

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

*For Richards Bay Minerals*

**2022 Annual Report**

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## Abbreviations

HP	Historical Period
IIA	Indeterminate Iron Age
LIA	Late Iron Age
EIA	Early Iron Age
ISA	Indeterminate Stone Age
ESA	Early Stone Age
MSA	Middle Stone Age
LSA	Late Stone Age
HIA	Heritage Impact Assessment
PIA	Palaeontological Impact Assessment

## GENERAL AGE. GROUPS DATE

Period	Pottery Group	Associated language/people	Years ago
ESA	N/A	Foragers/hunter/gatherers	1.5 million - 250 000
MSA	N/A	Hunter gatherers	250 000 – 30 000
LSA	N/A	San Hunter gatherers	30 000 – 2 000
EIA	1	Mzonjani	1 700 – 1 500
EIA	2	Msuluzi	1500 - 1300
EIA...	3	Ndondondwane	1300 – 1100
EIA	4	Ntshekane	1100 - 900
LIA	5	Blackburn/Mpambanyoni	900- 700
LIA	6	Moor Park	700 - 500
LIA	7	Thembe-Tsonga	500 – 250/300
Historical	Groups 8,9	Mthiyane /Sokhulu	200 – present

ESA = Early Stone Age

MSA = Middle Stone Age

LSA = Late Stone Age

EIA = Early Iron Age

LIA = Late Iron Age

## INTRODUCTION

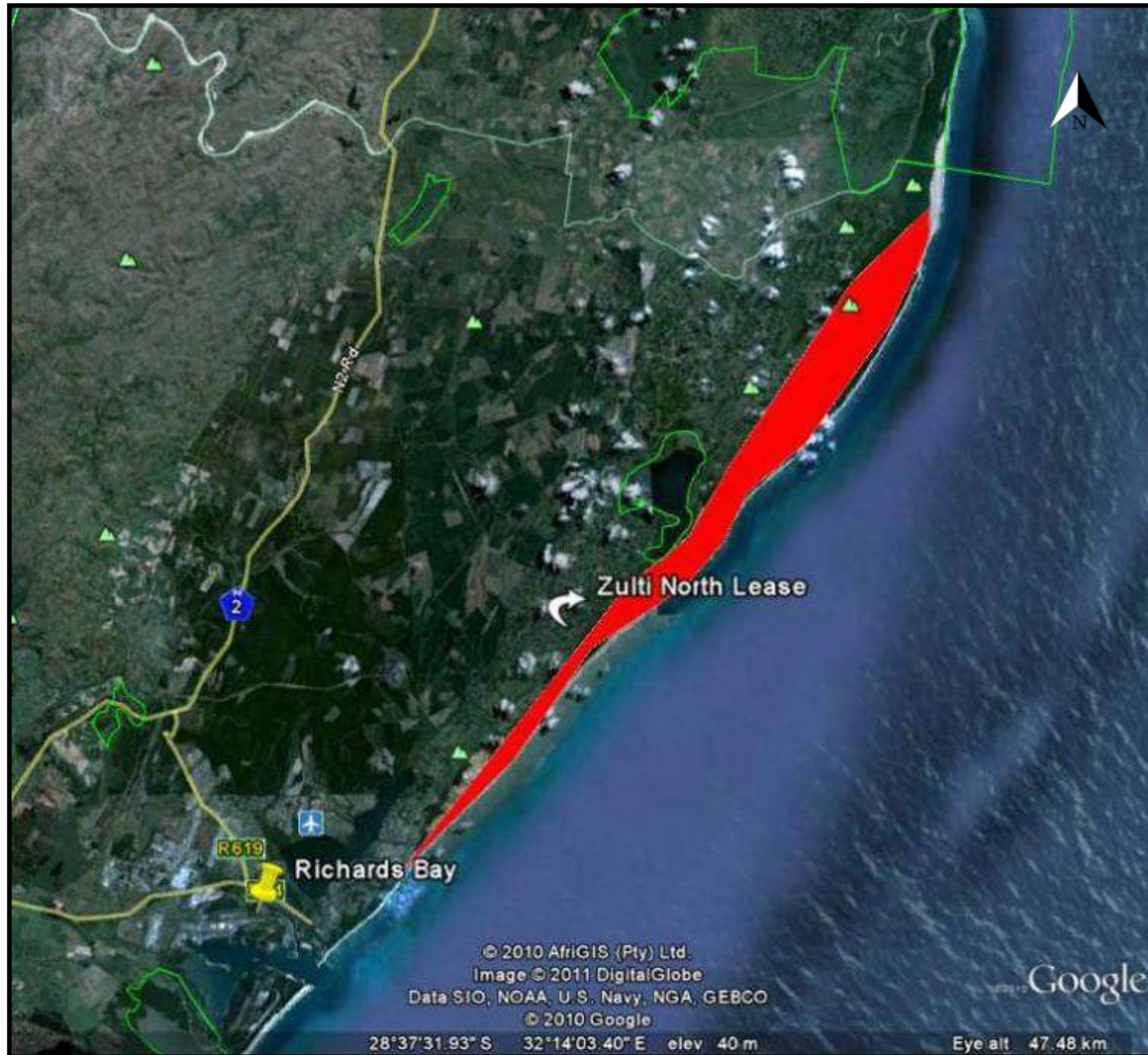
Umlando is contracted by Richards Bay Minerals (Pty) Ltd to undertake archaeological surveys and excavations in the Zulti North mining lease. The mining lease is located north of Richards Bay, KwaZulu-Natal and occurs along the eastern seaboard. (Fig.'s 1 - 2).The program consists of bi-monthly surveys, while excavations occur when needed. The archaeological program has been in progress at RBM Zulti North since 1995.

A total of 22 new sites were recorded in 2022, while several sites were continuously monitored and sampled. Two sites were excavated. It appears that MPE and Red Dunes still continue towards archaeologically sensitive areas and MPC remains in an area that has been partially mined by dry mining. MPA and MPD did not progress far in terms of distance in 2022.

There have been a total of 514 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, while a few date to the Early Iron Age. 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. These have relevance to contemporary research. The excavation also continued to yield results comparable to previously excavated sites. The importance in the excavations is that there is a very tight sequence over the last 1700 years in the dune system. That is, the sites will eventually give a near continual coverage of the last 1700 years in the dunes. It is rare to cover a long continual period in a well defined area.

**FIG. 1: LOCATION OF THE ZULTI NORTH MINING LEASE**



**FIG. 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?

3.2.1. 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

Often sites are covered by vegetation during a survey and thus their extent is estimated. We continue to monitor the site until it is mined and update the records accordingly. Some sites are not photographed as the dense vegetation does not allow for any representation. All diagnostic pottery, unique finds, well preserved faunal remains, and occasionally shell, is sampled from each site regardless of its significance. The sampling strategy allows for most sites to be represented since dune mining will destroy the entire site. It is also for this reason that sites with intact middens and/or deposit are targeted for excavations, since few of these remain intact after bush clearance.

### MINING POND A

#### MPA 45

MPA 45 is located on the first dune cordon from the ocean. It consists of a scatter of artefacts on the surface, over a 30m x 20m area (fig. 3). Artefacts include decorated pottery, pottery with “intsumpa”, small bovid bone (recent), possible human remains, tortoise shell (recent) and *Perna perna* dispersed across the whole area, but no visible midden.

The site is of medium significance due to the possible human remains and was sampled. It will also be monitored for as long as it remains possible.

**FIG. 3: MPA45**



### **MINING POND C**

No new sites recorded.

### **MINING POND D**

#### **MPD 115**

MPD115 is located at the MPD Dry mining section. It is halfway up the dune face on the first dune cordon from the sea. The site is located on a small spur of the dune.

The site consists of a concentration of quartzite pebbles 10cm - 15cm in size in a ~5m diameter. A single hammer stone and two *P. perna* fragments were noted. The site appears to be a cache of quartzite pebbles for potential stone tools. It would thus date to the Late Stone Age. Fig. 4 shows the zoomed in view of some of the stones.

The site is unique in the RBM mining lease; however, it is of low significance and has been disturbed. We will monitor the area.

**MPD 116**

MPD116 is located on the first dune cordon from the ocean. The site consists of an ephemeral *P. perna* midden visible in the road cutting. Artefacts include marine shell and undecorated pottery. It is of low significance and no further mitigation is required; however, we will continue to monitor it for as long as it remains possible.

**FIG. 4: CONCENTRATION OF QUARTZITE PEBBLES AT MPD115**

**MPD 117**

MPD 117 is located on the first dune cordon from the ocean. It consists of a scatter of artefacts on the surface, over a 20m x 20m area (fig. 5). The site is a topsoil dumpsite, so the material is not relevant, however, we sampled it.

The artefacts consist of dispersed *Perna perna*, limpet species, several upper grinding stones and two whole pots (undecorated).

The site is of low significance due to its lack of context.

**FIG. 5: MPD 117**



### **MPD 118**

MPD 118 is located on the first dune cordon from the ocean. It consists of two scatters of artefacts on the surface, each covering a 10m x 10m area (fig. 6). The site was divided into MPD 118 and MPD 118 extension and they are 20m apart. They are separated by the current track.

The artefacts consist of dispersed *Perna perna*, one oyster fragment and an upper grinding stone. No pottery was noted at the two middens. The *P. perna* are

larger than average in observation, suggesting that the site may be older than the Iron Age. MPD118 ext. still has some deposit as seen in the track cutting.

The site is of low significance.

**FIG. 6: MPD 118**



### **MPD 119**

MPD 119 is located on the first dune cordon from the ocean and 120m northeast of MPD118. It consists of two *Perna perna* middens that have been affected by the HME. The site is ~20m in diameter (fig. 7).

The artefacts consist of dispersed *Perna perna*, and one large limpet (*Helcion concolor?*). The *P. perna* are larger than average in observation, suggesting that the site may be older than the Iron Age. Neither pottery, nor stone tools were noted at the site.

The site is of low significance due to its lack of content.

**FIG. 7: SHELL MIDDEN AT MPD119**



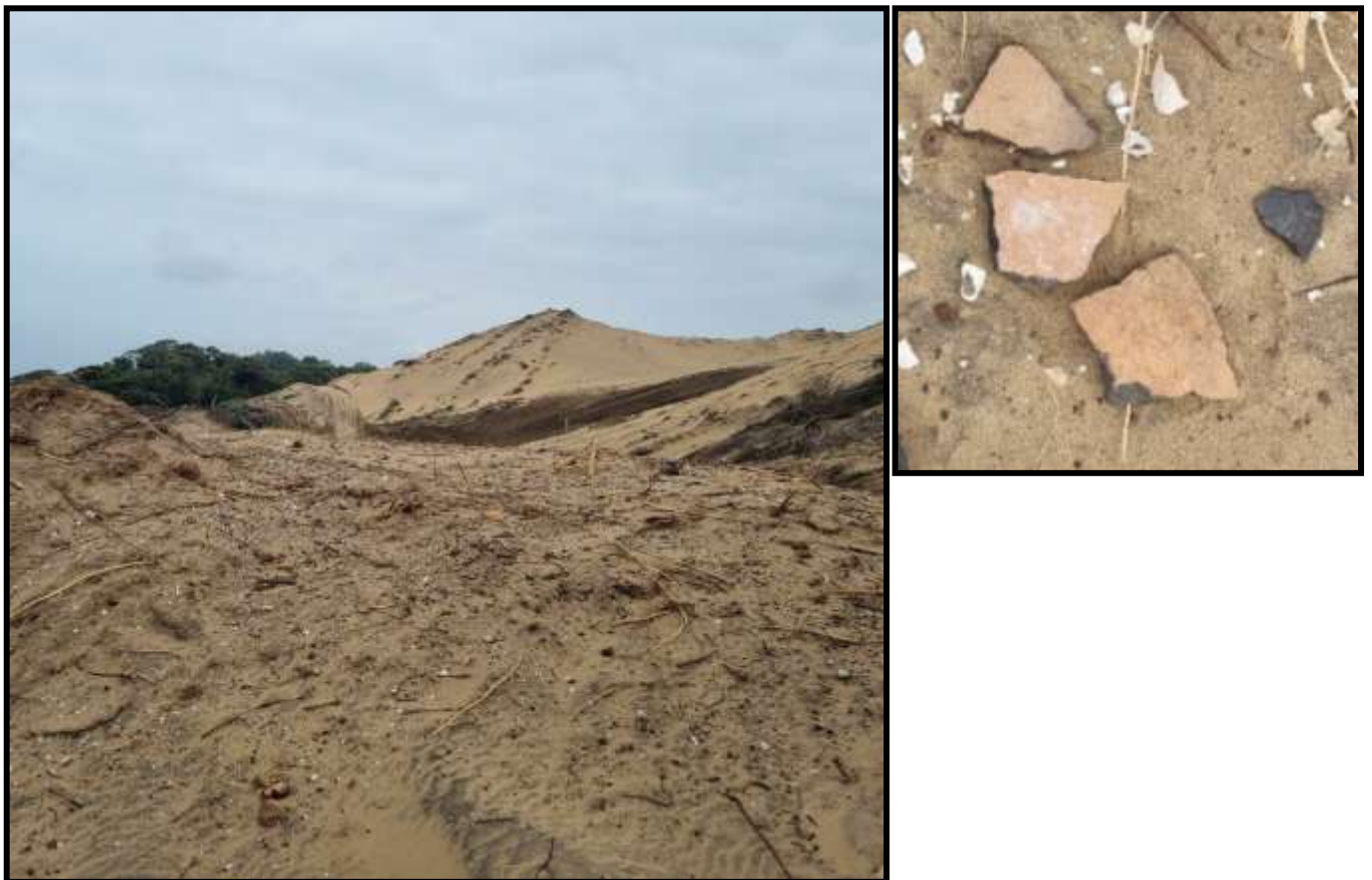


## MPD 120

MPD 120 is located on the first dune cordon from the ocean and between MPD118 and MPD119. It consists of a scatter of *Perna perna* and oyster shells. There is undecorated pottery associated with this site. The site is ~15m in diameter (fig. 8) and probably dates to the Historical Period.

The site is of low significance.

**FIG. 8: MPD120**



## MPD 121

MPD 121 is located on the first dune cordon from the ocean. It consists of scatters of artefacts on the surface, all along the ridge of the dune, as well as along the base (Fig. 9). This area was tagged on the 1937 aerial photographs as having a possible household

The artefacts include:

- Early Iron Age
  - Mzonjani
  - Msuluzi
- Historical Period/20<sup>th</sup> century
  - Shell
- Brown mussel
- Oyster
- Large gastropod
- upper grinding stones.

The site is of low significance, but will be monitored for as long as it remains possible.

**FIG. 9: MPD 021 ARTEFACTS**



### **MPD 122**

MPD 122 is located on the first dune cordon from the ocean, at the top of a high dune. It consists of a scatter of artefacts on the surface, covering a 10m x 10m area.

The artefacts consist of dispersed *Perna perna*, one potsherd with a hole, undecorated pottery and upper grinding stones. The site is of low significance and no further mitigation is required. We will, however continue to monitor it for as long as it remains possible.

### **MPD 123**

MPD 123 is located on the first dune cordon from the ocean, at the top of a high dune. It consists of a scatter of artefacts across the top of the dune over a 30m x 60m area. Artefacts have also rolled down the dune face and occur at the base of the dune. Artefacts include dispersed *Perna perna*, a worked hippo tooth, upper grinding stones, a possible sorghum lower grinding stone, LIA pottery, Historical pottery, EIA pottery and oyster fragments.

The site is of medium significance due to its high artefact yield and will be monitored for as long as it remains possible.

## **MINING POND E**

### **MPE 191**

MPE 191 is located in the valley between the first and second dune cordons from the ocean. It consists of a single, dispersed *Perna perna* midden. No other artefacts were noted, but the site may still extend further into the adjacent forest.

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

## RED DUNES

### RD 051

RD051 is located on the edge of the red dunes, before the Maphelane Road and occurs in the road cutting (fig. 10). It may extend into the adjacent forest. The site consists of a shell midden, 1.2m below the surface, visible in the road cutting. Surface artefacts consist of *P. perna* and *S. capensis*. No artefacts, apart from the shell, were visible, but it is possible that since the midden appears to be *in situ*, the other artefacts may be as well.

RD051 is of low significance and currently no further mitigation is required. We will continue to monitor it.

**FIG. 10: VIEW OF RD051**



RD052 is located on the first red dune from the Maphelane side (fig. 11). It consists of a surface scatter of artefacts, including pottery, undecorated rims and upper grinding stones. Faunal remains include possible hippopotamus and cow. Most of the shell consists of scatters of *P. perna*. The site is of medium to high significance as there is a good possibility of human remains occurring in the vicinity. The site dates to the Historical Period and is related to the local community. We will continue to monitor the site.

**FIG. 11: VIEW OF RD052****RD 053**

RD053 is located on the first red dune from the ocean side (fig. 12). It consists of a surface scatter of artefacts, dispersed along the road for about 50m, including undecorated pottery and upper grinding stones. The site is of low significance and no further mitigation is required, however, we will continue to monitor it for as long as it remains possible.

**FIG. 12: VIEW OF RD053**

**RD 054**

RD 054 is located at the western edge of the Red Dune System (fig. 13). The site consists of a scatter of artefacts over a 30m x 20m area, across the top of the dune, as well as a single, dispersed *Perna perna* midden. The artefacts include slag, undecorated pottery, upper grinding stones and a fragment of a ceramic clay dagga pipe.

The site is of low significance and no further mitigation is required. The site was sampled and will be monitored.

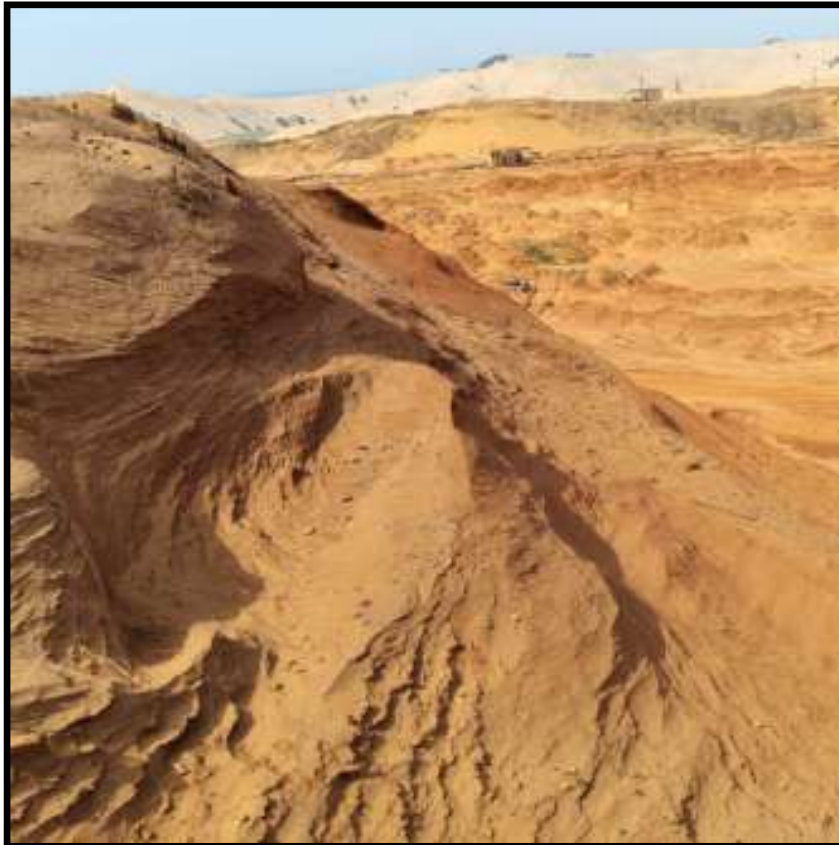
**FIG. 13: RD 054**

**RD 055**

RD 055 is located at the western edge of the Red Dune System. The site consists of a scatter of artefacts over a 10m x 20m area, at the mine face (fig. 14). Thus part of the site has collapsed into the mining area. The artefacts are in a lag deposit and include decorated pottery (Tembe-Tsonga and Mzonjani), upper grinding stones, ESA tools and bovid bone.

The site is of low significance and no further mitigation is required. The site was sampled and will be monitored.

**FIG. 14: RD 055**





**RD 056**

RD 056 is located at the western edge of the Red Dune System. The site consists of a scatter of smelting related artefacts over a 30m x 20m area (fig. 15). The artefacts include undecorated pottery, fire cracked rocks and slag.

The site is of low significance and no further mitigation is required. The site was sampled and will be monitored.

**FIG. 15: RD 056**

**RD 057**

RD 057 is located at the western edge of the Red Dune System RD 057 was monitored and we noted more shell located at the eastern edge of the site. The site consists of a scatter of artefacts over a 10m x 10m area, as well as a single, dispersed *Perna perna* midden. The artefacts include slag, undecorated pottery, upper grinding stones and bovid bone

The site is of low significance and no further mitigation is required. The site was sampled and will be monitored.

**RD 058**

RD 058 is located ~30m southwest of RD057 on the next small hill (fig. 16). The site consists of a scatter of pottery and *P. perna*. Only the edge of the site has been cleared and we expect more to occur in the centre. The site is probably a single house dating to the early 20<sup>th</sup> century. It is very close to the surface and similar in appearance to RD 015, RD 052, and RD 057. These sites could all form part of a single settlement of a family since they are 120m apart and appear to be of similar age.

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

**FIG. 16: RD 058**



## **RD 059**

RD 059 is located at the edge of the Red Dune system, on the district road to Maphelane side. It consists of a surface scatter of artefacts over a 50x 50m area and three dispersed middens. (Fig. 17). The artefacts include undecorated pottery, brown mussel and upper grinding stones.

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

**FIG. 17: RD059**



## **RD 060**

RD 060 is located at the edge of the Red Dune system, on the district road to Maphelane side. It consists of a surface scatter of artefacts over a 30x 30m area

(Fig. 18). Artefacts include undecorated pottery, brown mussel, some fragments of slag and upper grinding stones.

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

**FIG. 18: RD 060**



## **RD 061**

RD 061 is located at the edge of the red dune system, near the district road to Maphelane. We have been monitoring this area continuously as it appears to have several settlements dating from 1900s to 1937. These sites would be direct links to local community in terms of being (great) great grandparents. So far several scattered shell middens have been recorded between the various sites in this area; however no human graves have been noted.

RD061 It occurs across the top of the dune over a 40m x 30m area and consists of a scatter of surface artefacts (fig. 19). The artefacts include *P. perna*, upper grinding stones and undecorated pottery. The site probably dates to the Historical Period.

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

**FIGURE 19: RD 061**



### **AMS 27**

AMS 27 was originally recorded on the 17 September 2014. A human cranium that came from the dry mining sieves was associated with the site just as a geographical reference. The field notes recorded an Msuluzi site with *P. perna* midden, upper grinding stones and lower grinding stones.

Some of the site still remains on the eastern side of the dry mining path (fig. 20). It consisted of more Msuluzi pottery, brown mussel and grinding stones

**FIG. 20: REMAINS OF AMS 27**

## EXCAVATIONS

### RD 015

RD 015 is a site that we originally recorded in May 2014. It was assessed as having medium significance due to the possibility of human remains. The recent bush clearance had exposed an area with lots of marine shell (fig. 21). We decided to undertake a few test-pits at RD 015 as it appears to be contemporary with RD 052. In our initial site recording we noted that the midden was small and probably related to a single family household.

## METHOD

We set out four, 1m x 1m squares over the area that seemed to be the central part of the midden, as indicated by the shell on the surface and several small shovel test-pits (Fig.23)

The midden was small and relatively thin, consisting of mainly *Perna perna* and undecorated pottery. Much of the midden had been disturbed by tree roots and rodent activity that resulted in several patches of shell instead of a complete midden. Only three of the four 1m squares were excavated as we decided the midden would not yield significant information.

Excavations concluded after only two days, we will, however, continue to monitor the site.

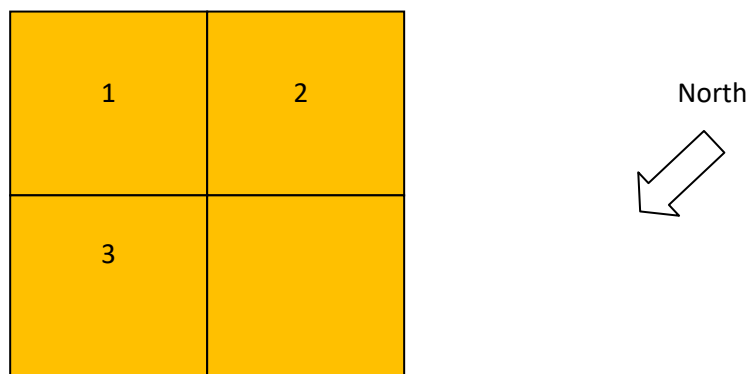
**FIG. 21: RD 015 GENERAL**



**FIG. 22 EXCAVATIONS AT RD 015**





**FIG. 23: EXCAVATION MAP OF RD 015**

## RESULTS

Table 1 lists the excavated material, while fig. 24 illustrates these artefacts.

**TABLE 1: ARTEFACT WEIGHTS FROM RD 015**

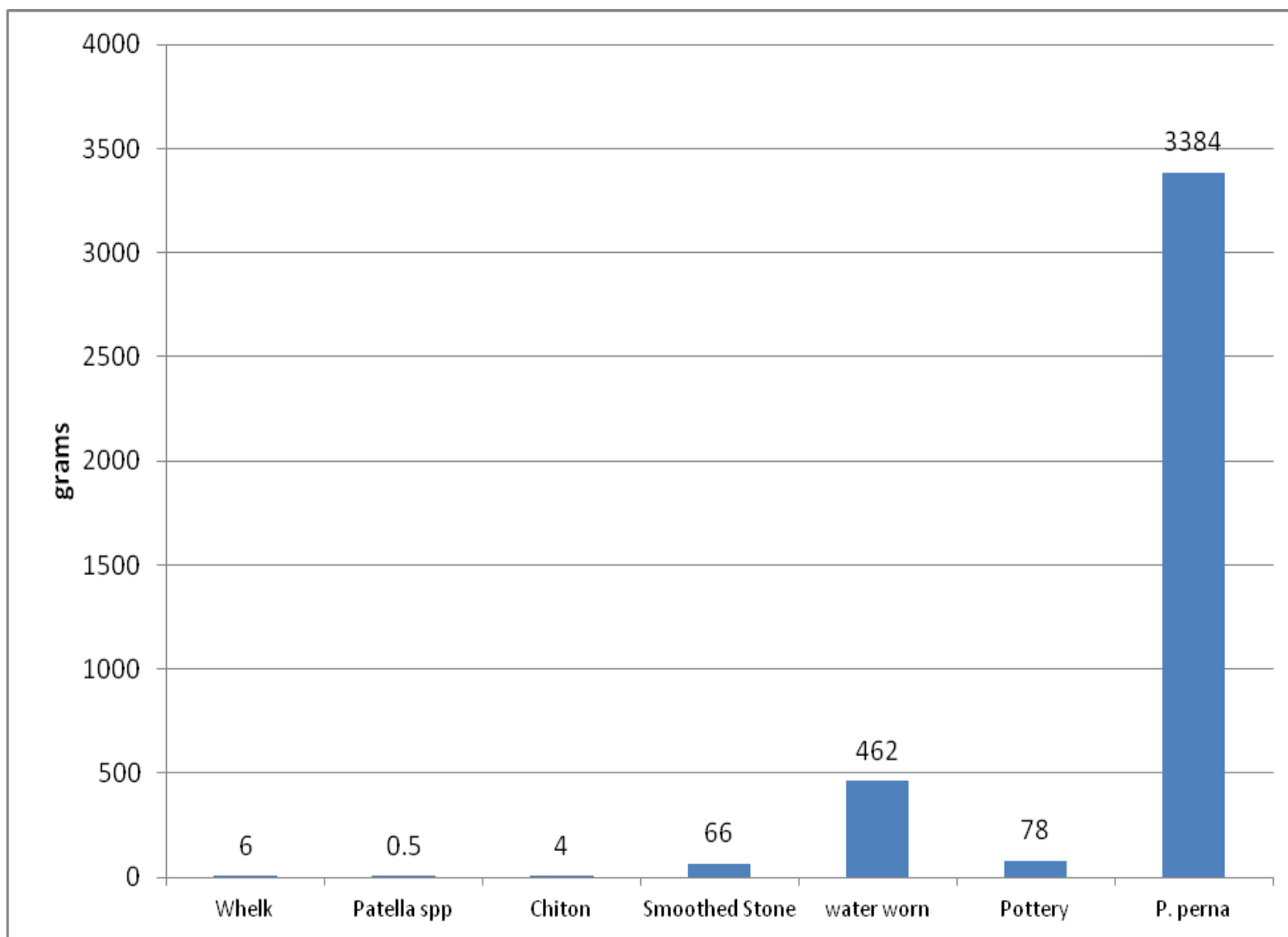
Lens	Buckets	Shell				Stone	Pottery	Total
		Whelk	Patella	Chiton	P. perna	Smoothed	water	
			spp			Stone	worn	
							stone	
<b>Lens 1</b>	416.25	6	0.5	4	3384	66	462	78
	dm <sup>3</sup>							4000.5

The results indicate a very small shell lens that was probably the result of a single meal. The shell is predominantly *P. perna* while the whelk and limpets were probably on the mussels.

## DISCUSSION

The shell lens at RD 015 is typical of the shell lenses recorded within a 400m radius. These are mostly ephemeral middens dominated by *P. perna*. The middens tend to be near the current surface suggesting a more recent age. These middens are in contrast to the older ones that are better defined, and have a wider array of shell species and artefacts. We have noted at least twenty of these types of middens in this section of the red dunes (fig. 25).

**FIG. 24: AREFACT WEIGHTS FROM RD 015**



**FIG. 25: LOCATION OF SHELL MIDDENS AROUND RD 015**



## RD 050

RD 050 is a site that we originally recorded in December 2021. We noted that the site was of medium significance and had the potential to yield at least one excavatable midden. In July 2022 we proceeded with excavations as the adjacent road was being upgraded and heavy rains had exposed an unusual amount of *Siphonaria capensis* on the surface. The site was first demarcated to create a safe working space, while the work on the road had temporarily halted (fig. 26).

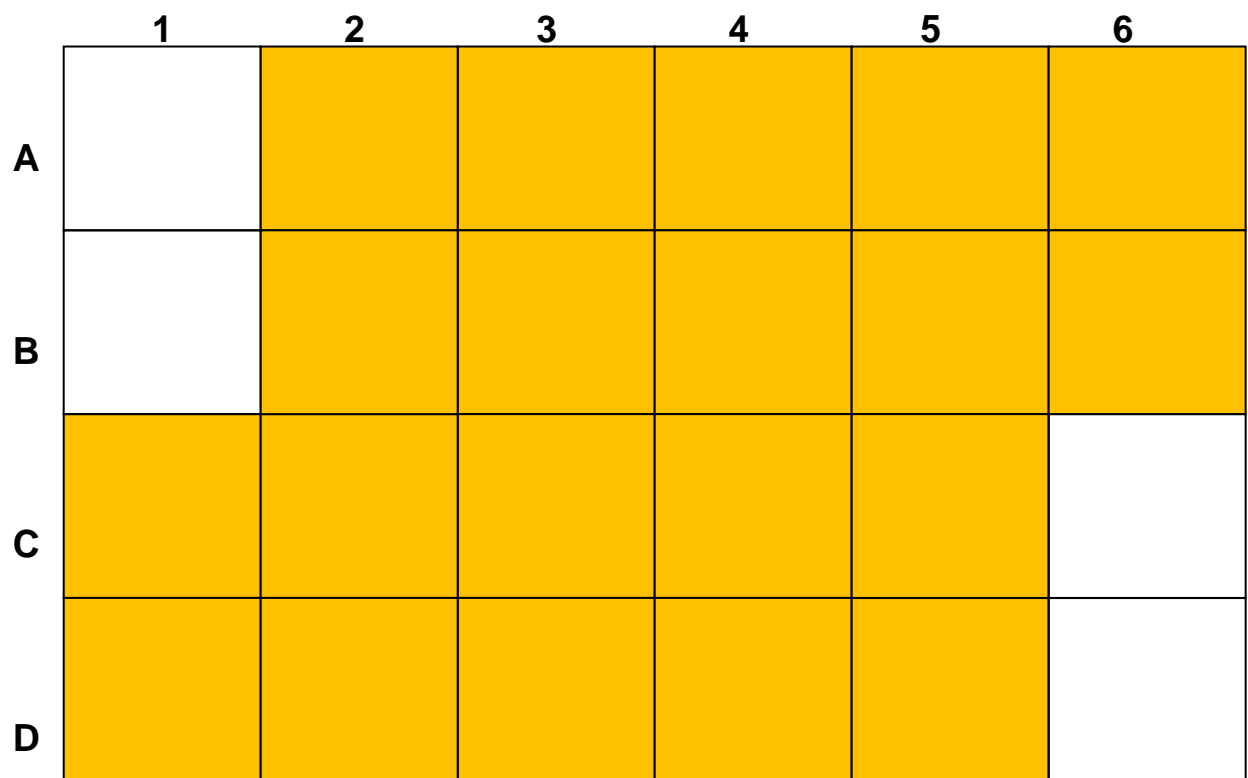
What was significant about RD 050 is the vast amount of *Siphonaria capensis* on the surface. They are very successful, intertidal limpets found in abundance in the warm waters of the KwaZulu-Natal coast even though they are considered evolutionarily primitive and unpalatable due to the large amount of mucous on the foot (Seaman 2022). We normally found these shellfish in Thembe-Tsonga sites and assumed that it dated to that period.

**FIG. 26: DEMARCATION OF RD050**

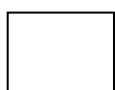


**METHOD:**

The excavation was divided into twenty 1m x 1m squares, and then subdivided into 50cm x 50cm quads (fig. 27). This allows for better control over shell midden excavations when trying to determine the stratigraphy and for spatial activity. A total of twenty squares were excavated (fig. 28), and this indicated that the site extends westwards under the road. This is good, in a sense, because even though we could not extend the excavation, the uncovered area is protected by the road and we can return to it at a later stage if needed.

**FIG. 27: EXCAVATION MAP OF RD 050**

Excavated



Unexcavated

North



**FIG. 28: EXCAVATIONS AT RD 050**

Lens 1 is a compacted lens in dark brown / black sand. It contains mainly *Perna perna*, *Siphonaria capensis*, some charcoal and pottery. Lens 2 is Lens 1, but just in the northern squares, separated by a rodent burrow. The same scenario presented itself with Lens 3, which was excavated separately because it appeared to be a different lens, but as the excavation proceeded it became clear it was also just Lens 1, with a major rodent burrow causing it to look like two separate lenses. RD 050 slopes downward significantly towards the east.

Lens 10 -11 were the edges of Lens 1 at the base of this eastward slope. These were initially excavated as separate lenses and then later as interface lenses: Lens 1/ 11. Lens 1/10, Lens 3/10.

The squares consist mostly of a shell layer in a dark brown/ black sand with a few artefacts and charcoal. Below this cultural horizon is very loose light brown sand.

**FIG. 29: MAIN STRATIGRAPHY AT RD 050**



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## RESULTS

Table 2 shows the results from the excavations, while Figures 30 and 31 illustrates these results. These are from the general lenses as excavated and not the final compiled lenses. We use Richards (1989) for shell fish identification, but revert to the newer genus and species names.

Lens 1 is the largest of the Lenses consisting mostly of *Perna perna* and *S. capensis*. *S. capensis* occurred mostly as a two large concentrations in Squares A2 – A3 and B2 – B3. Lens 11 has the next highest number of artefacts and ecofacts, followed by Lens 3/10.

*Perna perna* is the most abundant artefact/ecofact type from the excavations. This is followed by pottery, water worn stone, and charcoal.

### **Faunal Remains**

Very few faunal remains were excavated (fig. 32). These consist of mainly small bovid and one bird. Fish remains were also under-represented in comparison to other sites; however more fish bone occurs than bovid bone. Only one otolith was recorded and no meaningful data could be ascertained (see De Sousa *et al* 2019). The unexpected find was a few vertebrae of a snake within the shell lenses. This means the snake is from the time of the site, and not post-depositional.

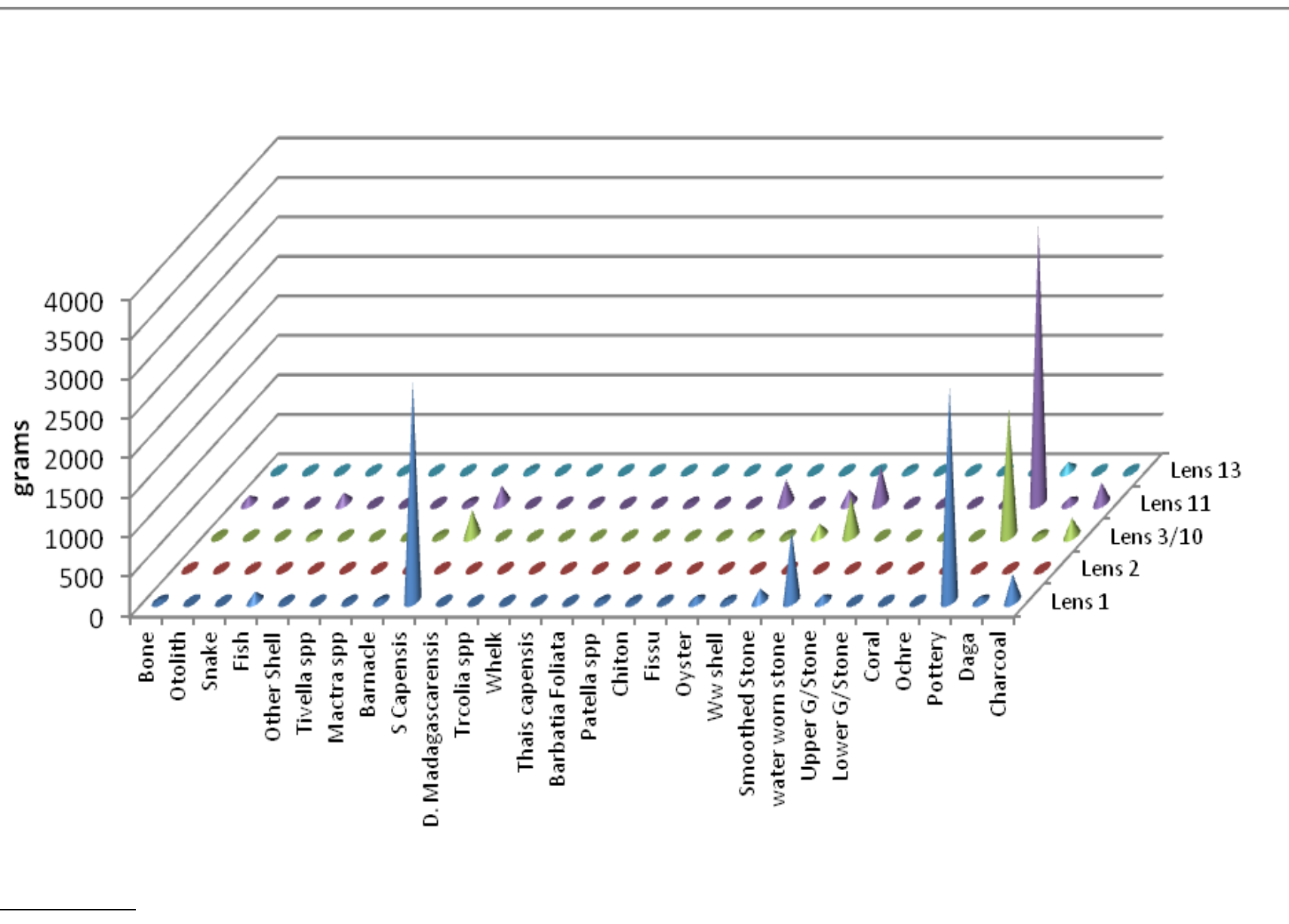


**TABLE 2: ARTEFACTS AND ECOFACTS FROM RD 050**

		grams/ number	Lens 1	Lens 2	Lens 3/10	Lens 11	Lens 13	Total	
	Bkts	f	37.45	0.4	25.433	22.45	3	<b>88.733</b>	
<b>Faunal</b>	Bone	g	22.5	0	4.5	92.5	0	<b>119.5</b>	
	Otolith	g	0	0	0	1	0	<b>1</b>	
	Snake	g	0.5	0	0.5	1	0	<b>2</b>	
	Fish	g	115	0	19.5	132	0.5	<b>267</b>	
<b>Other shell</b>	Other Shell	g	7.5	0	3	3	0	<b>13.5</b>	
	Tivella spp	g	2	0	0	2	0	<b>4</b>	
	Mactra spp	g	10.5	0	0	2	0	<b>12.5</b>	
	Barnacle	g	30.5	0	11.5	27	0	<b>69</b>	
	S Capensis	g	2783	2	325	218	12	<b>3340</b>	
		n	1951	1	208	187	5	<b>2352</b>	
	D. Madagascarensis	g	0.5	0	0	0.5	0	<b>1</b>	
	Tricolia spp	g	1.5	0	0	0	0	<b>1.5</b>	
		n	8	0	0	0	0	<b>8</b>	
	Whelk	g	3	0	0.5	7	0	<b>10.5</b>	
	Thais capensis	g	0.5	0	0	0	0	<b>0.5</b>	
	Barbatia Foliata	g	1.5	0	0	2.5	0	<b>4</b>	
	Patella spp	g	18.5	0	1.5	10	0	<b>30</b>	
		n	0	0	0	1	0	<b>1</b>	
	Chiton	g	12	0	3	7.5	0	<b>22.5</b>	
	Fissu	g	8.5	0	5.5	2.5	0	<b>16.5</b>	
	Oyster	g	69	0	37	295.5	0	<b>401.5</b>	
	Ww shell	g	20	0	16.5	7	0	<b>43.5</b>	
	<b>Stone</b>	Chunks	n	0	0	2	0	0	<b>2</b>
		Smoothed Stone	g	158.5	0	150	170	1	<b>479.5</b>
water worn stone		g	885	0.5	498	468	12	<b>1863.5</b>	
Upper G/Stone		g	80	0	0	0	0	<b>80</b>	
		n	2	0	0	0	0	<b>2</b>	
Lower G/Stone		g	0	0	0	0	0	<b>0</b>	
		n	0	0	0	0	0	<b>0</b>	
<b>Perna perna</b>	Left burnt	n	3	0	6	0	0	<b>9</b>	
	Left unburnt	n	1580	12	814	1052	7	<b>3465</b>	
	Right burnt	n	5	0	6	0	0	<b>11</b>	
	Right unburnt	n	1566	8	944	1205	13	<b>3736</b>	
	Burnt	g	85.5	0	59.5	54.5	2	<b>201.5</b>	
	Unburnt	g	49184	297.5	23864.5	37559	692	<b>111597</b>	
	Total	g	49269.5	297.5	25570.5	37613.5	694	<b>113445</b>	
Nassa. Beads	n	5	0	1	3	0	<b>9</b>		
worked oyster	n	0	0	1	0	0	<b>1</b>		
Shell Pendant	n	1	0	0	0	0	<b>1</b>		
Coral	g	0.5	0	0	2	0	<b>2.5</b>		

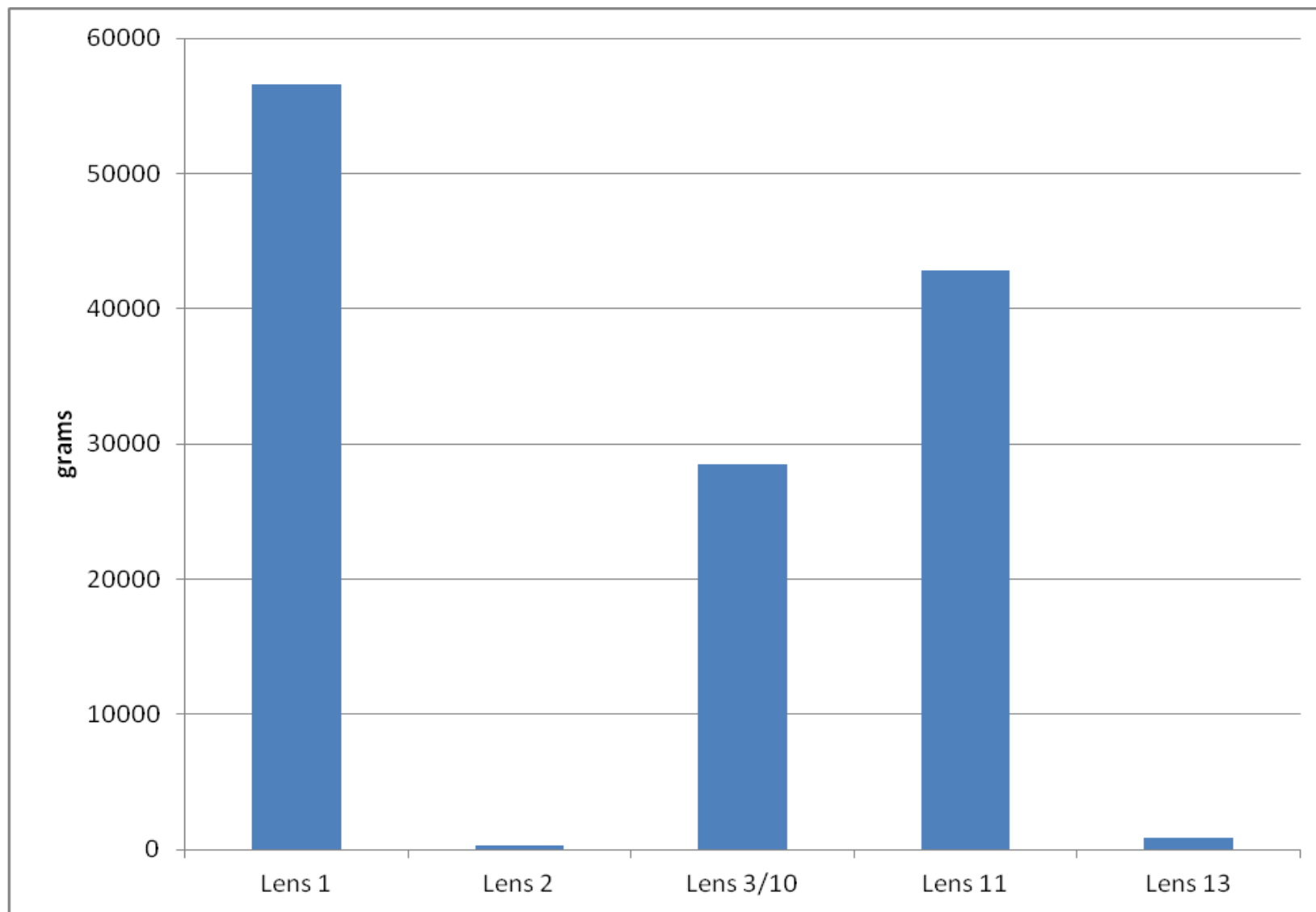
	Ochre	g	0	0	0.5	0	0	<b>0.5</b>
	Pottery	g	2712.5	0	1612	3511	104	<b>7939.5</b>
	Daga	g	54.5	0	25.5	73.5	0	<b>153.5</b>
	Charcoal	g	342	0.5	226	260	6	<b>834.5</b>
	Soil sample	n	1	0	0	1	0	<b>2</b>
	<b>Total Weight</b>	<b>g</b>	<b>56567.5</b>	<b>300.5</b>	<b>28487.5</b>	<b>42844</b>	<b>829.5</b>	<b>129029</b>

FIGURE 30: ARTEFACTS FROM RD 050<sup>1</sup>

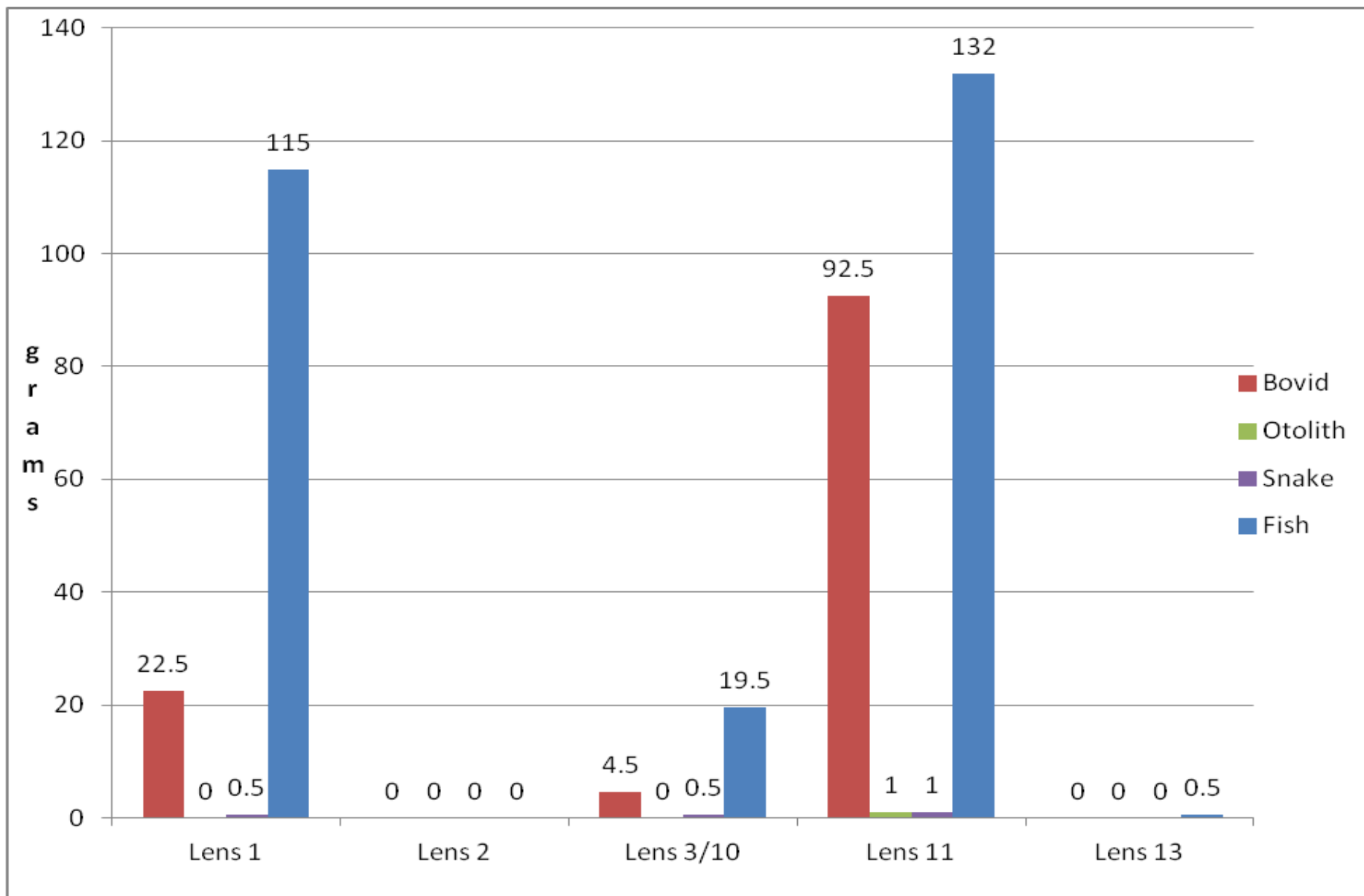


<sup>1</sup> Excludes *P. perna*

**FIG. 31 TOTAL WEIGHTS PER LAYER**



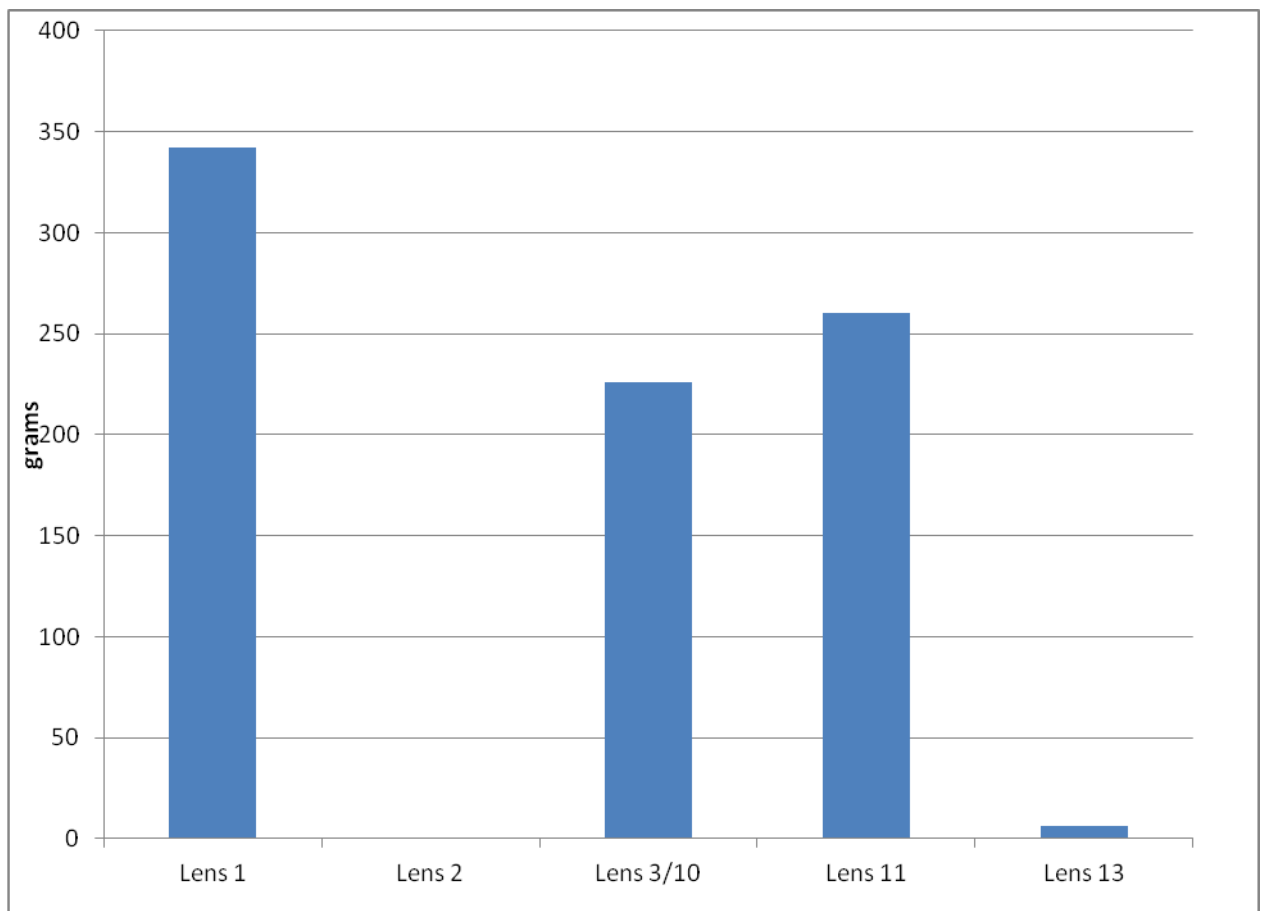
**FIG. 32: FAUNAL REMAINS WEIGHTS PER LAYER**



## Charcoal

Charcoal occurs in all layers, but mostly in Lens 1 and then Lens 11 and Lens 3/10 (fig. 33). The charcoal sample is a good sample size and appears to have been dumped with the middens. Only one ash pit was excavated in Lens 13. This means that there were no fires in the middens.

**FIG. 33: CHARCOAL WEIGHTS PER LAYER**



## Pottery

Most of the pottery came from Lens 11 and then Lens 1. Many of the shards came from near complete pots that had been placed in the midden. Most of the pots were undecorated and only a few had lip incisions. This would place the pottery with the Zulu-speaking occupation of the area.

## Daga

Only 153.5g of daga was excavated. The fragments occur in all lenses.

## Ochre

One piece of red ochre was found in Lens 3/10.

## Worked shell

*Nassarius kraussianus* (or *Nassa*. for short) is an estuarine shell “cream-buff with purple markings but usually covered with grey or green algae growth” (Richards 1989:62). These are often used as beads for necklaces from as early as the Middle Stone Age. Since *Nassarius kraussianus* has no nutritional value, their occurrence is automatically associated with beads.

A total of 9 *Nassa* beads were recorded of which most came from Lens 1. These were whole shells or fragments thereof.

A single piece of worked oyster and a fragment of a shell pendant were excavated. The oyster had been smoothed along the edges, but there was no drilled hole.

## Shell

Thirteen species of shell were excavated (fig. 34). The main type of shell from the excavations is *Perna perna* (brown mussel). These occur on the rock outcrops along the beach and are an important protein source. The analysis always separates *P. perna* from the other shells due to the abundance of the mussels obscuring other species in the graphs.

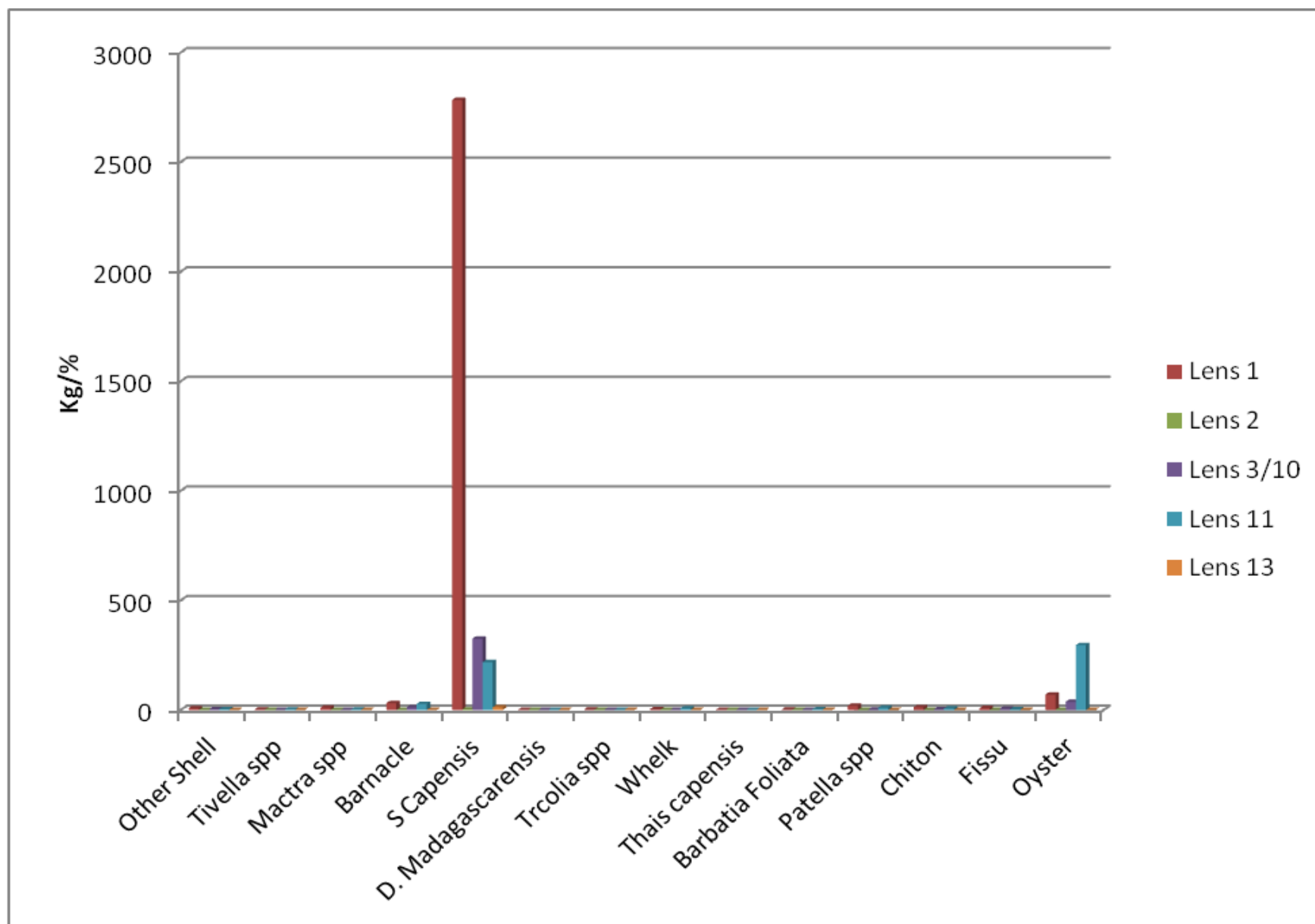
The most abundant shell species after *P. perna* is *S. capensis* and then some oyster. The other shell species tend to be small species that were probably attached to the main shell, with the exception of the chiton. Both *S. capensis* and chiton are very tough meats and require preparation before consumption.

A total of 113.44kg of *P. perna* was excavated from 17 squares. Lens 1 had the most *P. perna*, followed by Lens 11 and then Lens 3/10 (fig. 35). Most of the *P. perna* is unburnt suggesting it was cooked in a container of sorts, as the shell had no contact with charcoal/fire.

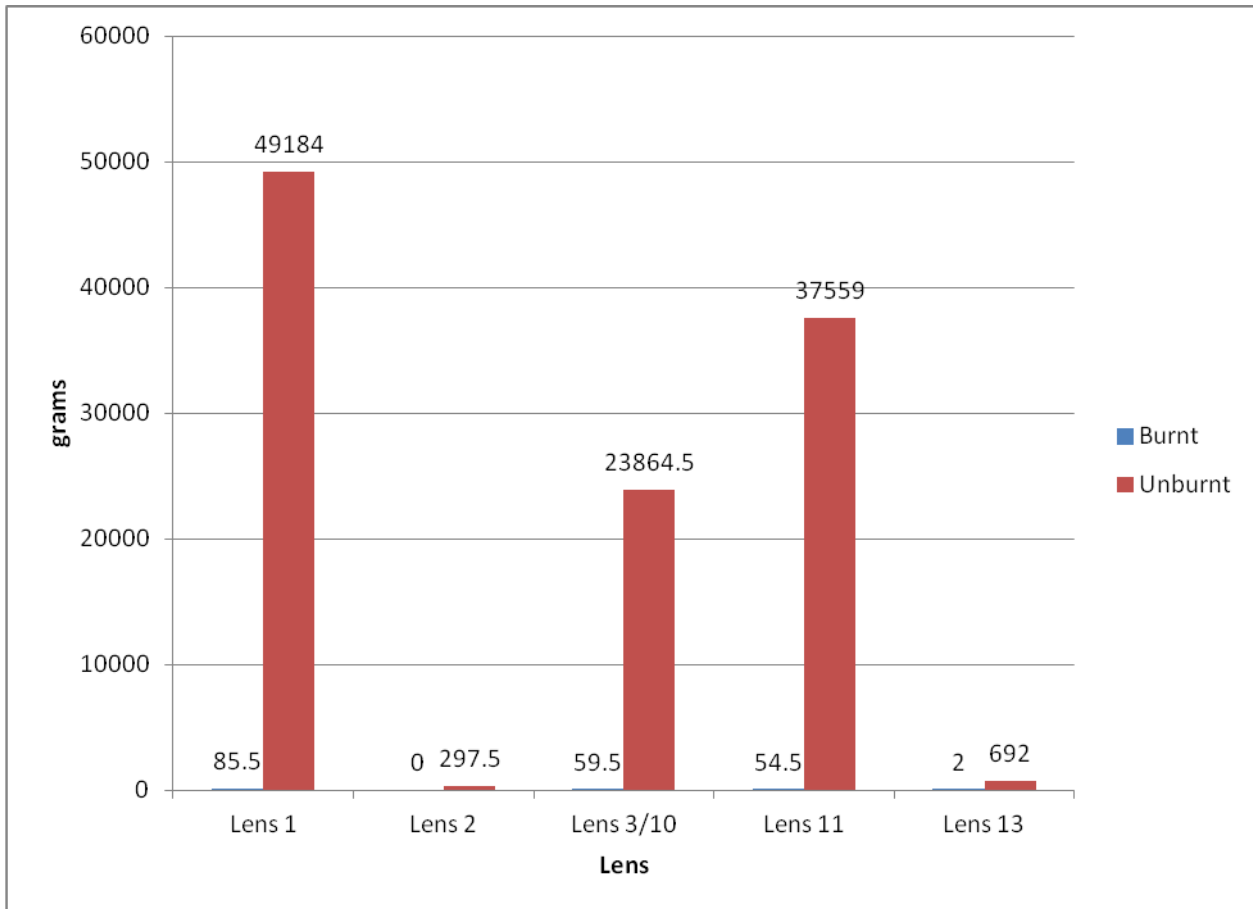
The MNI (minimum number of individuals) for *P. perna* shows that a total of 3474 individual shells were eaten. Lens 1 had the most with a total of 1583 MNI, followed by Lens 11052 with 3044 MNI (fig. 36).



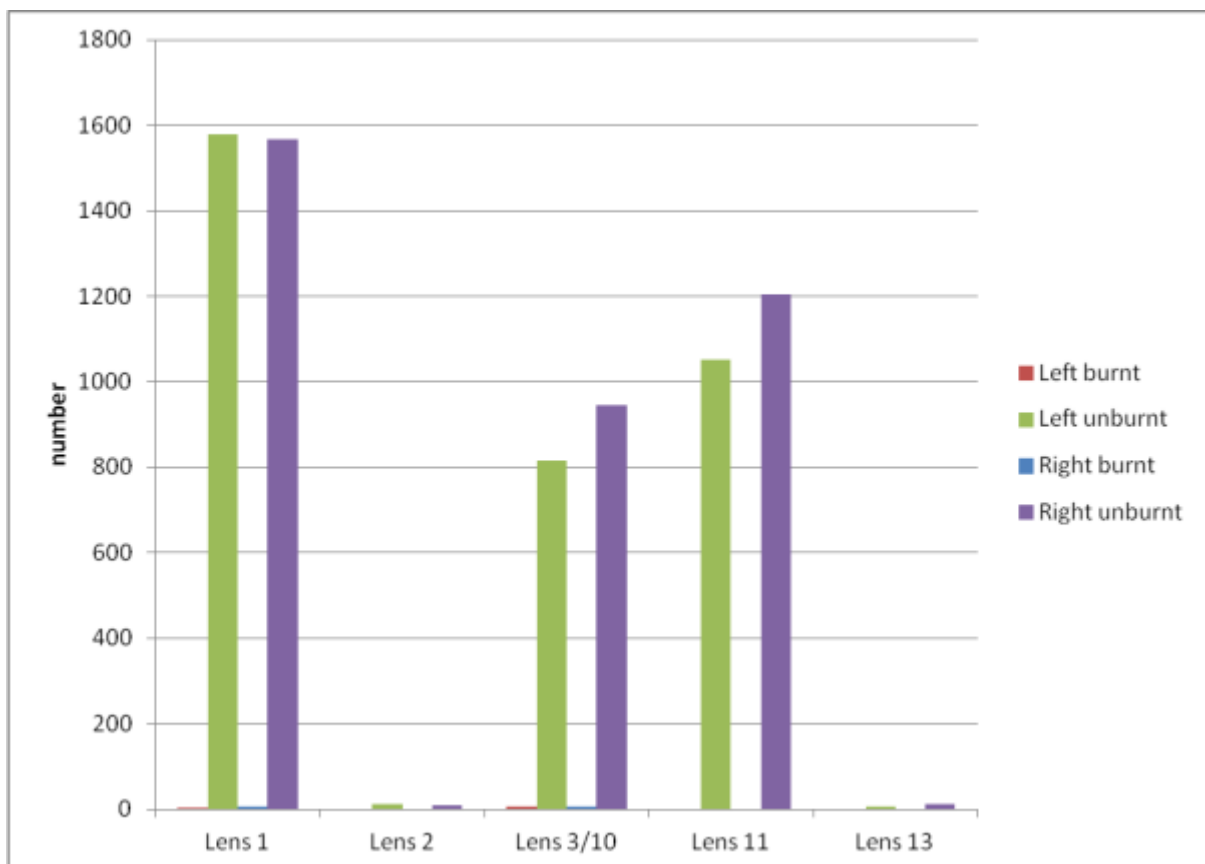
**FIG. 34: SHELL SPECIES**



**FIG. 35: PERNA PERNA WEIGHTS PER LAYER**



**FIG. 36: LEFT AND RIGHT MUSSEL FREQUENCIES AT MPE187**



The size of *P. perna* is used to determine gathering methods. The reasoning is that a wide range of sizes would indicate mass gathering activity, while targeted sizes would result in a skewed size plot. Unfortunately once can only measure unbroken *P. perna* to determine their sizes, unlike the black mussels (*C. meriodanalis*) where the internal scar is related to size. Most of the *P. perna* break within the midden and as part of site taphonomy. This results in low numbers of measurable shell. Table 3 summarises the data from measured *P. perna* for all layers. Fig. 37 shows the individual sizes.

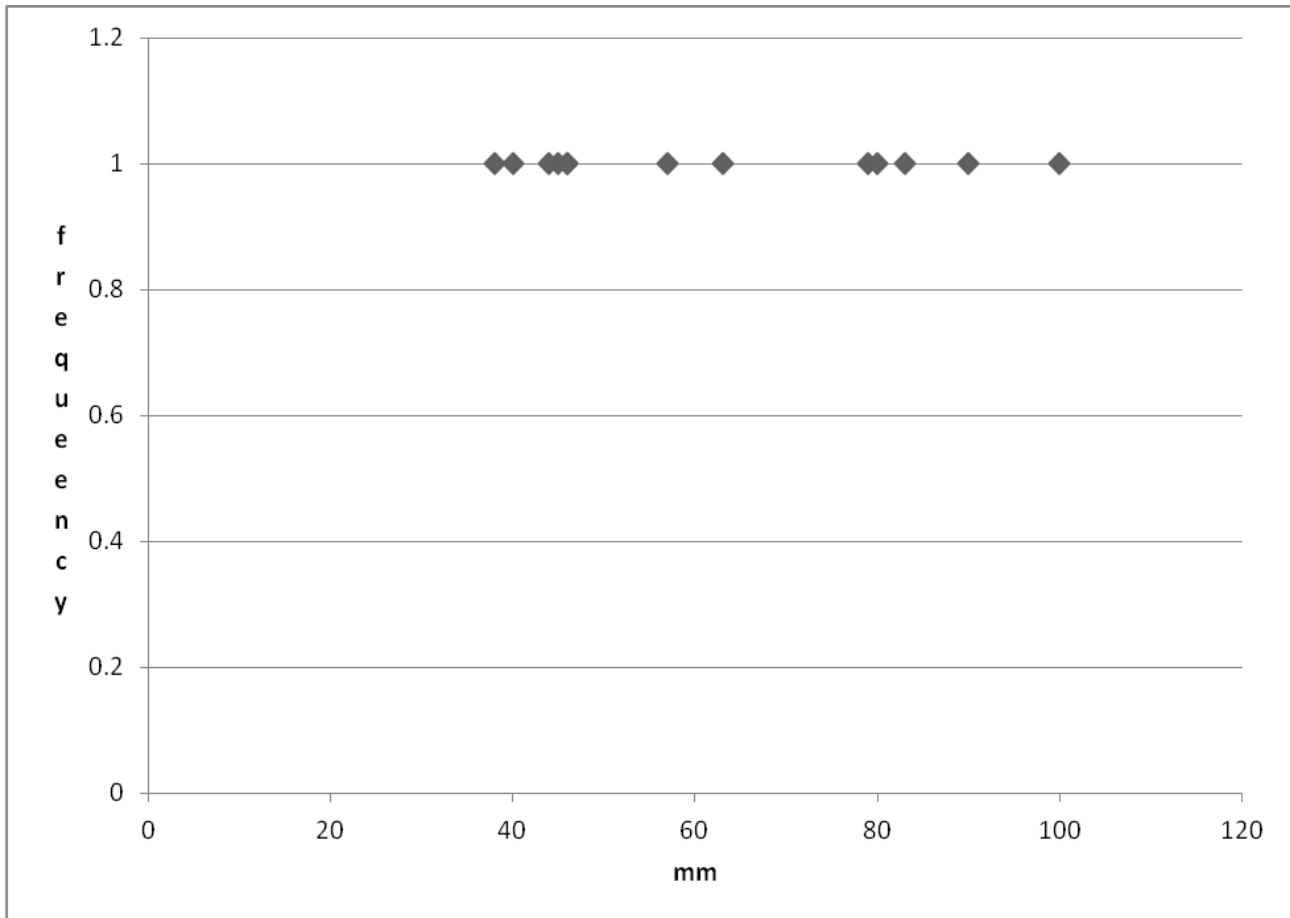
The shells are on average small in size (60mm) with a large standard deviation of 20.5mm. This suggests that there was mass harvesting from the rocky outcrops.

**TABLE 3: PERNA PERNA LENGHTS**

Square	Quad	Lens	left	right	left	right	
A5	NE	Lens 11	1	1	40	38	1
A5	NE	Lens 11	1	1	46	45	1
A5	SE	Below Lens 11	1	1	63	79	1
A5	SE	Lens 11	1	1	80	100	1
B6	NW	Lens 11		1	0	57	1
A5	SW	Below Lens 1		1	0	83	1
C4	NW	Lens 3	1		46	44	1
C3	SE	Lens 10	1	1	90	40	1

**Total**

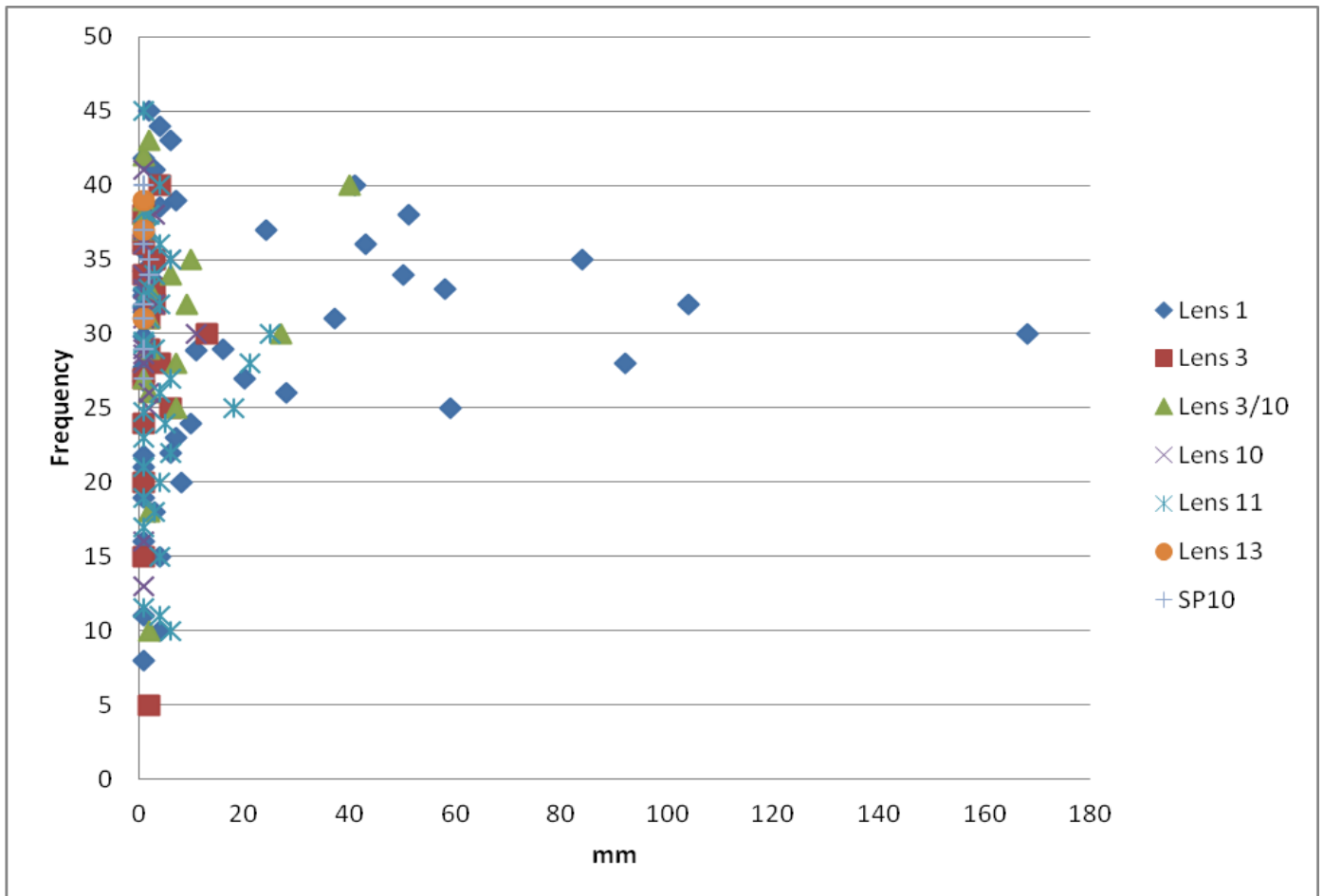
average	60.8	60.8	60.8
median	54.5	51	51.5
max	90	100	100
min	40	38	38
f	6	8	14
std	20.5	23.5	21.4

**FIG. 37: TOTAL *PERNA PERNA* LENGTHS AT RD 050**

A total of 1361 *S. capensis* (Cape false-limpet) were measurable. In total they are on average 29.7mm in size with a standard deviation 8.3mm (Table 4). Most of the shell occurs between 26mm and 40mm in size. This suggests that these shells are being more selectively gathered (fig. 38).

**TABLE 4: SUMMARY OF OF *S. CAPENSIS* SIZES**

Lens	average	median	max	min		std	f
1	30.2	31.9	45.0	8.0		8.6	986
3	28.4	30.0	40.0	5.0		8.7	49
10	30.2	31.0	41.0	13.0		7.3	38
11	27.0	28.0	45.0	10.0		8.8	149
Lens 3/10	31.4	32.0	43.0	10.0		8.2	125
SP10	33.4	34.0	40.0	27.0		4.1	11
total	29.7	31.0	45.0	5.0		8.3	1361

**FIG. 38: SHELL LENGTHS OF *S. CAPENSIS***

Other shell species that could be measured were *Fissurelidae* spp., *Tivella* spp. and *Barbatia* spp. (Table 5). These are too infrequent for an analysis.

**TABLE 5: OTHER SHELL MEASUREMENTS**

Species	Lense	Mm
<b>Fissurelidae</b>	Lens 3/10	35.7
<b>Tivella spp.</b>	Lens 11	10
<b>Tivella spp.</b>	Lens 1	26
<b>Tivella spp.</b>	Lens 1	5
<b>Barbatia spp</b>	Lens 1	24

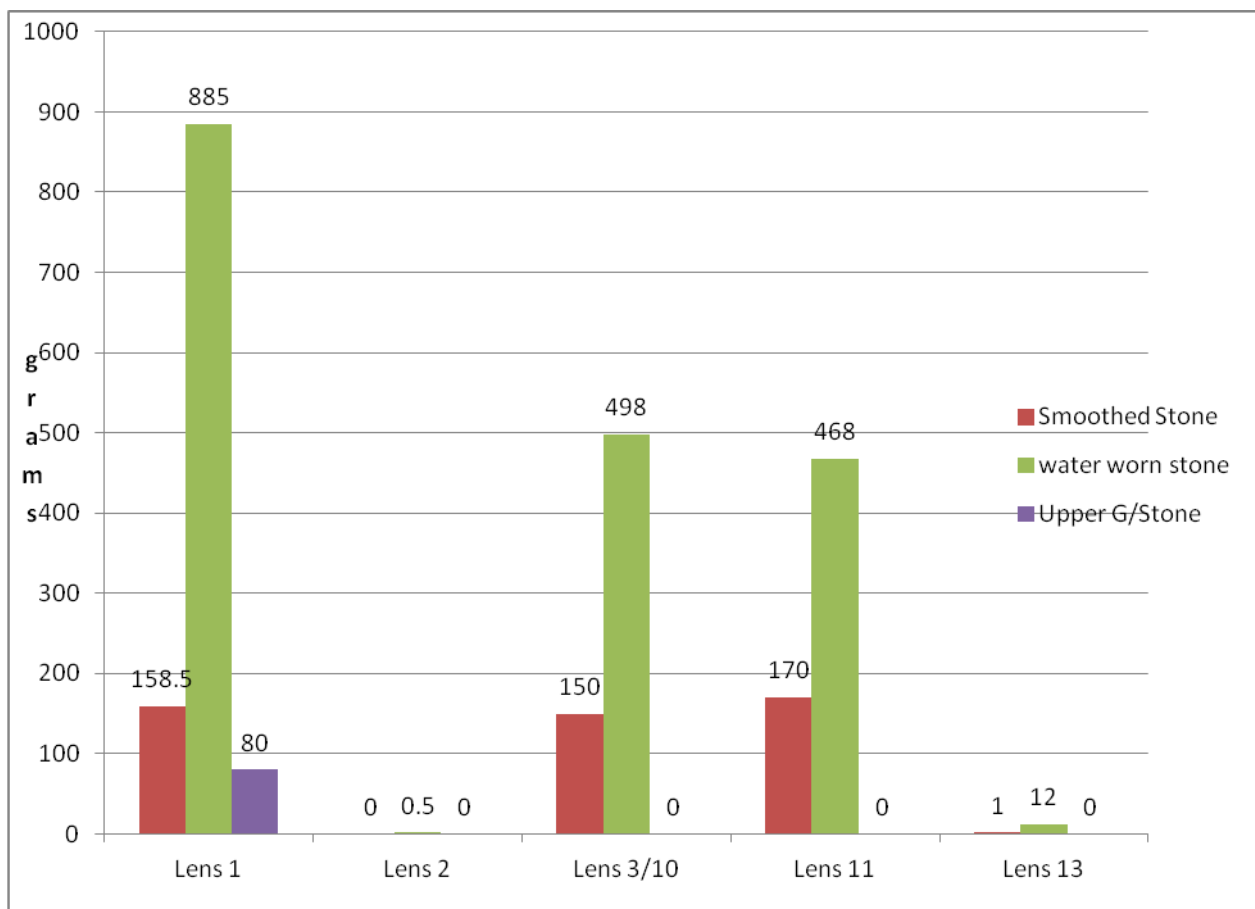
Water worn shell is shell fragments on the ocean floor that that attach to the byssus of a bivalve. It has been argued that the amount of water worn shell and stone is related to sea turbidity where low turbidity will result in more water worn fragments adhering to the byssus. High turbidity affects algae growth, sea temperatures and how well mussels 'clean' themselves. We started recording water worn shell/stone since the beginning of the RBM project, and continue to do so for

future research. Any meaningful results would require several stratified deposits, or dating of several sites for a chronological sequence.

## Stone

The excavations at RD 050 yielded very few stone artefacts and ecofacts (fig. 39).

**FIG. 39: STONE CATEGORIES AND WEIGHTS AT RD 050**



WBS Smoothed Pebbles are pebbles varying from 2cm – 10cm in size and have been smoothed by human activity. These are bigger than water worn stone and would not be associated with the byssus of mussels. The larger pebbles could be small upper grinding stones or hammer stones.

Water worn stone are the small beach pebbles and stones associated with mussels. While Lens 1 has the most water worn stones, it is also much larger.

Only six small upper grinding stones were excavated. These are much smaller than the upper grinding stones associated with sorghum, millet and maize. The shell middens are unlikely to yield many grinding stones as there will occur in the living area, and not the rubbish dump.

One upper grinding stones was excavated.

## GENERAL DISCUSSION

The excavations at RD 050 were undertaken as we had noticed a large amount of *S. capensis* that had been exposed by heavy rains. This species is not unusual in the shell lenses, but it does not occur in such a high frequency. *S. capensis* is also associated of the Thembe-Tsonga occupation of the area, and not the Zulu-speaking occupation. It was thus unexpected to find Zulu pottery on the site, and clearly dating the site to post 1829.

The site yielded good data for *S. capensis* with at least 2352 measurements. Few sites have been excavated with such a high density of this species. Research suggests that *S. capensis* is mostly inedible due to a chemical it releases and its high mucous content (McQuaid, Cretchley and Rayner 1999; X thesis). X found that the species was considered unpalatable along the Wild Coast of the Eastern Cape. The use of *S. capensis* at RD050 and a few other sites, suggests that this is a cultural preference and perhaps the flesh was prepared to remove the mucous and chemicals. This species tend to be associated with Thembe-Tsonga sites in the Zulti North mining lease, and could suggest that this site dates to the early Zulu-occupation of the area, with Thembe-Tsonga people living at the site. This is a developing hypothesis for us, and indicates that the archaeological surveys are still yielding new information.

There were initially three shell middens at RD 050, and two are under the current road, with more possibly to the west. We will place test pit holes along the west to see if more of the site occurs, otherwise we will wait for the road to be disused and then continue with excavations.

## MISCELLANEOUS ENVIRONMENTAL FINDS

A new initiative was started with Mbuso Khambule (Rehab.) where we record and photograph various wildlife and botanical finds of interest. We have previously noted and informed the Rehab/Ecology staff, but never on a formal basis. E.g. we have noted Bell's Hinged tortoises, black mambas, 'blind snakes', a Gaboon Viper, leopards, and an olive rameron pigeon in the past, but never recorded their location or photographed them for positive identification. This will extend to botanical species as well, e.g. snake lilies, we will now photograph these with GPS locations for the environmental department. If the animal is protected we will inform our supervisor immediately and await instructions.

An example of this would be the recording of a dwarf chameleon ahead of MPE mining (fig. 40). We were unaware of the relocation program regarding protected species, however, its location was recorded as (-28.525878°S, 32.384578°E). This will now form part of the environmental database.

**FIG. 40: DWARF CHAMELEON NORTH OF MPE**



Two sightings were made in May 2022.

1. Forest Cobra north of MPE (fig. 41) at S28.519540° E32.379470°
2. Plain grass frog (*Ptychadena spp.*) at S28.598465° E32.330823°. The frogs are in a wetland northeast of MPA in the ecostrip. There is a small



valley between the two dunes that goes to the sea. The erosion is down to Holocene beach with many shells, hardened beach sandstone and coral.

**FIG. 41: PTYCHADENA SPP**



September

The nest of a crowned eagle (*Stephanoaetus coronatus*), with two eagles in it, was spotted approximately 300m in front of MPC. It is a threatened species in the Red Data book (<http://africanraptor.co.za/gallery/african-crowned-eagle-2/>). The location has been given to Mbuso Khambule.

**FIG. 42: CROWNED EAGLE NEST**



**October**

A Natal Hinged Tortoise was noted on the gravel road at the mine office, .near The Rehab. Offices. It was relocated to more dense undergrowth on the lake side of the offices.

**FIG. 43: NATAL HINGED TORTOISE**



## CONCLUSION

A total of 22 new sites were recorded in 2022, while several sites were continuously monitored and sampled. Two sites were excavated: RD 015 and RD 050. It appears that MPE and Red Dunes still continue towards archaeologically sensitive areas and MPC remains in an area that has been partially mined by dry mining. MPA and MPD did not progress far in terms of distance in 2022.

There have been a total of 514 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, while a few date to the Early Iron Age. 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.

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 higher 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 two excavated sites are significant in that they both date to the Historical Period. RD015 probably dates to the early 20<sup>th</sup> century, while RD 050 may date to the arrival of Zulu-speaking people c. 1829.

The current heritage mitigation is still uncovering new finds, and increasing data to the general heritage of the area. There is a probability of more Late Stone Age sites in the mining lease. We have also increased our monitoring activity in the Red Dunes, or MPE Dry mining area. This was in response to local community concerns regarding ancestral remains.

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. Smaller mammal and bird remains would also be informative, as

would be the smaller shell species that are palaeo-environmental indicators. The coral fragments, oysters, limpets and mussels 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 a field. 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. The archaeology tends to suggest that the opposite occurred. 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 occurrence of *S. capensis* (Cape False Limpet) as a definite food source is interesting as it tends to be omitted from most people's diets along the southern African coastline where it occurs. We have suggested that this may be a cultural preference and could be related to Thembe-Tsonga speakers as they are mostly associated with their sites.

## REFERENCES

de Souza, G, Tubino, R., Monteiro, C. and da Costa, M. 2019. Relationships between fish and otolith dimensions of *Pomatomus saltatrix* (Linnaeus, 1766) (Perciformes: Pomatomidae) in southeastern Brazil. *Neotropical Ichthyology* **17**(1):

McQuaid, C. , Cretchley, R., and Rayner, J. 1999. Chemical defence of the intertidal pulmonate limpet *Siphonaria capensis* (Quoy & Gaimard) against natural predators. *Journal of Experimental Marine Biology and Ecology* **15**(1): 141-154

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

Seaman, J.A. 2002. Genetic Variation Within Two Pulmonate Limpet Species, *Siphonaria Capensis* And *S. Serrata* Along The South African Coast. Doctor Of Philosophy Of Rhodes University

Richards, D. 1989. **Shells of Southern Africa**. Struik: Cape Town

# APPENDIX A

## SITE RECORD FORMS

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA: <b>X</b>		LIA		IIA			
Historical	Historical Period:		Recent Past (last 60 yrs):					

Recorder's Site No.: MPA 045

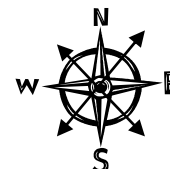
Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.60934 E: 32.31418

Alt: 64m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

MPA 45 is located on the first dune cordon from the ocean.

**SITE DESCRIPTION:**

Type of Site: Open.

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

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes

Tracings:

Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 12/08/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

It consists of a scatter of artefacts on the surface, over a 30m x 20m area. Artefacts include decorated pottery, pottery with "intsumpa", small bovid bone (recent), possible human remains, tortoise shell (recent) and *Perna perna* dispersed across the whole area, but no visible midden.

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:		LIA		IIA X			
Historical	Historical Period:		Recent Past (last 60 yrs):					

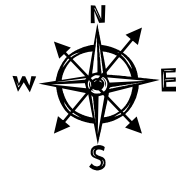
Recorder's Site No.: RD051

Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.53200 E: 32.36177 Alt: 67m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

RD 51 is located on the edge of the red dunes, before the Maphelane Road and occurs in the road cutting. It may extend into the adjacent forest.

**SITE DESCRIPTION:**

Type of Site: Shell midden

Merits conservation: The site is of low significance. We will continue to monitor it for as long as remains possible.

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes Tracings: Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 12/04/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

The site consists of a shell midden, 1.2m below the surface, visible in the road cutting. Surface artefacts consist of *P. perna* and *S. capensis*.

No artefacts, apart from the shell, were visible, but it is possible that since the midden appears to be *in situ*, the other artefacts may be as well.



**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:		LIA		IIA			
Historical	Historical Period:	<b>X</b>	Recent Past (last 60 yrs):					

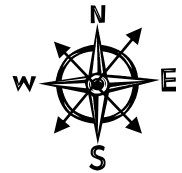
Recorder's Site No.: RD052

Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.52689 E: 32.36345 Alt: 81m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

RD052 is located on the first red dune from the Maphelane side.

**SITE DESCRIPTION:**

Type of Site: Shell midden

Merits conservation: Yes. The site is of medium significance because of the very real possibility of human remains. We will continue to monitor it closely.

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes Tracings: Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 17/06//2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

It consists of a surface scatter of artefacts, including pottery, undecorated rims and upper grinding stones. There is also bone on the surface, possibly from a hippo as well as several *P. perna* scatters

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:		LIA		IIA X			
Historical	Historical Period:	?	Recent Past (last 60 yrs):					

Recorder's Site No.: RD053

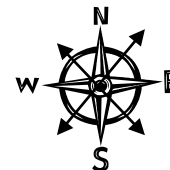
Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.52866 E: 32.36627

Alt: 90m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

RD053 is located on the first red dune from the ocean side.

**SITE DESCRIPTION:**

Type of Site: Open. Surface scatter of artefacts

Merits conservation: No. The site is of low significance and no further mitigation is required, however, we will continue to monitor it for as long as it remains possible.

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes

Tracings:

Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 08/07/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

It consists of a surface scatter of artefacts, dispersed along the road for about 50m, including undecorated pottery and upper grinding stones.

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:		LIAX		IIA			
Historical	Historical Period:	<b>X</b>	Recent Past (last 60 yrs):					

Recorder's Site No.: RD 054

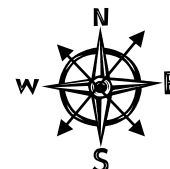
Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.52453 E: 32.36509

Alt: 78m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

RD 054 is located at the edge of the Red Dune System, inland side.

**SITE DESCRIPTION:**

Type of Site: Open.

Merits conservation: .No. The site is of low significance and no further mitigation is required, however, it was sampled and we will continue to monitor it for as long as it remains possible.

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes

Tracings:

Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 17/08/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

The site consists of a scatter of artefacts over a 30m x 20m area, across the top of the dune, as well as a single, dispersed *Perna perna* midden. The artefacts include slag, undecorated pottery, upper grinding stones and a fragment of a ceramic clay dagga pipe.

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:	X	MSA		LSA		ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:	X	LIA	X	IIA	X		
Historical	Historical Period:	X	Recent Past (last 60 yrs):					

Recorder's Site No.: RD 055

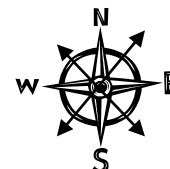
Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.52414 E: 32.30692

Alt: 87m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

RD 055 is located at the edge of the Red Dune System, inland side.

**SITE DESCRIPTION:**

Type of Site: Open.

Merits conservation: .No. The site is of low significance and no further mitigation is required, however, it was sampled and we will continue to monitor it for as long as it remains possible.

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes

Tracings:

Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 17/08/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

The site consists of a scatter of artefacts over a 10m x 20m area, right at the edge of Dry Mining, so part of the site has collapsed into the mining area. The artefacts are in a lag deposit and include decorated pottery (Tsonga and Mzonjani), upper grinding stones, ESA tools and bovid bone.

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:		LIA	<b>X</b>	IIA			
Historical	Historical Period:	<b>X</b>	Recent Past (last 60 yrs):					

Recorder's Site No.: RD 056

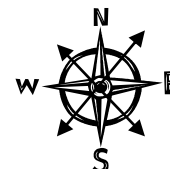
Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.52378 E: 32.36796

Alt: 94m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

RD 056 is located at the edge of the Red Dune System, inland side.

**SITE DESCRIPTION:**

Type of Site: Open. Smelting site

Merits conservation: .No. The site is of low significance and no further mitigation is required, however, it was sampled and we will continue to monitor it for as long as it remains possible.

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes

Tracings:

Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 17/08/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

The site consists of a scatter of smelting related artefacts over a 30m x 20m area. The artefacts include undecorated pottery, fire cracked rocks and slag.

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:		LIA	<b>X</b>	IIA			
Historical	Historical Period:	<b>X</b>	Recent Past (last 60 yrs):					

Recorder's Site No.: RD 057

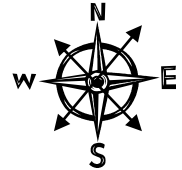
Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.52501 E: 32.36448

Alt: 75m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

RD 057 is located at the edge of the Red Dune System, inland side.

**SITE DESCRIPTION:**

Type of Site: Open. Midden and smelting

Merits conservation: .No. The site is of low significance and no further mitigation is required, however, it was sampled and we will continue to monitor it for as long as it remains possible.

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes      Tracings:      Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 17/08/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

The site consists of a scatter of artefacts over a 10m x 10m area, as well as a single, dispersed *Perna perna* midden. The artefacts include slag, undecorated pottery, upper grinding stones and bovid bone

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:	X	MSA		LSA		ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:	X	LIA	X	IIA	X		
Historical	Historical Period:	X	Recent Past (last 60 yrs):					

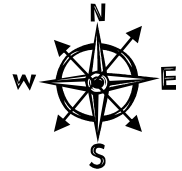
Recorder's Site No.: RD 058

Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S:28.52414 E: 32.30692 Alt: 87m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

RD 058 is located in the middle of the Red Dune System.

**SITE DESCRIPTION:**

Type of Site: Open.

Merits conservation: .No. Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes Tracings: Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 17/08/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

RD 058 is located ~30m southwest of RD057 on the next small hill. The site consists of a scatter of pottery and *P. perna*. Only the edge of the site has been cleared and we expect more to occur in the centre.

The site is probably a single house dating to the early 20<sup>th</sup> century. It is very close to the surface and similar in appearance to RD 015, RD 052, and RD 057. These sites could all form part of a single settlement of a family since they are 120m apart and appear to be of similar age.

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:		LIA		IIA	<b>X</b>		
Historical	Historical Period:		Recent Past (last 60 yrs):					

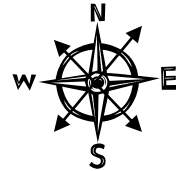
Recorder's Site No.: RD 059

Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.5277256 E: 32.362169 Alt: 74m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

RD 059 is located at the edge of the Red Dune system, on the district road to Maphelane side.

**SITE DESCRIPTION:**

Type of Site: Open.

Merits conservation: .No. The site is of low significance and no further mitigation is required. It will be monitored for as long as it remains possible.

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes Tracings: Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 27/10/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

It consists of a surface scatter of artefacts over a 50x 50m area and three dispersed middens.

Artefacts include undecorated pottery, brown mussel and upper grinding stones.



**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:		LIAX		IIA			
Historical	Historical Period:	<b>X</b>	Recent Past (last 60 yrs):					

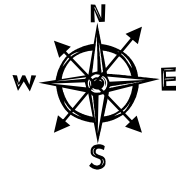
Recorder's Site No.: RD 060

Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.527911 E: 32.362752 Alt: 79m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

RD 060 is located at the edge of the Red Dune system, on the district road to Maphelane side.

**SITE DESCRIPTION:**

Type of Site: Open.

Merits conservation: .No. The site is of low significance and no further mitigation is required. It will be monitored for as long as it remains possible.

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes Tracings: Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 17/08/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

It consists of a surface scatter of artefacts over a 30x 30m area.

Artefacts include undecorated pottery, brown mussel and upper grinding stones.

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:		LIA		IIA <b>X</b>			
Historical	Historical Period:		Recent Past (last 60 yrs):					

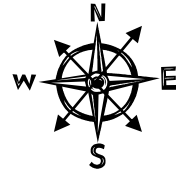
Recorder's Site No.: RD 061

Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.52889 E: 32.36390 Alt: 78m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

RD 061 is located at the edge of the red dune system, near the district road to Maphelane.

**SITE DESCRIPTION:**

Type of Site: Open.

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

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes Tracings:

Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 17/11/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

It occurs across the top of the dune over a 40m x 30m area and consists of a scatter of surface artefacts. Artefacts include *Perna perna*, upper grinding stones and undecorated pottery.

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA	X	ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:		LIA		IIA			
Historical	Historical Period:		Recent Past (last 60 yrs):					

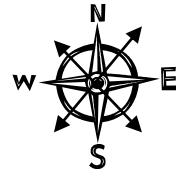
Recorder's Site No.: MPD 115

Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S -28.551158° E 32.368769° Alt: 94m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

MPD115 is located at the MPD Dry mining section. It is halfway up the dune face on the first dune cordon from the sea. The site is located on a small spur of the dune.

**SITE DESCRIPTION:**

Type of Site: Open.

Merits conservation: No

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes

Tracings:

Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 26/04/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

The site consists of a concentration of quartzite pebbles 10cm - 15cm in size in a ~5m diameter. A single hammer stone and two *P. perna* fragments were noted. The site appears to be a cache of quartzite pebbles for potential stone tools. It would thus date to the Late Stone Age.

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:		LIA	<b>X</b>	IIA	<b>X</b>		
Historical	Historical Period:		Recent Past (last 60 yrs):					

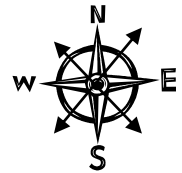
Recorder's Site No.: MPD 116

Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S 28.55173 ° E 32.36785 ° Alt: 100 m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

MPD116 is located 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, however: we will continue to monitor it for as long as it remains possible.

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes      Tracings:      Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 06/06/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

The site consists of an ephemeral *P. perna* midden visible in the road cutting. Artefacts include marine shell and undecorated pottery.

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:		LIA	<b>X</b>	IIA			
Historical	Historical Period:		Recent Past (last 60 yrs):					

Recorder's Site No.: MPD 117

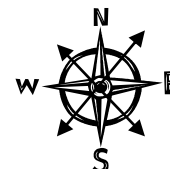
Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.55284 E: 32.36674

Alt: 105m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

MPD 117 is located on the first dune cordon from the ocean.

**SITE DESCRIPTION:**

Type of Site: Open.

Merits conservation: .No. The site is of low significance due to its lack of context.

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes

Tracings:

Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 12/08/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

It is consists of a scatter of artefacts on the surface, over a 20m x 20m area. The site is a topsoil dumpsite, so the material is not relevant, however, we sampled it.

The artefacts consist of dispersed *Perna perna*, *Patella* spp, oyster, several upper grinding stones and two whole pots (undecorated).

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	X
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:		LIA		IIA	X		
Historical	Historical Period:		Recent Past (last 60 yrs):					

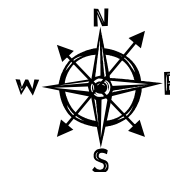
Recorder's Site No.: MPD 118

Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.55020 E: 32.37067 Alt: 75m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

Located on the first dune cordon from the ocean.

**SITE DESCRIPTION:**

Type of Site: Open.

Merits conservation: .No

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes Tracings:

Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 27/9/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

It consists of two scatters of artefacts on the surface, each covering a 10m x 10m area. The site was divided into MPD 118 and MPD 118 extension and they are 20m apart. They are separated by the current track.

The artefacts consist of dispersed *Perna perna*, one oyster fragment and an upper grinding stone. No pottery was noted at the two middens. The *P. perna* are larger than average in observation, suggesting that the site may be older than the Iron Age. MPD118 ext. still has some deposit as seen in the track cutting

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:		LIA	<b>X</b>	IIA			
Historical	Historical Period:		Recent Past (last 60 yrs):					

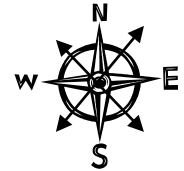
Recorder's Site No.: MPD 119

Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.54879 E: 32.37153 Alt: 92m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

MPD 119 is located on the first dune cordon from the ocean.

**SITE DESCRIPTION:**

Type of Site: Open.

Merits conservation: .No.

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes Tracings:

Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 12/08/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

MPD 119 is located on the first dune cordon from the ocean and 120m northeast of MPD118. It consists of two *Perna perna* middens that have been affected by the HME. The site is ~20m in diameter.

The artefacts consist of dispersed *Perna perna*, and one large limpet (*P. concolor?*). The *P. perna* are larger than average in observation, suggesting that the site may be older than the Iron Age. Neither pottery, nor stone tools were noted at the site.

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:		LIAX		IIA			
Historical	Historical Period:	<b>X</b>	Recent Past (last 60 yrs):					

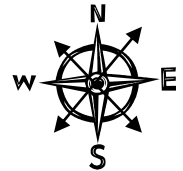
Recorder's Site No.:MPD120

Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.54961 E: 32.37088 Alt: 84m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

MPD 120 is located on the first dune cordon from the ocean and between MPD118 and MPD119.

**SITE DESCRIPTION:**

Type of Site: Open.

Merits conservation: .No

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes Tracings: Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 17/08/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

It consists of a scatter of *Perna perna* and oyster shells. There is undecorated pottery associated with this site. The site is ~15m in diameter



**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	X
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:		LIA		IIA	X		
Historical	Historical Period:		Recent Past (last 60 yrs):					

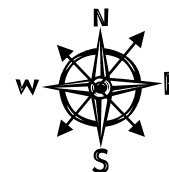
Recorder's Site No.: MPD 121

Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.558057 E: 32.361336 Alt: 112m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

MPD 121 is located on the first dune cordon from the ocean.

**SITE DESCRIPTION:**

Type of Site: Open.

Merits conservation: .No. The site is of low significance, but will be monitored for as long as it remains possible.

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes Tracings: Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 03/10/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

It consists of scatters of artefacts on the surface, all along the ridge of the dune, as well as along the base.

The artefacts include decorated pottery, shell and upper grinding stones.

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:		LIA	<b>X</b>	IIA			
Historical	Historical Period:	<b>X</b>	Recent Past (last 60 yrs):					

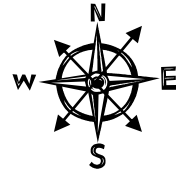
Recorder's Site No.: MPD 122

Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.54806 E: 32.36588 Alt: 137m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

MPD 122 is located on the first dune cordon from the ocean, at the top of a high dune.

**SITE DESCRIPTION:**

Type of Site: Open.

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

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes Tracings: Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 01/12/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

It is consists of a scatter of artefacts on the surface, covering a 10m x 10m area. The artefacts consist of dispersed *Perna perna*, one potsherd with a hole, undecorated pottery and upper grinding stones.

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:	X	LIA	X	IIA			
Historical	Historical Period:	X	Recent Past (last 60 yrs):					

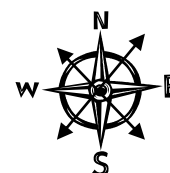
Recorder's Site No.: MPD 123

Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.54764 E: 32.36750 Alt: 168m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

MPD 123 is located on the first dune cordon from the ocean, at the top of a high dune.

**SITE DESCRIPTION:**

Type of Site: Open.

Merits conservation: .Yes. The site is of medium significance due to its high artefact yield and will be monitored for as long as it remains possible.

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes Tracings:

Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 01/12/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

It is consists of a scatter of artefacts across the top of the dune over a 30m x 60m area. Artefacts have also rolled down the dune face and occur at the base of the dune. Artefacts include dispersed *Perna perna*, a worked hippo tooth, upper grinding stones, a possible sorghum lower grinding stone, LIA pottery, Historical pottery, EIA pottery and oyster fragments.

**UMLANDO ARCHAEOLOGICAL SITE RECORD FORM****SITE CATEGORY:**

Stone Age	ESA:		MSA		LSA		ISA	X
Rock Art	Paintings		Engravings		Other			
Iron Age	EIA:		LIA		IIA			
Historical	Historical Period:		Recent Past (last 60 yrs):					

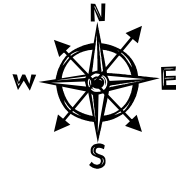
Recorder's Site No.: MPE 191

Official Name:

Local Name:

Map Sheet: 2832CA St Lucia

GPS reading: S: 28.52887 E: 32.39066 Alt: 26m

**DIRECTIONS TO SITE: SKETCH OR DESCRIPTION**

MPE 191 is located in the valley between the first and second dune cordons from the ocean.

**SITE DESCRIPTION:**

Type of Site: Open.

Merits conservation: .No. The site is of low significance and no further mitigation is required, however, we will continue to monitor it for as long as it remains possible.

Threats: Yes

What threats: RBM Mining

**RECORDING:**

Digital pictures: Yes Tracings: Drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 10153, Meerensee, 3901

Date: 01/12/2022

Owner:

References:

**DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.**

It consists of a single, dispersed *Perna perna* midden.

No other artefacts were noted, but the site may still extend further into the adjacent forest.