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PHASE 1
ARCHAEOLOGICAL IMPACT
ASSESSMENT

ROAD UPGRADING: SEKHUKHUNE CLUSTER
NORTHERN PROVINCE

FOR: Enviro Xcellence

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SYNOPSIS

Six archaeological sites were detected on the demarcated areas proposed for the Borrow pits. Although low in significance with regard to permanent protection status, mitigation for further assessments based on scientific considerations are recommended for at least three of these sites.

INTRODUCTION

The **Project Proposal** constitutes an activity that is listed in terms of the Environmental Conservation Act (Act No. 73 of 1989), for which an Environmental Impact Assessment is required to satisfy the requirements of the List of Activities and Regulation for EIA's – Government Gazette of 5 September 1997 - provided for in terms of sections 21, 22 and 26. In terms of the above mentioned Act, the Minerals Act, 1991, and the National Heritage Resources Act (Act No. 25 of 1999, Section 38), a Phase 1 Archaeological Impact Assessment (scoping) was undertaken.

AIM

The aim was to undertake a **Phase 1 Archaeological Impact Assessment** of the proposed borrow pits and the roads earmarked for upgrading, in order to assess the impact of the proposed project on archaeological and historical sites and features; and to submit appropriate recommendations with regard to the cultural resources management measures that may be required at affected sites / features.

METHOD

A thorough survey of the proposed activity areas were undertaken on foot and by vehicle. Standard archaeological practices for observation were followed. 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. Locations of archaeological material were recorded by means of a GPS (Garmin 12). Archaeological material and the general conditions on the terrain were photographed with a KODAK DC120 Digital camera.

The significance of archaeological sites is ranked into three categories.

No significance: sites that do not require mitigation.
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Low to medium significance: sites, which might require mitigation.
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High significance: sites, which must not be disturbed at all.

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.

LOCATION AND DESCRIPTION

Refer to map, South Africa (1:50 000 2429 BC.)

The dominant veldt type is mixed bushveld. Most of the area has been degraded by extensive agricultural activities and human settlement. The higher lying parts have generally had much soil loss from sheet erosion against the slopes, while erosion dongas occur along the drainage systems.

DISCUSSION OF THE PROPOSED ACTIVITY AREAS

The report is presented in accordance with the numerical order allocated to the proposed borrow pits:

BORROW PIT 1 *Co-ordinates: S24° 21'54.8" E29°38'40.4*

This area contains no significant heritage remains of any nature

BORROW PIT 2 *Co-ordinates: S24° 22'00.7" E29°39'21.9*

This area contains no significant heritage remains of any nature

BORROW PIT 3 *Co-ordinates: S24° 22'06.0" E29°40'48.8"*

No archaeological deposit was detected on the terrain, but a number of pottery fragments were found here.

This site is of no significance.

BORROW PIT 4 *Co-ordinates: S24° 20'56.3" E29° 42'40.1"*

The site contains the ruin of recent historical structures. Foundations of mud are all that is left of one structure, while a nearby concrete structure forms part of the ruin.

This site is of no significance.



Figure 1. Recent historical ruin

BORROW PIT 5 Co-ordinates: S2^o 20'00.6" E29^o43'51.8

This area contains no significant heritage remains of any nature

BORROW PIT 6 Co-ordinates: S2^o 18'29.0" E29^o44'03.3"

A high concentration of pottery is scattered over an extensive area next to a small stream. Decoration on this pottery suggests that this site belongs to the *Moloko* cultural tradition which is typically Sotho. A small piece of tuyere pipe was also found. This site was damaged by agricultural activities in the past.

This Moloko site is of medium significance.

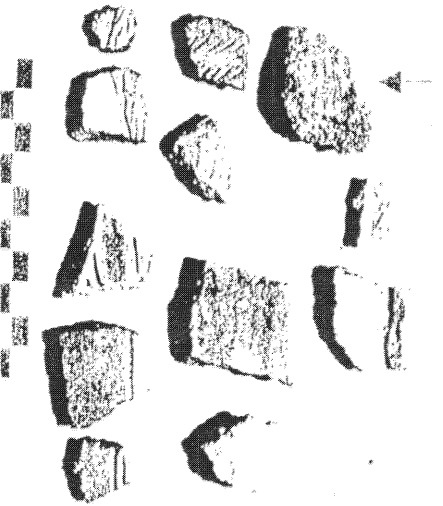


Figure 2. Moloko (Sotho/Tswana) pottery.
The arrow points to a tuyere fragment

BORROW PIT 7 Co-ordinates: S2^o 18'47.3" E29^o42'27.8

This is the location of three grinding stones, which is probably connected to a recent historical ruin on the eastern border of the demarcated area.

This site is not significant.

BORROW PIT 8 Co-ordinates: S2^o 23' 29.2" E30^o 34'40.2"

A concentration of pottery fragments was found scattered over an extensive area together with ash deposits. Maize grinding stones were found (maize was introduced after AD 1750), including one with ochre stains on it. The site has been partially destroyed by the existing Borrow pit. The deposit seems to be about thirty centimeters deep, while bone and pottery are found in-situ in the deposit. Decorations on the pottery suggest that this site belongs to the pre-colonial Sotho/Tswana *Moloko* tradition.

Early Stone Age (ESA), as well as Middle Stone Age (MSA) is present on the site. A good example of a Late Acheulean handaxe (ESA) approximately 250 000 years old, was found on the terrain

This Moloko site is of medium significance.



Figure 3. Grinding stone with ochre markings

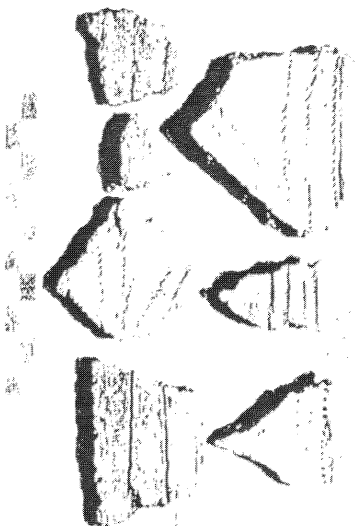


Figure 4. Typical *Moloko* pottery



Figure 5. Late Acheul handaxe

BORROW PIT 9 *Co-ordinates: S24° 23'47.9" E30° 36'07.4"*

This is the location of small stone terracing and stone platforms. Decoration on the pottery resembles Middle Iron Age pottery (AD 1000), probably pre-Sotho, but the cultural identity cannot be established within the limitations of the scoping. A dirt road cuts through the site. The proposed location of the borrow pit lies on the edge of the site.

This site is of low significance, but with scientific value.



Figure 6. Remains of a stone structure

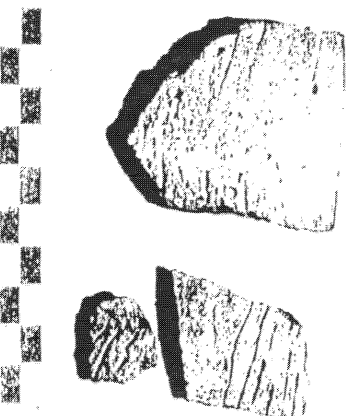


Figure 7. Pottery from pit 9

EVALUATION

A crucial aspect in determining 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. There are many aspects that must be taken into consideration when determining significance, such as rarity, national significance, scientific importance, cultural and religious significance, and not least, community preferences. 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. Such sites must be adequately recorded and sampled before being destroyed.

Borrow pit 4: is not regarded as significant because the historical structure is not unique in terms of its architecture and layout plan, etcetera.

Borrow pit 6: this *Moloko* site is regarded as of medium significance even though it has been damaged by agricultural activities in the past. It has significant research potential and should be re-evaluated when work commences.

Borrow pit 8: this *Moloko* site has significant research potential as there is still adequate deposit that could be sampled for data although the site has been partially destroyed.

Borrow pit 9: this site is regarded as low in significance, but should be sampled because of its scientific value.

The proposed development will have an adverse impact on the recorded archaeological and historical sites. In our view however, the potential sustainable socio-economic benefits of the proposed development outweighs the conservation value of the archaeological remains.

For mitigation purposes the scientific significance of the Iron Age sites must bear considerable weight. Phase 2 archaeological assessments are essential in order to extract sufficient and adequate data from these sites.

RECOMMENDATION

Due of the scientific value of these pre-colonial Iron Age sites, it is recommended that:

Borrow pit 6:
An archaeologist is present when earth works commence at borrow pit 6 to note stratification and to collect cultural and dating material. Further mitigation may result from this depending an on site evaluation.

Borrow pit 8:
A phase two archaeological excavation be conducted at borrow pit 8 in the ash middens to obtain data about stratification and to get a sufficient samples for dating.

Borrow pit 9:

An archaeologist is present when earth works commence at borrow pit 9 to re-evaluate the remains, and to collect cultural and dating material.

Notwithstanding the above note must however be taken of Sections 35 & 36 of the National Heritage Resources Act, of which an extract is given below

Extracts from:

The National Heritage Resources Act (Act No. 25 of 1999).

Archaeology, palaeontology and meteorites

Subsection 35. (3) Any person who discovers archaeological or palaeontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority, or to the nearest local authority or museum, which must immediately notify such heritage resources authority.

Subsection 35. (4) No person may, without a permit issued by the responsible heritage resources authority-

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite.

Burial grounds and graves

Subsection 36. (6) Subject to the provision of any law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority-

- (a) carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and
- (b) if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-interment of the content of such grave or, in the absence of such person or community, make any such arrangement as it deems fit.

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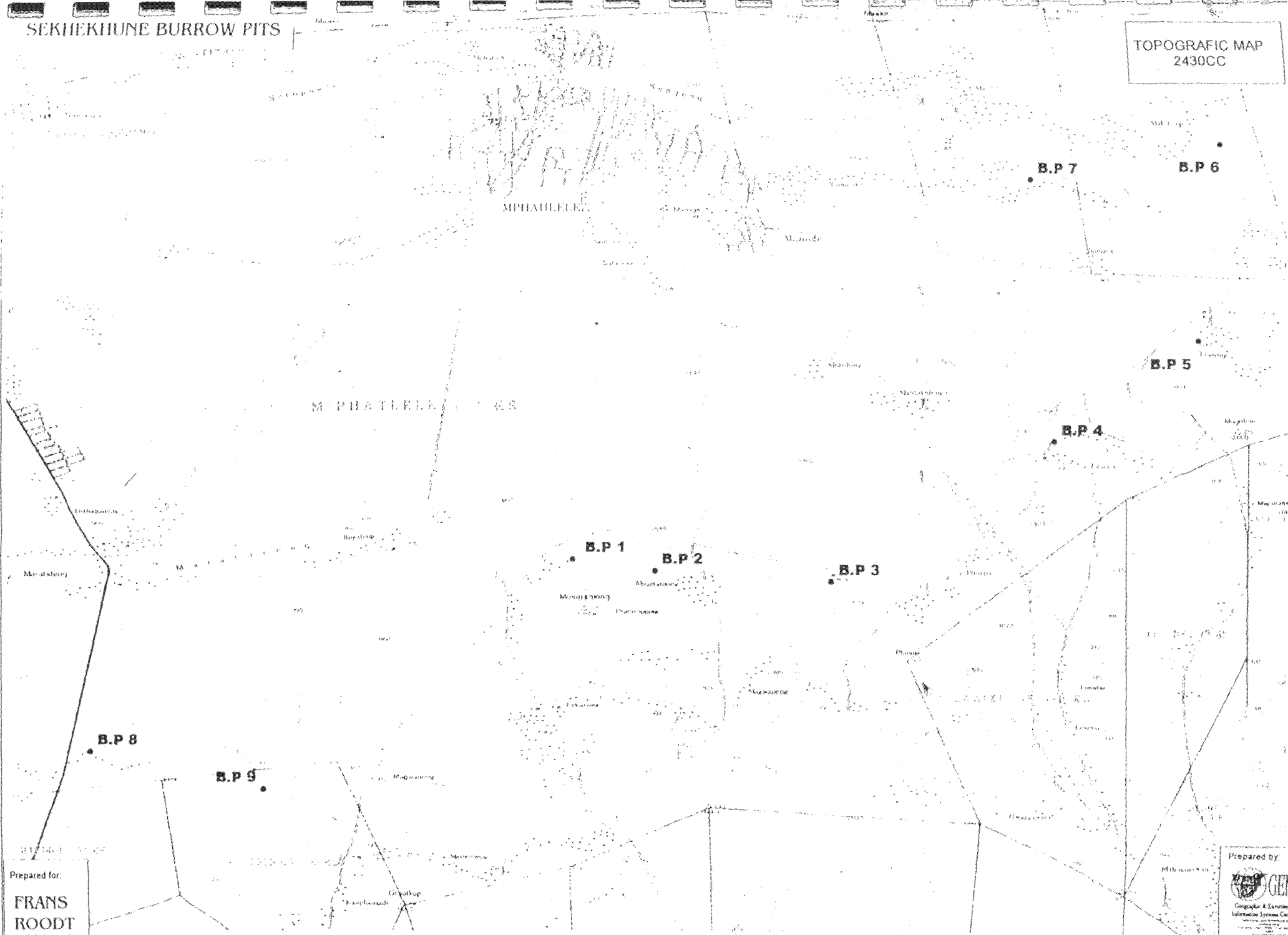
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SEKHEKIHUNE BURROW PITS

TOPOGRAPHIC MAP
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