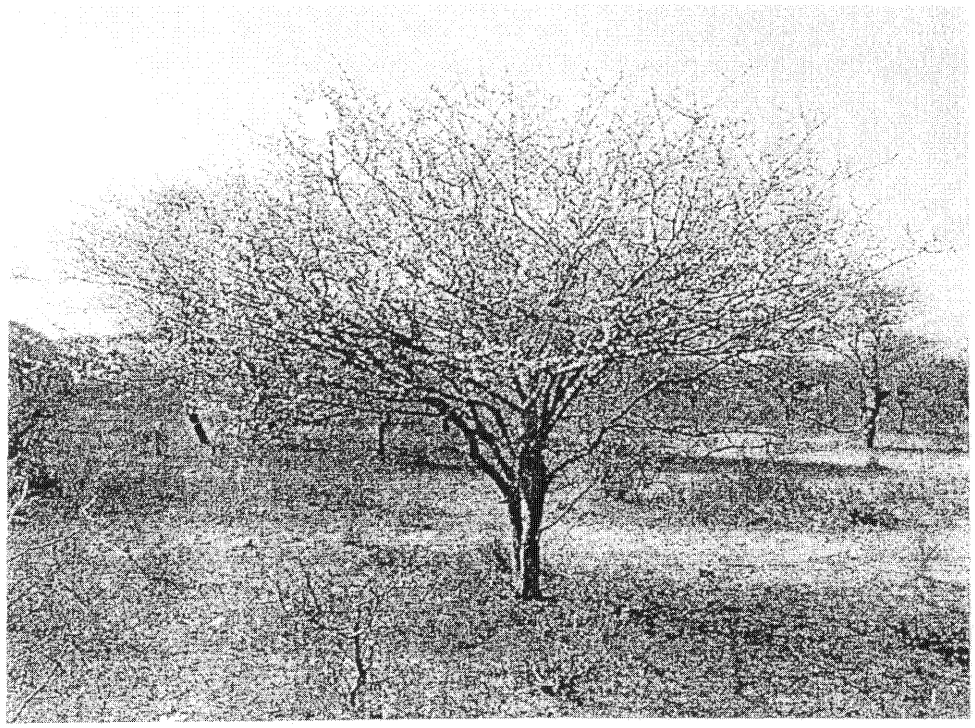
PHASE 1
ARCHAEOLOGICAL IMPACT ASSESSMENT

Irrigation Project (3 ha)
Seirappies Village
NORTHERN PROVINCE



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It is recommended that a **Phase 2 Archaeological Impact Assessment** be undertaken. The details could be finalised through mitigation on site.

Depending on the Phase 2 report and its recommendations, it would be of the utmost importance that the archaeologist be notified once the initial surface preparation (clearing of plant growth, etc.) has been done.

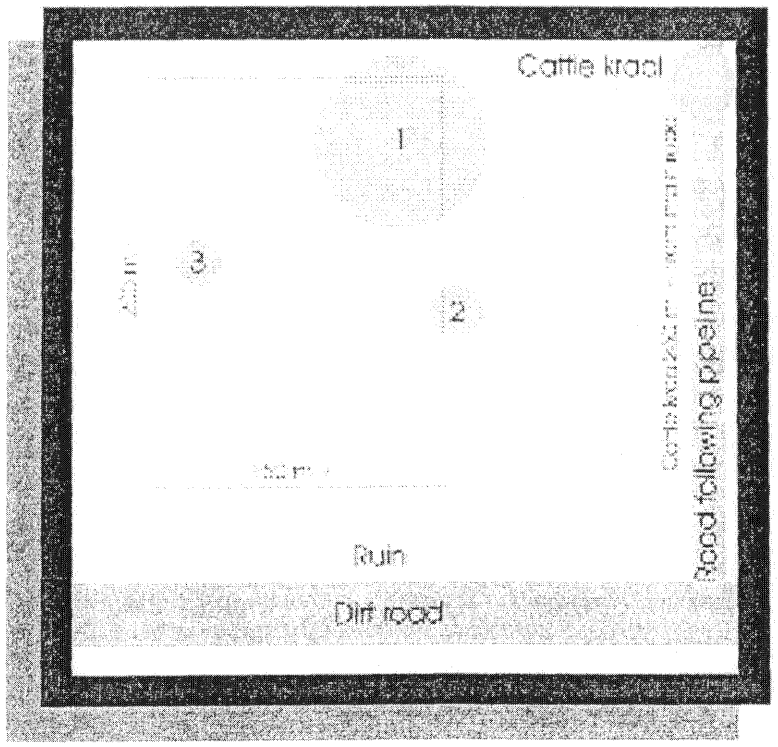
- If any **GRAVES** and/or **MIDDENS** are encountered during initial clearing of the surface or during subsoil removal, the archaeologist should be notified immediately.

AIM

The aim was to undertake a Phase 1 *Archaeological Impact Assessment* on approximately 3 ha at Selappies Village where an irrigation project has been proposed, to assess the impact of the proposed project in terms of archaeological/historical sites and features and to make recommendations. The task was performed on September 3, 1999.

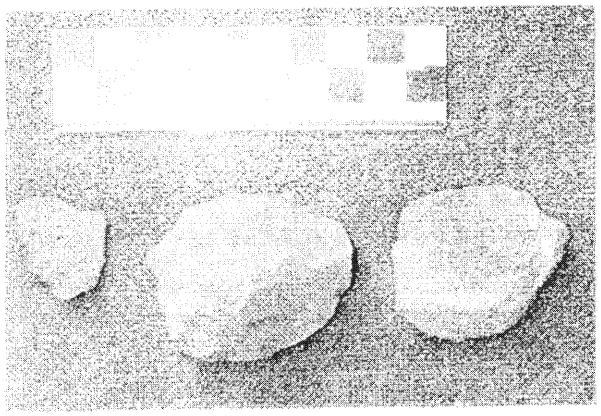
METHOD

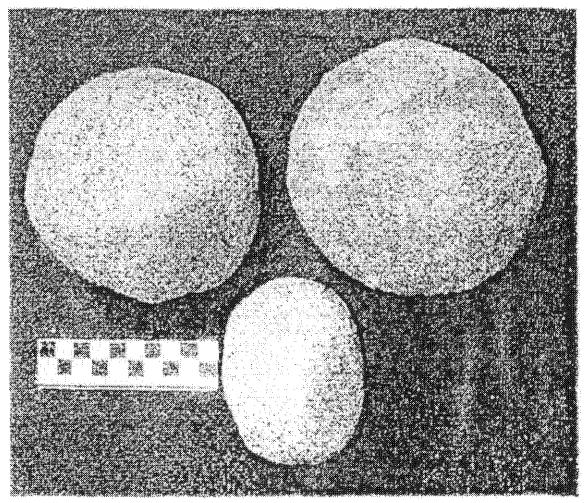
A survey of the whole area demarcated for development was done on foot by two professional archaeologists. As the demarcated area is very small, no GPS readings were used. Archaeological features were photographed with a Kodak Digital DC120 camera. A schematic map of the site, indicating the most important areas was drawn.

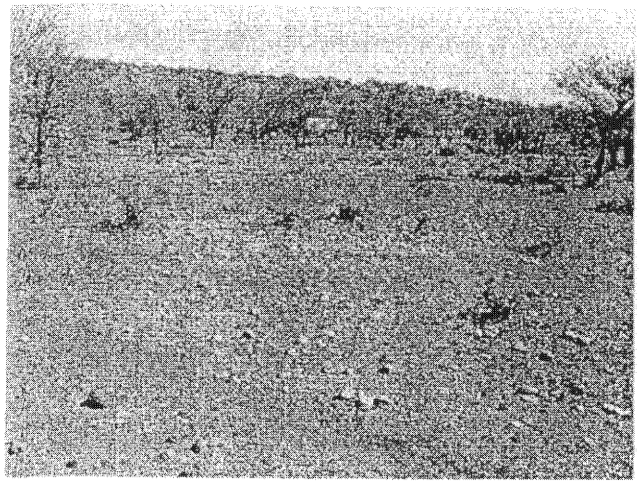


This map is not to scale

The area is reasonably flat and characteristically covered in turf soil, e.g the area closest to the road and ruin. The slightly lower lying parts seems to have been eroded away, which left pebble-like stone debris on the surface. It is among this stoney litter that the majority of archaeological finds were made. The finds were recovered from all over the site, but at least three main concentrations were identified. The finds consist of a Middle Stone Age (MSA) stone artefacts, large amounts of pottery sherds (undiagnostic sherds were not sampled), upper grinding stones, iron slag as well as a piece of a tuyère. All were found on the surface. To access depth, especially in the soil covered areas, a shallow test pit was dug up to 8 cm, where some pottery sherds were recovered.



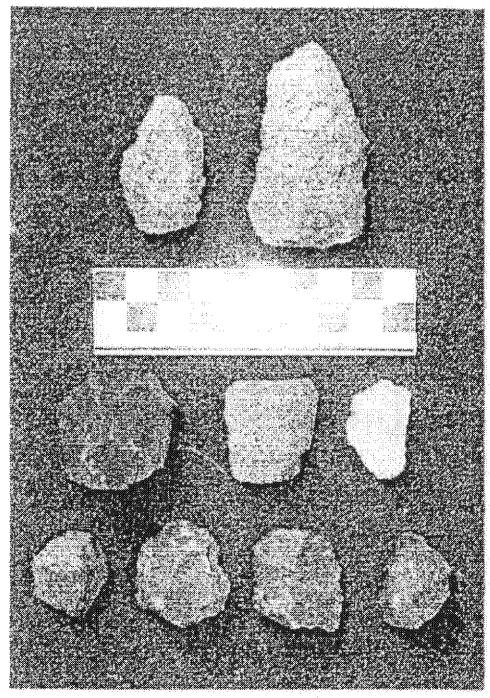




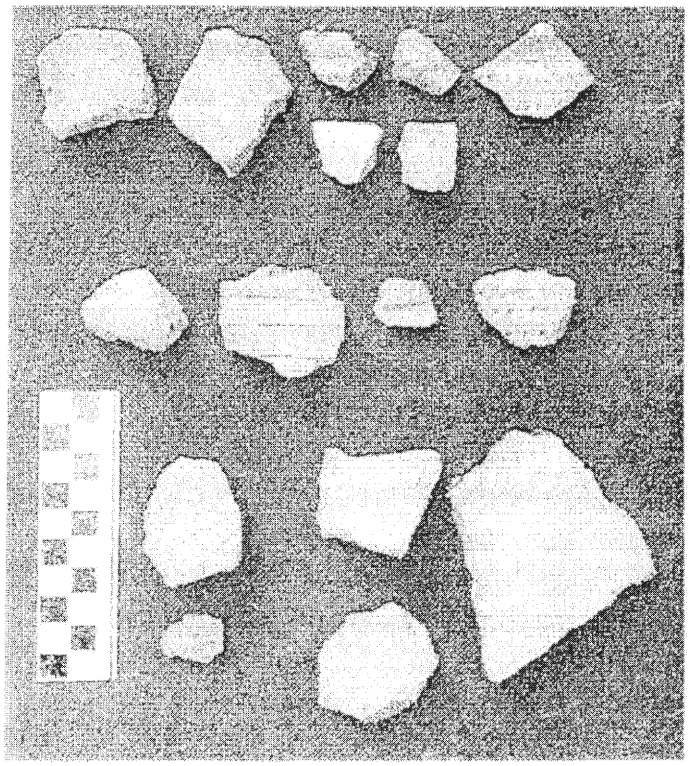
Site 1

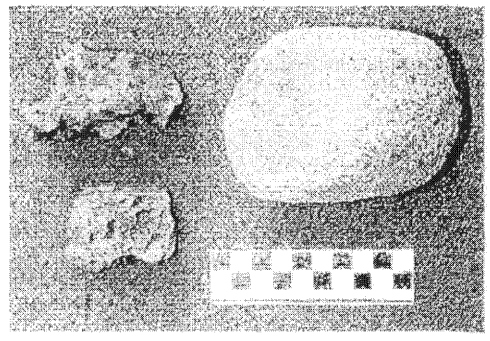
This site covers approximately ¼ (one quarter) of the demarcated area and seems to overlap into the adjacent section. The photograph was taken from the site in the direction of the ruin, which is approximately 100 m away.

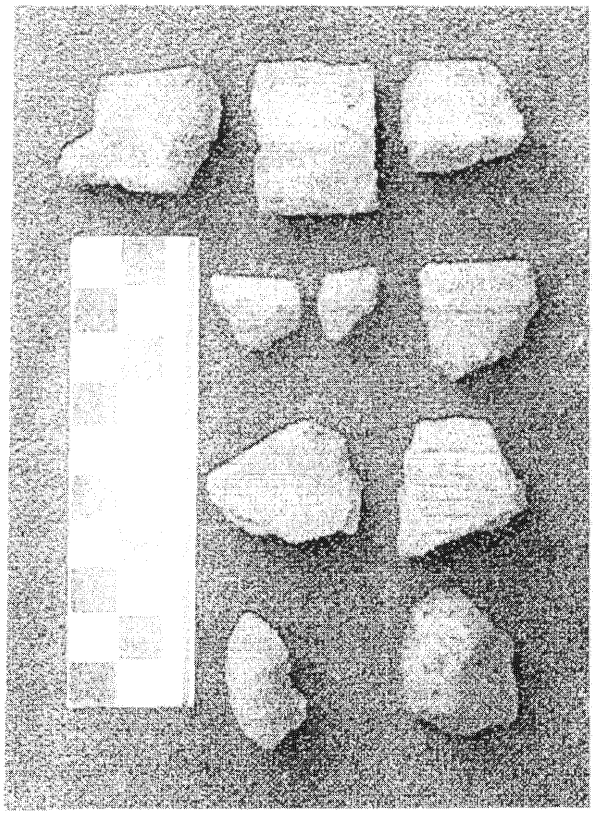
Some MSA artefacts were recovered from this site. This could date back to 200 000 - 40 000 years BP.



Other finds consist mainly of pottery sherds. A wealth of decorated and lipped pottery sherds can be found, only some were however sampled. The slag and tuyère piece were also recovered from this area. One of the many upper grinding stones were sampled.





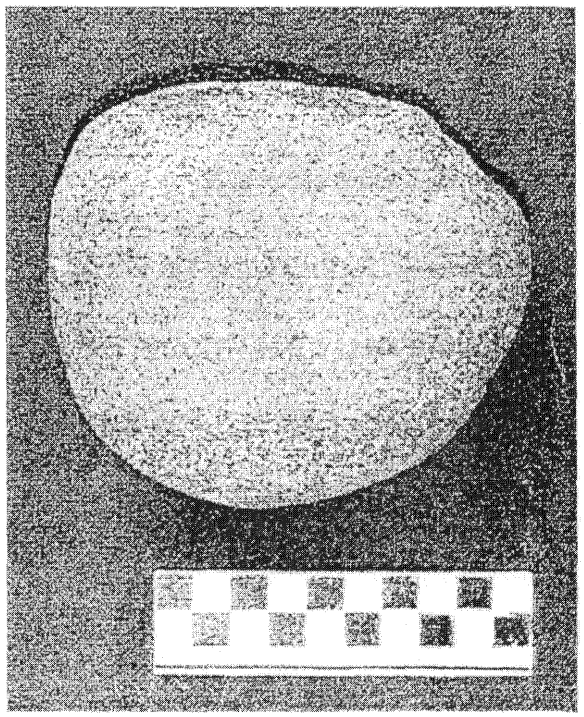


Site 2

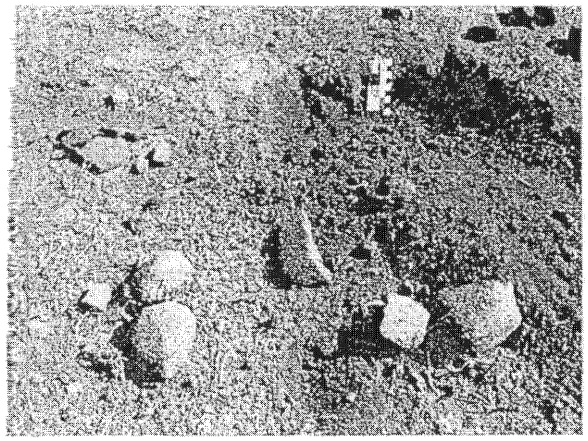
Some lipped as well as decorated pottery sherds were sampled. An interesting piece, seen at lower left, could be part of a clay sculpture. At lower right is an MSA artefact.

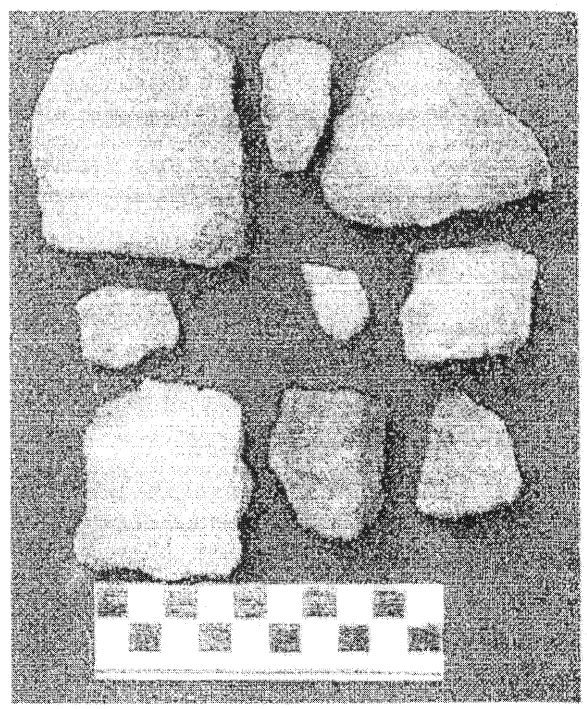
Site 3

Site 3 consists of another large collection of pottery sherds, which were however not sampled. On the accompanying photograph is one of the best examples of the typical upper grinders encountered in the area.



A test pit was dug to approximately 8 cm deep where a concentration of pottery sherds were sampled. The test pit was excavated in an area where the stone rubble was less concentrated.





STONE AGE REMAINS

In view of the above, it is clear that this area was inhabited and/or utilised since MSA times. No LSA (Later Stone Age) artefacts were recovered during the initial reconnaissance.

For the purposes of this report, a short description of the Stone Age, in particular the MSA, follows.

The Stone Age can be divided in three stages based on technological and typological characteristics of southern African archaeological collections. The three main stages are the following:

- The Early Stone Age (ESA), 2,5 Ma - 200 000 years ago.
- The Middle Stone Age (MSA), ca 200 000 years ago.
- The Late Stone Age (LSA), ca 40 000 years ago.

The Middle Stone Age

South from the Limpopo the Middle Stone Age (MSA) replaces the ESA at the beginning of the Upper Pleistocene, and possibly even earlier. The earliest MSA site has been dated for 200 000 years ago. To date no transitional industries have been identified, but a transition would probably result in very small hand axes and very long flake blades.

Collections are characterised by a variety of prepared cores and retouched flake tools, of which most have no equivalent in the ESA. Hand axes and choppers are absent, while flake and blade tools such as points, scrapers and finely toothed tools are characteristic. Both retouched and unrefined pieces could have been attached to wooden handles, as many examples presents a blunt back and sharp blade.

Three groups of MSA artefacts are distinguished, namely tools (with signs of secondary retouching or use), cores and waste (the pieces without signs of edge retouching. Characteristic of the MSA are the many triangular flakes with converging dorsal flaking and faceted butt-ends. Two broadly defined cores are distinguished, namely cores which were used to produce flakes with crossed dorsal flaking (mainly radiated, disc shaped or cores which had been worked from any direction), and cores with parallel, half-parallel or sometimes converging dorsal flaking (mainly with single or double platforms). The narrow, thin butt-ends and digressive percussion bulbs of some of the artefacts indicate the use of an intermediate punch (the so-called indirect percussion technique). This type of flake cores are present in large quantities in the South African interior and further north.

MSA sites occur in a variety of sites, such as river banks, flood plains, on the shores of lakes and pans as well as in fountain deposits. The materials of long occupation layers are well preserved in caves.

Hearths are characteristic of Upper Pleistocene, i.e MSA occupation, such as at the Cave of Hearths and Border Cave, Kwa-Zulu Natal. It is thus clear that humankind was able to control fire in South Africa at least 130 000 years ago, and probably earlier.

Problem areas

- Very little information still exists relating to the ESA transition to the MSA. This type of artefacts are very rare in the collections.
- It is still inconclusive whether the ESA and MSA traditions existed simultaneously in restricted regions.

IRON AGE REMAINS

At present the pottery found on the site cannot be dated or with certainty ascribed to any particular cultural group. It could however be of prehistoric origin, being ascribed to the Iron Age. The pottery appears to be Moloko in origin but reflects other attributes that is probably related to s specific ethnical group that is as yet undetermined. Due to the occurrence of metal working remains (the slag and tuyère) the site predates the colonial period.

For the purposes of this report, a short description of the Iron Age, in particular the Moloko assemblage, follows.

The southern African Iron Age began around AD 200 when people with knowledge of iron smelting moved into Botswana, Northern Province, Mozambique and the eastern coastal regions of South Africa. The archaeological name, Iron Age, derives from the fact that these new people with their knowledge of metallurgy made metal tools and weapons.

Iron Age people were farmers in contrast to the hunter-gatherers and herders of the Stone Age. Iron tools such as axes and hoes were used to clear forests and brush from the land and plant fields of grain (sorghum and millet) and other crops. As farming required a more settled life, they tended to live in villages and not move around as much as Stone Age people did. Stock raising was also an important part of Iron Age life.

The Iron Age can be divided into three phases, namely:
Early Iron Age (EIA) AD 200 - 1000
Middle Iron Age (MIA) AD 1000 - 1500
Late Iron Age (LIA) AD 1500 - colonial times

Moloko assemblage
Moloko ceramics dates to the fourteenth century in the Northern Province and the fifteenth century in the Northwest Province and on the southern Highveld (southern Gauteng and the northeastern Free State), where it is associated with stone-walled settlements. Moloko tradition ceramics are commonly considered to have been made by the ancestors of the Sotho-Tswana people because modern Pedi, South Sotho and Kgatla pottery can be derived from it.

RECOMMENDATIONS

In view of the above, it is recommended that a Phase 2 Archaeological Impact Assessment be undertaken. The details could be finalised through mitigation on site.

Depending on the Phase 2 report and its recommendations, it would be of the utmost importance that the archaeologist be notified once the initial surface preparation (clearing of plant growth, etc.) has been done.

- If any GRAVES and/or MIDDENS are encountered during initial clearing of the surface or during subsoil removal, the archaeologist should be notified immediately. *Please refer to the attached addenda.*

The Phase 2 Archaeological Impact Assessment will comprise of some test pits being excavated and sampling done according to a grid system. The excavated materials together with a full report will be lodged at the Pietersburg Museum where it will be curated. A copy of the report will be sent to each of the following: Nasco Museum in Pretoria and the NMC (National Monuments Council).

Deacon, J. 1996. *Archaeology for Planners, Developers and Local Authorities.* National Monuments Council. Publication no. P021E.

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Hall, M. 1987. *The Changing Past: Farmers, Kings and Traders in Southern Africa, 200 - 1860.* David Philip: Cape Town.

Loubser, JHN. 1994. *Ndebele Archaeology of the Pietersburg Area.* Navorsinge van die Nasionale Museum Bloemfontein, Vol 10, Part 2. February 1994.

Maggs, T. 1984. The Iron Age south of the Zambezi. In: Klein, RG (ed). *Southern African Prehistory and Paleoenvironments.* AA Balkema: Rotterdam.

Meyer, A. 1994. *Navorsingsmetodiek: Inligtingsformate vir Argeologiese Veldwerk.* Dept Antropologie en Argeologie, UP.

ADDENDUM 1

THE LAW

The National Monuments Act *(No. 28 of 1969)* protects all palaeontological, archaeological and historical sites and material older than 50 years. It is an offence to destroy, damage, alter, remove from its original site, or excavate any such site or material without a permit from the National Monuments Council. A person convicted of an offence in terms of the Act, could be liable for a fine of up to R10000 or two years imprisonment, or both. *See Addendum 1 for extracts from this act.*

In terms of the Environmental Conservation Act *(No. 73 of 1989)* the Integrated Environmental Management Procedure, Guideline Document 1 identifies certain man-made areas and features that are listed as environments which must be included in an environmental impact assessment report. These include archaeological and palaeontological sites, graves and burial sites, buildings and sites of religious, social and cultural significance.

ARCHAEOLOGICAL IMPACT ASSESSMENT

To minimise the impact of development on archaeological sites, and the impact of archaeological sites on development projects, and to avoid costly delays if a site is discovered during the course of construction work, it is important to hire an archaeologist well in advance to survey the area. It is important that developers realise that only qualified professional archaeologists should be employed to undertake survey work.

The developer is responsible for the costs involved in hiring an archaeologist to investigate the site.

Phase 1

The archaeologist hired to do the work will submit a phase 1 report. On the basis of the recommendations and assessment of significance made in the report, a decision can be taken on how the development may proceed. In most cases development will be able to go ahead as planned after the sites have been recorded.

Phase 2

In some cases, mitigation in a Phase 2 programme will be necessary and may involve excavation or collection of archaeological material. The purpose behind mitigation is to sample the site so that the evidence can be stored permanently in a museum where it can be consulted at a later date for record and research purposes.

Phase 3

More rarely, the site may be so important that it will warrant modification of the development in a Phase 3 programme. If this happens, the archaeologist, the National Monuments Council and the developer can confer on the action to be taken. It may be possible to incorporate an Iron Age village into a green belt in a housing scheme, or to modify a high rise building plan by covering rare 18th century foundations and associated rubbish dumps beneath a parking lot to avoid destroying them completely. Such solutions are possible if the archaeologist is consulted early enough in the planning process.

Permission for the development to proceed can be given only once the National Monuments Council is satisfied that steps have been taken to ensure that the archaeological sites will not be damaged, or that they have been adequately recorded and sampled.

If this chain of action is followed, we stand a chance of saving something of our archaeological heritage for future generations and of avoiding conflict between developers and cultural conservationists. The National Monuments Council must ensure that the historical and cultural heritage of all South Africans is protected. Careful planning can minimise the impact of archaeological surveys on development projects by selecting options that cause the least amount of inconvenience and delay.

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ADDENDUM 2

EXTRACTS FROM THE NATIONAL MONUMENTS ACT (NO 28 OF 1969, AS AMENDED IN 1986) THAT ARE RELEVANT TO ARCHAEOLOGICAL SITES

12(2A) No person shall destroy, damage, excavate, alter, remove from its original site or export from the Republic -

(a) any meteorite or fossil; or

(b) any drawing or painting on stone or a petroglyph known or commonly believed to have been executed by Bushmen; or

(c) any drawing or painting on stone or a petroglyph known or commonly believed to have been executed by any other people who inhabited or visited the Republic before the settlement of the Europeans at the Cape; or

(d) any implement, ornament or structure known or commonly believed to have been made, used or erected by people referred to in paragraphs (b) and (c); or

(e) the anthropological or archaeological contents of graves, caves, rock shelters, middens, shell mounds or other sites used by such people; or

(f) any other historical site*, archaeological or palaeontological finds, material or object,

except under the authority of and in accordance with a permit issued under this section.

[* An "historical site" is defined as "any identifiable building or part thereof, marker, milestone, gravestone, landmark or tell older than 50 years."]

ADDENDUM 3

Report on Workshop on Standards for the Assessment of Significance and Research Priorities for Contract Archaeology

SA3 (Southern African Association of Archaeologists) Biennial Conference
University of Venda, 10 July 1998

Janette Deacon
National Monuments Council

Opportunities for archaeological contract work will expand in southern Africa in the next few years. To make the best of the opportunities, medium-term (3-5 year) research and heritage conservation priorities need to be established as a matter of urgency in consultation with CRM practitioners, provincial and national heritage agencies and research archaeologists. The following factors are relevant.

1. In South Africa, the Department of Environmental Affairs and Tourism published on 5 September 1997 its long-awaited List of Activities which may have a substantial detrimental effect on the environment and the regulations regarding activities identified under Section 21(1) of the Environment Conservation Act (No. 73 of 1989). These effectively make environmental impact assessments compulsory for the listed activities.

2. The National Heritage Bill, designed to replace the National Monuments Act in South Africa, came before the Cabinet and Parliament in 1998. It could become law from 1 April 1999. Amongst other innovations, it makes impact assessments compulsory where historical, archaeological and palaeontological sites are affected by development but are not protected by other legislation.

3. In neighbouring African countries, the tempo of contract work is also rising as new legislation and requirements of the World Bank are implemented.

It seems widely accepted that CRM practitioners do mitigation to rescue the research potential of a site which would otherwise be lost. The following kinds of sites were identified as being worthy of mitigation:

Stone Age / Hunter Gatherer

- any open air site with bone or other organic material;
- any cave or rock shelter with deposit;
- rock paintings and rock engravings (record context as well as images);
- quarry sites with possibilities for core re-fitting;
- long sequence sites;
- coastal and inland shell middens;
- any sites with Howiesons Poort, Stillbay or Robberg artefacts;
- human remains or burials;
- fish traps;
- placement of Earlier Stone Age sites in the landscape - are they associated with river valleys, water sources or quarries?
- evidence for modernity in Middle Stone Age sites;
- sites with evidence for interaction between Stone Age and Iron Age or colonial people;
- Later Stone Age sites with Bambata pottery;
- pastoral sites, especially in the Eastern Cape;
- caches of ostrich eggshells or other items;
- hunting blinds;
- evidence for exploitation of raw material sources such as haematite or specularite.

Iron Age / Agriculturist

- Sites that will help to clarify the ceramic sequence of the Early Iron Age in the northern and eastern regions of southern Africa;
- any Bambata settlement;
- Early Iron Age sites with evidence for structures or long term occupation;
- sites with evidence for political or social hierarchies;
- evidence of the organization of metal production;
- burials with evidence for social differentiation, health and nutrition;
- evidence for trade within and outside of the Zimbabwe culture area;
- sites in areas that are under-researched to build up the culture-historical sequence;
- special-purpose sites such as rainmaking, circumcision, mining, furnaces, cattle posts vs living sites, salt making;
- Blackburn and Moor Park sites in KwaZulu-Natal;
- well preserved early Moloko sites with middens for evidence of diet and subsistence or stone walling;
- any Zimbabwe-style stone walling should be mapped in sufficient detail to estimate factors such as population size and grain-bin variability;
- evidence for contemporary cultural interaction, for example between Khami and Moloko;
- sites with architectural styles and information on materials used for housing, even in the recent past;
- evidence for the introduction of maize, either direct or in the style of grindstones used;
- sites with botanical remains of cultigens;
- information on the distribution, size and characteristics of dolly-holes for gold mining;
- evidence for textiles or weaving in addition to spindle whorls;
- evidence for games and contextual information relating to them;
- figurine caches and spatial relationships to settlements;
- check stone outcrops near stonewalled sites for engravings.

Historical / Colonial

- sites connected with whaling and sealing;
- ships or ship/boat structures on land;
- shipwreck survivor camps;
- sites in the interior with nineteenth century ceramics (RESUNACT is preparing guidelines for identification);
- single occupation sites in urban environments with deposits such as wells, cisterns and depressions;
- 17th century or early 18th century sites in Cape Town;
- sites that are connected with national and international slave trade routes;
- LSA sites with metal items such as brass buttons;
- documentary and archival searches should be done before going into the field;
- sites that could inform on the effects of military forces on indigenous local populations;
- the symbolic significance of textiles, beads and other items imported by traders;
- sites with oral traditions of sacred significance - oral histories increase significance and are therefore relevant to archaeology;
- historical graves need sensitive removal during mitigation and this is often best done in collaboration between archaeologists and funeral specialists.