

Baleni Archaeological Report

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Submitted by: Alexander Antonites

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Tel: 083 997 6914

Fax: 012 263 5266

Email: saje@up.ac.za

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Introduction

The research at Baleni was guided by specific research questions. The research was primarily aimed at the completion of my MA degree in archaeology at the University of Pretoria. The focus of the research was primarily on aspects of Early Iron Age production and as a result most of the analyses was aimed at material from this period.

Fieldwork at Baleni was carried out with four general aims in mind:

1. The establishment of a chronology of salt extraction at Baleni. Once established, the chronology would provide a temporal context relating to time depth and extent for salt extraction.
2. To determine the spatial characteristics of salt extraction activities in order to investigate the utilization of salt sources.
3. To identify first millennium settlements that were actively involved in salt extraction activities.
4. To investigate these communities as areas of salt extraction.

The Research Area

The name Baleni, refers to a mineral hot spring located at S23.41875°, E 30.91510°, and 380m above sea level. It is located approximately 20km south-east from the town of Giyani, and also falls within the borders of the Giyani Municipal District. Situated in the Limpopo Province, the district is bordered in the east by the Kruger National Park, in the south by the Groot Letaba River and in the north by the Shingwidzi River.

The study area falls within the South African Lowveld - the area geographically defined as the low-lying areas east of the South African escarpment and west of the Lebombo Mountains on the Mozambique border (Onderstal 1984). For the purposes of this study, the northern Lowveld is defined as the area north of the Olifants River and south of the Limpopo river basin region.

The Baleni research area covers the entire area within 1,5km around the salt pan. This encompasses the main salt working area around the spring, as well as the area peripheral to this, up to a distance of 1,5km measured from the spring's centre.

Biome

Baleni is situated within the Savannah Biome, which is characterized by grassy ground cover and an upper layer of trees and shrubs. The grass layer in savannah areas is mostly dominated by C4 –type grasses (Van Rooyen and Bredenkamp 1996).

Climate and Rainfall

The Lowveld is a summer rainfall region. The average precipitation for the Giyani region is 600mm per annum, mostly in the form of thunderstorms. On average 90% of the annual rainfall occurs during the period between October and March. Summer temperatures for the Giyani District varies between 18°C to 43°C while winter temperatures range between 8°C to 23°C.

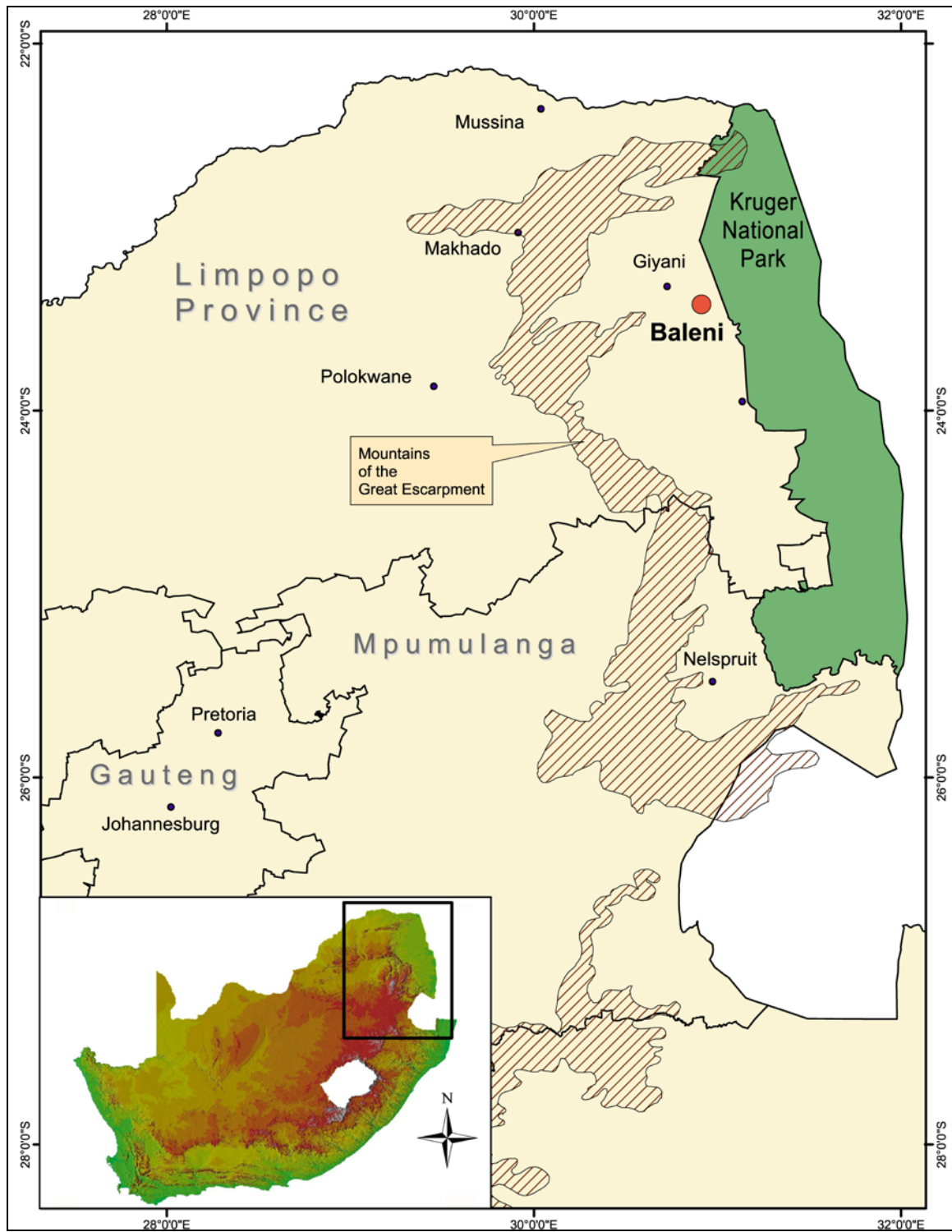


Figure 1: Baleni in regional context

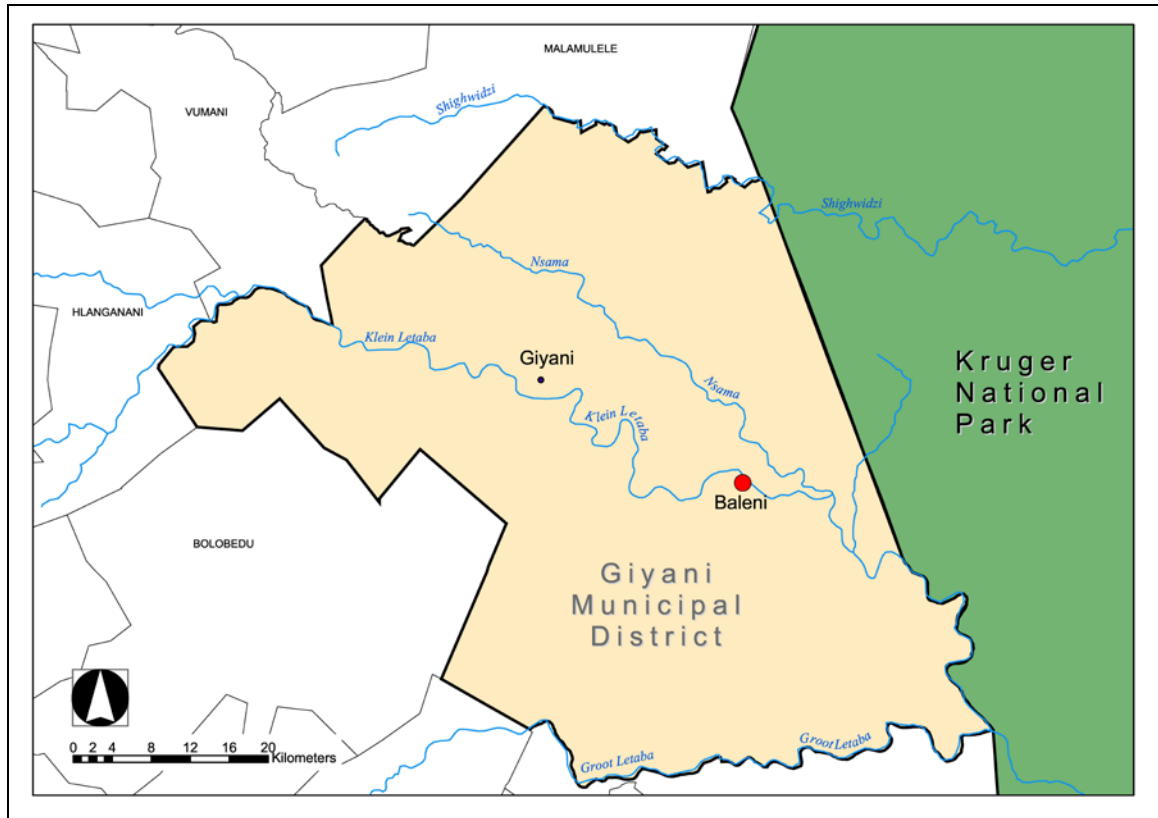


Figure 2: The Giyani Municipal District

Topography, Geology and Soils

Regionally, the average elevation of the northern Lowveld ranges between 600m in the west and 300m in the east. The gentle undulating landscape is broken at places by conspicuous ridges and hills like the Murchinson Range, Mangombe Hills, and the Black Hills which rise up to 400m above the surrounding landscape. In the east where the Lowveld meets the escarpment, the landscape rises sharply to an altitude of almost 2 000m (Brandl 1987).

The landscape around Baleni is set on archaean gneiss from the Goudplaats Gneiss formation. The gneiss varies in color between light and dark grey (Brandl 1987). The rocks are generally poorly exposed with outcrops limited to river channels. In the vicinity of Baleni, the gneiss is medium grained and well-foliated (Kent 1986; Brandl 1987). Small schist lenses and thin pegmatite in bands and segregations have also been observed in the area. The gneiss is cut by many mafic dykes of a north-east tending direction (Kent 1986).

The predominant soils are medium and coarse freely drained sandy loams, usually of a reddish-yellow to red colour. Both types have a high alkaline content making them saline.

Fauna and Flora

The predominant vegetation type at Baleni is Mopane Bushveld. It is characterized by fairly dense growth of *Colophospermum mopane* (mopane), and mixtures of *C. mopane* and *Combretum apiculatum* (Red Bushwillow) also being associated with Knob Thorn (*Acacia nigrescens*), *Comiphora* spp. and *Combretum imberde* (Van Rooyen and Bredenkamp 1996).

Areas of Mixed Lowveld Bushveld also occur approximately 1km south of the spring where the elevation rises slightly. Here the vegetation is mostly dominated by Red Bushwillow (*C. apiculatum*), Silver cluster leaf (*Terminalia siricea*), and Knob Thorn (*A. nigrescens*) with concentrated pockets of Sicklebush *Dichrostachys cinerea* (cf. Van Rooyen and Bredenkamp 1996). Dense clusters of Magic Guarri (*Euclea divinorum*) occur on the brackish floodplain area around the eastern and northern edges of the saltpan (cf. Van Wyk and Van Wyk 1997). The area along the Klein Letaba River is typical riverside forest with large examples of Common Cluster Fig (*Ficus sycomores*) and Tamboti (*Spirostachys Africana*). In areas along the river, pockets of Mopane Forest also occur. The predominant grass types in the area are all *Digitaria* sp.

At present, the area is devoid of game. Since the Mopane Bushveld extends into the Kruger National Park, and the boundary being approximately 10km east of Baleni, game profiles from the park can be applied to Baleni. Gertenbach (Gertenbach 1983) indicates that Mopane Bushveld supports buffalo, waterbuck, elephant, zebra, giraffe, impala, white rhinoceros, eland and sable antelope. The veldt type also supports large herds of elephant.

The Spring

The eastern edge of the swamp is situated about 150m from the bank of the Klein Letaba River. The swamp drains into the river by means of a small stream on its eastern edge. At present, the Baleni fountain is the most reliable source

of water in the area. Although the water is brackish, cattle from the surrounding area come to the spring to drink during dry spells. In wetter periods other sources of water are preferred.

The Baleni spring flows into a reed covered swamp or pan. The swamp is roughly oval in shape, about 415m in length and 150m wide. South east from the main spring, there are a number of much smaller eyes that flow out in open depressions. These depressions are mostly dry but become swampy in the rainy season.

Origins of the thermal water

Kent (Kent 1986), after analyzing air photographs and LANDSAT images, believes that the thermal water at Baleni rises to the surface through a geological fault. Though no faults pass directly through it, the spring is likely part of a fracture that is connected to a prominent east-west trending fault, situated 900m south of the pan. This fault, with its shear-zone and associated fractures, probably also form the main aquifer that feeds the spring (Kent 1986).

Other Hydrological features

The main hydrological feature in the area is the Klein Letaba River. Approximately 30km downstream, it drains into the Letaba River, which eventually flows into the Olifants River, the main drainage line of the northern Lowveld. The Nsama, a prominent tributary of the Klein Letaba, flows into the latter approximately 8km downriver from Baleni. At present the Klein Letaba only experiences ephemeral flows. This, however, was not the case in the past, since the catchment area has been dramatically modified by human activity (Moon and Heritage 2001).

At Baleni, there are several non-perennial streams around the swamp that all drain into the Klein Letaba (see figure 3). In several places these streams have formed deep dongas or erosion gullies. One large gully, on the south-eastern side of the swamp, has eroded into a deep channel with vertical banks, over 3m deep in places.

In several places these small perennial rivers display a tendency to expand horizontally to form open areas, which become swamp-like in the rainy season

(see figure 4). When dry, a salt crust forms on the surface of these open areas. The salt is probably a result of the surrounding saline soils being leached by the streams.

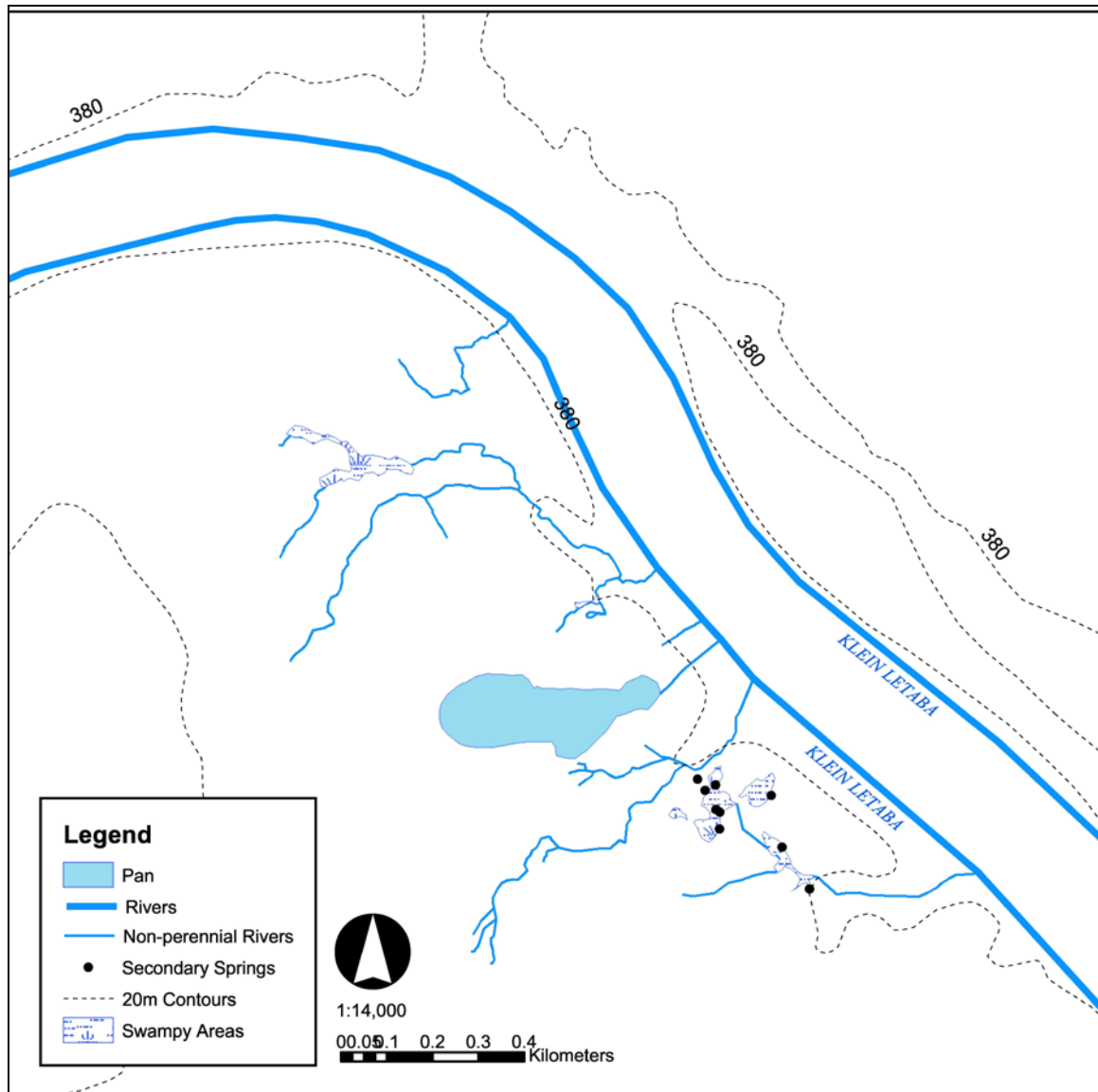


Figure 3: The Baleni natural landscape

Salt extraction at Baleni

Although the present study is the first systematic archaeological investigation at Baleni, several archaeologists have visited the saltworks in the past, drawing on the modern salt extraction activities for comparative data applicable to their own studies (e.g. Evers 1974).

Evers (1974; 1981) after visiting the site remarks on the similarities of the Baleni deposits with that of Eiland and Harmony. The continued extraction and the methods employed at the site have also been recorded by other observers (e.g. De Witt 1966; (Terblanche 1994)). Observations at Baleni have also been used to reconstruct traditional salt making methods at the Tsonga Kraal Open Air Museum (Terreblanche 1994).

Salt Extraction methods at Baleni

As elsewhere in Africa, present-day salt extraction at Baleni is an exclusively dry season activity. The salt-season usually starts in May, the precise day of commencement being decided on beforehand by consulting the ancestral spirits (Terreblanche 1994).

The first step in the extraction process is to construct the filters through which the salt is leached. The filters are mostly made from the branches and bark of the mopane tree (*Colophospermum mopane*). These filters vary in size, but must be high enough to place a container underneath. Four forked poles are planted into the ground approximately 40cm – 60cm from each other to form a square. Four other poles are placed in the forks of the planted poles and tied together using bark from a mopane tree. A hanging sieve from bark and thin branches is woven onto this structure. This sieve is held into position by supple mopane rods and lined with dry grass. Using clay from an anthill, the inside is built up into a cone shape leaving only a small hole in the bottom through which water can drip. This hole is usually covered with dry grass or leaves (Terblanche 1994).

The next step is to scrape off the salt crust on the edge of the swamp. Terreblanche (1994) mentions that the shell of a freshwater mussel is used for his practice. This mixture of soil and salt is then taken to the filter where it is

mixed with an equal amount of river sand. The river sand loosens the texture of the gathered crust, which would otherwise be too clayey. A suitable quantity of this mixture is then placed in the filter. Once in the filter, water obtained from the river is poured over the mixture. This process is repeated until the receptacle underneath the filter is filled with the saltwater extraction. After water has been poured over the salt-soil mixture two or three times, the content of the filter is scraped out and discarded next to the filter (Evers 1981; Terblanche 1994). The bulk of the archaeological deposit found at Baleni are mounds formed by the scraped out filter content.

The saltwater mixture is then placed in a container over a fire and boiled slowly so that the water evaporates, leaving only moist salt behind. The crystallized salt is then scraped into a pot, a large potsherd or calabash, again using a freshwater mussel shell. On questioning the meaning of the shell's use, Terblanche (1994) was informed that it used because it was always the practice, since iron objects will rust on contact with the salt.

When there is enough, the damp salt is formed into a cone shape. This is done by pouring the content onto a flat surface and forming the cone by ladling it with the hands. Terblanche indicates that at times coals are placed on the cone to form a hard crust on the surface. Sometimes the cone is also paced on dry grass, which is then burnt in order to produce the same effect. Witt (1966) mentions a process where the cone is placed in the sun in order for it to dry, and then baked in a clay pot placed on a fire. Measurements of the cones found that the cones weighed between 1 and 2 kg (Terblanche 1994).



Figure 4: Salt extraction filter



Figure 5: Salt extraction filter and mound of leached-out earth

Archaeological Research at Baleni

Areas of salt production

As has been shown, salt production at Baleni results in a distinct deposit of mounds of leached-out earth, which, continued over numerous years have resulted in a landscape, pockmarked by hundreds of mounds around the pan. These mounds, as the physical evidence of prehistoric salt production, were recorded during three surveys. The surveys provided data concerning spatial patterning of salt extraction and utilization of available salt sources at Baleni.

Survey methodology

The first survey in May 2003 focused on the area adjacent to the saline spring. Two additional surveys were undertaken in September 2003 and September 2004 to record mounds in the adjacent region. All three surveys were of a pedestrian nature, during which the identified mounds were mapped using a combination of a Global Positioning System (GPS) and a theodolite.

Results

The most important aspect of the study area, is the presence of the Baleni saline spring and the pan into which it flows. The pan's mineral rich waters, with its high NaCl content allowed Iron Age communities to extract salt, which is the current subject under study. However, the spring and associated pan, are not the only available source of salt at Baleni. Precipitated salt also forms in the dry beds of some of the small rivulets that drain into the Klein Letaba River. Both areas were exploited as sources of salt by prehistoric communities. Therefore, salt could be obtained from a variety of different means at Baleni.

The surveys recorded 730 mounds in total. The mounds' spatial attributes were plotted and mapped using a Geographic Information System (GIS). To determine spatial variation of the mounds, a density map was compiled of the salt mounds per square map unit. The results indicate that the highest concentration of salt extraction occurred on the banks of dry streams near the saline spring, especially to the southwest of the saline spring and swamp. The

deepest deposits were located along the western edge of the saline spring itself.

The density map clearly shows that, although the salt crust that precipitates on the surface of the secondary swampy areas were utilized as salt sources, the main salt spring and pan was the preferred source. This is evident through the high density and size of the mounds.

The spatial data of the leaching mounds also indicate that there is a clear preference in the location of salt making activities. Leached out mounds are located next to or near sources of water – with their density dropping off with distance away from these sources.

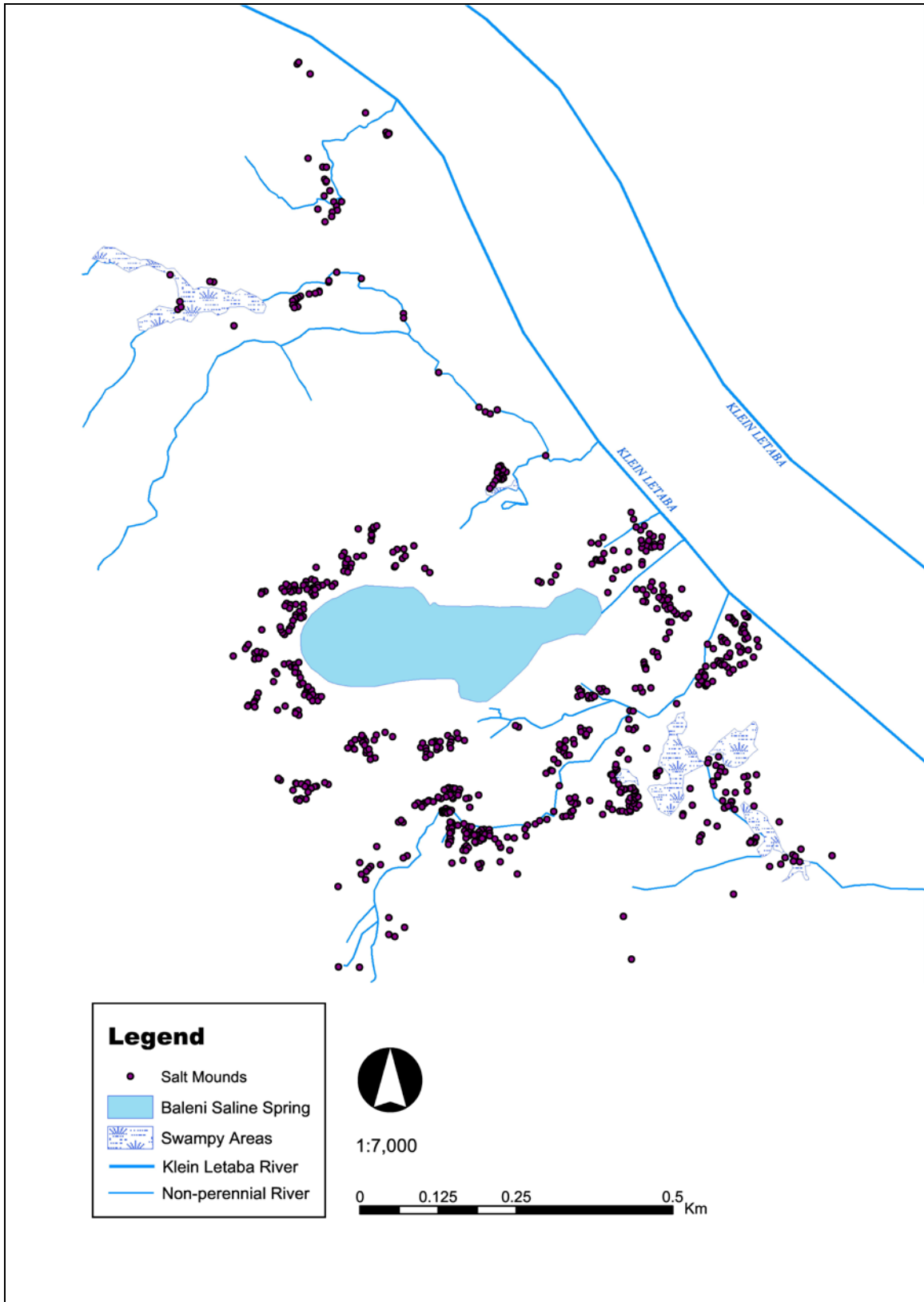


Figure 6: Location of mounds of salt making activity areas

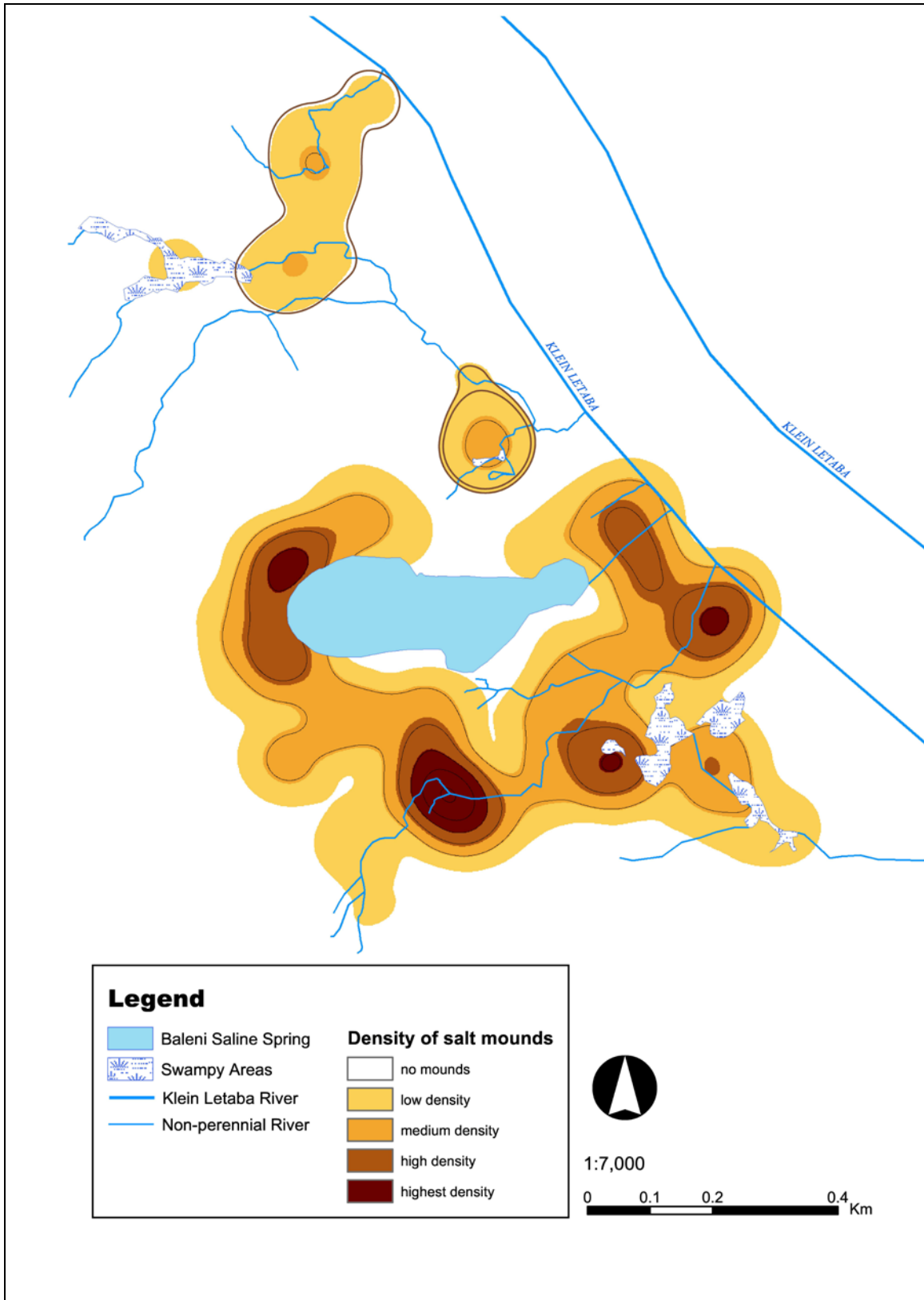


Figure 7: Density map of salt making areas

Salt producing settlements

In order to identify settlements connected to the main salt extraction site, a pedestrian survey was employed in the area adjacent to the swamp. The results from the survey gave an indication of the density of settlements around the salt making area. The survey also identified sites where future excavations could take place in order to investigate further aspects of early salt production.

Visible signs of architecture served as the primary criteria for the positive classification of a feature as a settlement. This included stonewalls as well as dagga and hut floors. Secondary diagnostic features included upper and lower grinding stones and ceramic scatters. These were not classified as settlements if no primary indicators were found in context.

Survey Methodology

The methodology employed in site location and initial recording was an orthodox methodology developed for total coverage pedestrian archaeological survey. Coverage was achieved by walking 30 transects spaced at 12° increments.

The prior surveys effort had already covered the immediate area around the swamp, and as a result this survey was started 300m out from a base point located on the eastern edge of the swamp and extended a further 1000m away in a circular form.

The first transect was started at magnetic north (0°), and the following 30 transects covering the full 360°. The survey team consisted of nine individuals, who, because of relatively low visibility in some areas due to the dense vegetation, were spaced approximately 10m-15m apart, thereby effectively covering 100m - 135m per transect.

A geographic information system was employed to import the start and end coordinates of the transects into a handheld GPS as waypoints. During the survey, a combination of GPS and prismatic compass were used to follow the transect route which would otherwise have proven difficult with just a compass in dense undergrowth.

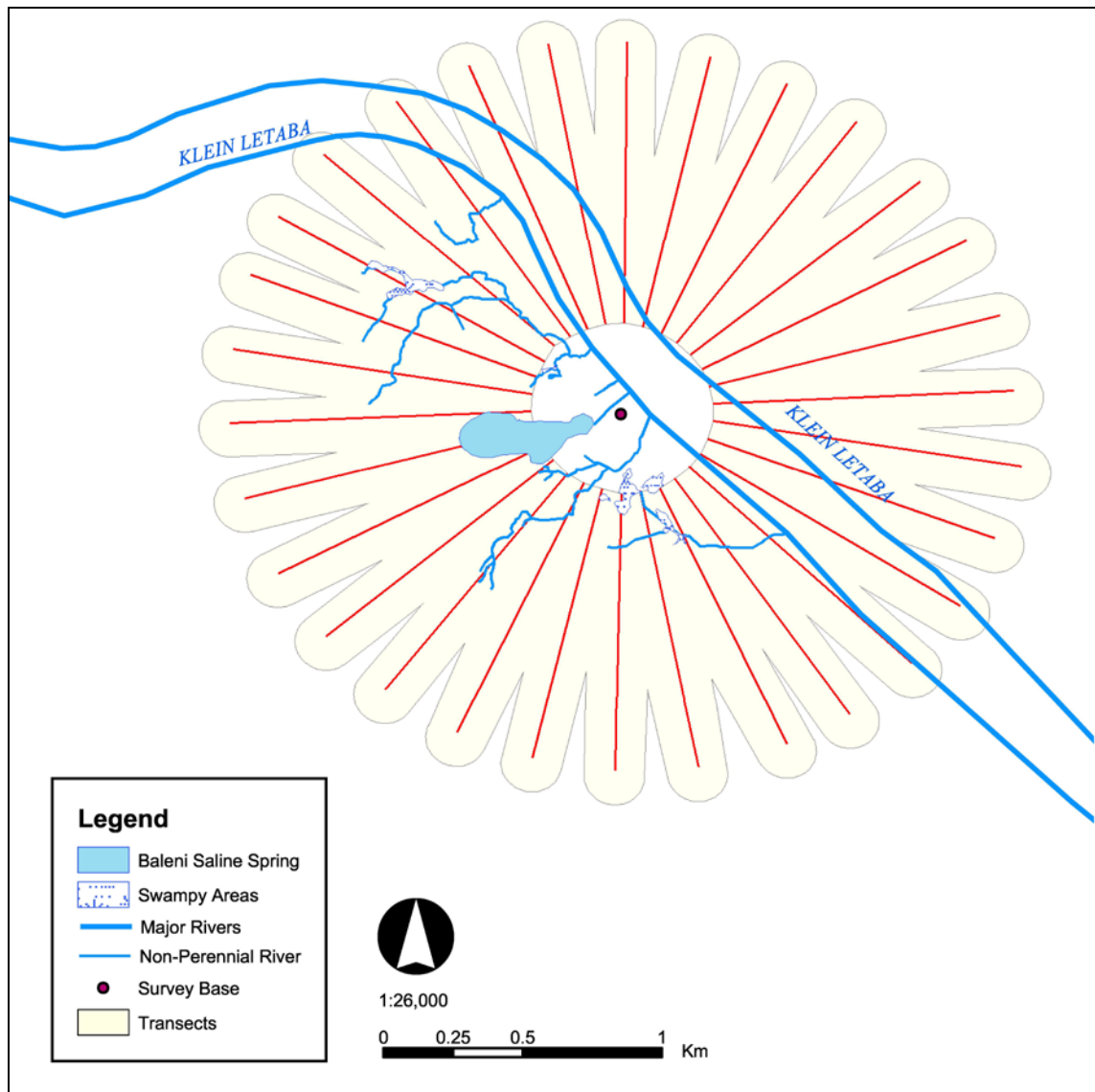


Figure 8: Survey transects and area covered by survey

Survey adequacy

The structure of the survey meant that total coverage was obtained in the areas closest to the pan where the transects were spaced right next to one another. Distance between the transects increased with distance away from the pan. At the end of the transects, the distance was approximately 60m. While this small distance can be seen as insignificant, I nevertheless tested the adequacy of the survey by applying the method suggested by (Sundstrom 1993). The formula was used to compute the probability of sites being intersected by the transects. The expression is a function of the size and shape of the archaeological site and the spacing of the transects.

In the test, I make the assumption that the target sites are circular in shape, with a radius of at least 20m, and therefore a surface area of 1256m². This relatively small size is seen as an adequate estimate. The probability (P), of finding a site of this size would be:

$$P = \frac{2\sqrt{(a^2 + b^2)/2}}{d} = \frac{2\sqrt{(20^2 + 20^2)/2}}{60} = 0.66$$

Where a and b are the two semi-axes of the ellipse (in this case the site is circular), and d the distance between the transects.

The survey, therefore, had a very high probability of finding archaeological sites, since it had a minimum probability of 66%. This figure increases over a distance of 300m to 100%, which means that the survey can be taken as obtaining full coverage for 95% of the area and a very high probability for the remaining 5%.

When an archaeological feature was identified, its coordinates were captured with the handheld GPS. After the survey, the captured coordinates were fed into a GIS system and a distribution map was compiled.

Results

Six settlements were identified in the area covered by the survey.

BS01

This site is one of only two sites north of the Klein Letaba River. Surface artifacts on the site indicates that it was inhabited during the twentieth century. Remnants of adobe structures and grinding stones were identified. A midden deposit included plastic beads and metal objects of western origin such as flashlights and motor vehicle parts. This all points to a relatively late date for the site, probably c. 1950.

BS02

BS02 is small settlement, of around 500m², located on the bank of the Klein Letaba River, 500m southeast from the pan. Of all the settlements it is located closest to the main salt working area around the pan. The site is situated on a flattened area that is bordered on the north by the Klein Letaba and the south and east by a non-perennial river that flows into the Klein Letaba just south from the site. Sheet erosion on the river banks has destroyed much of the site. Sparse vegetation around the site indicates that it was probably cleared for cultivation, taking advantage of the alluvial deposits on the river banks. Surface material was very limited and random placed shovel test pits returned very little material as well. These test pits indicated that the archaeological deposit did not extended down past the top three centimetres of topsoil. This, coupled with recovered diagnostic ceramic fragments, places the site in a Late Iron Age or early historical context.

BS03

This is the only settlement identified during the survey that displayed stone wall structures. Being located on a low ridge west from the pan, it is the only site not located on open ground. The stone walls are very low, for the most part packed only 30cm high. The packed stones form enclosed areas and terraces against the ridge that extends from approximately 100m in a north-south direction. The presence of stone walls, and the characteristic Letaba ceramics places the site as post 1600.

BS04

This site was identified by the presence of ceramic scatters and daga. A deep donga seems to have cut through the biggest part of the site, since material was found on both edges of it, and not extending very far back. The extensive erosion made it difficult to determine the approximate size of the settlement. Estimates indicate that it did not exceed 2000m². Preliminary analysis of the surface ceramics indicated that the site was occupied during the early first millennium. Leached out mounds of earth, possibly from a later date, were also identified on the edge of the donga. This led to the decision to excavate test pits in order to obtain ceramics which could be used for a more detailed temporal context for the settlement.

BS05

BS05 is situated 500m north east of BS04 on a steep embankment that forms the southern bank of the Klein Letaba River. The site was identified through the presence of ceramic scatters and hut rubble. Limited erosion had taken place in areas of the site but most of the site seems to have been undisturbed. Mounds of leached earth were also identified on the site. Estimates of the site size were around 5000m².

Analysis of the surface material indicated that the ceramics were of first millennium origin. The age, size and relative undisturbed nature of the site led to the decision to excavate the site in September 2004.

BS06

Assigning BS06 as a settlement is problematic. Concentrations of daga and a few undecorated potshards were the only indications of a possible settlement. This site is opposite BS04 on the 20m northern shore of the Klein Letaba River. Being situated so closely to the Klein Letaba, erosion and floods had destroyed almost the entire site, effectively limiting any estimates of site size and temporal phase.

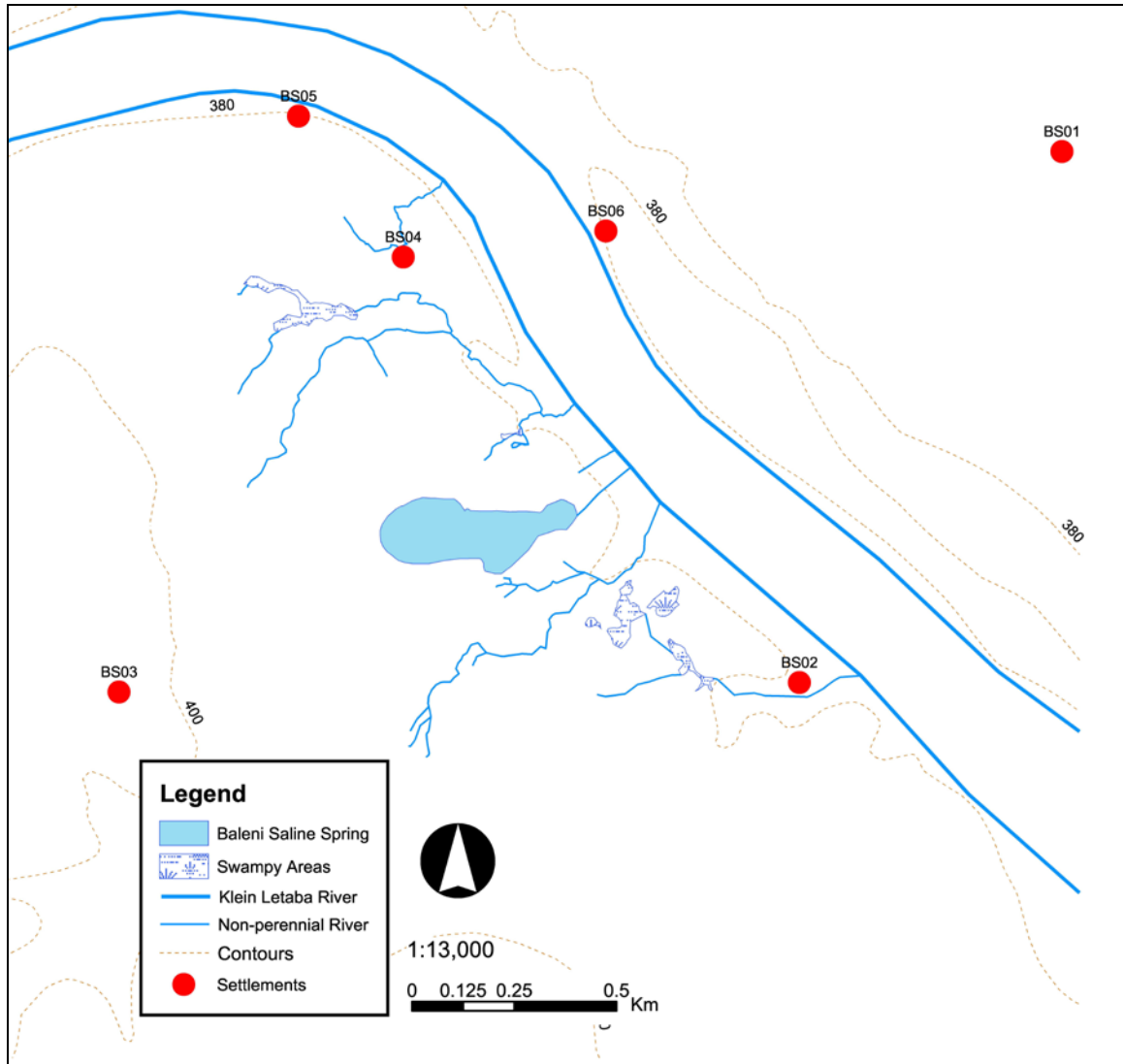


Figure 9: Settlements identified during survey

Discussion: Settlement Patterns

Although six settlements were identified in a relatively small area, all the settlements, with the exception of BS01 were of relatively small size, all below 1ha. This seems to be unusual especially if seen in the context of the presence of salt sources within easy walking distance.

No sites were identified on or near the saline pan where the majority of salt extraction took place. All the sites were placed at least 500m from this area.

Water seems to have been an important factor in the placement of these sites since all the settlements are situated directly next to streams. Although these streams are non-perennial at present, this would probably not have been the case in times of higher rainfall. Riverside settlement is also encouraged through

the relatively low nutrient contents of the predominant soil types and the poor water retention of the surrounding clays. As a result the area is relatively unsuitable for agriculture, with the areas best suited situated along the banks of large rivers where deep alluvial soils occur.

Temporally the sites do not cover the full iron age sequence. The majority of the settlements, are from late Iron Age/historical contexts and two were from the early first millennium AD. Therefore there is a hiatus of 1000 years of permanent settlement around Baleni after approximately 600AD. When people do again settle at Baleni there is a steep increase in the number of settlements around the pan.

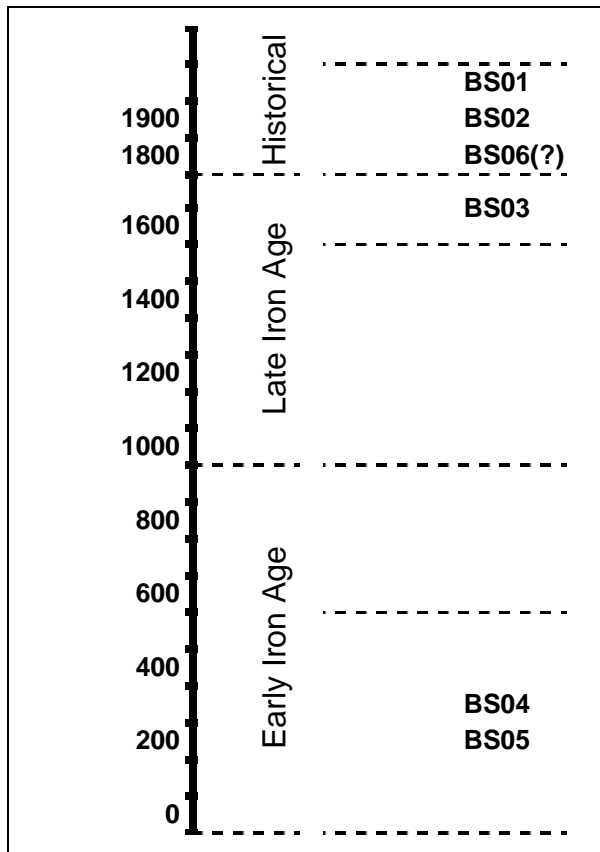


Table 1: Chronology of settlements at Baleni

Excavations at the Baleni Saltworks

The excavations at Baleni, were investigations in depth, not in area. In part, this was dictated by the nature of the deposits, but mainly due to the principal purpose of the research: to investigate chronology rather than spatial variation of prehistoric salt extraction; however such aspects could form part of future research at Baleni. The saltwork excavations were used to provide an “archaeological clock” which would place the settlements “in time” (cf. Connah 1996).

With these objectives in mind, an excavation strategy for Baleni was undertaken that would provide a deep-time chronology. Three cuttings were undertaken at different locations around the swamp. Of these the third cutting at BAL03 located at the southwest edge of the swamp was the deepest. BAL01 and BAL02 were placed along the bank of a donga that had cut into the salt mounds.

BAL03 was a 2m x 1,5m cutting that reached virgin soil at 2,5m below datum. This excavation provided a detailed ceramic chronology, which together with four C14 samples provided a chronological “key” to the site.

The excavations were carried out during two periods. The first of these was between 8 and 13 February 2004. During this time two cuttings, at BAL01 and BAL02 was completed. The third cutting, BAL03, was completed between 19 and the 25 March 2004. During all the excavations the research team comprised mostly of graduate students from the University of Pretoria.

Excavations: 08 February – 13 February 2004

During February 2004, two cuttings were completed at the Baleni salt works. The primary aims of the excavations were to obtain effective stratigraphic data from the salt works. A deep stratigraphy would provide data to determine the time depth of salt extraction at Baleni as well as material to place it in a regional context.

At both BAL01 and BAL02 the cuttings were laid out on the banks of a non-perennial stream. In places the stream, a minor tributary of the Klein Letaba

River, cuts deeply into the surrounding deposit and subsequently forms deep, vertical sidewalls. Horizontal expansion of the stream has resulted in it cutting into several of the leached out mounds on its banks. It was these mounds that were targeted for excavation during the February period.

The procedure entailed placing the excavation units parallel to the donga bank, approximately 30cm from the edge. Once this was done the exposed sidewall was straightened up to the edge of the excavation unit. This provided a “readymade” profile from which the natural strata could be easily identified. The rationale behind this was that such a course of action would provide a lot of data in relatively quick time.

This was indeed the case, but it quickly became evident that the excavations at BAL01 and BAL02 were limited in terms of chronological depth. Nonetheless, the excavations did provide quantitative data for ceramic analysis.

Both excavations were carried out with trowels, brushes and buckets. All the excavated material were dry screened through a 5mm steel mesh and hand sorted. All biological and cultural material were kept and transported to Pretoria for analysis.

Excavation BAL 01

At BAL01, the non-perennial stream that the unit was placed next to forms a deep vertical wall on its northern bank. The cutting at BAL01 measured 1,5m x 1m, with the two longer sides parallel to the edge of the bank and the orientation of the unit being 330° magnetic. The northwest corner of the cutting was placed 6m south of the datum BAL01 (S23 25.202°; E30 54.890°).

The southern bank of the stream is much lower and the banks do not display the same vertical nature, but slopes gradually. The only time when water can be found in this stream is directly after heavy rains when water flows quickly down the river. Water flow in the stream results in cycles of sand deposition and removal along the stream floor. This results in varying depth of the stream, which was measured at 2,78m on 9 February 2003 by means of level and staff from datum BAL01. As a result of horizontal movement by the stream, new archaeological deposits are constantly being exposed in its sidewalls.



Figure 10: Sidewall of erosion gully

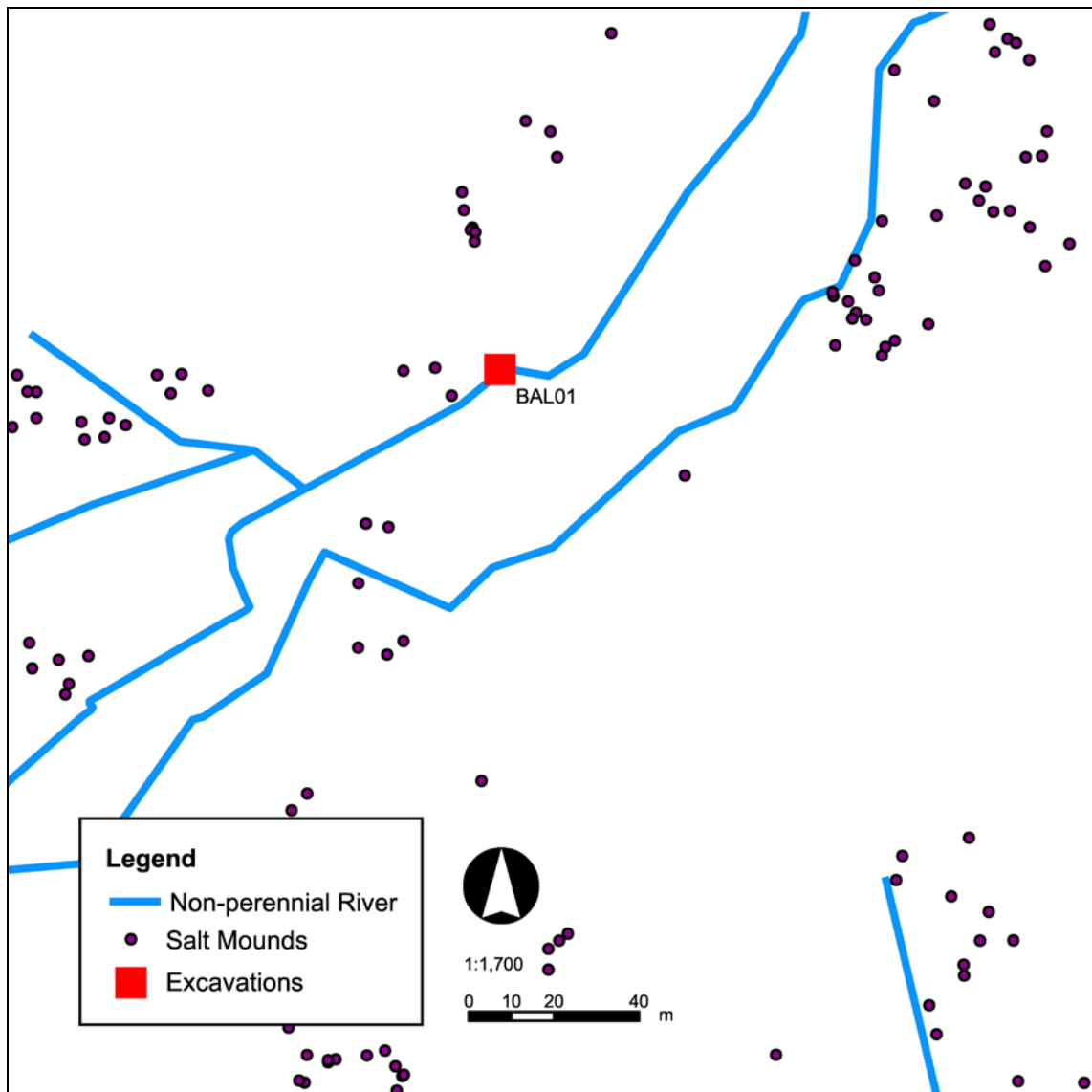


Figure 11: Location of BAL01

BAL 01 provided a straightforward stratigraphy that comprised of only two stratigraphic units, which were excavated in natural layers. Both layers were sandy loam in texture, but were well defined in terms of colour. Leaching and root activity had, however, resulted in a diffuse limit between the two strata in the south-eastern corner of the excavation. The first stratigraphic layer was dark brown in colour, humus-like and contained a lot of organic material and coarse gravel lower down. The second layer was greyish dark brown, with scattered small ash lenses, which were excavated with the rest of the layer.

The excavation ended on reaching sterile 0.60m below datum.



Figure 12: Northeastern profile at end of excavation

The excavations were done with trowels, brushes and buckets, and the excavated deposit was dry screened through a 5mm steel mesh and hand sorted. All cultural and biological material were kept and transported to Pretoria for analysis. The most abundant finds were ceramic shards with only isolated bone fragments found in found both strata. Stratigraphic unit 2 contained fragments of a freshwater mussel shell. Charcoal was also collected in unit 2 and kept for future dating requirements.

As seen in table X, unit 2 contained a comparatively greater volume of ceramics than Unit 1. These shards were also better preserved and less fragmented.

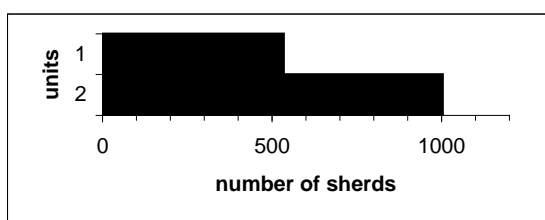


Table 2: Number of sherds per unit in BAL01 Table 3: Shard weight per unit

Excavation BAL 02

The cutting at BAL 02 was situated 300m west, on the southern bank of the same stream as BAL01. Here, the bank gradually slopes up and does not cut into the natural deposit in the same manner as at BAL01. At BAL02, an artificial embankment is formed by a series of debris mounds located in a turn in the stream's path. Horizontal movement of the stream had cut into the mounds along the edge of the embankment and this served as the location for BAL02. The mound's base, started 40cm higher than that of the stream. The stream floor was measured as being 2.67m below Datum BAL02 (S23 25.317°; E30 54.725°) located on the top of the embankment, on the 10th of February 2004 by means of level and staff.



Figure 13: BAL02 prior to excavation

BAL02 was a 1,8m x 0,5m cutting with the longest side laid out parallel to, and 30cm from the stream edge. The square was orientated 310° magnetic and 2,5m south (180° magnetic) from the datum BAL02.

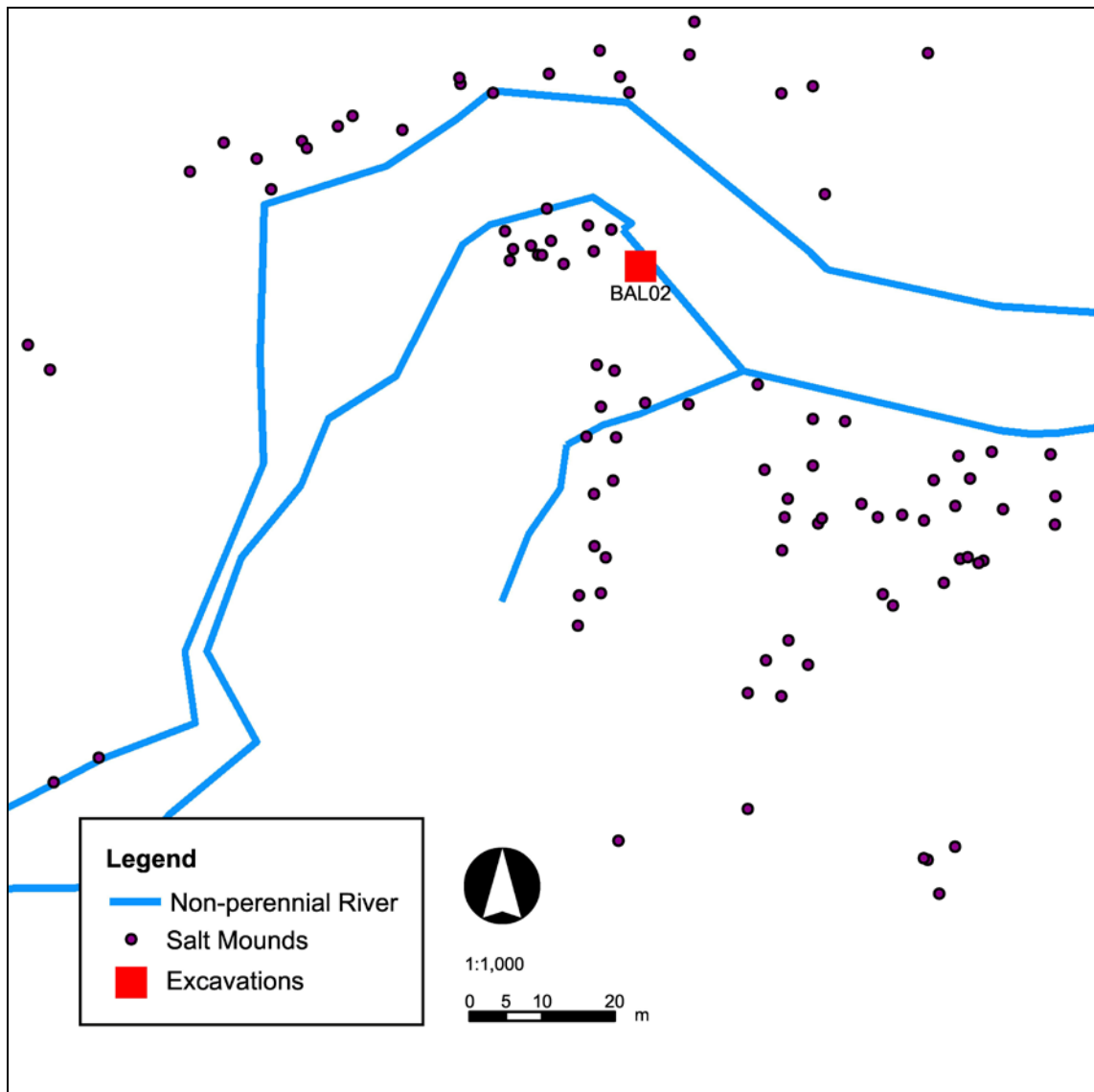


Figure 14: Location of BAL02

The eroded profile was prepared for excavation by removing loose earth and debris and cutting a straight edge with a shovel and trowels. The cleared section indicated a very complex stratigraphy. The decision was made to advance in arbitrary spits of 10cm. This was partly based on the limited time available, but primarily on the fact that the deposits seemed to have been a result of one depositional event as was evident in the cleared north-eastern profile (figure XX). Despite the obvious complex stratigraphy the strata displayed characteristics of being deposited simultaneously or with relatively quick succession after another resembling common midden fill. Although the strata were culturally from the same period, spits were employed to assert vertical control over the unit.

The BAL02 excavations were terminated before reaching virgin soil. This was done since the unit was virtually devoid of any archaeological material and due to time constraints, it would prove unproductive to continue at BAL02. The main aim of the excavation was to collect datable material, and since inspection of the lower stratigraphic units visible in section indicated that even less material would be forthcoming from these levels, the excavation of BAL 02 was discontinued at a depth of 50cm below the datum. Up to that point the excavation had delivered very little artefacts and no charcoal for C14 dating.

The deposit of BAL02 displayed a unique mound-like stratification (see fig. x). This indicates that it was probably formed by leached out earth from salt strainers. Therefore, despite the many strata visible in the profile, the entire mound was the result of one depositional event and therefore contemporary with one another. The deposit contained numerous lenses and pockets of river sand, ash and charcoal.

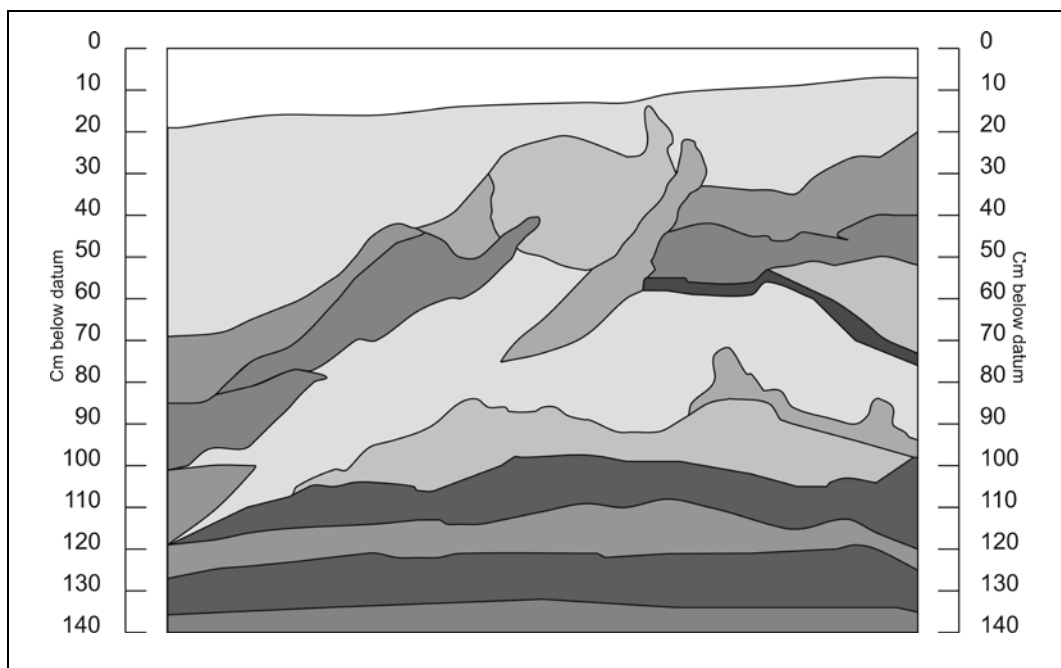


Figure 15: BAL02 Southeastern Profile

Excavations: 19-25 March 2004

BAL03

Along the south-western edge of the swamp, concentrated salt making has resulted in the formation of a large embankment. The possibility of this area to provide a deep well stratified chronology led to the excavations of BAL03. The cutting at BAL03 measured 2m x 1,5m and was orientated with its sides to the cardinal points of the compass (the two longer sides being the north-south edges), 24m north and 6m east from the datum BAL03. All the excavations' depth measurements were taken from Datum A placed 1,75m above the primary datum BAL03 on the north axis.

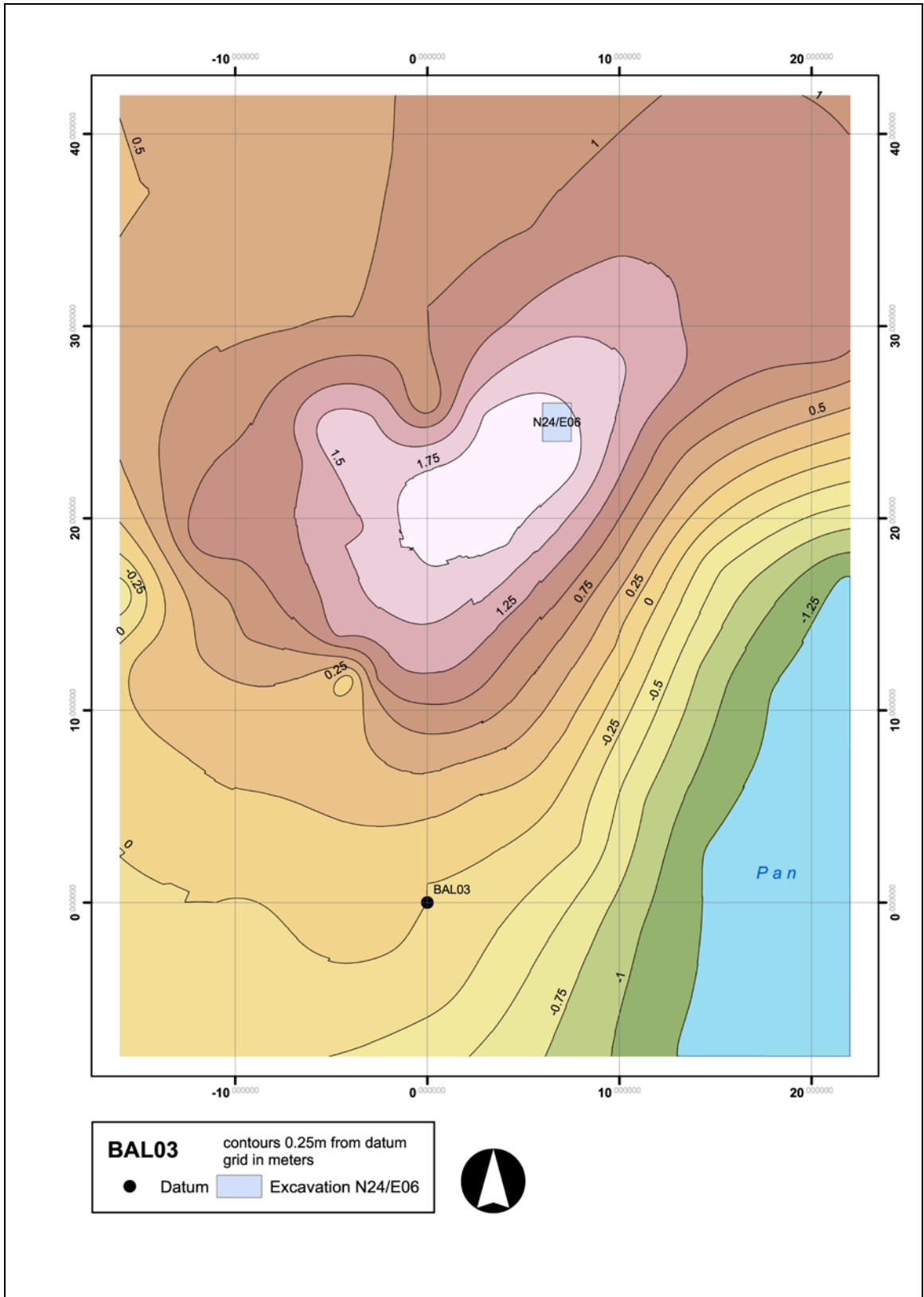


Figure 16: Site map of BAL03 indicating location of N24/E06

Although the stratification of the deposit could be seen clearly enough to be drawn in section, it was difficult to discern stratigraphic detail in plan in such a narrow test unit. For this reason and due to the little time available, the cutting was excavated in 10cm spits. As with BAL01 and BAL02, the excavations proceeded with trowels, brushes as well as shovels in certain areas. All the excavated material were screened through 5mm steel mesh.

BAL03 had a very complex stratigraphy (as illustrated in the southern profile, fig XX), resembling a midden-like deposit, with various layers butting against or intertwined with those next to them and above them. The mixed nature of the deposit is due to the deposition of the leached-out soil from the filters. Being leached-out filter content, the mounds contain lenses of river sand and clay that once lined the filters. The deposition and re-deposition of leached-out soil, resulted in a unique mound-like stratigraphy. This is best illustrated in an isometric view of the combined profiles (figxxxx). By combining the profiles in isometric view five distinct saltmaking events are clearly visible. A event, in this case, is the formation of a single "mound", not necessarily as the result of one seasons extraction, but at least a couple of seasons in relatively quick succession. The excavation will be discussed in terms of these events.

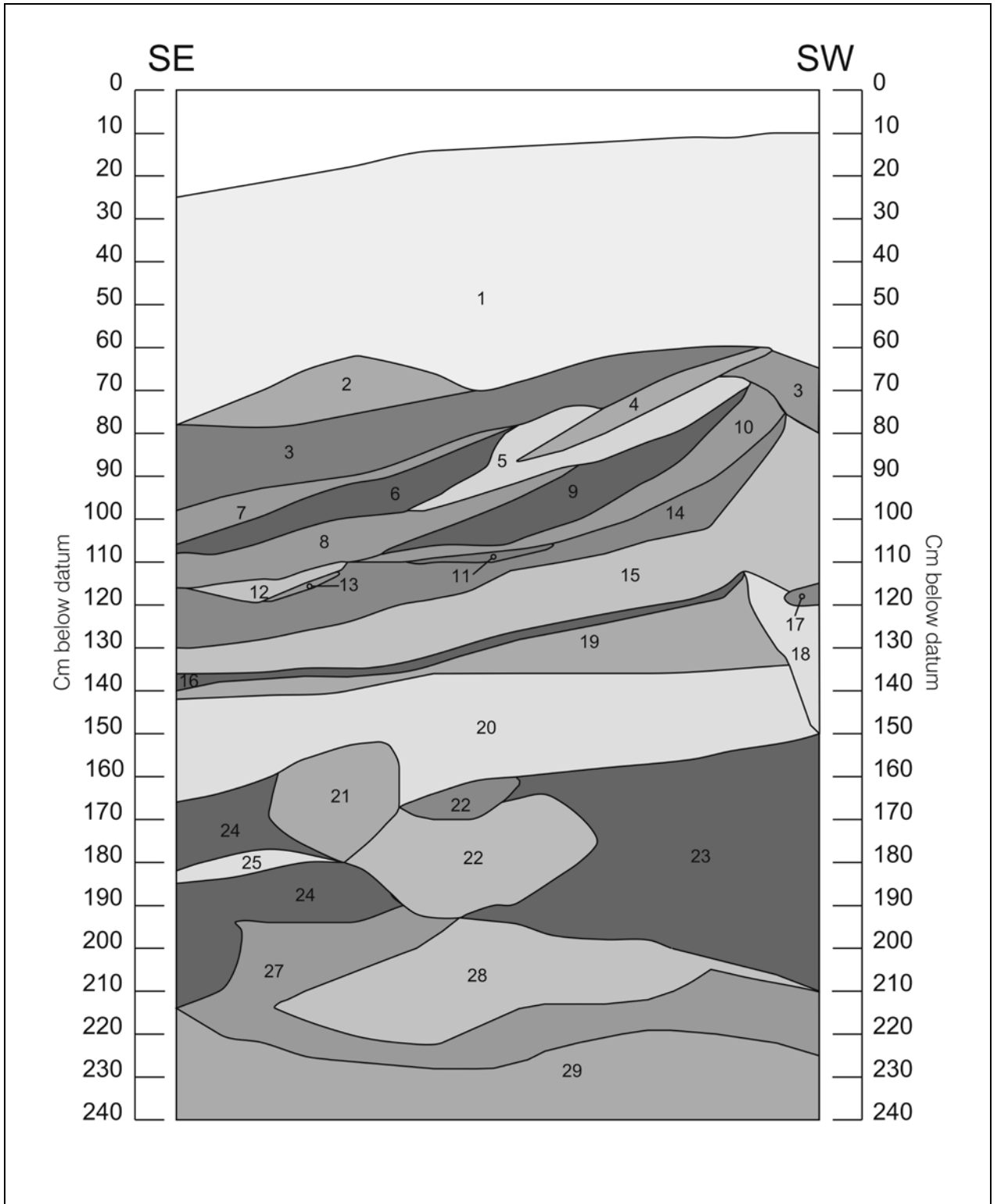


Figure 17: BAL03 Southern profile

Event 1

The most recent event comprised the top 60cm of the excavation. The deposit was mostly uniform yellowish-dark brown, sandy loam interspersed with small ash lenses. This deposit was loosely compact with quartz gravel inclusions found throughout.

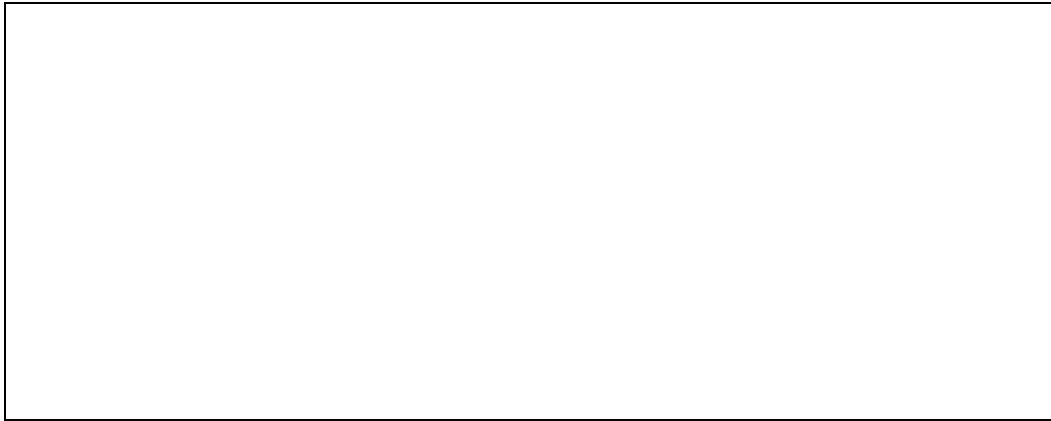


Figure 18: BAL03 Event 1

Event 2

The next depositional event was found below 60cm. This event is characterized by a series of diagonal stratigraphic layers, clearest visible in the southern profile. The mound-like event is clearly visible as it slopes down in a south-north direction. The southern profile shows that these numerous layers were deposited at the same time.

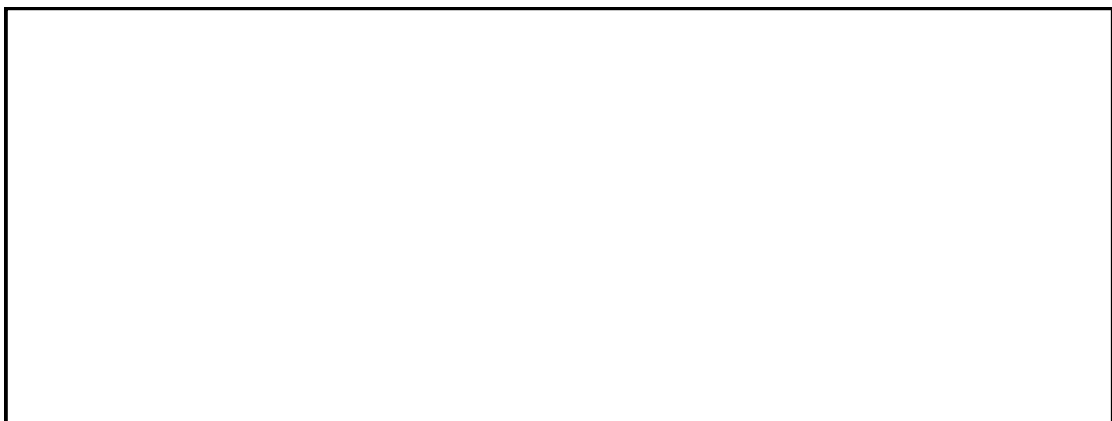


Figure 19: BAL03 Event 2

Event 3

The third event can be seen at around 140cm below datum in the southern profile. As opposed to the numerous small strata of the previous event, this event is comprised out of one primary layer of dark brown sandy loam, visible in the eastern, southern and northern profiles, with smaller layers butting against it. Interspersed within the deposit were lenses of orange river sand and grey ash.

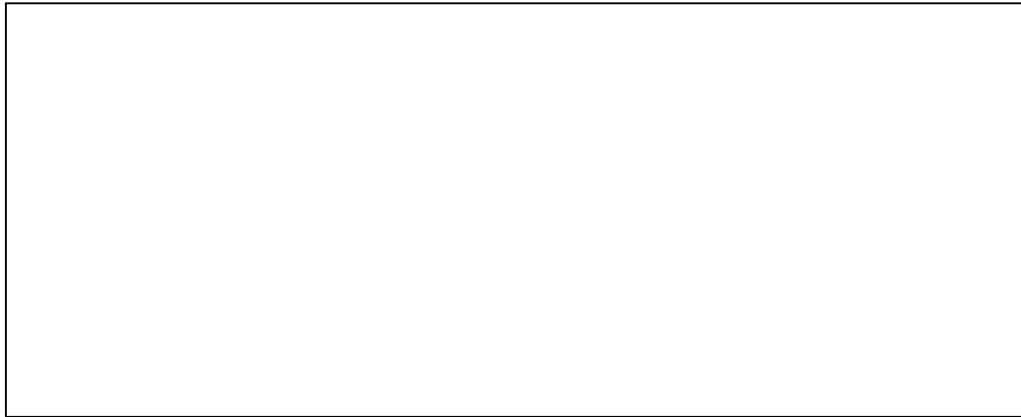


Figure 20: BAL03 Event 3

Event 4

The fourth event is comprised out of one stratigraphic unit almost a meter deep in places. This sandy-loam layer was a uniform orange dark brown and contained numerous almost intact Early Iron Age vessels.

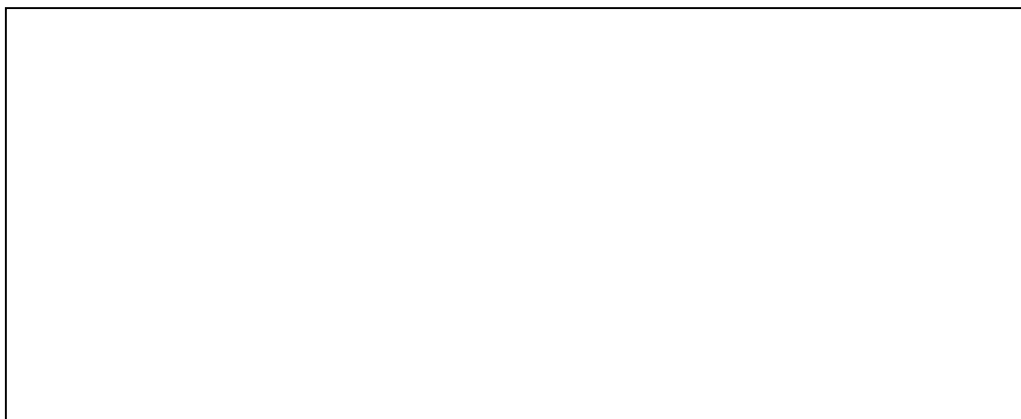


Figure 21: BAL03 Event 4

Event 5

The earliest event consisted out of a series of contemporary strata and lenses deposited to form a mound. The bottom most stratigraphic layer was a blackish dark brown clay with a high quantity of charcoal it inclusions. Being on the same level as the swamp, it was very moist, with water seeping in from the sides of the cutting. The permanent waterlogged state of this layer resulted in the shards being extremely weathered. The strata above were mostly sandy loam of blackish brown and yellowish dark-brown colour. The excavation was ended on sterile, which was a solid bed of small shist slabs 2,4m below Datum A.



Figure 22: BAL03 Event 5

Results

The most abundant material were ceramic fragments which were present in every spit. There was a much greater number of shards and total ceramic weight in the lower levels of BAL03. In some spits the ceramics displayed extreme fragmentation. This can be best seen by comparing the histograms showing the weight of shards per spit and the number of shards per spit.

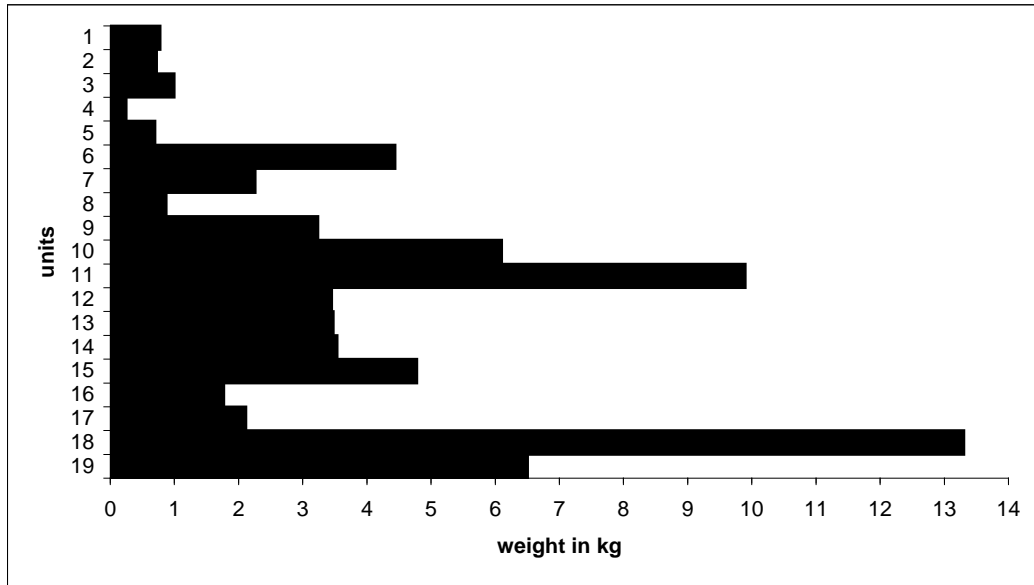


Table 4: Weight of ceramic shards per spit.

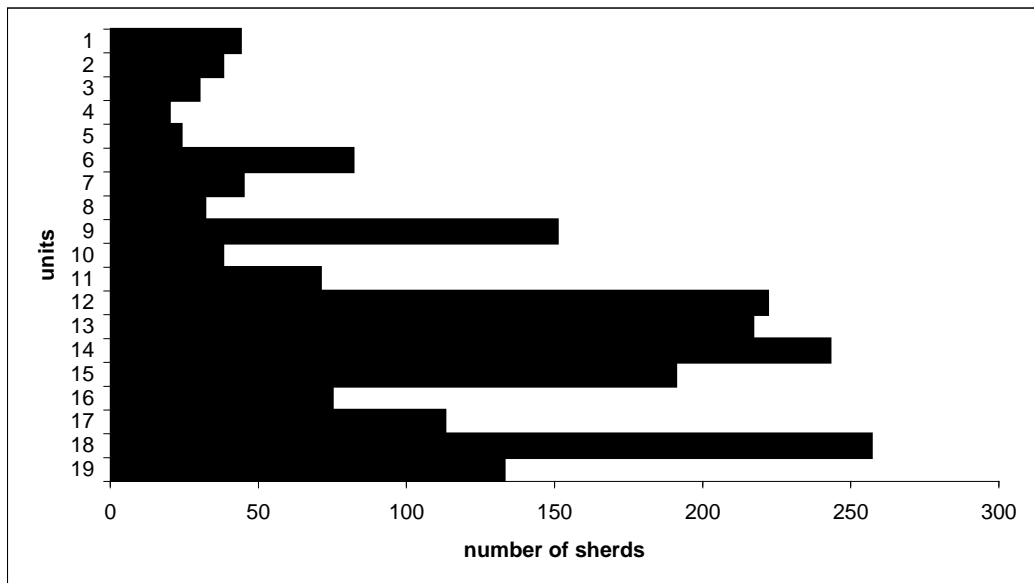


Table 5: Number of ceramic shards per spit

Burnt ceramic fragments were present in all but the bottom spits. The highest concentration of burnt pieces were found in spits 6 and 7. However, spits 7 and

8 had the highest percentage of burnt fragments when compared to the total weight of ceramics in the individual spit. The presence of burnt ceramics indicates that the process of brine reduction over a open fire as witnessed in modern salt making activities was applied by earlier salt makers as well.

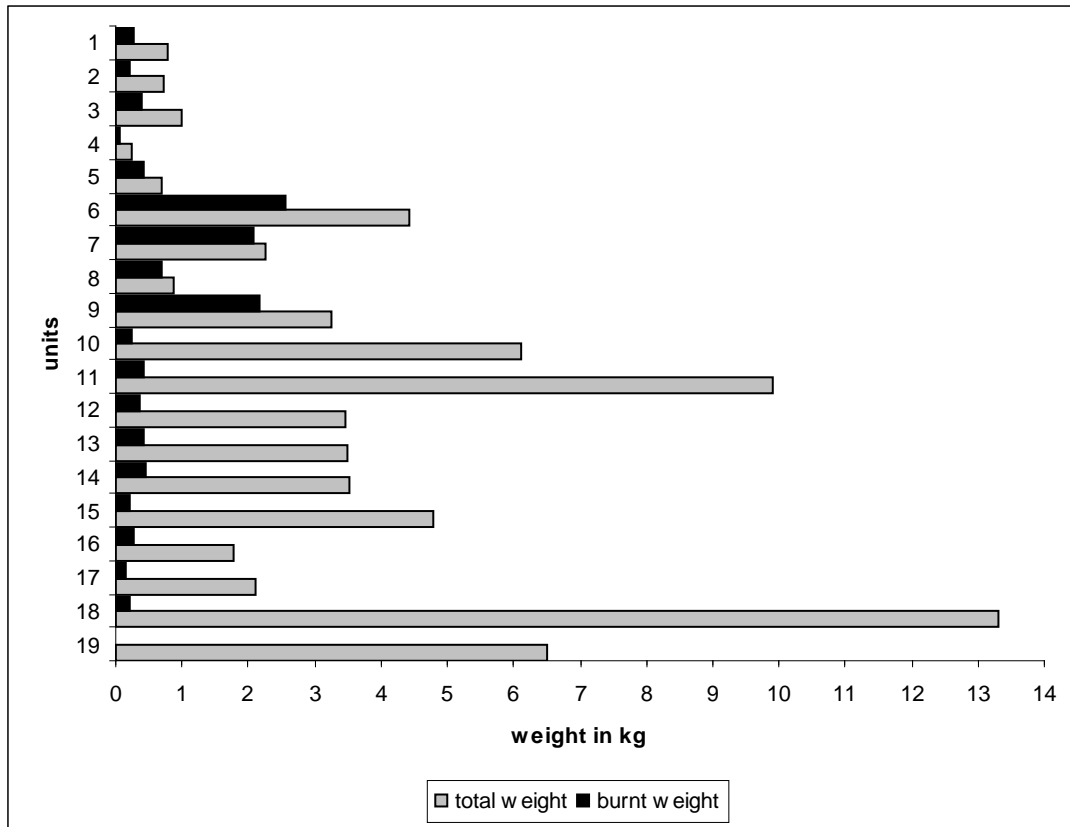


Table 6: Burnt ceramic weight vs. total ceramic weight

The only additional cultural artefact was a blue glass bead recovered in spit 4 (50-60cm below datum A).

Fragments of charcoal were common throughout the excavation. By combining ceramic and stratigraphic data, four samples of carbon were sent to the Quaternary Dating Research Unit (Quadru) at the Centre of Science Industry and Research (CSIR) in Pretoria for C14 analysis. The results were not complete before the date of submission of this report.

The faunal assemblage from BAL03 is very small. Bone fragments were recovered in all the spits, except spit 6 (70cm-80cm below datum A). The material is in the process of analysis and the results were not complete before the date of submission of this report.

23- 30 September 2004

The final phase of excavations were carried out on the settlement identified by the survey. The survey had established a relative temporal framework based on surface ceramics. Two sites, BS04 and BS05 were identified as possible first millennium settlements and was excavations were carried out in order to determine their relationship to the salt production activities of the area.

Erosion processes had exposed and destroyed some parts of both sites, BS04 being the worst affected. As far as could be determined, the larger part of BS05 remained undisturbed.

BS04

The site BS04 was initially identified by the presence of surface ceramics as well as hut rubble on the opposite edges of a deep erosion gully. During the September 2005 fieldwork period, a detailed survey was carried out and a series of shovel test pits placed in arbitrary positions on the site. These actions made it clear that the site had been almost totally destroyed by the erosion gully running through the middle of the site. Hut rubble were identified in only 4 places, all on the edge of the donga.

The test pits indicated that the cultural deposit only extended approximately 5cm down before sterile soil was reached. Despite the disturbed nature of the site, the test pits did provide enough diagnostic ceramic fragments as well as providing a temporal context for the hut rubble. Analysis of the ceramics proved that the initial temporal placement of the site as early first millennium was correct.

Along the edges of the erosion gully, mounds of leached earth from later periods of salt extraction were also identified. However the test pits showed that these were of a later phase and not connected to the occupation of the settlement.

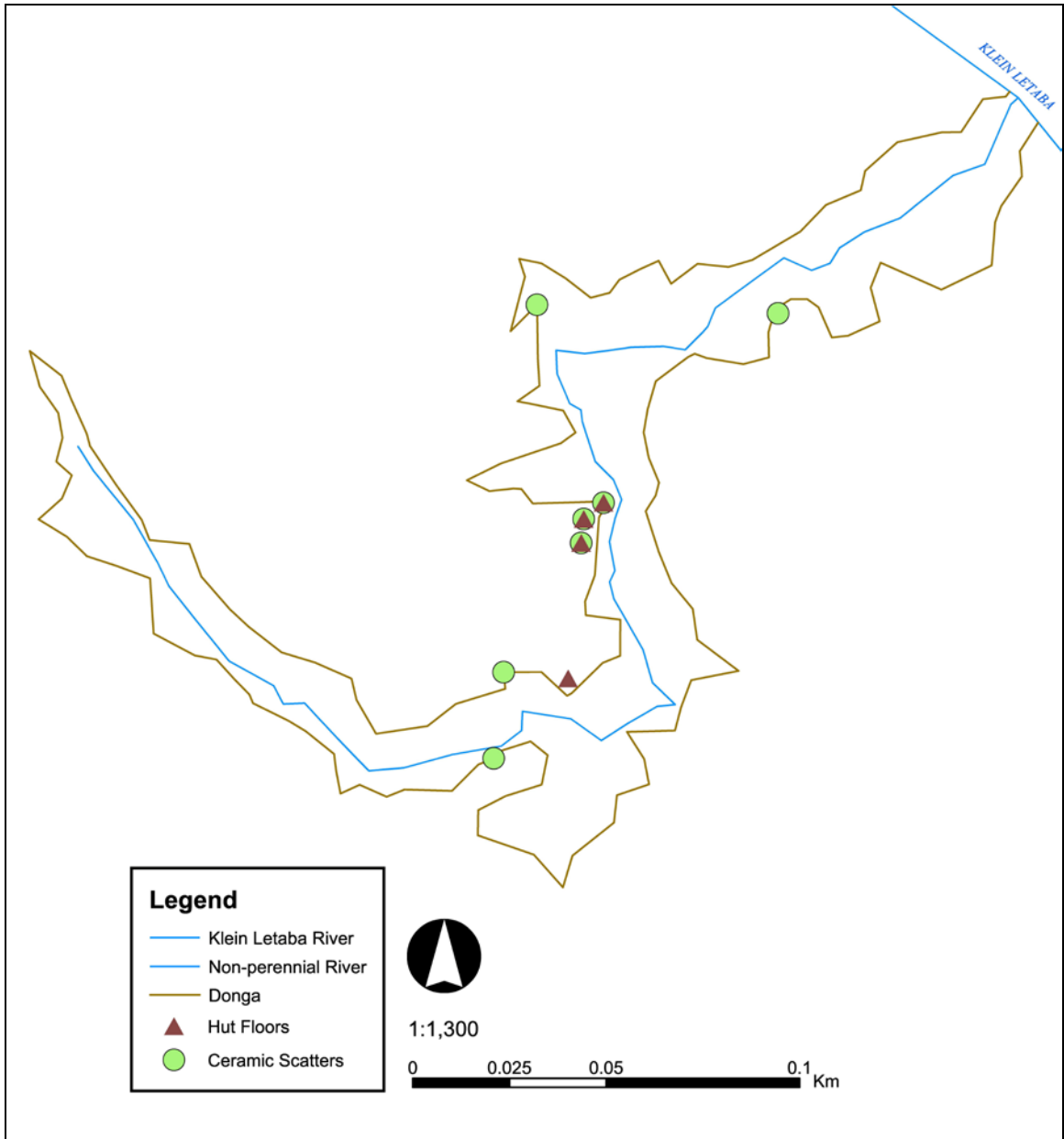


Figure 23: BS04 with associated hut rubble and ceramic scatters

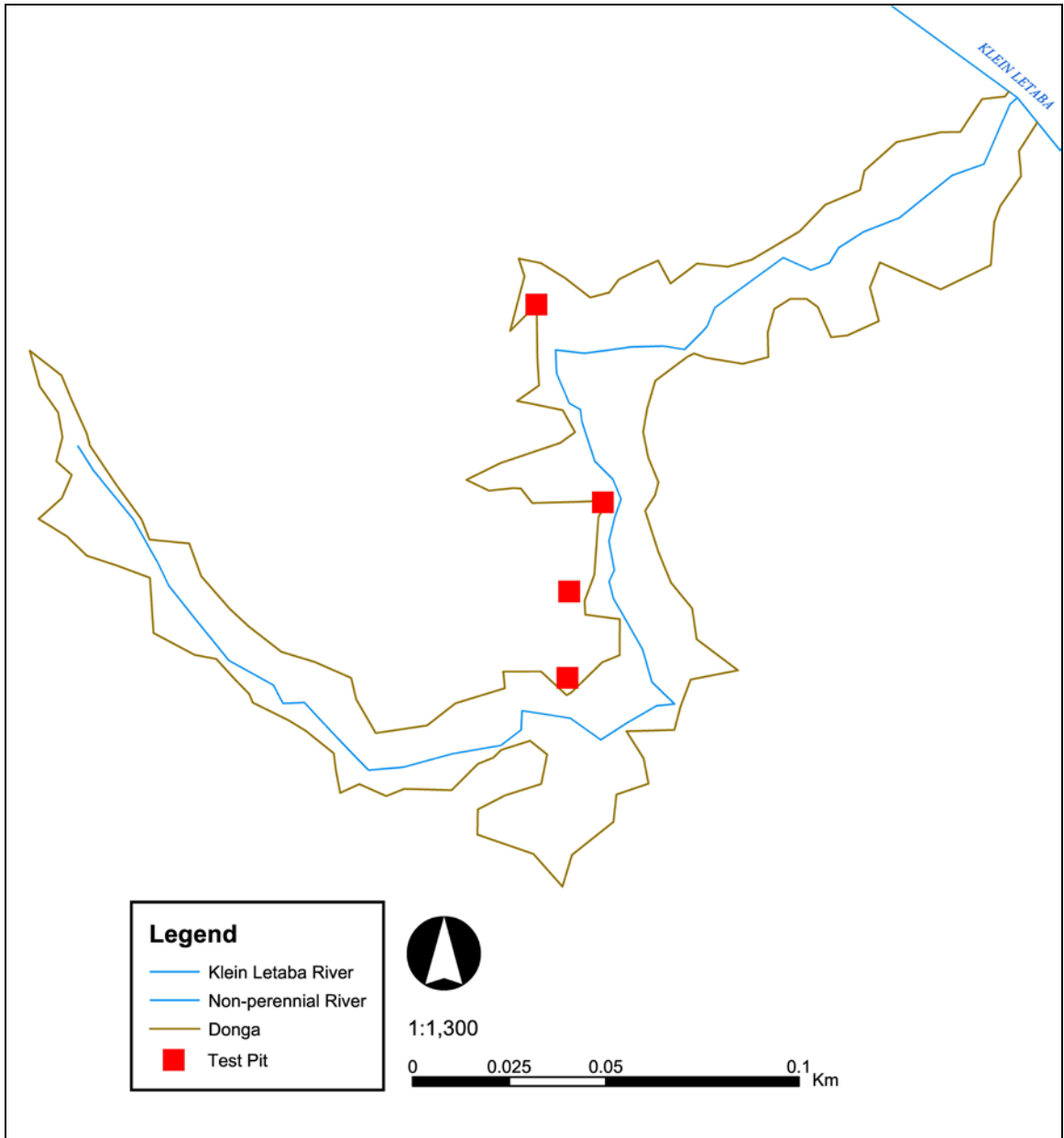


Figure 24: Placement of shovel test pits at BS04

BS05

As was the case with BS04, the settlement BS05 was identified by surface ceramics in context with hut rubble. Initial investigation indicated that BS05 was the best preserved settlement and this led to intensive sampling at the site.

Investigations at the site consisted of detailed survey and mapping, shovel test pits and 5 excavations units.

The aims of excavations at BS05 were to investigate its relationship to the salt making activities at Baleni during the early first millennium. The excavations therefore had to:

1. Establish a firm temporal context for the settlement. The ceramic assemblage were used as the chronological key for the settlement.
2. Prove that the settlement is linked to salt making activities. The presence of the settlement cannot be seen as proof of salt making by its inhabitants alone, since its presence could be due to a number of other factors. To this end the excavations needed to provide a ceramic assemblage directly related to that found at the saltworks.
3. Investigate the length and/or duration of occupation at the settlement. A settlement of only semi-permanent nature would shed light on aspects relating to function of the settlement.

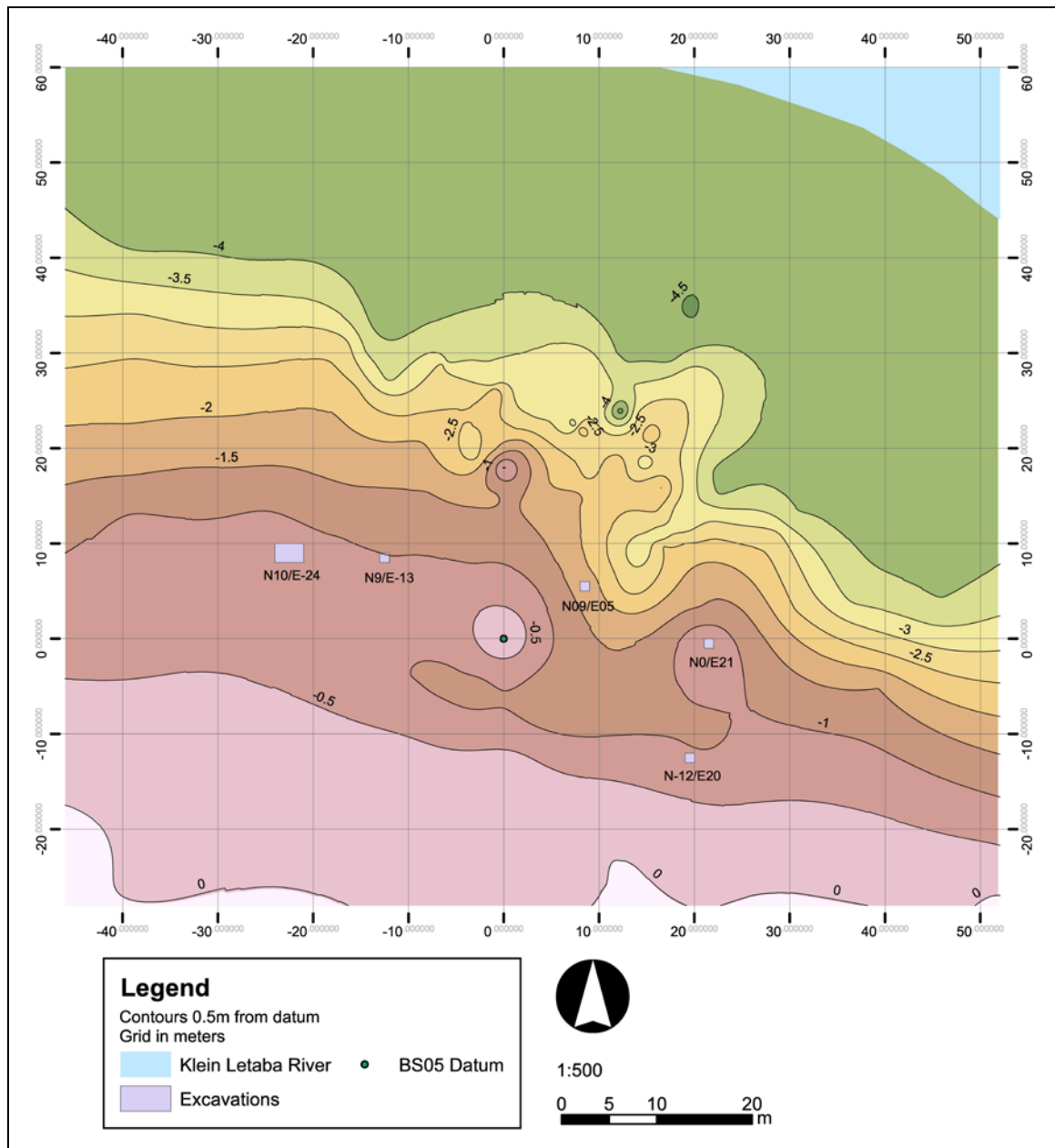


Figure 25: BS05 site map and location of excavations

Shovel Test Pits

The aim of the test pits were to determine settlement layout, obtain diagnostic material and locate possible areas where excavations could take place at the site.

During a three day period, 177 shovel test pits were completed. Each test pit was placed 3m apart with their origin at a centrally located datum. Deposits from the test pits were screened through a 5mm steel mesh where all cultural and biological material were bagged and recorded. The profiles of the test pits were also recorded in order to observe any stratigraphic changes. Other observations included depth of the deposits and soil descriptions.

Excavations

The test pits produced an insufficient quantity of material to construct a thorough ceramic assemblage for comparison with excavations at the saltworks. To obtain a greater quantity diagnostic ceramics, excavations were carried out in areas where a high density of material occurred

A possible leaching mound on the eastern edge of the site had been identified during the survey. Excavations were placed on this mound to determine whether the mound was contemporary with the rest of the site, or whether it was the result of later secondary activities, unrelated to the settlement.

The test pits also uncovered daga hut remains. An excavation was placed over one area in order to investigate these structures and to provide a good ceramic context for these structures. This excavation also investigated whether the huts were located on sterile soil, and if any rebuilding of the structures had taken place.

All excavations were carried out with trowel and brush. Deposits were screened through a 5mm steel mesh and all cultural and biological material were collected for later analysis.

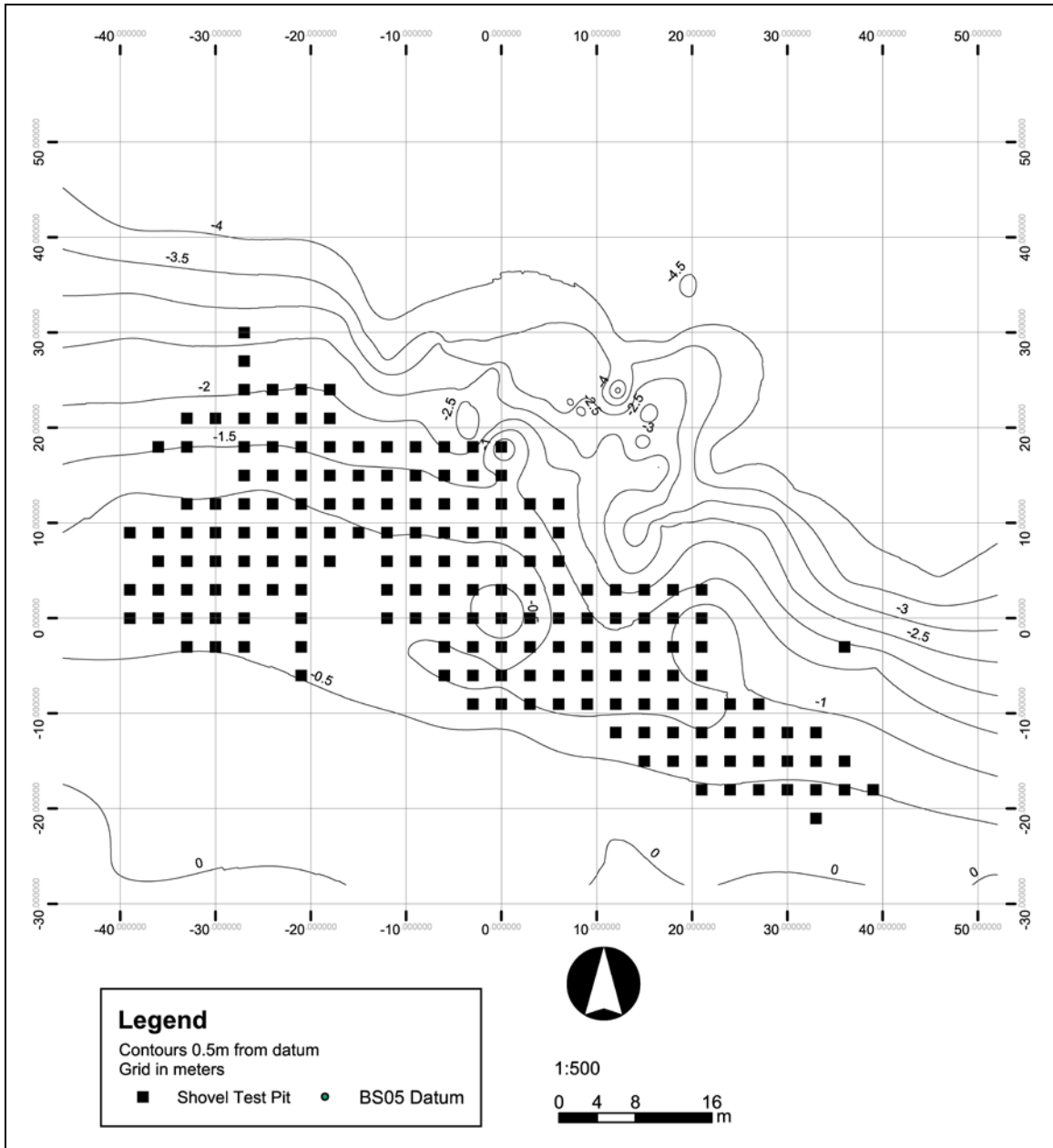


Figure 26: Shovel test pits at BS05

N10/E-24

This excavation was a 3m x 2m unit placed between test pits that had produced a high density of material. All archaeological material came from one layer of unstratified deposit. Excavations reached sterile at approximately 20cm below datum. The deposit was essentially sandy clay of reddish brown colour. The uniform deposit had inclusions of fine gravel and a few cobbles. The lower parts of the deposit produced a very high density of potshards almost forming a ceramic floor above the sterile ground. These ceramics displayed a high rate of fragmentation. In the centre of the unit a small concentration of daga was also found that extended into sterile. A second locus was extended into sterile and found that the solid daga chunk continued down a further 5cm. The absence of any other daga, its small size and the absence of hut floors, indicates that it probably was not the site of a structure, but deposited together with the ceramics.

The only other archaeological material that came from the unit were small fragments of badly preserved bone.

N-12/E20

This 1m x 1m unit was opened next to a test pit that uncovered part of a lower grinding stone. The excavation aimed to provide additional material. The unit consisted out of two stratigraphic layers. The first was mostly top soil of 5cm that did not produce any material. The second locus was a very compact sandy clay with a large quantity of gravel inclusions. The excavations delivered a high quantity of ceramics and a few bone fragments and was ended on sterile, 18cm below datum.

N09/E05

This 1m x 1m unit was placed over hut remains visible on the surface. An adjacent test pit had shown that the solid rubble continued down below the surface. After a thin locus of topsoil sediment was removed the deposit was mostly wall rubble of reddish-brown colour. Crumbly debris covered a floor surface and a part of the bottom wall with post marks. The thin floor was removed and found that it rested on sterile, only 10cm below the surface. A few

ceramic fragments were the only archaeological recovered. These fragments showed that the hut was indeed from early first millennium context.

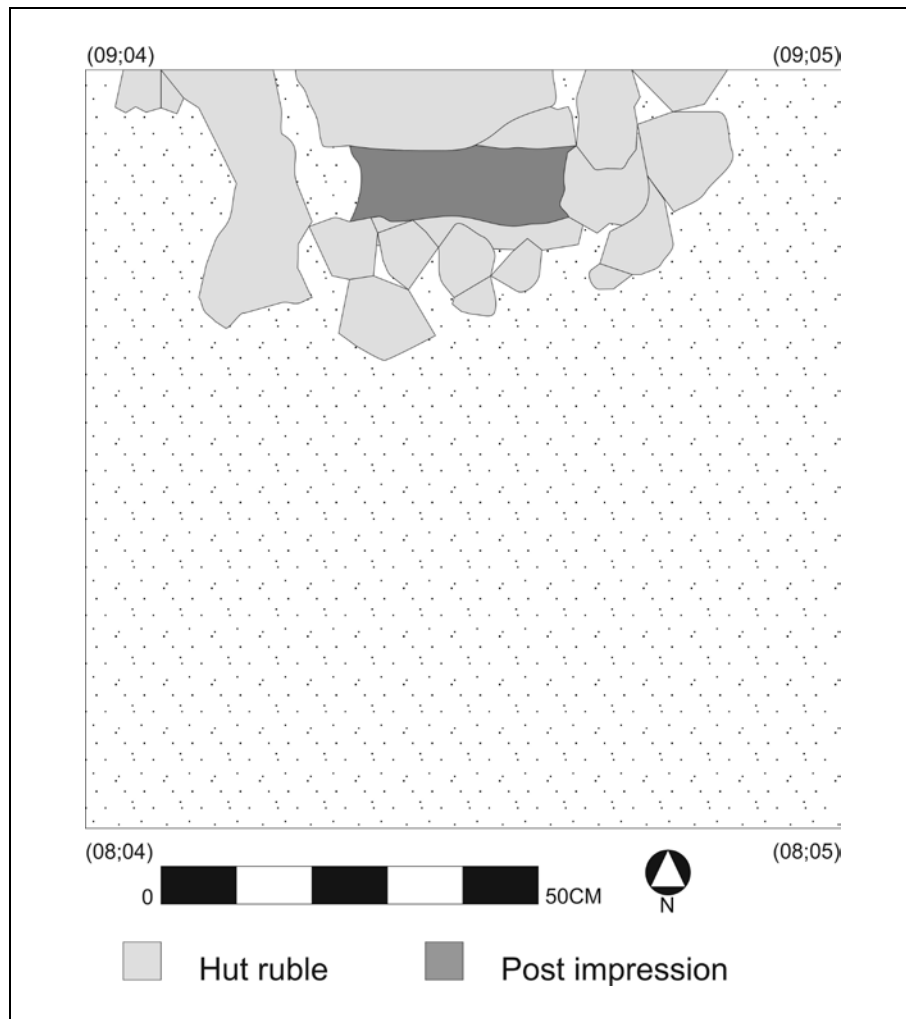


Figure 27: Plan of hut remains uncovered in N09/E06

N09/E-13

This excavation unit was a 1m x 1m unit. It was placed next to a shovel test pit that had produced a high number of ceramics. The unit consisted out of two loci, the first a thin layer of topsoil, and the second a 10cm layer of deposit above sterile. The layer only produced a few undecorated ceramic fragments. This reddish-brown layer had a few gravel inclusions.

N0/E21

As indicated, the survey had identified a possible leached-out mound, 1.5m long and 50cm wide, of earth on the eastern edge of the site. A test pit had produced of ceramic fragments from a single pot from a seemingly other phase

than the rest of the site. This excavation was started in order to provide additional material from the mound area. After the topsoil was removed, the deposit was a uniform dark brown loam with gravel inclusions. The only material from the excavation was a few undecorated shards. The excavation was stopped on sterile, 20cm below the surface.

First Millennium AD Occupation at Baleni

The excavations at BS05 indicated that there was a single occupation of the site during the early first millennium AD. Two factors indicate that this occupation was not a very long one: firstly, the excavated hut remains show no signs that the structures were rebuilt or the floors re-plastered as is often the case with unfired daga structures. Secondly, in all the test pits and excavations, the deposit was a single unstratified layer between the topsoil and the sterile surface below it. The depth of this deposit varied between 2cm and 30cm below surface.

When the short occupation period is taken into account, the near total absence of artefacts other than ceramics become evident. No metal artefacts or beads or beads often present on other EIA sites were recovered. A fragment of a lower grinding stone does indicate that at least limited food production did take place at the settlement.

Ceramic Analysis

The primary aim of the ceramic analysis was to complete the temporal framework for salt making activities at Baleni. The method used was the multi-dimensional approach as outlined by Huffman (Huffman 1980) for South African Iron Age assemblages.

When compared to classic assemblages from settlements, the Baleni production site assemblages displays a smaller variation in decoration placements but a high degree of similarity in vessel profile. The limitation is probably due to the fact that the pots were used in the salt making process and therefore had a very limited lifespan, negating the application of elaborate decorations or motifs.

Thirteen Ceramic classes were identified using a combination of vessel profile (shape) and decoration placement (motif):

Class 1 = pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture.

Class 2 = pot with everted rim and single horizontal band of decoration on the rim.

Class 3 = pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder.

Class 4 = spherical jar with a single horizontal band of decoration on shoulder.

Class 5 = hemispherical slightly constricted bowl with single horizontal band of decoration on the rim or just below rim.

Class 6 = straight-sided open bowl with decoration in isolated motifs on the upper portion of the vessel.

Class 7 = recurved jar with multiple grouped horizontal bands of decoration just below rim.

Class 8 = recurved jar decorated with arcades with hatching in alternate directions located in the neck.

Class 9 = spherical jar with motif on the shoulder area

Class 10 = recurved jar with single horizontal band of decoration in neck

Class 11 = recurved jar with single horizontal band of decoration just below rim

Class 12 = necked jar with multiple grouped horizontal bands of decoration on or just below rim.

Class 13 = necked jar with multiple separate single horizontal bands of decoration on or just below rim.

Class 14 = necked jar with decoration on the lip.

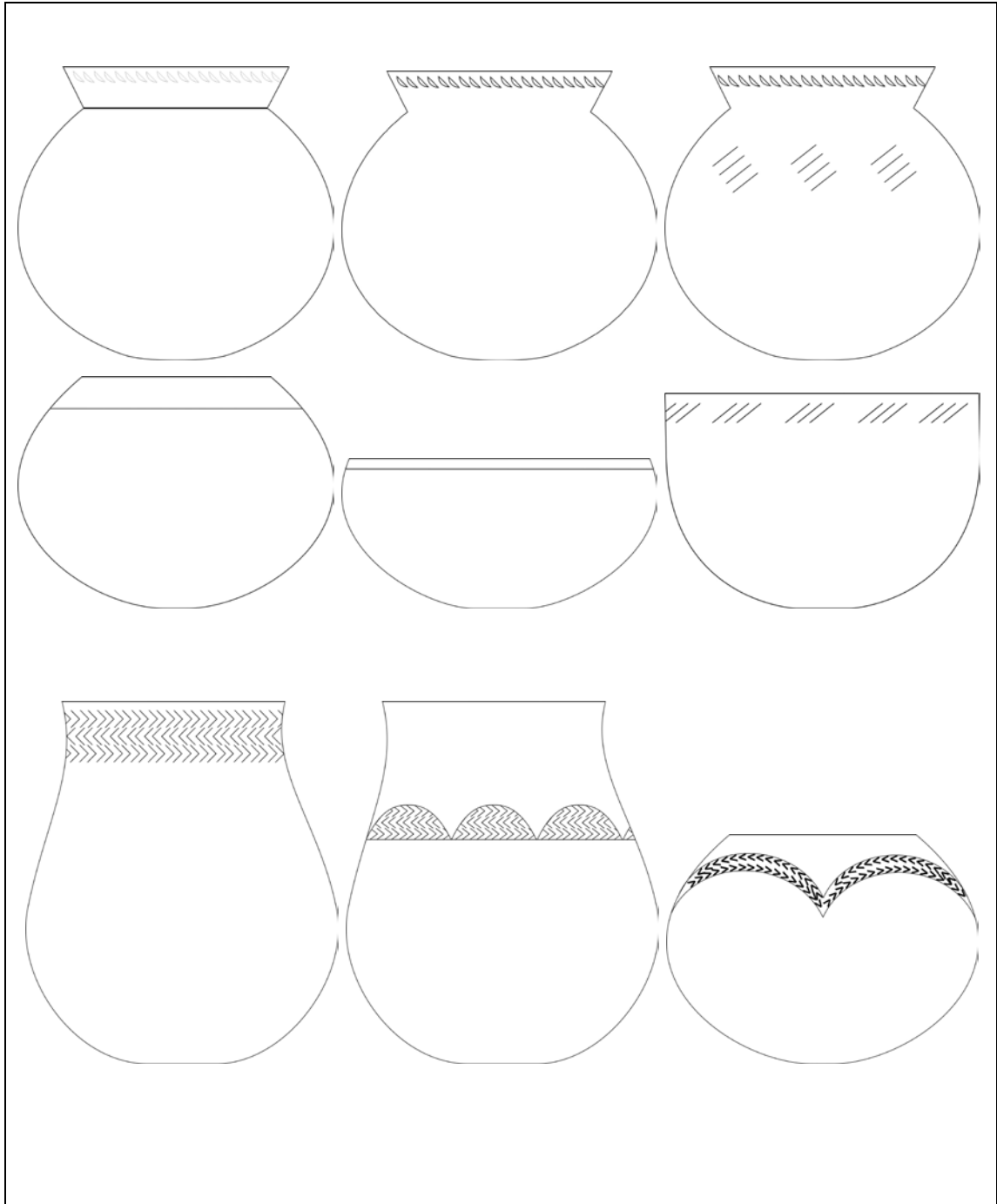


Figure 28: Top, Ceramic classes 1-3; Middle, Ceramic classes 4-6; Bottom, Ceramic Classes 7-9.

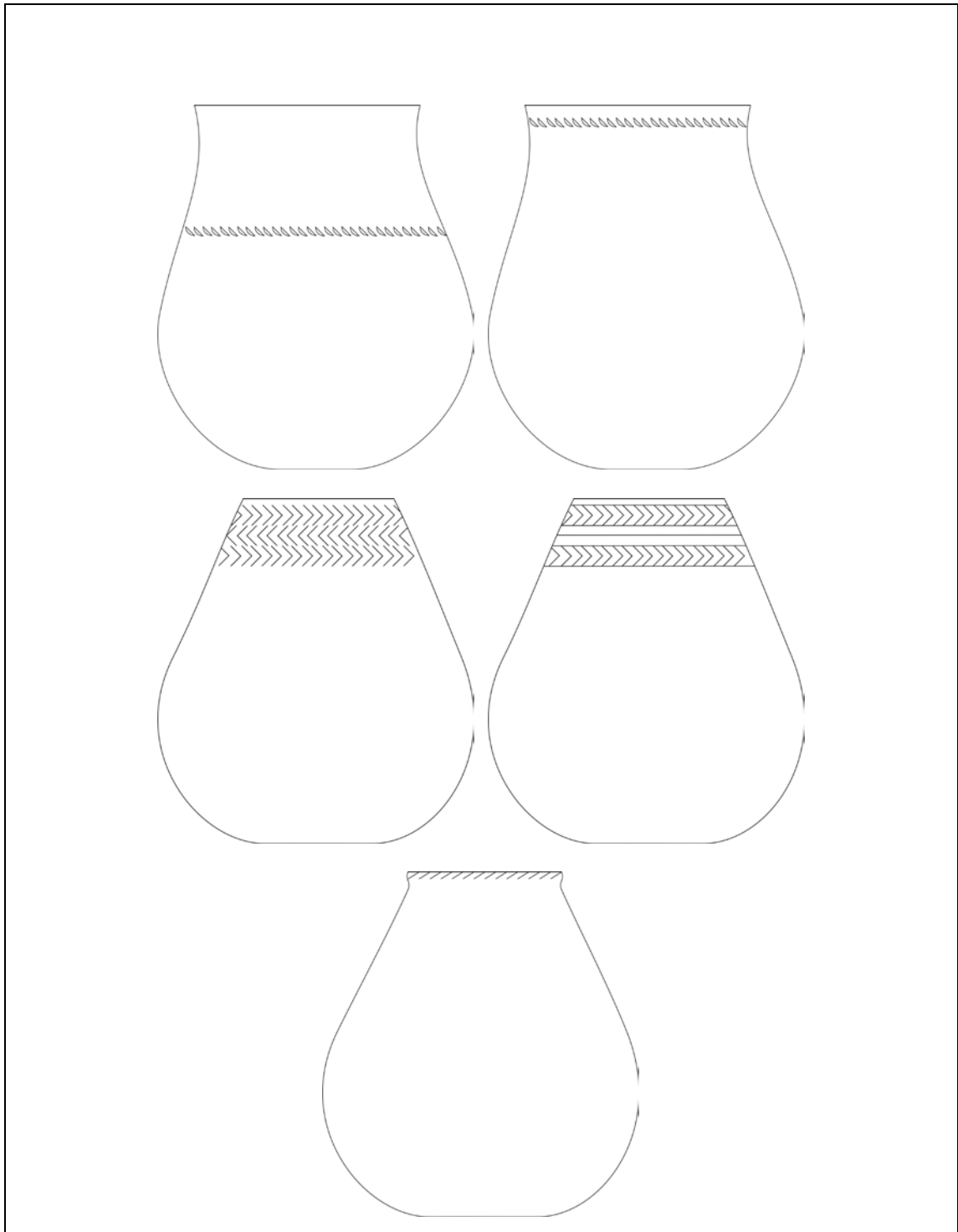


Figure 29: Top, Ceramic classes 10-11; Middle, Ceramic classes 12-13; Bottom, Ceramic Class 14.

The excavations at Baleni and the associated settlements provided three distinct ceramic assemblages. The earliest assemblage is a Mzonjani phase, the middle assemblage is Eiland and the third and latest assemblage is Letaba.

Letaba

Letaba consists only out of two classes namely 4 and 5. Letaba assemblages were excavated at BAL02 and the upper layers of BAL03. Subsequently events 1 and 2 identified in BAL03, were Letaba saltmaking events. Letaba ceramics are simple graphite burnished spherical and hemispherical vessels.

Decorations were mostly a single band of decoration on the upper portion of the vessel (cf. Evers 1981)

Eiland

The Eiland assemblage only occurred in BAL03 in event 3 and the leached out mounds in BS04 and BS05 (unit N0/E-21). Of the three identified assemblages, Eiland was the smallest with only 11 vessels in BAL03 and single vessels from BS04 and BS05. Despite the small assemblage, Eiland displayed the greatest variation in utilized vessels, containing 9 ceramic classes. Eiland are easily identifiable through the unique recurved jars and decorations applied in hatched bands, multiple bands, chevrons and arcades (cf. Evers 1981; Evers and Van der Merwe 1987).

Mzonjani

Mzonjani ceramics were excavated at BAL01, in the lower levels of BAL03 in events 3 and 4, and the settlements BS04 and BS05. The Mzonjani ceramic classes were 1, 2 and 3. The Mzonjani ceramics are characterized by pots with strongly everted rims, simple decorations on the rim and a discontinuous motif on the shoulder area (cf. Evers 1981). In contrast to excavations carried out at other Mzonjani-phase sites, no bowl classes were identified in excavations at the saltworking area, or the settlements.

The distribution of the assemblages indicates that there is a 100% similarity in the Mzonjani assemblages of BAL01, BAL03 BS05 and a 66% similarity with BS04. The lower similarity index with BS04 is due to the absence of class 3 vessels, which are similar vessels as class 1, but with spaced motifs on the

shoulder. The overall similarity with the other sites, and the small BS04 assemblage makes this dissimilarity insignificant.

The Letaba assemblage is also unproblematic with a 100% similarity in the BAL02 and BAL03 Letaba classes (4 and 5).

The excavations at BAL03 succeeded in its aim of providing a chronological framework for Baleni. This is evident in the distribution of ceramic class percentages per spit, which displays clear breaks between the ceramic phases. The occurrence of class 5 shards in spits 15 and 17 is probably due to post-depositional vertical movement of artefacts. This can be expected at a site with high impact activities such as salt extraction. The presence of class 5 in these two lower spits is even less significant when taking into account that in both instances it is represented by single shards.

		BAL01	BAL02	BAL03	BS04	BS05
CLASS	1	x		x	x	x
	2	x		x	x	x
	3	x		x		x
	4		x	x		
	5		x	x		
	6			x		
	7			x		
	8			x		
	9			x		
	10			x		
	11			x		
	12			x		
	13			x		
	14					x

Table 7: Occurrence of class types at Baleni

Discussion: Chronology of Salt Extraction

The assemblage fits the chronological model for the Iron Age in the Lowveld perfectly as already established by regional research. The relative chronology for salt making at Baleni is: Mzonjani between A.D.400 and 600, Eiland from A.D.1000 to A.D.1300 and Letaba ceramics in the sixteenth century.

Context for the Mzonjani assemblage

The earliest assemblage excavated at Baleni is Mzonjani. Mzonjani develops out of Silver Leaves during the mid-fifth century AD. In general, the Mzonjani assemblages display continuity in profile and design layout with Silver Leaves, but lack the distinctive bevels and flutes of the latter.

In the northern Lowveld, assemblages have been excavated at Silver Leaves (Huffman and Klapwijk 1996), Eiland (Evers 1981) and in the Kruger National Park (Meyer 1988). However, the most Mzonjani settlements are concentrated along the coastal belt of KwaZulu-Natal (Maggs 1980a; Hall 1980). The assemblages excavated at Eiland by Evers (1981) were initially classed as Silver Leaves, but have subsequently been reclassified as Mzonjani, since most of the vessels lack the flutes and bevels present in Silver Leaves assemblages (Huffman and Klapwijk 1996).

Context for the Eiland assemblage

In the South African interior, the fourth to ninth century Kalundu tradition develops into tenth century Klingbeil and tenth to fourteenth century Eiland (Evers 1981).

While Klingbeil is found almost exclusively in the Mpumalanga escarpment area, Eiland settlements had a far wider distribution. Eiland assemblages have been found in an area that extends from Tzaneen in the east, into eastern Botswana in the west with a southern boundary probably being the Magaliesberg (Evers 1987). Eiland ceramics also occur in small clusters outside this distribution area at Mapungubwe and various Toutswe sites (Denbow 1983).

Context for the Letaba assemblage

It has been noted that there is a gap in the Iron Age sequence between AD1300 and AD1500 in the Lowveld. All the evidence points to the absence of, or at least a very low human population in the Lowveld at that time (Plug 1988; Evers and Van der Merwe 1987). The hiatus lasts until Letaba ceramics appear in the sixteenth century and continues into historical times (Evers 1981; Evers and Van der Merwe 1987).

Conclusion

The research at Baleni succeeded in establishing a chronology for salt extraction, settlement patterns, and the nature of Early Iron Age settlements connected with salt extraction. Therefore the aspects outlined in the permit application have been completed.

The research at Baleni has shown that salt extraction at the site had taken place for at least 1600 years. During this period settlements did occur next to the salt making area. These settlements were all small in area and does not seem to have been inhabited for extended periods. This indicates that salt extraction did not directly lead to large scale accumulation of wealth.

The research conducted thus far serves a firm base for any future research. This research should be conducted on the spatial variation of salt making activities and specialization of salt extraction by the surrounding settlements.

While all fieldwork at the site has been completed, results from some laboratory analyses are still pending. A future report will be submitted to SAHRA which will include results from the radiocarbon samples submitted for dating, the faunal analysis and a detailed ceramic analysis. Upon completion of the final analyses, all material will handed over to the Polokwane Museum as stipulated in the permit.

Appendix A: Artefact Acquisition List

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0001	3	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0002	2	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim
0003	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0004	2	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim
0005	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0006	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0007	2	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim
0008	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0009	2	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim
0010	Non-diagnostic	BAL01	01	01	Non-diagnostic rim fragment
0011	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0012	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0013	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0014	2	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim
0015	2	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim
0016	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0017	Non-diagnostic	BAL01	01	01	Non-diagnostic neck fragment

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0018	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0019	Non-diagnostic	BAL01	01	01	Non-diagnostic rim fragment
0020	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0021	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0022	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0023	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0024	2	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim
0025	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0026	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0027	2	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim
0028	2	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim
0029	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0030	Non-diagnostic	BAL01	01	01	Non-diagnostic rim fragment
0031	Non-diagnostic	BAL01	01	01	Non-diagnostic rim fragment
0032	2	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim
0033	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0034	Non-diagnostic	BAL01	01	01	Non-diagnostic rim fragment
0035	2	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0036	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0037	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0038	2	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim
0039	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0040	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0041	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0042	Non-diagnostic	BAL01	01	01	Non-diagnostic rim fragment
0043	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0044	2	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim
0045	Non-diagnostic	BAL01	01	01	Non-diagnostic rim fragment
0046	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0047	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0048	2	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim
0049	2	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim
0050	Non-diagnostic	BAL01	01	01	Non-diagnostic rim fragment
0051	2	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim
0052	2	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim
0053	Non-diagnostic	BAL02	01	02	Undecorated body fragment

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0054	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0055	Non-diagnostic	BAL01	01	01	Non-diagnostic rim fragment
0056	2	BAL01	01	01	pot with everted rim and single horizontal band of decoration on the rim
0057	Non-diagnostic	BAL01	01	01	Undecorated body fragment
0058	Non-diagnostic	BAL01	01	02	Non-diagnostic neck fragment
0059	Non-diagnostic	BAL01	01	02	Non-diagnostic neck fragment
0060	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0061	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0062	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0063	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0064	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0065	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0066	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0067	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0068	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0069	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0070	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0071	Non-diagnostic	BAL01	01	02	Undecorated body fragment

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0072	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0073	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0074	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0075	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0076	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0077	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0078	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0079	1	BAL01	01	02	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0080	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0081	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0082	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0083	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0084	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0085	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0086	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0087	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0088	Non-diagnostic	BAL02	01	02	Undecorated body fragment
0089	1	BAL01	01	02	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0090	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0091	1	BAL01	01	02	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0092	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0093	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0094	3	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0095	Non-diagnostic	BAL01	01	02	Non-diagnostic rim fragment
0096	3	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0097	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0098	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0099	1	BAL01	01	02	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0100	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0101	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0102	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0103	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0104	Undecorated	BAL01	01	02	Pot with everted rim, undecorated
0105	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0106	Non-diagnostic	BAL01	01	02	Undecorated body fragment

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0107	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0108	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0109	Undecorated	BAL01	01	02	Pot with everted rim, undecorated
0110	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0111	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0112	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0113	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0114	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0115	Undecorated	BAL01	01	02	Pot with everted rim, undecorated
0116	Undecorated	BAL01	01	02	Pot with everted rim, undecorated
0117	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0118	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0119	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0120	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0121	1	BAL01	01	02	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0122	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0123	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0124	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0125	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0126	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0127	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0128	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0129	3	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0130	1	BAL01	01	02	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0131	Non-diagnostic	BAL01	01	02	Undecorated body fragment
0132	Undecorated	BAL01	01	02	Pot with everted rim, undecorated
0133	Non-diagnostic	BAL01	01	02	Non-diagnostic rim fragment
0134	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0135	1	BAL01	01	02	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0136	1	BAL01	01	02	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0137	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0138	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0139	1	BAL01	01	02	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0140	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0141	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0142	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0143	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0144	Non-diagnostic	BAL02	01	00	Non-diagnostic rim fragment
0145	Non-diagnostic	BAL01	01	02	Non-diagnostic rim fragment
0146	1	BAL01	01	02	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0147	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0148	Non-diagnostic	BAL01	01	02	Non-diagnostic neck fragment
0149	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0150	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0151	Undecorated	BAL01	01	02	Pot with everted rim, undecorated
0152	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0153	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0154	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0155	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0156	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0157	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0158	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0159	2	BAL01	01	02	pot with everted rim and single horizontal band of decoration on the rim
0160	Non-diagnostic	BAL01	01	02	Undecorated body fragment

0161	Non-diagnostic	BAL01	01	02	Non-diagnostic neck fragment
0162	Non-diagnostic	BAL01	01	02	Non-diagnostic neck fragment
0163	Non-diagnostic	BAL01	01	02	Non-diagnostic neck fragment
0164	Non-diagnostic	BAL01	01	02	Non-diagnostic neck fragment
0165	Non-diagnostic	BAL01	01	02	Non-diagnostic neck fragment
0166	Non-diagnostic	BAL01	01	02	Non-diagnostic neck fragment
0167	Non-diagnostic	BAL01	01	02	Non-diagnostic neck fragment
0168	Non-diagnostic	BAL01	01	02	Non-diagnostic neck fragment
0169	Non-diagnostic	BAL02	01	02	Non-diagnostic neck fragment
0170	Undecorated	BAL02	01	02	Spherical jar, undecorated
0171	Undecorated	BAL02	01	02	Spherical jar, undecorated
0172	Undecorated	BAL02	01	02	Spherical jar, undecorated
0173	5	BAL02	01	02	hemispherical slightly constricted bowl with single horizontal band of decoration on the rim or just below rim
0174	Undecorated	BAL02	01	02	Hemispherical jar, undecorated
0175	Undecorated	BAL02	01	02	Hemispherical jar, undecorated
0176	4	BAL02	01	02	spherical jar with a single horizontal band of decoration on shoulder
0177	Non-diagnostic	BAL02	01	02	Undecorated body fragment
0178	4	BAL02	01	02	spherical jar with a single horizontal band of decoration on shoulder
0179	4	BAL02	01	02	spherical jar with a single horizontal band of decoration on shoulder

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0180	5	BAL02	01	03	hemispherical slightly constricted bowl with single horizontal band of decoration on the rim or just below rim
0181	5	BAL02	01	03	hemispherical slightly constricted bowl with single horizontal band of decoration on the rim or just below rim
0182	Undecorated	BAL02	01	03	Hemispherical jar, undecorated
0183	5	BAL02	01	03	hemispherical slightly constricted bowl with single horizontal band of decoration on the rim or just below rim
0184	5	BAL02	01	04	hemispherical slightly constricted bowl with single horizontal band of decoration on the rim or just below rim
0185	5	BAL02	01	04	hemispherical slightly constricted bowl with single horizontal band of decoration on the rim or just below rim
0186	4	BAL03	N24E06	30-40	spherical jar with a single horizontal band of decoration on shoulder
0187	4	BAL03	N24E06	40-50	spherical jar with a single horizontal band of decoration on shoulder
0188	4	BAL03	N24E06	50-60	spherical jar with a single horizontal band of decoration on shoulder
0189	Undecorated	BAL03	N24E06	60-70	Hemispherical jar, undecorated
0190	5	BAL03	N24E06	70-80	hemispherical slightly constricted bowl with single horizontal band of decoration on the rim or just below rim
0191	5	BAL03	N24E06	70-80	hemispherical slightly constricted bowl with single horizontal band of decoration on the rim or just below rim
0192	4	BAL03	N24E06	70-80	spherical jar with a single horizontal band of decoration on shoulder
0193	4	BAL03	N24E06	80-90	spherical jar with a single horizontal band of decoration on shoulder
0194	4	BAL03	N24E06	80-90	spherical jar with a single horizontal band of decoration on shoulder
0195	Undecorated	BAL03	N24E06	90-100	Hemispherical jar, undecorated
0196	5	BAL03	N24E06	90-100	hemispherical slightly constricted bowl with single horizontal band of decoration on the rim or just below rim
0197	4	BAL03	N24E06	90-100	spherical jar with a single horizontal band of decoration on shoulder

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0198	4	BAL03	N24E06	90-100	spherical jar with a single horizontal band of decoration on shoulder
0199	4	BAL03	N24E06	100-110	spherical jar with a single horizontal band of decoration on shoulder
0200	4	BAL03	N24E06	100-110	spherical jar with a single horizontal band of decoration on shoulder
0201	5	BAL03	N24E06	100-110	hemispherical slightly constricted bowl with single horizontal band of decoration on the rim or just below rim
0202	4	BAL03	N24E06	110-120	spherical jar with a single horizontal band of decoration on shoulder
0203	2	BAL03	N24E06	110-120	pot with everted rim and single horizontal band of decoration on the rim
0204	6	BAL03	N24E06	130-140	straight-sided open bowl with decoration in isolated motifs on the upper portion of the vessel
0205	4	BAL03	N24E06	110-120	spherical jar with a single horizontal band of decoration on shoulder
0206	8	BAL03	N24E06	120-130	recurved jar decorated with arcades with hatching in alternate directions located in the neck
0207	Undecorated	BAL03	N24E06	100-110	Straight sided open bowl, undecorated
0208	12	BAL03	N24E06	130-140	recurved jar with single horizontal band of decoration just below rim
0209	7	BAL03	N24E06	130-140	recurved jar with multiple grouped horizontal bands of decoration just below rim
0210	Non-diagnostic	BAL03	N24E06	140-150	Undecorated body fragment
0211	9	BAL03	N24E06	130-140	spherical jar with single diagonal band of decoration on the shoulder
0212	9	BAL03	N24E06	130-140	spherical jar with single diagonal band of decoration on the shoulder
0213	Undecorated	BAL03	N24E06	130-140	necked jar, undecorated
0214	10	BAL03	N24E06	140-150	recurved jar with single horizontal band of decoration in neck
0215	11	BAL03	N24E06	140-150	recurved jar with single horizontal band of decoration just below rim

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0216	12	BAL03	N24E06	140-150	recurved jar with single horizontal band of decoration just below rim
0217	2	BAL03	N24E06	150-160	pot with everted rim and single horizontal band of decoration on the rim
0218	2	BAL03	N24E06	150-160	pot with everted rim and single horizontal band of decoration on the rim
0219	13	BAL03	N24E06	130-140	necked jar with multiple separate single horizontal bands of decoration on or just below rim
0220	2	BAL03	N24E06	160-170	pot with everted rim and single horizontal band of decoration on the rim
0221	5	BAL03	N24E06	160-170	hemispherical slightly constricted bowl with single horizontal band of decoration on the rim or just below rim
0223	2	BAL03	N24;E06	120-130	pot with everted rim and single horizontal band of decoration on the rim
0224	2	BAL03	N24;E06	120-130	pot with everted rim and single horizontal band of decoration on the rim
0225	2	BAL03	N24;E06	120-130	pot with everted rim and single horizontal band of decoration on the rim
0227	2	BAL03	N24;E06	130-140	pot with everted rim and single horizontal band of decoration on the rim
0228	2	BAL03	N24;E06	130-140	pot with everted rim and single horizontal band of decoration on the rim
0230	2	BAL03	N24;E06	130-140	pot with everted rim and single horizontal band of decoration on the rim
0231	3	BAL03	N24;E06	150-160	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0232	2	BAL03	N24;E06	160-170	pot with everted rim and single horizontal band of decoration on the rim
0233	2	BAL03	N24;E06	160-170	pot with everted rim and single horizontal band of decoration on the rim
0235	1	BAL03	N24;E06	160-170	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0236	2	BAL03	N24;E06	160-170	pot with everted rim and single horizontal band of decoration on the rim

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0237	2	BAL03	N24;E06	160-170	pot with everted rim and single horizontal band of decoration on the rim
0238	1	BAL03	N24;E06	170-180	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0239	1	BAL03	N24;E06	170-180	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0240	2	BAL03	N24;E06	170-180	pot with everted rim and single horizontal band of decoration on the rim
0241	2	BAL03	N24;E06	180-190	pot with everted rim and single horizontal band of decoration on the rim
0242	3	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0243	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0244	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0245	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0246	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0247	3	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0248	3	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0249	3	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0250	3	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0251	3	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0252	3	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0253	3	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0254	3	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0255	3	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0256	5	BAL03	N24;E06	180-190	hemispherical slightly constricted bowl with single horizontal band of decoration on the rim or just below rim
0257	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0258	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0259	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0260	2	BAL03	N24;E06	180-190	pot with everted rim and single horizontal band of decoration on the rim
0261	2	BAL03	N24;E06	170-180	pot with everted rim and single horizontal band of decoration on the rim
0262	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0263	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0264	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0265	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0266	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0267	2	BAL03	N24;E06	170-180	pot with everted rim and single horizontal band of decoration on the rim
0268	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0269	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0270	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0271	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0272	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0273	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0274	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0275	1	BAL03	N24;E06	220-240	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0276	1	BAL03	N24;E06	190-220	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0277	1	BAL03	N24;E06	190-220	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0278	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0279	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0280	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0281	2	BAL03	N24;E06	220-240	pot with everted rim and single horizontal band of decoration on the rim
0282	2	BAL03	N24;E06	220-240	pot with everted rim and single horizontal band of decoration on the rim
0283	1	BAL03	N24;E06	220-240	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0284	3	BAL03	N24;E06	220-240	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0285	3	BAL03	N24;E06	220-240	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0286	2	BAL03	N24;E06	220-240	pot with everted rim and single horizontal band of decoration on the rim
0288	3	BAL03	N24;E06	220-240	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0289	2	BAL03	N24;E06	220-240	pot with everted rim and single horizontal band of decoration on the rim
0290	2	BAL03	N24;E06	220-240	pot with everted rim and single horizontal band of decoration on the rim
0291	3	BAL03	N24;E06	220-240	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0292	3	BAL03	N24;E06	220-240	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0293	2	BAL03	N24;E06	190-220	pot with everted rim and single horizontal band of decoration on the rim
0294	Undecorated	BS04	537	1	Pot with everted rim, undecorated
0295	2	BS04	537	1	pot with everted rim and single horizontal band of decoration on the rim
0296	2	BS04	537	1	pot with everted rim and single horizontal band of decoration on the rim
0297	2	BS04	537	1	pot with everted rim and single horizontal band of decoration on the rim
0298	2	BS04	537	1	pot with everted rim and single horizontal band of decoration on the rim
0299	2	BS04	537	1	pot with everted rim and single horizontal band of decoration on the rim

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0300	Undecorated	BS04	537	1	Pot with everted rim, undecorated
0301	2	BS04	537	1	pot with everted rim and single horizontal band of decoration on the rim
0302	1	BS04	524	1	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0303	2	BS04	524	1	pot with everted rim and single horizontal band of decoration on the rim
0304	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0305	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0306	Undecorated	BS05	N10;E-24	1	Pot with everted rim, undecorated
0307	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0308	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0309	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0310	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0311	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0312	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0314	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0315	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0316	1	BS05	N10;E-24	1	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0317	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0318	1	BS05	N10;E-24	1	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0319	1	BS05	N10;E-24	1	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0320	1	BS05	N10;E-24	1	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0321	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0322	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0222	Undecorated	BAL03	N24;E06	100-110	Recurved jar, undecorated
0226	Undecorated	BAL03	N24;E06	120-130	Hemispherical jar, undecorated
0234	Undecorated	BAL03	N24;E06	160-170	Hemispherical jar, undecorated
0313	2	BS05	N10;E-10	1	pot with everted rim and single horizontal band of decoration on the rim
0287	Non-diagnostic	BAL03	N24;E06	220-240	Undecorated body fragment
0229	Non-diagnostic	BAL03	N24;E06	130-140	Undecorated body fragment
0323	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0324	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0325	3	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim above a spaced motif decoration on the upper shoulder
0326	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0327	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0328	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0329	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0330	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0331	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0332	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0333	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0334	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0335	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0336	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0337	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0338	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0339	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0340	1	BS05	N10;E-24	1	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0341	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0342	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0343	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0344	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0345	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0346	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0347	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0348	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0349	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0350	1	BS05	N10;E-24	1	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0351	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0352	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0353	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0354	1	BS05	N10;E-24	1	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0355	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0356	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0357	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0358	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0359	2	BS05	N10;E-24	1	pot with everted rim and single horizontal band of decoration on the rim
0360	2	BS05	N10;E-24	3	pot with everted rim and single horizontal band of decoration on the rim
0361	1	BSO5	N10;E-24	3	pot with everted rim with single horizontal bands of decoration on the rim and rim-shoulder juncture
0362	2	BS05	N10;E-24	3	pot with everted rim and single horizontal band of decoration on the rim
0363	Non-diagnostic	BSO5	N-12;E20	5	Non-diagnostic
0364	Non-diagnostic	BS05	N-12;E20	5	Non-diagnostic
0365	Non-diagnostic	BSO5	N-12;E20	5	Non-diagnostic
0366	undecorated	BS05	N-12;E20	5	Necked jar, undecorated

Accession number	Ceramic Class	Excavation	Unit	Spit/ Locus	Description
0367	14	BS05	N-12;E20	5	Necked jar with decoration on the lip
0368	Non-diagnostic	BS05	N0;E21	5	Non-diagnostic
0369	Non-diagnostic	BS05	N0;E21	5	Non-diagnostic
0370	Non-diagnostic	BS05	N0;E21	5	Non-diagnostic

Reference List

Brandl, G. (1987). The Geology of the Tzaneen Area. Johannesburg, Government Printer.

Connah, G. (1996). Kibiro: The Salt of Bunyoro, Past and Present. London, The British Institute in Eastern Africa.

Evers, T. M. (1981). The Iron Age in the Eastern Transvaal, South Africa. Guide to Archaeological Sites in the Northern and Eastern Transvaal. E. A. Voigt. Pretoria, Transvaal Museum.: 65-109.

Evers, T. M. and N. J. Van der Merwe (1987). "Iron Age Ceramics from Phalaborwa, North-Eastern Transvaal Lowveld, South Africa." South African Archaeological Bulletin 42: 87-106.

Gertenbach, W. P. D. (1983). "Landscapes of the Kruger National Park." Koedoe 26: 9-121.

Huffman, T. N. (1980). "Ceramics, Classification and Iron Age Entities." African Studies 39(1): 121-173.

Kent, L. E. (1986). "The Thermal Springs of the North-Eastern Transvaal." Annals of the Geological Survey of South Africa 20: 141-154.

Moon, B. P. and G. L. Heritage (2001). "The Contemporary Geomorphology of the Letaba River in the Kruger National Park." Koedoe 44(1): 45-55.

Onderstal, J. (1984). Transvaalse Laeveld en Platorand. Pretoria, Botanical Society of South Africa.

Sundstrom, L. (1993). "A Simple Mathematical Procedure for Estimating the Adequacy of Site Survey Strategies." Journal of Field Archaeology 20: 91-96.

Terblanche, H.-P. (1994). Geselekteerde Tegniese Skeppinge Van Die Tsonga Vrou, Met Spesifieke Verwysing Na Die Tsongakraal-Opelugmuseum. Faculty of Arts. Pretoria, University of Pretoria.

Van Rooyen, N. and G. Bredenkamp (1996). Mixed Lowveld Bushveld. Vegetation of South Africa, Lesotho and Swaziland. A. B. Low and A. G. Rebelo. Pretoria, Department of Environmental Affairs and Tourism: 27.

Van Rooyen, N. and G. Bredenkamp (1996). Mopane Bushveld. Vegetation of South Africa, Lesotho and Swaziland. A. B. Low and A. G. Rebelo. Pretoria, Department of Environmental Affairs and Tourism: 20.

Van Rooyen, N. and G. Bredenkamp (1996). Savanah Biome. Vegetation of South Africa, Lesotho and Swaziland. A. B. Low and A. G. Rebelo. Pretoria, Department of Environmental Affairs and Tourism: 19.

Van Wyk, B. and P. Van Wyk (1997). Field Guide to Trees Southern Africa. Cape Town, Struik.