

**Cultural Heritage Survey of the proposed Construction and Operation of
an Ethanol Production Plant on Portions of the Farms
Portsmouth 286KT and Richmond 214KT,
Maruleng Local Municipality (NP335),
Limpopo Province**

For

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Executive Summary

Stone Age & Iron Age settlements

No Stone Age or Iron Age settlements, structures, features or artefacts were recorded during the survey.

Graves

A possible infant pot burial was recorded in Alternative 2 on the farm Portsmouth 286KT.

If impact will occur in the near future, mitigation measures may entail full grave relocation. Such a relocation process must be undertaken by suitably qualified individuals with a proven track record. Furthermore, a concerted effort must also be made to identify all buried individuals and to contact their relatives and descendants. Other legislative measures which may be of relevance include the Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925), the Human Tissues Act (Act no. 65 of 1983, as amended), the Ordinance on Excavations (Ordinance no. 12 of 1980) as well as any local and regional provisions, laws and by-laws that may be in place.

Also note the following:

- It should be kept in mind that archaeological deposits usually occur below ground level. Should archaeological artefacts or skeletal material be revealed in the area during construction activities, such activities should be halted, and a university or museum notified in order for an investigation and evaluation of the find(s) to take place (*cf.* **NHRA (Act No. 25 of 1999)**, Section 36 (6)).

1. Introduction

The aim of this cultural heritage survey is to record and document cultural heritage remains consisting of visible archaeological and historical artefacts, structures (including graves) and settlements of cultural significance within the boundaries of the proposed area of development. The aim of the project is to establish an Ethanol Plant. Two alternatives were investigated, a site (Alternative 2) on the farm Portsmouth 286KT and a site (alternative 1) on the farm Richmond 214KT. This report forms part of the EIA process and was requested by Ages Environmental on behalf of the client.

2. Terms of Reference

The terms of reference of this survey are as follows:

- * Provide a detailed description of all archaeological artefacts, structures (including graves) and settlements
- * Estimate the level of significance/importance of the archaeological remains within the area
- * Assess any possible impact on the archaeological and historical remains within the area emanating from the proposed development activities
- * Propose possible mitigation measures provided that such action is necessitated by the development

3. Nature of the Proposed Activity or Development

The proposed development consists of the construction and running of an ethanol plant and mill.

4. Definitions and Approach

- Archaeological remains can be defined as human-made objects, which reflect past ways of life, deposited on or in the ground.
- Heritage resources have lasting value in their own right and provide evidence of the origins of South African society and they are valuable, finite non-renewable and irreplaceable.
- All archaeological remains, artificial features and structures older than 100 years and historic structures older than 60 years are protected by the relevant legislation, in this case the **National Heritage Resources Act (NHRA) (Act No. 25 of 1999)**. The Act makes an archaeological impact assessment as part of an EIA and EMPR mandatory. No archaeological artefact, assemblage or settlement (site) may be moved or destroyed without the necessary approval from the **South African Heritage Resources Agency (SAHRA)**. Full cognisance is taken of this Act in making recommendations in this report.
- Cognisance will also be taken of the **Mineral and Petroleum Resources Development Act (Act No 28 of 2002)** and the **National Environmental Management Act (Act No 107 of 1998)** when making any recommendations.

- Human remains older than 60 are protected by the **National Heritage Resources Act**, with reference to Section 36. Human remains that are less than 60 years old are protected by the **Human Tissue Act (Act 65 of 1983 as amended)**.

- **Mitigation guidelines:**

Significance Rating	Action
Not protected	1. None
Low	2a. Recording and documentation (Phase 1) of site adequate; no further action required
	2b. Controlled sampling (shovel test pits, augering), mapping and documentation (Phase 2 investigation); permit required for sampling and destruction
Medium	3. Excavation of representative sample, C ¹⁴ dating,), mapping and documentation (Phase 2 investigation); permit required for sampling and destruction [including 2a & 2b]
High	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 4b. Graves: Locate demonstrable descendants through social consulting; obtain permits from applicable legislation, ordinances and regional by-laws; exhumation and reinterment [including 2a, 2b & 3]

- Rating the **significance of the impact** on a historical or archaeological site is linked to the significance of the site itself. 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.
- With reference to the evaluation of sites, the certainty of prediction is definite, unless stated otherwise.
- The guidelines as provided by the **NHRA (Act No. 25 of 1999)** in Section 3, with special reference to subsection 3, and the Australian ICOMOS Charter (also known as the Burra Charter) are used when determining the cultural significance or other special value of archaeological or historical sites.
- It should be kept in mind that archaeological deposits usually occur below ground level. Should archaeological artefacts or skeletal material be revealed in the area during construction activities, such activities should be halted, and a university or museum notified in order for an investigation and evaluation of the find(s) to take place (*cf.* **NHRA (Act No. 25 of 1999)**, Section 36 (6)).
- A copy of this report will be lodged with the **South African Heritage Resources Agency (SAHRA)** as stipulated by the National Heritage Resources Act (NHRA)

(Act No. 25 of 1999), Section 38 (especially subsection 4).

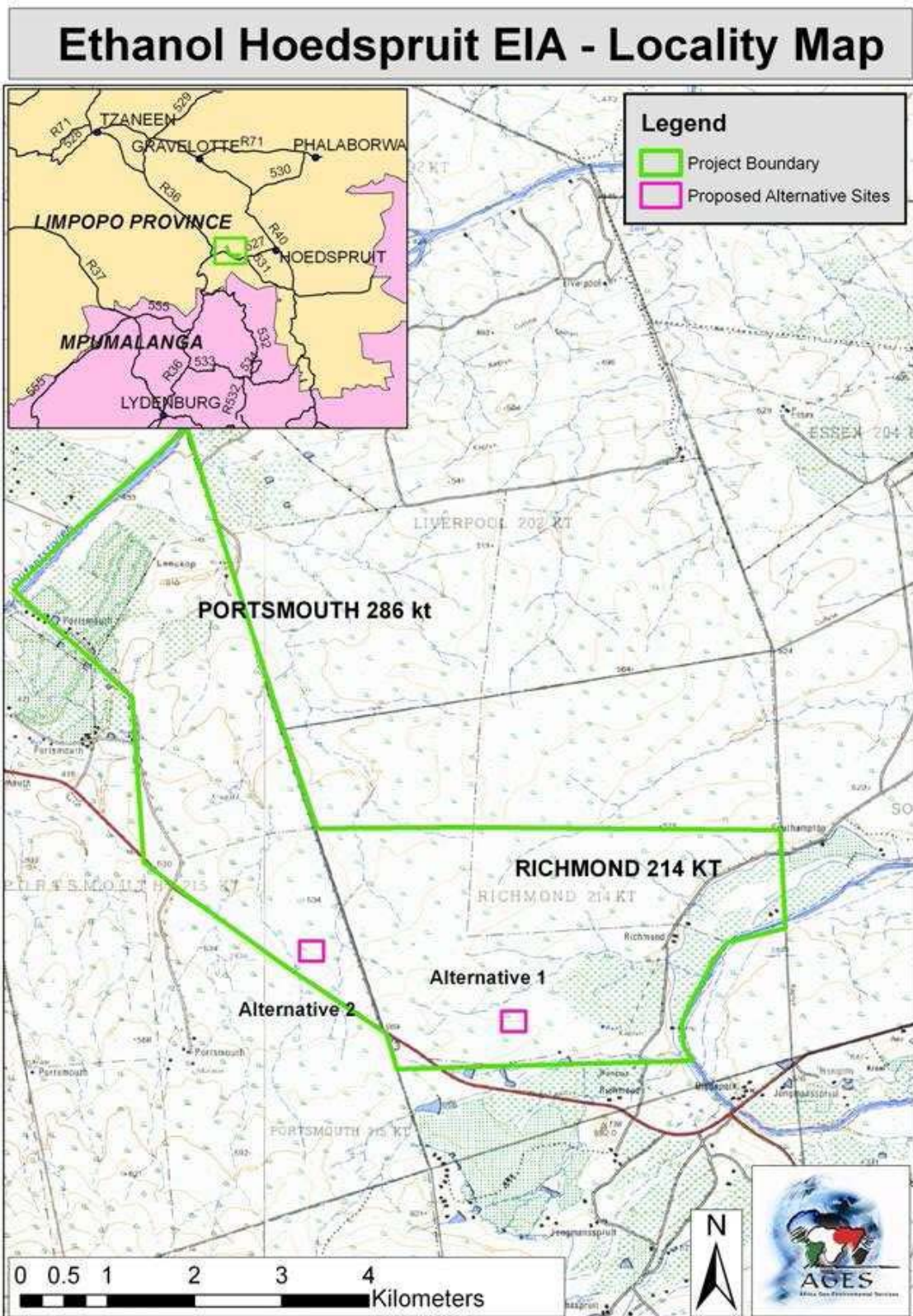
- Note that the final decision for the approval of permits, or the removal or destruction of sites, structures and artefacts identified in this report, rests with the South African Heritage Resources Agency (SAHRA) (or relevant PHRA).

5. Methodology

5.1 Maps and Other Sources

The proposed area of development is situated within the Maruleng (NP335) Local and Mopani (DC33) District Municipalities within the Limpopo Province and is located 20km west of Hoedspruit on the R527 road. The location of the survey areas (Alternatives 1 & 2) are indicated on Map 1. The sites are located at:

- Alternative 1 (Richmond)
 - Latitude: 24°23'45.64"S
 - Longitude: 30°46'31.78"E
- Alternative 2 (Portsmouth)
 - Latitude: 24°23'20.36"S
 - Longitude: 30°45'17.01"E



Map 1: Geographical context of survey areas.

5.2 Fieldwork

An intensive site visit was conducted on 25 November 2008. Both areas (alternatives) were investigated on foot.

5.3 Visibility and Constraints

No severe restrictions were encountered. Also note that due to the subterranean nature of cultural remains this report should not be construed as a record of all archaeological and historic sites in the area.

6. Description of Study Area

Alternative 1 (on the farm Portsmouth 286KT) is an existing orchard and has been severely disturbed. Alternative 2 (on the farm Richmond 214KT) is open and flat and characterised by thorn trees and grass cover. Both survey areas are approximately 2 hectares in extent.



Figure 1: General view of Alternative 2



Figure 2: General view of Alternative 1

7. Archaeological Sequence

PERIOD	APPROXIMATE DATE
Early Stone Age	more than c. 2 million years ago - c. 250 000 years ago
Middle Stone Age	c. 250 000 years ago – c. 25 000 years ago
Later Stone Age (Includes San Rock Art)	c. 25 000 years ago - c. AD 200 (up to historic times in certain areas)
Early Iron Age	c. AD 400 - c. AD 1025
Late Iron Age (Stonewalled sites)	c. AD 1025 - c. AD 1830 (c. AD 1640 - c. AD 1830)

8. Archaeological Context

8.1 Stone Age Sequence

Concentrations of Early Stone Age (ESA) sites are usually present on the flood-plains of perennial rivers and may date to over 2 millions years ago. These ESA open sites may contain scatters of stone tools and manufacturing debris and secondly, large concentrated deposits ranging from pebble tool choppers to core tools such as handaxes and cleavers. The earliest hominins who made these stone tools, probably not always actively hunted, instead relying on the opportunistic scavenging of meat from carnivore fill sites.

Middle Stone Age (MSA) sites also occur on flood plains, but are also associated with caves and rock shelters (overhangs). 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 preserve. Limited drive-hunting activities are also associated with this period.

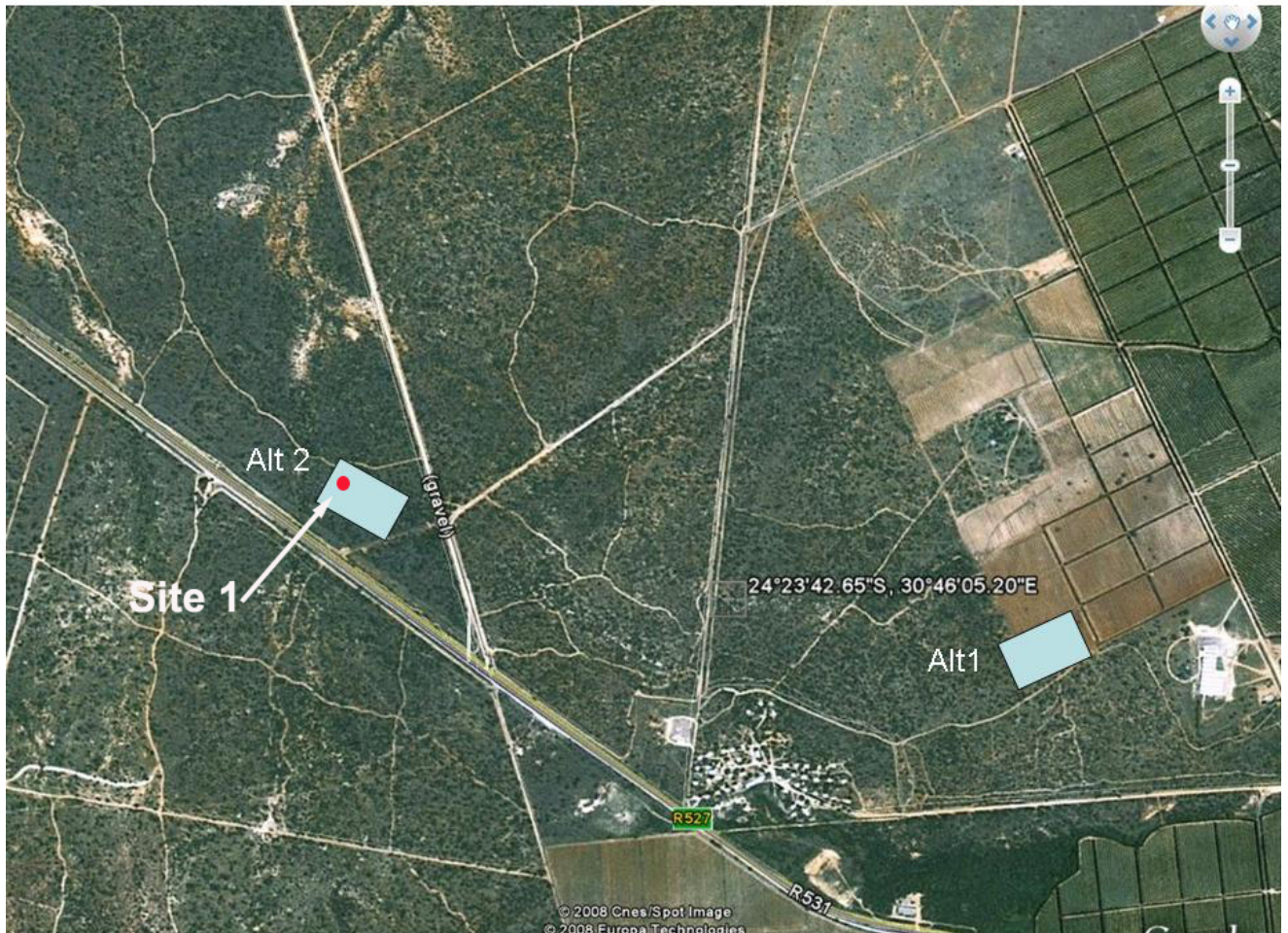
Sites dating to the Later Stone Age (LSA) are better preserved in rock shelters, although open sites with scatters of mainly stone tools can occur. Well-protected deposits in shelters allow for stable conditions that result in the preservation of organic materials such as wood, bone, hearths, ostrich 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.

8.2 Iron Age Sequence

In the northern regions of South Africa at least three settlement phases have been distinguished for early prehistoric agropastoralist settlements during the **Early Iron Age** (EIA). Diagnostic pottery assemblages can be used to infer group identities and to trace movements across the landscape. 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. These sites are usually located on low-lying spurs close to water. However, please note that there are no EIA sites in the Free State.

The **Late Iron Age** (LIA) settlements are characterised by stone-walled enclosures situated on defensive hilltops c. AD 1640 - AD 1830). This occupation phase has been linked to the arrival of ancestral Northern Sotho, Tswana and Southern Ndebele (Nguni-speakers) in the northern and Waterberg regions, and dates from the sixteenth to seventeenth centuries AD. The terminal LIA is represented by late 18th/early 19th century settlements with multichrome Moloko pottery commonly attributed to the Sotho-Tswana. These settlements can in many instances be correlated with oral traditions on population movements during which African farming communities sought refuge in mountainous regions during the processes of disruption in the northern interior of South Africa, resulting from the so-called *difaqane* (or *mfecane*).

9. Description of Site



Map 2: Location of recorded site.

9.1 Site 1

A. GENERAL SITE DESCRIPTION

The site consists of a surface scatter of undecorated potsherds. Due to the close proximity to a termite nest (although probably abandoned) it might signify the remains of a infant pot burial. According to oral tradition (especially of local Sotho-speaking people) very young infants and especially a still born foetus are put in a small clay pot and then interred into the base of a termite mount. Several of these types of burials have been recorded by research in the Limpopo Province. No other archaeological features or middens were recorded in the area.

The remains are probably older than 60 years and are, therefore, protected by the NHRA (Act no 25 of 1999).

B. SITE EVALUATION

B1. HERITAGE VALUE

Yes	No
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Historic Value

It has importance to the community or pattern of South Africa's history or

√

precolonial history.			
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.			√
It has significance relating to the history of slavery in South Africa.			√
Aesthetic Value			
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or cultural group.			√
Scientific Value			
It has potential to yield information that will contribute to an understanding of South Africa's natural and cultural heritage.		√	
It has importance in demonstrating a high degree of creative or technical achievement at a particular period.			√
It has importance to the wider understanding of temporal changes within cultural landscapes, settlement patterns and human occupation.		√	
Social Value			
It has marked or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).		√	
Tourism Value			
It has significance through contributing towards the promotion of a local sociocultural identity and can be developed as a tourist destination.			√
Rarity Value			
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.		√	
Representative Value			
It is of importance in demonstrating the principle characteristics of a particular class of South Africa's natural or cultural places or objects.		√	
B2. REGIONAL CONTEXT			
Other similar sites in the regional landscape.		√	
B3. CONDITION OF SITE			
Integrity of deposits/structures.		Stable but erosion is present	
C. SPHERE OF SIGNIFICANCE	High	Medium	Low
International			√
National			√
Provincial			√
Local	√		
Specific community	√		
D. 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]		√	
Generally protected B [Medium significance, to be recorded]			
Generally Protected C [Low significance, no further action]			
E. GENERAL STATEMENT OF SITE SIGNIFICANCE			
Low			
Medium			
High		√	

F. RATING OF POTENTIAL IMPACT OF DEVELOPMENT

None	
Peripheral	
Destruction	
Uncertain	√

G. RECOMMENDED MITIGATION

- The possible grave must be fenced.
- The area should be maintained and cleared of undergrowth.
- A minimum 20 metres buffer zone should be maintained around the grave
- If further impact is envisaged, please note the following:
 - Phase 2 investigation
 - Social consultation
 - Exhumation and reburial

H. 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

I. PHOTOGRAPHS



Figure 3: Old termite nest (ant heap).



Figure 4: Undecorated potsherds of a possible pot burial.

10. Summary of Sites

Site	Coordinates	Site Type	Statement of Significance	Impact	Mitigation
1	24.392069°S 30.757696°E	Possible pot burial	High	Unknown	<ul style="list-style-type: none"> • Area must be fenced • Phase 2 investigation • Permit from SAHRA

11. Conclusions and Recommendations

Stone Age & Iron Age settlements

No Stone Age or Iron Age settlements, structures, features or artefacts were recorded during the survey.

Graves

A possible infant pot burial was recorded in Alternative 2 on the farm Portsmouth 286KT.

If impact will occur in the near future, mitigation measures may entail full grave relocation. Such a relocation process must be undertaken by suitably qualified individuals with a proven track record. Furthermore, a concerted effort must also be made to identify all buried individuals and to contact their relatives and descendants. Other legislative measures which may be of relevance include the Removal of Graves and Dead Bodies Ordinance (Ordinance

no. 7 of 1925), the Human Tissues Act (Act no. 65 of 1983, as amended), the Ordinance on Excavations (Ordinance no. 12 of 1980) as well as any local and regional provisions, laws and by-laws that may be in place.

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.

Also note the following:

- It should be kept in mind that archaeological deposits usually occur below ground level. Should archaeological artefacts or skeletal material be revealed in the area during construction activities, such activities should be halted, and a university or museum notified in order for an investigation and evaluation of the find(s) to take place (*cf.* **NHRA (Act No. 25 of 1999)**, Section 36 (6)).