

**The Archaeological Surveys and Excavations of the  
Zulti North Mining Lease**

*For Richards Bay Minerals*

**2013 Annual Report**

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## INTRODUCTION

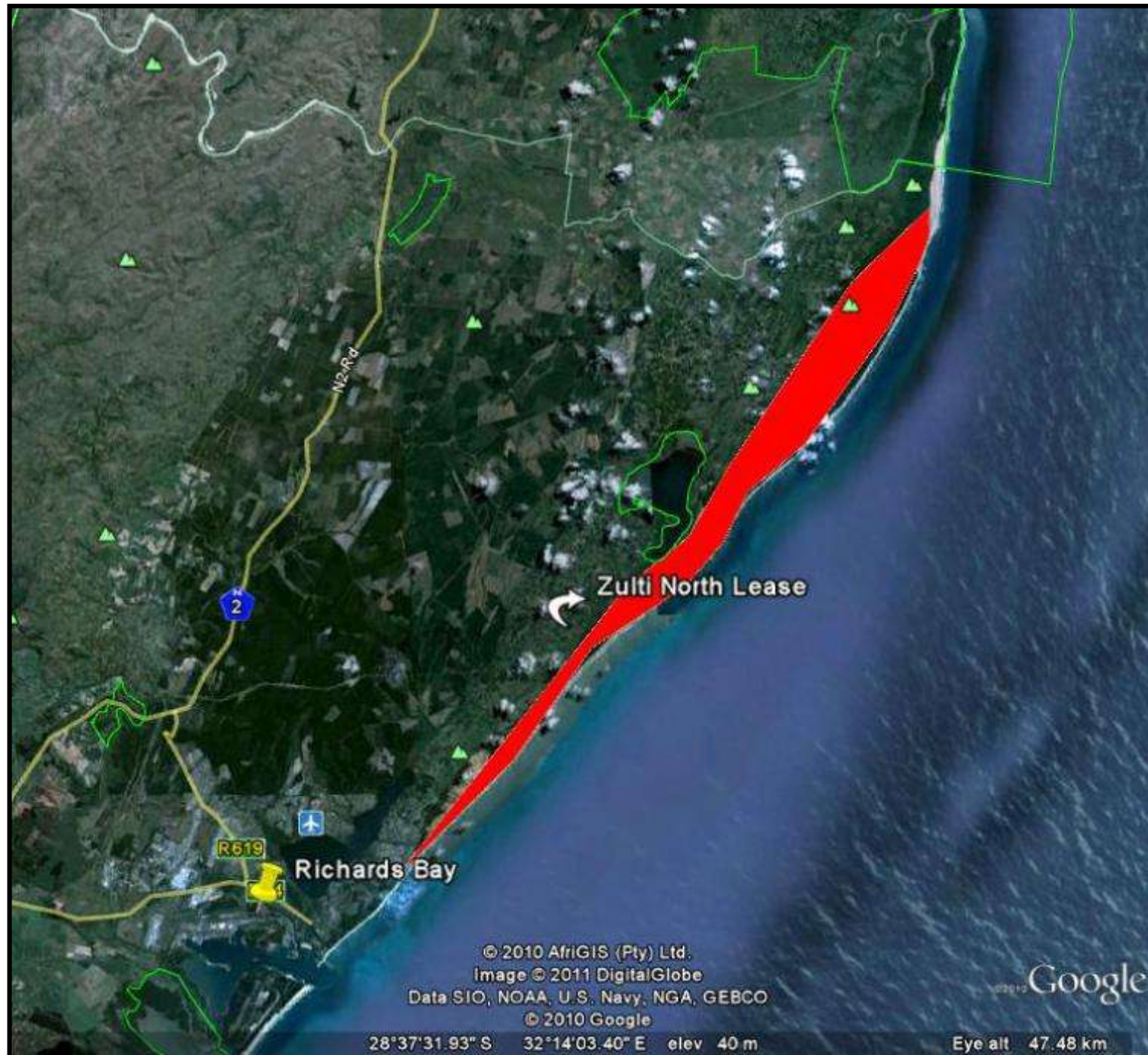
Umlando is contracted by Richards Bay Minerals (Pty) Ltd to undertake archaeological surveys and excavations in the Zulti North mining lease. The mining lease is located north of Richards Bay, KwaZulu-Natal and occurs along the eastern seaboard. (Fig.1 - 2).The surveys consist of bi-monthly surveys, while excavations occur when needed. The archaeological program has been in progress at RBM for 18 years.

A total of 25 new sites were recorded, several sites were continuously monitored and sampled, and two sites were excavated. As in 2012 it appears that the mining ponds, especially MPE, continue towards archaeologically sensitive areas. Apart from the bi-monthly surveys we also excavated three sites and set up excavations for one site.

There have been a total of 494 archaeological sites recorded in the Zulti North mining lease since 1995. This number excludes large sites that have been subdivided. Most of these sites date to the Late Iron Age and Historical Period. Three San hunter-gatherer sites have been recorded and/or excavated. These sites are rare in the dune system as they tend to be ephemeral or assumed to be Iron Age sites.

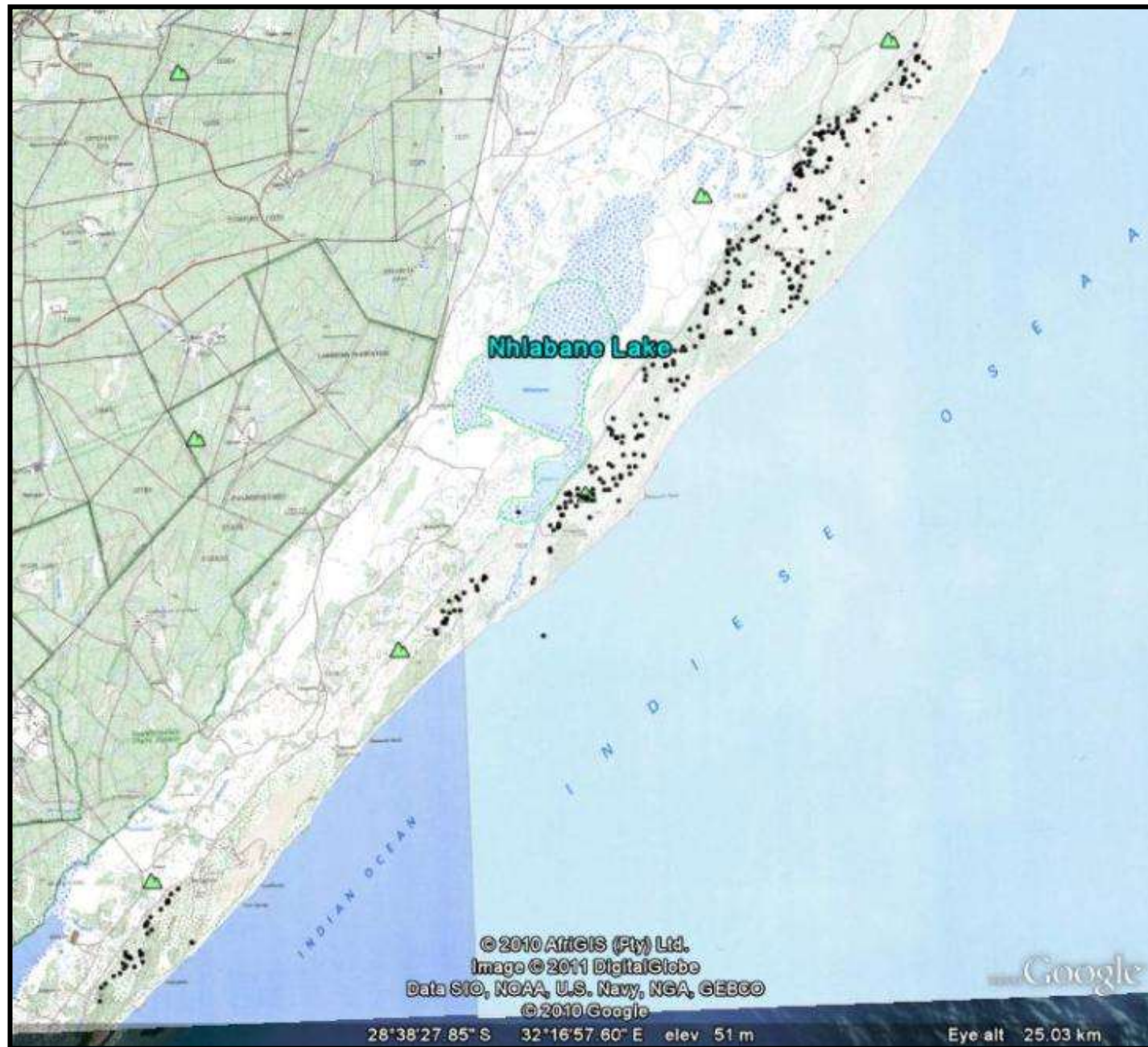
The excavation results have yielded an increase in general sample size of faunal remains, shellfish species data, such as mean sizes and density, and these have relevance to contemporary research.

**Figure 1: Location of the Zulti North Mining Lease**





**Figure 2: Location of Recorded Archaeological Sites in the Mining Lease**



# METHOD

All sites are grouped according to low, medium, and high significance for the purpose of this report. Sites of low significance have no diagnostic artefacts, especially pottery. Sites of medium significance have diagnostic artefacts and these are sampled. Sampling includes the collection of artefacts for future analysis. All diagnostic pottery, such as rims, lips, and decorated sherds are sampled, while bone, stone, and shell are mostly noted. Sampling occurs on most sites. Sites of high significance are excavated and/or extensively sampled. Those sites that are extensively sampled have high research potential, yet poor preservation of features. We attempt to recover as many artefacts from these sites by means of systematic sampling, as opposed to sampling diagnostic artefacts only.

## Defining significance

Archaeological sites vary according to significance and several different criteria relate to each type of site. However, there are several criteria that allow for a general significance rating of archaeological sites.

These criteria are:

### 1. State of preservation of:

- 1.1. Organic remains:
  - 1.1.1. Faunal
  - 1.1.2. Botanical
- 1.2. Rock art
- 1.3. Walling
- 1.4. Presence of a cultural deposit
- 1.5. Features:
  - 1.5.1. Ash Features
  - 1.5.2. Graves
  - 1.5.3. Middens
  - 1.5.4. Cattle byres
  - 1.5.5. Bedding and ash complexes



## **2. Spatial arrangements:**

- 2.1. Internal housing arrangements
- 2.2. Intra-site settlement patterns
- 2.3. Inter-site settlement patterns

## **3. Features of the site:**

- 3.1. Are there any unusual, unique or rare artefacts or images at the site?
- 3.2. Is it a type site?
- 3.3. Does the site have a very good example of a specific time period,

feature, or artefact?

## **4. Research:**

- 4.1. Providing information on current research projects
- 4.2. Salvaging information for potential future research projects

## **5. Inter- and intra-site variability**

5.1. Can this particular site yield information regarding intra-site variability, i.e. spatial relationships between various features and artefacts?

5.2. Can this particular site yield information about a community's social relationships within itself, or between other communities?

## **6. Archaeological Experience:**

6.1. The personal experience and expertise of the CRM practitioner should not be ignored. Experience can indicate sites that have potentially significant aspects, but need to be tested prior to any conclusions.

## **7. Educational:**

7.1. Does the site have the potential to be used as an educational instrument?

7.2. Does the site have the potential to become a tourist attraction?

7.3. The educational value of a site can only be fully determined after initial test-pit excavations and/or full excavations.

The more a site can fulfil the above criteria, the more significant it becomes. Test-pit excavations are used to test the full potential of an archaeological deposit. These test-pit excavations may require further excavations if the site is of significance. Sites may also be mapped and/or have artefacts sampled as a form of mitigation. Sampling normally occurs when the artefacts may be good examples of

their type, but are not in a primary archaeological context. Mapping records the spatial relationship between features and artefacts.

## **RESULTS**

### **SURVEYS**

#### **MINING POND A**

No new sites recorded. MPA was mining an area that has already had the upper layers removed by dry mining activity.

#### **MINING POND C**

##### **MPC 098**

MPC098 is located on the first main dune cordon from the ocean. It consists of an ephemeral shell midden and a few fragmented grinding stones on the surface.

The site is of low significance and no further mitigation is required.

**Fig. 3: MPC 098**



## **MINING POND D**

### **MPD 085**

The site is on a large dune with a smaller outcrop at the top, overlooking the ocean. It consists mainly of a shell midden and very little surface pottery. The site was excavated in 2012 and described in the 2012 report. We monitor all sites for as long as it remains possible. Heavy rains and wind sometimes uncover artefacts that were previously covered. On the surface was a shell button that relates to the main excavated shell midden (Figure 4). This is the first shell button to be collected in the mining lease. The button appears to be made from oyster shell. A near complete pot was also recovered from the site.

A shell lens, much lower than the main excavation, was noted during one of the visits. This will be sampled in 2014.

**Figure 4: Shell Button Found At MPD 85**



### **MPD 102**

MPD 102 is located on the second dune cordon from the ocean. It is situated on the main back road between MPC and MPD. The site consists of a scatter of

undecorated pottery on the surface.

The site is of low significance and no further mitigation is required.

### **MPD 103**

MPD 103 is located on the second dune cordon from the ocean. It consists of a single, ephemeral shell midden of mainly brown mussel.

The site is of low significance and no further mitigation is required.

## **MINING POND E**

### **MPE107b**

MPE107b was excavated in 2012 and monitored and sampled in 2013. Two human skeletons were noted during one of the monitoring sessions and excavated. This is discussed below.

### **MPE 138**

MPE 138 is located on the second dune cordon from the ocean. It is close to MPE 134 and just below MPE 107b. It consists of at least two ephemeral shell middens, as well as a surface scatter of undecorated pottery, bone, slag and upper grinding stones. The bone appears to belong to bovid.

The site is of low significance and no further mitigation is required. We did, however sample it.

### **MPE 139**

MPE 139 is located on the second dune cordon from the ocean. It consists of a single shell midden which was exposed by road clearance (fig. 5). It may be contemporary with MPE129 that occurs ~50m from the midden.

The site is of medium significance. The site was excavated and is discussed below.

**Fig. 5: Section Cutting At MPE 139**



**MPE 140**

MPE 140 is located on the first dune cordon from Lake Nhlabane. It consists of two shell scatters that probably extend into the uncleared bush.

The site is of indeterminate significance and will be monitored in the future.

**MPE 141**

MPE 141 is located 100m southwest of MPE 107b, on the first dune cordon from Lake Nhlabane. The site was divided into areas a, b and c to accommodate the extent of it.

It consists of:

- a) Partial human remains scattered over a 3m x 4m area. These were sampled.



- b) A large shell scatter
- c) A large shell scatter with grinding stones and pottery on the surface.

The site is of medium significance and has been sampled. It was monitored during 2013.

**MPE 142**

MPE 142 is located on the first dune cordon from Lake Nhlabane over a 30m x 30m and is most likely related to MPE 141. It consists of an ephemeral shell midden, as well as a surface scatter of undecorated pottery, bone and upper grinding stones. (Fig. 6). The bone fragments appear to be bovid and hippo.

The site is of low significance and no further mitigation is required.

**Fig. 6: MPE 142**



MPE 138, MPE 140, MPE141 and MPE142 may all relate to the same time period and extended family

### **MPE 143**

MPE 143 is located on the first dune cordon from the Sokhulu Reservoir. It consists of a single shell scatter which was exposed by road clearance. The site extends into the adjacent forest (Fig. 7). The site may be related to AMS 025 that has juvenile cranial remains.

The site is of low significance, and was monitored during 2013.

**Fig. 7: MPE 143**



### **MPE 144**

MPE 144 is located on the first dune cordon from Sokhulu Reservoir, on a high dune. It is situated in the vicinity of MPE 114. It consists of a surface scatter of pottery and upper grinding stones.

The site is of low significance and no further mitigation is required. However, we

will continue to monitor the site.

### **MPE 145**

MPE 145 is located on the second dune cordon from the ocean and is close to MPE 107b and MPE 110. It consists of a single shell midden of brown mussel with very good preservation.

The site was sampled, but is of low significance and no further mitigation was undertaken.

### **MPE 146**

MPE 146 is located on the first dune cordon from the ocean and occurs on its own small hill between larger dunes. It consists of at least one shell midden which was exposed by bulldozer clearance.

The site is of low significance and no further mitigation was undertaken.

### **MPE 147**

MPE 147 is located on a high dune which forms part of the first dune cordon from the ocean. The site consists of large scatters of shell and pottery, but no intact midden, apart from one area which was recorded as MPE 147a. The shell is mainly brown mussel with small percentages of oyster, whilst the pottery is thick walled and undecorated.

MPE 147 was sampled, but the site is of low significance and no further mitigation is required.

### **MPE 148**

MPE 148 is located on the second dune cordon from the ocean on a high dune in front of and visible from, Sokhulu Reservoir and close to MPE 110. It consists of a single intact shell midden exposed by bulldozer clearance. Since the midden was largely *in situ* we decided to undertake some test-pits. The excavations are discussed below.

The site is of medium significance

#### **MPE 149**

MPE 149 is located in a small valley between two high dunes on the first dune cordon from the ocean. The site consists of an ephemeral scatter of brown mussel and upper grinding stones.

The site is of low significance and no further mitigation is required. We will, however, monitor the site for as long as it remains possible.

#### **MPE 150**

MPE 150 is located on the first dune cordon from the ocean. The site consists of a single brown mussel midden with upper and lower grinding stones.

The site is medium significance and was sampled. The site will be monitored for as long as it remains possible.

#### **MPE 151**

MPE 151 is located on a high dune on the first dune cordon from the ocean. The site consists of an ephemeral scatter of a dispersed brown mussel midden. There are also pottery and water worn stones on the surface.

The site is of low significance and no further mitigation is required. The site will, however, be monitored for as long as it remains possible.

#### **MPE 152**

MPE 152 is located on a high dune on the first dune cordon from the ocean. The site consists of a single brown mussel midden that was exposed by road clearance.

The site is of low significance and no further mitigation is required. The site will, however, be monitored for as long as it remains possible.

### **MPE 153**

MPE 153 is located on the first dune cordon from the ocean. The site consists of a single *Perna perna* midden. Some of the midden is intact and extends into the uncleared bush.

The site is of medium significance because of the well preserved shell and we will do test-pits in the near future.

### **MPE 154**

MPE 154 is located on the first dune cordon from the ocean, looking down on Sokhulu Reservoir. The site consists of an ephemeral shell midden that was exposed by bush- clearance and exploration.

It is of low significance and no further mitigation is required, however, we will monitor it for as long as it remains possible.

### **MPE 155**

MPE 155 is located on the first dune cordon from the ocean. It consists of a single disturbed *P. perna* midden and one upper grinding stone on the surface.

The site is of low significance and no further mitigation is required.

## **RED DUNES**

### **RD 012**

RD 012 is located on the last of the red dunes before Sokhulu Reservoir. The site consists of an ephemeral scatter of pottery on the surface. The pottery is mainly thin walled, on red clay, with no decoration.

The site is of low significance and no further mitigation is required.



### **RD 013**

RD 013 is located on the last of the red dunes before Sokhulu Reservoir. The site consists of a single, small, ephemeral shell midden.

The site is of low significance and no further mitigation is required.

### **RD 014**

RD014 is located on the ocean side of the red dune system. It consists of a scatter of LSA flakes and EIA pottery on the surface.

The site is of low significance and no further mitigation is required, however, we will monitor the site for as long as it remains possible.

## **AMS**

### **AMS025**

No new sites recorded; however human skeletal remains were found at the MPD dry mining area. This site is called AMS 025. Umlando was informed by RBM that a cranium was found at AMS dry mining, near MPD (fig. 8). As per SOP5, the cranium was reported and delivered to the Rehabilitation Offices. Normally, the human remains would be left where they were found, however since this was an isolated and fragmented cranium, and had slumped from the face, it was removed.

The AMS dry mining was already on the second tier of mining, the original surface had been mined in the previous year (fig. 9). There was thus no way in which to define the exact location of the cranium. We have given a tentative co-ordinate.

**Fig. 8: AMS Dry Mining At MPD**



#### Desktop analyses

A GPS waypoint was taken at the central mine face for a general location of the area. We then compared the location with previously recorded sites in the area, as well as with historical maps. Figure 9 illustrates these locations. Our notes indicate that there is/was a very ephemeral scatter of pottery and sherds to the north and northeast of the current dry mining face. We have monitored the area; however, there was never enough material for it to be called a site. We require at least 2-3 different pots and/or evidence of a shell midden for a site to be called a site. In this case, there was one sherd and a few isolated marine shell fragments along the ridge of the dune.

The 1943 1:50 000 topographical map indicates that there are no human settlements in this area (fig. 10). This is to be expected, as it was, by then, a declared forestry area, and all local inhabitants had been removed. This is discussed in the 2012 ZN Annual Report. The 1937 aerial photographs suggest a different story (fig. 10). The aerial photographic map shows that vast areas of the dune forest was grasslands and/or sand dunes, i.e. very little forestry. Within the forested area, just

north of the dry mining is a semi-cleared area, with a path running along a northwest-southeast line. This is most probably a settlement.

#### The Cranial Fragments

Fig. 12 shows the cranial fragment. The cranial consists only of the parietal, temporal and occipital plates. The facial bones are missing.

The anterior and posterior fontanellae have closed, suggesting the age of the individual to be at least over 2 years in age. This does vary between children and in some cases they may close at 1 year old. The sutures are not fused suggesting an individual age below 11 years (see [http://www.redwoods.edu/instruct/agarwin/anth\\_6\\_age.htm](http://www.redwoods.edu/instruct/agarwin/anth_6_age.htm)). At best, one can deduce that the human was aged between 2 - 11 years in age, although (s) he may be on the younger side of the scale.

Unfortunately, no other remains were found to assist with the age estimation, e.g. teeth and milk teeth.

The cranium is well preserved and shows little sign of decay often noticed in other older skeletal remains we have excavated in the dunes. It would appear to be historical recent, and I would link it to the settlement located in Figure 10. The cranium probably dates to the late 19<sup>th</sup> century to 1937. I would estimate that it would be in the 1930s given the state of preservation.

The cranial fragment should be reburied with the other human remains after dune mining has been completed.

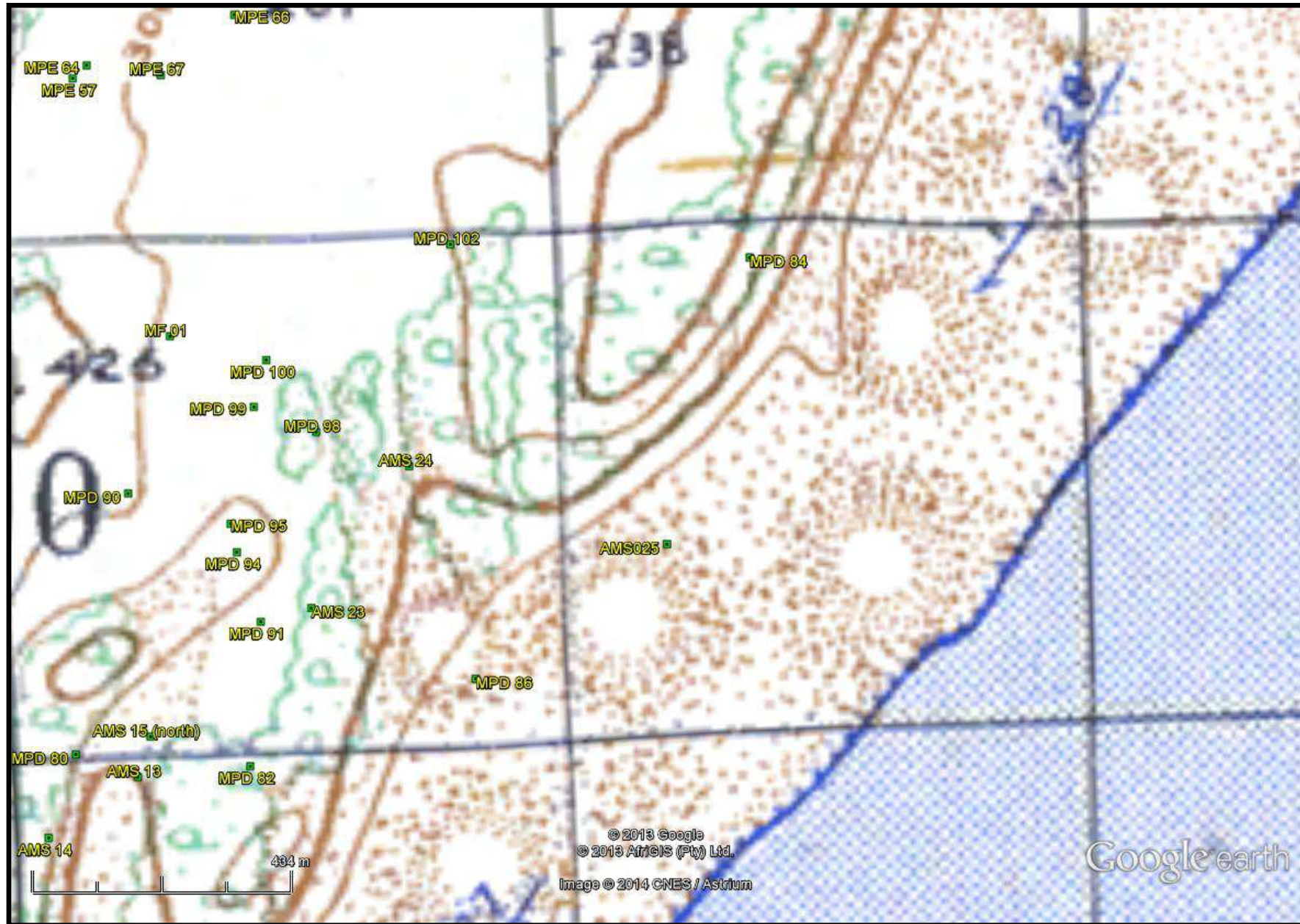


**Fig. 9: Location of Recorded Sites in the General Area of AMS Dry Mining**





**Fig. 10: Location of Archaeological Sites In Relation To the 1943 1:50 000 Topographical Map**





**FIG. 11: LOCATION OF SITES IN RELATION TO 1937 AERIAL IMAGERY<sup>1</sup>**



<sup>1</sup> Arrow indicates location of AMS Dry mining

**Fig. 12: Images of the Cranial Fragment**



## EXCAVATIONS

We set aside 28 days a year to undertake excavations in the dunes. This is based on 18 years experience working within the Zulti North mining lease. We normally excavate in the mornings, and then undertake sorting in the afternoon. This is especially important in summer months where the heat and humidity can impact on company health and safety policies.

### **MPE 107b**

MPE 107b was originally recorded site in 2012. We had recorded, sampled and partially excavated the site at the end of 2012. The decorated sherds are similar to Mpambanyoni and Blackburn pottery, or Group 5 and 6 in the RBM sequence. This suggests that the site dates between c. 1000 ACE to c. 1200 ACE.

The initial excavations placed two 2m x 2m squares in areas where there was a high concentration of marine shell and pottery. During these excavations we determined that the main middens no longer existed and excavations ceased. However, we were expecting human remains and for that reason the site was deemed significant and continuously monitored. The area had been cleared of vegetation in 2013. During the June survey, after heavy rains and wind, we noted that dune slumping had occurred. We then noticed the two exposed skeletal remains. The remains were demarcated and excavations were undertaken over three days. The one excavation was 5m away from Skeleton 1, while the other excavation square was ~10m from Skeleton 2. This highlights the need to continually monitor sites in the dune system as material is consistently exposed.

### **SK 1**

Skeleton 1 was noted by the cranial fragments and maxilla that were exposed on the surface. We initially thought that we had a complete burial as the head had been exposed (fig. 13). However, when we did the surface sampling below the SK1 we noted many bone fragments and realised that SK1 would be less than complete. A 1m x 1m excavation was placed around the cranial fragments and the sand was removed. A

single shale/copper earring was recovered near the fragments (fig. 14). This is only the second earring we have sampled in the dune system. . It became apparent that the head had slumped forward, as the rest of the skeletal remains occurred slightly upslope of the cranium.

Due to the heavy rains before the excavations the skeletal remains were very wet and fragile. Since more rain was expected over the weekend we decided to remove the bones and dry them at the offices. In addition to the moisture, the bones were also brittle due to the time spent in the sand. The *in situ* skeletal remains consisted of fragments of a pelvis and lower limbs (tibia, calcanium and metatarsals). This is shown in figure 15. The two feet were well preserved in formation; however the individual bones were very fragile. Soils samples above, around and below the pelvis were taken and bagged separately.

The bones were more gracile (than SK2) and the pelvis was female-shaped, while the some of the epiphysis had not yet fused. The teeth were complete (although the wisdom teeth were not found) but not yet worn down. This suggests that skeleton appears to be that of a teenage to early adult female.

In summary, very few of the skeletal remains were *in situ* and/or sampled. Much of the skeleton had already slumped down the dune. Despite several post-excavation revisits few more bones were recovered. The occurrence of two human skeletal remains near each other is significant and rare. These humans could have been related to each other in the past.

The skeletons are also important in that they form part of the first late Iron Age people who entered the area c. 1100 ACE. These remains thus form part of the first people in the area, who eventually became Nguni-Speaking people. There is thus potential for DNA analyses, as well as dietary analyses.



**Fig. 13: SK 1 Before Excavation**



**Fig. 14: SK 1 Associated Artefacts**





**Fig. 15: SK 1 During Excavation**



## **SK 2**

SK2 is located ~8m east-northeast of SK1. The surface of the general area was a scatter of human bones, with some long bones appearing to be *in situ* (fig. 16). A surface collection was undertaken and most of the skeletal remains were found on the slope of the dune. There was thus little expectation for a complete burial. A 2m x 2m excavation square was placed around SK2. The excavations removed the upper 5cm of sand and this was sieved.

**Fig. 16: SK 2 Before Excavation**



The excavations revealed that only parts of the pelvis, femora, tibiae and fibulae were still *in situ*. The tarsals and metatarsals were *in situ*, but very fragile. Fig. 17 shows these remains during excavation.



**Fig. 17: SK 2 During Excavation**



The pelvis is too fragmented to assess the sex of the skeleton, however, the bones are robust and the mandible suggests a male skeleton. The epiphyses that were located are fused. All of the teeth have grown, however the premolars and molars have been 'lost' and the sockets have ossified. This suggests that SK2 is a post-40s male.

The direction of the *in situ* remains suggests that SK2 faced the same direction as SK1. Figure 18 shows the location of SK1 (yellow arrow) and SK2 (red arrow). That is both humans were buried facing a general sunset position.

MPE107b dates to the first Late Iron Age people of the area. The pottery decorations are associated with those of Mpambanyoni and Blackburn. The site thus dates to c. 1100-1200 ACE.

The site was repeatedly monitored until mining removed it.



**Fig. 18: Location of SK1 and SK2 at MPE107b**



### **MPE139**

MPE139 is situated on the first dune cordon from Sokhulu Reservoir, and ~250m north of MPE107. The site was discovered after a bulldozer had cleared an access path to MPE (fig. 19). The shell midden was 1m – 2m below the surface and we requested an excavator to assist in removing the topsoil. The excavator operator was guided by painted wooden poles indicating the maximum depth to excavate, as well as by one of us using hand signals in directing the bucket. Visual contact was kept by both people at all times and a safe distance was maintained (fig. 20). This method of topsoil removal

was very economical in terms of labour hours. The site was excavated over a three day period in January when high winds and heavy rains made excavations difficult.

**Fig. 19: Cutting Through MPE139<sup>2</sup>**



**Fig. 20: Excavator Removing Topsoil at MPE139**

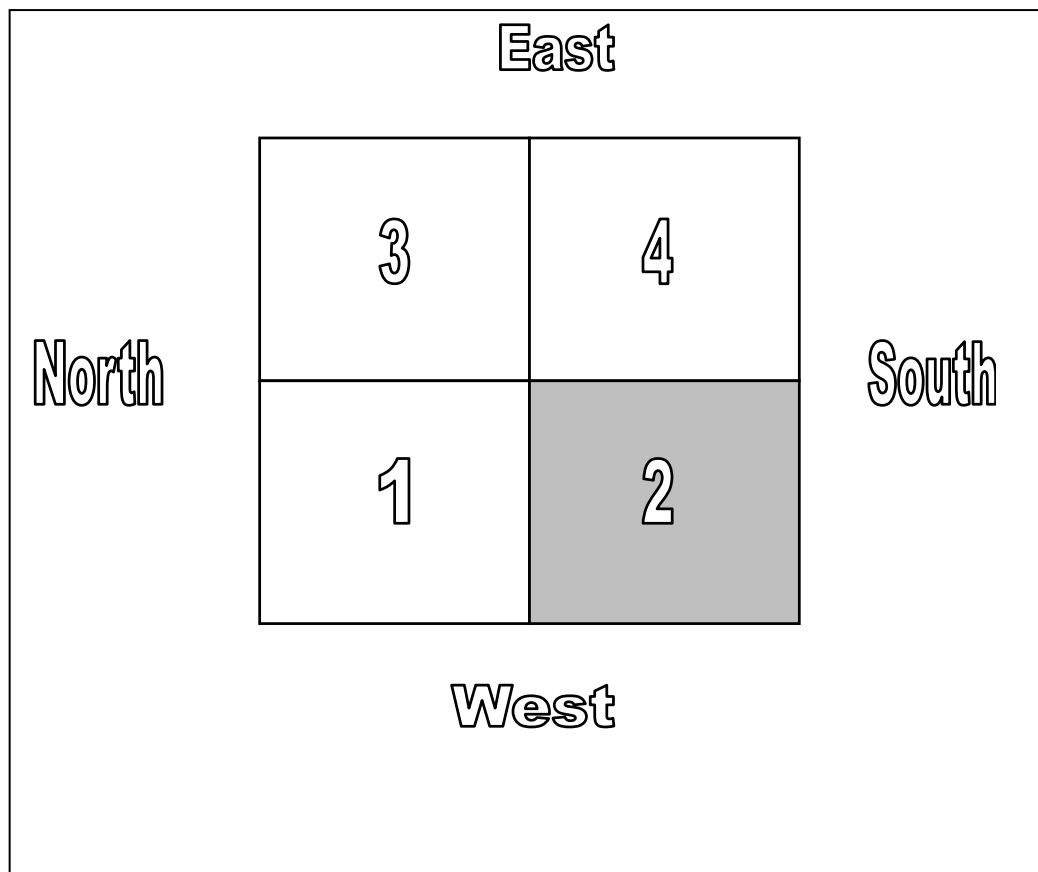


<sup>2</sup> White arrow – shell lens; red arrow = MPE107b

## Site plan

The site was divided into four 1m x 1m squares with each square subdivided into four 50cm x 50cm quadrants (fig. 21). Only Square 2 was excavated as this was the thickest part of the midden.

**Fig. 21: Excavation Plan**



## Stratigraphy

The stratigraphy of the site consisted of three main lenses. Each lens was a main shell lens with a fragmented layer below mixed with the sand. The latter lens was referred to as 'Below lens'. The 'Below lens' represented the interphase between the two lenses. Lens 1 was the thickest lens with most complete shell, while Lenses 2 and 3 were more fragmented and less compacted. Figure 22 shows these layers in the excavation.



**Fig. 22: Shell Lenses at MPE139**



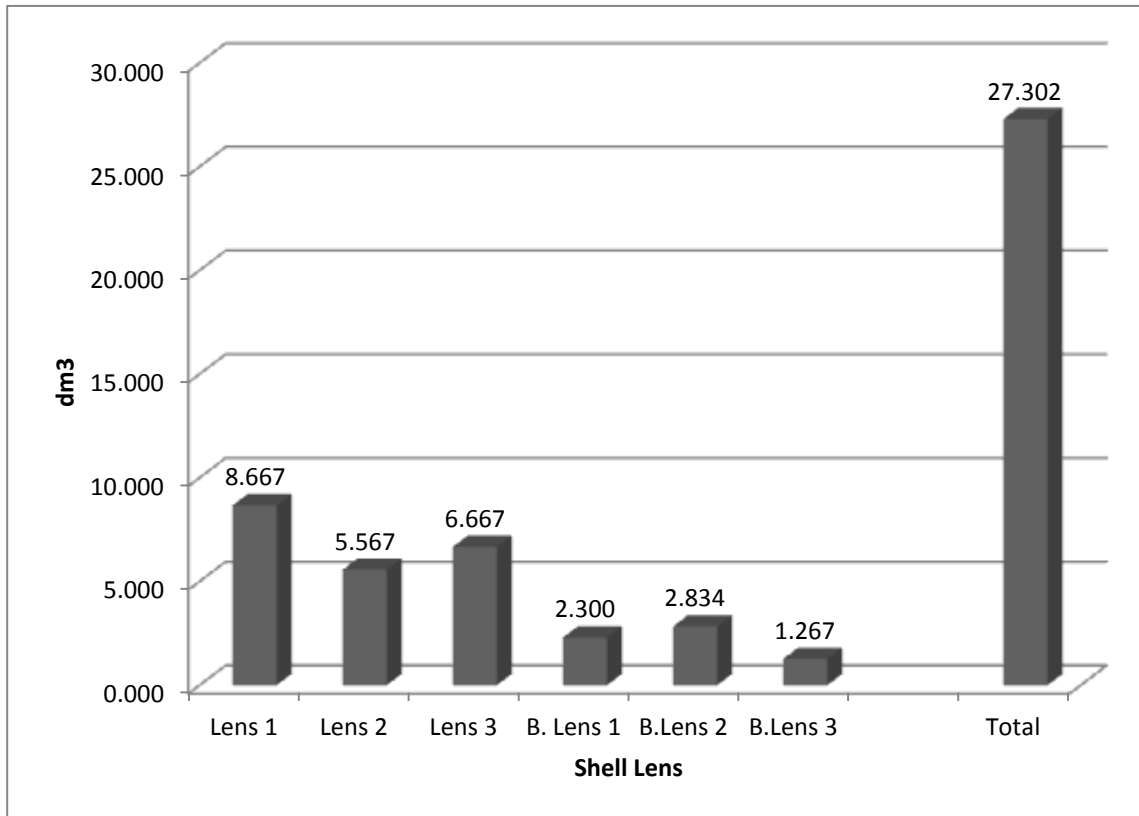
Lens 1 had the highest volume of deposit, followed by Lens 3 and then 2 (fig. 23). However, Lens 1 had the highest density of marine shell followed by Lens 2 and 3 (fig. 24). This is a result of Lens 3 (itself) being much smaller than the other lenses and that more sand was removed with Lens 3 as it was a basal layer.

The stratigraphy followed the basic stratigraphy for small family based shell middens in the area: ~2m in length and forms a basin shape. There are normally 3 – 5 lenses per midden, depending on the duration of the occupation.

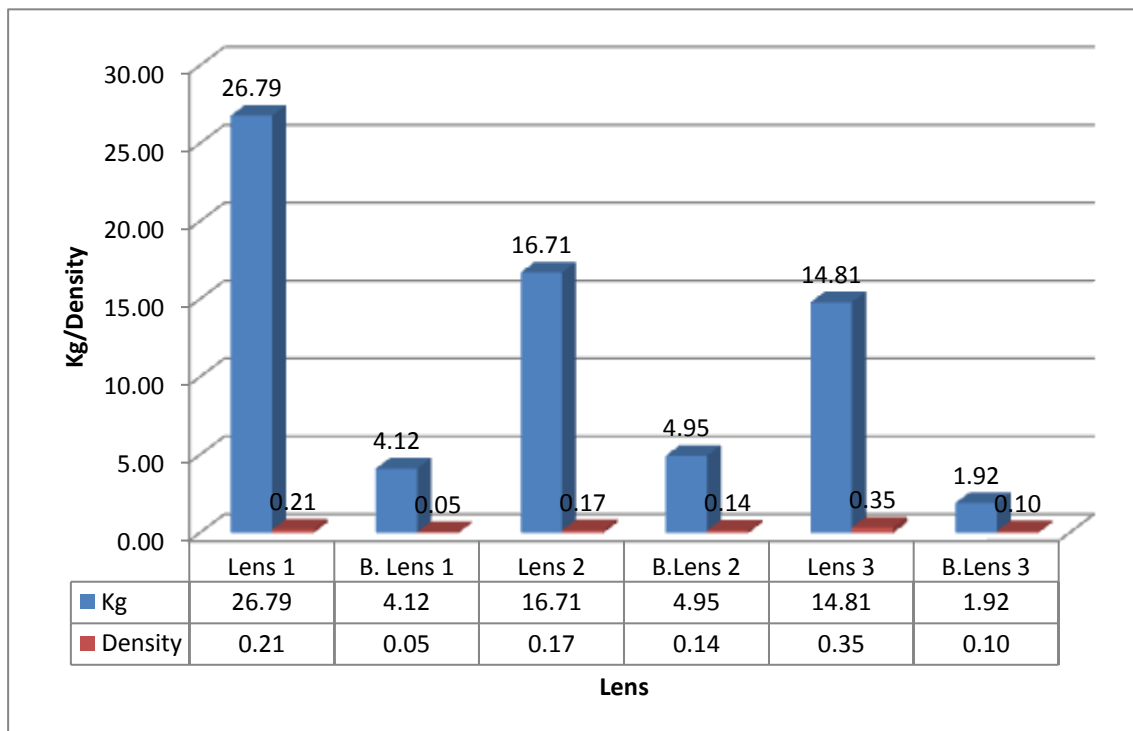
The southwest quadrant was used as the bulk sample quadrant.



**Fig. 23: Volumes of Lenses at MPE139**



**Fig. 24: Density of Total Marine Shell per Lens at MPE139**



## Artefacts

Table 1 summarises the artefacts from the excavations. All squares were sieved with a 2mm sieve and sorted into basic categories. Only the left and right hinges of *P. perna* from bulk samples were counted, while all measurable *P. perna* were counted from all samples.

**Table 1: List of Artefacts and Ecofacts from MPE139 Excavation**

Lens		Lens 1	Lens 2	Lens 3	B. Lens 1	B.Lens 2	B.Lens 3
<b>Buckets</b>		8.667	5.567	6.67	2.3	2.8	1.267
<b>Bone</b>		99	9	47	13	4	0
<b>Otolith</b>		0	1	1	0	0	0
<b>Daga</b>		0	40	0	0	0	0
<b>Fish</b>		20.5	20.5	27	5	8	5
<b>Other shell</b>		368	194	92	14	44	18
<b>Manuport</b>		0	0	0	0	5	0
<b>Smoothed stone</b>	weight	52	16	0	26	76	0
	n	10	8	0	3	8	0
<b>Water worn stone</b>		555	476	394	126	212	62
<b>Upper g/stone</b>	weight	676	244	0	270	196	0
	n	2	2	0	1	1	0
<b>Lower g/stone</b>	weight	68	0	0	0	0	0
	n	3	0	0	0	0	0
<b>Nassa. Beads</b>		5	3	2	0	1	2
<b>Coral</b>		0	0	1	0	0	0
<b>Worked bone</b>		0	1	0	0	0	0
<b>Charcoal</b>		36	30	50	6	12	8
<b>Iron fragment</b>		0	0	0	1	0	0
<b>P. perna</b>	Left	67	73	15	56	0	0
	Right	67	86	20	70	0	0
	Weight (grams)	26791.5	16714.5	14806	4123	4950	1919
<b>Pottery</b>	(grams)	2356	684	628	306	152	78
<b>Total weight of all material (grams)</b>		31022	18388	16045	4890	5654	2090

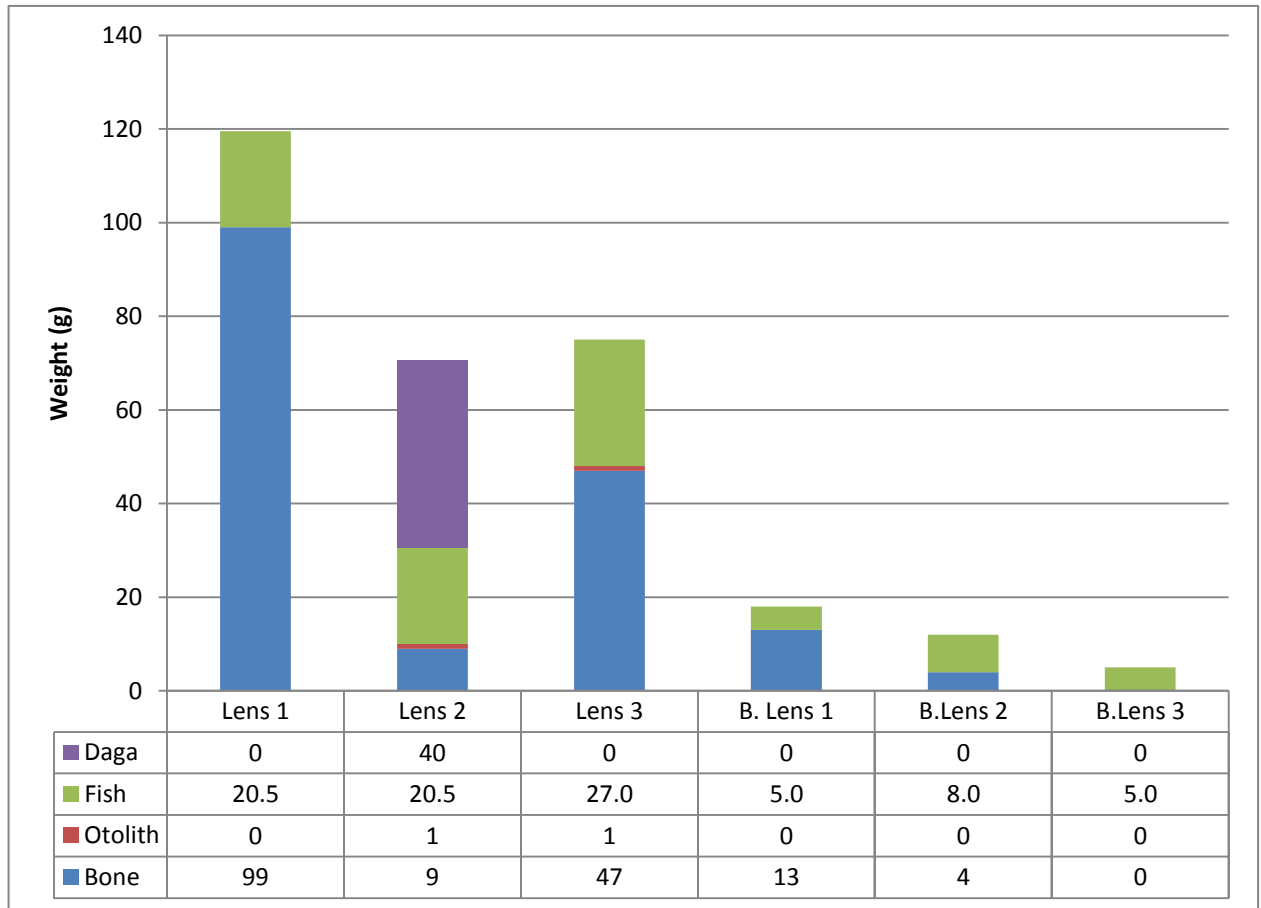
## Bone

The faunal assemblage is illustrated in figure 25. The faunal assemblage appears to be similar in all three lenses.

Mammal bone consisted mainly of domestic cattle, and a few small fragments small antelope. The faunal sample was not well represented, although surface samples were also taken.

Fish bone is represented mainly by vertebrae and the occasional otolith. The sizes of the otoliths indicate that there are two different fish species from the site.

**Fig. 25: Faunal and Daga Weights from MPE139**



### **Stone**

Stone results are given in frequency and not weight. The results are summarised in figure 26.

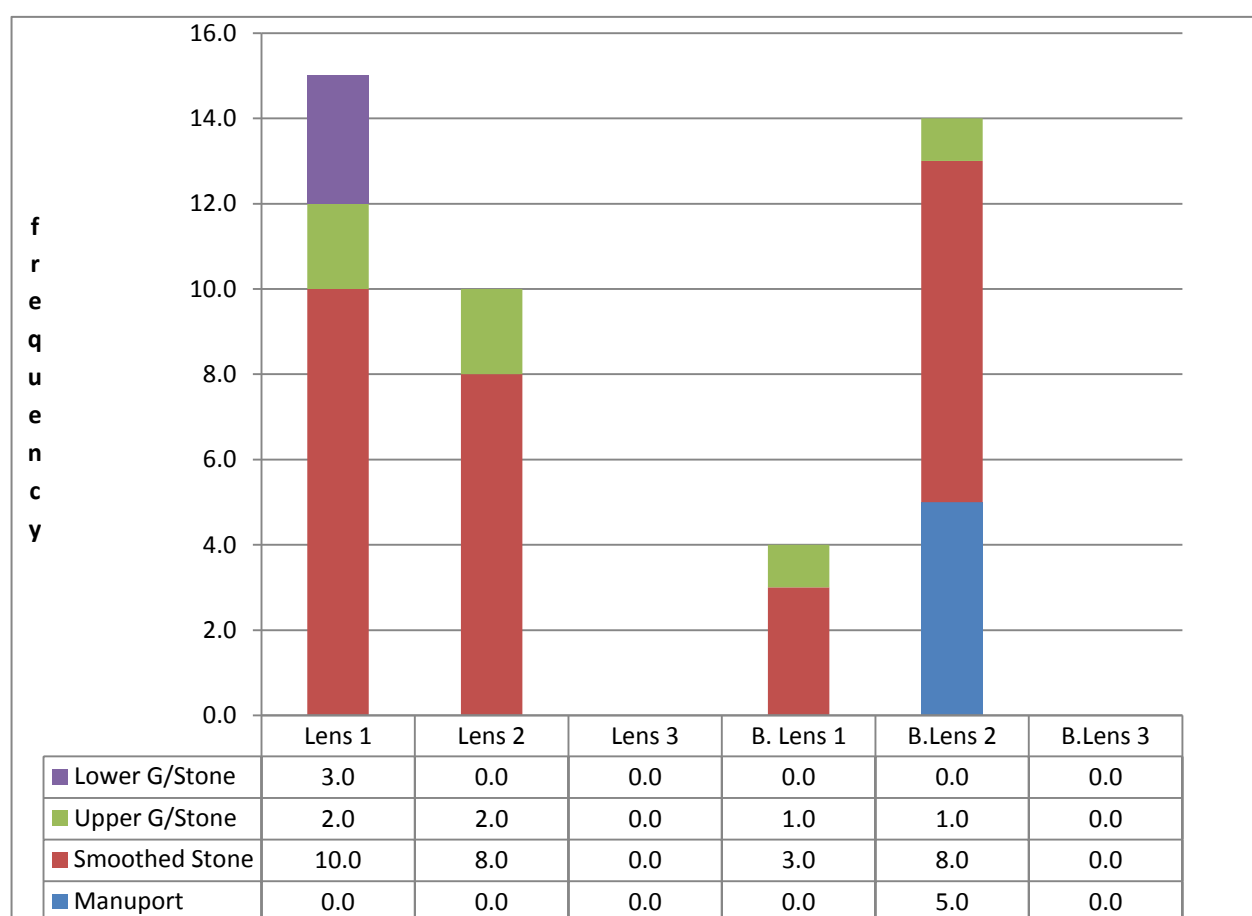
Manuports are stones that do not occur in the general area, and thus were brought in from a distance. All of the manuports from MPE139 occur in Below Lens 2, and are cryptocrystalline silicates (CCS). CCS occurs infrequently in the archaeological sites in the study area, and is normally associated with Stone Age sites, and sometimes Iron Age sites. When it occurs in Iron Age sites, the CCS nodules are not worked.

Smoothed stone consists mainly of small beach pebbles that are associated with the sedimentary Pleistocene deposits – commonly referred to as white beach sandstone.

Occasionally small quartzite pebbles are used as well. These pebbles are a maximum of 10cm in size and have one or both sides smoothed. They were used for smoothing pottery or house floors, or may have been used for *muthi* or shellfish purposes. These pebbles occur in similar quantities in Lenses 1 and 2, but not in lens 3.

Grinding stones occur as upper and lower grinding stones. Upper grinding stones are mostly made from quartzite beach pebbles. The lower grinding stones are made on white beach sandstone. These are standard artefacts in all of the sites.

**Fig. 26: Stone Category Frequencies from MPE139**



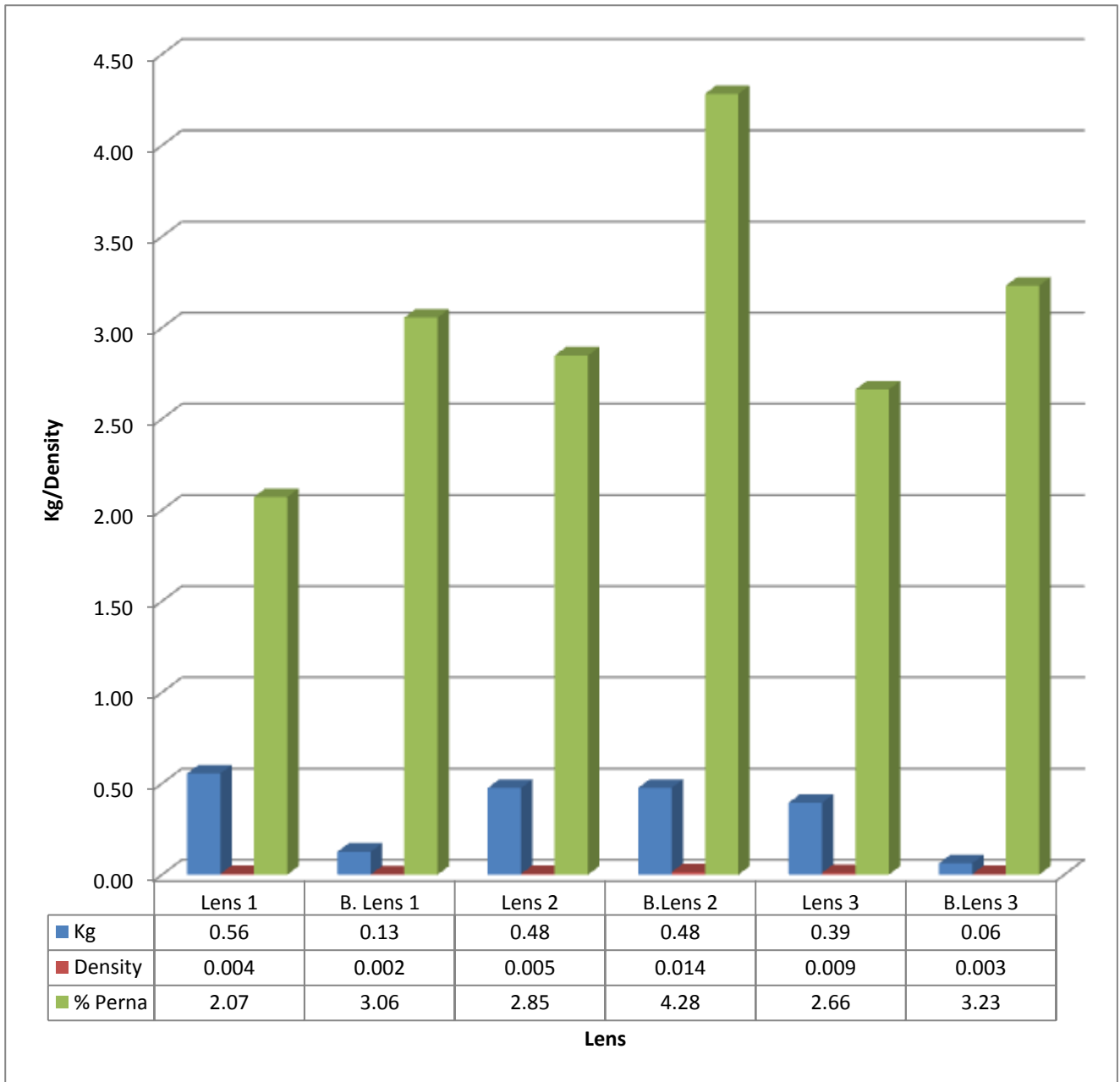
Water worn stone are the small pebbles associated with shellfish collecting. The results of water worn pebbles can yield information on shellfish collection strategies and/or sea viscosity and turbidity. The results are useful in sites with a long sequence, or when many sites are compared in a chronological order.

The water worn shell tends to yield similar results for all lenses in terms of overall weight and density (fig. 27). The results differ more when the weight is compared as a



percentage to *P. perna* weight. Lens 2 (and Below Lens 2) has a slightly higher percentage of water worn stone than the other two lenses.

**Fig. 27: Water worn Stone at MPE139**

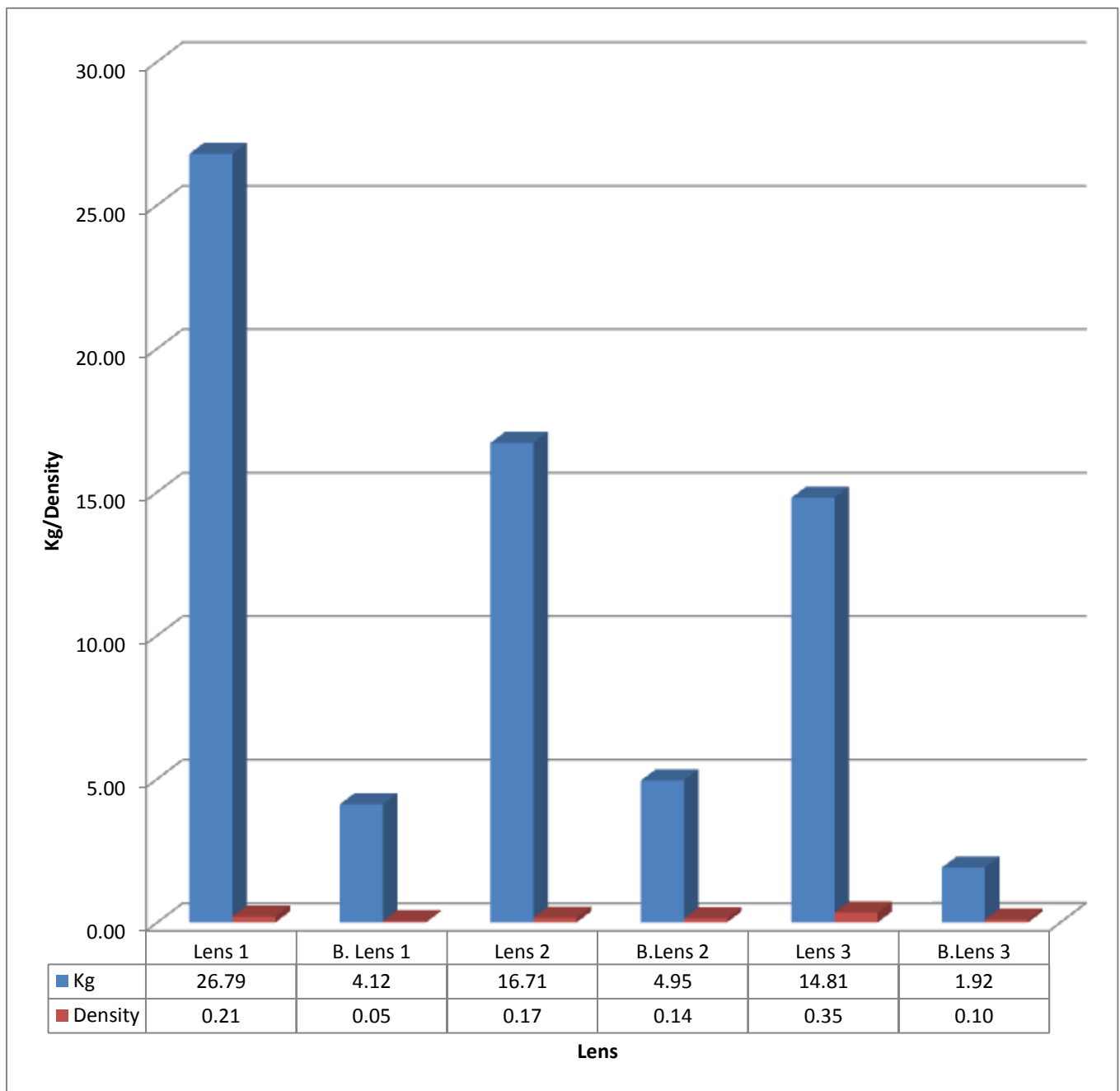


### **Shell**

*P. perna* (brown mussel) is the most commonly occurring species of shellfish at all sites in the mining lease. They are locally available and occur along the rocky outcrops at the beach. Shellfish is an important dietary component in areas where there is a low carrying capacity for domestic animals.

The results for the shellfish remains are illustrated in figure 28.

**Figure 28: Results From *P. perna* Analyses**



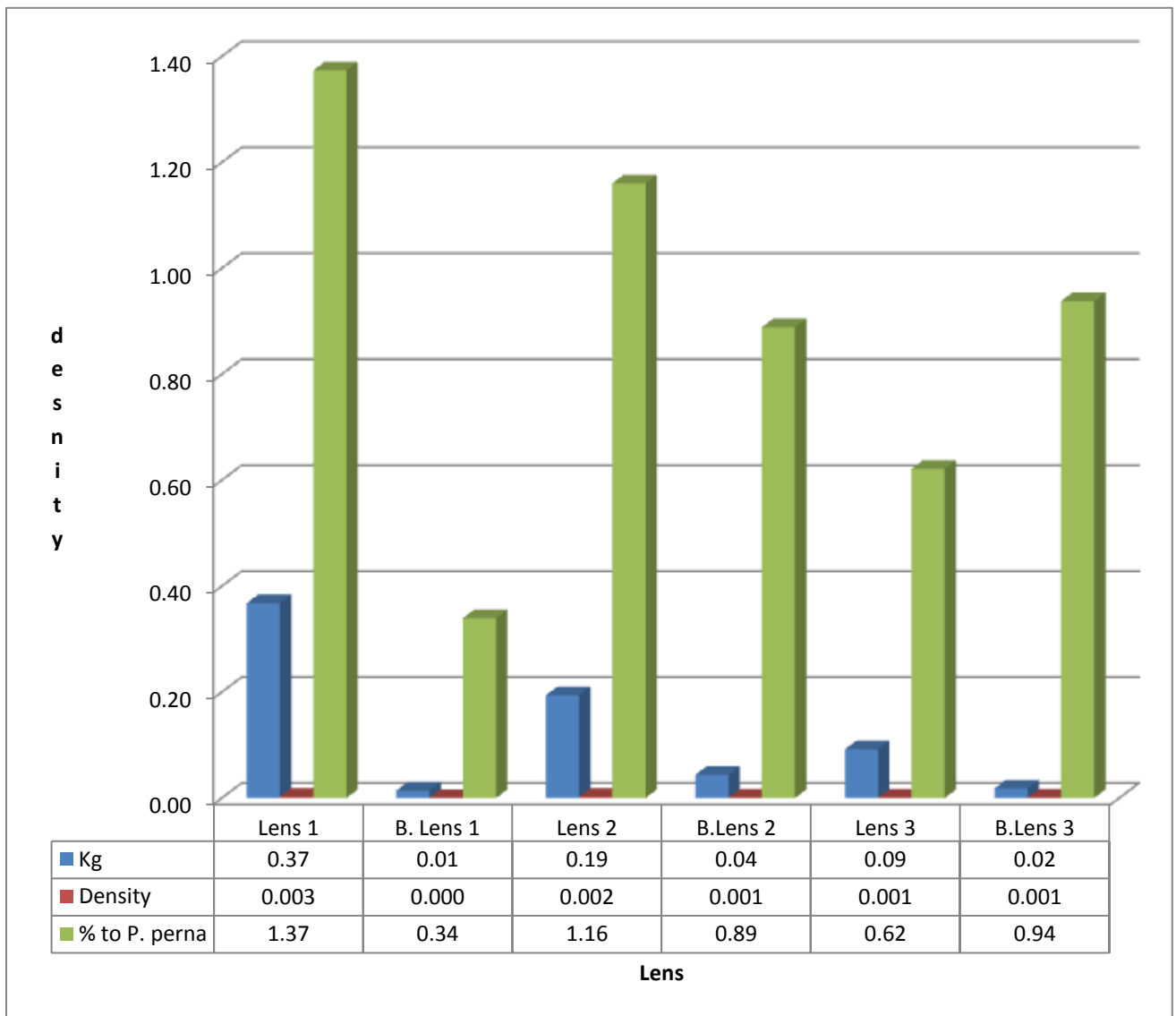
70kg of *P. perna* was excavated in one square. Lens 1, followed by 2 and then 3, has the highest weight of *P. perna*. However it is the inverse when considering the density of marine shell to total deposit. The differences are unlikely to be significant.

The MNI for each layer appears to be similar. The number of *P. perna* per layer per (bulk sample) quad ranges from 67 to 86 individuals. This means that there would be,

on average 281 – 324 individuals/m<sup>2</sup>. Since the midden, and lenses, covers approx. 4m<sup>2</sup>, one could extrapolate the MIN count further. We cannot assume that these were the amounts taken in one gathering. However, one can assume that each lens has several gathering episodes within a short time. None of the *P. perna* could be measured for size.

The category of 'Other shell' consists of other shell species that could have been used for food, or are accidental inclusions. The other food sources would include oyster, limpets and possibly chitons. Accidental inclusions would be barnacle (that grow on mussels), *Littorina spp.*, and small bivalves that could be gathered accidentally. The additional food species consist of 90% of the "other shell" category. The accidental inclusions are important in that they can be environmental indicators. Figure 29 summarises the results of 'other shell'.

**Fig. 29: Other Shell from MPE139**



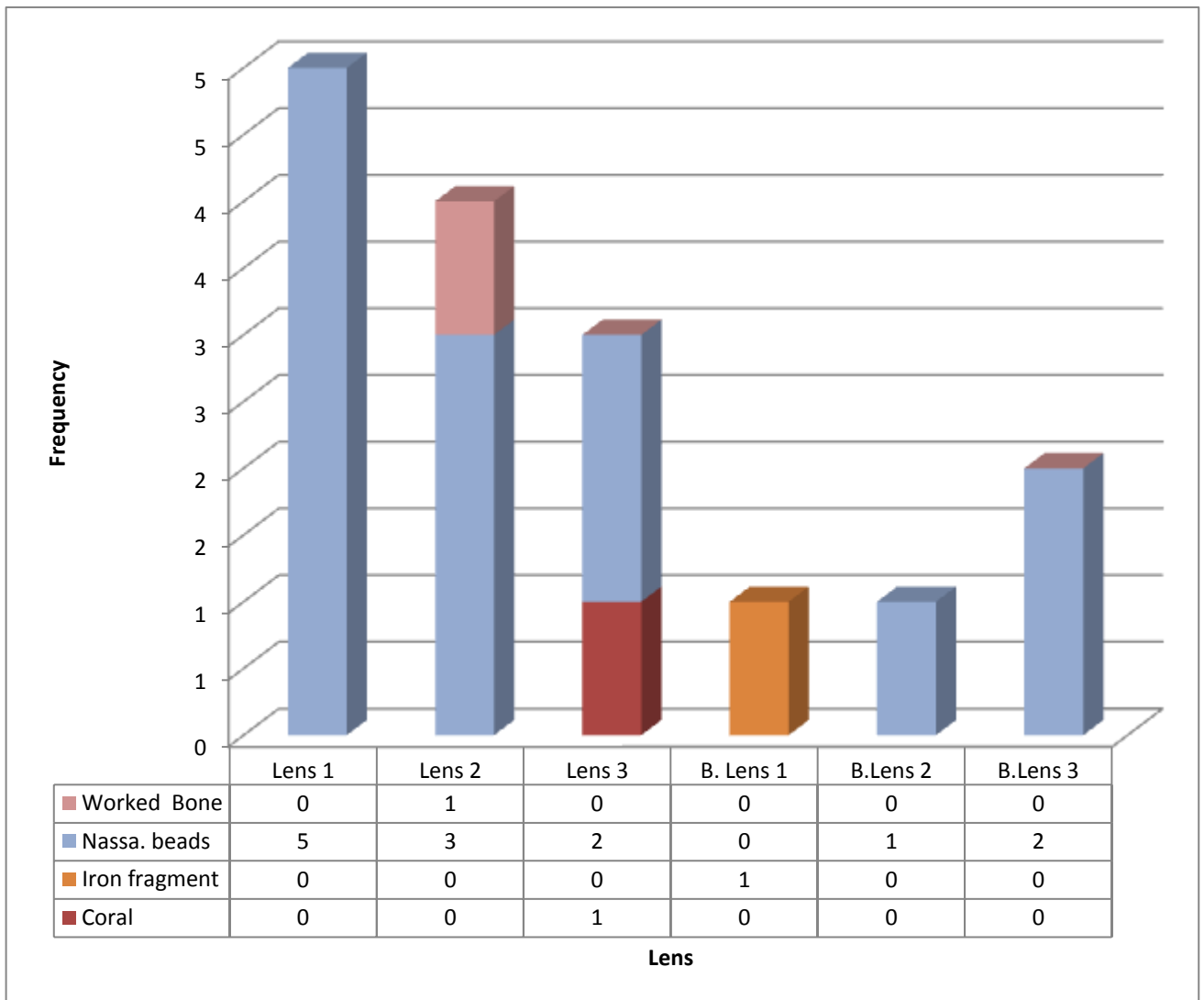
Very little coral was recovered from the samples. Coral can be used as a palaeo-environmental indicator, especially if certain isotopes are analysed.

### **Worked Material**

Worked material includes bone, shell and general artefacts normally used for adornments. Nassa beads are an acronym for *Nassarius kraussianus*. These are small colourful shells that are normally used for necklaces. They can be picked up on the beach or fresh from estuaries. Nassa beads are also referred to as 'tick shells'. These occur in all lenses (Fig. 30).

**Fig 30: Worked Materials at MPE139**





One fragment of worked bone occurred in Lens 2. The bone was polished on one side and angled on the other: it probably is a fragment of a bracelet. One fragment of iron artefact was recovered from Below Lens 1. It was too rusted for an accurate description, but appears to be in the shape of a sprig.

### **Charcoal**

Charcoal is mainly used for radiocarbon dating and to a lesser degree tree species identification. Unfortunately there is very little charcoal in the shell middens and there is on average 30g of charcoal per lens (see Table 1). Since the charcoal; is widespread throughout each lens I would not recommend that it be used for radiocarbon dating.

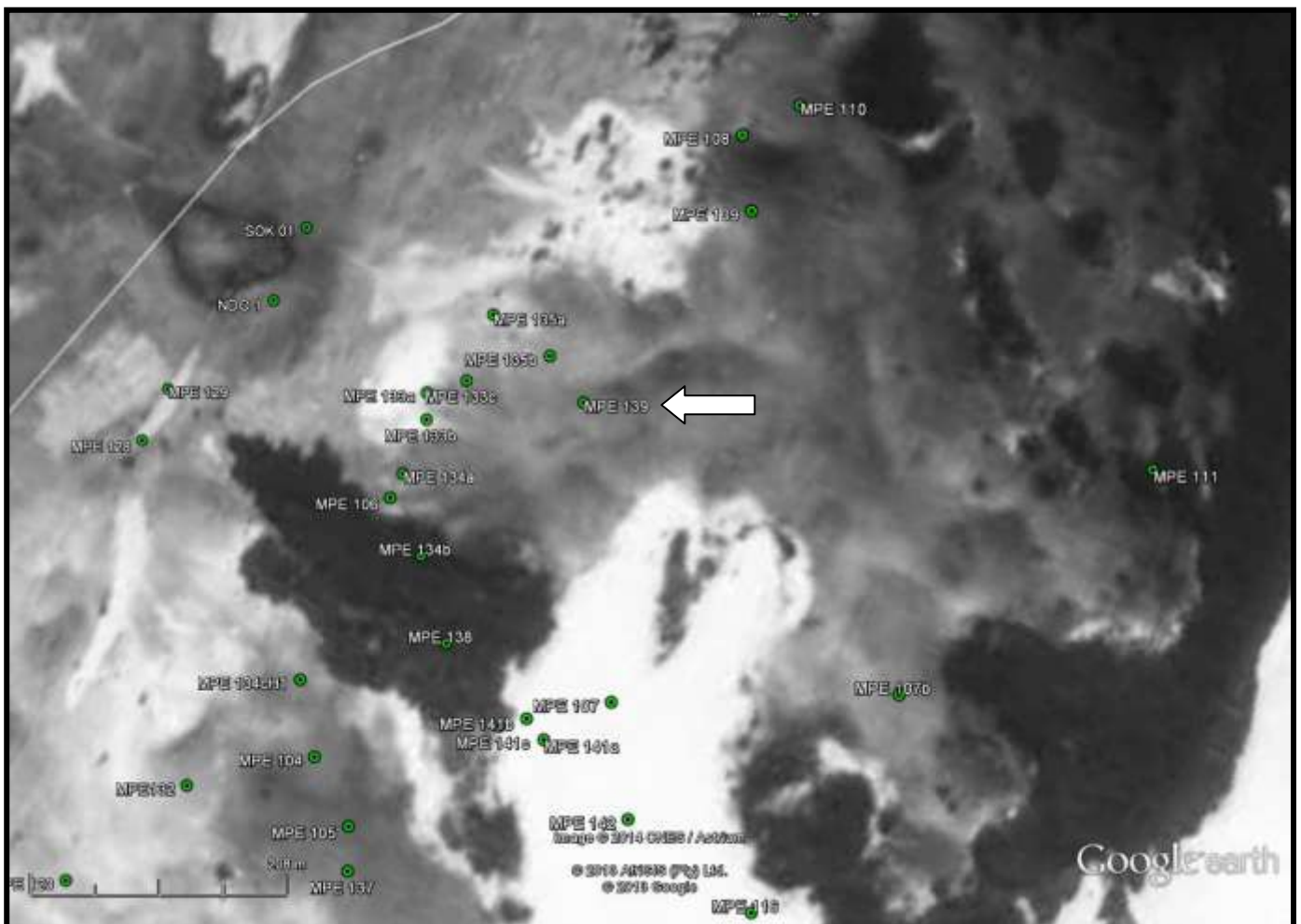
## Pottery

The pottery from MPE139 is all thin walled and undecorated. One rim was recorded and this was also undecorated. This suggests that the site probably dates to the Historical Period. Most of the pottery occurs in Lens 1, while Lenses 2 and 3 have similar amounts.

## Discussion

The shell midden from MPE139 is typical of other shell middens in the area. The 1942 topographical map does not indicate any homesteads in this area. The 1937 aerial photograph does not clearly show any homesteads either (fig. 31) – other homesteads are visible on these maps.

**Fig. 31: Location of MPE139 In 1937**



The shell sample is adequate for future analyses. The midden is an example of a single household's diet over a limited period. This can be compared with other shell middens that have been excavated over the years. These individual excavations allow for a several sites in a well defined area to form a tight chronological sequence of the area.

## **MPE148**

MPE148 is located just above Sokhulu Reservoir and on the first dune cordon from the hinterland. The site is the most northern site to be excavated so far in the mining lease. MPE148 could be related to the larger settlement of MPE108 and MPE110; however all three have been kept separated as there was no visible link between the sites.

MPE148 was exposed by a bulldozer cutting that cleared a platform for the drilling team in 2012. We had demarcated the area as a no-entry area and undertook the necessary notifications with the Supervisor. Excavations began in July 2013 and continued to December 2013. The site was impacted on two occasions by heavy duty machinery. On both occasions the signage had been removed and/or driven over, and the sections and excavations were damaged. An incident report was written and this is being currently investigated by RBM. The report is given in Appendix B.

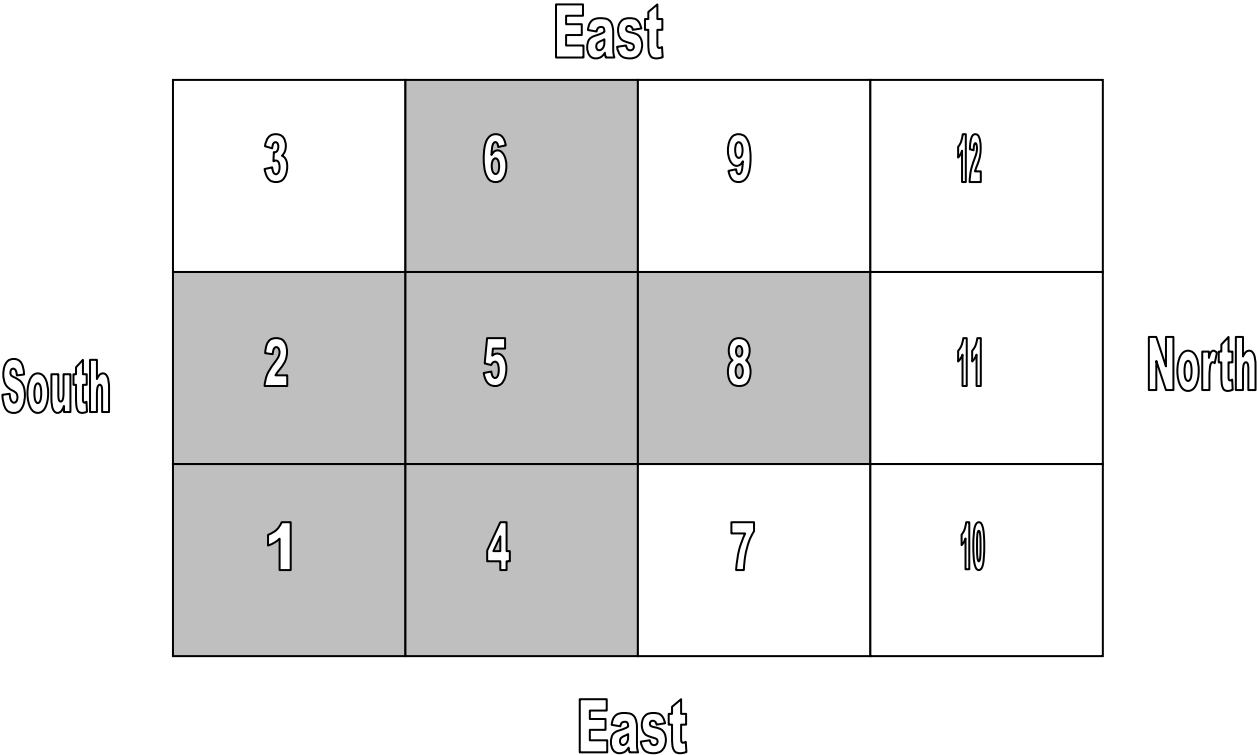
### **Site plan**

Twelve 1m x 1m squares were set out to the southwest of the cutting. Each square was subdivided in to 50cm x 50cm quadrants. The eastern squares were on the edge of the cutting and some of it had been disturbed during the cutting. The rest of the area to

the east of the excavations was monitored for potential human remains. Of the twelve squares, only squares 1, 2, 4, 5, 6 and 8 were excavated (fig. 32-33). This was considered to extensive enough for an adequate sample as half of the midden was excavated.

Bulk samples were taken from Square 5/NW quadrant and Square 6/SW quadrant. These were the approximate centre of the midden.

**Fig. 32: Excavation Plan of MPE148**





**Fig. 33: Excavation Squares at MPE148**



### **Stratigraphy**

The site has seven main lenses. Lenses 1 – 3 can be grouped into Unit 1, while lenses 4 – 7 can be grouped into Unit 2 (fig. 34). That is there is longer time difference between the two main units, than within the units. Lenses 1- 3 were also angled differently in the sections than were Lenses 4 – 7. The edges of Lenses 2 and 3 were at times mixed with Lens 4. In these instances the layer was removed as 'Mix'.

The lenses of Unit 1 followed a basic pattern of three depositions: An upper layer of compacted and broken shell with a thin sandy layer below it. This is followed by a thinner and less compacted layer of which there is burnt shell. The lower layer is not compacted and consists of loose sand and shell. Unit 2 consists of a thin layer of broken shell with brown sand below it (Lens 4). Lens 5 is a layer of less broken shell in a grey ashy soil and with a lot of burnt shell. Lens 6 is a layer of near complete shell in a brown-grey soil. Lens 7 is a layer of whole shell in brown sand.

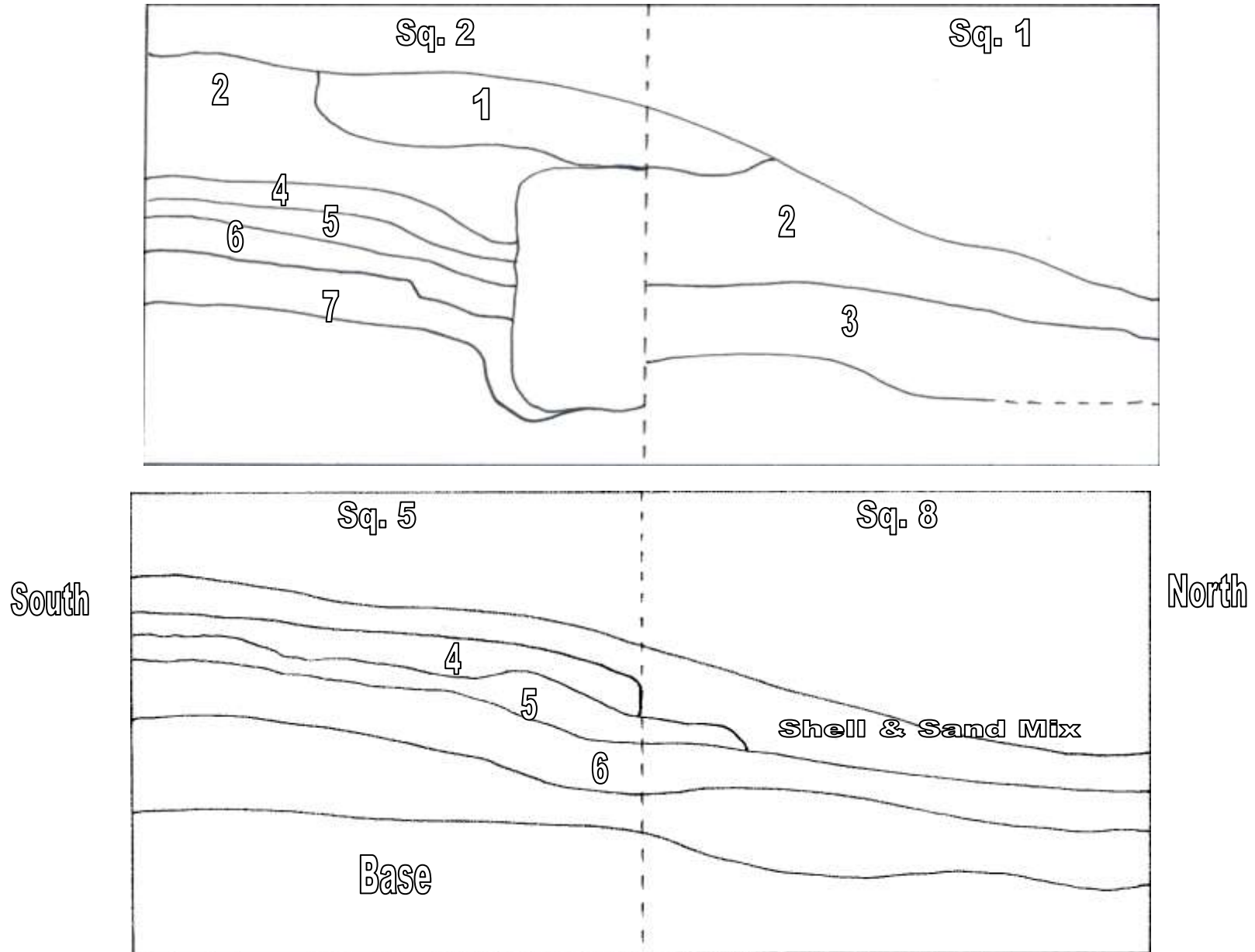
Figures 34 – 37 illustrate and show these sections.

The base of Lens 6 in Squares 5 and 8 formed a small basin that appeared to be a small pit.

Squares 1 and 4 were damaged during the initial bush clearance and the eastern quads were essentially mixed with several lenses. These were removed as one lens and not included in the general analyses.

An additional 30cm was excavated below each square to test for human remains. Older human remains, in the mining lease, tend to be found either directly below shell middens, or within 5m of it. It was for this reason that we were monitoring the cleared area to the east of the excavations.

**Fig. 34: Section Drawings of MPE148**





**Fig 35: Sq2/NW section**



**Fig. 36: Sq. 8 West Section**



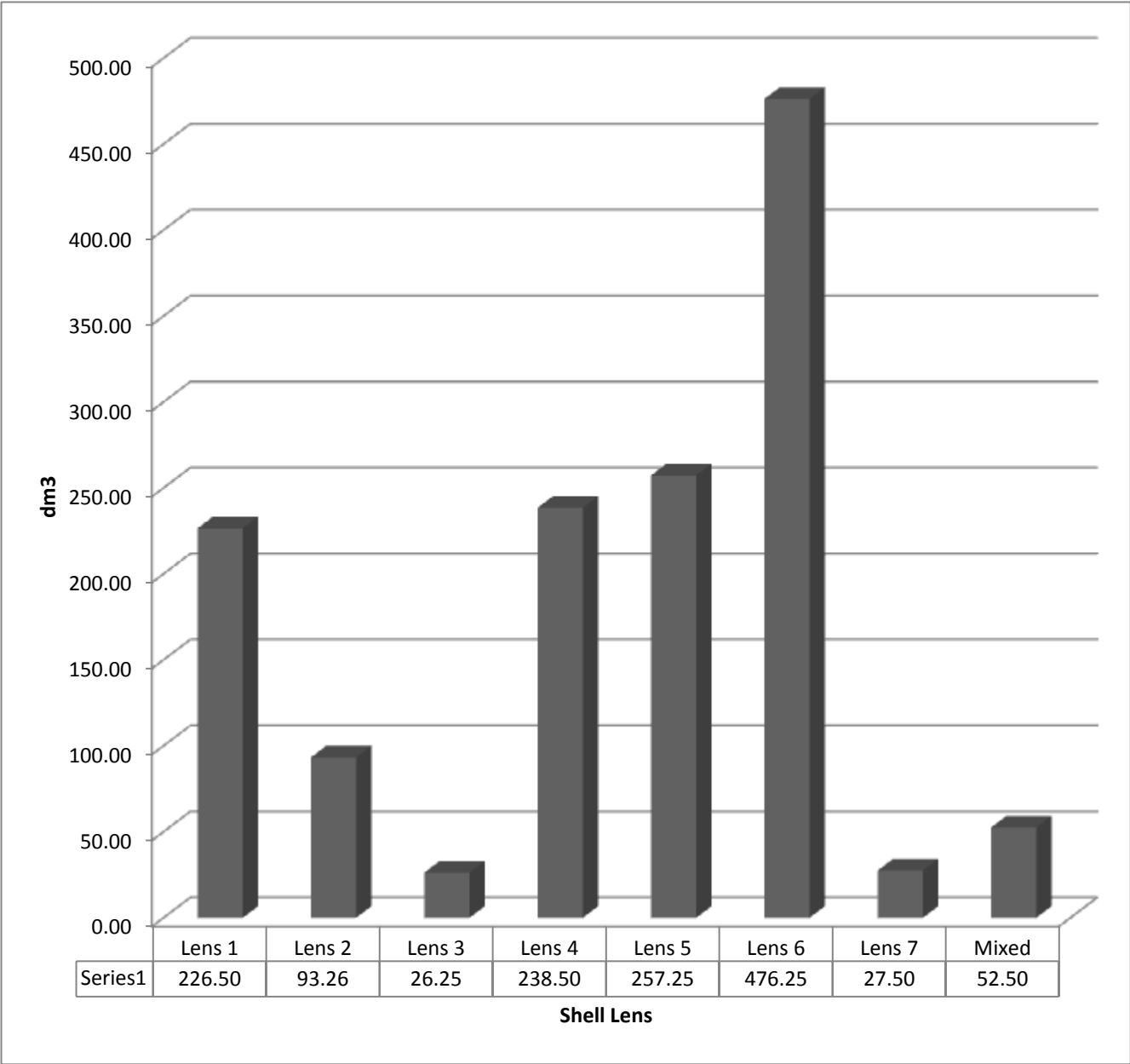


**Fig. 37: West Sections of MPE148**

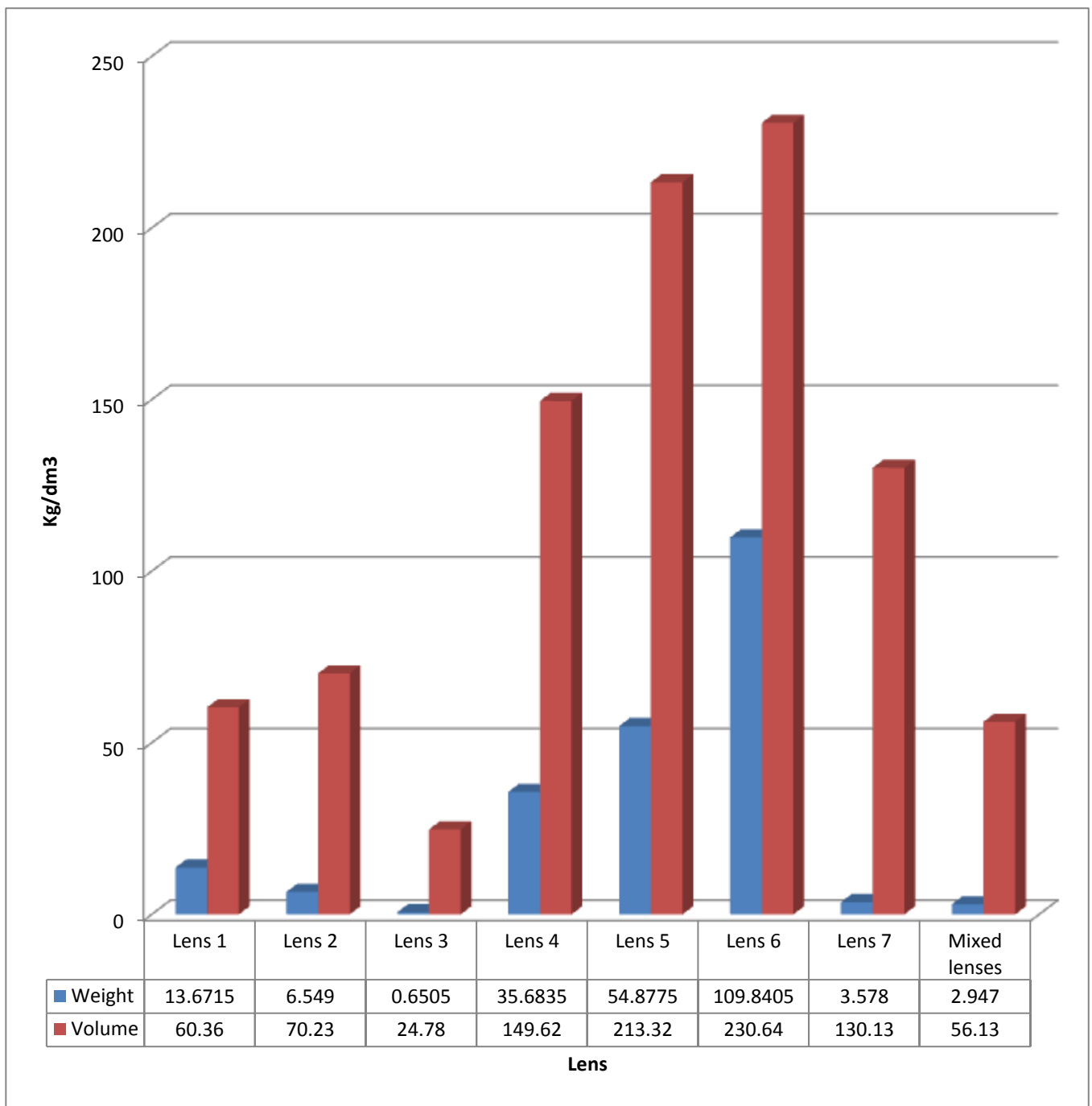


Lens 6 had the highest volume of deposit followed by lenses 5, 4, and 1m (fig. 38). This is repeated when one analyses the volume and density of *P. perna* (fig. 38). This indicates that Lenses 6, 5 and 4 were the most compact lens of the site. The other lenses were more fragmented and substantially mixed with sand. This may be indicative of more shellfish being collected and dumped at specific times.

**Fig. 38: Volume of Deposit per Lens at MPE148**



**Fig. 39: Weight and Density of *P. perna* at MPE139**



**Artefacts**

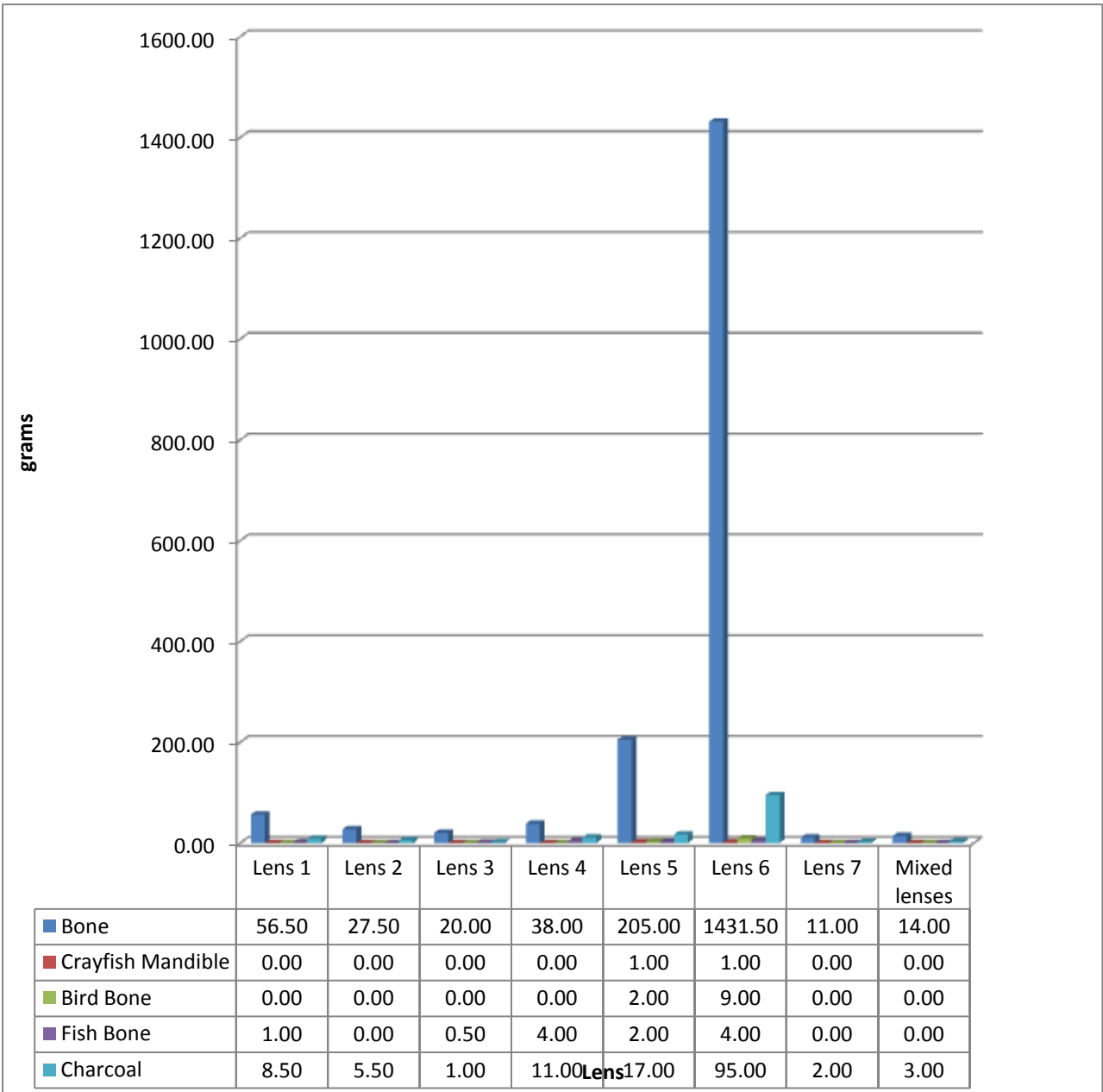
The artefacts and ecofacts from MPE148 are summarised in Table 2.

**Bone**

Faunal remains are shown in Figure 39. The most abundant mammal bone is that of a hippopotamus. The main hippo finds occurred at the interface of lens 5 and 6 (fig. 40).

The large amount of faunal remains on the Surface (SF) is of the same animal. The main body parts of the hippo were the distal parts of the leg, i.e. the carpals/tarsals and metacarpals/metatarsals (fig. 41). Two canines (hippo) were excavated as well. A few domestic bovid bones did occur, as well as isolated bird long bone fragments. Two tortoise plastrons were noted on the surface but omitted from the analyses as they could have been recent items.

**Fig. 40: Faunal Remains at MPE148**





**Table 2: Artefacts and Ecofacts from MPE148**

			SF	Lens 1	Lens 2	Lens 3	Lens 4	Lens 5	Lens 6	Lens 7	Mixed lenses	Total
Bone	General Bone	Weight	270	56.5	27.5	20	38	205	1431.5	11	14	2073.5
	Crayfish Mandible	n	0	0	0	0	0	1	1	0	0	2
	Fish Teeth	n	0	0	0	0	0	2	9	0	0	11
	Fish	Weight	0	1	0	0.5	4	2	4	0	0	11.5
Stone	Manuport		0	0	0	0	0	0	0	0	0	0
	Smoothed Stone	Weight	0	0	0	0	2	14	30	0	0	46
		n	0	0	0	0	1	1	5	0	0	7
	water worn stone	weight	36	93	49	4	238	392	1040.5	48	26	1926.5
	Upper G/Stone	Weight	438	904	0	0	18	0	0	0	0	1360
		n	3	1	0	0	1	0	0	0	0	5
Lower G/Stone	Weight	340	50	648	0	296	48	0	0	0	1382	
	n	1	1	3	0	3	5	0	0	0	13	
Shell	Nassa. beads	n	0	0	0	0	4	0	6	1	0	11
	Coral	n	0	0	1	0	0	0	3	0	0	4
	Worked shell	n	0	0	0	0	0	0	6	0	1	7
	Charcoal	weight	2	8.5	5.5	1	11	17	95	2	3	145
	Pendant (oyster)	n	0	0	0	0	1	0	0	0	0	1
		P. perna	Left	0	0	0	0	350	379	1318	0	0
	Right		0	0	0	0	240	430	1512	0	0	2182
		(grams)	0	13672	6549	650.5	35683.5	54877.5	109840.5	3578	2947	227798
Other Shell	Shell	6.5	24.5	13.5	0	84	67.5	402.5	9	3	610.5	
Pottery	Pottery	(grams)	443	43	133	50	130	68	676	0	38	1580.5
Total	Total	Weight	2569	14852	8422	726	36504fs	55692	113524	3648	4027.5	239965

**Fig. 41: Hippopotamus Remains on Lens 6**



Fish bone consisted of mainly vertebrae and vertebrae spines.

Bird bone consisted of a three long bones and could not be identified.

A single crayfish mandible was excavated from Lens 5. This is an unusual find for the mining lease.

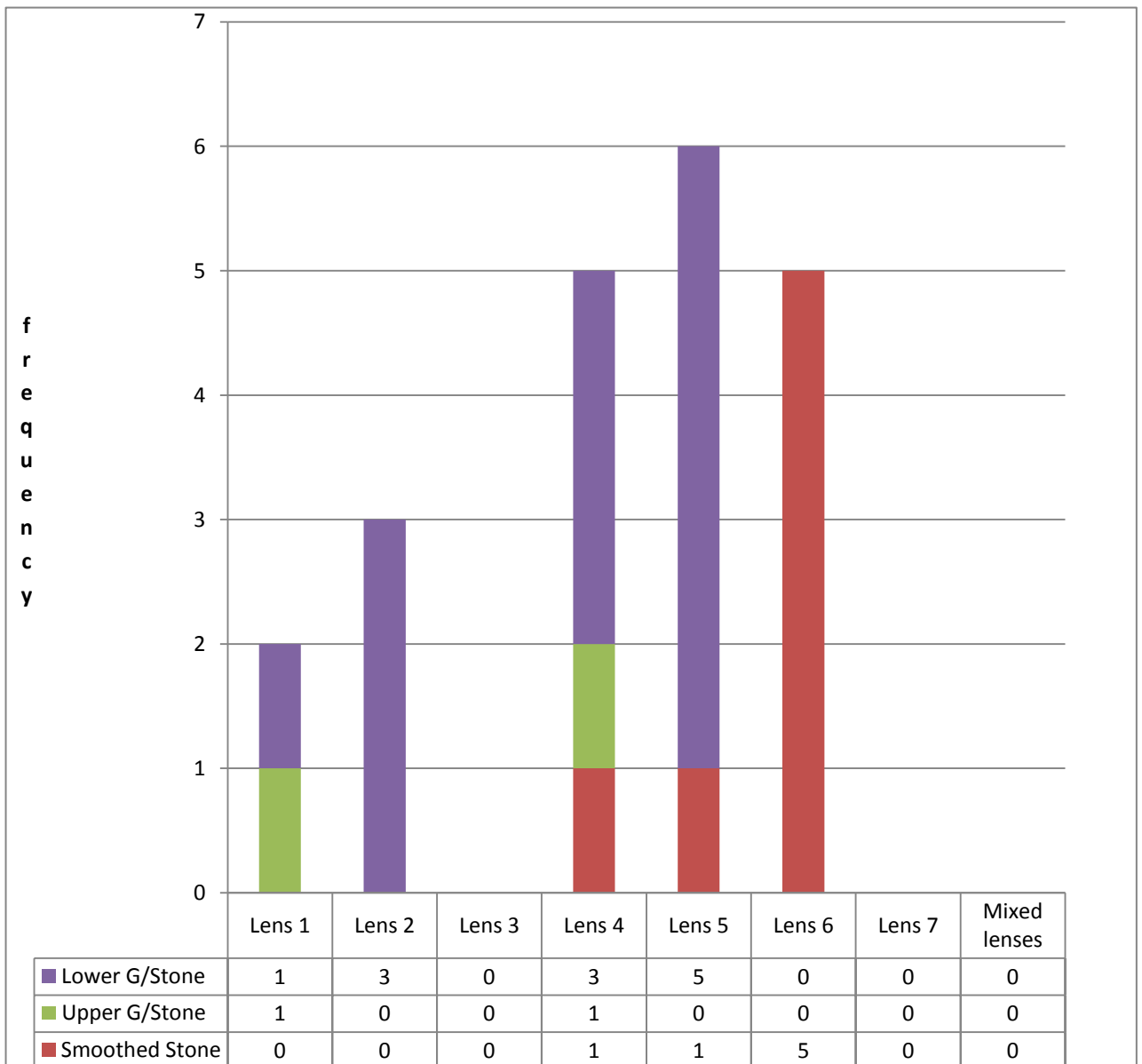
### **Stone**

The results of the stone analyses are shown in figure 42.

Most of the smoothed stone came from Lens 6.

As with shell, water worn stone is the densest in Lens 6. Lens 7 does however have a higher ration of water worn shell to *P. perna*, when compared to other lenses. The other lenses have similar rations.

**Fig. 42: Results of Stone Analyses at MPE148**



Lower grinding stones are mostly fragments from white beach sandstone and occur in most lenses. Only two upper grinding stones were recovered from the excavations; however several were noted on the surface.

**Shell**

The *P. perna* sample from the excavations yielded many complete shells. Most of the shell from Lenses 5, 6 and 7 were whole in the excavations. However the shell is very brittle and breaks during excavations. Both Lenses 6 and 7 had several unopened *P. perna* as well. Some of these were sampled for possible biological analyses. That is

since the shell had not been opened, there should still be organic traces inside the shell. Most of the unopened shell came from Square 6 layers.

The Minimum Number of Individuals (MNI) for lefts/rights for lenses 4, 5, 6 is 240, 379 and 1318, respectively. The total MNI for the three lenses would be 2047. Similarly the maximum number of individuals would be 350, 379, and 1512, respectively. Since these were taken from two quads, the results would need to be multiplied by four for estimated excavation figures, and probably multiplied by six to eight times for site figures. Lens 6 has the highest volume of deposit, and thus would have the highest MNI counts. However, Lens 6 has a substantial higher amount of mussel than the other lenses and we believe this is a period of heightened shellfish gathering. The higher numbers could also be due to the higher numbers of unopened shells in Lens 6. The number of unopened shells was not quantitatively recorded, but is an observation.

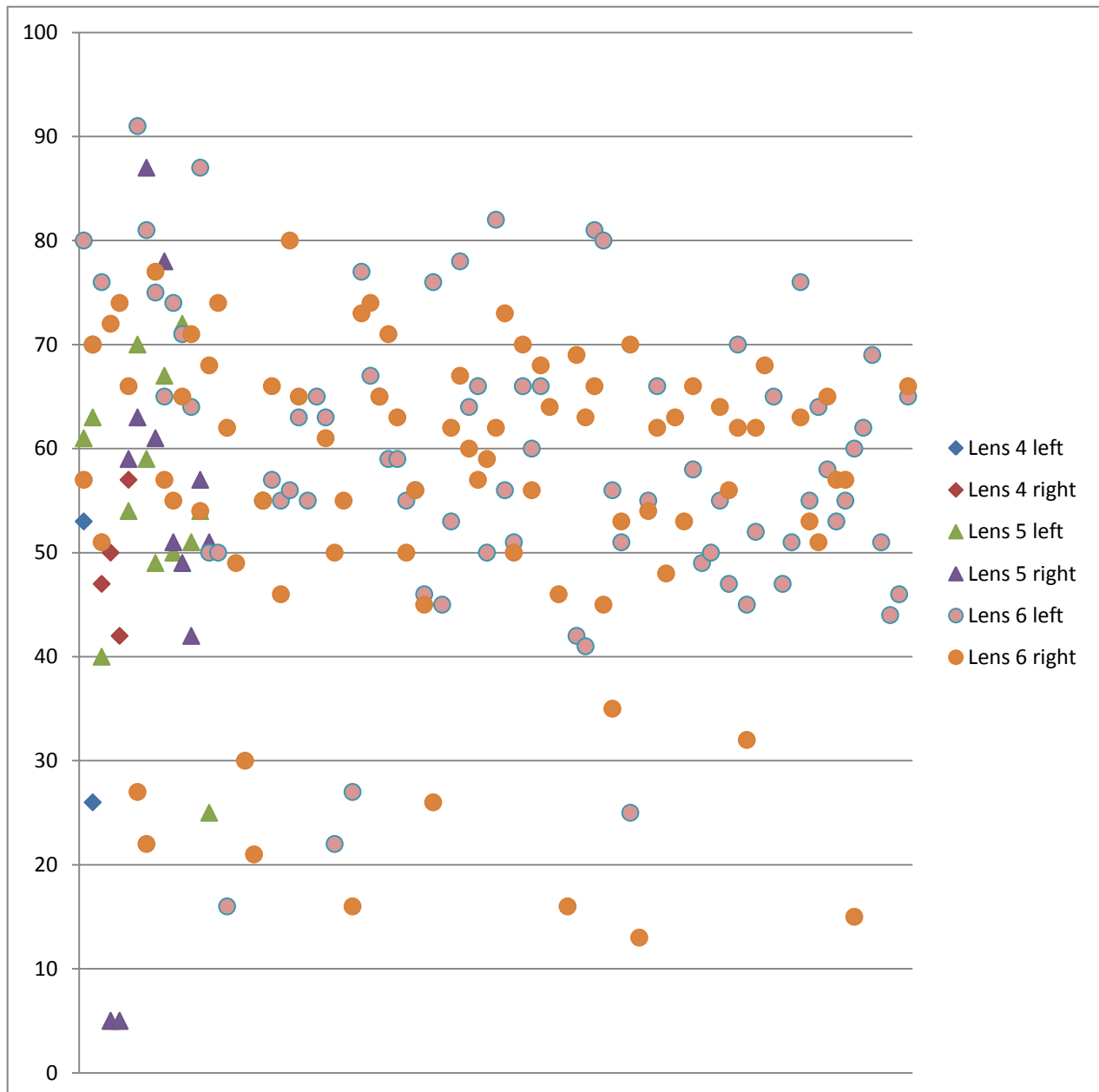
Table 3 lists the shell sizes. The size of the mussels tends to be on the small size. The mussel sizes appear to have become smaller through time (on mean average), despite Lens 6 being a period of more gathering. Other sites have had higher mean averages.

**Table 3: *P. perna* Measurements from MPE149**

	<b>Average</b>	<b>Median</b>	<b>Max</b>	<b>Min</b>	<b>Frequency</b>
Total Left	56.9	56	91	5	95
Total Right	55.0	57	87	5	96
Total All	56.0	57	91	5	191
Lens 4 Left	43.3	51	53	26	3
Lens 4 Right	48.3	54	72	5	4
Total Lens 4	46.6	50	57	26	7
Lens 5 Left	48.3	54	72	5	15
Lens 5 Right	50.7	54	87	5	12
Total Lens 5	49.4	54	87	5	27
Lens 6 Left	59.1	58	91	16	78
Lens 6 Right	56.0	60.5	80	13	80
Total Lens 6	57.5	59	91	13	158

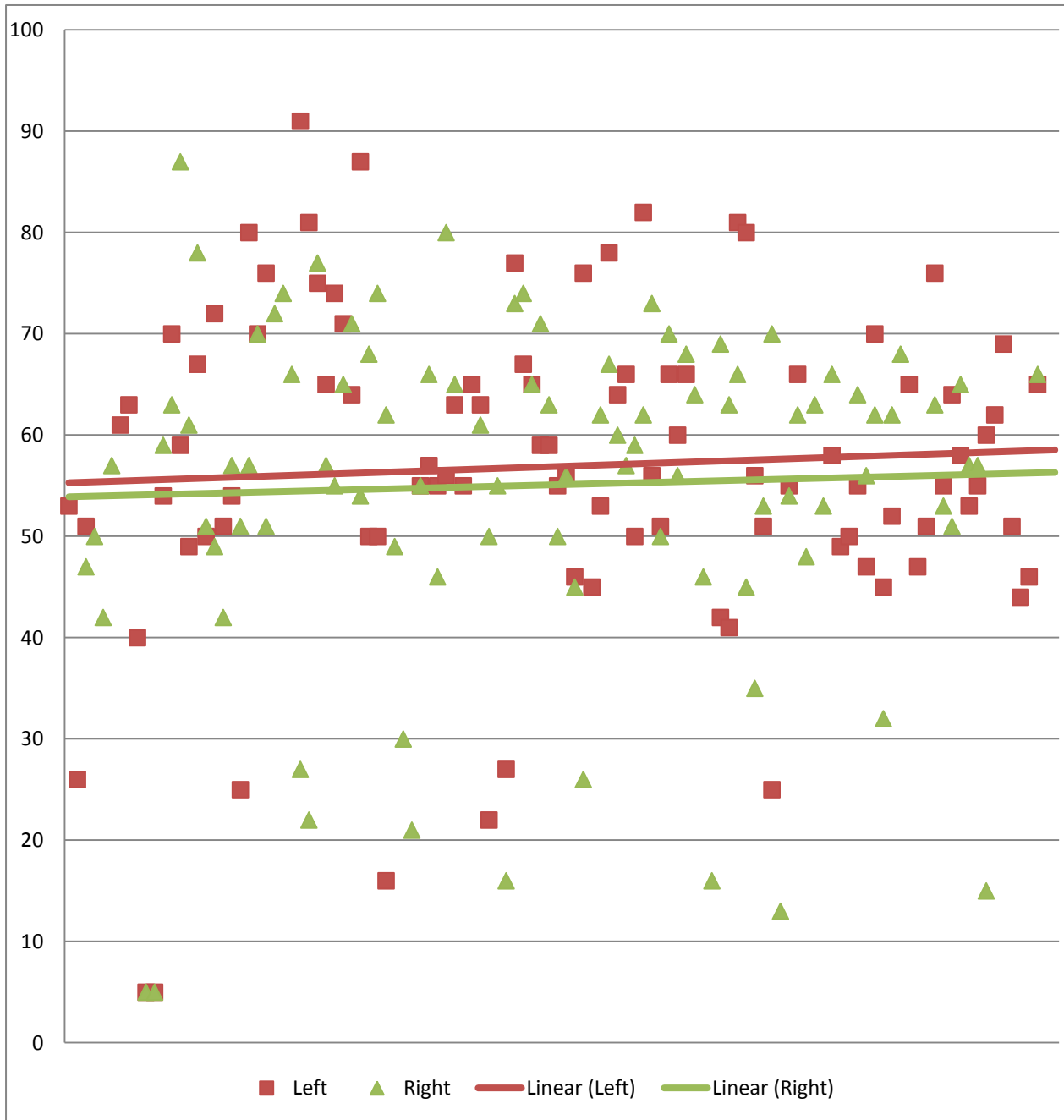
Figures 43 and 44 illustrate the sizes per lens and the totals. The shell lengths indicate that there was not a selective gathering of *P. perna*, i.e. large individuals were only chosen; rather *P. perna* was collected in clusters regardless of size.

**Fig. 43: Left/Right *P. perna* Measurements per Layer**



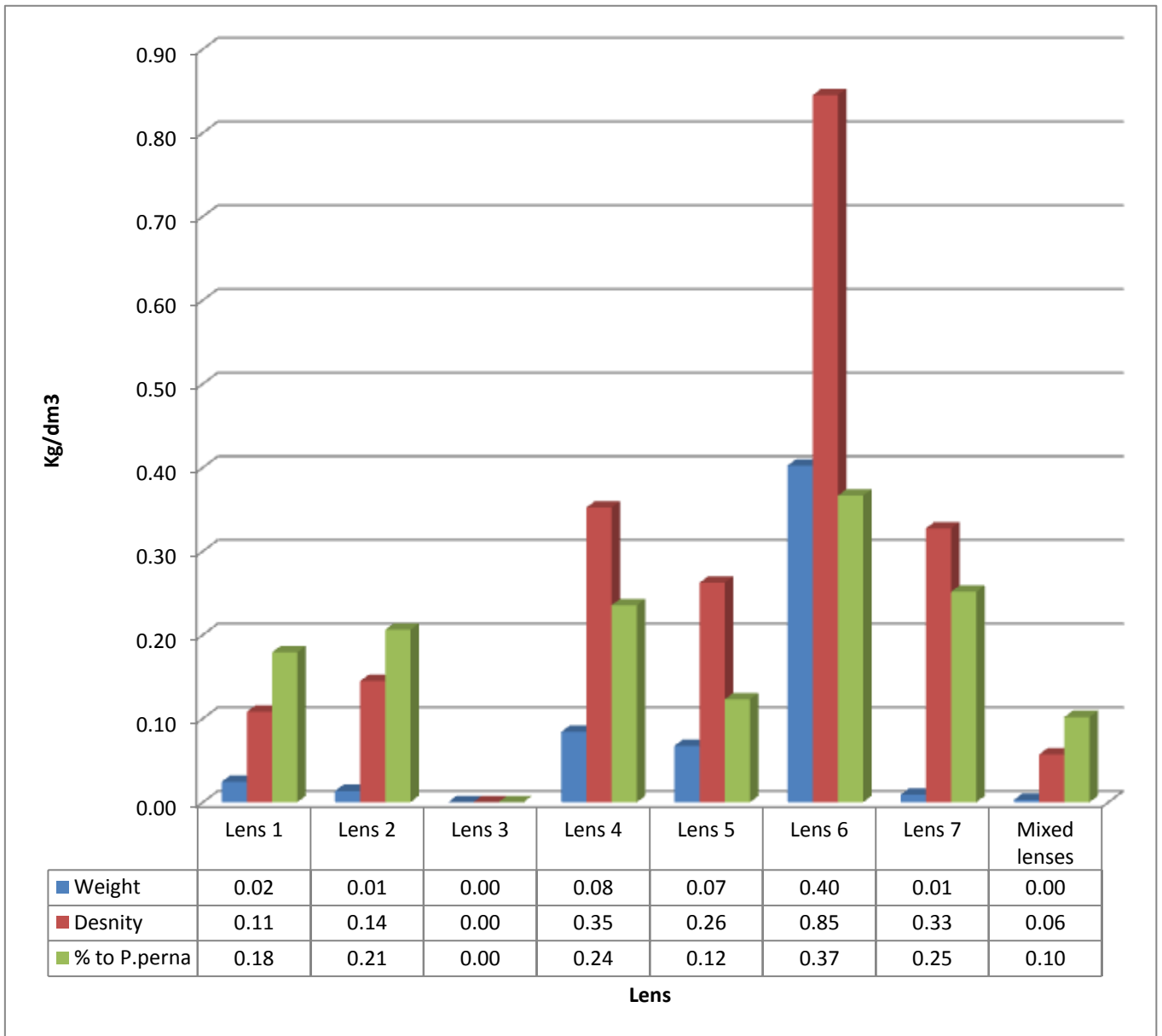


**Fig. 44: Total Left/Right *P. perna* Measurements**



Other shell species included chiton, limpets, oyster, *Fissurellidaea spp.*, *Littorina spp.* and barnacle. They are never abundant and contribute little to the overall diet. Fig. 45 illustrates these weights. As with other material, Lens 6 has the highest weight and density of other shell compared to surrounding lenses.

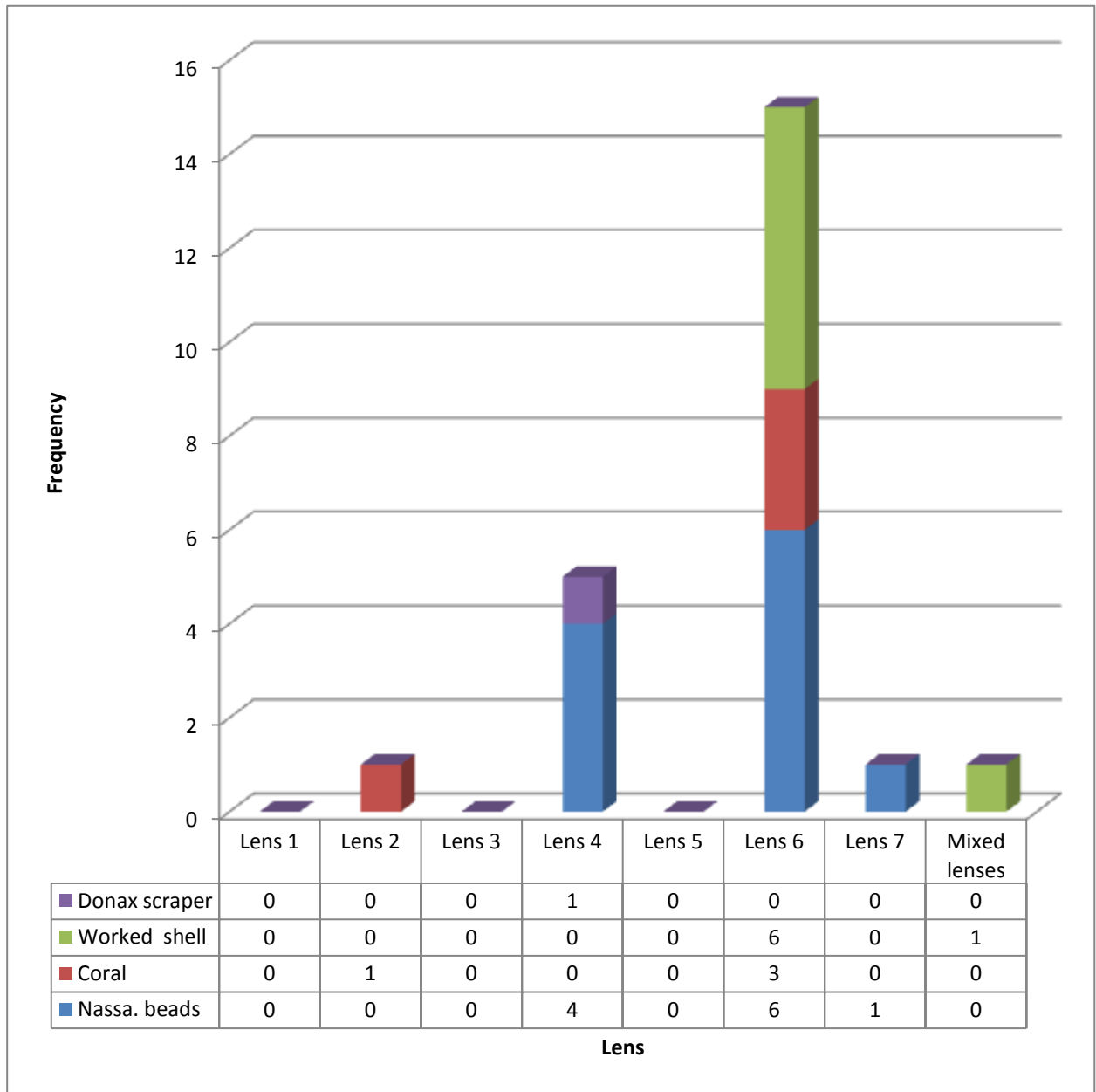
**Fig. 45: Other Shell Density, Weight and Percentages.**



Coral occurs infrequently at the site and occurs mostly in Lens 6. Figure 46 shows these results.

Worked shell occurs in Lenses 4 and 6. There is one mostly “Donax scraper” in Lens 4. “Donax scrapers” are the hinges of a (white clam) bivalve, which shows evidence of being used as a scraper. Lens 6 has most of the worked shell. These are fragments of oyster shell that appear to have been smoothed around the edges. These could be the beginning of pendants. Figure 45 shows these results.

**Fig. 46: Worked Shell and Adornments at MPE148**



**Adornments**

The adornments at MPE148 are Nassa beads. These occur in Lenses 4 and 6.

**Charcoal**

The charcoal sample from the site in general is poor. However, Lens 6 did yield a substantial amount of charcoal. These could be tentatively used for radiocarbon dating. One must remember that the charcoal is removed as fragments thought the lens over eight quads (in this instance), and thus the charcoal may not be directly related to a single episode or fire. Where charcoal occurs in large lumps, it is removed separately during the excavation and bagged directly for radiocarbon dating.

### **Pottery**

Pottery was excavated throughout the shell midden, however most of it was found in Lens 6. Most of the pottery is undecorated. One sherd had lip notching. This suggests that the site probably dates to the Historical Period.

### **Discussion**

The site yielded a good sample of faunal and shellfish remains. The abundance of charcoal and bone would be useful for radiocarbon dating purposes. The midden had a dense deposit in three of the squares and provided an average *P. perna* sample size for measurements. All excavated sites have the *P. perna* measured where possible, so as to generate a general pattern of shellfish exploitation through time. Limpets could be used for measurements; however they occur infrequently in the deposit to make a meaningful statement.

The site probably dates to the 18<sup>th</sup> – 19<sup>th</sup> century given the lack of decorations on the pottery. There are several shell middens within a 150m radius of this site, and these probably form part of the same larger family settlement. The next “family site” of this area to be excavated will be MPE110

The area will continue to be monitored until mining occurs as we expect human remains to occur. It is for this reason that the area has been demarcated until mining begins.

## **FUTURE EXCAVATIONS**



## **MPE110**

MPE110 has been previously recorded and sampled by a small excavation in 2012. Recently more of the site was exposed by bulldozer activity where a shell midden was exposed in the cutting (fig. 47). The site was demarcated for future excavations; however, a bulldozer had driven over the signage, and slightly impacted the site (fig. 48). This incident was reported to the supervisor and manager and is being investigated. The site was demarcated again, with more poles. Demarcation had to be redone, as the original metal poles had been removed (or stolen) from the site.

More recently, we had an excavator remove the top soil above the midden, in the same manner as at MPE139. The excavator left 0.5m of deposit above the midden and exposed the beginnings of a possible hut floor and/or general living area (fig. 49). The site was cleared in December 2013, and we are letting the sand settle and the wind expose more of the site. We intend to excavate the site in April 2014. Between our December 2013 and January 2014 surveys, the site was again impacted whereby signage was pushed over and we assume a bulldozer had driven through part of the site (fig. 50). The main site was not damaged; however there is a deposit in the centre of the site. This is being recorded as an environmental incident with RBM.

**Fig. 47: Demarcated Site at MPE 110**



**Fig. 48: Bulldozer Activity and Missing Demarcation Signs At MPE 110**



**Fig. 49: Re-demarcated Site at MPE 110 after Topsoil Clearance**



**Fig. 50: Site Impact at MPE110**





## CONCLUSION

A total of 25 archaeological sites were recorded in 2013, and three sites were excavated. Most of the 25 sites were sampled. The sites dated from the Late Stone Age to the early 20<sup>th</sup> century and form part of an increased sample size of archaeological sites in the mining lease. Early Iron Age sites appear to have decreased in occurrences, while there is an increase in Late Iron Age and Historical Period sites. This is, however, due to the location of the mining operations that are currently concentrating on taller dunes, which were favoured by the latter settlements. There should be an increase in Early Iron Age sites once MPE extends along the lower areas north of Sokhulu Reservoir.

The current heritage mitigation is still uncovering new finds, and increasing data to the general heritage of the area. The occurrence of a small oyster button is unique, while the occurrence of two human remains, that are probably related, is rare. The occurrence of Mpambanyoni pottery at one site is also rare for this area as only two other sites have this type of decoration.

Shell middens, and their surrounding areas, are always targeted as these yield better preserved artefacts and human remains. The increase in faunal remains assemblages is important for the eventual reconstruction of the animal species over time in this area. For example, the occurrence of a small, yet fully developed elephant cranium in 2010 within the dune system is intriguing. Smaller mammal and bird remains would also be informative, as would be the smaller shell species that are palaeo-environmental indicators. The coral fragments, limpets and even the *P. perna* have potential for scientific research if the isotopes are analysed, e.g. in sea temperature changes over time. The *P. perna* size measurements have use through not only indicating human harvesting patterns through time, but also the impact this may have made on the shellfish populations. This in turn would have relevance for more recent impact studies undertaken brown mussel exploitation KwaZulu-Natal and further afield. Some of the research (e.g. Proudfoot et al, 2006) suggests that there is a significant change in species size over time due to human exploitation. It is important that the shell middens along the eastern seaboard are systematically sampled and excavated as these have relevance to contemporary research (see research undertaken by the Oceanographic Research Institute (<http://www.seaworld.org.za/research/>) as one

example. The sampling and excavations of these middens is also important in that dune mining removes the entire midden during operations, and thus the material is lost forever. Human skeletal remains dating back to the 11<sup>th</sup> century are being uncovered. We expect an increase in 18<sup>th</sup> – 20<sup>th</sup> century human remains in the area around Sokhulu Reservoir, as the recorded sites suggest this area was more recently occupied.

Mining Ponds D and E will be entering an archaeologically rich area in 2014. These sites will be close to the St Lucia estuary, and it will be interesting to see how, or if, they differ to the sites more to the south. Mining Pond A and C are entering areas of medium archaeological sensitivity. These two ponds will be mining the first main and highest) dune cordon from the beach.

## REFERENCES

Oceanographic Research Institute 2014. <http://www.seaworld.org.za/research/>

Proudfoot, L., Kaehler, S. McGarry, D. , Uppink, P. Aereboe, M and Morris, K. 2006 Exploitation status of infralittoral abalone (*Haliotis midae*) and alikreukel (*Turbo sarmaticus*) in the southern section of the Eastern Cape coast. *South Africa. South African Journal of Science* **102** 162 - 168



**APPENDIX A**  
**SITE RECORD FORMS**

# UMLANDO ARCHAEOLOGICAL SITE RECORD FORM



SITE CATEGORY: (X where applicable)

Stone Age:?

Early Iron Age:?

Late Iron Age:?

Historical Period:X

Recorder's Site No.: AMS025

Official Name: Location # 4

Local Name:

Map Sheet: 2832CA Cape St Lucia

GPS reading: S: 28 34 11.14 E: 32 21 23.4 Alt. 115m (approx. location)

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

AMS025 is located on the first dune cordon from the ocean on the top of the hill

SITE DESCRIPTION:

Type of Site: Open. Human remains

Merits conservation: No – remains came through mining

Threats: Yes

What threats: RBM Mining

RECORDING:

Graphic record: Yes

Digital pictures: x

Tracings:

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 25 March 2013

Owner:

References:

Description of site and artefactual content.

Partial child cranium found at Dry mining face. See report for details

# UMLANDO ARCHAEOLOGICAL SITE RECORD FORM



Umlando Archaeological Trust  
& Resource Management  
P.O. Box 102532, Meerensee, 3901  
Ph: 033-7631788 / 0834883852 / 0723481527

SITE CATEGORY: (X where applicable)

Stone Age: x

Early Iron Age:

Late Iron Age:

Historical Period:

Recorder's Site No.: MPC098

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28 35 05.5 E: 32 20 35.3 Alt. 73m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPC098 is located on the first main dune cordon from the ocean.

SITE DESCRIPTION:

Type of Site: Open

Merits conservation: The site is of low significance and no further mitigation is required.

Threats: Yes

What threats: RBM Mining

RECORDING:

Graphic record:

Digital pictures:

Tracings :

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 16 January 2013

Owner:

References:

Description of site and artefactual content.

It consists of an ephemeral shell midden and grinding stones on the surface.

## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM



SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age: ?

Late Iron Age: ?

Historical Period: ?

Recorder's Site No.: MPD 102

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28 33 54.6 E: 32 21 09.7 Alt. 72m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPD 102 is located on the second dune cordon from the ocean. It is situated on the main back road between MPC and MPD.

SITE DESCRIPTION:

Type of Site: Open

Merits conservation: The site is of low significance and no further mitigation is required.

Threats: Yes

What threats: RBM Mining

RECORDING:

Graphic record: No

Digital pictures:

Tracings:

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 19 April 2013

Owner:

References:

Description of site and artefactual content.

The site consists of a scatter of undecorated pottery on the surface.

# UMLANDO ARCHAEOLOGICAL SITE RECORD FORM



Umlando Archaeological Trust  
& Resource Management  
P.O. Box 102532, Meerensee, 3901  
Ph: 033-7631788 / 0834883862 / 0723481327

SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age: ?

Historical Period:

Recorder's Site No.: MPD 103

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28 33 06.3 E: 32 21 52.7 Alt. 132m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPD 103 is located on the second dune cordon from the ocean.

SITE DESCRIPTION:

Type of Site: Open

Merits conservation: The site is of low significance and no further mitigation is required.

Threats: Yes

What threats: RBM Mining

RECORDING:

Graphic record: n/a

Digital pictures:

Tracings:

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 14 May 2013

Owner:

References:

Description of site and artefactual content.

The site consists of a single, ephemeral shell midden of mainly brown mussel.

The site is of low significance and no further mitigation is required.



## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM



SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age: x

Historical Period:

Recorder's Site No.: MPE138

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28 32 29.0 E: 32 22 14.8 Alt. 102m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPE 138 is located on the second dune cordon from the ocean. It is close to MPE 134 and just below MPE 107b.

SITE DESCRIPTION:

Type of Site: Open. Midden

Merits conservation: The site is of low significance and no further mitigation is required. We did, however sample it.

Threats: Yes

What threats: RBM Mining

RECORDING:

Graphic record: Digital

Digital pictures:

Tracings :

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 16 January 2013

Owner:

References:

Description of site and artefactual content.

It consists of at least two ephemeral shell middens, as well as a surface scatter of undecorated pottery, bone, slag and upper grinding stones.

Bone appears to be bovid.

## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM



Umlando Archaeological Trust  
& Resource Management  
P.O. Box 102532, Meerensee, 3901  
Ph: 031-7631788 / 0834883852 / 0723481327

SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age: x

Historical Period:

Recorder's Site No: MPE 139

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28 32 22.9 E: 32 22 18.8 Alt. 106m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPE 139 is located on the second dune cordon from the ocean.

SITE DESCRIPTION:

Type of Site: Open. Midden

Merits conservation: The site is of medium significance and we are currently performing test-pits to determine the extent and importance.

Threats: Yes

What threats: RBM Mining

RECORDING:

Graphic record: Digital

Digital pictures:

Tracings :

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 16 January 2013

Owner:

References:

Description of site and artefactual content.

It consists of a single shell midden which was exposed by road clearance.

## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM



SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age: ?

Historical Period: ?

Recorder's Site No.: MPE 140

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28 32 36.3 E: 32 22 19.2 Alt. 96.4m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPE 140 is located on the first dune cordon from Lake Nhlabane.

SITE DESCRIPTION:

Type of Site: Open. Midden

Merits conservation: The site is of indeterminate significance and will be monitored in the future.

Threats: Yes

What threats: RBM Mining

RECORDING:

Graphic record: Digital

Digital pictures:

Tracings :

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 25 January 2013

Owner:

References:

Description of site and artefactual content.

It consists of two shell scatters, but there is a possibility that it extends into the uncleared bush.

## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM



SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age: x

Historical Period:

Recorder's Site No.: MPE 141

Official Name:

Local Name:

Map Sheet:

GPS reading: a) S: 28 32 31.3 E: 32 22 17.7 Alt. 128m

b) S:28 32 30.8 E: 32 22 17.2 Alt. 129m

c) S: 28 32 31.0 E: 32 22 16.4 Alt. 128m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPE 141 is located 100m southwest of MPE 107b, on the first dune cordon from Lake Nhlabane.

SITE DESCRIPTION:

Type of Site: Open. Midden

Merits conservation: The site is of medium significance and has been sampled. It will also be monitored in the future.

Threats: Yes

What threats: RBM Mining

RECORDING:

Graphic record: Digital

Digital pictures:

Tracings :

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 25 January 2013

Owner:

References:

Description of site and artefactual content.

The site was divided into areas a, b and c to accommodate the extent of it.

It consists of:

a) Partial human remains scattered over a 3m x 4m area

b) A large shell scatter

c) A large shell scatter with surface grinding stones and pottery.

## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM



SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age: x

Historical Period:

Recorder's Site No.: MPE 142

Official Name: Location # 4

Local Name:

Map Sheet: 2832CA Cape St Lucia

GPS reading: S: 28 32 33.2 E: 32 22 20.1 Alt. 127m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPE 142 is located on the first dune cordon from Lake Nhlabane over a 30m x 30m and is most likely related to MPE 141.

SITE DESCRIPTION:

Type of Site: Open

Merits conservation: The site is of low significance and no further mitigation is required.

Threats: Yes

What threats: RBM Mining

RECORDING:

Graphic record: Yes

Digital pictures: x

Tracings:

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 12 March 2013

Owner:

References:

Description of site and artefactual content.

It consists of an ephemeral shell midden, as well as a surface scatter of undecorated pottery, bone and upper grinding stones. Bone appears to be bovid and hippo.



## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM



SITE CATEGORY: (X where applicable)

Stone Age:?

Early Iron Age:?

Late Iron Age:?

Historical Period:?

Recorder's Site No.: MPE143

Official Name: Location # 4

Local Name:

Map Sheet: 2832CA Cape St Lucia

GPS reading: S: 28 32 08.8 E: 32 22 32.3 Alt. 118m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPE 143 is located on the first dune cordon from the Sokhulu Reservoir.

SITE DESCRIPTION:

Type of Site: Open. Midden

Merits conservation: The site is of low significance and no further mitigation is required.

Threats: Yes

What threats: RBM Mining

RECORDING:

Graphic record: Yes

Digital pictures: x                      Tracings:                      Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 25 March 2013

Owner:

References:

Description of site and artefactual content.

It consists of a single shell scatter which was exposed by road clearance.

The site extends into the adjacent forest.

## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM



SITE CATEGORY: (X where applicable)

Stone Age:?

Early Iron Age:

Late Iron Age: x

Historical Period:

Recorder's Site No.: MPE144

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28 32 43.0 E: 32 22 10.9 Alt. 120m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPE 144 is located on the first dune cordon from Sokhulu Reservoir, on a high dune. It is situated in the vicinity of MPE 114.

SITE DESCRIPTION:

Type of Site: Open.

Merits conservation: The site is of low significance and no further mitigation is required. However, we will monitor it regardless.

Threats: Yes

What threats: RBM Mining

RECORDING:

Graphic record: No

Digital pictures:

Tracings:

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 19 April 2013

Owner:

References:

Description of site and artefactual content.

It consists of a surface scatter of pottery and upper grinding stones.

# UMLANDO ARCHAEOLOGICAL SITE RECORD FORM



Umlando Archaeological Trust  
& Resource Management  
P.O. Box 102532, Meerensee, 3901  
Ph: 031-7631788 / 0834883862 / 0723481327

SITE CATEGORY: (X where applicable)

Stone Age:?

Early Iron Age:?

Late Iron Age:?

Historical Period:?

Recorder's Site No.: MPE145

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28.54205 E: 32.37358 Alt. 143m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPE 145 is located on the second dune cordon from the ocean and is close to MPE 107b and MPE 110.

SITE DESCRIPTION:

Type of Site: Open. Midden

Merits conservation: Sampled. The site is of low significance and no further mitigation is required.

Threats: Yes

What threats: RBM Mining

RECORDING:

Graphic record: Yes

Digital pictures: x                      Tracings:                      Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 14 May 2013

Owner:

References:

Description of site and artefactual content.

It consists of a single shell midden of brown mussel with very good preservation. The site was sampled, but is of low significance and no further mitigation is required.

# UMLANDO ARCHAEOLOGICAL SITE RECORD FORM



SITE CATEGORY: (X where applicable)

Stone Age:?

Early Iron Age:?

Late Iron Age:?

Historical Period:?

Recorder's Site No.: MPE146

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28.54263 E: 32.37250 Alt. ?m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPE 146 is located on the first dune cordon from the ocean and occurs on its own small hill between larger dunes.

SITE DESCRIPTION:

Type of Site: Open. Open. Midden

Merits conservation: The site is of low significance and no further mitigation is required.

Threats: Yes

What threats: RBM Mining

RECORDING:

Graphic record: Yes

Digital pictures: x

Tracings:

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 14 May 2013

Owner:

References:

Description of site and artefactual content.

It consists of at least one shell midden which was exposed by bulldozer clearance. The site is of low significance and no further mitigation is required.

## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM



Umlando Archaeological Trust  
& Resource Management  
P.O. Box 102532, Meerensee, 3901  
Ph: 031-7621780 | 0834589362 / 9723481327

SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age:

Historical Period: x

Recorder's Site No.: MPE147

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28.542384 E: 32.37184 Alt. ?m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPE 147 is located on a high dune which forms part of the first dune cordon from the ocean.

SITE DESCRIPTION:

Type of Site: Open. Midden

Merits conservation: Sampled. The site is of low significance and no further mitigation is required.

Threats: Yes

What threats: RBM Mining

RECORDING:

Graphic record: Yes

Digital pictures: x Tracings: Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 31 May 2013

Owner:

References:

Description of site and artefactual content.

The site consists of large scatters of shell and pottery, but no intact midden, apart from one area which was recorded as MPE 147a.

The shell is mainly brown mussel with small percentages of oyster, whilst the pottery is thick walled and undecorated.

MPE 147 was sampled, but the site is of low significance and no further mitigation is required.



## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM



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& Resource Management  
P.O. Box 102532, Meerensee, 3901  
Ph: 033-7631788 / 0834893952 / 0723481327

SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age: x

Historical Period:

Recorder's Site No.: MPE148

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28 32 13.8 E: 32 22 24.7 Alt. 135m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPE 148 is located on the second dune cordon from the ocean on a high dune in front of and visible from, Sokhulu Reservoir and close to MPE 110.

SITE DESCRIPTION:

Type of Site: Open. Midden

Merits conservation: Test-pits. site is of medium significance and we'll remove a large portion of the shell midden as a sample. Thereafter the site will be monitored.

Threats: Yes

What threats: RBM Mining

RECORDING:

Graphic record: Yes

Digital pictures: x Tracings: Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 31 May 2013

Owner:

References:

Description of site and artefactual content.

It consists of a single intact shell midden exposed by bulldozer clearance. Since the midden was largely *in situ* we decided to do some test-pits.

We are currently busy with these test-pits and although complete analysis of the material has not been finalised it does seem to have yielded good percentages of well preserved shell, bones of domesticated cattle, small antelopes, wild fowl, fish and bush pig as well as decorated pottery and upper grinding stones.

The site is of medium significance and we'll remove a large portion of the shell midden as a sample. Thereafter the site will be monitored.

NOTE: THESE EXCAVATIONS HAVE BEEN COMPLETED AND THE FINDINGS HAVE BEEN INCLUDED IN THIS REPORT

## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM

### SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age? Indeterminate IA

Historical Period:



Recorder's Site No.: MPE 149

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28 32 40.9 E 32 22 20.2 Alt: 145m

### DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPE 149 is located in a small valley between two high dunes on the first dune cordon from the ocean.

### SITE DESCRIPTION:

Type of Site: Open

Merits conservation: No. It is of low significance and no further mitigation is required. We will, however, monitor the site for as long as it remains possible.

Threats: Yes

What threats: MPE Mining

### RECORDING:

Graphic record: N/A

Digital pictures: x

Tracings:

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 07/10/2013

Owner:

References:

### Description of site and artefactual content.

Site consists of an ephemeral scatter of brown mussel and upper grinding stones.

## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM

### SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age: ? Indeterminate IA

Historical Period:



Recorder's Site No.: MPE 150

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28 32 42.8 E: 32 22 12.5 Alt: 134m

### DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPE 150 is located on the first dune cordon from the ocean.

### SITE DESCRIPTION:

Type of Site: Open

Merits conservation: Yes. It is of medium significance and was sampled. The site will be monitored for as long as it remains possible.

Threats: Yes

What threats: MPE Mining

### RECORDING:

Graphic record: Yes

Digital pictures: x

Tracings:

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 07/10/2013

Owner:

References:

### Description of site and artefactual content.

Site consists of a single brown mussel midden with upper and lower grinding stones.

## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM

### SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age: ? Indeterminate IA

Historical Period:



Recorder's Site No.: MPE 151

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28 32 37.0 E: 32 22 20.5 Alt: 151m

### DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPE 151 is located on a high dune on the first dune cordon from the ocean.

### SITE DESCRIPTION:

Type of Site: Open

Merits conservation: No. It is of low significance and no further mitigation is required.

The site will, however, be monitored for as long as it remains possible.

Threats: Yes

What threats: MPE Mining

### RECORDING:

Graphic record: Yes

Digital pictures: x

Tracings :

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 07/10/2013

Owner:

References:

### Description of site and artefactual content.

Site consists of an ephemeral scatter of a dispersed brown mussel midden. There are also pottery and water worn stones on the surface.

## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM



### SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age:? Indeterminate IA

Historical Period:

Recorder's Site No.: MPE 152

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28 32 58.1 E: 32 22 15.1 Alt: 56m

### DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPE 152 is located on a high dune on the first dune cordon from the ocean.

### SITE DESCRIPTION:

Type of Site: Open

Merits conservation: No. It is of low significance and no further mitigation is required.

The site will, however, be monitored for as long as it remains possible.

Threats: Yes

What threats: MPE Mining

### RECORDING:

Graphic record: Yes

Digital pictures: x

Tracings:

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 25/10/2013

Owner:

References:

### Description of site and artefactual content.

Site consists of a single brown mussel midden that was exposed by road clearance.



## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM

SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age: ? Indeterminate IA

Historical Period:



Recorder's Site No.: MPE 153

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28 31.559 E 32 22.707 Alt: 123m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPE 153 is located on the first dune cordon from the ocean.

SITE DESCRIPTION:

Type of Site: Open. Midden

Merits conservation: Yes. Test-pits. We will also monitor the site for as long as it remains possible.

Threats: Yes

What threats: MPE Mining

RECORDING:

Graphic record:

Digital pictures: x

Tracings:

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 04/11/2013

Owner:

References:

Description of site and artefactual content.

The site consists of a single p. Perna midden.

## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM

SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age: x

Historical Period:



Recorder's Site No.: MPE 154

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28 31.945 E: 32 22.630 Alt: 140m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPE 154 is located on the first dune cordon from the ocean.

SITE DESCRIPTION:

Type of Site: Open. Midden

Merits conservation: No

Threats: Yes

What threats: MPE Mining

RECORDING:

Graphic record:

Digital pictures: x

Tracings:

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerendee, 3901

Date: 22/11/2013

Owner:

References:

Description of site and artefactual content.

The site consists of an ephemeral shell midden that was exposed by bush- clearance and exploration.

## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM

### SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age? Indeterminate IA

Historical Period:



Recorder's Site No.: MPE 155

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28 32.166 E 32 22.538 Alt: 119m

### DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

MPE 155 is located on the first dune cordon from the ocean.

### SITE DESCRIPTION:

Type of Site: Open. Midden

Merits conservation: Yes. Test-pits. We will also monitor the site for as long as it remains possible.

Threats: Yes

What threats: MPE Mining

### RECORDING:

Graphic record: n/a

Digital pictures:

Tracings:

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 06/12/2013

Owner:

References:

### Description of site and artefactual content.

The site consists of a single *p. Perna* midden and an upper grinding stone on the surface.

## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM



Umlando Archaeological Trust  
& Resource Management  
P.O. Box 102532, Meerensee, 3901  
Ph: 031-7631788 / 0834883862 / 0723481327

SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age: x

Historical Period:

Recorder's Site No.: RD 012

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28 32 02.8 E: 32 21 39.7 Alt. 62m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

RD 012 is located on the last of the red dunes before Sokhulu Reservoir.

SITE DESCRIPTION:

Type of Site: Open. Midden

Merits conservation: The site is of low significance and no further mitigation is required.

Threats: Yes

What threats: RBM Mining

RECORDING:

Graphic record: Digital

Digital pictures:

Tracings :

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 29 January 2013

Owner:

References:

Description of site and artefactual content.

It consists of an ephemeral scatter of pottery on the surface. The pottery is mainly thin walled, on red clay, with no decoration.

# UMLANDO ARCHAEOLOGICAL SITE RECORD FORM



Umlando Archaeological Trust  
& Resource Management  
P.O. Box 102532, Meerensee, 3901  
Ph: 031-7631788 / 0834883862 / 0723481327

SITE CATEGORY: (X where applicable)

Stone Age:

Early Iron Age:

Late Iron Age:

Historical Period: ?

Recorder's Site No.: RD 013

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28 32 04.3 E: 32 21 51.0 Alt. 69m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

RD 013 is located on the last of the red dunes before Sokhulu Reservoir.

SITE DESCRIPTION:

Type of Site: Open

Merits conservation: The site is of low significance and no further mitigation is required.

Threats: Yes

What threats: RBM Mining

RECORDING:

Graphic record: n/a

Digital pictures:

Tracings :

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 15 February 2013

Owner:

References:

Description of site and artefactual content.

It consists of a single, small, ephemeral shell midden.



## UMLANDO ARCHAEOLOGICAL SITE RECORD FORM

SITE CATEGORY: (X where applicable)

Stone Age: x

Early Iron Age: x

Late Iron Age:

Historical Period:



Recorder's Site No.: RD 014

Official Name:

Local Name:

Map Sheet:

GPS reading: S: 28 32 24.4      E: 32 21 31.1      Alt: 52m

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

RD014 is located on the ocean side of the red dune system

SITE DESCRIPTION:

Type of Site: Open. Midden

Merits conservation: No

Threats: Yes

What threats: MPE Mining

RECORDING:

Graphic record:

Digital pictures: x

Tracings:

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 04/11/2013

Owner:

References:

Description of site and artefactual content.

The site consists of a scatter of LSA flakes and EIA pottery on the surface.

**APPENDIX B**  
**INCIDENT REPORTS**

## **Damage to excavation site and demarcated area**

**DATE: 13 September 2013**

**Umlando: Archaeological Surveys and Heritage  
Management**

**PO Box 102532, Meerensee, 3901**

**Phone/fax: 035-7531785 Fax: 0865445631**

**Cell: 0836585362**



## Background

The site was first recorded on 25/03/2013. It was noted as a bulldozer had gone through a shell midden when clearing an area for drilling (fig. 1). No one reported the midden.

Excavations began in June 2013. The site was demarcated with two types of signs:

1. No Entry plastic signs on green wooden poles
2. Metal sign on metal post with the words :Scientific work in progress. Please use alternative route”

Fig. 2. Shows the location of the one metal sign. Unfortunately, we cannot locate photographs of the front entrance showing original signage locations.

The site was excavated in June/July. Unpredicted rainfalls made the sand too wet to sieve, and excavations were halted. Excavations located a medium sized shell midden with well preserved remains including possible human remains. Human remains were on secondary context, and thus the entrance road was closed off with a sign in the middle of the entrance as the human remains could occur in the tracks. There were artefacts in the track.

Site was visited every two weeks to ensure signage was intact.

## Incident

Site was visited on 12/9/2013 to find the drilling team were on site

All signs had been removed, except for the one sign on the side of the road shown in fig. 1 and 3. The sign from the centre of the road was removed and placed to the side and both wooden poles had been driven over (fig. 4),

The excavation poles had just been missed, however the ground had been pressurised and moved the subsurface material.

The entrance track, where the sign had been placed, had been churned. This is the area that was behind the middle sign, i.e. inside the demarcated area, that was being monitored for human skeletal remains.

I spoke to the supervisor who said he was told to start drilling by the geologist. He was unconcerned regarding the fact that signs were removed, and stated that saw the metal poles from the excavation and had missed them. This is incorrect as they had affected the excavations and the monitoring area, and was beside the fact that the excavation area was clearly demarcated.

**FIG. 1 SITE EXPOSED BY BULLDOZER**



**FIG 2: SIGNAGE AND DEMARCATION AT BEGINNING OF EXCAVATIONS**



**FIG. 3: SIGNAGE REMOVED<sup>3</sup>**



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<sup>3</sup> The centre sign (yellow arrow) was originally located where the 2 people are standing



**FIG. 4: REMOVED GREEN WOODEN POLE**



**FIG. 5: CRUSHED WOODEN POLE, METAL SIGNAGE REMOVED TO ONE SIDE, TRACKS NEXT TO EXCAVATIONS**



Points to note:

1. Area was demarcated as per regulations
2. Site was designated a no go area AND had green –white poles
3. Excavations were in process and we never removed signs
4. Signs were deliberately removed and ignored
5. Excavation area was impacted
6. Drilling team had ‘diminished responsibility’ as an excuse: i.e. “we were told to go there”.

This is against RBM rules that state you may not enter no go areas regardless of supervisor, or similar to lock out procedures.

7. Total disregard and lack of concern by people concerned
8. Exploration never report finds despite going through many sites. Exposing sites is not an issue; it is the lack of reporting. This is similar to bush clearance where sites are exposed and bulldozed without them being reported.
9. Failure to comply with RBM SOP5, and general disregard for heritage sites

We started with test-pit excavations in May 2013. We were in the process of removing a large portion of the intact shell midden, which is of medium significance due to the well preserved shell, bones of domesticated cattle, small antelope, wild fowl, fish and bush pig as well as decorated pottery and upper grinding stones. Previously the site was negatively impacted by the drilling team who removed our signage and drove over an area we were keeping clear for monitoring possible human skeletal remains (see Appendix B). More recently, the midden was partially destroyed by a bulldozer operator who disregarded our site demarcation and drove over the midden it (see figures 6 and 7). We are still excavating the site and will recover what material has not been damaged.



**FIG 6: THE DAMAGE AT MPE 148**



**FIG. 7: THE DAMAGE AT MPE 148**



