATIONS.....	20
4.2.1	<i>Access .....</i>	<i>20</i>
4.2.2	<i>Visibility.....</i>	<i>21</i>
4.2.3	<i>Limitations and Constraints.....</i>	<i>24</i>
<b>5</b>	<b>RESULTS: ARCHAEOLOGICAL SURVEY .....</b>	<b>24</b>
5.1	PALAEONTOLOGY .....	24
5.2	THE STONE AGE.....	25
5.3	THE IRON AGE (FARMER PERIOD).....	26
5.4	HISTORICAL / COLONIAL PERIOD AND RECENT TIMES.....	27
5.5	GRAVES & BURIALS .....	29
5.6	OTHER POINTS OF INTEREST.....	35
-	SITE MAP02 .....	37
<b>6</b>	<b>ARCHAEO-HISTORICAL CONTEXT .....</b>	<b>39</b>
6.1	THE ARCHAEOLOGY OF SOUTHERN AFRICA .....	39
6.1.1	<i>The Stone Ages .....</i>	<i>39</i>
6.1.2	<i>The Iron Age (Farmer Period).....</i>	<i>40</i>
6.1.3	<i>Historical and Colonial Times and Recent History:.....</i>	<i>41</i>
6.2	THE EASTERN CAPE AND MOUNT AYLIFF: SPECIFIC THEMES.....	41
6.2.1	<i>Palaeontology .....</i>	<i>41</i>
6.2.2	<i>The Stone Age Period.....</i>	<i>41</i>
6.2.3	<i>Hunters-gatherers, Herders and Shell Middens.....</i>	<i>42</i>
6.2.4	<i>A landscape of rock markings: Rock Art.....</i>	<i>43</i>
6.2.5	<i>The Iron Age / Farmer Period .....</i>	<i>44</i>
6.2.6	<i>Later History: Reorganization, Colonial Contact and living heritage.....</i>	<i>46</i>

6.2.7	<i>The Pondo People</i> .....	48
<b>7</b>	<b>RESULTS: STATEMENT OF SIGNIFICANCE AND IMPACT RATING</b> .....	<b>49</b>
7.1	HERITAGE RESOURCES MANAGEMENT AND CONSERVATION .....	49
7.2	CATEGORIES OF SIGNIFICANCE .....	49
7.3	POTENTIAL IMPACTS AND SIGNIFICANCE RATINGS .....	51
7.3.1	<i>General assessment of impacts on resources</i> .....	51
7.3.2	<i>Direct impact rating</i> .....	52
7.3.3	<i>Management actions</i> .....	53
7.3.4	<i>Site significance and impact rating</i> .....	54
-	Site MAS 01 .....	54
-	Site MAI01 .....	56
-	Site MAH01 & Site MAH02 .....	59
-	Site MAB01- Site MAB09 .....	61
-	Site MAP01 .....	63
-	SiteMAP02 .....	65
7.4	DISCUSSION: EVALUATION OF RESULTS AND IMPACTS .....	67
<b>8</b>	<b>RECOMMENDATIONS</b> .....	<b>71</b>
<b>9</b>	<b>GENERAL COMMENTS AND CONDITIONS</b> .....	<b>72</b>
<b>10</b>	<b>BIBLIOGRAPHY</b> .....	<b>74</b>

LIST OF FIGURES

Figure 3-1: 1:50 00 Map representation of the Mt Ayliff Peri Urban Water Scheme Project location (3029CD).....	15
Figure 3-2: The southern sector of the study area, looking west towards Mount Ayliff in the distance. ....	16
Figure 3-3: The northern sector of the study area, looking east towards Betshwana. ....	16
Figure 3-4: Large-scale digging and surface disturbance in the study area at Esingeni.....	17
Figure 3-5: Surface soil erosion east of Mount Ayliff.....	17
Figure 3-6: Aerial photograph of routes and proposed infrastructure for the Mt Ayliff Peri Urban Water Scheme indicating areas of interest in the landscape. ....	19
Figure 4-1: View of the current Mount Ayliff water treatments works east of the town. ....	21
Figure 4-2: View of the study area east of Mount Ayliff. ....	22
Figure 4-3: View of the study area, looking north towards Esingeni and Betshwana. ....	22
Figure 4-4: View of the study area north of Mount Ayliff. ....	23
Figure 4-5: View of current reservoirs on a high ridge in the Emalawini area. ....	23
Figure 4-6: Dense vegetation east on Mount Ayliff in the study area. ....	24
Figure 5-1: Erosion gullies containing minor MSA deposits at Site MAS01.....	25
Figure 5-2: Weathered formal MSA lithics from Site MAS01: scraper (left), blade (centre) and point (right). ....	26
Figure 5-3: Lithics from Site MAS01. Note highly weathered proto-handaxe left. ....	26
Figure 5-4: Remains of a stone wall structure at Site MAI01. ....	27
Figure 5-5: Aerial image indicating two large cattle kraals at Site MAH01. ....	28
Figure 5-6: Overgrown stone walling at Site MAH01.....	28
Figure 5-7: Stone structures and foundations at Site MAH02.....	29
Figure 5-8: Marked burials at site MAB01. ....	30
Figure 5-9: Marked and unmarked overgrown burials at site MAB02. ....	31
Figure 5-10: Marked burials at site MAB03. ....	31
Figure 5-11: Unmarked burials at site MAB04. ....	32
Figure 5-12: Possible burial mound at Site MAB06.....	33
Figure 5-13: A possible burial at Site MAB07. ....	34
Figure 5-14: A single burial at Site MAB08.....	34
Figure 5-15: Site MAB09, the Mount Ayliff municipal cemetery.....	35
Figure 5-16: Fenced marble monument for Elizabeth Paul at Site MAP01. ....	36
Figure 5-17: The entrance to the Ntsizwa Community Park. ....	37
Figure 5-18: Map indicating the locations of archaeological and historical occurrences discussed in the text, occurring in the Mt Ayliff Peri Urban Water Scheme Project Area.....	38
Figure 6-1: Large shell midden off the coast of southern Africa.....	43
Figure 6-2: Hunter-Gatherer Rock Art from southern Lesotho. ....	44
Figure 6-3: Early Iron Age farmer period sites in the Eastern Cape (after Feely & Bell-Cross 2011).....	45

## 1 EXECUTIVE SUMMARY

This report details the results of an Archaeological Impact Assessment (AIA) study in the Mount Ayliff area, south of Kokstad in the Eastern Cape Province where the Alfred Nzo District Municipality is undertaking the Mount Ayliff Peri Urban Water Treatment Works and Bulk Water Supply Project. The report includes background information on the area's archaeology, its representation in southern Africa, and the history of the larger area under investigation, survey methodology and results as well as heritage legislation and conservation policies. A copy of the report will be supplied to the South African Heritage Resources Agency (SAHRA) and recommendations contained in this document will be reviewed in order to consider the conservation priority of sites located in the area. Limited academic archaeological and historical studies have been conducted in this section of the Eastern Cape. However, the area encompasses a rich and diverse archaeological landscape, representative of most phases of human and cultural development in southern Africa. A number of areas of archaeological and heritage potential were located during the AIA survey which focused around the route for the proposed access road.

### ***Palaeontology:***

Palaeontological remains in the form of silicified wood fragments were observed elsewhere in the landscape and it is recommended that such resources be avoided if exposed. It is also recommended that close monitoring of the general surroundings be done during construction, in order not to disturb undetected palaeontological remains. If such remains were to be encountered, a suitably qualified palaeontologist should be consulted in order to establish the significance, and provide management measures for such resources.

### ***Stone Age Remains:***

During the survey, a low density Middle Stone Age scatter was identified along erosion gullies on a mountain slope east of Mt Ayliff. It is recommended that any activities around this MSA occurrence, which is rated as of medium-low significance (**Site MAS01**), be monitored in order to avoid the destruction of significant and previously undetected Stone Age occurrences.

### ***Iron Age (Farmer Period):***

A minor rough stone structure, resembling a section of collapsed stone walling and terracing was documented near existing water reservoirs on a high ridge at KuSimakamaka. This possible Iron Age Farmer Period site and stone structure (**Site MAI01**) is of medium-low significance and it is recommended that the site be monitored when construction commences in order to avoid the possible loss of previously undetected heritage remains.

### ***Historical Period Remains:***

The remains of two large cattle kraals (**Site MAH01**) as well as a small historical settlement (**Site MAH02**) were located in the study area. The sites are of medium-low significance due to poor preservation of the sites and it is recommended that any activities pertaining to the water supply development in the area be monitored in order to avoid any possible impact sites of significance in the area. However, should the structures be directly impacted by development activities, a destruction permit from the relevant heritage resources authority (SAHRA) should be obtained.

### ***Graves:***

Nine individual burial grounds have been identified along the proposed water supply project routes (**Site MAB01**)

- **Site MAB09**). These sites are of high heritage sensitivity and it is primarily recommended that all activities pertaining to the construction of the pipelines be conducted in such a way as to avoid impact on the graves. In addition, a conservation buffer zone of at least 20m around the graves, as well as the fencing off of all cemeteries and graves are recommended. However, should the graves or the proposed 20m buffer zone inevitably be impacted in any way by the planned activities, full grave relocations are recommended for these burial grounds. This measure should be undertaken by a qualified archaeologist, and in accordance with relevant legislation and subject to any local and regional provisions and laws and by-laws pertaining to human remains. A full social consultation process should occur in conjunction with the mitigation of cemeteries and burials. **As burial locations in this area follow a general (and fairly common) pattern where graves occur within the context of homestead complexes, utmost care should be taken during construction in occupation areas, not to disturb previously undetected burials.**

***Sites of General Cultural Interest:***

Two sites of general cultural interest were identified in the study area. The Elizabeth Paul memorial site (**Site MAP01**) carries high cultural heritage significance and it is recommended that the site be avoided and any activities pertaining to the water supply project in the area be monitored in order to avoid any possible impact on the site. The Ntsizwa Community Park (**Site MAP02**) is of local value and it is recommended that any activities pertaining to the project that might occur near the site be monitored in order to avoid possible impact on the site.

It is essential that cognisance be taken of the larger archaeological landscape of the area in order to avoid the destruction of previously undetected heritage sites. Here, care should be taken around rock faces and outcrops in the larger landscape, as rock art is known to occur on these outcrops. Water sources such as drainage lines and rivers should also be regarded as potentially sensitive in terms of possible Stone Age deposits. The possible existence of Historical Period resources deriving from the area's more recent history should also be considered. Graves and cemeteries generally occur within settlements, often around homesteads and utmost care should be taken not to disturb these high risk heritage resources as they involve complex intrinsic social and ritual attributes within the community. Generally, a careful watching brief monitoring process is recommended for all stages of the project, specifically around heritage sensitive areas i.e. historical period structures and graves. Should any subsurface palaeontological, archaeological or historical material be exposed during construction activities, all activities should be suspended and the archaeological specialist should be notified immediately

This report details the methodology, limitations and recommendations relevant to these heritage areas, as well as areas of proposed development. It should be noted that mitigation measures are valid for the duration of the development process, and mitigation measures might have to be implemented on additional features of heritage importance not detected during this Phase 1 assessment (e.g. uncovered during the construction process).

## 2 BACKGROUND

### 2.1 Scope and Motivation

AGES was commissioned by the Alfred Nzo District Municipality for an Archaeological Impact Assessment (AIA) study of areas demarcated for the Mount Ayliff Peri Urban Water Treatment Works (WTW) and Bulk Water Supply Pipelines Project. The rationale of the AIA study was to determine the presence of heritage resources such as archaeological and historical sites and features, graves and places of religious and cultural significance; to consider the impact of the proposed project on such heritage resources, and to submit appropriate recommendations with regard to the cultural resources management measures that may be required at affected sites / features.

### 2.2 Project Direction

AGES's expertise ensures that all projects be conducted to the highest international ethical and professional standards. As archaeological specialist for AGES, Mr Neels Kruger acted as field director for the project; responsible for the assimilation of all information, the compilation of the final AIA report and recommendations in terms of heritage resources on the demarcated project area. Mr Kruger is an accredited archaeologist and Culture Resources Management (CRM) practitioner with the Association of South African Professional Archaeologists (ASAPA), a member of the Society for Africanist Archaeologists (SAFA) and the Pan African Archaeological Association (PAA) as well as a Master's Degree candidate in archaeology at the University of Pretoria.

### 2.3 Terms of Reference

Heritage specialist input in Environmental Impact Assessment (EIA) processes is essential to ensure that through the management of change, development conserves our heritage. Heritage specialist input in EIA processes can play a positive role in the development process by enriching an understanding of the past and its contribution to the present. It is also a legal requirement for certain categories of development defined in the relevant heritage legislation, which may have an impact on heritage resources. Thus, EIAs should, in all cases, include the assessment of Heritage Resources. The heritage component of the EIA is provided for in the **National Environmental Management Act, (Act 107 of 1998)** and endorsed by section 38 of the **National Heritage Resources Act (NHRA - Act 25 of 1999)**. In addition, the NHRA protects all structures and features older than 60 years (see Section 34), archaeological sites and material (see Section 35) and graves as well as burial sites (see Section 36). The objective of this legislation is to enable and to facilitate developers to employ measures to limit the potentially negative effects that the development could have on heritage resources.

Based hereon, this project functioned according to the following **terms of reference** for heritage specialist input:

- *Provide a detailed description of all archaeological artefacts, structures (including graves) and settlements which may be affected, if any.*
- *Assess the nature and degree of significance of such resources within the area.*
- *Establish heritage informants/constraints to guide the development process through establishing thresholds of impact significance;*
- *Assess any possible impact on the archaeological and historical remains within the area emanating from the proposed development activities.*
- *Propose possible heritage management measures provided that such action is necessitated by the development.*

- Liaise and consult with the South African Heritage Resources Agency (SAHRA).

## 2.4 CRM: Legislation, Conservation and Heritage Management

The broad generic term *Cultural Heritage Resources* refers to any physical and spiritual property associated with past and present human use or occupation of the environment, cultural activities and history. The term includes sites, structures, places, natural features and material of palaeontological, archaeological, historical, aesthetic, scientific, architectural, religious, symbolic or traditional importance to specific individuals or groups, traditional systems of cultural practice, belief or social interaction.

### 2.4.1 Legislation regarding archaeology and heritage sites

The South African Heritage Resources Agency (SAHRA) and their provincial offices aim to conserve and control the management, research, alteration and destruction of cultural resources of South Africa. It is therefore vitally important to adhere to heritage resource legislation at all times.

- *National Heritage Resources Act No 25 of 1999, section 35*

According to the National Heritage Resources Act of 1999 a historical site is “any identifiable building or part thereof, marker, milestone, gravestone, landmark or tell older than 60 years.” This clause is commonly known as the “60-years clause”. Buildings are amongst the most enduring features of human occupation, and this definition therefore includes all buildings older than 60 years, modern architecture as well as ruins, fortifications and Iron Age settlements. “Tell” refers to the evidence of human existence which is no longer above ground level, such as building foundations and buried remains of settlements (including artefacts). The Act identifies heritage objects as:

- objects recovered from the soil or waters of South Africa including archaeological and palaeontological objects, meteorites and rare geological specimens
- visual art objects
- military objects
- numismatic objects
- objects of cultural and historical significance
- objects to which oral traditions are attached and which are associated with living heritage
- objects of scientific or technological interest
- any other prescribed category

With regards to activities and work on archaeological and heritage sites this Act states that:

*“No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit by the relevant provincial heritage resources authority.” (34. [1] 1999:58)*

and

*“No person may, without a permit issued by the responsible heritage resources authority-*

- destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;*
- destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;*



- (c) *trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or*
- (d) *bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites. (35. [4] 1999:58)."*

And:

*"No person may, without a permit issued by SAHRA or a provincial heritage resources agency-*

- (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;*
- (c) *bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) and excavation equipment, or any equipment which assists in the detection or recovery of metals (36. [3] 1999:60)."*

- *Human Tissue Act of 1983 and Ordinance on the Removal of Graves and Dead Bodies of 1925*

Graves 60 years or older are heritage resources and fall under the jurisdiction of both the National Heritage Resources Act and the Human Tissues Act of 1983. However, graves younger than 60 years are specifically protected by the Human Tissues Act (Act 65 of 1983) and the Ordinance on the Removal of Graves and Dead Bodies (Ordinance 7 of 1925) as well as any local and regional provisions, laws and by-laws. Such burial places also fall under the jurisdiction of the National Department of Health and the Provincial Health Departments. Approval for the exhumation and re-burial must be obtained from the relevant Provincial MEC as well as the relevant Local Authorities.

#### **2.4.2 Background to HIA and AIA Studies**

South Africa's unique and non-renewable archaeological and palaeontological heritage sites are 'Generally' protected in terms of the National Heritage Resources Act (Act No 25 of 1999, section 35) and may not be disturbed at all without a permit from the relevant heritage resources authority. Heritage sites are frequently threatened by development projects and both the environmental and heritage legislation require impact assessments (HIAs & AIAs) that identify all heritage resources in areas to be developed. Particularly, these assessments are required to make recommendations for protection or mitigation of the impact of the sites. HIAs and AIAs should be done by qualified professionals with adequate knowledge to (a) identify all heritage resources including archaeological and palaeontological sites that might occur in areas of developed and (b) make recommendations for protection or mitigation of the impact on the sites.

The National Heritage Resources Act (Act No. 25 of 1999, section 38) provides guidelines for Cultural Resources Management and prospective developments:

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

- (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;*
- (b) the construction of a bridge or similar structure exceeding 50 m in length;*
- (c) any development or other activity which will change the character of a site:*
  - (i) exceeding 5 000 m<sup>2</sup> in extent; or*
  - (ii) involving three or more existing erven or subdivisions thereof; or*
  - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or*
  - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;*
- (d) the re-zoning of a site exceeding 10 000 m<sup>2</sup> in extent; or*
- (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority,*

*must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.”*

And:

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

- (a) The identification and mapping of all heritage resources in the area affected;*
- (b) an assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;*
- (c) an assessment of the impact of the development on such heritage resources;*
- (d) an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;*
- (e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;*
- (f) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and*
- (g) plans for mitigation of any adverse effects during and after the completion of the proposed development (38. [3] 1999:64).”*

Consequently, section 35 of the Act requires Heritage Impact Assessments (HIAs) or Archaeological Impact Assessments (AIAs) to be done for such developments in order for all heritage resources, that is, all places or objects of aesthetics, architectural, historic, scientific, social, spiritual, linguistic or technological value or significance to be protected. Thus any assessment should make provision for the protection of all these heritage

Mount Ayliff Peri Urban Water Scheme: Archaeological Impact Assessment Report

components, including archaeology, shipwrecks, battlefields, graves, and structures older than 60 years, living heritage, historical settlements, landscapes, geological sites, palaeontological sites and objects.

3 REGIONAL CONTEXT

3.1 Area Location

The Mount Ayliff Peri Urban Water Treatment Works and Bulk Water Supply Project is planned for the towns of Mount Ayliff and Betshwana in the Umzimvubu Local Municipality in the Alfred Nzo District, generally at **S30.809160° E29.367166° (Mount Ayliff)** and **S30.770342° E29.397190° (Betshwana)**. A number of smaller villages occur in in the project area, including Esingeni, Kwezeni, Bijintaba and eSixhotyeni. The study area is situated approximately 35km south of Kokstad on the N2 national route.

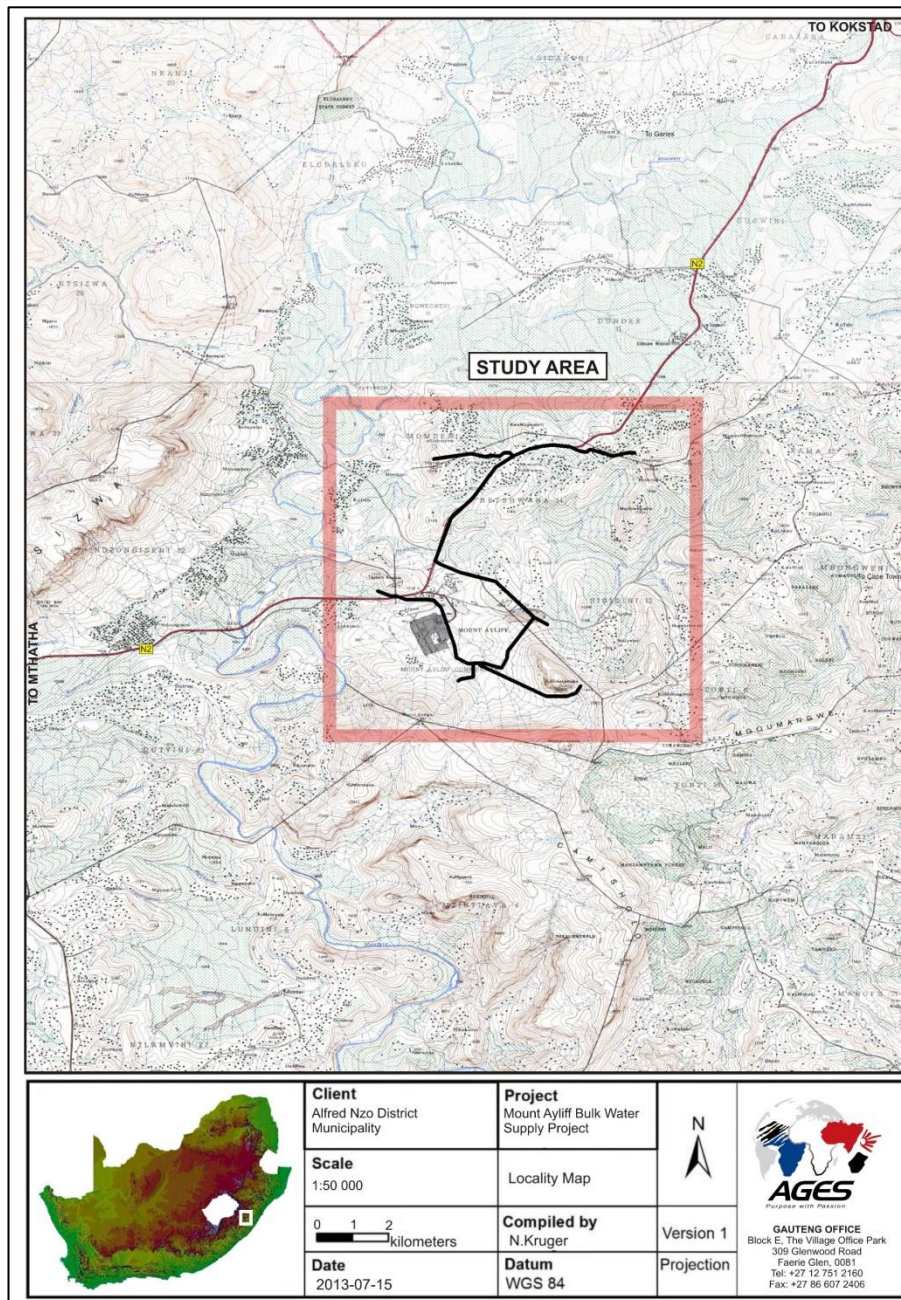


Figure 3-1: 1:50 00 Map representation of the Mt Ayliff Peri Urban Water Scheme Project location (3029CD).

### 3.2 Area Description: Receiving Environment

Mount Ayliff is situated on the hills of the Eastern Cape grasslands east of the Drakensberg. The ecological landscape is defined as a combination of mixed grasslands and forest / scrub forest, typically dominated by mixed grassveld and forests at differing altitudes. The annual rainfall ranges between 1150 to over 1300mm per annum. The geology of the larger region is constituted by mudstones and sandstones of the Beaufort group and towards the coast, shales, mudstones and sandstones of the Ecca group, with exposures of dolerite intrusions mostly in the higher lying areas, are found. Soils in the area are moderate to deep and vary between sandy loams in the upper half to clayey loam in the downstream half. Several perennial and non-perennial streams and drainage lines, most of them originating in the surrounding hills, transect the area. The project is situated within expanding rural residential areas and surface disturbances are prevalent in the study areas. These disturbance agents include agricultural activities such as ploughing and grazing and severe surface erosion and decomposition of low-lying geomorphological deposits.



Figure 3-2: The southern sector of the study area, looking west towards Mount Ayliff in the distance.



Figure 3-3: The northern sector of the study area, looking east towards Betswana.

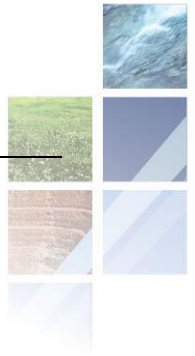


Figure 3-4: Large-scale digging and surface disturbance in the study area at Esingeni.



Figure 3-5: Surface soil erosion east of Mount Ayliff.

### 3.3 Site Description

The Mt Ayliff Peri Urban Water Scheme extends for approximately 20km from the village of Mount Ayliff

### Mount Ayliff Peri Urban Water Scheme: Archaeological Impact Assessment Report

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northwards to Betshwana, including villages such as Esingeni, Kweceni, Bijintaba and eSixhotyeni. The project involves the construction of bulk water supply pipelines and well as reservoirs and the upgrade a waste water treatment plant at Mt Ayliff. The terrain consists predominantly of mountainous areas with flatter parcels of developable land on the plateaus, terraces and areas adjacent to the rivers. The vegetation mainly consists of grassland, with pockets of natural bush thicket around the watercourses emanating from the mountain slopes. A significant proportion of this area, particularly on the mountain slopes, has rock which is less than one metre below the natural ground level.

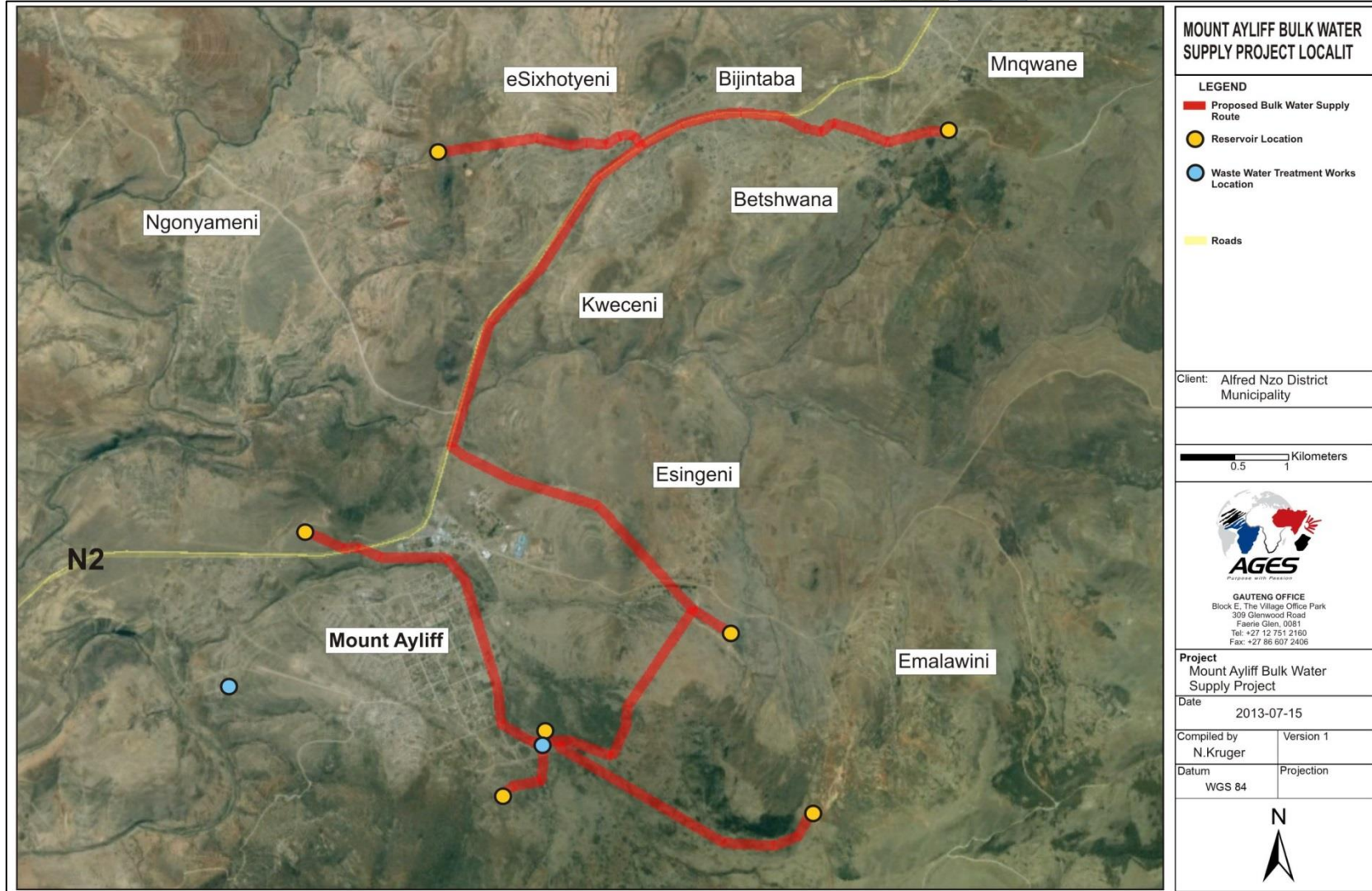
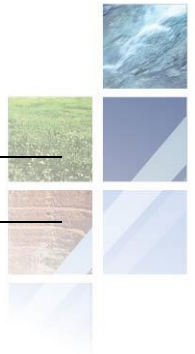


Figure 3-6: Aerial photograph of routes and proposed infrastructure for the Mt Ayliff Peri Urban Water Scheme indicating areas of interest in the landscape.



## **4 METHOD OF ENQUIRY**

### **4.1 Sources of Information**

#### **4.1.1 Desktop Study**

A desktop study was prepared in order to contextualize the proposed project within a larger historical milieu. The study focused on relevant previous studies, archaeological and archival sources, Heritage Impact Assessment Reports, aerial photographs, historical maps and local histories, all pertaining to the larger landscape of this section of the Eastern Cape Province.

#### **4.1.2 Aerial Representations and Survey**

Aerial photography is often employed to locate and study archaeological sites, particularly where larger scale area surveys are performed. This method was applied to aid the pedestrian and vehicular survey at Mt Ayliff and surroundings, where contour lines of elevations, depressions, variation in vegetation, soil marks and landmarks were examined. Specific attention was given to shadow sites (shadows of walls or earthworks which are visible early or late in the day), crop mark sites (crop mark sites are visible because disturbances beneath crops cause variations in their height, vigour and type) and soil marks (e.g. differently coloured or textured soil (soil marks) might indicate ploughed-out burial mounds). Attention was also given to moisture differences, as prolonged dampening of soil as a result of precipitation frequently occurs over walls or embankments. By superimposing high frequency aerial photographs with images generated with Google Earth, potential sensitive areas were subsequently identified. These areas served as referenced points from where further pedestrian surveys were carried out.

#### **4.1.3 Field Survey**

Archaeological survey implies the systematic procedure of the identification of archaeological sites. An archaeological survey of areas to be impacted by the Mt Ayliff Peri Urban Water Scheme Project was done by means of a systematic survey in accordance with standard archaeological practise by which heritage resources are observed and documented. In order to sample surface areas systematically and to ensure a high probability of site recording the entire area to be impacted by the road upgrade was driven and field walked. Using a Garmin E-trex Legend GPS visible objects and structures of archaeological / heritage value were recorded and photographed with a Canon 450D Digital camera. Real time aerial orientation, by means of a mobile Google Earth application was also employed to investigate possible disturbed areas during the survey. As most archaeological material occur in single or multiple stratified layers beneath the soil surface, special attention was given to disturbances, both man-made such as roads and clearings, as well as those made by natural agents such as burrowing animals and erosion.

#### **4.1.4 General Public Liaison**

In single cases, consultation with local residents provided information on the general history of the area, possible locations of heritage resources and brief commentaries on the recent history of the area.

### **4.2 Limitations**

#### **4.2.1 Access**

The project area is accessed from the N2 national road to Kokstad. Access control is not applied to any of the



zones included in the project area around villages and no access constraints or restrictions were encountered during the field survey.

#### 4.2.2 Visibility

The surrounding vegetation at Mt Ayliff is mostly comprised out of mixed grasslands and riverine bush. The general visibility at the time of the survey (June 2013) was high in most areas as a result of the domestic nature of the landscape around the road upgrade areas and also resulting from past surface disturbances. However, visibility was low on a high ridge south-east of the existing Mt Ayliff water treatment works towards Emalawini, surface cover was dense and impenetrable. In single cases during the survey sub-surface inspection was possible but where applied, this revealed no substantial archaeological deposits.



Figure 4-1: View of the current Mount Ayliff water treatments works east of the town.

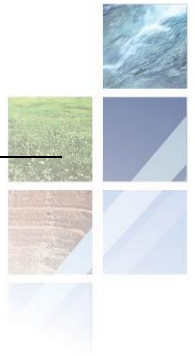


Figure 4-2: View of the study area east of Mount Ayliff.

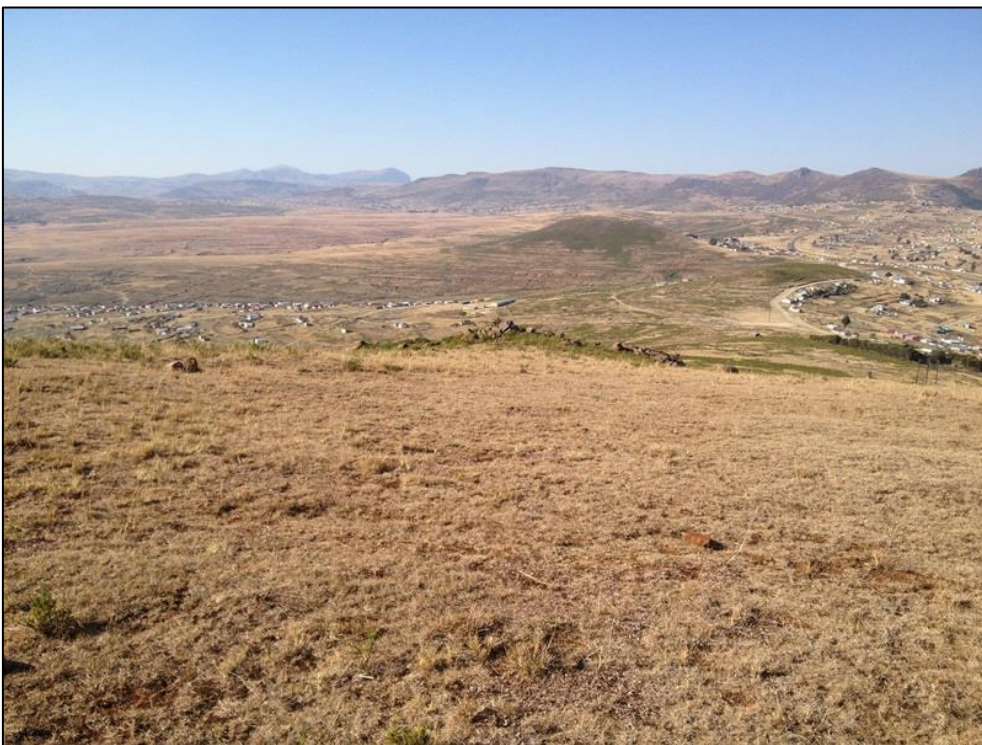


Figure 4-3: View of the study area, looking north towards Esingeni and Betshwana.

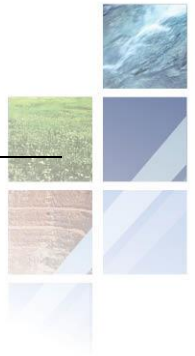


Figure 4-4: View of the study area north of Mount Ayliff.



Figure 4-5: View of current reservoirs on a high ridge in the Emalawini area.



Figure 4-6: Dense vegetation east on Mount Ayliff in the study area.

#### 4.2.3 Limitations and Constraints

The pedestrian site survey primarily focused around areas tentatively identified as sensitive and of high heritage probability (i.e. those noted during the aerial survey) where the bridge will be constructed. Survey-time proved adequate but visibility proved to be a somewhat of a constraint along one area on a high ridge south-east of Mt Ayliff.

Even though it might be assumed that survey findings are representative of the heritage landscape of the Mt Ayliff area, it should be stated that the possibility exists that individual sites could be missed due to the localised nature of some heritage remains as well as the possible presence of sub-surface archaeology. Thus, maintaining due cognisance of the integrity and accuracy of the archaeological survey, it should be stated that the heritage resources identified during the study do not necessarily represent *all* the heritage resources present on the area. The subterranean nature of some archaeological sites, dense vegetation cover and visibility constraints sometimes distort heritage representations and any additional heritage resources located during consequent development phases must be reported to the Heritage Resources Authority or an archaeological specialist.

## 5 RESULTS: ARCHAEOLOGICAL SURVEY

### 5.1 Palaeontology

Silicified wood were documented elsewhere in the landscape, which is indicative of a palaeontological presence in the area. Even though no palaeontological resource were documented in the survey area, great caution should be taken not to disturb further undetected palaeontological remains in the general landscape

## 5.2 The Stone Age

One Stone Age site was identified in areas directly associated with the Mount Ayliff Bulk Water Supply Project area. It is highly likely that Earlier, Middle and possibly Later Stone Age scatters will occur in the area, specifically along drainage lines and water sources.

### - Site MAS01

**S30.80249 E29.38783**

During the survey, a low density Middle Stone Age Scatter was identified along erosion gullies on a mountain slope east of Mt Ayliff. The density of the scatter was arbitrarily estimated by placing a one-meter drawing frame, sub-divided into quadrants, on a randomly-selected area displaying higher amounts of surface lithics. By plotting the counts of all lithic elements present in the 1x1 metre square relative density per m<sup>2</sup> was established and rated on a scale of low (<10), medium (10-20) and high (>20). This method has been adapted as expedient and non-invasive sampling technique that is particularly useful in value assessment of lithic occurrences during Phase 1 AIA's (see Van Der Ryst 2012). Typologically, the artefacts can tentatively attribute to the Middle Stone Age and the location of these scatters corresponds with a general Stone Age site distribution pattern in the area where archaeological sites in the landscape occur near water sources close to local sources of rare raw materials in lithic manufacture. Amongst the lithics observed, were lightly smoothed dolerite and hornfels artefacts, cores with some peripheral preparation and scattered debris. Single formal tools, specifically a blade, point and scrapers were observed. The occurrence is probably of limited scientific value due to the mixing of artefacts and the low density of the lithics.



Figure 5-1: Erosion gullies containing minor MSA deposits at Site MAS01.

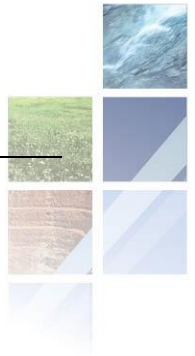


Figure 5-2: Weathered formal MSA lithics from Site MAS01: scraper (left), blade (centre) and point (right).

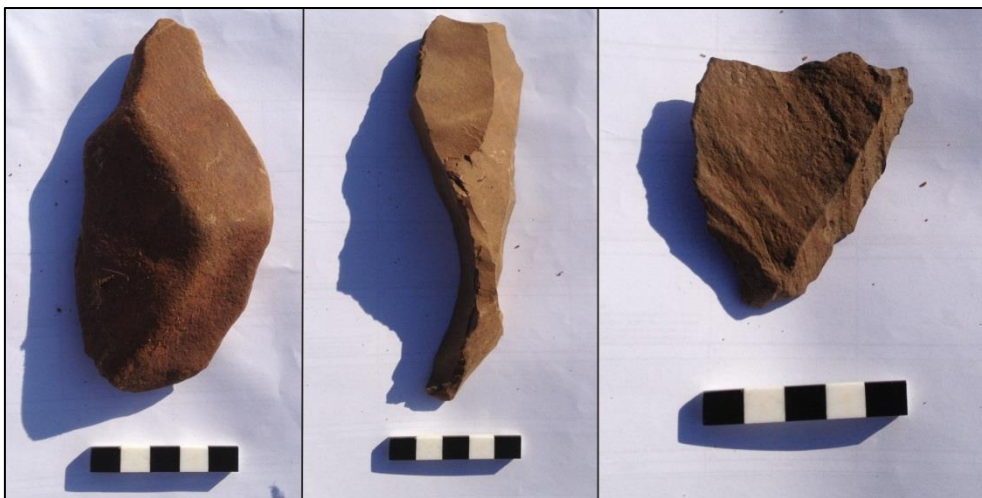


Figure 5-3: Lithics from Site MAS01. Note highly weathered proto-handaxe left.

### 5.3 The Iron Age (Farmer Period)

A single possible Iron Age Farmer Period material was identified in areas directly associated with the Mount Ayliff Bulk Water Supply Project area but it is likely that Later Iron Age Farmer Period settlements and remnants will occur in the area, specifically on higher ridges and hills, and along drainage lines.

#### - Site MAI01

**S30.82294 E29.40208**

A minor rough stone structure, resembling a section of collapsed stone walling and terracing was documented near existing water reservoirs on a high ridge at KuSimakamaka. The structure extends for about 10m along the

ridge where it forms a terrace. A clear vegetation change, possibly indicating historical human activity, is visible behind the stone structure even though no deep archaeological deposits were observed. No material culture was observed in association with the walling and it is therefore not possible to establish without a doubt a temporality for the structure but the elevated and secluded location of the site might infer a Iron Age farmer period origin. The structure is poorly preserved and of limited scientific value.



Figure 5-4: Remains of a stone wall structure at Site MAI01.

#### 5.4 Historical / Colonial Period and recent times

A Historical Period site was identified in areas directly associated with the Mount Ayliff Bulk Water Supply Project area and it is highly likely that Historical Period / Recent settlements and remnants will occur in the area.

- **Site MAH01**  
**S30.76752 E29.41507**

The remains of at least two large stone walled cattle kraals occur high on a ridge at Ntshongo. The structures are densely overgrown with Aloes. As with other similar remains in the landscape, a temporal context for the structures could not be ascertained. However, it might be assumed that the settlement remains date to the early-mid 20<sup>th</sup> century since the structures bear close resemblance to cattle enclosures currently in use. It is highly likely that human burials will occur in association with the sites.

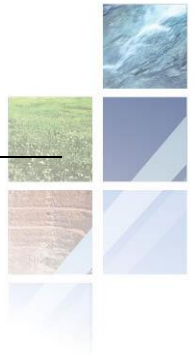


Figure 5-5: Aerial image indicating two large cattle kraals at Site MAH01.



Figure 5-6: Overgrown stone walling at Site MAH01.

- **Site MAH02:**  
**S30.79901 E29.38342**

The remains of a small Historical Period farmstead with a number of poorly preserved structures occur east of Mt Ayliff near **Site MAB06**. The structures include the foundations of a hut, cattle pens and kraals as well as monoliths and unidentified stones structures,





Figure 5-7: Stone structures and foundations at Site MAH02.

## 5.5 Graves & Burials

Nine individual burial grounds, containing a large number of graves were identified along proposed Mount Ayliff Bulk Water Supply Project area. In this area graves and cemeteries generally occur within settlements, often around homesteads and it is highly probable that these heritage resources might be encountered during construction, in addition to the sites noted below. Ancestral graves are usually located within homestead precincts. However, in some instances lack of space within the homestead necessitates burial outside it. All human remains have high heritage significance at all levels for their spiritual, social and cultural values.

### - Site MAB01

**S30.76799 E29.37993**

Two marked graves, dressed with elaborate marble headstones and grave stones occurs within a homestead in the Betshwana area.

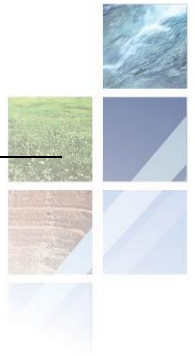


Figure 5-8: Marked burials at site MAB01.

- **Site MAB02**

**S30.76745 E29.38390**

A large number of unmarked graves occur in an open field at Betshwana. Except for one burial, all graves are covered with rough stones. One burial is dressed with a concrete structure that is painted white. Some of the stone covered burials are heavily overgrown and not clearly visible.

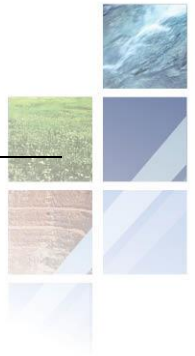


Figure 5-9: Marked and unmarked overgrown burials at site MAB02.

- **Site MAB03**

**S30.76557 E29.39749**

At least two marked graves, dressed with marble headstones occur in a fenced graveyard in the Betshwana area.



Figure 5-10: Marked burials at site MAB03.

- **Site MAB04**

**S30.76573 E29.39807**

Two unmarked graves, dressed with stone cairns occur fenced graveyard in the Betshwana area next to a cultivated crop field.



Figure 5-11: Unmarked burials at site MAB04.

- **Site MAB05**

**S30.77530 E29.37883**

Two unmarked graves occur next to a homestead and the N2 road in the Betshwana area. The burials are demarcated with rough soil mounds.

- **Site MAB06**

**S30.79891 E29.38367**

A stone structure and monolith occur in association Historical Period remains (**MAH02**). The function and provenance of the structure is not clear but considering the appearance and context of the structure, it should be treated as a burial until otherwise established.



Figure 5-12: Possible burial mound at Site MAB06.

- **Site MAB07**

**S30.82277 E29.40231**

Another rough stone structure and monoliths occur on a high ridge in association with possible Iron Age Farmer Period Historical Period remains (**MAI01**) on a high ridge in the KuSimakamaka area. The function and provenance of the structure is not clear but considering the appearance and context of the structure, it should be treated as a burial until otherwise established.

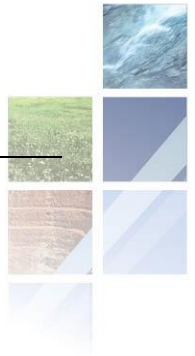


Figure 5-13: A possible burial at Site MAB07.

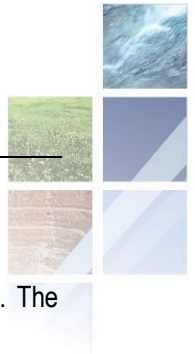
- **Site MAB08**

**S30.80939 E29.37103**

A single unmarked grave occurs in an open field in Mt Ayliff. The burial is demarcated by a soil mound and rough headstone.



Figure 5-14: A single burial at Site MAB08.



- **Site MAB09**

**S30.80656 E29.37123**

The Mt Ayliff Municipal cemetery occurs to the south-east of the town on the banks of a small stream. The cemetery contains a large amount of marked and unmarked graves.



Figure 5-15: Site MAB09, the Mount Ayliff municipal cemetery.

**5.6 Other Points of Interest**

- **Site MAP01**

**S30.77033 E29.38253**

A fenced marble memorial stone occurs next to the N2 national road in the Betshwana area. The stone commemorates the time and place where Elizabeth Paul, a well-known and influential Anglican Catholic Missionary was killed in a car accident in the previous century. The memorial contains the following text:

PAUL

ELIZABETH NEE SPALDING

Born 10.12.1906

Died 04.04.1964

Period of Evangelism

1950 – 1964

This monument was unveiled on 08.04.1996 by Abantwana Bendaba Zosindiso

“Onward Christian soldiers”

Umprofethikazi Owa Shumayela

Incunquko Ebantwini

Cuqukani Ubukumkani Bamazulu Busondele  
Manyanani, Thandanani, Thandazisanani  
Ningabekani Izandla



Figure 5-16: Fenced marble monument for Elizabeth Paul at Site MAP01.

Elizabeth Paul was born Elizabeth Spalding in Zandukwana, Tsolo on 19 December 1906. She grew up in a Christian environment and attended a local Tsolo school. As her mother spoke isiXhosa and her white father, Joe, was English she was fluent in both languages. She was very young when she married James Paul. Their marriage was childless but one day she dreamt of being told that her children would be countless in number, a message she initially misunderstood. It is told that on 13 May 1950 she had a vision in which she was told to be prepared on the next day, which was Pentecost, to welcome visitors who she did not know. She got up early in the morning of the 14<sup>th</sup> and headed for church with her husband. However, as they reached the church door step, she was reminded by the voice that she should go back home to welcome her visitors. Her ministry came at a time when the church had a lull in the ministry of healing and its impact is still very much alive as it was 62 years ago. Although her preaching and healing attracted people from all denominations and her services embraced choruses and dancing with a broad appeal, she strongly resisted urgings to launch her own sect. Instead she always encouraged people to attend their own churches. The pivotal point around which her preaching revolved was the upholding of the Ten Commandments and the Lord's Prayer. She believed these inculcated love of fellow human beings and a preparedness to forgive unconditionally. But it was her gift of healing through supplication to the Holy Spirit that drew huge crowds and there are reports of many successes. She would often be invited to travel long distances to conduct healing sessions and in those cases the cost of travel and accommodation was carried by her hosts. Otherwise she charged no fees no matter how long she was away from home. When given cash as a gift she saved the monies to buy a car which made it easier for her to spread the gospel of Christ.

Elizabeth died in a car accident near Mt Ayliff on 4 April 1964. Some say that she had a premonition of her death, referring to her blood being shed and the fracturing of her bones. She relocated from Tsolo to Kokstad because opposition to her ministry had grown so virulent. She also hoped to find more time to read the Bible, pray and meditate in her new home as this had become almost impossible in Tsolo. Every year in May, her followers make



the pilgrimage to Tsolo in the Transkei where a special festival is held to commemorate her extraordinary healing powers. Many women still pray to her to make them fertile. The 2012 synod of bishops agreed to include Elizabeth Paul in the Anglican liturgical calendar. Her official feast day is on May 13.

- **Site MAP02**

**S30.80576 E29.36942**

The Ntsizwa Community Park, a recreational area for the residents of Mout Ayliff is situated towards the eastern periphery of the town near the cemetery. The park has picnic spots and outdoor gym facilities.



Figure 5-17: The entrance to the Ntsizwa Community Park.

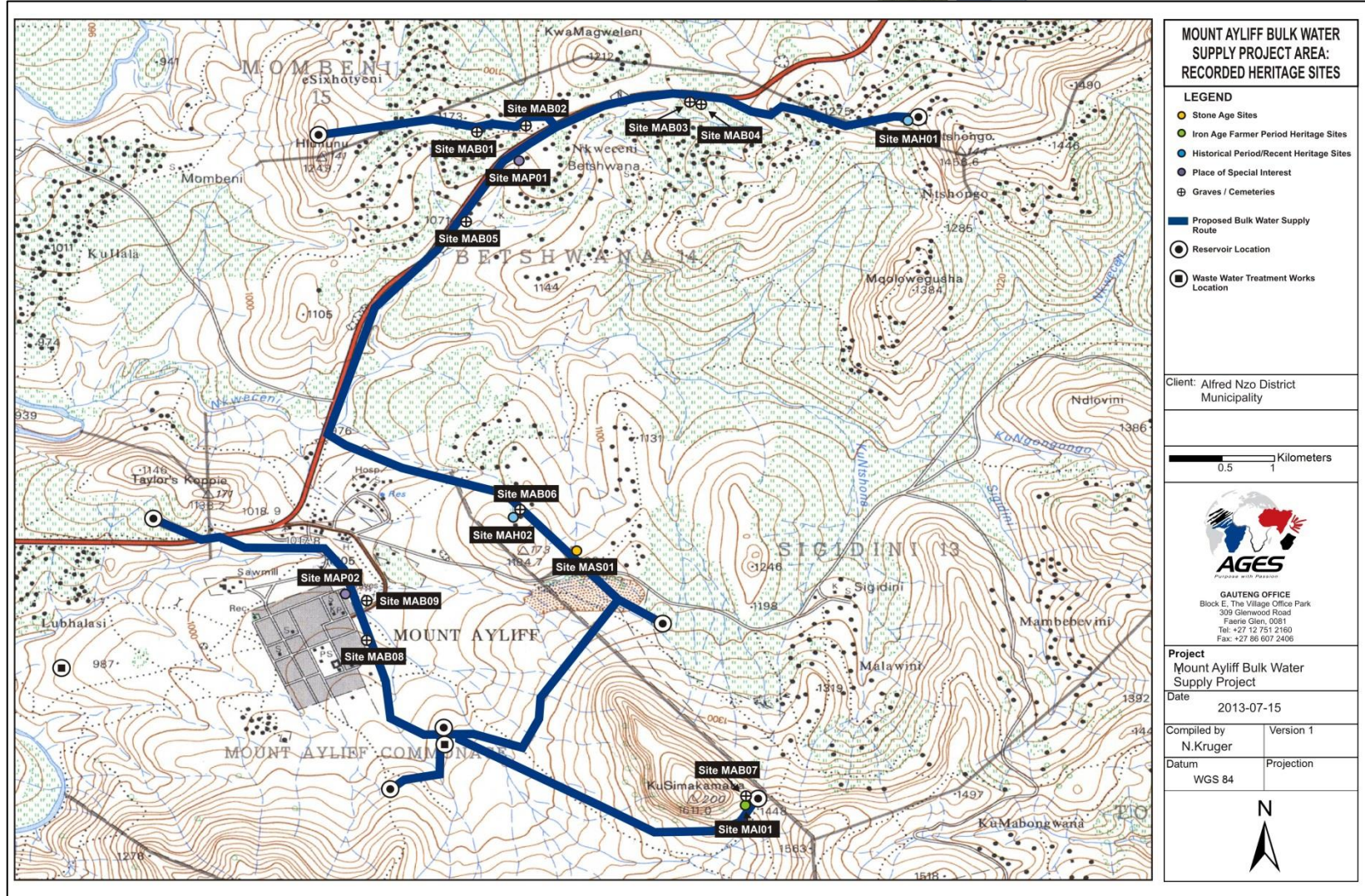


Figure 5-18: Map indicating the locations of archaeological and historical occurrences discussed in the text, occurring in the Mt Ayliff Peri Urban Water Scheme Project Area.

## 6 ARCHAEO-HISTORICAL CONTEXT

### 6.1 The archaeology of Southern Africa

Archaeology in southern Africa is typically divided into two main fields of study, the **Stone Age** and the **Iron Age** or **Farmer Period**.

The following table provides a concise outline of the chronological sequence of periods, events, cultural groups and material expressions in Southern African pre-history and history:

Period	Epoch	Associated cultural groups	Typical Material Expressions
Early Stone Age 2.5m – 250 000 YCE	Pleistocene	Early Hominins: <i>Australopithecines</i> <i>Homo habilis</i> <i>Homo erectus</i>	Typically large stone tools such as hand axes, choppers and cleavers.
Middle Stone Age 250 000 – 25 000 YCE	Pleistocene	First <i>Homo sapiens</i> species	Typically smaller stone tools such as scrapers, blades and points.
Late Stone Age 20 000 BC – present	Pleistocene / Holocene	<i>Homo sapiens sapiens</i> including San people	Typically small to minute stone tools such as arrow heads, points and bladelets.
Early Iron Age / Early Farmer Period 300 – 900 AD	Holocene	First Bantu-speaking groups	Typically distinct ceramics, bead ware, iron objects, grinding stones.
Middle Iron Age (Mapungubwe / K2) / early Later Farmer Period 900 – 1350 AD	Holocene	Bantu-speaking groups, ancestors of present-day groups	Typically distinct ceramics, bead ware and iron / gold / copper objects, trade goods and grinding stones.
Late Iron Age / Later Farmer Period 1400 AD -1850 AD	Holocene	Various Bantu-speaking groups including Venda, Thonga, Sotho-Tswana and Zulu	Distinct ceramics, grinding stones, iron objects, trade objects, remains of iron smelting activities including iron smelting furnace, iron slag and residue as well as iron ore.
Historical / Colonial Period ±1850 AD – present	Holocene	Various Bantu-speaking groups as well as European farmers, settlers and explorers	Remains of historical structures e.g. homesteads, missionary schools etc. as well as, glass, porcelain, metal and ceramics.

#### 6.1.1 The Stone Ages

##### - The Earlier Stone Age (ESA)

Earlier Stone Age deposits typically occur on the flood-plains of perennial rivers and may date to between 2 million and 250 000 years ago. These ESA open sites sometimes contain stone tool scatters and manufacturing debris ranging from pebble tool choppers to core tools such as handaxes and cleavers. These stone tools were made by the earliest hominins. These groups seldom actively hunted and relied heavily on the opportunistic scavenging of meat from carnivore kill sites.

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

The majority of Middle Stone Age (MSA) sites occur on flood plains and sometimes in caves and rock shelters. Sites usually consist of large concentrations of knapped stone flakes such as scrapers, points and blades and associated manufacturing debris. Tools may have been hafted but organic materials, such as those used in hafting, seldom remain preserved in the archaeological record. Limited drive-hunting activities are also associated with the MSA.

- **The Later Stone Age (LSA)**

Sites dating to the Later Stone Age (LSA) are better preserved in rock shelters, although open sites with scatters of mainly stone tools can occur. Well-protected deposits in shelters allow for stable conditions that result in the preservation of organic materials such as wood, bone, hearths, ostrich eggshell beads and even bedding material. By using San (Bushman) ethnographic data a better understanding of this period is possible. South African rock art is also associated with the LSA.

**6.1.2 The Iron Age (Farmer Period)**

- **Early Iron Age (Early Farming Communities)**

The Early Iron Age (also Early Farmer Period) marks the movement of Bantu speaking farming communities into South Africa at around 200 A.D. These groups were agro-pastoralists that settled in the vicinity of water in order to provide subsistence for their cattle and crops. Artefact evidence from Early Farmer Period sites is mostly found in the form of ceramic assemblages and the origins and archaeological identities of this period are largely based upon ceramic typologies and sequences, where diagnostic pottery assemblages can be used to infer group identities and to trace movements across the landscape. Early Farmer Period ceramic traditions are classified by some scholars into different “streams” or trends in pot types and decoration that, over time emerged in southern Africa. These “streams” are identified as the Kwale Branch (east), the Nkope Branch (central) and the Kalundu Branch (west). More specifically, in the northern regions of South Africa at least three settlement phases have been distinguished for prehistoric Bantu-speaking agropastoralists. The first phase of the Early Iron Age, known as Happy Rest (named after the site where the ceramics were first identified), is representative of the Western Stream of migrations, and dates to AD 400 - AD 600. The second phase of Diamant is dated to AD 600 - AD 900 and was first recognized at the eponymous site of Diamant in the western Waterberg. The third phase, characterised by herringbone-decorated pottery of the Eiland tradition, is regarded as the final expression of the Early Iron Age (EIA) and occurs over large parts of the North West Province, Northern Province, Gauteng and Mpumalanga. This phase has been dated to about AD 900 - AD 1200. Early Farmer Period ceramics typically display features such as large and prominent inverted rims, large neck areas and fine elaborate decorations. The Early Iron Age continued up to the end of the first millennium AD.

- **Middle Iron Age / K2 Mapungubwe Period (early Later Farming Communities)**

The onset of the middle Iron Age dates back to ±900 AD, a period more commonly known as the Mapungubwe / K2 phase. These names refer to the well known archaeological sites that are today the pinnacle of South Africa’s Iron Age heritage. The inhabitants of K2 and Mapungubwe, situated on the banks of the Limpopo, were agriculturalists and pastoralists and were engaged in extensive trade activities with local and foreign traders. Although the identity of this Bantu-speaking group remains a point of contestation, the Mapungubwe people were the first state-organized society southern Africa has known. A considerable amount of golden objects, ivory, beads (glass and gold), trade goods and clay figurines as well as large amounts of potsherds were found at these sites and also appear in sites dating back to this phase of the Iron Age. Ceramics of this tradition take the form of beakers with upright sides and decorations around the base (K2) and shallow-shouldered bowls with decorations as well as globular pots with long necks. (Mapungubwe). The site of Mapungubwe was deserted at around 1250 AD and this also marks the relative conclusion of this phase of the Iron Age.

- **Later Iron Age (Later Farming Communities)**

The late Iron Age of southern Africa marks the grouping of Bantu speaking groups into different cultural units. It also signals one of the most influential events of the second millennium AD in southern Africa, the difaqane. The difaqane (also known as “the scattering”) brought about a dramatic and sudden ending to centuries of stable society in southern Africa. Reasons for this change was essentially the first penetration of the southern African

interior by Portuguese traders, military conquests by various Bantu speaking groups primarily the ambitious Zulu King Shaka and the beginning of industrial developments in South Africa. Different cultural groups were scattered over large areas of the interior. These groups conveyed with them their customs that in the archaeological record manifest in ceramics, beads and other artefacts. This means that distinct pottery typologies can be found in the different late Iron Age groups of South Africa.

### 6.1.3 Historical and Colonial Times and Recent History:

The Historical period in southern Africa encompass the course of Europe's discovery of South Africa and the spreading of European settlements along the East Coast and subsequently into the interior. In addition, the formation stages of this period are marked by the large scale movements of various Bantu-speaking groups in the interior of South Africa, which profoundly influenced the course of European settlement. Finally, the final retreat of the San and Khoekhoen groups into their present-day living areas also occurred in the Historical period in southern Africa.

## 6.2 The Eastern Cape and Mount Ayliff: Specific Themes

The regions surrounding the Eastern Cape and the Lesotho frontier have been the subject of few archaeological research projects. However, the area displays a rich archaeological landscape with significant palaeontological, archaeological and historical sites.

### 6.2.1 Palaeontology

A large number of paleontological sites occur around the Eastern Cape and in areas towards Lesotho. Material found in and around Lesotho, the Eastern Cape Highlands and in the Karoo of South Africa is significant as it documents the late Triassic to early Jurassic transition, which is the period for the evolution of true dinosaurs, crocodile ancestors, bird ancestors and early mammals.

### 6.2.2 The Stone Age Period

No systematic Early and Middle Stone Age research has been undertaken in the Mount Ayliff area. Most Early Stone Age (ESA) sites (1.5 million years ago-250 000 years ago) in South Africa can probably be connected with the hominin species known as *Homo erectus*. Simply modified stones, hand axes, scraping tools, and other bifacial artifacts had a wide variety of purposes, including butchering animal carcasses, scraping hides, and digging for plant foods. Most South African archaeological sites from this period are the remains of open camps, often by the sides of rivers and lakes, although some are rock shelters, such as Montagu Cave in the Cape region. ESA sites are relatively rare in the Eastern Cape, occurring mostly in major river valleys. Generally EIA artefacts are not found *in situ* and are likely to be out of their primary context. ESA handaxes, cleavers and other stone tools have been documented mainly in inland areas such as in the districts of Middledrift, Kentani, Butterworth, Idutywa and Lusikiki to name a few.

The Middle Stone Age (MSA) (250 000-30 000 years ago) is characterised by stone tools typically made from quartzite, dolerite, or hornfels. Such sites occur as surface scatters at sites throughout the Eastern Cape Highlands along minor and major river courses. Specifically, these sites occur in exposed and disturbed areas such as quarries, erosion dongas, gravel farm roads and 'manmade' dams (Binneman *et al.* 2010). Data obtained from the MSA deposits in the Eastern, Western, and Southern Cape have provided detailed palaeoenvironmental records with long occupation sequences providing evidence of occupation for much of the Late Pleistocene. Open camps and rock overhangs were used for shelter. Day-to-day debris has survived to

provide some evidence of early ways of life, although plant foods have rarely been preserved. MSA bands hunted medium-sized and large prey, including antelope and zebra, although they tended to avoid the largest and most dangerous animals, such as the elephant and the rhinoceros. They also ate seabirds and marine mammals that could be found along the shore and sometimes collected tortoises and ostrich eggs in large quantities.

The Later Stone Age (LSA) (40 000 years ago – present) is abundantly represented with LSA material found across the Eastern Cape. Basic toolmaking techniques began to undergo additional change about 40 000 years ago. Small finely worked stone implements known as microliths became more common, while the heavier scrapers and points of the Middle Stone Age appeared less frequently and archaeologists refer to this technological stage as the Late Stone Age. The numerous collections of stone tools from South African archaeological sites show a great degree of variation through time and across the subcontinent. Bands moved with the seasons as they followed game into higher lands in the spring and early summer months, when plant foods could also be found. When available, rock overhangs became shelters; otherwise, windbreaks were built. Shellfish, crayfish, seals, and seabirds were also important sources of food, as were fish caught on lines, with spears, in traps, and possibly with nets. Dating from this period are numerous engravings on rock surfaces, mostly on the interior plateau, and paintings on the walls of rock shelters in the mountainous regions, such as the Drakensberg and Cederberg ranges. The images were made over a period of at least 25 000 years and the paintings are closely associated with the work of medicine men, shamans who were involved in the well-being of the band and often worked in a state of trance. Specific representations include depictions of trance dances, metaphors for trance such as death and flight, rainmaking, and control of the movement of antelope herds.

### 6.2.3 Hunters-gatherers, Herders and Shell Middens

Hunter-gatherer and herder sites occur widely in the Eastern Cape. It is sometimes difficult to distinguish between hunter-gatherer and herder sites, because the former may have acquired stock through theft or herder clientship and the latter largely relied on hunting and gathering to supplement pastoral resources. Both groups collected shellfish and used other food sources from the sea, and both groups hunted and gathered plant food. Excavations at sites indicate that shellfish and marine animals, and in particular seals, specifically formed a major part of their diet. The intensive utilization of shellfish manifests in the archaeological record through hundreds of shell middens (large piles of marine shell) dating to the terminal Pleistocene and Holocene that litter the coastal areas of southern Africa (see Figure 6-1 & Figure 6-2). These were campsites of San, Khoisan and Bantu-speakers who lived along the immediate coast. Human remains are frequently found in the middens, mixed with shell, other food remains and cultural material. A large number of shell middens were situated east of Coega River Mouth and numerous middens, ceramic pot sherds (from Later Stone Age Khoekhoen pastoralist origin - last 2 000 years) and other archaeological material, occur between the Coega and Sunday's River Mouths. These remains date mainly from Holocene Later Stone Age (last 10 000 years). Human remains have also been found in the dunes along the coast.

Mega-middens which accumulated in coastal and inland areas probably represent alternative seasonal food resources and the shellfish species from middens reflect the species available in the immediate vicinity and also provide information on the environment. Inland shell middens are also found in the Eastern Cape and these shell accumulations date to the last 3000 years. The existence of these features implies the use of alternative food sources as a result of the spread of pastoralists and Iron Age people (Deacon 1984b). Various researchers have observed that the occurrence of seasonally restricted food remains in archaeological deposits could be linked to historically known seasonal movements by the early Khoisan and Khoekhoen hunters and herders of the Cape.

In other places, those Khoi who had lost their stock (to drought, disease or raiders), as well as San who had none, may have subsisted mainly or entirely on seafood, but for the rest pastoralism, involving cattle and perhaps fat-tailed sheep, was the principal focus of subsistence, accompanied by a few crops in the fertile river valleys (Elphick 1977). This pattern of subsistence was continued - with different emphases and eventually on a larger scale - by those who succeeded the Khoi on this coast, the Cape Nguni, or Xhosa. By the 16th century, the Khoi peoples of the Wild Coast had been largely displaced or absorbed by Nguni speakers (Peires 1976).



Figure 6-1: Large shell midden off the coast of southern Africa

#### 6.2.4 A landscape of rock markings: Rock Art

The Eastern Cape and Lesotho regions are renowned for their rich rock art heritage. The majority of these rock markings can be associated with Later Stone Age hunter-gatherers, more specifically a group known locally as the Maloti San. This group was probably widespread in Lesotho and adjacent areas over the last few thousand years, but they may have retreated into mountainous areas year-round when farmers moved into the region. The rock art is found in different densities in various parts of Lesotho and the Eastern Cape, mostly in areas with appropriate rock shelters. This rock art images are composed of very finely drawn polychromatic images with narrow lines, small dots and gradated colouring. The images usually depict eland, rhebok, or humans in various states, activities, or postures. Occasionally, lions, other carnivores, other antelope, baboons, cattle, horses, horseback riders, snakes, and extraordinary creatures with human and animal features (known as therianthropes) are depicted. This imagery is associated with the religious, spiritual and healing activities of the Maloti San groups.

Some examples of non-hunter-gatherer rock art also occur in the area. Historical “farmer rock art” for example, is characterized by large figures in a single colour made with broad blocky lines and are uniformly filled with colour. This tradition is characterized by large geometric designs, usually in either red or white, or both. “Farmer” and “herder” rock art traditions are not as common as hunter-gatherer rock art but they are equally important as they are probably records of the historical period of the larger region during which many social and political transformations occurred.



Figure 6-2: Hunter-Gatherer Rock Art from southern Lesotho.

### 6.2.5 The Iron Age / Farmer Period

Archaeological evidence shows that Bantu-speaking agriculturists first settled in southern Africa around AD 300. Bantu-speakers originated in the vicinity of modern Cameroon from where they began to move eastwards and southwards, some time after 400 BC, skirting around the equatorial forest. An extremely rapid spread throughout much of sub-equatorial Africa followed: dating shows that the earliest communities in Tanzania and South Africa are separated in time by only 200 years, despite the 3 000 km distance between the two regions. It seems likely that the speed of the spread was a consequence of agriculturists deliberately seeking iron ore sources and particular combinations of soil and climate suitable for the cultivation of their crops.

The earliest agricultural sites in KwaZulu-Natal date to between AD 400 and 550. All are situated close to sources of iron ore, and within 15 km of the coast. Current evidence suggests it may have been too dry further inland at this time for successful cultivation. From 650 onwards, however, climatic conditions improved and agriculturists expanded into the valleys of KwaZulu-Natal, where they settled close to rivers in savanna or bushveld environments. There is a considerable body of information available about these early agriculturists.

Seed remains show that they cultivated finger millet, bulrush millet, sorghum and probably the African melon. It seems likely that they also planted African groundnuts and cowpeas, though direct evidence for these plants is lacking from the earlier periods. Faunal remains indicate that they kept sheep, cattle, goats, chickens and dogs, with cattle and sheep providing most of the meat. Men hunted, perhaps with dogs, but hunted animals made only a limited contribution to the diet in the region.

Metal production was a key activity since it provided the tools of cultivation and hunting. The evidence indicates that people who worked metal lived in almost every village, even those that were considerable distances from ore sources.

The beginnings of the Iron Age (Farmer Period) in southern Africa are associated with the arrival of a new Bantu speaking population group at around the third century AD. These newcomers introduced a new way of life into areas that were occupied by Later Stone Age hunter-gatherers and Khoekhoe herders. Distinctive features of the Iron Age are a settled village life, food production (agriculture and animal husbandry), metallurgy (the mining,



smelting and working of iron, copper and gold) and the manufacture of pottery. Iron Age farming communities generally preferred to occupy river valleys within the eastern half of southern Africa owing to the summer-rainfall climate that was conducive for growing millet and sorghum. According to Huffman (2007) an eastern migration stream, known as the Chifumbaze Complex spread southwards from East Africa south into southern Africa during the period of about AD 200—300 where several KwaZulu-Natal and north-Eastern Cape sites were occupied. Evidence of numerous Early Iron Age (EIA) sites or material occurs in the area surrounding Mtatha and the Eastern Cape (Feely & Bell-Cross 2011). Evidence in the form of thick-walled well-decorated pot sherds are present along other parts of the Transkei coast as is evident from sites that were excavated at Mpame River Mouth (Cronin 1982) and just west of East London (Nongwaza 1994). Research in the adjacent Kei River Valley area indicates that the first mixed farmers were already settled in the Eastern Cape region between A.D. 600 - 700 (Binneman 1994, Feely & Bell-Cross 2011). Thus far the closest documented and well-researched Early Iron Age site is located within the Great Kei River Valley. The site is situated some 200 m below the plateau and 60 km inland from the coast, within the borders of the Transkei, approximately 100 km up the coast towards Durban. There has been some speculation that EIA populations may have spread well south of the Transkei into the Ciskei, possibly up to the Great Fish River (Binneman et al. 1992), however, no further research has been undertaken to confirm these statements. Two closer EIA sites have been documented, one to the south of East London (Cronin 1982) and the other is situated 12 km west of East London on the west bank of the Buffalo River (Nogwaza 1994). Thicker and decorated pottery sherds, kraals, possible remains of domesticated animals, upper and lower grindstones and storage pits are associated for identifying Early Iron Age sites. The sites are generally large settlements, but the archaeological visibility may in most cases be difficult owing to the organic nature of the homesteads. Metal and iron implements are also associated with Early Iron Age communities.

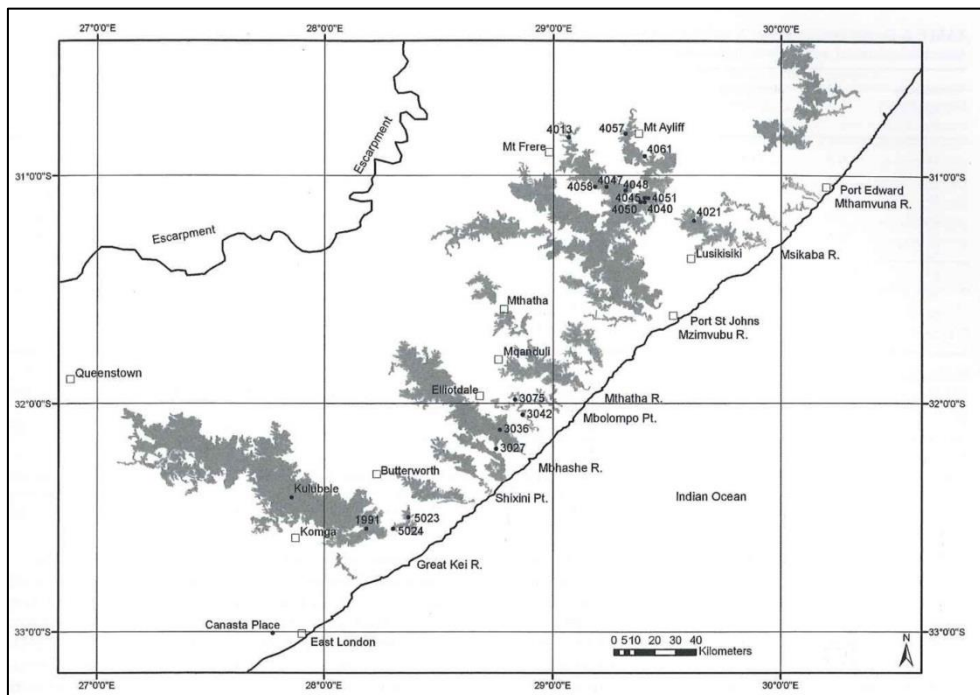


Figure 6-3: Early Iron Age farmer period sites in the Eastern Cape (after Feely & Bell-Cross 2011).

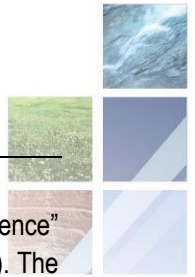
Relatively little research has been conducted on the archaeology of later farmer communities of the Eastern Cape and adjacent areas. According to research in adjacent parts of South Africa, there was little or no settlement in the dry high-altitude grasslands of the north-western parts of the Eastern Cape and Lesotho until

after AD 1600 (e.g. Walton 1956; Maggs 1976; Hall 1990; Mitchell 2002). In many instances, Later Iron Age farmer communities moved from river valleys to the hilltops, such settlements have been formally recorded by the Albany Museum and cover a relatively extended area in comparison to the Early Iron Age settlement patterns (Binneman *et al.* 2010). As such, Later Iron Age communities gradually expanded into the grasslands of the KwaZulu-Natal and north Eastern Cape interior. An early phase of the Late Iron Age has been uncovered in KwaZulu-Natal which transpired in a ceramic style known as "Blackburn". This ceramic style represents a break with that of the Early Iron Age. Since there is a resemblance between Blackburn pottery and Nguni pottery, Huffman (1989) postulates that Blackburn reflects the migration of the Nguni to KwaZulu-Natal and later to the Transkei. Consequently, sites belonging to the final phase of the Late Iron Age can often be linked with historically known Nguni groups. The most southern Iron Age site, Kulubele, excavated by archaeologists from the Albany Museum during the 1990's, is situated along the banks of the Kei River in the Kei River Valley. The earliest date for the site is 1250 BP yielded numerous settlement areas, thick-walled pottery, animal bones, and most importantly chicken bones that illustrates contact between the first farming communities and European seafarers. Contact with the Cape Colony initially stimulated an already flexible and dynamic characteristic of the Cape Nguni political economy. When trade opportunities developed in the late 18th century, the Xhosa would exchange cattle (and permission for and guidance in hunting elephants) in return for copper, iron, beads (Peires 1981:95); they would then exchange these goods at a profit for cattle with their African neighbours to the east, bringing about a kind of speculation in cattle.

#### **6.2.6 Later History: Reorganization, Colonial Contact and living heritage.**

The oral and written history of the Eastern Cape pertaining to the last centuries is relatively abundant resulting from an assimilation of local folklore and Historical sources such as missionary accounts. The Historical period for this area can be divided into three periods of settlement, as described in oral traditions and local histories. First in the area were the pioneers, arriving between the nineteenth century and early twentieth century, depending on the region. They may have lived in caves at first (sometimes in association with San), or had compounds in places not occupied today. Second, the main population established villages on the high shoulders of the mountains and hills when areas were formally allocated to chiefs. This period lasted until the 1940s or 1950 when the chieftaincies were transformed by the paramount chief. The older villages in many areas were abandoned, were combined and/or moved to more accessible locations at lower elevations. Villages of this final phase are often still occupied today (Cain 2005).

At the time of white settlement of the Cape, Xhosa groups were living far inland, into the area between Bushman's River and the Kei River. Since around 1770, they had been confronted with the Afrikaner Trek Boers who approached from the west. Both the Boers and the Xhosa were stock-farmers. The competition for grazing land led first to quarrels between the two groups, and eventually it came to a number of wars known as the Grensoorloë ("border wars" in Afrikaans). The politics of the colonial government attempted to enforce the separation of white and black settlement areas with the Fish River as the border. But the more the colony developed into a modern state with a strong military organization, the more the whites tended towards a policy of land annexing and the subjugation of the black population. In the middle of the 19th century, all the land formerly inhabited by Xhosa was in the hands of white settlers. With the founding of the South African Union in 1910, the British colony and the independent Boer Republics were united. Other types of Historical sites found in the Eastern Cape include early schools and Missions which are part of the cultural transformations between the mid-19th and mid-20th centuries. These sites are often valuable sources of oral histories and written documents and they present a later regional social development in the area where European expansion brought about dramatic changes in social and cultural land tenure on the Eastern Cape frontier.



The region was given nominal autonomy in 1963, under the “Separate Development” act and “full independence” followed in 1976 where after the area became known as Transkei (meaning: the land beyond the Kei River). The newly-formed Transkei state was not recognized internationally and remained diplomatically isolated and politically unstable. The area was reincorporated into South Africa's after 1994 when it became part of the Eastern Cape Province.

By the closing decades of the 18th century, South Africa had fallen into two broad regions: west and east. Colonial settlement dominated the west, including the winter rainfall region around the Cape of Good Hope, the coastal hinterland northward toward the present-day border with Namibia, and the dry lands of the interior. Trekboers took increasingly more land from the Khoekhoe and from remnant hunter-gatherer communities, who were killed, were forced into marginal areas, or became labourers tied to the farms of their new overlords. Indigenous farmers controlled both the coastal and valley lowlands and the Highveld of the interior in the east, where summer rainfall and good grazing made mixed farming economies possible.

A large group of British settlers arrived in the Eastern Cape in 1820; this, together with a high European birth rate and wasteful land usage, produced an acute land shortage, which was alleviated only when the British acquired more land through massive military intervention against Africans on the eastern frontier. Until the 1840s the British vision of the colony did not include African citizens (referred to pejoratively by the British as “Kaffirs”), so, as Africans lost their land, they were expelled across the Great Fish River, the unilaterally proclaimed eastern border of the colony.

The first step in this process included attacks in 1811–12 by the British army on the Xhosa groups, the Gqunukhwebe and Ndlambe. An attack by the Rharhabe-Xhosa on Graham's Town in 1819 provided the pretext for the annexation of more African territory, to the Keiskamma River. Various Rharhabe-Xhosa groups were driven from their lands throughout the early 1830s. They counterattacked in December 1834, and Governor Benjamin D'Urban ordered a major invasion the following year, during which thousands of Rharhabe-Xhosa died. The British crossed the Great Kei River and ravaged territory of the Gcaleka-Xhosa as well; the Gcaleka chief, Hintsa, invited to hold discussions with British military officials, was held hostage and died trying to escape. The British colonial secretary, Lord Glenelg, who disapproved of D'Urban's policy, halted the seizure of all African land east of the Great Kei. D'Urban's initial attempt to rule conquered Africans with European magistrates and soldiers was overturned by Glenelg; instead, for a time, Africans east of the Keiskamma retained their autonomy and dealt with the colony through diplomatic agents.

However, after further fighting with the Rharhabe-Xhosa on the eastern frontier in 1846, Governor Colonel Harry Smith finally annexed, over the next two years, not only the region between the Great Fish and the Great Kei rivers (establishing British Kaffraria) but also a large area between the Orange and Vaal rivers, thus establishing the Orange River Sovereignty. These moves provoked further warfare in 1851–53 with the Xhosa (joined once more by many Khoe), with a few British politicians ineffectively trying to influence events.

The Pondo people, under Faku (and west of the Kei), had never clashed with the British and the British treated the amaPondo as an independent nation<sup>8</sup>. However, the Boers who trekked into Natal (now KwaZulu-Natal) to escape British rule in first the Western and then the Eastern Cape, found themselves under British sovereignty again. They sought new farms in Pondo territory and Faku turned to the British to help him resist the Boer invasion.



As the first of the amaPondo kings to rule a united nation, he was deemed by his own people and the British to have the authority to sign the Maitland Treaty of 1844. The treaty confirmed his claim to the land of the amaPondo (from the Drakensberg mountains in the west to the coast in the east, and from Mthatha in the south to the Umzimkhulu River in the north). It also guaranteed him protection from annexation of that land by the British. In addition, the colonial government promised to stand by him should he need to defend his own territory and gave him cattle valued at seventy-five pounds.

In return, he committed the amaPondo to avoiding conflict with the Cape Colony, handing over any criminal elements who tried to hide on his land, returning any stolen cattle to their rightful owners, protecting the whites living legitimately on his land as well as traders passing through his territory, maintaining peace amongst the various clans under his sovereignty, and supporting the Cape government with his forces if requested.

Between 1811 and 1858 colonial aggression deprived Africans of most of their land between the Sundays and Great Kei rivers and produced poverty and despair. From the mid-1850s British magistrates held political power in British Kaffraria, destroying the power of the Xhosa chiefs. Following a severe lung sickness epidemic among their cattle in 1854–56, the Xhosa killed many of their remaining cattle and in 1857–58 grew few crops in response to a millenarian prophecy that this would cause their ancestors to rise from the dead and destroy the whites. Many thousands of Xhosa starved to death, and large numbers of survivors were driven into the Cape Colony to work. British Kaffraria fused with the Cape Colony in 1865, and thousands of Africans newly defined as Fingo resettled east of the Great Kei, thereby creating Fingoland. After Faku died in 1867, Mqikela refused to cooperate with the government. Accordingly, the Cape government curtailed his powers, dividing Pondoland, as it had become known, into two and threatening to elevate Nqwiliso, the son and successor to Ndamase, to paramountcy. In 1878, in order to ensure that he did indeed get the paramountcy, Nqwiliso sold land at Port St. Johns to the British for one thousand pounds. The British wanted the land to secure the port for their ships. On his accession to power Nqwiliso made it clear that, while recognising Mqikela's house as the Great House of the amaPondo, he intended to follow in Ndamase's footsteps and owe allegiance to no one, and maintain his position as an independent chief. That meant he would suffer no interference from Mqikela. In this declaration he was supported by the Government. Once again, dissent among the amaPondo gave the colonial power an opportunity to further erode traditional leadership. Colonial officialdom either ignored traditional authorities completely or allowed them to, at best, play a marginal role in governing their communities.

### **6.2.7 The Pondo People**

The people of the Mbizana region are descendants of Nguni clans that migrated across the Umtamvuna River in the 1700s. They speak a dialect of Xhosa known as Pondo and the people themselves are called the amaPondo. In those early years, the amaPondo lived in small clans ruled by chieftains assisted by clan elders and councillors - who were usually members of the extended royal family. The affairs of the clans were regulated by customary law. Sons of chieftains other than the direct heir to the chieftaincy were free to start their own clans with reasonably loose bonds of loyalty to their fathers' clans. Lineages tended to die out after three or four generations. That, coupled with the fact that most amaPondo history is based on oral tradition, has made tracing lineages difficult. Interference, in terms of the arbitrary appointment of traditional leaders by both the British colonial government during the 1800s and the Nationalist government during the 20th Century, has complicated matters further.

Mount Ayliff is located in a typical rural Pondoland setting of rolling grassland interfluves between steeply incised

streamlines and river courses. Nguni language-speakers, including the amaPondo, have traditionally lived in dispersed nuclear homesteads scattered across the landscape as resource availability prescribed. However, from the late 1950s, recommendations of the Tomlinson Commission (1954) were implemented, whereby many people were forcibly moved into villages (amalali) and the surrounding landscape was formally demarcated into crop-lands and grazing camps. This social engineering and land management was enforced by local magistrates and fed into the anger and wider frustrations and disenfranchisement that gave cause to the Pondo Uprising of 1960. Whilst some individuals have broken from this mould, amalali remain a characteristic feature of the modern rural settlement pattern. With the relaxation of controls over communal grazing camps and dedicated agricultural fields, fenced homestead precincts have become a necessity to protect vegetable gardens and maize fields from free-ranging cattle and small-stock.

## 7 RESULTS: STATEMENT OF SIGNIFICANCE AND IMPACT RATING

### 7.1 Heritage resources management and conservation

Archaeological sites, as previously defined in the National Heritage Resources Act (Act 25 of 1999) are places in the landscape where people have lived in the past – generally more than 60 years ago – and have left traces of their presence behind. In South Africa, archaeological sites include hominid fossil sites, places where people of the Earlier, Middle and Later Stone Age lived in open sites, river gravels, rock shelters and caves, Iron Age sites, graves, and a variety of historical sites and structures in rural areas, towns and cities. Palaeontological sites are those with fossil remains of plants and animals where people were not involved in the accumulation of the deposits. The basic principle of cultural heritage conservation is that archaeological and other heritage sites are valuable, scarce and *non-renewable*. Many such sites are unfortunately lost on a daily basis through development for housing, roads and infrastructure and once archaeological sites are damaged, they cannot be re-created as site integrity and authenticity is permanently lost. Archaeological sites have the potential to contribute to our understanding of the history of the region and of our country and continent. By preserving links with our past, we may not be able to revive lost cultural traditions, but it enables us to appreciate the role they have played in the history of our country.

### 7.2 Categories of significance

Rating the significance of archaeological sites, and consequently grading the potential impact on the resources is linked to the significance of the site itself. The significance of an archaeological site is based on the amount of deposit, the integrity of the context, the kind of deposit and the potential to help answer present research questions. Historical structures are defined by Section 34 of the National Heritage Resources Act, 1999, while other historical and cultural significant sites, places and features, are generally determined by community preferences. The guidelines as provided by the NHRA (Act No. 25 of 1999) in Section 3, with special reference to subsection 3 are used when determining the cultural significance or other special value of archaeological or historical sites. In addition, ICOMOS (the Australian Committee of the International Council on Monuments and Sites) highlights four cultural attributes, which are valuable to any given culture:

- *Aesthetic value:*

Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria include consideration of the form, scale, colour, texture and material of the fabric, the general atmosphere associated with the place and its uses and also the aesthetic values commonly assessed in the analysis of landscapes and townscape.

- *Historic value:*

Historic value encompasses the history of aesthetics, science and society and therefore to a large extent



underlies all of the attributes discussed here. Usually a place has historical value because of some kind of influence by an event, person, phase or activity.

- *Scientific value:*

The scientific or research value of a place will depend upon the importance of the data involved, on its rarity, quality and on the degree to which the place may contribute further substantial information.

- *Social value:*

Social value includes the qualities for which a place has become a focus of spiritual, political, national or other cultural sentiment to a certain group.

It is important for heritage specialist input in the EIA process to take into account the heritage management structure set up by the NHR Act. It makes provision for a 3-tier system of management including the South Africa Heritage Resources Agency (SAHRA) at a national level, Provincial Heritage Resources Authorities (PHRAs) at a provincial and the local authority.

The Act makes provision for two types or forms of protection of heritage resources; i.e. formally protected and generally protected sites:

**Formally protected sites:**

- Grade 1 or national heritage sites, which are managed by National Heritage Resources Agencies
- Grade 2 or provincial heritage sites, which are managed by Provincial Heritage Resources Agencies
- Grade 3 of local heritage sites, managed by local authorities.

**Generally protected sites:**

- Human burials older than 60 years.
- Archaeological and palaeontological sites.
- Shipwrecks and associated remains older than 70 years.
- Structures older than 60 years.

With reference to the evaluation of sites, the certainty of prediction is definite, unless stated otherwise and if the significance of the site is rated high, the significance of the impact will also result in a high rating. The same rule applies if the significance rating of the site is low. The significance of archaeological sites is generally ranked into the following categories.

Significance	Rating Action
No significance: sites that do not require mitigation.	None
Low significance: sites, which may require mitigation.	2a. Recording and documentation (Phase 1) of site; no further action required 2b. Controlled sampling (shovel test pits, augering), mapping and documentation (Phase 2 investigation); permit required for sampling and destruction
Medium significance: sites, which require mitigation.	3. Excavation of representative sample, C14 dating, mapping and documentation (Phase 2 investigation); permit required for sampling and destruction [including 2a & 2b]
High significance: sites, where	4a. Nomination for listing on Heritage Register (National, Provincial or Local) (Phase 2 & 3 investigation); site management plan; permit required if utilised for education or tourism

disturbance should be avoided.	
High significance: Graves and burial places	4b. Locate demonstrable descendants through social consulting; obtain permits from applicable legislation, ordinances and regional by-laws; exhumation and reinterment [including 2a, 2b & 3]

Furthermore, the significance of archaeological sites was based on six main criteria:

- Site integrity (i.e. primary vs. secondary context),
- Amount of deposit, range of features (e.g., stonewalling, stone tools and enclosures),
- Density of scatter (dispersed scatter),
- Social value,
- Uniqueness, and
- Potential to answer current and future research questions.

**A fundamental aspect in assessing the significance and protection status of a heritage resource is often whether or not the sustainable social and economic benefits of a proposed development outweigh the conservation issues at stake. When, for whatever reason the protection of a heritage site is not deemed necessary or practical, its research potential must be assessed and mitigated in order to gain data / information, which would otherwise be lost.**

### 7.3 Potential Impacts and Significance Ratings<sup>1</sup>

The following section provides a background to the identification and assessment of possible impacts and alternatives, as well as a range of risk situations and scenarios commonly associated with heritage resources management. The section ultimately provides a guideline (Section 7.3.1, Section 7.3.2 & Section 7.3.3) for the rating of impacts and recommendation of management actions for sites of heritage potential in the Mount Ayliff Peri Urban Water Scheme Project area, as supplied in section 7.3.4.

#### 7.3.1 General assessment of impacts on resources

Generally, the value and significance of archaeological and other heritage sites might be impacted on by any activity that would result immediately or in the future in the destruction, damage, excavation, alteration, removal or collection from its original position, any archaeological material or object (as indicated in the National Heritage Resources Act (No 25 of 1999)). Thus, the destructive impacts that are possible in terms of heritage resources would tend to be direct, once-off events occurring during the initial construction period. However, in the long run, the proximity of operations in any given area could result in secondary indirect impacts. The EIA process therefore specifies impact assessment criteria which can be utilised from the perspective of a heritage specialist study which elucidates the overall extent of impacts.

#### Significance of the heritage resource

This is a statement of the nature and degree of significance of the heritage resource being affected by the activity. From a heritage management perspective it is useful to distinguish between whether the significance is embedded in the physical fabric or in associations with events or persons or in the experience of a place; i.e. its visual and non-visual qualities. This statement is a primary informant to the nature and degree of significance of an impact and thus needs to be thoroughly considered. Consideration needs to be given to the significance of a heritage resource at different scales (i.e. sitespecific, local, regional, national or international) and the relationship between the heritage resource, its setting and its associations.

#### Nature of the impact

<sup>1</sup> Based on: Winter, S. & Baumann, N. 2005. *Guideline for involving heritage specialists in EIA processes: Edition 1.*

## Mount Ayliff Peri Urban Water Scheme: Archaeological Impact Assessment Report

This is an assessment of the nature of the impact of the activity on a heritage resource, with some indication of its positive and/or negative effect/s. It is strongly informed by the statement of resource significance. In other words, the nature of the impact may be historical, aesthetic, social, scientific, linguistic or architectural, intrinsic, associational or contextual (visual or non-visual). In many cases, the nature of the impact will include more than one value.

### Extent

Here it should be indicated whether the impact will be experienced:

- On a site scale, i.e. extend only as far as the activity;
- Within the immediate context of a heritage resource;
- On a local scale, e.g. town or suburb
- On a metropolitan or regional scale; or
- On a national/international scale.

### Duration

Here it should be indicated whether the lifespan of the impact will be:

- Short term, (needs to be defined in context)
- Medium term, (needs to be defined in context)
- Long term where the impact will persist indefinitely, possibly beyond the operational life of the activity, either because of natural processes or by human intervention; or
- Permanent 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.

Of relevance to the duration of an impact are the following considerations:

- Reversibility of the impact; and
- Renewability of the heritage resource.

### Intensity

Here it should be established whether the impact should be indicated as:

- Low, where the impact affects the resource in such a way that its heritage value is not affected;
- Medium, where the affected resource is altered but its heritage value continues to exist albeit in a modified way; and
- High, where heritage value is altered to the extent that it will temporarily or permanently be damaged or destroyed.

### Probability

This should describe the likelihood of the impact actually occurring indicated as:

- Improbable, where the possibility of the impact to materialize is very low either because of design or historic experience;
- Probable, where there is a distinct possibility that the impact will occur;
- Highly probable, where it is most likely that the impact will occur; or
- Definite, where the impact will definitely occur regardless of any mitigation measures

### Confidence

This should relate to the level of confidence that the specialist has in establishing the nature and degree of impacts. It relates to the level and reliability of information, the nature and degree of consultation with I&AP's and the dynamic of the broader socio-political context.

- High, where the information is comprehensive and accurate, where there has been a high degree of consultation and the socio-political context is relatively stable.
- Medium, where the information is sufficient but is based mainly on secondary sources, where there has been a limited targeted consultation and socio-political context is fluid.
- Low, where the information is poor, a high degree of contestation is evident and there is a state of socio-political flux.

### Impact Significance

The significance of impacts can be determined through a synthesis of the aspects produced in terms of the nature and degree of heritage significance and the nature, duration, intensity, extent, probability and confidence of impacts and can be described as:

- Low; where it would have a negligible effect on heritage and on the decision
- Medium, where it would have a moderate effect on heritage and should influence the decision.
- High, where it would have, or there would be a high risk of, a big effect on heritage. Impacts of high significance should have a major influence on the decision;
- Very high, where it would have, or there would be high risk of, an irreversible and possibly irreplaceable negative impact on heritage. Impacts of very high significance should be a central factor in decision-making.

## 7.3.2 Direct impact rating

**Direct or primary effects** on heritage resources occur at the same time and in the same space as the activity, e.g. loss of historical fabric through demolition work. **Indirect effects or secondary effects** on heritage



resources occur later in time or at a different place from the causal activity, or as a result of a complex pathway, e.g. restriction of access to a heritage resource resulting in the gradual erosion of its significance, which is dependent on ritual patterns of access. The following table provides an outline as to the relationship between the significance of a heritage context, the intensity of development and the significance of heritage impacts to be expected.

HERITAGE CONTEXT	TYPE OF DEVELOPMENT			
	CATEGORY A	CATEGORY B	CATEGORY C	CATEGORY D
<b>CONTEXT 1</b> High heritage Value	Moderate heritage impact expected	High heritage impact expected	Very high heritage impact expected	Very high heritage impact expected
<b>CONTEXT 2</b> Medium to high heritage value	Minimal heritage impact expected	Moderate heritage impact expected	High heritage impact expected	Very high heritage impact expected
<b>CONTEXT 3</b> Medium to low heritage value	Little or no heritage impact expected	Minimal heritage impact expected	Moderate heritage impact expected	High heritage impact expected
<b>CONTEXT 4</b> Low to no heritage value	Little or no heritage impact expected	Little or no heritage impact expected	Minimal heritage value expected	Moderate heritage impact expected
<b>NOTE: A DEFAULT "LITTLE OR NO HERITAGE IMPACT EXPECTED" VALUE APPLIES WHERE A HERITAGE RESOURCE OCCURS OUTSIDE THE IMPACT ZONE OF THE DEVELOPMENT.</b>				
HERITAGE CONTEXTS	CATEGORIES OF DEVELOPMENT			
<p><b>Context 1:</b> Of high intrinsic, associational and contextual heritage value within a national, provincial and local context, i.e. formally declared or potential Grade 1, 2 or 3A heritage resources</p> <p><b>Context 2:</b> Of moderate to high intrinsic, associational and contextual value within a local context, i.e. potential Grade 3B heritage resources.</p> <p><b>Context 3:</b> Of medium to low intrinsic, associational or contextual heritage value within a national, provincial and local context, i.e. potential Grade 3C heritage resources</p> <p><b>Context 4:</b> Of little or no intrinsic, associational or contextual heritage value due to disturbed, degraded conditions or extent of irreversible damage.</p>	<p><b>Category A: Minimal intensity development</b></p> <ul style="list-style-type: none"> <li>- No rezoning involved; within existing use rights.</li> <li>- No subdivision involved.</li> <li>- Upgrading of existing infrastructure within existing envelopes</li> <li>- Minor internal changes to existing structures</li> <li>- New building footprints limited to less than 1000m2.</li> </ul> <p><b>Category B: Low-key intensity development</b></p> <ul style="list-style-type: none"> <li>- Spot rezoning with no change to overall zoning of a site.</li> <li>- Linear development less than 100m</li> <li>- Building footprints between 1000m2-2000m2</li> <li>- Minor changes to external envelop of existing structures (less than 25%)</li> <li>- Minor changes in relation to bulk and height of immediately adjacent structures (less than 25%).</li> </ul> <p><b>Category C: Moderate intensity development</b></p> <ul style="list-style-type: none"> <li>- Rezoning of a site between 5000m2-10 000m2.</li> <li>- Linear development between 100m and 300m.</li> <li>- Building footprints between 2000m2 and 5000m2</li> <li>- Substantial changes to external envelop of existing structures (more than 50%)</li> <li>- Substantial increase in bulk and height in relation to immediately adjacent buildings (more than 50%)</li> </ul> <p><b>Category D: High intensity development</b></p> <ul style="list-style-type: none"> <li>- Rezoning of a site in excess of 10 000m2</li> <li>- Linear development in excess of 300m.</li> <li>- Any development changing the character of a site exceeding 5000m2 or involving the subdivision of a site into three or more erven.</li> <li>- Substantial increase in bulk and height in relation to immediately adjacent buildings (more than 100%)</li> </ul>			

### 7.3.3 Management actions

Recommendations on relevant heritage resources management actions are vital to the conservation of heritage

resources. Recommended management actions may include the following:

**No further action / Monitoring**

Where no heritage resources have been documented, heritage resources occur well outside the impact zone of any development or the primary context of the surroundings at a development footprint has been largely destroyed or altered, no further immediate action is required. Site monitoring during development, by an ECO or the heritage specialist are often added to this recommendation in order to ensure that no undetected heritage remains are destroyed.

**Avoidance**

This is appropriate where any type of development occurs within a formally protected or significant or sensitive heritage context and is likely to have a high negative impact. Mitigation is not acceptable or not possible.

**Mitigation**

This is appropriate where development occurs in a context of heritage significance and where the impact is such that it can be mitigated to a degree of medium to low significance, e.g. the high to medium impact of a development on an archaeological site could be mitigated through sampling/excavation of the remains. Not all negative impacts can be mitigated.

**Compensation**

Compensation is generally not an appropriate heritage management action. The main function of management actions should be to conserve the resource for the benefit of future generations. Once lost it cannot be renewed. The circumstances around the potential public or heritage benefits would need to be exceptional to warrant this type of action, especially in the case of where the impact was high.

**Rehabilitation**

Rehabilitation is considered in heritage management terms as a intervention typically involving the adding of a new heritage layer to enable a new sustainable use. It is not appropriate when the process necessitates the removal of previous historical layers, i.e. restoration of a building or place to the previous state/period. It is an appropriate heritage management action in the following cases:

- The heritage resource is degraded or in the process of degradation and would benefit from rehabilitation.
- Where rehabilitation implies appropriate conservation interventions, i.e. adaptive reuse, repair and maintenance, consolidation and minimal loss of historical fabric.
- Where the rehabilitation process will not result in a negative impact on the intrinsic value of the resource.

**Enhancement**

Enhancement is appropriate where the overall heritage significance and its public appreciation value are improved. It does not imply creation of a condition that might never have occurred during the evolution of a place, e.g. the tendency to sanitize the past. This management action might result from the removal of previous layers where these layers are culturally of low significance and detract from the significance of the resource. It would be appropriate in a range of heritage contexts and applicable to a range of resources. In the case of formally protected or significant resources, appropriate enhancement action should be encouraged. Care should, however, be taken to ensure that the process does not have a negative impact on the character and context of the resource. It would thus have to be carefully monitored.

**7.3.4 Site significance and impact rating**

Refer to Section 7.3.1, Section 7.3.2 & Section 7.3.3 for background on the rating of impacts and recommendation of management actions for sites of heritage potential. Impact thresholds and management measures for the sites are further discussed in section 7.3.5.

- **Site MAS 01**

<b>1. SITE DESCRIPTION : Historical Period Structures</b>				
<b>1.1 General Site Description</b>				
A low density Middle Stone Age Scatter				
<b>1.2 Site features / artefacts / Other</b>				
<b>Site Location</b>				
Province / District	<b>Eastern Cape Province</b>	Map Number	<b>3029CD</b>	
Farm / Settlement / Zone	<b>Mount Ayliff Commonage</b>	Co-ordinates	<b>S30.80249</b>	<b>E29.38783</b>
<b>Site Type</b>				
Surface sites	<b>X</b>	Caves and rock shelters		
Larger open-air sites		Sealed sites (deposits		
River deposits		Other		
<b>Site Function</b>				

## Mount Ayliff Peri Urban Water Scheme: Archaeological Impact Assessment Report

Living / habitation	<input checked="" type="checkbox"/>	Kill	
Ceremonial		Burial	
Trading / Barter		Art	
Quarry / Mining / Smelting		Other	
<b>Site Placement</b>			
Valley floor		Hill top	
		Vlei/swamp	
Dam		River Bank	
		Slope	<input checked="" type="checkbox"/>
		Plains	
Other / Comments			
<b>Vegetation</b>			
Riverine forest		Bushveld	
		Savannah	
Thornveld		Grassland	<input checked="" type="checkbox"/>
		Cultivated	<input checked="" type="checkbox"/>
		Other	
<b>Age Classification</b>			
Stone Age	<input checked="" type="checkbox"/>	Early Iron Age	
		Middle Iron Age	
		Later Iron Age	
Historical		Other	
<b>Material Culture</b>			
Midden		House Remains	
		Stone Walling	
		Stone Structures	
Granary		Grinding Stone (L)	
		Grinding Stone (U)	
		Granary Stand	
Metal		Ceramics (Potter)	
		Ceramics (Porcelain)	
		Stone (non-lithic)	<input checked="" type="checkbox"/>
Metal slag		Tuyere	
		Fauna	
		Bead (Glass)	
Bead (OES / Shell)		Glass	
		Lithics	<input checked="" type="checkbox"/>
		Smelting Residues	
Other: <b>X - Plastic</b>		Other:	
<b>1.3 Site Condition</b>			
<b>The site integrity has been severely compromised.</b>			
<b>2. SITE EVALUATION</b>			
<b>2.1 Heritage Value (NHRA, section 2 [3])</b>	<b>High</b>	<b>Medium</b>	<b>Low</b>
It has importance to the community or pattern of South Africa's history or pre-colonial history.		<input checked="" type="checkbox"/>	
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.			<input checked="" type="checkbox"/>
It has potential to yield information that will contribute to an understanding of South Africa's natural and cultural heritage.		<input checked="" type="checkbox"/>	
It is of importance in demonstrating the principle characteristics of a particular class of South Africa's natural or cultural places or objects.			<input checked="" type="checkbox"/>
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or cultural group.		<input checked="" type="checkbox"/>	
It has importance in demonstrating a high degree of creative or technical achievement at a particular period.			<input checked="" type="checkbox"/>
It has marked or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).			<input checked="" type="checkbox"/>
It has strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa.		<input checked="" type="checkbox"/>	
It has significance through contributing towards the promotion of a local sociocultural identity and can be developed as a tourist destination.			<input checked="" type="checkbox"/>
It has significance relating to the history of slavery in South Africa.			<input checked="" type="checkbox"/>
It has importance to the wider understanding of temporal changes within cultural landscapes, settlement patterns and human occupation.		<input checked="" type="checkbox"/>	
<b>2.2 Field Register Rating</b>			
National/Grade 1 [should be registered, retained]			
Provincial/Grade 2 [should be registered, retained]			
Local/Grade 3A [should be registered, mitigation not advised]			

## Mount Ayliff Peri Urban Water Scheme: Archaeological Impact Assessment Report

Local/Grade 3B [High significance; mitigation, partly retained]			
Generally Protected A [High/Medium significance, mitigation]			
Generally protected B [Medium significance, to be recorded]	<b>X</b>		
Generally Protected C [Low significance, no further action]			
<b>2.3 Sphere of Significance</b>	<b>High</b>	<b>Medium</b>	
International			
National			
Provincial			
Local		<b>X</b>	
Specific community			
<b>3. IMPACT RATING AND MITIGATION</b>			
<b>3.1 Impact assessment</b>			
<b>APPROXIMATE DISTANCE FROM DEVELOPMENT: 0 - 100 METERS</b>			
<b>NATURE OF IMPACT: HISTORICAL, AESTHETIC, SOCIAL, SCIENTIFIC, ARCHITECTURAL &amp; VISUAL.</b>			
<b>EXTENT OF IMPACT: Local</b>			
<b>SPECIALIST LEVEL OF CONFIDENCE IN DEGREE OF IMPACT AND SEVERITY: High</b>			
<b>3.2 Impact Significance and Severity</b>			
General assessment of impacts on resource (Refer to Section 7.3.1)		<b>Without Management*</b>	<b>With Management*</b>
	Duration	<b>Permanent: High</b>	<b>Permanent: Low</b>
	Intensity	<b>Local: High</b>	<b>Local: Low</b>
	Probability	<b>Probable</b>	<b>Improbable</b>
	Impact Significance	<b>Very High</b>	<b>Negligible</b>
<b>3.3 Direct Impact Rating</b>			
<b>Direct impact on resource</b>	None (the potential development does not adversely or positively affect the heritage resource)		
	Peripheral / Indirect (the heritage resource or its setting is located in proximity to the footprint of the potential development)		
	Destruction / Direct (the heritage resource or site is physically located within the footprint of the potential development)		<b>X</b>
Direct impact rating (Refer to Section 7.3.2) Note that a default "no impact expected" value applies where a heritage resource occurs outside the impact matrix or applicable conservation buffers of the development.		<b>High Heritage Impact Expected.</b>	
<b>3.4 Recommended Management* (refer to section 7.3.3)</b>			
<b>Avoidance / Monitoring</b>			
<b>Comments on recommended management</b>			
<b>Avoidance: Management of development process in order to avoid impact on the resources.</b> <b>Monitoring: It is necessary that the sites be monitored to ensure that heritage resources are not impacted on. If further impact occurs, or is envisaged at any stage of development and operation the following will be required:</b> - Documentation of sites. - Relevant Permitting from Heritage Resources Authority where applicable. .			
<b>4. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS</b>			
- National Heritage Resources Act (Act no. 25 of 1999) - Local and regional provisions, laws and by-laws			

**- Site MAI01**

<b>1. SITE DESCRIPTION : Historical Period Structures</b>			
<b>1.2 General Site Description</b>			
The remains of a minor rough stone wall structure.			
<b>1.2 Site features / artefacts / Other</b>			
<b>Site Location</b>			
Province / District	Eastern Cape Province	Map Number	3029CD

## Mount Ayliff Peri Urban Water Scheme: Archaeological Impact Assessment Report

Farm / Settlement / Zone	Mount Ayliff Commonage			Co-ordinates	S30.82294	E29.40208
<b>Site Type</b>						
Surface sites	X			Caves and rock shelters		
Larger open-air sites				Sealed sites (deposits)		
River deposits				Other		
<b>Site Function</b>						
Living / habitation	X			Kill		
Ceremonial				Burial		
Trading / Barter				Art		
Quarry / Mining / Smelting				Other		
<b>Site Placement</b>						
Valley floor		Hill top	X	Vlei/swamp		River Mouth
Dam		River Bank		Slope		Plains
Other / Comments						
<b>Vegetation</b>						
Riverine forest		Bushveld		Savannah		Mountain forest
Thornveld		Grassland	X	Cultivated	X	Other
<b>Age Classification</b>						
Stone Age		Early Iron Age		Middle Iron Age		Later Iron Age
Historical		Other		X		
<b>Material Culture</b>						
Midden		House Remains		Stone Walling		Stone Structures
Granary		Grinding Stone (L)		Grinding Stone (U)		Granary Stand
Metal		Ceramics (Potter)		Ceramics (Porcelain)		Stone (non-lithic)
Metal slag		Tuyere		Fauna		Bead (Glass)
Bead (OES / Shell)		Glass		Lithics		Smelting Residues
Other:				Other:		
<b>1.3 Site Condition</b>						
<b>The site integrity has been severely compromised and structures have almost completely collapsed.</b>						
<b>2. SITE EVALUATION</b>						
<b>2.1 Heritage Value (NHRA, section 2 [3])</b>				<b>High</b>	<b>Medium</b>	<b>Low</b>
It has importance to the community or pattern of South Africa's history or pre-colonial history.					X	
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.						X
It has potential to yield information that will contribute to an understanding of South Africa's natural and cultural heritage.					X	
It is of importance in demonstrating the principle characteristics of a particular class of South Africa's natural or cultural places or objects.						X
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or cultural group.					X	
It has importance in demonstrating a high degree of creative or technical achievement at a particular period.						X
It has marked or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).						X
It has strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa.					X	
It has significance through contributing towards the promotion of a local sociocultural identity and can be developed as a tourist destination.						X

## Mount Ayliff Peri Urban Water Scheme: Archaeological Impact Assessment Report

It has significance relating to the history of slavery in South Africa.			X
It has importance to the wider understanding of temporal changes within cultural landscapes, settlement patterns and human occupation.		X	
<b>2.2 Field Register Rating</b>			
National/Grade 1 [should be registered, retained]			
Provincial/Grade 2 [should be registered, retained]			
Local/Grade 3A [should be registered, mitigation not advised]			
Local/Grade 3B [High significance; mitigation, partly retained]			
Generally Protected A [High/Medium significance, mitigation]			
Generally protected B [Medium significance, to be recorded]			X
Generally Protected C [Low significance, no further action]			
<b>2.3 Sphere of Significance</b>		High	Medium
International			
National			
Provincial			
Local		X	
Specific community			
<b>3. IMPACT RATING AND MITIGATION</b>			
<b>3.1 Impact assessment</b>			
<b>APPROXIMATE DISTANCE FROM DEVELOPMENT: 0 - 100 METERS</b>			
<b>NATURE OF IMPACT: HISTORICAL, AESTHETIC, SOCIAL, SCIENTIFIC, ARCHITECTURAL &amp; VISUAL.</b>			
<b>EXTENT OF IMPACT: Local</b>			
<b>SPECIALIST LEVEL OF CONFIDENCE IN DEGREE OF IMPACT AND SEVERITY: High</b>			
<b>3.2 Impact Significance and Severity</b>			
General assessment of impacts on resource (Refer to Section 7.3.1)		<b>Without Management*</b>	<b>With Management*</b>
	Duration	Permanent: High	Permanent: Low
	Intensity	Local: High	Local: Low
	Probability	Probable	Improbable
	Impact Significance	Very High	Negligible
<b>3.3 Direct Impact Rating</b>			
<b>Direct impact on resource</b>	None (the potential development does not adversely or positively affect the heritage resource)		
	Peripheral / Indirect (the heritage resource or its setting is located in proximity to the footprint of the potential development)		
	Destruction / Direct (the heritage resource or site is physically located within the footprint of the potential development)		X
<b>Direct impact rating (Refer to Section 7.3.2)</b> Note that a default "no impact expected" value applies where a heritage resource occurs outside the impact matrix or applicable conservation buffers of the development.		<b>High Heritage Impact Expected.</b>	
<b>3.4 Recommended Management* (refer to section 7.3.3)</b>			
<b>Avoidance / Monitoring</b>			
<b>Comments on recommended management</b>			
<b>Avoidance: Management of development process in order to avoid impact on the resources.</b> <b>Monitoring: It is necessary that the sites be monitored to ensure that heritage resources are not impacted on. If further impact occurs, or is envisaged at any stage of development and operation the following will be required:</b> - Documentation of sites. - Relevant Permitting from Heritage Resources Authority where applicable. .			
<b>4. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS</b>			
- National Heritage Resources Act (Act no. 25 of 1999) - Local and regional provisions, laws and by-laws			

- Site MAH01 & Site MAH02

1. SITE DESCRIPTION : Historical Period Structures							
1.3 General Site Description							
The remains of at least two large stone walled cattle kraals and the remains of a small historical settlement.							
1.2 Site features / artefacts / Other							
Site Location							
Province / District	Eastern Cape Province			Map Number	3029CD		
Farm / Settlement / Zone	Mount Ayliff Commonage			Co-ordinates	S30.76752 S30.79901	E29.41507 E29.38342	
Site Type							
Surface sites	X			Caves and rock shelters			
Larger open-air sites				Sealed sites (deposits)			
River deposits				Other			
Site Function							
Living / habitation				Kill			
Ceremonial				Burial			
Trading / Barter				Art			
Quarry / Mining / Smelting				Other	X – stock keeping		
Site Placement							
Valley floor		Hill top		Vlei/swamp		River Mouth	
Dam		River Bank		Slope	X	Plains	
Other / Comments							
Vegetation							
Riverine forest		Bushveld		Savannah		Mountain forest	
Thornveld		Grassland	X	Cultivated	X	Other	
Age Classification							
Stone Age		Early Iron Age		Middle Iron Age		Later Iron Age	
Historical	X	Other	X - recent				
Material Culture							
Midden		House Remains		Stone Walling	X	Stone Structures	X
Granary		Grinding Stone (L)		Grinding Stone (U)		Granary Stand	
Metal		Ceramics (Potter)		Ceramics (Porcelain)		Stone (non-lithic)	
Metal slag		Tuyere		Fauna		Bead (Glass)	
Bead (OES / Shell)		Glass		Lithics		Smelting Residues	
Other: X - Plastic				Other: X - concrete			
1.3 Site Condition							
The site integrity has been severely compromised. Sites are overgrown.							
2. SITE EVALUATION							
2.1 Heritage Value (NHRA, section 2 [3])				High	Medium	Low	
It has importance to the community or pattern of South Africa's history or pre-colonial history.					X		
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.						X	
It has potential to yield information that will contribute to an understanding of South Africa's natural and cultural heritage.					X		
It is of importance in demonstrating the principle characteristics of a particular class of South Africa's natural or cultural places or objects.						X	
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or					X		

## Mount Ayliff Peri Urban Water Scheme: Archaeological Impact Assessment Report

cultural group.			
It has importance in demonstrating a high degree of creative or technical achievement at a particular period.			X
It has marked or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).			X
It has strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa.		X	
It has significance through contributing towards the promotion of a local sociocultural identity and can be developed as a tourist destination.			X
It has significance relating to the history of slavery in South Africa.			X
It has importance to the wider understanding of temporal changes within cultural landscapes, settlement patterns and human occupation.		X	
<b>2.2 Field Register Rating</b>			
National/Grade 1 [should be registered, retained]			
Provincial/Grade 2 [should be registered, retained]			
Local/Grade 3A [should be registered, mitigation not advised]			
Local/Grade 3B [High significance; mitigation, partly retained]			
Generally Protected A [High/Medium significance, mitigation]			
Generally protected B [Medium significance, to be recorded]			X
Generally Protected C [Low significance, no further action]			
<b>2.3 Sphere of Significance</b>	<b>High</b>	<b>Medium</b>	<b>Low</b>
International			
National			
Provincial			
Local		X	
Specific community			
<b>3. IMPACT RATING AND MITIGATION</b>			
<b>3.1 Impact assessment</b>			
<b>APPROXIMATE DISTANCE FROM DEVELOPMENT: 0 - 100 METERS</b>			
<b>NATURE OF IMPACT: HISTORICAL, AESTHETIC, SOCIAL, SCIENTIFIC, ARCHITECTURAL &amp; VISUAL.</b>			
<b>EXTENT OF IMPACT: Local</b>			
<b>SPECIALIST LEVEL OF CONFIDENCE IN DEGREE OF IMPACT AND SEVERITY: High</b>			
<b>3.2 Impact Significance and Severity</b>			
General assessment of impacts on resource (Refer to Section 7.3.1)		<b>Without Management*</b>	<b>With Management*</b>
	Duration	<b>Permanent: High</b>	<b>Permanent: Low</b>
	Intensity	<b>Local: High</b>	<b>Local: Low</b>
	Probability	<b>Probable</b>	<b>Improbable</b>
	Impact Significance	<b>Very High</b>	<b>Negligible</b>
<b>3.3 Direct Impact Rating</b>			
<b>Direct impact on resource</b>	None (the potential development does not adversely or positively affect the heritage resource)		
	Peripheral / Indirect (the heritage resource or its setting is located in proximity to the footprint of the potential development)		
	Destruction / Direct (the heritage resource or site is physically located within the footprint of the potential development)		X
Direct impact rating (Refer to Section 7.3.2) Note that a default "no impact expected" value applies where a heritage resource occurs outside the impact matrix or applicable conservation buffers of the development.		<b>High Heritage Impact Expected.</b>	
<b>3.4 Recommended Management* (refer to section 7.3.3)</b>			
<b>Avoidance / Monitoring</b>			
<b>Comments on recommended management</b>			
<b>Avoidance: Management of development process in order to avoid impact on the resources.</b>			



## Mount Ayliff Peri Urban Water Scheme: Archaeological Impact Assessment Report

**Monitoring: It is necessary that the sites be monitored to ensure that heritage resources are not impacted on. If further impact occurs, or is envisaged at any stage of development and operation the following will be required:**

- Documentation of sites.
- Relevant Permitting from Heritage Resources Authority where applicable. .

### 4. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS

- National Heritage Resources Act (Act no. 25 of 1999)
- Local and regional provisions, laws and by-laws

### - Site MAB01- Site MAB09

1. SITE DESCRIPTION							
1.1 General Site Description							
Marked and Unmarked Burials and Graves							
1.2 Site features / artefacts / Other							
Site Location							
Province / District	Eastern Cape Province			Map Number	3029CD		
Farm Name	Mount Ayliff Commonage			Co-ordinates	S30.76799	E29.37993	
				S30.76745	E29.38390		
				S30.76557	E29.39749		
				S30.76573	E29.39807		
				S30.77530	E29.37883		
				S30.79891	E29.38367		
				S30.82277	E29.40231		
				S30.80939	E29.37103		
				S30.80656	E29.37123		
Site Type							
Surface sites	X			Caves and rock shelters			
Larger open-air sites				Sealed sites (deposits)			
River deposits				Other			
Site Function							
Living / habitation				Kill			
Ceremonial				Burial	X		
Trading / Barter				Art			
Quarry / Mining / Smelting				Other			
Site Placement							
Valley floor		Hill top		Vlei/swamp		River Mouth	
Dam		River Bank		Slope	X	Plains	X
Other / Comments							
Vegetation							
Riverine forest		Bushveld		Savannah		Mountain forest	
Thornveld		Grassland	X	Cultivated	X	Other	
Age Classification							
Stone Age		Early Iron Age		Middle Iron Age		Later Iron Age	
Historical	X	Other	X - Recent				
Material Culture							
Midden		House Remains		Stone Walling		Stone Structures	
Granary		Grinding Stone (L)		Grinding Stone (U)		Granary Stand	
Metal		Ceramics (Pottery)		Ceramics (Porcelain)		Stone (non-lithic)	
Metal slag		Tuyere		Fauna		Bead (Glass)	
Bead (OES / Shell)		Glass		Lithics		Smelting Residues	

## Mount Ayliff Peri Urban Water Scheme: Archaeological Impact Assessment Report

Other: <b>X</b> – grave dressing		Other: <b>X</b> – funeral goods	
<b>1.3 Site Condition</b>			
Site preservation is fair as the burial is probably of more recent age.			
<b>2. SITE EVALUATION</b>			
<b>2.1 Heritage Value (NHRA, section 2 [3])</b>	<b>High</b>	<b>Medium</b>	<b>Low</b>
It has importance to the community or pattern of South Africa's history or pre-colonial history.		<b>X</b>	
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.	<b>X</b>		
It has potential to yield information that will contribute to an understanding of South Africa's natural and cultural heritage.		<b>X</b>	
It is of importance in demonstrating the principle characteristics of a particular class of South Africa's natural or cultural places or objects.	<b>X</b>		
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or cultural group.			<b>X</b>
It has importance in demonstrating a high degree of creative or technical achievement at a particular period.			<b>X</b>
It has marked or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).	<b>X</b>		
It has strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa.			<b>X</b>
It has significance through contributing towards the promotion of a local sociocultural identity and can be developed as a tourist destination.			<b>X</b>
It has significance relating to the history of slavery in South Africa.			<b>X</b>
It has importance to the wider understanding of temporal changes within cultural landscapes, settlement patterns and human occupation.		<b>X</b>	
<b>2.2 Field Register Rating</b>			
National/Grade 1 [should be registered, retained]			
Provincial/Grade 2 [should be registered, retained]			
Local/Grade 3A [should be registered, mitigation not advised]			
Local/Grade 3B [High significance; mitigation, partly retained]			<b>X</b>
Generally Protected A [High/Medium significance, mitigation]			
Generally protected B [Medium significance, to be recorded]			
Generally Protected C [Low significance, no further action]			
<b>2.3 Sphere of Significance</b>	<b>High</b>	<b>Medium</b>	<b>Low</b>
International			
National			
Provincial			
Local	<b>X</b>		
Specific community			
<b>3. IMPACT RATING AND MITIGATION</b>			
<b>3.1 Impact assessment</b>			
<b>APPROXIMATE DISTANCE FROM DEVELOPMENT: 0 - 100METERS</b>			
<b>NATURE OF IMPACT: Historical, Aesthetic, Social, Scientific, Intrinsic, Associational &amp; Contextual</b>			
<b>EXTENT OF IMPACT: Local</b>			
<b>SPECIALIST LEVEL OF CONFIDENCE IN DEGREE OF IMPACT AND SEVERITY: High</b>			
<b>3.2 Impact Significance and Severity</b>			
General assessment of impacts on resource (Refer to Section 7.3.1)		<b>Without Management*</b>	<b>With Management*</b>
	Duration	<b>Permanent: High</b>	<b>Permanent: Low</b>
	Intensity	<b>Local: High</b>	<b>Local: Low</b>
	Probability	<b>Probable</b>	<b>Improbable</b>

## Mount Ayliff Peri Urban Water Scheme: Archaeological Impact Assessment Report

Impact Significance

**Very High**

**Negligible**

### 3.3 Direct Impact Rating

<b>Direct impact on resource</b>	None (the potential development does not adversely or positively affect the heritage resource)	
	Peripheral / Indirect (the heritage resource or its setting is located in proximity to the footprint of the potential development)	
	Destruction / Direct (the heritage resource or site is physically located within the footprint of the potential development)	<b>X</b>

#### Direct impact rating (Refer to Section 7.3.2)

Note that a default "no impact expected" value applies where a heritage resource occurs outside the impact matrix or applicable conservation buffers of the development.

**High heritage impact expected.**

### 3.4 Recommended Management\* (refer to section 7.3.3)

#### Avoidance & Monitoring / Mitigation

##### Comments on recommended management

**It is recommended that all phase of the proposed activity be done in such a manner as to avoid the heritage feature or proposed conservation buffer zones. In addition, it is necessary that the site be monitored to ensure that heritage resources are not impacted on.**

**However, if further impact occurs, or is envisaged at any stage of development and operation the following will be required:**

- Documentation of site.
- Exhumation and reburial
- Full social consultation.
- Possible conservation management and protection measures.
- Relevant Permitting from Heritage Resources Authority.

### 4. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS

- Human Tissue Act (Act 65 of 1983 as amended).
- Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925)
- Ordinance on Excavations (Ordinance no. 12 of 1980)
- Local and regional provisions, laws and by-laws
- National Heritage Resources Act (Act no. 25 of 1999)
- Permit from SAHRA for removal

#### - Site MAP01

### 1. SITE DESCRIPTION

#### 1.1 General Site Description

**Elizabeth Paul Memorial**

#### 1.2 Site features / artefacts / Other

##### Site Location

Province / District	<b>Eastern Cape Province</b>	Map Number	<b>3029CD</b>
Farm Name	<b>Mount Ayliff Commonage</b>	Co-ordinates	<b>S30.77033 E29.38253</b>

##### Site Type

Surface sites	<b>X</b>	Caves and rock shelters	
Larger open-air sites		Sealed sites (deposits)	
River deposits		Other	

##### Site Function

Living / habitation		Kill	
Ceremonial	<b>X</b>	Burial	
Trading / Barter		Art	
Quarry / Mining / Smelting		Other	

##### Site Placement

Valley floor		Hill top		Vlei/swamp		River Mouth	
Dam		River Bank		Slope		Plains	<b>X</b>
Other / Comments							

##### Vegetation

Riverine		Bushveld		Savannah		Mountain forest	
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## Mount Ayliff Peri Urban Water Scheme: Archaeological Impact Assessment Report

forest							
Thornveld		Grassland	<b>X</b>	Cultivated	<b>X</b>	Other	
<b>Age Classification</b>							
Stone Age		Early Iron Age		Middle Iron Age		Later Iron Age	
Historical	<b>X</b>	Other	<b>X - recent</b>				
<b>Material Culture</b>							
Midden		House Remains		Stone Walling		Stone Structures	
Granary		Grinding Stone (L)		Grinding Stone (U)		Granary Stand	
Metal		Ceramics (Potter)		Ceramics (Porcelain)		Stone (non-lithic)	
Metal slag		Tuyere		Fauna		Bead (Glass)	
Bead (OES / Shell)		Glass		Lithics		Smelting Residues	
Other: <b>X – Memorial Stone.</b>				Other:			
<b>1.3 Site Condition</b>							
The condition of the resources is good.							
<b>2. SITE EVALUATION</b>							
<b>2.1 Heritage Value (NHRA, section 2 [3])</b>					High	Medium	Low
It has importance to the community or pattern of South Africa's history or pre-colonial history.						<b>X</b>	
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.						<b>X</b>	
It has potential to yield information that will contribute to an understanding of South Africa's natural and cultural heritage.						<b>X</b>	
It is of importance in demonstrating the principle characteristics of a particular class of South Africa's natural or cultural places or objects.						<b>X</b>	
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or cultural group.						<b>X</b>	
It has importance in demonstrating a high degree of creative or technical achievement at a particular period.						<b>X</b>	
It has marked or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).						<b>X</b>	
It has strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa.						<b>X</b>	
It has significance through contributing towards the promotion of a local sociocultural identity and can be developed as a tourist destination.						<b>X</b>	
It has significance relating to the history of slavery in South Africa.							<b>X</b>
It has importance to the wider understanding of temporal changes within cultural landscapes, settlement patterns and human occupation.						<b>X</b>	
<b>2.2 Field Register Rating</b>							
National/Grade 1 [should be registered, retained]							
Provincial/Grade 2 [should be registered, retained]							
Local/Grade 3A [should be registered, mitigation not advised]							<b>X</b>
Local/Grade 3B [High significance; mitigation, partly retained]							
Generally Protected A [High/Medium significance, mitigation]							
Generally protected B [Medium significance, to be recorded]							
Generally Protected C [Low significance, no further action]							
<b>2.3 Sphere of Significance</b>					High	Medium	Low
International							
National							
Provincial					<b>X</b>		
Local							
Specific community							

## Mount Ayliff Peri Urban Water Scheme: Archaeological Impact Assessment Report

3. IMPACT RATING AND MITIGATION			
3.1 Impact assessment			
<b>APPROXIMATE DISTANCE FROM DEVELOPMENT: 0 - 100 METERS</b>			
<b>NATURE OF IMPACT: Historical, Aesthetic, Social, Scientific, Intrinsic, Associational &amp; Contextual</b>			
<b>EXTENT OF IMPACT: Local</b>			
<b>SPECIALIST LEVEL OF CONFIDENCE IN DEGREE OF IMPACT AND SEVERITY: High</b>			
3.2 Impact Significance and Severity			
General assessment of impacts on resource (Refer to Section 7.3.1)		<b>Without Management*</b>	<b>With Management*</b>
	Duration	Permanent: High	Permanent: Low
	Intensity	Local: High	Local: Low
	Probability	Probable	Improbable
	Impact Significance	Very High	Negligible
3.3 Direct Impact Rating			
Direct impact on resource	None (the potential development does not adversely or positively affect the heritage resource)		
	Peripheral / Indirect (the heritage resource or its setting is located in proximity to the footprint of the potential development)		
	Destruction / Direct (the heritage resource or site is physically located within the footprint of the potential development)		<b>X</b>
Direct impact rating (Refer to Section 7.3.2) Note that a default "no impact expected" value applies where a heritage resource occurs outside the impact matrix or applicable conservation buffers of the development.		<b>Very High heritage impact expected.</b>	
3.4 Recommended Management* (refer to section 7.3.3)			
<b>Avoidance, Monitoring. Ensure that mission complex is not impacted on.</b>			
Comments on recommended management			
<b>Avoidance: Management of development process in order to avoid impact on the resources.</b> <b>Monitoring: It is necessary that the sites be monitored to ensure that heritage resources are not impacted on. If further impact occurs, or is envisaged at any stage of development and operation the following will be required:</b> <ul style="list-style-type: none"> <li>- Documentation of sites.</li> <li>- Further desktop study and community consultation to more accurately ascertain context of sites.</li> <li>- Relevant Permitting from Heritage Resources Authority where applicable. .</li> </ul>			
4. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS			
<ul style="list-style-type: none"> <li>- National Heritage Resources Act (Act no. 25 of 1999)</li> <li>- Local and regional provisions, laws and by-laws</li> </ul>			

**- SiteMAP02**

1. SITE DESCRIPTION			
1.1 General Site Description			
The Ntsizwa Community Park			
1.2 Site features / artefacts / Other			
Site Location			
Province / District	Eastern Cape Province	Map Number	3029CD
Farm Name	Mount Ayliff Commonage	Co-ordinates	S30.80576      E29.36942
Site Type			
Surface sites	X	Caves and rock shelters	
Larger open-air sites		Sealed sites (deposits)	
River deposits		Other	
Site Function			
Living / habitation		Kill	
Ceremonial		Burial	
Trading / Barter		Art	
Quarry / Mining / Smelting		Other	X - recreational

## Mount Ayliff Peri Urban Water Scheme: Archaeological Impact Assessment Report

Site Placement							
Valley floor		Hill top		Vlei/swamp		River Mouth	
Dam		River Bank		Slope		Plains	<b>X</b>
Other / Comments							
Vegetation							
Riverine forest		Bushveld		Savannah		Mountain forest	
Thornveld		Grassland	<b>X</b>	Cultivated	<b>X</b>	Other	
Age Classification							
Stone Age		Early Iron Age		Middle Iron Age		Later Iron Age	
Historical		Other	<b>X - recent</b>				
Material Culture							
Midden		House Remains		Stone Walling		Stone Structures	
Granary		Grinding Stone (L)		Grinding Stone (U)		Granary Stand	
Metal		Ceramics (Potter)		Ceramics (Porcelain)		Stone (non-lithic)	
Metal slag		Tuyere		Fauna		Bead (Glass)	
Bead (OES / Shell)		Glass		Lithics		Smelting Residues	
Other: <b>X - Buildings</b>				Other:			
1.3 Site Condition							
The condition of the resources is good since it is of recent age.							
2. SITE EVALUATION							
2.1 Heritage Value (NHRA, section 2 [3])				High	Medium	Low	
It has importance to the community or pattern of South Africa's history or pre-colonial history.						<b>X</b>	
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.					<b>X</b>		
It has potential to yield information that will contribute to an understanding of South Africa's natural and cultural heritage.						<b>X</b>	
It is of importance in demonstrating the principle characteristics of a particular class of South Africa's natural or cultural places or objects.						<b>X</b>	
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or cultural group.					<b>X</b>		
It has importance in demonstrating a high degree of creative or technical achievement at a particular period.						<b>X</b>	
It has marked or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).					<b>X</b>		
It has strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa.						<b>X</b>	
It has significance through contributing towards the promotion of a local sociocultural identity and can be developed as a tourist destination.					<b>X</b>		
It has significance relating to the history of slavery in South Africa.						<b>X</b>	
It has importance to the wider understanding of temporal changes within cultural landscapes, settlement patterns and human occupation.						<b>X</b>	
2.2 Field Register Rating							
National/Grade 1 [should be registered, retained]							
Provincial/Grade 2 [should be registered, retained]							
Local/Grade 3A [should be registered, mitigation not advised]							
Local/Grade 3B [High significance; mitigation, partly retained]							
Generally Protected A [High/Medium significance, mitigation]				<b>X</b>			
Generally protected B [Medium significance, to be recorded]							
Generally Protected C [Low significance, no further action]							

## Mount Ayliff Peri Urban Water Scheme: Archaeological Impact Assessment Report

2.3 Sphere of Significance		High	Medium	Low
International				
National				
Provincial				
Local			X	
Specific community				
<b>3. IMPACT RATING AND MITIGATION</b>				
<b>3.1 Impact assessment</b>				
<b>APPROXIMATE DISTANCE FROM DEVELOPMENT: 0 - 100 METERS</b>				
<b>NATURE OF IMPACT: Historical, Aesthetic, Social, Scientific, Intrinsic, Associational &amp; Contextual</b>				
<b>EXTENT OF IMPACT: Local</b>				
<b>SPECIALIST LEVEL OF CONFIDENCE IN DEGREE OF IMPACT AND SEVERITY: High</b>				
<b>3.2 Impact Significance and Severity</b>				
General assessment of impacts on resource (Refer to Section 7.3.1)		<b>Without Management*</b>	<b>With Management*</b>	
	Duration	<b>Permanent: High</b>	<b>Permanent: Low</b>	
	Intensity	<b>Local: High</b>	<b>Local: Low</b>	
	Probability	<b>Probable</b>	<b>Improbable</b>	
	Impact Significance	<b>Very High</b>	<b>Negligible</b>	
<b>3.3 Direct Impact Rating</b>				
Direct impact on resource	None (the potential development does not adversely or positively affect the heritage resource)			
	Peripheral / Indirect (the heritage resource or its setting is located in proximity to the footprint of the potential development)			X
	Destruction / Direct (the heritage resource or site is physically located within the footprint of the potential development)			
Direct impact rating (Refer to Section 7.3.2) Note that a default "no impact expected" value applies where a heritage resource occurs outside the impact matrix or applicable conservation buffers of the development.			<b>Moderate heritage impact expected.</b>	
<b>3.4 Recommended Management* (refer to section 7.3.3)</b>				
<b>Avoidance, Monitoring. Ensure that mission complex is not impacted on.</b>				
<b>Comments on recommended management</b>				
<b>Avoidance: Management of development process in order to avoid impact on the resources.</b> <b>Monitoring: It is necessary that the sites be monitored to ensure that heritage resources are not impacted on. If further impact occurs, or is envisaged at any stage of development and operation the following will be required:</b> <ul style="list-style-type: none"> <li>- Documentation of sites.</li> <li>- Relevant Permitting from Heritage Resources Authority where applicable. .</li> </ul>				
<b>4. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS</b>				
<ul style="list-style-type: none"> <li>- National Heritage Resources Act (Act no. 25 of 1999)</li> <li>- Local and regional provisions, laws and by-laws</li> </ul>				

### 7.4 Discussion: Evaluation of Results and Impacts

Previous studies conducted in the larger Eastern Cape area suggest a rich and diverse, yet relatively understudied archaeological landscape and cognisance should be taken of archaeological material that might be present in surface and sub-surface deposits.

Sites dating to the **Stone Age Period** occur in the study area.

- Low densities of Middle Stone Age artefacts occur at **Site MAS01** in erosion gullies. These Stone Age occurrences and its cultural context is of limited value due to the low concentration of formal stone tools and the loss of artefact context due to poor site preservation and are therefore the site is of medium-low significance. The site is situated within the demarcated water pipe routes and the impact on the site by the proposed activity will be local, and of permanent duration where in essence, the impact might result in

the possible confusing of the archaeological context and potential loss of archaeological material. **The significance of the impact on the heritage resources is considered to be MODERATE but the threshold of the impact can be limited to a NEGLIBLE impact by the implementation of mitigation measures (avoidance, conservation, documentation, monitoring) for the sites, if / when required.**

Sites dating to the **Iron Age Farmer Period** in occur in the study area.

- The possible Iron Age farmer site at **Site MAI01** is of medium-low significance due to the bad preservation of the structures at the site. The site is situated within the demarcated water pipe routes and the impact on the site by the proposed activity will be local, and of permanent duration where in essence, the impact might result in the possible confusing of the archaeological context and potential loss of archaeological material. **The significance of the impact on the heritage resources is considered to be MODERATE but the threshold of the impact can be limited to a NEGLIBLE impact by the implementation of mitigation measures (avoidance, conservation, documentation, monitoring) for the sites, if / when required.**

Sites dating to the **Historical / Colonial Period** in occur in the study area.

- The remains of at least two cattle kraals as well as a small historical settlement / family unit dwelling (**Site MAH01 & Site MAH02**) are of medium-low significance due to poor preservation of the sites. The site is situated within the demarcated water pipe routes and the impact on the site by the proposed activity will be local, and of permanent duration where in essence, the impact might result in the possible confusing of the archaeological context and potential loss of archaeological material. **The significance of the impact on the heritage resources is considered to be MODERATE but the threshold of the impact can be limited to a NEGLIBLE impact by the implementation of mitigation measures (avoidance, conservation, documentation, monitoring) for the sites, if / when required.**

**Graves** are generally protected and are of high significance. This applies to all informal cemeteries and burial places identified in the study area. In addition, one should also consider that burial places functions as place of "Living Heritage". Here, "Living Heritage" can broadly refer to a place of cultural heritage and sacred nature; with cultural attributions that are not generally physically manifested. This said, due cognisance should be taken of the value and intrinsic symbolic power of cemeteries as site of "Living Heritage" in the Mount Ayliff area.

- The nine individual burial grounds identified along the Mt Ayliff Peri Urban Water Scheme project (**Site MAB01 - Site MAB09**) are of high heritage sensitivity a high significance rating. Since the burials all occur in the general vicinity of the proposed pipeline routes impact zone impact on the sites, if any, is expected to be peripheral and of permanent duration where in essence, the impact might result the potential damage / loss of the graves. **The significance of the impact on the heritage resources is considered to be HIGH but the threshold of the impact can be limited to a NEGLIBLE impact by the implementation of mitigation measures (avoidance, conservation, documentation, monitoring) for the sites, if / when required.**

Areas of **General Cultural Interest** occur in the study area.

- The marble memorial beacon for Elizabeth Paul is situated in the vicinity of the water pipeline route and impact on the site, if any, is expected to be direct and of permanent duration where in essence, the impact might result the potential damage / loss of the site, which carries high cultural value. **Since the**



site might be of heritage priority, the significance of the impact on the heritage resources is considered to be HIGH but the threshold of the impact can be limited to a NEGLIBLE impact by the implementation of mitigation measures (avoidance, conservation, documentation, monitoring) for the sites, if / when required.

- The Ntsizwa Community Park is of local social significance. The park is situated in the general vicinity of the water pipeline route and impact on the site, if any, is expected to be peripheral and of permanent duration where in essence, the impact might result the potential damage / loss of the site. **Thus, the significance of the impact on the heritage resources is considered to be LOW but the threshold of the impact can be limited to a NEGLIBLE impact by the implementation of mitigation measures (avoidance, conservation, documentation, monitoring) for the sites, if / when required**

Mount Ayliff Peri Urban Water Scheme: Archaeological Impact Assessment Report

Table 1: Impact Assessment Matrix for the Mt Ayliff Peri Urban Water Scheme Project Area during the Pre-Construction, Construction, Operation and Closure Phases. Unique weight values are indicated below matrix.

Site	Activity	Impact	P	D	S	M/S	Significance Before Mitigation	Mitigation Measures	P	D	S	M / S	Significance		
Pre-Construction, Construction, Operation and Closure								Pre-Construction and Construction Phase							
MAS01	Pre-Construction, Construction, Operation and Closure	Loss of Heritage Resource and Attributes	4	5	2	6	52	Moderate	Avoidance & Conservation	1	1	2	2	5	Negligible
MAI01	Pre-Construction, Construction, Operation and Closure	Loss of Heritage Resource and Attributes	4	5	2	6	52	Moderate	Avoidance & Conservation	1	1	2	2	5	Negligible
MAH01 & MAH02	Pre-Construction, Construction, Operation and Closure	Loss of Heritage Resource and Attributes	4	5	3	6	56	Moderate	Avoidance & Conservation	1	1	3	2	6	Negligible
MAB01 - MAB09	Pre-Construction, Construction, Operation and Closure	Loss of Heritage Resource and Attributes	4	5	3	8	64	High	Avoidance & Conservation	1	1	3	2	6	Negligible
MAP01	Pre-Construction, Construction, Operation and Closure	Loss of Heritage Resource and Attributes	4	5	3	8	64	High	Avoidance & Conservation	1	1	3	2	6	Negligible
MAP02	Pre-Construction, Construction, Operation and Closure	Loss of Heritage Resource and Attributes	4	5	3	6	56	Moderate	Avoidance & Conservation	1	1	3	2	6	Negligible

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

## 8 RECOMMENDATIONS

The larger landscape around Mount Ayliff is rich in pre-historical and historical remnants. Cognisant of this historically significant landscape and the need for the conservation of its heritage resources, the following recommendations are made based on general observations in the Mount Ayliff Peri Urban Water Treatment Works and Bulk Water Supply Pipelines Project area:

- Fossilized material have been observed in the larger region and utmost care should be taken not to destroy previously undetected palaeontological resources. Should fossil remains such as fossil fish, reptiles or petrified wood be exposed during construction, these objects should carefully safeguarded and the relevant heritage resources authority (SAHRA) should be notified immediately so that the appropriate action can be taken by a professional palaeontologist.
- It is recommended that any activities around the MSA occurrences of medium-low significance identified in the study area (**Site MAS01**), be monitored in order to avoid the destruction of significant and previously undetected Stone Age occurrences.
- The possible Farmer Period site and stone structure at **Site MAI01** is of medium-low significance and it is recommended that the site be monitored when construction commences on order to avoid the possible loss of previously undetected heritage remains.
- The remains of two large cattle kraals as well as a small historical settlement at **Site MAH01 & Site MAH02** are of medium-low significance due to poor preservation of the sites and it is recommended that any activities pertaining to the water supply development in the area be monitored in order to avoid any possible impact sites of significance in the area. However, should the structures be directly impacted by development activities, a destruction permit from the relevant heritage resources authority (SAHRA) should be obtained.
- Nine individual burial grounds identified along the proposed water supply project (**Site MAB01 - Site MAB09**) are of high heritage sensitivity and it is primarily recommended that all activities pertaining to the construction of the pipelines be conducted in such a way as to avoid impact on the graves. In addition, a conservation buffer zone of at least 20m around the graves, as well as the fencing off of all cemeteries and graves are recommended. However, should the graves or the proposed 20m buffer zone inevitably be impacted in any way by the planned activities, full grave relocations are recommended for these burial grounds. This measure should be undertaken by a qualified archaeologist, and in accordance with relevant legislation and subject to any local and regional provisions and laws and by-laws pertaining to human remains. A full social consultation process should occur in conjunction with the mitigation of cemeteries and burials. **As burial locations in this area follow a general (and fairly common) pattern where graves occur within the context of homestead complexes, utmost care should be taken during construction in occupation areas, not to disturb previously undetected burials.**
- The Elizabeth Paul memorial site (**Site MAP01**) is high cultural heritage significance and it is recommended that the site be avoided and any activities pertaining to the water supply project road upgrade development in the area be monitored in order to avoid any possible impact on the site. The Ntsizwa Community Park (**Site MAP02**) is of local value and it is recommended that any activities pertaining to the road upgrade development that might occur near the site be monitored in order to avoid possible impact on the site.
- Due cognisance should be taken of the larger palaeontological, archaeological and historical landscape of the area in order to avoid the destruction of previously undetected heritage sites in the area. Here, care should be taken around sandstone outcrops and rock faces, as rock art is known to occur on such

features. Water sources such as drainage lines, springs and pans should also be regarded as potentially sensitive in terms of possible Stone Age deposits. The existence of Historical Period and recent resources deriving from the area's contemporary farming history should also be considered.

- A careful watching brief monitoring process is recommended for all stages of construction and infrastructure development. Should any subsurface paleontological / archaeological / historical material be exposed during construction activities, all activities should be suspended and the archaeological specialist should be notified immediately

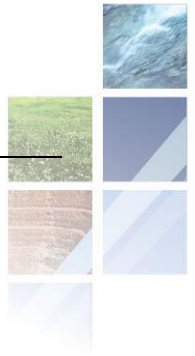
In addition to these site-specific recommendations, careful cognizance should be taken of the following:

- Archaeological traces of Iron Age settlements in this area are sometimes ephemeral unless the characteristic stone-wall towns are identified or surface scatters of thick-walled pottery.
- Rock art is known to exist in sandstone overhangs and rock faces in the larger landscape. Such geological features occur in the landscape but no rock art or markings were identified. Such sandstone outcrops and rock faces should nonetheless be regarded as potentially sensitive in terms of rock markings.
- Water sources such as drainage lines, fountains and pans would often have attracted human activity in the past. As Stone Age material seems to originate from below present soil surfaces in eroded areas, the larger landscape should be regarded as potentially sensitive in terms of possible subsurface deposits.
- As Palaeontological remains occur where bedrock has been exposed, such geological features should be regarded as sensitive in terms of impacts on fossilized resources.
- The Mout Ayliff area has been occupied for many centuries, and bears resemblance to important life events of historical figures. As such, places of "Living Heritage" might be present in the landscape. Here, "Living Heritage" can broadly refer to a place of cultural heritage and sacred nature; with cultural attributions that are not generally physically manifested. Such places might include initiation sites, places of ritual seclusion, old farmsteads, ritual graves and specific meeting areas. These sites and possible material residues thereof convey an intangible cultural significance beyond the site, shelter or object, where the meaning speaks directly of a sense of place and lived experience. Therefore, Historical period and recent material culture and structures should be regarded as potentially sensitive in terms of the tangible and intangible value of such resources.

## 9 GENERAL COMMENTS AND CONDITIONS

This AIA report serves to confirm the extent and significance of archaeological material at the site of the proposed Mount Ayliff Peri Urban Water Treatment Works and Bulk Water Supply Pipelines Project. In addition to heritage resources occurring here, the larger Eastern Cape encompasses a rich and diverse archaeological landscape and cognizance should be taken of heritage resources and archaeological material that might be present in surface and sub-surface deposits. If, during construction, any possible archaeological material culture are made, the operations must be stopped and a qualified archaeologist be contacted for an assessment of the find. Such material culture might include:

- Formal Earlier Stone Age stone tools such as handaxes, choppers and cleavers.
- Formal Middle Stone Age stone tools such as points, blades and scrapers.
- Formal Later Stone Age stone tools such a microlithic blades, points and scrapers.



- Lithic residues and debris such as stone cores and flakes.
- Decorated and undecorated potsherds.
- Iron objects.
- Beads made from ostrich eggshell and glass.
- Ash middens and cattle dung deposits and accumulations.
- Animal bones and faunal remains.
- Human remains/graves.
- Stone walling or any sub-surface structures.
- Historical glass, tin or ceramics.
- Fossils.

If such site were to be encountered or impacted by any proposed developments, recommendations contained in this report, as well as endorsement of mitigation measures as set out by SAHRA, the National Resources Act and the CRM section of ASAPA will be required. Please note that this report is an archaeological scoping study only and does not include or exempt other required heritage impact assessments.

It must be emphasised that the conclusions and recommendations expressed in this archaeological heritage sensitivity investigation are based on the visibility of archaeological sites/features and may not therefore, represent the area's complete archaeological legacy. Many sites/features may be covered by soil and vegetation and might only be located during sub-surface investigations. If subsurface archaeological deposits, artefacts or skeletal material were to be recovered in the area during construction activities, all activities should be suspended and the archaeological specialist should be notified immediately (**cf. NHRA (Act No. 25 of 1999), Section 36 (6)**).

It must also be clear that Archaeological Specialist Reports will be assessed by the relevant heritage resources authority. The final decision rests with the heritage resources authority, which should give a permit or a formal letter of permission for the destruction of any cultural sites.

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