



## **Dynamic Integrated Geo-Environmental Services**

**PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT SPECIALIST STUDY  
REPORT FOR THE PROPOSED TOWNSHIP ESTABLISHMENT OF 5760  
STANDS ON PORTION 6 OF FARM RIETSPRUIT 437-IS IN ERMELO REGION  
WITHIN MSUKALIGWA LOCAL MUNICIPALITY OF GERT SIBANDE  
DISTRICT, MPUMALANGA PROVINCE.**

**May 2011 (Amended 2013)**

| REPORT CONDUCTED BY   | CONDUCTED FOR  |
|---|--|
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**PROJECT NO:**

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## **DECLARATION**

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

Munyadziwa Magoma is a professional archaeologist, having obtained his BA degree in Archaeology and Anthropology at University of South Africa (UNISA), an Honours degree at the University of Venda (UNIVEN), and currently completing his MA at the University of Pretoria (UP). He is an accredited Cultural Resource Management (CRM) member of Association for southern African Professional Archaeologists (ASAPA) and Amafa aKwazulu Natali. Munyadziwa is further affiliated to the South African Archaeological Society (SAAS), the Society of Africanist Archaeologists (SAfA), and the International Council of Archaeozoology (ICAZ). He has more than seven years experience in Cultural Resources Management, having worked for different CRM organisations and government heritage authorities. Munyadziwa has completed over hundred Archaeological Impact Assessments (AIA) in several provinces of the Republic of South Africa. The AIA projects he has been involved with are diverse, and include the establishment of major substation, upgrade and establishment of roads, establishment and extension of mines. In addition, he has also conducted Heritage Impact Assessment (HIA) for the alteration to heritage buildings, and the relocation of graves. His detailed CV is available on request.

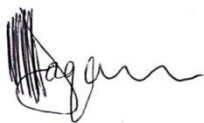
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### **INDEPENDENCE**

I, Munyadziwa Magoma declare that this report has been prepared independently of any influence as may be specified by all relevant department, institution and organisation.

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## **EXECUTIVE SUMMARY**

Vhubvo Archaeo-Heritage Consultant Cc has been commissioned by Dynamic Integrated Geo-Environmental Services to conduct an Archaeological Impact Assessment (AIA) Study for the proposed township establishment of 5760 stands on Portion of the Farm Rietspruit 437-IS, situated at Ermelo within Msukaligwa Local Municipality. The aim of the survey was to identify and document archaeological sites and objects. Also built structures over 60 years old, sites associated with oral histories, burial grounds, graves and cultural landscapes within the footprint of the area in which the township is proposed.

The findings of this AIA have been informed by desktop study and field survey. These entails desktop study, publication avenues, the University of Pretoria's Library and entailed reviewing archaeological and heritage impact assessments conducted around the Ermelo area. The field survey was conducted on the 11<sup>th</sup> April 2011, in the company of the environmental practitioner from Dynamic Geo-Environment Services (DIGES), and also on the 20<sup>th</sup> of May 2011 by two Vhubvo archaeologists. Farm owners and farm dwellers/ workers were consulted and their involvement assisted in locating some graves that were recorded during the site survey. These investigations (desktop study and survey), as aforementioned were conducted to determine if there are any known sites of archaeological or historical significance within the proposed site of interest.

The proposed activity involves township establishment in the Ermelo area of Mpumalanga Province. Analysis of the archaeological, cultural heritage, environmental and historic contexts of the study area predicted that archaeological sites, cultural heritage sites, historic structures, (isolated) artefacts, and burial grounds (especially dating to the historical era) were likely to be present on the affected landscape. The field survey was conducted to test this hypothesis and verify this forecast within the proposed area of approximately 413ha where the proposed township would be undertaken. The site can be accessed on the N11 road to Ermelo, and is about 4km north-west of the town (Ermelo). Considering the evident level of disturbance noted in the proposed area, it became clear that the possibility of finding sites of significant archaeological (or other forms of heritage) value was minimal. The area has been farmed extensively for over 100 years.

The archaeology of the area around the proposed site is rich and varied, and it covers a long span of human history. Nonetheless, from the Archaeological Impact Assessment (AIA), Heritage Impact Assessment (HIA), Heritage Management Plan (HMP) and excavation conducted in the region, it is clear that some areas are richer than others, and not all sites are of equally significant. A discussion of these has been offered in this report

**Survey Findings:**

- The proposed area is accessible through a controlled gate, and access is only through appointment.
- The proposed area is disturbed by past activities related to farming, such that it is not possible for any archaeological materials to have remained *in situ* on the affected landscape.
- Several contemporary farm dwellings were noted in the footprint of the area. Noteworthy that there were no historical farm houses noted in the proposed area.
- Other formations made of cement were also noted. These might have been used as gateway for the old entrance.
- Five burial sites were recorded within the footprint of the proposed area, combined these burials constitutes 78 graves. While some of them have headstone, others are indicated by cairns of stones. These graves appear to vary in age, according to the local informants, these graves dates to the early 1900s. Therefore, they are protected by the National Heritage Resource Act, Act 25 of 1999.

**Recommendations, note these are given in order of importance:**

- Grave have high significance value by their true nature of being related to human beings. Hence, the developer should locate and identify all the relevant families of these graves and explain to them about the proposed development, which might have an impact on their graves.
- A reasonably 20m buffer zone should be maintained around these graves. This is to ensure maximum protection to the graves. In addition, access to the graves by the family concerned should not be limited in any way. A small management plan should be set up to ensure positive conservation of the graves, and access by the families. In fact, the descendant should be involved from the earliest stage of planning.
- No stone robbing or removal of any material is allowed around these graves. Any disturbance or alteration on these sites (burial) would be illegal and punishable by law, under section 36 (3) of the National Heritage Resources Act (NHRA) of 1999 (Act 25 of 1999).
- The area should be marked by a visible tape i.e., danger tape, for the duration of the project, and labor-intensive workers should be notified about these graves, and their significance.
  - However, if the above is deemed not practical, due to the nature of the proposed development, Phase-2 mitigation (grave relocation) can be considered as a last option. This should be done by an accredited archaeologist and in consultation and agreeing with all stake-holders (especially the descendant).
- The noted farm dwelling structures and associates are of low cultural heritage significance, and are thus not protected by any of the sections under the National Heritage Resources Act of 1999. As such, documentation during survey is seen as sufficient.

- ❑ Note that it is the responsibility of the developer to notify contractors and workers that archaeological material (e.g. pottery, remains of stone-walling, graves, etc) and fossils are often located underground. The developer should induct these construction team about archaeology, and steps that should be taken in the event of archaeological resources being accidentally exposed during construction. Although the project area is disturbed, it should be noted that archaeological material may still be encountered during subsurface construction work. In fact, experience has taught us that previously unnoticed archaeological and fossil materials in built-up area can be exposed during secondary construction work.
- If archaeological materials are uncovered, work should cease immediately and the PHRA and SAHRA be notified. No work should resume until appropriate management provisions have been put in place. The same applies to the discovery of human remains which should be reported to SAHRA (021 462 4502) and nearest police station.

**Conclusions:**

The findings of this report, with approval of the PHRA/SAHRA, may be classified as accessible to any interested and affected parties within the limits of the laws. From an archaeological perspective we recommend South African Heritage Resources Agency (SAHRA) to approve the project to proceed with recommended measure as laid in this report.

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## ACRONYMS AND ABBREVIATIONS

|       |   |
|-------|---|
| AIA   | Archaeological Impact Assessment        |
| EMP   | Environmental Management Plan           |
| LIA   | Late Iron Age                           |
| MIA   | Middle Iron Age                         |
| EIA   | Early Iron Age                          |
| HMP   | Heritage Management Plan                |
| LIA   | Late Iron Age                           |
| MSA   | Middle Stone Age                        |
| ESA   | Early Stone Age                         |
| NASA  | National Archives of South Africa       |
| NHRA  | National Heritage Resources Act         |
| PHRA  | Provincial Heritage Resources Authority |
| SAHRA | South African Heritage Resources Agency |





## GLOSSARY OF TERMS

The following terms used in this Archaeology are defined in the National Heritage Resources Act [NHRA], Act Nr. 25 of 1999, South African Heritage Resources Agency [SAHRA] Policies as well as the Australia ICOMOS Charter (*Burra Charter*):

**Archaeological Material** remains resulting from human activities, which are in a state of disuse and are in, or on, land and which are older than 100 years, including artifacts, human and hominid remains, and artificial features and structures.

**Chance Finds** means Archaeological artefacts, features, structures or historical cultural remains such as human burials that are found accidentally in context previously not identified during cultural heritage scoping, screening and assessment studies. Such finds are usually found during earth moving activities such as water pipeline trench excavations.

**Compatible use means** a use, which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.

**Conservation** means all the processes of looking after a place so as to retain its cultural significance.

**Cultural Heritage Resources** Same as **Heritage Resources** as defined and used in the National Heritage Resources Act (Act No. 25 of 1999). Refer to physical cultural properties such as archaeological and palaeontological sites; historic and prehistoric places, buildings, structures and material remains; cultural sites such as places of ritual or religious importance and their associated materials; burial sites or graves and their associated materials; geological or natural features of cultural importance or scientific significance. **Cultural Heritage Resources** also include **intangible resources** such as religion practices, ritual ceremonies, oral histories, memories and indigenous knowledge.

**Cultural significance** means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.

**Cultural Significance** also encompasses the complexities of what makes a place, materials or intangible resources of value to society or part of, customarily assessed in terms of aesthetic, historical, scientific/research and social values.

**Environment** The surroundings within which humans exist and that are made up of: i. the land, water and atmosphere of the earth;

ii. micro-organisms, plant and animal life;

iii. any part or combination of (i) and (ii) and the interrelationships among and between them; and,

iv. the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being. This includes the economic, social, cultural, historical and political



circumstances, conditions and objects that affect the existence and development of an individual, organism or group.

**Environmental impact assessment** An Environmental Impact Assessment (EIA) refers to the process of identifying, predicting and assessing the potential positive and negative social, economic and biophysical impacts of any proposed project, plan, programme or policy which requires authorisation of permission by law and which may significantly affect the environment. The EIA includes an evaluation of alternatives. As well as recommendations for appropriate mitigation measures for minimising or avoiding negative impacts, measures enhancing the positive aspects of the proposal and environmental management and monitoring measures.

**Expansion** means the modification, extension, alteration or upgrading of a facility, structure or infrastructure at which an activity takes place in such a manner that the capacity of the facility or the footprint of the activity is increased;

**Fabric** means all the physical material of the place including components, fixtures, contents and objects.

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

**Heritage impact assessment** (HIA) refers to the process of identifying, predicting and assessing the potential positive and negative cultural, social, economic and biophysical impacts of any proposed project, plan, programme or policy which requires authorisation of permission by law and which may significantly affect the cultural and natural heritage resources. The HIA includes recommendations for appropriate mitigation measures for minimising or avoiding negative impacts, measures enhancing the positive aspects of the proposal and heritage management and monitoring measures.

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

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

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

**Interested and affected parties** **Individuals**, communities or groups, other than the proponent or the authorities, whose interests may be positively or negatively affected by the proposal or activity and/ or who are concerned with a proposal or activity and its consequences.

**Interpretation** means all the ways of presenting the cultural significance of a place.

**Late Iron Age** this period is associated with the development of complex societies and state systems in southern Africa.



**Material culture** means buildings, structure, features, tools and other artefacts that constitute the remains from past societies.

**Mitigate** The implementation of practical measures to reduce adverse impacts or enhance beneficial impacts of an action.

**Place** means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.

**Protected area** means those protected areas contemplated in section 9 of the NEMPAA and the core area of a biosphere reserve and shall include their buffers;

**Public participation process** A process of involving the public in order to identify issues and concerns, and obtain feedback on options and impacts associated with a proposed project, programme or development. Public Participation Process in terms of NEMA refers to: a process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to specific matters

**Setting** means the area around a place, which may include the visual catchment.

**Significance** can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. intensity, duration and likelihood). Impact significance is the value placed on the change by different affected parties (i.e. level of significance and acceptability). It is an anthropocentric concept, which makes use of value judgments and science-based criteria (i.e. biophysical, physical cultural, social and economic).

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

**Use** means the functions of a place, as well as the activities and practices that may occur at the place.



## 1. Introduction

At the request of Dynamic Integrated Geo-Environmental Services, Vhubvo Archaeo-Heritage Consultant Cc conducted the archaeological study for the proposed township establishment of 5760 stands on Portion of the Farm Rietspruit 437-IS, situated at Ermelo within Msukaligwa Local Municipality. The survey was conducted in accordance with the terms of the National Heritage Resources Act No. 25 of 1999. The proposed area measures approximately 413Ha. DIGES accompany the archaeology team to the site, and also submitted maps, and all relevant materials related to the locality and extent of the area proposed for the township, and this was assumed to be relevant and correct.

## 2. Purpose of the AIA study

The purpose of this archaeological impact assessment study was to conduct an archaeological survey, and have an understanding of the archaeological and cultural sensitivity of the area proposed for township establishment. Impact assessments highlight many issues facing sites in terms of site management, conservation, monitoring and maintenance and the environment in and around the site. Thus this archaeological impact assessment involves the following:

- Identification and recording of heritage resources that will be affected by the proposed development,
- Taking responsibility to ensure protection of identified cultural and heritage resources that may be affected by the proposals. Thus, as a result of an impact assessment, development (and in this case development of township) proposals may be modified to avoid or minimize harm,
- Decision-makers who provide a basis for decisions on whether a proposal safeguards cultural heritage,
- All participants in determining the basis for cultural heritage management and monitoring if a proposal proceeds,
- Incorporation of all stakeholders' views in assessment and decision-making processes,
- To identify and describe (in terms of their conservation and / or preservation importance) sites of cultural and archaeological importance that may be affected by the proposed township development project. This study should include the identification of gravesites.
- Make recommendations on mitigation measures with the view to reduce specific adverse impacts and enhance specific positive impacts on the heritage resources.
- Take responsibility for communicating with the SAHRA and other relevant authorities in order to obtain the relevant authorisation with reference to heritage aspects where applicable.



### **3. Methodology**

#### *Background Study introduction*

The study method refers to the in terms of the National Heritage Resources Act No. 25 of 1999. As part of this archaeological impact assessment, the following tasks were conducted: 1) site file search, 2) literature review, 3), consultations, 4) completion of a field survey assessment and 5) analysis of the acquired data, leading to the production of a report.

To understand the archaeology of the area proposed for township, a background study was undertaken and relevant institutions were consulted. These studies entails review of archaeological and heritage impact assessment studies that have been conducted around the proposed area. In addition, the University of Pretoria's Library collection was also pursued. These investigations were fundamental in shading light about the archaeology of the proposed area, as well as the compilation of this report.

#### *Physical survey*

The field survey was conducted on the 11<sup>th</sup> April 2011 and also on the 20<sup>th</sup> of May 2011. A systemic survey of the area as indicated by Burke and Smith (2004) resulted in the maximum coverage of the area. This survey was conducted by two Vhubvo archaeologists. The survey was conducted on foot. The field survey did not include any form of subsurface inspection beyond the inspection of burrows, road cut sections, and the stream banks exposed by natural erosion forces. A permit from the relevant heritage authority is required to disturb a heritage resource. In addition, no materials were collected.

#### *Documentation*

The general project area was documented. This documentation included taking photographs using a 10.1 mega-pixel Sony Cybershort Digital Camera and Nikon Coolpix L110. Plotting of finds was done by a hand-held Garmin etrex Venture HC and Tom-Tom GPS.

#### *Oral Interview*

Oral interview was conducted with a few available farm workers. The information provided was critical in the compilation of this report.

#### *Restrictions*

This study may have missed archaeological site/ and or materials since they often occur below the surface, and can only be exposed once development commences.

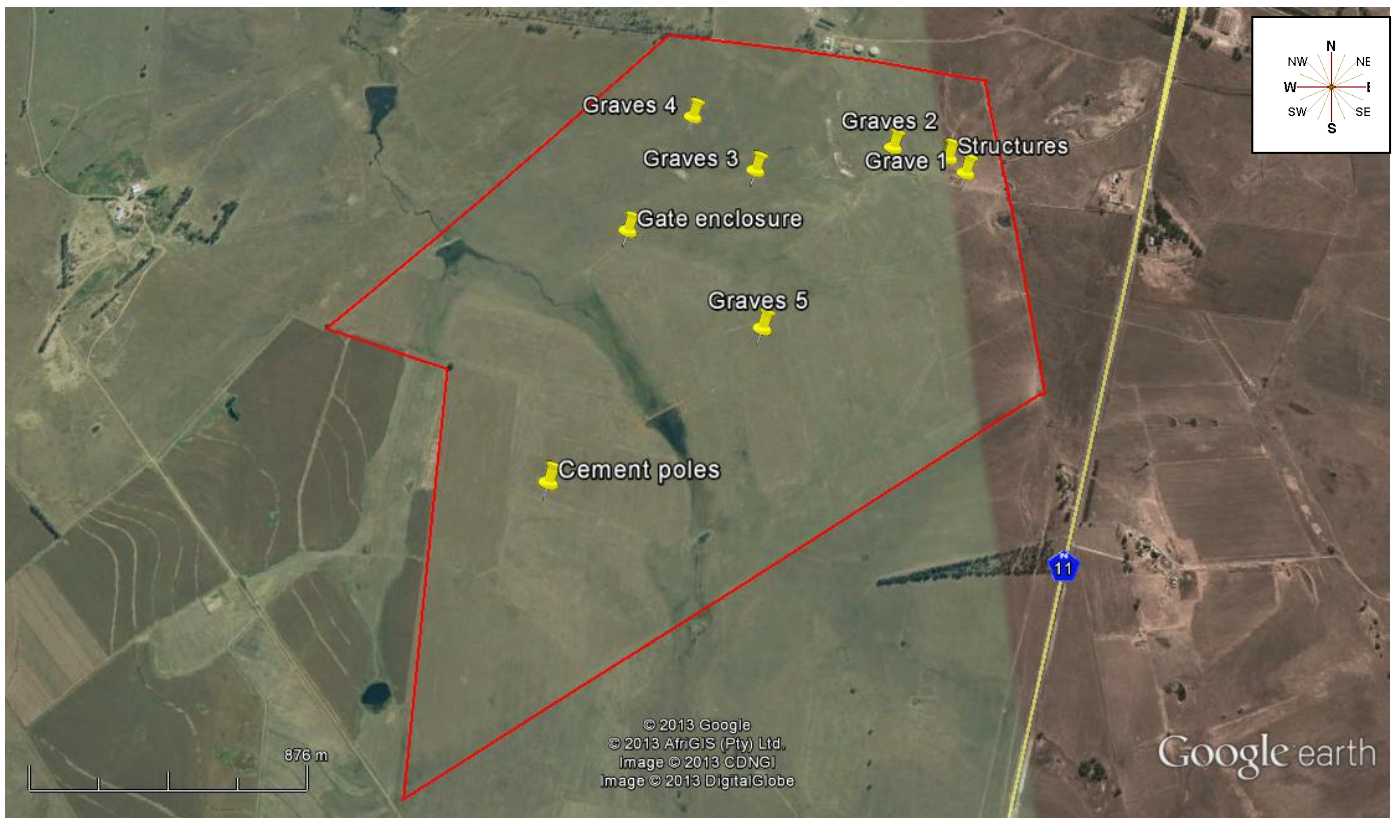


#### 4. Sites location and description

The proposed township is located in the Ermelo area of Msukaligwa Local Municipality within Mpumalanga Province, on Portion of the Farm Rietspruit 437-IS (see figure 1 below). The total extent of the proposed township establishment area is estimated to be about 413ha. The site can be accessed through N11, West of Ermelo town. The site is predominantly a grazing area zoned for livestock herding. The area's topography is varied and mostly characterised by fairly flat and steep section, also adulating slopes and rolling hills. Rocky outcrops also occur in the area.

#### Summary of Project Location Details

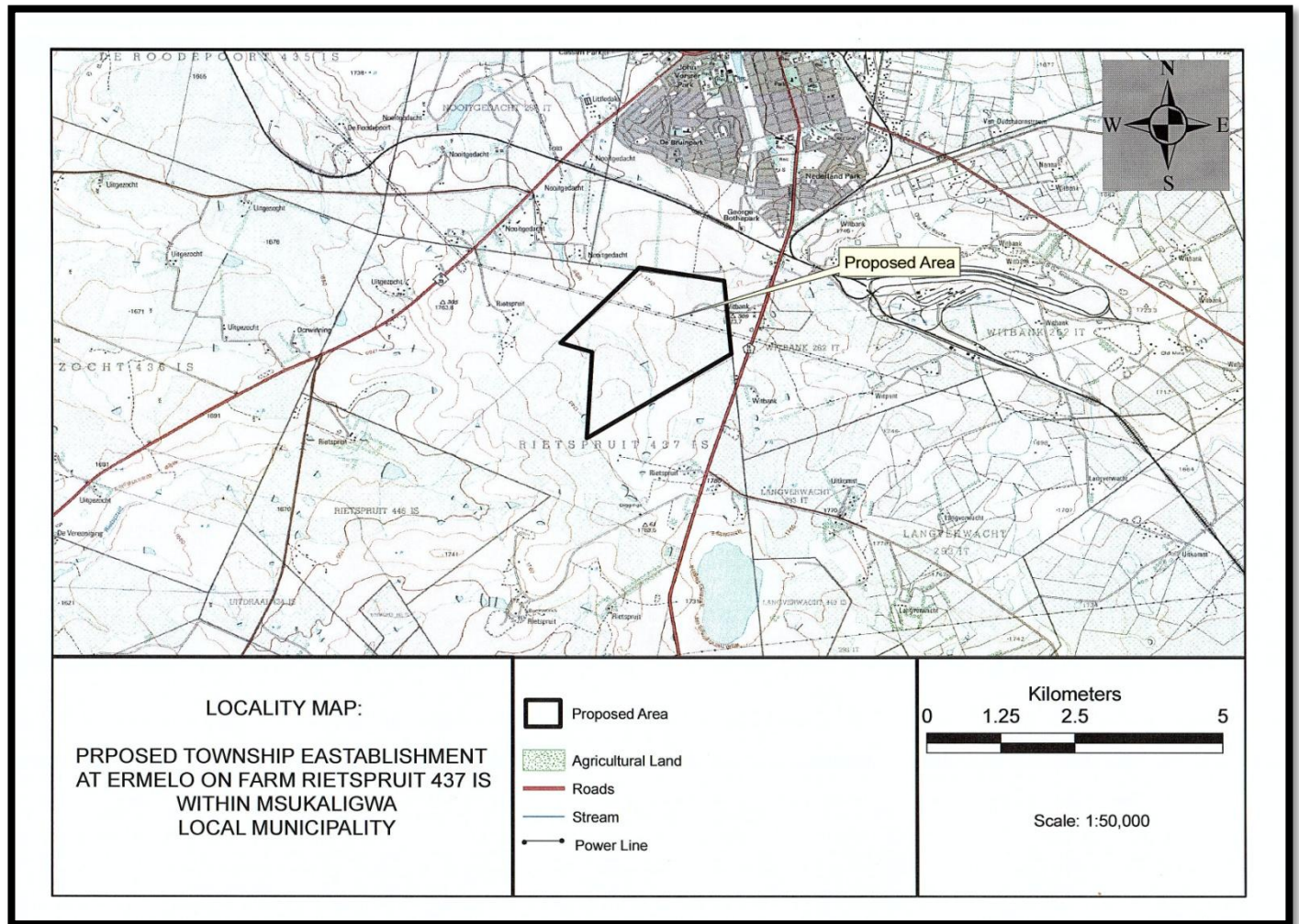
|                                      |  |
|--------------------------------------|--|
| Province:                            | Mpumalanga                                     |
| Local Municipalities:                | Msukaligwa                                     |
| District Municipality:               | Gert Sibande                                   |
| Farm name/affected properties:       | Rietspruit 437-IS                              |
| Extent                               | 413.16Ha                                       |
| Description of proposed development: | Establishment of 5760 township stands          |
| Map:                                 | Topographic 1:50 000 map and Google earth Map. |



**Figure 1:** Google map of the proposed township area (Courtesy, 2013 Google earth).







**Figure 2:** Locality map of the proposed township area and coordinates (Courtesy Diges).



**Figure 3:** View of farm dwellings. These are currently utilised by people who are looking after the farm. They are in a reasonable close proximity to each other. These dwellings were all confirmed to have been built during the past 30 years.







**Figure 4:** View of the eastern tip of the proposed area.



**Figure 5:** View of the old gate enclosure. These were located on the western section of the proposed site.





**Figure 6:** View of one of several dotted borrow pits that were noted in the proposed area. These have since been crammed by water from rain.



**Figure 7:** View of the cattle noted in the proposed area. These cattle were being relocated to a nearby farm. Note the carriage on the back ground.



## 5. Nature of the proposed project

According to the Spatial Development Framework for Msukaligwa Municipality, there are huge backlogs relating to infrastructure and housing within the municipal area. In Ermelo/Wesselton there are currently approximately 6 000 informal unserviced shacks, and this is largely attributed to the increasing migration of people to the larger employment center, Ermelo city centre. Bongiveli CC has therefore proposed township establishment of 4772 sites with 5760 residential stands, on portion 6 of Rietspruit farm at Ermelo within Msukaligwa Municipality of Gert Sibande District. Mpumalanga Province.

The proposed project will entail the following:

- ☐ Residential erven
- ☐ Business stand
- ☐ Institutional erven
- ☐ Parks and
- ☐ Construction of associated infrastructure (water supply, sewage, internal streets and electricity).

## 6. Applicable heritage legislation

Several legislation provide the legal basis for the protection and preservation of both cultural and natural resources. These includes the National Environment Management Act (No. 107 of 1998); Mineral Amendment Act (No 103 of 1993); Tourism Act(No. 72 of 1993); Cultural Institution Act (No. 119 of 1998), and the National Heritage Resources Act (Act 25 of 1999). Section 38 (1) of the National Heritage Resources Act requires that where relevant, an Impact Assessment is undertaken in case where a listed activity is triggered. Such activities include:

- (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;*
- (b) the construction of a bridge or similar structure exceeding 50 m in length; and*
- (c) any development or other activity which will change the character of an area of land, or water -*
  - (i) exceeding 5 000 m<sup>2</sup> in extent;*
  - (ii) involving three or more existing erven or subdivisions thereof; or*
  - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or*
  - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a Provincial Heritage Resources Authority;*
- (d) the re-zoning of a site exceeding 10 000 m<sup>2</sup> in extent; or*
- (e) any other category of development provided for in regulations by SAHRA or a Provincial Heritage Resources Authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.*

Section 3 of the National Heritage Resources Act (25 of 1999) lists a wide range of national resources protected under the act as they are deemed to be national estate. When conducting a Heritage Impact Assessment (HIA) the following heritage resources have to be identified:



- (a) Places, buildings structures and equipment of cultural significance*
- (b) Places to which oral traditions are attached or which are associated with living heritage*
- (c) Historical settlements and townscapes*
- (d) Landscapes and natural features of cultural significance*
- (e) Geological sites of scientific or cultural importance*
- (f) Archaeological and paleontological sites*
- (g) Graves and burial grounds including-*
  - (i) ancestral graves*
  - (ii) royal graves and graves of traditional leaders*
  - (iii) graves of victims of conflict*
  - (iv) graves of individuals designated by the Minister by notice in the Gazette*
  - (v) historical graves and cemeteries; and*
  - (vi) other human remains which are not covered by in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983)*
- (h) Sites of significance relating to the history of slavery in South Africa*
- (i) moveable objects, including -*
  - (i) objects recovered from the soil or waters of South Africa, including archaeological and paleontological objects and material, meteorites and rare geological specimens*
  - (ii) objects to which oral traditions are attached or which are associated with living heritage*
  - (iii) ethnographic art and objects*
  - (iv) military objects*
  - (v) objects of decorative or fine art*
  - (vi) objects of scientific or technological interest; and*
  - (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1 of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).*

Section 3 of the National Heritage Resources Act (No. 25 of 1999) also distinguishes nine criteria for places and objects to qualify as 'part of the national estate if they have cultural significance or other special value ...'. These criteria are the following:

- (a) Its importance in the community, or pattern of South Africa's history*
- (b) Its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage*
- (c) Its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage*
- (d) Its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects*
- (e) Its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group*
- (f) Its importance in demonstrating a high degree of creative or technical achievement at particular period*
- (g) Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons*
- (h) Its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and*
- (i) Sites of significance relating to the history of slavery in South Africa.*

***Other sections of the Act with a direct relevance to the AIA are the following:***

***Section 34(1)*** No person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.





**Section 35(4)** *No person may, without a permit issued by the responsible heritage resources authority:*

- *destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite*

**Section 36 (3)** *No person may, without a permit issued by SAHRA or a provincial heritage resources authority:*

- *destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside formal cemetery administered by a local authority; or*
- *bring onto or use at a burial ground or grave any excavation equipment, or any equipment which assists in detection or recovery of metals.*

## 7. Degree of significance

This category requires a broad, but detailed knowledge of the various disciplines that might be involved. Large sites, for example, may not be very important, but a small site, on the other hand, may have great significance as it is unique for the region.

### Significance rating of sites

(i) High

(ii) Medium

(iii) Low

This category relates to the actual artefact or site in terms of its actual value as it is found today, and refers more specifically to the condition that the item is in. For example, an archaeological site may be the only one of its kind in the region, thus its regional significance is high, but there is heavy erosion of the greater part of the site, therefore its significance rating would be medium to low. Generally speaking, the following are guidelines for the nature of the mitigation that must take place as Phase 2 of the project.

#### High

- This is a 'do not touch' situation, alternative must be sought for the project, examples would be natural and cultural landscapes like the Mapungubwe Cultural Landscape World Heritage Site, or the house in which John Langalibalele resided.
- Certain sites, or features may be exceptionally important, but do not warrant leaving entirely alone. In such cases, detailed mapping of the site and all its features is imperative, as is the collection of diagnostic artefactual material on the surface of the site. Extensive excavations must be done to retrieve as much information as possible before destruction. Such excavations might cover more than half the site and would be mandatory; it would also be advisable to negotiate with the client to see what mutual agreement in writing could be reached, whereby part of the site is left for future research.



## Medium

- Sites of medium significance require detailed mapping of all the features and the collection of diagnostic artefactual material from the surface of the site. A series of test trenches and test pits should be excavated to retrieve basic information before destruction.

## Low

- These sites require minimum or no mitigation. Minimum mitigation recommended could be a collection of all surface materials and/ or detailed site mapping and documentation. No excavations would be considered to be necessary.

In all the above scenarios, permits will be required from the South African Heritage Resources Agency (SAHRA) or the appropriate PHRA as per the legislation (the National Heritage Resources Act, no. 25 of 1999. Destruction of any heritage site may only take place when a permit has been issued by the appropriate heritage authority. The following table is used to grade:

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

**Table 2:** Grading and rating systems of identified heritage resources in terms of National Heritage Resources Act (Act 25 of 1999).

## 8. Discussion of (Pre-) History of South Africa and areas around the proposed site

### Introduction

South Africa has one of the longest sequences of human development in the world. The prehistory and history of South Africa span the entire known life span of human on earth. It is thus difficult to determine exactly where to begin, a possible choice could be the development of genus *Homo* millions of years ago. South African scientists have been actively involved in the study of human origins since 1925 when Raymond Dart identified the Taung child as an infant halfway between apes and humans. Dart called the



remains *Australopithecus africanus*, southern ape-man, and his work ultimately changed the focus of human evolution from Europe and Asia to Africa, and it is now widely accepted that humankind originated in Africa (Robbins *et al.* 1998). In many ways this discovery marked the birth of palaeoanthropology as a discipline. Nonetheless, the earliest form of culture known in South Africa is the Stone Age. These prehistoric period during which humans widely used stone for tool-making, stone tools were made from a variety of different sorts of stone. For example, flint and chert were shaped for use as cutting tools and weapons, while basalt and sandstone were used for ground stone. Stone Age can be divided into Early, Middle and Late, it is argued that there are two transitional period. Noteworthy that the time frame used for Stone Age period is an approximate and differ from researcher to researcher (see Korsman and Meyer 1999, Mitchell 2002, Robbins *et al.* 1998)

### *Stone Age period*

Although a long history of research on the Early Stone Age period of southern Africa has been conducted (Mason 1962, Sampson 1974, Klein 2000, Chazan 2003), it still remains a period where little is known about. These may be due to many factors which includes, though not limited to retrieval techniques used, reliance on secondary, at times unknown sources, and the fact that few fauna from this period has been analysed (Chazan 2003). According to Robbins *et al.* (1998) the Stone Age is the period in human history when stone was mainly used to produce tools. This period began approximately 2.5 million years ago and ended around 200 000 years ago. During this period human beings became the creators of culture and was basically hunters and gatherers, this era is identified by large stone artefacts.

The Middle Stone Age overlap with the EIA and possibly began around 100 000 to about 200 000 years ago and extends up to around 35 000 years ago. This period is marked by smaller tools than in ESA and characterized by the production of food and the introduction of domestication of animals. Many MSA sites have evidence for control of fire, prior to this, rock shelters and caves would have been dangerous for human habitation due to predators. MSA people made a wide range of stone tools from both coarse – and fine-grained rock types. Sometimes the rocks used for tools were transported considerable distances, presumably in bags or other containers; as such tool assemblages from some MSA sites tend to lack some of the preliminary cores and contain predominantly finished products like flakes and retouched pieces.

Microlithic Later Stone Age period began around 35 000 and extend to the later 1800 AD. According to Deacon (1984), LSA is a period when human being refined small blade tools, conversely abandoning the prepared-core technique. Thus, refined artefacts such as convex-edge scrapers, borers and segments are associated with this period. Moreover, large quantity of art and ornaments were made during this period.



Few Stone Age materials have been documented in the region of the proposed area. These can be attributed to amongst other, the environment and lack appropriate shelter, wherein Stone Age people could stay. Nonetheless, handful of Stone Age site have been documented in the Bombela region (Bornman 1995)

### *Iron Age and Historical period*

The Iron Age is the name given to the period of human history when metal was mainly used to produce artefacts. Recently, they have been a debate about the use of the name. Other archaeologist have argued that the word “Iron Age” is problematic and does not precisely explain the event of what happen in southern Africa, as such, the word farming communities has been proposed (Segobye 1998). Nonetheless, in South Africa this period can be divided into two phases. Early (200 - 1000 A.D) and Late Iron Age (1000 - 1850 A.D). Huffman (2007) has indicated that a Middle Iron Age (900 - 1300 A.D) should be included. According to Huffman (2007:361), until the 1960s and 1970s most archaeologists had not yet recognised a Middle Iron age. Instead they began the Late Iron Age at AD 1000. The Middle Iron Age (AD 900–1300) is characterised by extensive trade between the Limpopo Confluence and the East Coast of Africa. This has been debated, with other researchers, arguing that the period should be restricted to Shashe-Limpopo Confluence.

The region around the proposed area was probably first settled back in the c.1400, as can be articulated by the ruins of settlements dating to that period. However, it was during the *mfecane* era when most of the Bantu speakers migrated to the district we now call Ermelo. The European groups migrated into this area during the nineteenth century. Like many region in South Africa, the area around Ermelo experience the battle between Boer and British around 1900 to 1902. This battle vehemently reduced the town into few structures, as such, most of the building in town dates to the period after the Boer-war. Nonetheless, the town was initial founded by Reverend Lion Cachet of the Dutch Reformed Church. Reverend Lion Cachet was recruited by Hermanus Willem Witteveen, who uses to stay in the town of Ermelo in the Netherlands. As such, in honour of the man who recruited him, Reverend Lion Cachet named the area in honour of Witteveen. Thus, the district of Ermelo was proclaimed in 1882.

## **9. Survey findings and discussion**

As indicated earlier, the intention is to develop a township in Ermelo. The proposed project will significantly and permanently alter the entire landscape. However, this will be in keeping with the landscape which is already disturbed. The proposed area for development is surrounded by, farming and is also marked by access roads, power lines, boundary-fence lines and contemporary dwelling. Nonetheless, as required by Section 38 (1) of the National Heritage Resources Act (Act 25 of 1999), that for



development of this magnitude an Impact Assessment study have to be conducted, this study is presenting its findings, noteworthy in accordance with the National Heritage Legislation, no development activity was conducted prior to this archaeological assessment.

### **Stone Age**

The background study revealed that the area was inhabited by descendants of the San. Thus, although the project area is associated with Stone Age communities, no confirmable sites were identified during the site survey, the area is vehemently disturbed such that no archaeological material can be found *in situ*.

### **Iron Age and Historical period**

Generically speaking, built environment is associated with early white settlers, colonial wars period sites and, industrialisation; recent and contemporary African population settlements, contemporary ritual sites dating to the last 100 years. Although the area at large is associated with historical events such as settler migration, colonial wars and the recent African peopling of the region, the proposed township development area did not yield any Iron Age or historical sites. As aforementioned, the area is disturbed by activities related to farming.

### **National/provincial heritage sites and landmarks**

There are no listed monuments and land marks in the project area.

### **Natural and contemporary cultural sites**

No significant natural heritage will be affected by the proposed township development.

### **Burial grounds and cemetery**

In terms of the Section 36 (3) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) no person may, without a permit issued by the relevant heritage resources authority: a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves; b) destroy, damage, alter, exhume or 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.

In addition to the formal protection of graves, all graves which are older than 60 years and which are not already located in a cemetery (such as ancestral graves in rural areas), are protected. Communities, which have an interest in the graves, must be consulted before any disturbance can take place. The graves of





victims of conflict and those associated with the liberation struggle will have to be included, cared for, protected and memorials erected in their honour where practical.

Note that four categories of graves can be identified. These are:

- Graves younger than 60 years;
  - Graves older than 60 years, but younger than 100 years;
  - Graves older than 100 years; and
  - Graves of victims of conflict or of individuals of royal descent.
- Five burial sites were recorded within the footprint of the proposed area, combined these burials constitutes 78 graves. While some of them have tomb-stones, others are indicated by cairns of stones. These graves appear to vary in age, and according to the informants the earliest grave dates to the 1900s. Therefore, they are protected by the National Heritage Resource Act, Act 25 of 1999.

**Table 3:** Overview of the findings and their significance

| Name of the resource | Co-ordinates               | Description/Condition  | Significance |
|----------------------|----------------------------|--|--------------|
| Informal Graves 1    | E 29.97697°<br>S 26.56319° | Six informal graves marked by stone cairns.  | High         |
| Informal Graves 2    | S 26.56220°<br>E 29.97434° | 35 informal graves indicated by stone cairns, also sepulchered.  | High         |
| Informal Graves 3    | S 26.56293°<br>E 29.96919° | Eight informal graves marked by parked stones.   | High         |
| Informal Graves 4    | S 26.56085°<br>E 29.96684° | 21 informal graves marked by parked stones.  | High         |
| Informal Graves 5    | S 26.56865°<br>E 29.96933° | Eight informal graves were noted. These graves were marked by stone cairns, one of the graves has been borrowed, possibly by rodent. | High         |
| Structures           | S 26.56251°<br>E 29.97630° | Contemporary   | Low          |





**Figure 8:** This informal grave site contains six graves.



**Figure 9:** This informal grave-yard yielded 35 graves.





**Figure 10:** From this informal grave-yard, which is approximately 100m from the power line, there were eight informal graves.



**Figure 11:** 21 graves were counted from this informal grave-yard.





**Figure 12:** The last of the five grave-yards that was noted on the study area, contains eight observable informal graves. One of the graves has been borrowed possibly some rodent. Rodents are known to sharpen their teeth by bones.



**Figure 13:** View of some of the vandalism that was noted on the site. It appears that exhumation was conducted. Inappropriate rehabilitation of the interment indicates that an archaeologist was not involved. In addition, there is no application of exhumation permit related to this farm in the SAHRA database.



## 10. Recommendations

- Grave have high significance value by their true nature of being related to human beings. Hence, the developer should locate and identify all the relevant families of these graves and explain to them about the proposed development, which might have an impact on their graves.
  - A reasonably 20m buffer zone should be maintained around these graves. This is to ensure maximum protection to the graves. In addition, access to the graves by the family concerned should not be limited in any way. Thus, a small management plan should be set up to ensure positive conservation of the graves, and access by the families. In fact, the descendant should be involved from the earliest stage of planning.
  - No stone robbing or removal of any material is allowed around these graves. Any disturbance or alteration on these sites (burial) would be illegal and punishable by law, under section 36 (3) of the National Heritage Resources Act NHRA of 1999 (Act 25 of 1999).
  - The area should be marked by a visible tape i.e., danger tape, for the duration of the project, and labor-intensive workers should be notified about these graves, and their significance.
    - ❑ However, if the above is deemed not practical, due to the nature of the proposed development, Phase-2 mitigation (grave relocation) can be considered as a last option. This should be done by an accredited archaeologist, and in consultation and agreeing with all stake-holders (especially the descendant).
  - The noted farm dwelling structures and associates are of low cultural heritage significance and are not protected by any of the sections under the National Heritage Resources Act of 1999.
    - ❑ Note that it is the responsibility of the developer to notify contractors and workers that archaeological material (e.g. pottery, remains of stone-walling, graves, etc) and fossils are often located underground. As such, the developer should induct the construction team about archaeology, and steps that should be taken in the event of archaeological resources being accidentally exposed during construction. Although the project area is disturbed, it should be noted that archaeological material may still be encountered during subsurface construction work. In fact, experience has taught us that previously unnoticed archaeological and fossil materials in built-up area can be exposed during secondary construction work.
- If archaeological materials are uncovered, work should cease immediately and the PHRA and SAHRA be notified. No work should resume until appropriate management provisions have been put in place. The same applies to the discovery of human remains which should be reported to SAHRA (021 462 4502) and nearest police station.



## **11. Concluding remarks**

A thorough background study and survey of the proposed township area was conducted and findings were recorded in line with SAHRA guidelines. The study revealed that the study area is located within a contemporary cultural landscape dotted with settlements and infrastructure development with a long local history. Thus, it is recommended that SAHRA approve the proposed project to proceed on condition that the recommended measures as laid in this report are adhered to.





## References consulted

Bornman, H. 1995. *Pioneers of the Lowveld*.

Breutz, P. L. 1985. *Pre-Colonial Africa: The South-Eastern Bantu Cultural Province*.

Burke, H. and Smith, C. 2004. *The archaeologist field handbook*. Allen and Unwin: Singapore

DIGES. 2011. Geotechnical Engineering Investigation for the township establishment at Ermelo on portion 6 of farm Rietspruit 437IS within Msukaligwa local Municipality Mpumalanga Province. *DIGES*: Polokwane.

DIGES. 2011. BID. Township establishment at Ermelo on portion 6 of farm Rietspruit 437IS within Msukaligwa local Municipality Mpumalanga Province.

Dambuwo Consulting Engineers. 2011. Engineering Services Report for township establishment at Ermelo on portion 6 of farm rietspruit 437IS within Msukaligwa Local Municipality. *Dambuwo*: Polokwane.

Gert Sibande District IDP, 2011.

Delius, P. 2007. *Mpumalanga History and Heritage*. University of KwaZulu-Natal Press.

Campbell, J. 1822. *Travels in South Africa*. Vol I and II. London: Francis Westley.

Cloete, P.G. 2000. *The Anglo-Boer War: A chronology*. Pretoria: JP van der Walt.

Connah, G. 2004. *An Introduction to its Archaeology*. Routledge: USA & Canada.

Deacon, J. 1997. Report: Workshop on Standards for the Assessment of Significance and Research Priorities for Contract Archaeology. In: Newsletter No. 49, Sept.1998. *South African Association of Archaeology*.



Dunn, E. J. 1931. *The Bushman*. London: Griffin

Ehret, C. 2002. *The Civilization of Africa: A History to 1800*. London: Currey

Hall, M. 1987. *The Changing Past: farmers, kings and traders in southern Africa. 200-1860*. Cape Town: David Phillip.

Huffman, T. N. 2007. *A handbook to the Iron Age: The archaeology of Precolonial Farming societies in southern Africa*. University of Kwazulu-Natal Press: Pietermaritzburg.

King, T. F. 1978. *The Archaeological Survey: Methods and Uses*. U.S. Department of the Interior: Washington

Klapwijk, M. 1973. A preliminary report on pottery from the North-eastern Transvaal, South Africa. *The South African Archaeological Bulletin*, 29: 19-23.

Magoma, M. 2010. Heritage Impact Assessment for the proposed establishment of Emjindini township Extension 17, on Portion 2 of the Farm Biggar 664JT, Farm Adelaide 339JU, Farm Mona 659JT, and Farm Hulley's Hill 338JT, within Umjindi Local Municipality of Ehlazeni District Municipality. *Unpublished report*: Sibasa.

Mitchell, P. J. 2002. *The archaeology of Southern Africa*. Cambridge: Cambridge University.

Pelser, A., Van Schalkwyk, J. A., Teichert, F. & Masiteng, I. 2007. The archaeological investigation of an Iron Age site on the farm Rietfontein 101IS, Emalahleni district, Mpumalanga Province. *NCHM Research Journal*, 2:1-24.

Pistorius, J. C. C. 2004. A heritage impact assessment (HIA) studies for the proposed new Optimum Colliery on the farm Schoonoord 164IS in the Mpumalanga Province of South Africa. *Unpublished report*: Pretoria.





----- 2007. A Phase 1 Heritage Impact Assessment Study for the Proposed New 88 kV Power Line Running from the Majuba Power Station near Amersfoort to the Camden Power Station near Ermelo in the Mpumalanga Province. *Unpublished report*: Pretoria.

Segoboye A. 1998. Early Farming Communities. In. Lane, P, Reid, A and Segoboye A. 1998. (ed), *Pula Press and Botswana Society*, pp 101-114.

Van Schalkwyk, J.A. 2003. Archaeological survey of a section of the Mozambique-Secunda pipeline, Ermelo and Bethal Districts, Mpumalanga. *Unpublished report*: Pretoria.

South Africa - Reclaiming the Promised Land, 2003.

[http://sagns.dac.gov.za/local\\_authorities.asp](http://sagns.dac.gov.za/local_authorities.asp)

[http://en.wikipedia.org/wiki/Ermelo,\\_Mpumalanga](http://en.wikipedia.org/wiki/Ermelo,_Mpumalanga)

<http://www.sahistory.org.za/dated-event/ermelo-founded>



## APPENDIX 1: SITE SIGNIFICANCE

The following guidelines for determining site significance were developed by SAHRA in 2003. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.

**(a) Historic value**

- Is it important in the community, or pattern of history?
- Does it have strong or special association with the life or work of a person, group or organization of importance in history?
- Does it have significance relating to the history of slavery?

**(b) Aesthetic value**

- Is it important in exhibiting particular aesthetic characteristics valued by a community or cultural group?

**(c) Scientific value**

- Does it have potential to yield information that will contribute to an understanding of natural or cultural heritage?
- Is it important in demonstrating a high degree of creative or technical achievement at a particular period?

**(d) Social value**

- Does it have strong or special association with a particular community or cultural group for social, cultural or spiritual reasons?

**(e) Rarity**

- Does it possess uncommon, rare or endangered aspects of natural or cultural heritage?

**(f) Representivity**

- Is it important in demonstrating the principal characteristics of a particular class of natural or cultural places or objects?
- What is the importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as being characteristic of its class?
- Is it important in demonstrating the principal characteristics of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province, region or locality?



**APPENDIX 2: GRAVE**

A grave is a place of interment and includes all that is associated with such a place, and should be avoided by all means possible unless when totally impossible. If accidental found during construction, the constructor should immediately halt construction and notify SAHRA, the nearest Police Station and a Museum (preferably where there is an Archaeologist), or an independent Archaeologist, so that the discovery can be speedily investigated and facilitated. In the meantime a buffer of about ten meters from the grave should be maintained, and if the grave is to be relocated, the correct procedure which involve, notification, consultation and permit application should be followed. If the grave is less than 60 years of age, it is subject to provision of the Human Tissue Act (Act 65 of 1983) and to local regulations. Exhumation of graves must conform to the standards set out in the ordinance on excavations (ordinance no. 12 of 1980) (replacing the old Transvaal Ordinance no. 7 of 1925). Permission must also be sought from the descendent (where known), the national department of health, provincial department of health, premier of the province and local police. Furthermore permission must also be sought from the landowners before exhumation can take place. Human remains can only be handled by a registered undertaker or an institution declared under the human tissues act (Act 65 of 1983 as amended). This act states that a survey and an evaluation of cultural resources should be undertaken in areas where development, which will change the face of the environment, is to be made.

