# Archaeological Excavations at CASR1

For Chand Environmental Consultants

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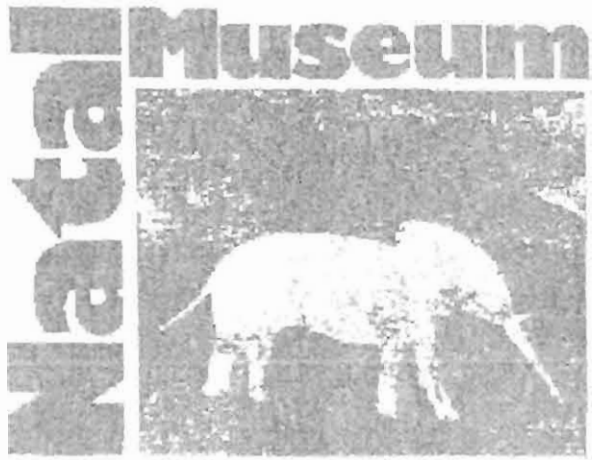
Sun International

By

By Gavin Anderson

Institute for Cultural Resource Management, Natal Museum, Private Bag 9070,

Pietermaritzburg, 3200

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## INTRODUCTION

Chand Environmental Consults, on behalf of Sun International, contracted the Institute for Cultural Resource Management to undertake salvage excavations of a site called CASR1. The site will be affected by the proposed N2 Interchange for the Sibaya Casino. The site was originally surveyed in 1997, and was revisited in 2003 for re-evaluation.

The survey report suggested that seven days would be required for test-pit excavations, whereby the site would be re-assessed in terms of potential future work. As stated in the previous reports, test-pit excavations are used to determine the full potential of the site, and can indicate whether further excavations are required at the site. The test-pit excavations have been completed, however, I believe further work is still required to fully mitigate this site.

The site yielded much information regarding features and finds. The more intriguing aspect of the excavations is the occurrence of potential domestic bovine remains in direct association with Mzonjani pottery. This would be the first site on the Eastern Seaboard to have domestic cattle remains in association with this time period. There is also good preservation of other faunal remains for both the Early Iron Age and the Late Iron Age components of the site.

The site is located just north of the Ohlanga River, and besides the N2 freeway.

## METHOD

Excavation Squares were placed throughout the site in areas where there was a concentration of artefacts on the surface (Fig. 1). These surface artefacts are a result of sugar cane farming. A total of thirteen squares were excavated. Ten of these squares were 2 m x 2 m in size, and three were 2 m x 3 m in size.

The site was excavated in 10 cm spits, unless obvious stratigraphy was present. Artefacts and features were mapped according to accepted archaeological method and practice.

## STRATIGRAPHY

The site has a basic stratigraphy. The surface sand varies from 15 cm to 30 cm in depth. This is followed by a dark brown sand that varies between 15 cm and 35 cm in depth. Most of the LIA material is associated with this layer, although some of the EIA material is also located in this layer. The following layer is Soft Brown Sand. This yellow-brown aelion sand tends to have the EIA material. The basal layer (for the excavations) is the hard red clay-like layer referred to as the Berea Reds. Some Early and Middle Stone Age stone tools were located in this layer. Figures 2 and 3 illustrate the basic stratigraphy of the site.

Shell middens occurred in both the LIA and EIA levels. In square 4/4a the shell middens were located in the Berea Reds.

## ARTEFACTS

### Pottery

The pottery from the site can be divided into two phases of the Iron Age: the EIA phase (specifically the Mzonjani Phase) and the LIA. The former dates between 1 700 and 1 500 years ago, while the latter probably dates between 600 and 400 years ago.

The Mzonjani pottery has various motifs that can be ascribed to this phase:

- Hanging pendant motifs
- Single horizontal groove below the rim
- Cross hatching on the rim-neck
- Bands of alternate triangles on the shoulder

The LIA pottery cannot be ascribed to a specific phase. The pottery tends to be undecorated on the rim-shoulder-body areas. However, several rims have lip notching. Furthermore, some of these sherds have a red burnish on thin-walled pottery. This type of style has been attributed to the middle of the LIA further north along the coast.

The pottery, in general, includes vessels and bowls that would have been used for various functions.

### Faunal Remains

The faunal remains tend to be restricted to bovines. This includes domestic and wild antelope. Other animals include birds, possible suids, and fish. The bovine remains tend to be that of cattle, sheep/goats, and possibly small antelope. A brief site analyses suggests that most of the larger animals are juveniles, with the occasional adult.

Their tends to be poor preservation of faunal remains along the coast. This is ascribed the acidity of the soils. The pattern is that when faunal remains due occur on a site, then they tend to belong to the LIA. However, the occurrence of shellfish, or shell middens, tends to increase the preservation of such remains. This is because the shells excrete calcium carbonate, and thus preserve the organic material.

The faunal remains at the site are in direct association with artefacts from both time periods. The occurrence of domestic bovines in association with Mzonjani pottery is of high significance and is discussed later.

### Metallurgy

Evidence for metal working at the site tends to be associated with the Mzonjani period. These items include tuyerés and slag. Most of the slag pieces were on the small side, however a few weighed approximately 1 kg. The tuyerés varied in size, and no complete versions were excavated.

A few fragments of iron ore were excavated in the middle of the site.

The metal working debris tends to occur in the middle of the site at Squares 6 and 3.

### Shellfish

The shellfish at the site is predominantly *Perna perna* (brown mussel), followed by *Ostridaea spp.* (oyster) and *Patella spp.* (limpets). Other shell remains do occur at the site, but are probably not part of the diet. These include barnacles, and *Tuvela spp.*

The shellfish tends to occur in shell middens across most of the site.

### Daga

Two kinds of daga occur at the site: Granary and hut floor daga. Only one piece of hut floor daga was observed in the middle of the site. Granary daga occurred along the upper (or southern) parts of the site. These fragments varied in size and many had pole and grass-read impressions. The larger granary daga fragments tended to be burnt on one side.

### Miscellaneous artefacts

Several upper and lower grinding stones were excavated. All of these suggest that sorghum and millet were processed at the site. This in turn suggests that both phases of occupation may predate the 1500s. No upper grinding stones for maize were observed or excavated. Other stones consisted of fire cracked rocks. These were located in several squares.

One dagga pipe fragment was excavated from the upper layers of Sq. 6. It is probably associated with the LIA occupation.

Various stone tools were observed at the site. These tend to be typical Middle Stone Age flakes and cores. One hand-axe was observed on the surface as well as several Late Stone Age flakes.

## FEATURES

Several types of features occur at the site. These include bone concentrations, daga concentrations, pottery concentrations, pits, and shell middens.

### Shell Patch 1

Shell Patch 1 is located in Spit 3 of Sq. 4. It tends to extend over most of the square, however it thickens in the southwestern corner. The upper parts of this midden tend to be fragmented shell due to ploughing activity. Just above this midden is a thin layer of charcoal and dark brown sand. The main lens is compacted brown mussel ± 5 cm thick (fig. 4). This lens is concentrated along the southern part of the square, although it slopes steeply in the corner.

The shell remains are mainly of brown mussel, although some ouster and limpet fragments do occur. The shell at the interface of the brown sand and Shell Patch 1 tends to be burnt.

### Shell Patch 2

Shell Patch 2 is located in the southern parts of Sq. 3 and in Spit 3. It is ± 170 cm x 100 cm wide, although it extends into Sq. 3A (fig.'s 5 & 6).

Shell Patch 2 consists mainly of brown mussel, oyster, and limpets. The midden is compacted and partly disturbed by rootlets and animal burrows. Several fire-cracked rocks, pottery, and bone were recovered. No burnt shell fragments were observed.

A total of 13.5 buckets of shell were removed

### Shell Patch 3

SP3 is a shell midden in Spits 3 - 4 in Sq. 3. It is ±60 cm in diameter and ± 7 cm deep. It occurs in the SBS (fig. 6). The shell consists mainly of brown mussels and a few oyster and limpet fragments. Several faunal remains occur from this midden.

### Shell Patch 4

SP4 occur in Sq. 3A. SP4 occurs below SP2 and is located in the Berea Red sand (fig. 4). SP4 extends southwards and dips down in the southwestern section. At the base of SP4 is a small pit, called Pit in SP4 (PSP4). Sp4 caps this spit. PSP4 is a brown sandy layer that is flecked with charcoal and is ±25 cm deep. There are two layers of shell in this pit: in the middle of the pit and at its base. Each layer is separated by the brown-charcoal sand. A few faunal remains were removed from the pit. The decorated pottery associated with SP4 is associated with the Mzonjani Phase of the site.

### Shell Patch 5

SP5 occurs in Spits 4 – 9 in Sq. 11. It is a narrow shell midden running east to west (fig.'s 7- 8). It is a compacted shell lens ± 5 cm deep with no artefacts. The shell consists mainly of brown mussel. A total of 4.5 buckets were removed from this midden.

### Shell Patches 6 – 9 and Pits 7 - 8

SP6 occurs in Spit 4 – 9 in Sq. 11. SP6 angles sharply downwards (at ± $80^0$) along the northern section. It is located below SP5 and is separated from SP5 by a sandy layer that is 3 cm – 5 cm thick. SP6 is situated above Pit 8 (fig.'s 7- 8).

SP7 is a small shell patch in the west section. It is ± 30 cm x 20 cm in diameter. SP8 is also located along the west section. It is ±10 cm in diameter. SP7 is located at the top of Pit 7, while SP8 is located at the base of Pit 7. SP9 occurs at the base of Pit 7 (fig.'s 7- 8).

It appears that Pit 7 and 8 are two shell lined pits besides each other separated by a few centimeters of sand. Whilst this does not show in the section drawings (fig. 9), the separation was evident during the excavation. Both pits are located below the Dark Brown Sand, and are surrounded by the Soft Brown Sand. This suggests that these may be associated with the Mzonjani Phase of the site. These pits and shell patches extend into the north and west sections, respectively.

### Small Ash Pit

This ash pit is located in the north eastern corner of Sq. 4. The excavated pit is ±100 cm wide and ±10 cm deep. The sand tends to be ashy with fragments of shell. Two thin-walled pottery sherds, an upper grinding stone and charcoal fragments were removed. A total of seven buckets of shell were removed.

### Grey Sandy Feature

This feature is located in the northern section of Spit 5 in Sq. 1. It is ±100 cm x 30 cm in size and 30 cm deep. No artefacts were removed from the pit, but the colouration and texture of the soil suggests that it is an ash pit.

### Ash Pit 1

Ash Pit 1 is located in Spit 3 of Sq. 3. It is ± 50 cm in diameter and ± 10 cm deep. The pit is a small ash pit of black sand with small charcoal fragments

### Brown Sandy Pit

Brown Sandy Pit is located in Spit 3 of Sq. 7. It is ±60 cm in diameter and 31 cm deep. The pit is defined by a soft brown-black sand pit in the Soft Brown Sand. The pit consisted of a few Mzonjani pottery sherds. It appears to be a fire pit.

### T-Pit

T-pit is located in Spit 6 of Sq. 8. The pit is a small bowl-shaped depression of shell and beneath it is a possible tibia from domestic cattle. This basin is on the top of the Berea Reds and is possibly part of the Mzonjani phase of the site.

### Pit 3

Pit 3 is located in Spit 6 of Sq. 8. It is ±50 cm x 20 cm wide and 68 cm deep. The pit consists of a dark ashy soil and a few adiagnostic pottery sherds. There are three clusters of shell in the pit. These occur at the top, middle, and base of the pit. Each cluster consists of ±3 brown mussels. Some charcoal occurs in the pit as well.

### Pit 5

Pit 5 is located in Spit 3 of Sq. 10. The pit is ±30 cm in diameter and between 11 cm to 21 cm deep. Pit 5 is a small shallow pit in fine black sand and has three undecorated sherds.

### Pit 6

Pit 6 is located in Spit 4 in the southwestern corner of Sq. 6a. It is ±55 cm in diameter and varies between 15 cm to 42 cm in depth. The pit has daga fragments, Mzonjani sherds, and faunal remains. The faunal remains include a long bone and tooth of what appears to be a domestic bovine.

### Pit 9

Pit 9 occurs in Spit 3 of Sq. 4. Pit 9 is 35 cm long, 27 cm wide, and 14 cm deep. It is a small depression in a fragmentary shell patch (part of SP1). A large pottery sherd appears occurs in the middle of this pit. The pit appears to be lined with brown mussel, although some oyster and limpet occur as well. Many of the brown mussels are still closed. This suggesls that they had not been eaten after they were processed.

### Grey Ashy Soil

GAS occurs in Spit 3 of Sq. 4A. GAS is ± 20 cm wide, 60 cm long, and 4 cm deep. The soil is a grey powder-like soil and appears to be ash. It is situated between two shell middens (that require further excavations). No artefacts are associated with this feature.

### Black Ash Pit

Black Ash pit occurs in the southwestern corner of Spit 5 in Sq. 7. The pit consists of soft blackish sand dug into the SBS. The excavated part of the pit is ±30 cm in diameter and 62 cm deep. Mzonjani pottery is associated with pit.

### Dark Grey Soil Pit

DGSP occurs in the eastern parts of Spit 3 of Sq. 6. It is ± 50 cm in diameter and 60 cm – 70 cm deep (fig. 9). The soils is a mixture of some SBS, with a dark grey-black soils (possible charcoal flecked sand). Very few artefacts were removed from this pit. These artefacts include: goat/sheep incisor, small pottery fragments, a fragment of a tortoise carapace, and small charcoal fragments.

### Daga Concentrations

Daga Concentration 1 occurs in Sq. 6/6A in Spit 3 along the southern section. It is ±100 cm x 60 cm wide, and 10 cm deep (fig. 2). The daga is granary daga and has pole and grass impressions. Along the southern parts of this concentration are several Mzonjani sherds.

Daga Concentration 2 is located in Spit 4 of Sq. 8. It is 20 cm x 15 cm wide. These are granary daga fragments and tend to be burnt. Mzonjani pottery is associated with this feature.

Daga Pit occurs in Spit 4 of Sq. 8. The excavated pit is ± 70 cm in diameter and 32 cm deep. It consists of several daga fragments, fire cracked rocks and shale fragments.

### Bone Concentration

The main Bone concentration occurs in Spit 3 of Sq. 6. The concentration consists of several fore- and hindleg bones of a possible domestic bovine – these include the metapodials and metacarpals/-tarsals. It appears that this is the remains of a single animal. Several small rocks are located in this concentration.

### Pottery Concentrations

Pottery concentrations (PC) occur in a few squares of the site and are probably the remains of individual pots.

PC1 occurs in Spit 4 of Sq. 6/6A. PC1 is ±50 cm in diameter and 20 cm deep. The pottery is undecorated but appears to be related to the Mzonjani Phase of the site.

PC2 occurs in Spit 2 of Sq. 7. The pottery may be in a pit ±20 cm deep. The pottery is Mzonjani pottery.

PC3 occurs in Spit 6 of Sq. 8. PC3 occurs in the SBS and consists of several Mzonjani sherds. A fragment of a bowl has a graphite burnish on the rim.

PC4 occurs in Spit 5 of Sq. 3. It is ± 40 cm in diameter. The pottery fragments are from at least three different Mzonjani vessels.

PP1 is a concentration of pottery sherds and bone in Spit 5 of Sq. 10. The pottery is black in colour and undecorated. I believe the pottery is associated with the LIA occupation.

### Slag Concentration

The Slag Concentration occurs in Spit 5 of Sq. 3. It is ± 90 cm long and 30 cm wide. The artefacts include Mzonjani pottery, a few bone fragments, tuyeré fragments, basin-shaped slag, and small slag fragments. These occur in the south section and probably extend further south. The shape of the slag suggests that a furnace may be located to the south or west of this square.

## CONCLUSIONS AND FUTURE MANAGEMENT

CASR1 was excavated over a seven day period as part of the initial mitigation of the site. These excavations were test-pit excavations and were used to determine the full significance of the site. The survey report clearly stated that more excavations might be required if the test-pit excavations revealed significant information.

The excavations have yielded significant artefacts in terms of preservation and spatial features. Several pits and shell middens were located across the site. The pits tend to occur along the upper parts of the hill, while shell middens occur on the outskirts of the site. This suggests that houses were placed along the outskirts of the site during the Late Iron Age.

Little spatial information was obtained from the Early iron Age phase of the site. While a few pottery concentrations, or pits, did occur, it is not enough to obtain a layout for the settlement.

The main significance of the site is in the preservation of organic remains. The well preserved remains are a direct result of the shell middens (calcium carbonate leaching onto the organic remains). Bone is well preserved in and below the middens. One square yielded possible domestic cattle in the Mzonjani layers of the site – another square has domestic cattle remains possibly associated with the Mzonjani layer. This is significant as no Mzonjani sites, along the KwaZulu-Natal coastline, have yielded domestic cattle remains. A larger faunal sample from this site is thus required. This sample would be obtained by excavating more shell middens. This process had begun on the last two days of the excavations. Another shell midden also requires further excavation.

My personal observations of Late Iron Age burial practices are that they tend to occur nearby, or below, shell middens. CASR1 has several shell middens and well preserved faunal remains. This suggests that there is a possibility of human remains occuring at the site. Several shell middens occur on the site and these would require monitoring during the earthmoving phase of construction.

In summary, the mitigation for CASR1 is incomplete and further excavations should occur before earthmoving continues. The site has significant material that necessitates this mitigation. On-site monitoring should also occur during the earthmoving phase.

The mitigation should occur as soon as possible. The ICRM was prepared to undertake the mitigation immediately after the initial excavations; however, the developer queried the need for further mitigation, and delayed this mitigation. The developer is thus liable for future time constraints of the development.