Final Archaeological Report for the Greater St Lucia Wetland Park: Infrastructure Development Project Phase 1

Archaeological surveys and excavations

For Lubombo SDI Infrastructure Steering Committee

By

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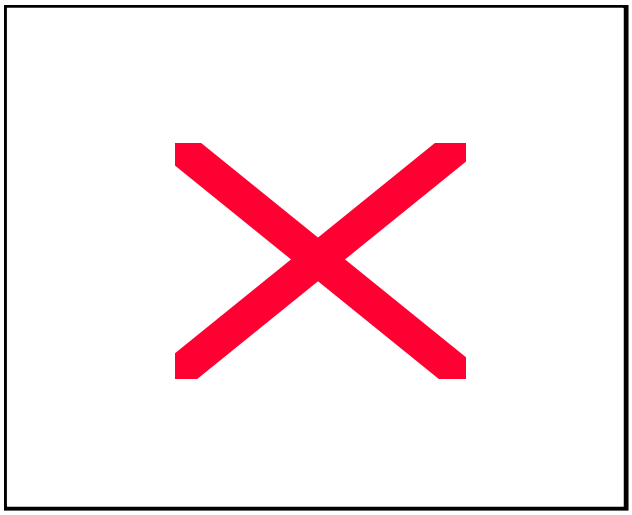

INTRODUCTION

The Institute for Cultural Resource Management (ICRM) was appointed by ACER (Africa) on behalf of the Lubombo SDI Infrastructre Steering Committee (the Client) to undertake an archaeological survey and excavations for the Phase 1 Infrastructure Development Project on the Eastern Shores, Greater St Lucia Wetlands Park (GSLWP). The area is known to have high archaeological sensitivity based on the work undertaken by Anderson (1996, 1997, 1998, 1999, 2000) in the Richards Bay area, and by Hall (1987) in the GSLWP. Thus it was highly probable that archaeological sites would occur in the proposed infrastructure.

The Phase 1 survey recorded sixteen new archaeological sites and revisited several others recorded by Hall (1987). Of these sixteen sites six were of medium significance and were marked for further mitigation. Subsequent to the first excavations further surveys were undertaken to complete the archaeological component of this contract. A total of 39 new archaeological sites have been recorded and several previously recorded sites have been reassessed. This report is a synthesis of the archaeological surveys and a summary of the excavations. The survey results are discussed first and followed by the excavation results. The discussion of each excavated site is a summary of the findings as a full analyses of each site is beyond the scope of this project.

The area along the Eastern Seaboard, especially between Richards Bay and Maputo, is of high archaeological significance. It is this area, where the first agriculturists entered the coastal plains 1700 years ago. At approximately 1500 years ago, it appears that a different linguistic group of people entered this area. They were also agriculturists yet had different social organisations and language. The interaction and timing between these two groups forms part of the academic debates in (pre-)history. Another factor that makes this area of archaeological significance is the period between the Early Iron Age and the Late Iron Age, at *c.* AD 1000. Current debates centre on the origins of the Late Iron Age people. One side of the debate argues that the Late Iron Age people originated from Central Africa and travelled along the Eastern Seaboard. The other side of the debate argues that the change from the two Iron Ages was one of internal social change and not the result of an influx of new people. The earliest dated Late Iron Age side occurs just north of Durban. Similar, but slightly younger, sites occur in the Richards Bay area. The St Lucia area thus has the potential to yield archaeological information regarding the origins of the Late Iron Age in KwaZulu-Natal. If sites of similar age to the Durban site are located then it would support the one hypothesis over the other. The late Iron Age people spoke the formative Nguni languages. Any Late Iron Age site is thus crucial to the academic debates and in our understanding of local history. Fig. 1 summarises the radiocarbon dates for the Iron Age in KwaZulu-Natal.

Many of the sites recorded in this survey have been partially damaged by existing afforestation roads/tracks, and some as a direct result of current construction activities. All archaeological sites are protected by the KwaZulu-Natal Heritage Act of 1997, and previously by the National Monuments Act of 1969. It is the Developer's responsibility to obtain permits in order to damage, or alter, these sites. The report complies with the KwaZulu-Natal Heritage Act of 1997 with regards to archaeological impact assessments and excavations.

Six archaeological sites had been damaged by the GSLWP construction prior to any archaeological survey. On a more positive note, some sites exist that have not been affected by any development. These sites have the potential to be salvaged and/or used for archaeotourism. Thus, the emphasis should be on these latter sites.

The terms of reference for this project are to undertake an archaeological survey of the following areas in terms of sites with archaeological significance:

- AR1b: Realignment of a section of the Cape Vidal Road (timber loading site to Bhangazi Forest Station)
- AR1c: Realignment of a section of the Cape Vidal Road (timber loading site to Bhangazi Forest Station)
- AR4b: Bhangazi Heritage Site access
- AR5: Catelina Jetty Access Road and Picnic site
- AR10: Cape Vidal Eastern Loop Road
- AW1a & AW1b: St Lucia to Mission Rocks Road and Bulk Water Supply
- AW1b: Mission Rocks to Cape Vidal Bulk Water Supply

Only those sites to be affected by the above development were initially assessed. Any other development and/or archaeological site, in the GSLWP area, is beyond the Terms of Reference for this study. However, if a site was in the vicinity of the affected area, then it was noted for future development and part of the management plan of the area.

METHODOLOGY

Once the routes had been finalised, the Natal Museum archaeology database was consulted for known archaeological sites. Hall (1987) had already recorded several sites in the GSLWP in the 1980s. These sites were initially assessed in terms of their significance, however the criteria for site significance has changed as a result of more information being gathered. Thus the previously recorded sites were revisited and reassessed. The survey of the new roads and pipelines entailed walking along the routes and locating and recording archaeological sites.

Archaeological sites were recorded with a GPS **and** marked on two orthophotos (except for the sites with a CVR prefix). One orthophoto was handed to the Resident Engineer at the end of each trip, while the smaller one was kept by the archaeological consultant for report writing purposes. A few sites were recorded, but were not part of the contract itself. These sites were noted as they occur in the general affected area and both Ezemvulo KwaZulu-Natal Wildlife and the Client need to be made aware of these sites in the event of future development.

Each scatter of artefacts is usually regarded as a site. All sites are grouped according to low, medium and high significance. Sites of low significance have no diagnostic artefacts. 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 usually occurs on most sites. Sites of medium significance may also have test-pit excavations. Sites of high significance are excavated and/or extensively sampled. The sites that are extensively sampled have high research potential, yet poor preservation of features. Some sites may be of such high significance that no impact should occur.

Significance is generally determined by several factors. Each site is also assessed in terms of other sites in the specific region and to the broader regional context.

Defining significance

Archaeological sites vary according to significance and different criteria relate to each type of site. However, there are several criteria that allow for a general significance assessment 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. Presence of a cultural deposit
    - 1.3. Features:
        - 1.3.1. Ash Features
        - 1.3.2. Graves
        - 1.3.3. Middens

1.3.4. Cattle pens

1.3.5. Houses/Structures

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 at the site?

3.2. Is it a type-site?

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

7.2. Educational value is in terms of display at a Heritage institution or local site museum.

The more a site can fulfill 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 high 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 FROM THE ARCHAEOLOGICAL SURVEYS

All sites are named according to the recorder. Sites with a prefix of 2832 have been recorded by Hall (Natal Museum archaeological site records). Sites with the prefix of SLD, CVR, CJ, WL and OCV are previously unrecorded sites recorded during the current survey. The impact of roads and/or pipelines is assessed according to their current locations. That is, the locations of pipelines and servitudes as marked per orthophoto were surveyed. This may be problematic for the Perriers Rock and Mission Rocks roads, as these have had development on the southern side of the existing track/road, yet no mitigation. The on-site discussions and orthophoto detailing the development did not indicate this latter development. Significance is defined in terms of the whole site while mitigation is assessed in terms of the impact the road and/or pipeline may have on that specific part of the site. Deviations to these locations may require a reassessment of each site. Appendix B lists the geographical co-ordinates of each site. Since archaeological sites are of high sensitivity, the locations of these sites should not be included in any public document [1]. Table 1 summarises the archaeological sites, their significance and required mitigation.

SLD1 (Pipeline Contract 1-6)

SLD1 is an ephemeral scatter of shell and some pottery over an approximate radius of 40m. It appears as if the existing road to Perriers Rock has extensively damaged this site. There are a few small pockets of shell still *in situ*, however these are a maximum of 15cm in diameter. The pottery is adiagnostic and fragmented. The shells are mostly fragmented and consist of *P. perna* (brown mussel) and *Ostrideae spp.* (oyster). The site extends to the embankment on the north side of the road, however it will not be impacted. The site dates to the Late Iron Age or Historical Period.

Significance: The site is of low significance as it has been extensively damaged from previous disturbance.

Mitigation: No mitigation required

SLD2 (Pipeline Contract 1-6)

SLD2 is a sparse scatter of *P. perna* over a 10m radius. The site may extend to the embankment on the south[2] side of the road to Perriers Rock, however it will not be impacted. The site dates to the Late Iron Age or Historical Period.

Significance: The site may be of medium significance.

[1] The description of each site is for the purpose of describing the site and is topographical setting, **not** to give direcitons to the site. The orthophotos and/or GPS can be used to relocate to a site if the archaeologist is not available.
[2] The pipeline occurs on the north side of the road/track

Mitigation: No further mitigation is required provided that the main site is not affected.

SLD3 (Pipeline Contract 1-6)

SLD3 is a shell midden concentrated on the south side of the road to Perriers Rock. The existing road has already damaged part of the site. The remains of the midden are under dense vegetation, although some of it is visible in areas of sparse vegetation. Several artefacts were recorded at this site. These artefacts included pottery, shell and worked stone. The shell remains consist of *P. perna*, although other species are bound to be present. No diagnostic sherds were recorded although at least three vessels are visible. A lower grindstone (30cm x 20cm) was recorded on the main site. The main site has an archaeological deposit and probably dates to the Late Iron Age.

Significance: This site is of medium significance. It is unlikely that the planned pipeline will further affect the site.

Mitigation: No further mitigation is required.

SLD4 (Pipeline Contract 1-6)

SLD4 is a shell midden concentrated on the south side of the road to Perriers Rock. The existing road has already damaged part of the site. The remains of the midden are under dense vegetation, while some remains are visible on the road. It appears that the site has a smaller concentration of sherds than SLD3. These remains include bone, *P. perna*, oyster, and pottery. One pottery sherd has an orange-red colouring. The site probably dates to the Late Iron Age.

Significance: The site is of low-medium significance. It is unlikely that the planned pipeline will further affect the site.

Mitigation: No further mitigation is required.

SLD5 (Pipeline Contract 1-6)

SLD5 is a shell midden concentrated on the south side of the road to Perriers Rock. Most of the midden, and presumably the rest of the site, is under dense vegetation. The site is similar to SLD3 in size and archaeological debris. The shell remains only consist of *P. perna*. Three sherds, from different vessels, were recorded and one had an orange-red colouring.

Significance: The site may be of medium significance. It is unlikely that the planned pipeline will further affect the site.

Mitigation: No further mitigation is required.

SLD6 (Pipeline Contract 1-6)

SLD6 appears to be an extensive scatter of shell and pottery that is located on both the north and south sides of the road. The surface shell remains consist of well-preserved oyster fragments. This is significant as no *P. perna* were observed, this making the site different to previously recorded sites along the road. Sherds from three different vessels were recorded on either side of the road. The site has and archaeological deposit approximately 15 cm – 20 cm below the current surface. The site dates to the Late Iron Age or Historical Period.

Significance: The site is of medium significance. The occurrence of only oyster fragments and an archaeological deposit make this site significant. Since the previous sites (SLD1 - 5) have been previously damaged, this site may still be a representative sample of these sites recorded along this road (even if it has a different shell content).

Mitigation: The site needs to be mitigated as it is of significance and the pipeline will negatively affect part of the site. A two-phased approach to the mitigation is proposed. The first phase will be to place a series of 1m x 1m excavation test-pits along the route of the pipeline. The aim of these test-pits will be to determine the full significance of the site and to locate potentially important features that may be impacted by the pipeline. This would occur over a maximum of two days. If an *in situ* midden or other feature(s) is located then further mitigation may be required. If further mitigation is required then the more excavations should occur near the pipeline and/or road. If the new road will remove the current topsoil then excavations along the road may also be required.

The excavations of this site are discussed below.

SLD7 (AR1a Contract 1-1)

This site has been extensively damaged by current roadworks for the GSLWP. According to the Regional Engineer the area was mistakenly marked as a loading area and subsequently the topsoil was removed. The removal of several centimetres of topsoil was sufficient to remove a shell midden, probably the remains of a settlement, and disturb an Early and Late Stone Age deposit.

The archaeological material observed scattered in the area included several pottery sherds, *P. perna* fragments, whelk, an Early Stone Age hand-axe, and a Late Stone Age stone tool (specifically an adze).

The accidental damage to this site highlights the need for consultation with all contractors/consultants before any construction activity.

Significance: The original significance of the site cannot be ascertained as it is now disturbed; however, currently it is of low significance.

Mitigation: No further archaeological mitigation is required as the site has already been damaged and that no further construction activity is envisaged. If the area is to be rehabilitated then an archaeologist should be included in the rehabilitation program to ensure no further damage occurs to the remaining parts of the site.

SLD8 (Management Contract 1 – 8, E Shores)

SLD8 is located ±20 meters west from the ablution blocks at Mission Rocks. It has been extensively damaged by the previous construction of these facilities and the road. The site consists of a variety of shell species (barnacle, oyster, *P. perna,* and *Donax spp.*). A lower grinding stone was also recorded. More of the site, or other smaller sites are likely to occur underneath the dense dune vegetation.

My personal experience, and the database at the Natal museum, suggests that there is a very high density of archaeological shell middens within a 1 km radius of any rock outcrop along the beach.

Significance: The parts of the remaining site are of low significance since they have been previously extensively damaged. However, there is a high probability of sites occurring in the proximity of the proposed boardwalk and the last 50 m of the road leading to the proposed boardwalk. The high diversity of shell species in the one midden suggests that nearby sites may have a similar composition of species.

Mitigation: No mitigation is required for SLD8, as it is already too damaged for salvage. However, the construction of the boardwalk and pipeline requires comment. The location of the posts for the boardwalk should occur in consultation with an archaeologist. If the post holes only occur along the existing track from the road to the beach, then it is unlikely to affect any archaeological material. However, if post holes should occur beyond this track, then a management plan should be followed.

I propose the following management plan:

1. Consultation with an archaeologist and KwaZulu-Natal Heritage as to the location of the boardwalk
2. An archaeologist should excavate several of these post holes to ensure that no other shell middens occur beneath the current surface.
3. Any other future development in this area should be with the consultation of an archaeologist and KwaZulu-Natal Heritage.

SLD9 (AR1a Contract 1-1)

SLD9 occurs on the east side of the road along the fire break and just before the Mission Rocks turnoff road. As with SLD7 this site has been damaged by recent construction activity for one of the stockpiles. A bulldozer has cleared the topsoil of the site, and thus removing part of the site. It is currently stockpiled with gravel presumably for the use of the road. A shell midden (*P. perna* and *Patella spp.*), a probable settlement, several pottery sherds, a lower grindstone, and two bones (a bovid rib and phalange) were recorded. The site has a potential deposit. The archaeological material appears to have a spatial component, i.e., material was recorded at different parts of the site. The site dates to the Late Iron Age or Historical Period.

The pipeline or culverts may affect part of the site.

Significance: The site would have been originally of medium significance as it apparently has well preserved faunal remains and spatial component. Currently much of material is in a secondary context making it of low significance.

Mitigation: Some form of mitigation would be required for the part of the site that may be affected by the pipeline. I suggest that an archaeologist be on site while this section of the pipeline is excavated. It is unlikely that a shell midden, or any other feature, will be located, however other material may occur. An on site archaeologist would be able to ascertain any the immediate affect of the pipeline on the site, and salvage any material that may occur. Alternatively, a few test-pits are excavated to determine if any material may occur near the pipeline. It was later ascertained that that this site would not be affected by the pipeline contract. To date no mitigation or observation has been undertaken.

SLD10 (AR1a Contract 1-1)

SLD10 is located on the east (pipeline) side of the road (at the chain marker: MHPO70), and may have been partially affected by the existing road. Most of the site appears to be located on the small raised area besides the road. Several Early Iron Age decorated sherds and *P. Perna*

fragments were recorded. The decorated sherds indicate that the site is associated with the Mzonjani Phase of the Early Iron Age, i.e. the first farmers in the St Lucia area. These decorated sherds date the site to between 1700 and 1500 years ago. The recorded material remains have probably slumped for the side of the site because of the road construction.

Significance: The main site is of medium significance as it has well preserved organic remains and appears to be in a primary context. The pipeline is unlikely to affect the site.

Mitigation: No direct mitigation is required for this site. However, an archaeologist should be on site when the pipeline is excavated to retrieve potential remains. To date no mitigation or observation has been undertaken.

SLD11 (AR1a Contract 1-1)

SLD11 is located ±100m along the current road (towards Cape Vidal) from SLD10. As with SLD10, most of the site is located on the side of the road, and appears to be relatively unaffected by the road. Early Iron Age sherds, slag, marine shell (*P. perna* and *Fissurellideae spp.*) were recorded.

Significance: The main site is of medium significance as it has well preserved organic remains and appears to be in a primary context. However, the pipeline is unlikely to affect the site.

Mitigation: No direct mitigation is required for this site. However, an archaeologist should be on site when the pipeline is excavated to retrieve potential remains.

Mitigation: No direct mitigation is required for this site. An archaeologist should be on site when the pipeline trench is excavated to retrieve potential remains. To date no mitigation or observation has been undertaken.

SLD12 (Gravel roads Contract 1 - 4)

This site was observed in the section of the road cutting near the southern end of the Eastern Loop road. The observable part of the site is an *in situ* shell midden (of *P. perna*) with a cultural deposit. The midden is ±30cm below the current topsoil (under dense vegetation) and is ±3 cm in depth. The rest of the site probably occurs on both sides of the road. Grindstones fragments were noted further downhill and are probably part of this site.

Significance: The site is of medium significance as it has preserved shell remains in a (stratified) deposit.

Mitigation: If the current road is widened, then the shell midden would require some mitigation. I suggest that the midden be sampled by excavation: specifically that part of the midden that would be damaged. To date no mitigation has been undertaken.

SLD13 (Gravel roads Contract 1 – 4)

SLD13 appears to be a series of sites in close proximity to each other over a length of ± 200m. on the Eastern Loop. The archaeological remains included marine shell (*P. perna* and oyster) and pottery fragments found scattered along the crest of the dune. A concentration of shell indicates that an archaeological deposit is present.

The site is currently under dense vegetation making it difficult to locate specific areas of the site. However, this type of dune topography, and site settlement pattern, is similar to that which I have observed in the dunes of Richards Bay. These areas consist of several homesteads (or a village) located on the flatter crest of a dune.

The Eastern Loop road (AR10) is currently cutting across the north-eastern part of the site. Pottery and shell fragments are visible in the road cutting.

Significance: The site is of medium-high significance in that it has the potential to yield information regarding intra-site settlement patterns. There is also a cultural deposit.

Mitigation: The main site should not be affected unless some mitigation occurs. However, the current road does not appear to affect the main part of the site. The current road will not be widened any further (according to the Resident Engineer) and thus it is unlikely to have any further impact on the site. If the width of the road does not change (i.e. 4 m – 5 m in width) no further mitigation is required. Any changes to this width would require further archaeological investigation.

Since the first survey, several ’culverts’ and/or pipes had been dug into the road. I am unsure whether this has affected the site or not. To date no mitigation has been undertaken for this site.

SLD14 (Gravel roads Contract 1 – 4)

SLD14 is located on both sides of the road to the Catalina Jetty and will be affected by construction. It consists of an ephemeral scatter of *P. perna* fragments over an area of ±30 m.

Significance: The site is of low archaeological significance.

Mitigation: This site requires no further mitigation.

SLD15a/b (Management contract 1- 8, E Shores)

SLD 15a/b is located near the alternative Picnic Site to Catalina Jetty (SLD16). SLD15a is located at the proposed Picnic Site. Pottery sherds were observed along the edge of the site. This suggests the site extends eastwards.

SLD15b is a large shell midden located ±20 m north of SLD15a. The midden is mostly undisturbed and overlooks Lake St. Lucia. The shell midden is ± 15 cm deep, ±10 m in radius and appears to have a stratigraphic deposit. The shell species consist mostly of *P. perna*, oyster and whelk. Well preserved bone (hippo?) was observed in the deposit. This midden is a good representative example of middens in the area and has high research potential. In addition to this, the site has the potential for archaeotourism.

Significance: SLD15a is of low-medium significance while SLD15b is of high significance.

Mitigation: SLD15a has a potential archaeological deposit that will be affected by the boardwalks for the proposed site. If this alternative Picnic Site is selected, then test-pit excavations should occur in the areas where the post-holes shall occur. These test-pits will determine whether archaeological material exists in these specific areas and their full significance. (After the survey report, this site was damaged apparently by a tourist/camping group (see Appendix A)).

SLD15b is unlikely to be directly impacted by the proposed Picnic Site. An indirect impact could be with visitors walking over the site. The site should be fenced off so that further damage by animals and potential visitors does not occur. If the Picnic Site is chosen near this site, then both the Catalina Jetty and SLD15a/b may be developed for tourism. These sites have the potential to show visitors the long history of the area. To date no mitigation has been done, nor has the management plan been undertaken or discussed with KwaZulu-Natal Heritage.

SLD16 (Management contract 1- 8, E Shores)

SLD16 is commonly known as Catalina Jetty. The Jetty was used as a base for the RAF 262 Squadron between 1943 and 1944 (NCS 1995, in ACER 2000). Currently the Catalina Jetty consists of several foundation structures, the jetty itself, and some concrete structures. These are currently under vegetation and not clearly visible. A cultural deposit probably exists underneath the vegetation.

An Early and Late Iron Age site was also recorded in the vicinity of the jetty. The artefacts were visible along the shore line of Lake St Lucia and probably extend inland and into Lake St Lucia itself. I have removed one complete and inverted pot, and noted the occurrence of another fragmented pot along the shoreline. This suggests that more complete pots are likely to occur inland and underneath the current topsoil.

Significance: The ICRM is not suitably qualified to assess the full significance of the Historical site, which would need to be determined by an architect and/or historian. The Client will need to liase with KwaZulu-Natal Heritage regarding this aspect.

The Iron Age sites are of medium significance as it may yield palaeoenvironmental information regarding the changing water levels of Lake St Lucia. This information may be in the form of palynological studies. Furthermore, the two near complete vessels that I removed, suggests that other vessels may occur in the vicinity of the proposed boardwalk.

Mitigation: It is unlikely that the structures will be affected by the development of the Picnic Site, and thus no mitigation would be required. The site does however form part of the history of St. Lucia and it should be preserved, even if the structures are not yet protected by the KwaZulu-Natal Heritage Act.

The site also has the potential to be developed into a site museum, in conjunction with other sites and the current hiking track. Archaeological excavations may yield more material near the Jetty that can be used for display purposes.

The Early Iron Age should be monitored during any development of the area. Appropriate excavations should occur when/if the area is developed. The mitigation procedures occur in the site log book and have been duly recorded and signed. To date no mitigation has occurred or been approved by KwaZulu-Natal Heritage.

SLD17 (not part of affected construction areas)

SLD17 is located on the second dune crest from the west of the existing Cape Vidal Road. The site is a small scatter of shell that has been disturbed by recent bulldozer activity (fig. 2). This area was not part of the area affected by current contracts nor part of the area to be surveyed for these contracts. The site was recorded and noted as it forms part of the GSLWP archaeological component. This emphasises the need for full archaeological consultation in all aspects of the GSLWP.

Significance: The site is of low significance.

Mitigation: No further mitigation required.

SLD18 (AR1a Contract 1 – 1)

SLD18 is located just north of the Western Loop and Cape Vidal Road (AR1b) intersection. This area was not included in the affected area for the archaeological survey, and was only recorded after the site had been disturbed by bulldozer activity presumably by the stockpile area for one of the GSLWP developments (fig. 3).

Significance: The site is now of low significance.

Mitigation: No further mitigation required.

SLD19 (AR1b Contract 1 - 5)

This site is located along the new Cape Vidal Road (AR1b) north of the Eastern Loop southern turnoff. The site consists of a scatter of shell and ± 3 sherds.

Significance: The site is of low significance.

Mitigation: No further mitigation is required.

SLD20 (AR1b Contract 1 - 5)

This site is located along the new Cape Vidal Road at the CH11240 chain marker. The site consists of an ephemeral scatter of shells, some pottery and a piece of iron ore.

Significance: The site is of low significance.

Mitigation: No further mitigation is required.

The CVR sites occur along the northern half Eastern Loop. These sites are not mapped on the Resident Engineer's orthophoto as the orthophoto was not available at the time of the survey. However, the sites were given a GPS reading. At the time of the archaeological survey, the surveyor had not yet marked certain sections (between CVR1 to CVR5) of the AR1b road with chain markers. CVR6 to CVR 11 had been surveyed and the chain markers were noted. All of the CVR sites will be damaged by the Cape Vidal Road (AR1b). All sites were reported to the Client prior to any construction activity.

CVR1 (AR1b Contract 1 - 5)

This site is located on the new Cape Vidal Road, halfway up a small dune north of the firebreak. The site has been previously damaged by afforestation. The site extends for a ±15 m radius. The main site consists of scatters of shell with a possible archaeological deposit.

Significance: The site is of low significance

Mitigation: No further mitigation is required.

CVR2 (AR1b Contract 1 - 5)

This site is located ±70 m north from CVR1 on a flat area on top of the hill. The site consists of at least four shell middens over a ±30 m radius. The middens and archaeological deposit appears to have been previously extensively damaged by afforestation. The middens have a variety of shell species.

Significance: The site is of low archaeological significance.

Mitigation: No further mitigation is required.

CVR3 (AR1b Contract 1 - 5)

This site is located on the new alignment of the Cape Vidal road (AR1b) north of CVR2. It is situated on a small raised area on the southerly base of a large dune. The site appears to have well preserved remains; however, afforestation has damaged the site to a large degree. The shell consists of two concentrations of brown mussel and oyster, while a variety of faunal remains occur (probably from the same animal).

Significance: The site is of low archaeological significance.

Mitigation: No further mitigation is required.

CVR4 (AR1b Contract 1 - 5)

The site is on top of the hill to be affected by the road on a relatively flat area of the road. The site consists of a scatter of shell, waterworn shell, and some pottery. More of the site may occur in the vegetation to the east of the road.

Significance: The site is of low archaeological significance.

Mitigation: No further mitigation is required.

CVR5 (AR1b Contract 1 - 5)

This site is located along AR1b in the vicinity of the chain markers 16040 to 16180. The site extends over a large area (± 60 m) with the chain marker 16160, indicating the general middle of the site. The site consists of four shell middens that have been exposed by the bush clearance. These middens occur over the whole site suggesting that there is a spatial component and a settlement on top of this dune. The middens are well preserved and appear to be dense with stratigraphy. The middens have a variety of shell species that include brown mussels, oyster and cowry. More middens extend below the current top soil of the site.

Several pottery fragments were recorded. One vessel was nearly complete and located along the western fringes of the site. Some of the pottery has a brown-red burnish. A radius-ulna of a large bovid was also recorded. Other bone is also well preserved.

The site probably dates to the Late Iron Age or Historical Period.

Significance: The site is of medium significance since it has well preserved material and a spatial component. Most of the site has not been affected by bush clearance.

Mitigation: Several test-pit excavations should occur on the site to determine the full potential of the site. Excavations were undertaken and these are described below.

The site currently has an electricity pole that will need to be moved during the construction of the road. Onsite discussions with the RE have occurred regarding the positioning of the electricity pole and the restrictions regarding the moving the pole. Under no circumstances can machinery with metal tracks, such as a bulldozer, be used to create a path to the site, or go onto the site. It would be better for the new pole to be placed along the western side of the road, as this section of the site is less sensitive than the rest of the site. If the pole is positioned on the eastern part of the site, then the hole for the pole needs to be supervised by an archaeologist, or alternatively and archaeologist will be required to excavate this hole.

An archaeologist should be on site during the removal of the poles and the reposition of this pole. I also suggested that the pole should be removed during the course of the excavations. In this way the archaeologist is on site and can excavate the new hole at the same time. Subsequent

to the survey and on-site discussions, the pole was placed in the eastern part of the site. However, no direct damage to the archaeological site occurred.

The mitigation for this site is completed and is discussed below.

CVR6 (AR1b Contract 1 - 5)

This site is located on the hill to the south of CVR5 (between chain markers 15800 and 15760). The site consists of two small shell middens that have been exposed by bush clearance. The shell is mainly brown mussel. One pottery fragment was recorded.

The site probably dates to the Late Iron Age or Historical Period.

Significance: The site is of low significance.

Mitigation: No further mitigation is required.

CVR7 (AR1b Contract 1 - 5)

This site is located at the top of the dune, on the AR1b road, near chain marker 15600. The site consists of a scatter of shell (mussel and oyster) that have been exposed by bush clearance.

The site probably dates to the Late Iron Age or Historical Period.

Significance: The site is of low significance.

Mitigation: No further mitigation is required.

CVR8 (AR1b Contract 1 - 5)

This site is located along the crest of the dune in the vicinity of chain markers 15440 and 15520. The site consist of several dense shell midden scatters, and more middens exist beneath the current surface. The location of the middens suggest that there is a spatial component to the site. The shell consists of brown mussel and oyster. A fireplace was observed with burnt shell and bone, along the western margins of the site. The shell and bone are well preserved. Several pottery fragments were also recorded.

The site probably dates to the Late Iron Age or Historical Period.

Significance: The site is of medium significance due to the well preserved remains and the spatial component. The site can be compares to CVR5 in terms of inter- and intra site variability, across space and perhaps through time.

Mitigation: Several test-pit excavations should occur on the site to determine the full potential of the site. The mitigation for this site is completed and is discussed below.

CVR9 (AR1b Contract 1 - 5)

This site is situated on the hill near CVR8, and in the vicinity of chain marker 15300 along the AR1b road. Several shell middens were visible along the flat crest of the dune. The location of these middens suggest that there is a spatial component to the site. The shell middens and bone are well preserved. Several pottery fragments were recorded. More of the site occurs underneath the undisturbed soil of the site.

The site probably dates to the Late Iron Age or Historical Period.

Significance: The site is of medium significance due to the well preserved remains and the spatial component. The site can be used to compare with CVR5 and CVR 8 in terms off inter- and intra site variability, across space and perhaps time.

Mitigation: Several test-pit excavations should occur on the site to determine the full potential of the site. The mitigation for this site is completed and is discussed below.

CVR10 (AR1b Contract 1 - 5)

This site is located on the flat crest of the dune near chain marker 14600 along the AR1b road. The site may be associated with CVR4. The site consists of a small fragmented shell midden and a piece of adiagnostic pottery.

The site probably dates to the Late Iron Age or Historical Period

Significance: The site is of low significance.

Mitigation: No further mitigation is required.

CVR11 (AR1b Contract 1 - 5)

This site is located just west of the staff housing and consists of a small scatter of shell and pottery. The midden is approximately 1 m – 2 m in diameter. One of the pottery fragments has a brown burnish.

The site probably dates to the Late Iron Age or Historical Period.

Significance: The site is of low archaeological significance.

Mitigation: no further mitigation is required.

CJ1 (Gravel Roads contract 1 - 4)

This site is along the ridge of the original proposed Catalina Jetty Road. The site consists of 2+ concentrations of shell, of which some is burnt. The burnt shell, and waterworn stone, suggests that more middens may occur in the area. The site probably extends over a ±30 m radius and it has an archaeological deposit.

Significance: the site is of medium significance.

Mitigation: The site has an archaeological deposit and shell middens. This suggests that it may be well preserved. Test-pit excavations should occur to determine the full significance of the site. Subsequent to the report the road was realigned and did not affect the site.

CJ2 (Gravel Roads contract 1 - 4)

This site is located ±50 m along the same ridge as CJ1. As with CJ1 the site is under dense vegetation making archaeological visibility poor. The site is a potentially wide scatter of marine shell, waterworn stone, two grindstones and some pottery. There is a potential archaeological and spatial component to the site.

Significance: The site is of medium significance, due to its archaeological deposit and spatial information that may be retrieved.

Mitigation: The site requires further mitigation in terms of test-pit excavations to determine the full significance of the site. See Appendix A for further discussions relating to this site.

After the recording of this site, an on site meeting occurred and the new route was graded with an archaeologist present. Figure 4 shows the before and after photos of the site and the road.

OCV1

This site is located along the old Cape Vidal Road and was damaged by the old borrow pit that is located there. The site consists of a scatter of Early Iron Age pottery. The site is not part of the current GSLWP contract.

Significance: The site is of low significance.

Mitigation: The site required no further mitigation.

2832BA 32

This site is a dense scatter of pottery and shell fragments over a wide area. It has an archaeological deposit and probably the remains of a settlement. The site dates to the Late Iron Age.

Significance: The site is of medium significance as it has an archaeological deposit and apparently well preserved features and artefacts.

Mitigation: If the site is to be affected by the construction of the road and/or pipeline then test-pit excavations should be undertaken.

The site has not been affected by current construction activities.

2832BA38

This site is an ephemeral scatter of artefacts along the firebreak. The site dates to the Late Iron Age.

Significance: The site is of low significance

Mitigation: No further mitigation is required. The site has not been affected by current construction activities.

2832BA 78 - 79

These two sites could not be located because of dense vegetation. Both sites are ephemeral scatters of pottery and some shell dating to the Late Iron Age.

Significance: The sites appear to be of low significance.

Mitigation: No further mitigation is required. The site has not been affected by current construction activities.

2832AD 9 – 19, 26 - 31

These sites are a series of sites on the western side of the road (i.e. side opposite to the pipeline), between the road and the afforested areas. The sites begin at the first “cattle-crossing” on the road near the entry gate, and end near the turnoff to the current contractors' offices. The sites date from the Late Iron Age to the Historical Period. The are unlikely to be affected by current development plans.

Significance: The sites range from low to medium significance.

Mitigation: The sites will not be affected by current development and thus no mitigation is required. Mitigation may be required if these sites are affected in the future.

The site has not been affected by current construction activities.

2832AD 6

This site was recorded in the 1976,and little information has been located in the Natal Museum’s data base. The site consists of two pieces of pottery and appears to date to the Late Iron Age.

Significance: The site is of low archaeological significance.

Mitigation: No further mitigation is required, although the site will be affected by construction activities.

2832AD 74

This site dates to the Early and Late Iron Age and is located near the current staff football field and houses. The site consists of a scatter of sherds and shell that have been partly damaged by the development of the houses and football field.

Significance: The site is of low significance.

Mitigation: No further mitigation is required, although the site will be affected by construction activities if the water reservoir and pipeline is planned..

2832AD 81

The site is an ephemeral scatter of sherds dating to the Late Iron Age.

Significance: The site is of low significance:

Mitigation: The site requires no further mitigation, although it will be affected by construction activities if the water reservoir and pipeline is planned.

CH9720

This site is located between the chain markers 9680 and 9720. It appears to be an ephemeral scatter of sherds and shell. However, on reinspection, 10+ glass beads and an *in situ* shell midden were observed. The glass beads range in colour (white, pink, light and dark blue, and white with blue stripes) and are located in various parts of the site. The shell midden is ±15 cm below the current surface and appears to be well preserved. A settlement probably occurs near the midden. The midden is likely to yield well preserved faunal remains.

Significance: The site is of medium-high significance due to the glass beads, and cultural deposit. The archaeological material also has display potential.

Mitigation: A large part of the site will be effected and damaged by the road. I propose that several test-pit excavations are placed on the site and that the shell midden is partially excavated.

The excavations of this site are discussed below.

CH10020

This site is located near the chain marker 10020 and appears to be an ephemeral scatter of sherds and shell. However, on reinspection, an *in situ* shell midden was observed. The midden is ±10cm below the current surface and appears to be ±15 cm thick. The midden is stratified and appears to be well preserved. A settlement may occur near the site.

Significance: The site is of medium-high significance. The midden is well preserved and can be used as a comparison to the midden at CH9720. The two sites are not necessarily related to each other in time, and thus form part of the historical sequence of the area. The site has display potential

Mitigation: A large part of the site will be effected and damaged by the road. I propose that several test-pit excavations are placed on the site and that the shell midden is partially excavated.

The excavations of this site are discussed below and comments about the damage to this site are in Appendix A.

CH10030

The site is near the intersection of the new Cape Vidal Road and the Eastern Loop on top of the dune. The site has been disturbed to a degree by afforestation. The site occurs over a ±50 m radius and is a series of shell middens that appear to have some spatial component. The shell middens have a wide variety of shell species. Several bone, pottery and stone fragments were recorded in the various shell concentrations.

Significance: The site would have been of medium significance taking in consideration the affects of afforestation. However, the recent bulldozer activity has disrupted the spatial component of the site. Previously, the site could have been selectively sampled in terms of a spatial and/or chronological analysis. The site is now of low significance since even the spatial component had been disturbed.

Mitigation: No further mitigation is required.

Western Loop

The Western Loop road occurs over several existing roads and/or tracks. The vegetation in many areas is very dense making archaeological visibility very difficult. SNA had, however cleared the vegetation down to the surface of the soil. This allowed for a higher chance of locating archaeological sites.

Two archaeological sites were recorded along this route. Both sites are within 50 m of each other and their locations have been marked on the orthophoto. Appendix A lists the discussions and reports regarding this aspect of the contract.

WL1

This site is located on the edge of the existing track and over an area of approximately 30 m in diameter. The current road has already affected the site. The site consists of several shell concentrations and ceramics. The shell consists of *Perna perna* and oyster fragments on the surface. This indicates that subsurface middens are likely to our. A few ceramic fragments were located of which one was decorated. The decorated sherd had a flat lip and rim with a double row

of circular impressions on the body (referred to as Group 5 pottery in Richards Bay). The site is a settlement with an archaeological deposit dating to the Late Iron Age.

Significance:

The site is of medium archaeological significance as it has a deposit, well preserved remains and potential settlement patterns.

Mitigation:

The new road will affect this site. The developer has four options regarding this site:

1. Reroute the road past the site. This new route will require an archaeological survey as well.
2. Undertake archaeological excavations to negate any negative impacts on the site. These excavations would our in the affected area of the site.
3. The road should be moved to the west or wetlands side of the road around this site. This is unlikely to impact on the wetland.
4. The road should be made narrower near this site. By narrower I would suggest a change from 7 m in width to 5 m in width over a distance of approximately 25 m.

Subsequent to the recording of this site, parts of this site have been irretrievably damaged (see Appendix A for details). The damage to the site occurs in various ways. Three shell middens and one scatter of shell are visible in the track cuttings (i.e. these have been permanently removed/damaged). The piece of decorated pottery observed during the initial recording could not be seen. I estimate that the new track has removed at least 1m of the site; although I cannot be sure as to the exact extent of the damage until photographs have been developed and the engineering maps have been consulted (see fig. 5 for the before and after photographs relating to the damage to this site). This damage to the site is enough to have damaged the shell middens, and thus affect the interpretation of intra-site and inter-midden activities.

WL2:

WL2 is located on the dune opposite WL1, i.e. 50 m away. The site consists of several shell middens, pottery and a cattle byre. The outer edge of the site has several sisal plants that are on the edge of the existing track. The shell middens consists of *P. perna* fragments and their location suggests that several houses may be located in the area behind the shell middens is the cattle byre. Sisal plants currently demarcate the outer boundary of the cattle byre. The site occurs over a 35 m meter radius, although this may widen if excavations occur.

The site has been shown to the RE of SNA and the danger tape has been marked with the site number.

Significance: The site is of medium archaeological significance since it has visible spatial patterns (houses and cattle byre) and well preserved features and artefacts.

Mitigation: The Western loop will probably not affect this site, provided that its current location is not altered. If the road does not extend beyond the fist row of sisal plants beside the road, then no impact will occur and no mitigation would be required. However, if the road extends beyond this area then it may very well impact the site, and archaeological excavations would have to occur.

To date the construction activities have gone ahead and have not affected the site.

RESULTS FROM THE ARCHAEOLOGICAL EXCAVATIONS

Six archaeological sites were assessed as having medium significance and test-pit excavations were undertaken to determine their full significance. Given the time constraints for most rescue excavations a full detailed analysis of a site cannot be undertaken. It is for this reason that I concentrate on areas that yield well preserved remains and information regarding the spatial component and cultural history of a site. The aim of rescue excavations is to salvage that information from a site that can be used for future research. The interpretations of these sites presuppose knowledge of current academic debates surrounding Iron Age archaeology in KwaZulu-Natal.

SLD6

SLD6 will be damaged by the new road and pipeline along the Perriers Rock road. The site was initially recorded as having a potential deposit and being of medium significance. The pipeline will occur ±1 m off the center of the road and the archaeological excavations were placed 50 cm on each side of this 1 m mark.

Stratigraphy

Ten 1 m x 1 m squares were placed along the pipeline route. Each square was excavated down to the archaeologically sterile layer (orange-brown in colour). Two cultural horizons exist at this site and vary between 10 cm and 20 cm in depth (fig. 6). The first horizon tends to occur in the dark

brown soil horizon, while the second occurs either in the lower dark brown-black horizon and/or orange-brown layer. The stratigraphic depth of each cultural horizon varied from square to square and in some excavated squares they appear to be mixed. The stratigraphic position of the two middens does, however, clearly separate each horizon.

Features

Two shell middens were excavated along the western part of the site (Fig. 7). Both middens consisted of fragmentary oyster remains and are divided into Lens 1 and Lens 2. A grey-black sand at the base of the dark brown-black layer surrounds lens 1. The midden is ±150 cm in length and 3 cm – 4 cm thick. A few pottery sherds were recovered from this lens, and are associated with the early Late Iron Age.

Lens 2 is located ±5 cm below Lens 1 (in Squares 7 and 8) and occurs in the orange-brown layer. No decorated sherds were directly associated with this lens, however I would place this lens with the Early Iron Age Phase of the site. The stratigraphic colouring of the sand wherein Lens 2 lies is similar to that of the Early Iron Age horizon.

Pottery Concentrations:

Pottery Concentration 1 (PC1) is located in Squares 19, 20 and 20A. The cultural horizon consists of brown sand with flecks of charcoal. It consists of a high density of large sherds, probably from the same vessel. Square 20A has two bowl fragments with fragments of a pot (fig. 8).

PC2 is located in Squares 7 and 8. Most of the fragments are undecorated and on their side. This suggests that this feature is not a pit.

Artefacts

Pottery:

The pottery from this site can be divided into two distinctive groups. The first group is characterised by thin-walled sherds. One of these has a graphite burnish on the rim-neck junction. Two decorated sherds were recovered from this cultural horizon. The first sherd has a motif of rectangular impressions and probably relates to the Late Iron Age. These decorations are in comb-stamping and occur over the rim and body of the pot.

The pottery associated with the Early Iron Age tends to be undecorated apart from two decorated sherds. The first sherd consists of a band of alternating triangles. The second sherd has

a hanging pendant motif. The motif consists of five horizontal square impressions outlined with a vertical row of square impressions. These were located in a very fragmented shell midden ± 55 cm below the surface.

Shell:

The identifiable shell consists mainly of oyster and brown mussel (*P. perna*) fragments. A fire has burned some of these shell fragments as they have the characteristic grey colour.

Metal working:

A few fragments of slag and iron-ore were recovered from the upper squares.

Discussion

The excavations did not reveal much information in terms of the spatial layout of the site. The methodology of the excavations made this not possible as the site was only affected in a well defined area – a lineal development. However, information regarding the cultural history of the site was salvaged. The site consists of two phases of occupation. The earliest occupation dates to the Mzonjani Phase of the Early Iron Age, while the upper occupation dates to the early Late Iron Age.

The first cultural horizon is associated with early Late Iron Age. The sherds associated with this horizon are similar to those dated to AD 1295 at Richards Bay (Anderson 2000). The second cultural horizon is associated with the Mzonjani Phase of the Early Iron Age. This Phase dates to *c.* AD 300 and represents the first farmers in KwaZulu-Natal. More of the site lies on either side of the proposed servitude, and further mitigation would be required if more of the site will be damaged.

CH9720

The site is situated along the lower slopes of the dunes along the new Cape Vidal Road. The site will be affected by the construction of the road and it required salvage excavations. The site was first noted by the fragments of shell and several glass beads on the surface, and either side of the road.

The excavations occurred in areas with high concentrations of artefacts on the surface. In addition to this, several small test-pits were excavated to determine the general location of features on the site (fig's 9 and 10).

Stratigraphy

The site consists of a main cultural horizon varying between 20 cm – 50 cm in depth. The cultural horizons consist of shell middens and a dark black-brown sand (DBS). The surface is a brown sand with roots, and this is distinguishable from the DBS. The DBS layer tends to form a large basin shape over the whole site. That is, the outer edges of the site are relatively thin (±10 cm), while the center of the site becomes thicker (±50 cm). Most of the artefactual material occurs in the DBS layer.

The middens in the DBS tend to be thin lenses made up of 2 sub-lenses: the main lens and a basal lens. The main lens consists of mostly broken shell with some whole shell in the darker DBS. The basal lenses tend to be slightly lighter in colour and are located at the interface between DBS and the mostly sterile Orange-Brown Sand (OBS) (fig. 11).

Features

Several small features were recorded. These include hearths, pottery concentrations and shell middens.

Fire Place 1 (FP1)

Fire Place 1 is located in Square 1, ±20 cm below the surface of the soil. FP1 is ±30 cm in diameter and 19 cm deep, forming a shallow basin. FP1 consists of many charcoal fragments, a pink bead, and burnt shell and bone.

Fire Place 2 (FP2)

FP2 is ±1.2 m in diameter and 5 cm deep. No artefacts were located outside of this feature in this square. The artefacts from FP2 included beads, bone, charcoal and pottery. The soil from FP2 is a mixture of Light Brown Sand (LBS) and Dark Brown Sand (DBS).

Pottery Concentrations

Three pottery concentrations were recorded. These concentrations are high densities of pottery that are indications of cattle pens, middens and/or huts. One concentration had a few sherds with shell-impressed decorations.

Middens

Fragments of shell were scattered throughout the site, however there were a few areas where it was highly concentrated (fig. 12). These concentrations are the remains of shellfish rubbish dumps

almost exclusively reserved for shellfish and fish remains. The excavations concentrated mainly on these middens and the area besides them, as they have important spatial information regarding settlement patterns. Representative samples of each midden were taken.

Three main middens were excavated and each was ±1.5 m – 2 m in diameter, and varied between 15 cm – 30 cm in depth. The middens consisted of three main layers. The upper layer is almost exclusively fragments of oyster over a very small area in comparison to the rest of the midden. Below this layer is a fragmented brown mussel layer mixed with DBS. The third lowest layer also consists mostly of brown mussel, however these are less fragmented. The lower layer is a mixture of LBS and shell. The middens tend to form basin-shaped depressions.

The middens consist mostly of brown mussel, small antelope, domestic bovid-sized animals, fish bone, glass beads, pottery fragments, and occasionally small pieces of slag.

Artefacts

Pottery

Most of the pottery is undecorated. Those few decorated fragments have shell-impressed decorations and/or lip notching. The sherds tend to be thin-walled pottery and mostly brown in colour. Some of the sherds have a dark red burnish. These sherds are similar those radiocarbon dated to *c.* AD 1400 in Richards Bay.

Bone

The bone from the site belongs to both domestic and wild animals. These included, small antelope, large antelope, and marine mammal and fish. By small antelope I refer to those the size of duiker, sheep, etc.- by large antelope I refer to those the size of domestic cattle, buffalo, etc. Some of the fragments have cut-marks and may yield information regarding butchery, and thus social practices.

Beads

Many glass beads were recovered during the course of the excavations (Table 2). These beads vary in size and colour and will require specialist analysis for further information. Most of the beads were located outside the areas of the shell middens.

Soil Samples

Soil samples were taken from the shell middens, and general cultural horizons. These samples can be used for palynological studies, and thus environmental data.

Shell

The shell remains from the site consist primarily of brown mussels (*Perna perna*), two oyster species (*Ostrideae spp.*), limpets (mainly *Patella concolar),* and various species of whelk. Other shell species do occur but in lower frequencies. The *Nassarius kraussianus* (Dunker 1846) have the characteristic perforations and markings associated with shell bead necklaces.

Discussion

The excavated features and artefacts from this site tend to be well preserved. In general, the site appears to be a single occupation settlement that was inhabited for a short period of time. A general interpretation of the DBS layer suggests there is a relatively thin cultural horizon (± 50 cm deep) with several features located within it. The middens suggest that there are several cultural depositions of shellfish remains over a relatively short period of time, or that these were deposited concurrently. No shell middens overlapped other middens, as is the case at SLD6 and CH10020.

A general spatial pattern has emerged from the limited excavations of the site. The shell middens tend to be located in the center of the excavations. This 'center' is however on the periphery of the site. This suggests that refuse discard occurred on the outer edges of the site. The middens were exclusively located in Squares 1, 1a, 2, 6 and 10. Very little material is located along the western side of the excavations. Glass beads and pottery concentrations are almost exclusively found along the northern excavated squares. This suggests that these areas may be the domestic living areas of the site. More of these features and artefacts probably occur in the east and southeastern parts of the (unexcavated) site. Small fireplaces are also located outside the areas of the shell middens. The cattle pen could not be located and this probably occurs to the east of the main excavations. If the cattle pen can be located then a clearer spatial interpretation of the site can be made. In summary, it appears that the road affects the western periphery of the site and that more of the site occurs to the east. Further excavations would confirm this hypothesis.

The cultural history of this site is important in the general understanding of the Late Iron Age sequence of KwaZulu-Natal. Little research has been undertaken in KwaZulu-Natal regarding the Late Iron Age. Thus, sites dating to this time period, with well preserved remains, are important in the understanding of the formative stages of the Late Iron Age. Two aspects of this site are important in this understanding. The first is the decorative pottery. This pottery style is similar to that dated to *c.* AD 1400 in the Richards Bay area. Since dateable material has been recovered from this site, it has the potential to be able add to current debates regarding the origin of the Late Iron Age people.

The second aspect is the relationship between the decorated pottery and glass beads. A brief analysis of the glass beads suggests that the beads may be more recent than the radiocarbon dates associated with the pottery. This has two implications for research. Either glass bead analyses has incorrectly identified the origins of certain glass beads, or that some of these beads date back to far earlier than previously believed. Alternatively, the Late Iron Age has a specific decorative style that extends beyond those sites dated at Richards Bay. In other words, the Late Iron Age may have a certain decorative style that continues, relatively unchanged through time. This decoration does, however, change with the arrival of Zulu-speaking people in Maputaland. Radiocarbon dates and a detailed analyses of the glass beads from this site may resolve this issue.

CH10020

CH10020 is located ±300 m northeast of CH9720. The site had been damaged by construction activities between the initial survey and the excavations (see Appendix A and fig. 13). The damage included damage to three separate shell middens. The excavations thus had to salvage the remaining parts of the site. The site had the potential to yield spatial information and well-preserved remains, however, it has lost part of its integrity due to the damage accrued by the bulldozer. More of the site may occur underneath the existing vegetation to the east of the road.

A base line was placed through the center of the area to be affected by the road and several squares were excavated (fig. 14).

Stratigraphy

The site is a multicomponent site and can be divided into two main cultural horizons. The earlier occupation tends to be in the basal Light Brown Sand (LBS) and has no visible stratigraphy. The more recent horizon is more complex and consists of several shell middens (often overlapping each other) and a dark brown-black sand (DBS). A grey-black sand occurred underneath the DBS in some squares. The DBS is similar to that of CH9720. The shell middens tend to have two sub-divisions: a fragmented upper layer in DBS, with a less fragmented layer underneath (in LBS). Some areas were disturbed by roots and/or construction activity. This caused some of the middens to be either mixed with each other, or the edges to be intermingled. The site was excavated to a maximum depth of 100 cm.

Features

Middens

Several shell middens are located on the site (fig. 15). In addition to the excavated middens, a total of fourteen individual lenses were excavated, and several ephemeral scatters of shell were recorded. A representative sample from each midden was taken for future analyses.

Lens 1 is very fragmented and restricted to Square A43. A few pottery sherds were recovered from this lens.

Lenses 2, 2A, 2B, 5 and 6 are located in squares B30, B32 and A43. These overlay each other at times or were situated very near each other. Lens 2 overlay Lens 2A, and it appears that lens 2B was underneath these two lenses. These series of lenses appear to be shell dumps over short periods of time. These lenses are also the largest middens of the excavated site. Few artefacts were associated with this midden. These included small antelope and fish bone, a few glass beads, and some pottery.

Lenses 3 and 4 are located in Square A45. These are small localised basin-shaped middens with well preserved remains.

Lenses 7, 7A, 7B, 8, BSL (Black Shelly Layer) and BSL2 were located near each other in squares B14 and C14. Each lens was itself small in size and appears to be small individual dumping episodes. Lens 7/7A appears to be examples of repeated dumping episodes as a microstratigraphy was observed during the excavations. The upper lens is in a humic black sand while the lower lens is in LBS. A thin layer of LBS occurs between the lenses. Lenses 7B and 8 are adjacent to lenses 7 and 7A and may be roughly contemporaneous with lens 7. All of these lenses form small shallow basins. BSL and BSL2 are located on the edges of Lenses 7B and 8 and are small areas of shell mixed with ash. The shells in both of these middens tend to be burnt (fig. 16).

More shell lenses were observed on the outer (road side) of the site, however these were damaged by construction activities, and considered not to be worthwhile to excavate – the stratigraphic associations between the lenses had been compromised.

Artefacts

Pottery

The pottery from this site is mostly undecorated. Those sherds that are decorated can be divided into two distinct Phases. The earliest pottery dates to the Msuluzi Phase, and is part of the Early Iron Age. This pottery was found only in the LBS layer.

The next group of pottery belongs to the RBM Group 6 and 7 phases (Anderson 2000). The sherds have either shell impressed ware (Group 7) and rectangular impressions (Group 6). The occurrence of these two decorations, on the same site, is not uncommon in Richards Bay. When these decorations do co-occur the Group 6 pottery is always stratigraphically below the Group 7 pottery.

Group 6 pottery dates to *c.* AD 1300, while Group 7 pottery dates to *c.* AD 1400.

Bone

The bone from the site belongs to both domestic and wild animals. These included small antelope, large antelope, and marine mammal and fish. Some of the fragments had cut-marks.

Beads

Only four glass beads were recovered during the course of the excavations (Table 2). These beads were not as varied as those from CH9720. All of the beads came from Sq. B14.

Soil Samples

Soil samples were taken from the shell middens and general cultural horizons. These samples can be used for palynological studies, and thus environmental data.

Shell

The shell remains from the site consist primarily of brown mussels (*Perna perna*), two oyster species (*Ostrideae spp.*), limpets (mainly *Patella concolar),* and various species of whelk. Other shells species do occur however these tend to be species that are naturally associated with the main shellfish of above. The *Nassarius kraussianus* (Dunker 1846) have the characteristic perforations and markings associated with shell bead necklaces.

Metal working

Evidence for metal working is in the form of slag, iron ore and a tuyére fragment. These are associated with the earlier occupation of the site and in the north-eastern excavated squares.

Discussion

This site differs from CH9720 in several ways. First, there have been several human occupations at this site. Second, the spatial component differs in terms of the location and densities of shell middens. Third, the density of various artefactual material varies between the two sites.

The site has had at least four different human occupations through time. The first, and earliest, dates to the Msuluzi Phase of the Early Iron Age. The occupation debris does not appear to be as dense as that of the more recent occupations. In addition to that, the concentration of pottery does not extend southwards (into the excavation), and probably extends eastwards (the non-affected area).

It is difficult to determine how many of the more recent occupations occurred at this site. This is for several reasons. First, not all of the shell middens could be related to each other. This is due to the fact that the middens did not always overlap each other, and most of the middens were in the same colour of soil. This made a straight stratigraphic correlations difficult. Those middens in the Squares A14 to C14 area indicate that there are at least three distinct dumping episodes. These dumping episodes appear to have some time difference as well, since there is at least $\pm$ 2 - 5 cm of sterile sand between some of the superimposed lenses. A similar scenario occurs in the vicinity of Squares B30 – B32.

The pottery from the shell middens may date to the early Late Iron Age. Using similar decorative motifs from Richards Bay, one can deduce that the main component of the site dates between AD 1300 and AD 1400. Although the occurrence of certain glass beads do make this direct association difficult – as is the case for CH9720. In all probability there is a decorative motif that is consistent through time.

The spatial component of the site also differs from CH9720. CH10020 has a high density of shell middens on the outskirts of the site – much of the site is to the east of the main excavations. The outskirts appear to be a semi-continuous area of shell middens. The affect of the bulldozer has masked this to a degree since the bulldozer spread some of the middens over the site. What is apparent is that at CH9720 the shell middens were discrete features surrounded by ‘domestic’ features (fire places, pottery concentration, etc.), while at CH10020 these features tend to be more widespread. This may be a result of CH10020 being a larger settlement than CH9720.

The southeastern middens (Squares B43 and B45) differ form the other middens in that these are smaller and deeper middens in comparison to the other basin-shaped middens. One of these middens may have been a pit.

More of the site still exists, and any future work along this section of the road should be undertaken in conjunction with KwaZulu-Natal Heritage and an archaeologist.

CVR9

CVR9 is located along the AR1b section of the development and it will be affected by this road. The site is located along a slightly raised area between two larger dunes. Only the periphery of the main site will be affected by the road.

Methodology and Stratigraphy

A total of fifteen 3 m x 3 m squares were excavated down to the archaeologically sterile layer. All main lenses and features were mapped according to archaeological standards (fig. 17).

Many of the lenses were close to the surface of the soil, and the maximum depth of the deposit was at ±50 cm. The stratigraphy of the site generally consisted of the humic top soil and/or Grey-Brown Sand, with most of the shell lenses, shell patches or hearths below it. Below these features is a Black Sand with shell and/or the archaeologically sterile Light Brown Sand (LBS).

Features

The main features in this site are the shell lenses of which several were excavated and sampled. Other features included a large hearth and pottery concentrations.

Lenses 1 to 5 and Lens 8 are small shell lenses varying between 5 cm to 10 cm in depth (fig.'s 18 - 19). These lenses tend to be small compacted lenses with a maximum depth of ±1.5m in diameter. These lenses are in a Black Sandy Soil, which are sometimes ashy. Roots and rootlets intersperse these middens resulting in slightly disturbed areas. Most of these middens consists of ephemeral edges with a thick and compacted center of mostly broken shell. Often these edges abut other Lenses, e.g. lenses 3 and 4. Lens 6 is located in the LBS thus making it the oldest shell lens at the site. This shell lens has several whole shells and does not have the characteristic black and fragmented shell above it.

Lens 7 differs from the other lenses in that it is a large and deep shell patch of near complete mussels mixed with black sand and charcoal. It appears that this feature was used specifically as a cooking area or a discard area of cooking remains. To the west of Lens 7 is another patch called MBS. MBS consists of shell and a very dark black sand filled with charcoal.

Shell Patches are smaller than shell lenses and average ±60 cm in diameter. They tend to contain complete and burnt shells

Bulk samples from most of the Lenses and Shell Patches were kept.

Hearth 1 is a large fireplace filled with black sand and charcoal. The eastern side of the hearth has a small shell lens ('Shell in Hearth 1') and a larger Shell Patch. The shell is probably one shell patch that was later used as a fire place.

Artefacts

The archaeological material from this site tends towards the standard material associated with these types of sites.

Pottery

Those few sherds that were decorated had shell-impressed decorations. Several sherds had a red burnish suggesting Late Iron Age or Historical Period sherds. Only one sherd had an Early Iron Age (Mzonjani Phase) decoration. Three near complete pots were recovered, however they were undecorated. The first pot had been inverted, while the second was on it side. The third pot was too fragmented to view its position.

Bone

Few bovid and fish bones were recovered from the excavation.

Shell

The marine shell species consists of, in order of density: brown mussel, oyster (2 species), limpets, and whelks. Other species were noted and these include a (money?) cowry.

Discussion

No glass beads nor modern finds were recovered from this site, making it difficult to give an estimated age of the site. Part of the site may well date to AD 300, since the Early Iron Age pottery

is relatively well dated. Only one fragment was recovered, and thus most of the site cannot be associated with this sherd.

A large sample of various types of shell middens were sampled and this awaits further analysis.

CVR8

CVR8 is located ±100 m north of CVR9 and higher up the dune. Most of the site is situated along the AR1b although more of the site may exist underneath the existing vegetation. A total of 31 squares were excavated at various locations on the site. All of these squares are 2 m x 2 m in size, except for seven squares that are 3 m x 3m squares (fig. 20). The site was excavated over a fourteen day period.

Features

Many features were excavated at this site. Most of the features are various types of shell middens, however hearths, a main/central discard area, pottery concentrations and two human burials were also recovered. Below is a description of the more well preserved features and shell lenses.

Lens 1 is located in Sq. A3 and consists of a scatter of shell pockets in spit 1. Lens 1 thickens to 7 – 9 cm as it extends to the south and west. Several pottery sherds with undecorated rims are associated with this lens. **Lens 9** is located in Sq. A3.1 Spit 1. The lens is located ± 5 cm directly below Lens 1 and consists of a shell patch of mussels and a Grey-Ash soil. The lens is ±40 cm in diameter and is more consistent with a shell patch than a shell lens *per se*.

Shell Scatter 1 occurs in Sq. B2, Spit 4 and is surrounded by Brown-Black Sand. Shell Scatter is the remains an ephemeral scatter of shell with shell-impressed pottery (fig. 21)

Lens 2 occurs in Sq. B2, Spit 4. The lens begins as a shell scatter (named Shell Scatter 1 in the excavation), and thickens to 7 – 8 cm along the eastern edge of the square. Lens 2 forms a basin-shaped lens with burnt mussels, charcoal and pottery. One decorated fragment has 4 horizontal rows of shell-impressed decorations. Black Sand surrounds Lens 2.

Lenses 3 and 4 are located in Sq. B6, Spit 1 and are ± 6 - 7 cm deep. Lens 3 is located in the southeast corner and lens 4 in the northwest corner of the square. These lenses are separated by

Humic Brown Sand that also surrounds each lens. Both lenses consist of mussel fragments and a few pottery sherds.

Shell Scatter 41 is located at Sq. A6, Spit 1. This scatter was probably a thick shell lens but it has been extensively disturbed by large roots. The pottery associated with the scatter has a burnish and is of the thin-walled variety.

Shell Scatter 2 is located in Sq. B4, Spit 5. The scatter occurs along the western side of the square and is ±1 cm thick. It is surrounded by Black Sand and consists mainly of brown mussel.

Burnt Surface Scatter 1 is a scatter of burnt shell and bone with several pottery fragments in Sq. B8 Spit 1. The scatter has been disturbed by the bush clearance, but was sampled as it had well preserved remains. A near complete vessel came from this feature.

Lens 5 is located in Sq. A9, Spit 2. It is a thin shell lens ± 90 cm wide and extends into the west section.

Shell Patch 6 is located in Sq.'s A10 and A10.1, Spits 1 - 3. The main part of this shell patch is a concentration of limpets (*Patella concolar*)– called Limpet Scatter 1. The important aspect of this shell patch is that it only consists of limpets. LS1 is ± 5 cm thick and is surrounded by an Ashy Grey Sand. Mussel fragments occur besides and beneath LS1. Several fragments of bone, grinding stones and pottery were recovered from Shell Patch 6. The decorated pottery consists of both shell-impressed and rectangular comb stamping.

Shell Scatter 10 is located in Sq. B14, Spit 3. This scatter is ± 30 cm in diameter and ±3 cm deep. The scatter consists entirely of brown mussel. Shell-impressed pottery occurs just below this scatter.

Lens 8 is located in Sq. B13, Spit 1. Lens 8 is ± 30 cm in diameter and ±5 cm thick. It consists of brown mussels surrounded by a Dark Brown Sand. Several sherds and a large blue glass bead came from this lens.

Mussel Patch 1 and 2 (MP1 and MP2) is located between Sq.'s A9, B10 and B11. Both have been exposed by bush clearance and are on the surface. MP1 is a smaller patch connected to MP2 and it appears to be one large shell lens that has been disturbed by roots and bulldozer activity. MP1 is a large area of shell with crushed shell on the upper ± 15 cm. Below this is a dense layer of fragile whole mussels ± 30 cm in depth. The mussels were still complete, i.e. they had not

yet been opened. This suggests that these patches are either shell processing areas, or discard areas of mussels that had gone putrid.

Lens 11 is located in Sq.'s B21 and B21.1, Spits 4 - 6. This lens is over ±180 cm in diameter (a 1m x 1 m bulk sample was taken) and is ±25 cm thick. This lens is one of the better preserved lenses on the site and probably one of the oldest. The lens consists of very compacted shell where no demarcation in sub-lenses could be made. Approximately half of the lens was excavated and it appears to extend more into the west sections. The lens comprises mostly of mussels and oysters with the upper part of the lens has several sherds that appear to be from the same vessel. A few bones may belong to a human cranium, however a complete human burial could not be found.

Several **Pottery Concentrations** were located throughout the site. These tend to be areas where (several) vessels were at one time placed and have subsequently broken. They often include two or more vessels. The pottery concentrations may also be suggestive of living areas such as hut floors and/or cattle pens. The area with the highest pottery concentration(s) is in the Sq. B5 area.

Central Discard Area (CDA) is located in Sq.'s B5, B5.1, B5.2, B5.3, B5.4, B5.5, B5.6, B5.7, B4, B4.1 and B4.2, Spits 2 – 4. Most of these squares are 2 m x 2 m squares (fig. 22) and thus this is the largest, and highest, concentration of artefacts on the site. This feature consists of several smaller features including (near) complete vessels, pottery concentrations, shell lenses, animal skeletal remains and grinding stones. The deposit varies between 10 – 40 cm below the surface (fig. 23).

A total of nine pottery concentrations were recorded and mapped in CDA. These contained various sherds of which some were decorated with the shell-impressed motif. Seven (near) complete pots were associated with these concentrations and or lenses, however none of these were decorated. Many bone fragments are also associated with these pottery concentrations, shell patches and shell lenses.

Three main shell lenses (Lens 6, 7 and 10) were located in this area. These are large lenses (between 1.5 m and 2 m in diameter) and consist mainly of mussels and oysters. The middens vary in thickness, but they average to ±10 cm. These shell lenses tend to be in Spits 2 and 3.

Three near complete animal skeletons were recovered along the eastern edges of this feature (A1 – A3 in map). The animals similar in size to the red duiker. Two of the skeletons were placed in a foetal-like position, while the bones of the third skeleton had been placed into the pit in no formal

position. All of the skeletons had signs of butchery and cut marks. Two of the animals are juveniles, and the third is an adult.

Hearth 1 was located to the northwest of the Central Discard Area. It is a small hearth (±45 cm in diameter) with lots of burnt material and charcoal. It has a maximum depth of 25 cm.

Artefacts

Pottery

The pottery consisted mostly of shell-impressed decorations which are characteristic of parts of the Late Iron Age and Historical Period of the area. The sherds are mostly in a brown or orange-brown colour, but some have a dark red burnish. The decorated pottery came from various depths. One sherd was highly decorated and came from 20 cm below the surface and is described as:

Lip: Flat lip with slight external emphasis
Rim: Oblique row of rectangular comb stomping
Neck: Horizontal and vertical rows of shell-impressed comb-stamping with two pairs of conical perforations.

One fragment of an Early Iron Age sherd was recovered and it had a hanging pendant motif. This motif is associated with the Mzonjani Phase of the Early Iron Age.

Bone

A high percentage of well preserved faunal remains came from this site. This may be a result of the remains being recovered from the shell middens. The faunal remains are mostly small to medium sized bovids, although a few large bovids did occur. These bovid remains include a wide range of body parts and many had cut marks on them or had been burnt. Two fragments of hippo bone were also recovered.

Shell

The main shell species present is the brown mussel, followed by oysters and limpets. Other species were recovered but in smaller amounts. These include key-hole limpets, whelks and cowries.

Glass Beads

Several glass beads were located on the surface of the site (very few came from the actual excavations). The glass beads are similar to those from CH10020 and CH9720 and thus probably originally date to the 18th century.

Metal Working

There is little evidence for metal working on the site. Only two pieces of slag were recovered (above skeleton 1) and these were just below the black sandy surface in Sq. B1.

Two metal hoes were recovered from the upper 5 cm of the site. Other smaller modern metal fragments were observed on the surface.

Stone

Several upper and lower grinding stones were recovered. Most of the lower grinding stones are on white beach sandstone, while the upper grindstones are on quartz river pebbles. Hammer stones and other utilised stones were also observed.

Skeletal Remains

Two human burials were excavated at this site. The first skeleton is located at the southern part of the site in Sq. B1. The burial pit was visible from ±60 cm below the surface of the sites, and in a Light Brown Sand. A faded brown sand (±10 cm wide) appears to form the burial pit. Most of the skeletal remains are well preserved, however, I used a reversible glue on the skeletal remains so that the bones did not break during or after the excavations. The pelvis, ribs and scapula were the least well preserved. The person was buried in a kneeling position with the right hand underneath femur but above the tibia-fibula, and the left hand had been placed on the lap. The cranium was facing sunset. The burial had slumped towards the north, and this is probably due to post-depositional factors. No grave goods were associated with the skeleton.

The second burial was located ±20 m north of the first burial[3]. This skeleton was not glued as was the first one. The skeleton was in a crouched position, facing west/sunset. The skeleton was well-preserved and had slumped forward slightly onto the torso. The feet were tucked under the pelvis and the arms were crossed over the torso, left over right. Hand and foot bones were intact but crumbled easily once removed from the sandy matrix. The rib bones were extremely friable and crumbled upon removal. It was possible to remove some of the long bones with their epiphyses remaining fused, but the friability of the latter did not allow this in all cases. One of the more interesting aspects of this skeleton was that the upper incisors had been reshaped (or chipped) to form small triangular points). This is a tradition that has been recorded before in southern Africa (Junod 1962). No grave goods were found in association with the skeleton.

[3] This skeleton was excavated by colleagues whom I had asked to assist, as the time frame on this site did not allow for further protracted excavations. The report by eThembeni should be available from Amafa KwaZulu-Natal, ACER, or Ubombo SDI.

These two burials thus show different burial practices that may (not) be related to gender differences within the same cultural system. Any future dealings with these human remains need to be done via KwaZulu-Natal Heritage.

Few Iron Age or Historical Period human burials have been excavated along the Eastern Seaboard region. Those skeletons that have been excavated tend to be within the upper 40 cm of the deposit (Anderson 200), and date to within the last 800 years. More recently I have excavated two Early Iron Age skeletons in the Richards Bay area. This suggests that bone may preserve for longer than what was originally believed for this region. The two St. Lucia skeletons have the potential to show regional variation in human burial practices.

Discussion

The site has not been fully analysed, and only a brief discussion is possible. The many squares excavated at CVR8 have yielded both an interesting cultural sequence and spatial pattern. It appears that the site has been occupied for several decades, up to a more recent past. The depth of the deposits and shell lenses is the key in understanding which feature is related to which period. However, without conclusive radiocarbon dates, ceramic chronology and/or glass bead analysis a maximum and minimum date cannot be assumed. This report is dealing strictly with the archaeological material and not the oral history that has been undertaken by eThembeni.

The glass beads suggest that the site was occupied at least in the 19th century. A limitation with the glass bead analysis is that most of the beads are located on the surface of the site. This may suggest that the upper layers of the site are as old as the glass beads. However, since the surface of the site had been disturbed, the beads are not in a primary context and they should rather be used to as an indicator of potential maximum age.

The decorated ceramics should normally be able to indicate an approximate age. However, the only dated sites with this type of decorated ceramics occur in the dunes being mined by Richards Bay Minerals (Anderson 2000). These decoration date to ±AD1300 – AD 1400, and are replaced by a different ceramic tradition (more radiocarbon dates are forthcoming from this sequence). The oral history in Maputaland suggests that the shell-impressed motif may occur up to the more recent past. It is for this reason that sites with shell-impressed motifs are important in the archaeological ceramic sequence as they may yield information regarding ceramic sequences across geographical space and through chronological time. The Late Iron Age ceramic sequence is relatively unknown, and more sites need to be excavated to determine this sequence.

Another possible indicator for the age of the site, and indirectly the human skeletal remains, is the preservation of bone. Coastal dune sites tend to have a low percentage of faunal remains due to the bioactive nature of the dunes. That is, faunal remains do not last for a long period in these dunes. However, the archaeological sites north of Richards Bay tend to have faunal remains dating back to ± AD 1300 (these are radiocarbon dated sites). Furthermore, these sites tend to have a high percentage of shellfish and/or ashy remains. Both of these micro-environments have a high calcium carbonate content, thus favouring for better preserved faunal remains over a longer period of time. CVR8 does have a very high concentration of both faunal and shellfish remains. A possible factor for the well-preserved skeletal remains is that they have been subjected to post-depositional leaching of the shellfish remains. This would especially be the case for Skeleton 1 that had a thick fragmented shell lens/patch ± 40 cm – 50 cm above it. Skeleton 2 did not have a similar density of shellfish remains directly above it. Thus, one cannot assume that a relatively well preserved skeleton is modern - other factors need to be taken into account.

A more important factor in deciding the relative age of the site would be the depth of the archaeological deposit. If all of the shell lenses were placed together, in their relative positions to the surface, their would be a continuous vertical deposit for ± 60 cm – 70 cm. This is a deep shell midden sequence even for an Iron Age site. The more northern and far eastern areas of the site have most of the material in the upper 10 cm. The central part of the site has most of its material between ±20 cm to 40 cm. The deepest shell midden (Lens 11) was located at ±40 cm below the surface and was between 5 cm and 20 cm deep. Lastly, the central western areas of the site (i.e. Sq.'s B3, B4, B9 and B18) went down to a depth of ±70 cm – 80 cm.

The various shell lenses, and some of the archaeological artefacts suggest that parts of the site were indeed occupied in the 19th century, while some of the upper material may be more recent. An in-depth analyses of the material may yield more conclusive results. A more likely scenario is that the area was occupied and reoccupied for many decades resulting in a multicomponent site.

Another piece of evidence suggests that the lower parts of the site may predate mid-19th century. A few pieces of slag were found in the vicinity of the burial (and see CVR5). Maggs (1986, 1992) and Hall (1980) argue that iron smelting had ceased in KwaZulu-Natal by mid 19th century and that people were using imported iron/steel from Europe. Thus sites with evidence of iron smelting probably predate the 1850's. This correlates with the glass beads and suggests that the earliest occupation of the site is over 150 years.

The spatial component is interesting and tends to conform to a more traditional Iron Age pattern. That is, a cattle byre, which may include a central discard area, surrounded by the domestic area. However, until a more detailed analyses of each area, and its relative age, is made, a complete spatial analyses cannot be postulated. More of the site extends to the east of the current excavations (or road) and this may yield features that may show the changing settlement pattern through time, or a more detailed settlement pattern.

A final note regarding this site is related to the human skeletal remains. All correspondence relating to these remains and their potential reburial should be through KwaZulu-Natal Heritage and the Natal Museum. The former as they are the legislative body dealing with these matters, the latter as the material has been accessioned to the Natal Museum Archaeology Department who has been given the legal responsibility to curate these remains.

CVR5

This site is located along the northern part of the AR1b road. The site consists of two areas of artefact concentrations. The more southern side is located on the higher part of the dune, while the northern concentration is located on a much lower part. Both parts of this site extend towards the east and these will be unaffected by the road.

On the second day of the excavation, it became apparent that the southern side of the site was more recent (post 1950?). Excavations stopped in this area and concentrated on the more older material.

Methodology and Stratigraphy

A total of sixteen 2 m x 2 m squares were excavated at various parts of the site (fig. 24). Squares were set up in areas of high artefact concentrations and excavated. The southern and southeastern squares did not extend beyond ± 30 cm in depth and most of the material was in the upper 20 cm before the archaeologically sterile Light Brown Sand was reached. Sq. B6 has a more complex stratigraphy. The square consists of several shell lenses directly below each other. The upper three lenses alternate between an ashy grey sand, a brown humic sand a dark charcoal layer. Below these three lenses is another lens that angles westwards at an almost 45^0 angle (L3BS) (Fig. 25). Other shell lenses on the site tended to be thin layers of shell, often disturbed by roots and or bush clearance. These lenses tended to be in the upper ±20 cm of the site.

The northern part of the site (i.e. the area on flatter and lower ground) also has shell lenses but these tend to be underneath a thicker layer of topsoil, suggesting that they may be older than the southern part of the site.

Shell lenses and shell patches were sampled for future analysis.

Features

Sq. B6 has several shell lenses suggesting a continued occupation at the site over a period of time. These lenses are compacted shell lenses varying in depth and size and have well preserved faunal remains and several glass and plastic beads. A total of six different lenses were excavated in this 1 m x 2 m square. The upper five lenses had a very thin layer of sand between each other, however the lower lens (L3BS) has a substantial layer of sand above it. This suggests that there was a longer period of non-occupation between the lower lens and the upper lenses. This is supported by the artefactual content where modern metal fragments and plastic beads were only found in the upper lenses and not the lower lenses.

Lenses 10 and **11** are located in the Sq.'s B10 and B10.1. These lenses occur ±10 cm below the surface and are fragmentary and compacted shell lenses (fig. 26). These two lenses may be of the same shell lens however there is a significant gap between the two lenses - either a result of root disturbance or a real occurrence. A shell-impressed decorated sherd occurred at the base of Lens 10.

Lens 12 is located in Sq. B8 and is a large shell lens ± 1.2m in diameter. The lens forms a basin-shape and has a maximum depth of ± 10 cm. Several of the brown mussels from this lens are nearly complete and not fragmented like those in Sq. B6. A large metal ring was located at the base of this lens. This suggests that this midden is associated with the more modern part of the site.

A few shell patches were excavated from Sq.'s B5, and B10. The shell patches were small concentrations of marine shell never extending more than ± 30 cm in diameter.

Hearth 1 is located in Sq. B12. Hearth 1 is located ± 15 cm below the surface and is a maximum of 15 cm deep and is ± 1 m in diameter. Several pieces of charcoal, burnt shell and pottery came from this hearth, as well as a layer mixed with ash and sand.

Artefacts

Pottery

Most of the pottery from this site is undecorated. Only one piece of decorated pottery was recovered from the northern part of the site - this is shell-impressed decoration. The rest of the pottery is the characteristic thin-walled ceramics.

Shell

The marine shell is similar to that of other sites in the area. That is, most of the middens consist of brown mussels, with some oyster and limpets. Various other species occur on the site, however, they are more likely “chance occurrences”.

Metallurgy

Evidence for iron smelting/smithying occurs in Sq. B9. A fragment of a tuyére and several fragments of slag were recovered. No specific furnace fragments could be found, and it appears that these fragments are in a secondary context.

Beads

A few glass beads were recovered from this site. Most of the beads came from the surface, while some came from the excavations at Sq. B6 – these are in the upper two lenses. A few plastic yellow beads were also recovered. A superficial analysis of these beads suggests that they may be different to those from CVR8, CH10020 and CH9720.

Modern finds

Several modern artefacts were recovered from this excavation. These are mostly from the southern part of the site (except for Sq. B8). These artefacts included a spoon, a bullet cartridge, metal ring and plastic beads.

Discussion

Most of the site to be affected by the AR1b road occurs along the southern side of the site. It is in this area where the more modern finds were located. The occurrence of these artefacts within the middens suggested that this part of the site dates to the 20th century and the excavations in this area were halted. However, the material does provide a good comparative sample for other sites excavated in the GSLWP.

The northern part of the site appears to be older than the southern part. The occurrence of tuyéres and slag suggest at least a mid-18th century occupation. It is also in this area where the decorated pottery was recovered (*albeit* one fragment). Most of this part of the site appears to extend eastwards and is largely unaffected by the road.

No specific spatial patterns could be ascertained at this site.

A general intersite pattern has emerged from the six excavated sites. In general CH10020 and CH9760 appear to have much larger, and sometimes thicker, shell middens. In contrast, CVR5 CVR8 and CVR9 appear to have different patterns in shell middens. The latter sites tend to have smaller and thinner middens scattered over a wider area. Admittedly, the excavations at CH10020 and CH9760 concentrated along the outer margins of the site (as this is where the AR1b was going to impact on the site). However, the margins of the three CVR sites were also excavated and indicate different settlement patterns. A more detailed analysis should provide better insight into these differences and similarities.

CONCLUSIONS AND FUTURE MANAGEMENT PLAN

The ICRM was contracted to undertake various surveys and excavations for the Phase 1 development stage of the GSLWP. This contract began in February 2001 and was to be completed by March 2001. Various delays from the Client, and/or contractor(s) have resulted in the archaeological work being delayed. The final excavations ended in July 2001 and no further work has been undertaken by the ICRM since then. Various sites have been recorded and the initial survey and report was completed in February 2001. Prior to this initial survey six sites had already been damaged by the construction activities.

The Client requires a permit from KwaZulu-Natal Heritage to damage, destroy and/or alter an archaeological site (KwaZulu-Natal Heritage Act 1997). The onus is on the Client to ensure that this permit is obtained.

The various surveys for this contract recorded 39 new archaeological sites and revisited several previously recorded sites. Only those areas and sites identified in the terms of reference were surveyed and those sites in the vicinity of the development. The original survey report proposed management plans for each of these sites and/or areas. Of these recorded sites six have been excavated and have provided valuable material for future research. More material from these sites still exists, and future development would need to mitigate for the rest of these sites. Not all of the management plans from the initial survey report have been adhered to and this has been

highlighted in various correspondences between the various organisations involved in this project (of which some occur in Appendix A). One of the biggest difficulties in a project as large as this, is in the lines of communication in the various departments. All personnel involved in the project should be regularly and actively informed of the various sub-contracts within each contract.

One of the main aspects that have come out of this project is that the Eastern Seaboard, or specifically the area covered by the GSLWP, has a high density of archaeological material. Any type of development has a high probability of impacting on archaeological sites. Since the GSLWP is promoting itself as a world heritage site, the archaeological component of the Eastern Seaboard has the potential to add more value to this region. To date just under 200 known archaeological sites exist in the GSLWP, and many more have not yet been recorded. This cultural component has the potential to be used for tourism as much as the natural component is currently being advertised.

The future archaeological management plan for the GSLWP should include the timeous appointment of an archaeologist who can liase with both ACER, Lubombo SDI, KwaZulu-Natal Heritage and any other organisation involved in this project. This interaction should include alternative routes, potential problem areas and archaeological surveys and excavations. All future developments should have an archaeological assessment automatically included in the planning stages. This assessment can highlight areas of archaeological sensitivity and suggest early management plans and thus counter any potential damage to sites. These management plans need to be sanctioned by KwaZulu-Natal Heritage as they are the legislative body in the province that deals with these sites.

More liaisons should also occur with former local communities who used to live in the affected area. These communities should be included in the discussions regarding the location of the roads, and the locations of ancestral graves. These communities should locate and identify sites prior to any development. This would have resolved several issues such as those that occur at CVR8.

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Appendix A

Reports and discussions regarding the damage to various archaeological sites

Report on the damage of archaeological sites in the St. Lucia Greater Wetlands Project

For KZN Heritage

By Gavin Anderson
Institute for Cultural Resource Management, Natal Museum, Private Bag 9070, Pietermaritzburg, 3200

This report notes several archaeological sites that have been damaged or destroyed without permits during the course of the development of the new Cape Vidal roads, their infrastructures and servitudes. Much of the damage could have been avoided if all parties concerned were more sensitive to heritage sites, consulted an archaeologist prior to the damage to these sites, and/or followed the management plans for archaeological sites as set out on the Phase 1 report on archaeological sites in this development node. It is not my aim to lay blame on any of the parties concerned; rather to inform KZN Heritage of several transgressions to the KZN Heritage Act. The Phase 1 archaeological report serves as the basis for this report, and all parties should have read this report once it was available; ignorance of the contents of the report should not be an excuse for damage to archaeological sites.

The report is divided into two parts: those sites damaged prior to an archaeological survey and those sites damaged during or after the archaeological survey.

Archaeological sites damaged prior to an archaeological survey

At least half of the archaeological sites recorded during the course of the survey had already been damaged. Some of these have been damaged several years ago due to forestry tracks. These are sites along the Mission Rocks and Perriers Rock Road, the sand borrow pit ±1.5km after the Western Loop and New Cape Vidal Roads (named OCV1 see Fig. 17), and sites in the afforested areas. The important point in this section is that even if sites had been damaged in the past, they still have archaeological value/significance, require to be assessed, and require a permit for further damage.

Several sites have been damaged recently during the beginning stages of the GSLWP. Areas in italics refer to the Phase 1 archaeological report.

SLD7

This site has been extensively damaged by current roadworks for the GSLWP. According to the Regional Engineer the area was mistakenly marked as a loading area and subsequently the topsoil was removed. The removal of several centimetres of topsoil was sufficient to remove a shell midden, probably the remains of a settlement, and disturb an Early and Late Stone Age deposit.

The archaeological material observed scattered in the area included several pottery sherds, P. perna fragments, whelk, an Early Stone Age hand-axe, and a Late Stone Age stone tool (specifically an adze).

The accidental damage to this site highlights the need for consultation with all contractors/consultants before any construction activity.

Significance: The original significance of the site cannot be ascertained as it is now disturbed; however, currently it is of low significance.

Mitigation: No further archaeological mitigation is required as the site has already been damaged and that no further construction activity is envisaged. If the area is to be rehabilitated then an archaeologist should be included in the rehabilitation program to ensure that no further damage occurs to the remaining parts of the site.

SLD9

SLD9 occurs on the right hand side of the road along the firebreak and just before the Mission Rocks turnoff road. As with SLD7 this site has been damaged by current construction activity. A bulldozer has cleared the topsoil of the site, and thus removing part of the site. It is currently filled with gravel presumably for the use of the road. A shell midden (P. perna and Patella spp.), a probable settlement, several pottery sherds, a lower grindstone, and two bones (a bovid rib and phalange) were recorded. The site has a potential deposit. The archaeological material appears to have a spatial component, i.e., material was recorded at different parts of the site. The site dates to the Late Iron Age or Historical Period.

The pipeline may affect part of the site.

Significance: The site would have been originally of medium significance as it has an apparent good preservation of faunal remains and spatial component. Currently much of material is in a secondary context making it of low significance.

Mitigation: Some form of mitigation would be required for the part of the site that may be affected by the pipeline. I suggest that an archaeologist be on site while this section of the pipeline is excavated. It is unlikely that a shell midden, or any other feature, will be located, however other material may occur. An on site archaeologist would be able to ascertain any the immediate affect of the pipeline on the site, and salvage any material that may occur. Alternatively, a few test-pits are excavated to determine if any material may occur near the pipeline.

In both instances KZN NCS and SNA had not consulted with an archaeologist prior to the finalisation of this site as a loading area. Subsequently, an agreement was reached whereby the archaeology would be included in all future decisions regarding loading bays and/or stockpile

areas. This agreement was kept for the following two stockpile areas. Subsequently to these two assessments, another loading bay/stock pile has been placed over an archaeological site that was clearly marked on the orthophoto map (it was not mentioned in the report as no development was designated for this area). The site was an Early Iron Age site. I first noticed the damage to the site after bulldozers had already cleared the topsand. A photograph of the bulldozers on the site has been taken. This site would not have been damaged if the archaeological orthophoto map and an archaeologist were consulted.

Two other sites had negative impacts prior to the survey: SLD 12 and SLD13.

SLD12

This site was observed in the section of the road cutting near the beginning of the Cape Vidal Eastern Loop road. The observable part of the site is an in situ shell midden (of P. perna) with a cultural deposit. The midden is ±30cm below the current topsoil (under dense vegetation) and is ±3 cm in depth. The rest of the site probably occurs on both sides of the road. Grindstone fragments were noted further downhill and are probably part of this site.

The new road cutting was already being undertaken when we were assessing the site.

Significance: The site is of medium significance as it has preserved shell remains in a (stratified) deposit.

Mitigation: If the current road is widened, then the shell midden would require some mitigation. I suggest that the midden be sampled by excavation: specifically that part of the midden that would be damaged.

SLD13

SLD13 appears to be a series of sites in close proximity to each other over a length of ± 200m. The archaeological remains included marine shell (P. perna and oyster) and pottery fragments found scattered along the crest of the dune. A concentration of shell indicates that an archaeological deposit is present.

The site is currently under dense vegetation making it difficult to locate specific areas of the site. However, this type of dune topography, and site settlement pattern, is similar to that which I have observed in the dunes of Richards Bay. These areas consist several homesteads located on the flatter crest of a dune.

The Cape Vidal Eastern Loop road (AR10) is currently cutting across the north-eastern part of the site and the new road clearance and placing of gravel has already occurred. Pottery and shell fragments are visible in the road cutting.

Significance: The site is of medium-high significance in that it has the potential to yield information regarding intra-site settlement patterns. There is also a cultural deposit.

Mitigation: The main site should not be effected unless excavations are undertaken. However, the current road does not appear to affect the main part of the site. The current road will not be widened any further (according to the Regional Engineer) and thus it is unlikely to have any further impact on the site. If the width of the road does not change (i.e. 4 m – 5 m in width) no further mitigation is required. Any changes to this width would require further archaeological investigation.

Both of these sites had been affected prior to any archaeological survey, and as a result of construction activity.

A more serious damage to an archaeological site occurs just after the entrance gates of St. Lucia and before the cattle grid. This section of the road was not marked for development/upgrading in the initial contract - only the pipeline-side of the road was marked for development. Rumdell construction is currently upgrading this road and has cut into a dune on the left-hand side of the road (the side opposite to the new pipeline). Several marine shell fragments, pottery sherds, and two upper grindstones were located along the slope. More of the site exists underneath the current vegetation. It is of concern that this development was not in any of the EIA reports regarding the GSLWP development program, and that KZN NCS once again did not allow for an archaeological survey to be undertaken.

A final transgression as a result of no archaeological survey is the construction of the boma fencing (Fig. 18). This fencing went through archaeologically sensitive areas and should have been surveyed.

Archaeological sites damaged after an archaeological survey

One site, CH10020, had been noted for excavation. The site was marked on the map, referred to in the report, and shown to SNA representatives.

CH10020

This site is located near the chain marker 10020 and appears to be an ephemeral scatter of sherds and shell. However, on reinspection, an in situ shell midden was observed. The midden is ±10cm below the current surface and appears to be ±15 cm thick. The midden is stratified and appears to be well preserved. A settlement may occur near the site.

Significance: The site is of medium-high significance. The midden is well preserved and can be used as a comparison to the midden at CH9720. The two sites are not necessarily related to each other in time, and thus form part of the historical sequence of the area. The site has display potential.

Mitigation: A large part of the site will be effected and damaged by the road. I propose that several test-pit excavations are placed on the site and that the shell midden is partially excavated. ***Test-pit excavations may require further excavations if they recover important/significant information.***

The site was thus a “no-go’ area for all activities besides archaeology. On our arrival to excavate CH9720, on Friday afternoon, I noticed that a bulldozer/"backactor" was near CH10020. On inspecting this site I noticed that the bulldozer was on the site and that it had already cleared bushes and topsoil from the site. When a SNA representative passed me on the road, I had informed him that the bulldozer was not allowed on the site as it was to be excavated. The bulldozer had affected at least three shell middens so far – these are three that we had not recorded during the initial survey.

On Monday I had to attend a meeting, however my senior assistant was requested to inform the bulldozer operator and construction company representative (or foreman) that the bulldozer was not to work on the site under any conditions. When the bulldozer operator and foreman passed site CH9720, they were informed in both Zulu and Afrikaans that the site was out of bounds to all machinery, an explanation was also given as to why the site was out of bounds. The operator and foreman then went onto the site and continued with the work on the site.

When I returned to the site, with KZN NCS, ACER (Africa), and SNA representatives, the bulldozer was still working on the site. Finally a SNA representative told the bulldozer to move off the site and phoned the foreman to explain the situation. As the bulldozer was leaving the site it went over the side of the dune, thereby cutting into a shell midden and damaging more of the site.

The shell middens were close to the surface of the sand, in some cases 2 cm below, and the bulldozers tracks had impacted on the site. One of the middens had well preserved and unbroken

shell remains; however the bulldozer had crushed these as well. Another midden had been damaged when a tree trunk had been uprooted and thereby damaging the midden.

Both KZN NCS and SNA should be reminded that they are not qualified to determine neither the location of an archaeological site, its significance nor the type of mitigation required for such a site. I am left with the impression that heritage matters have been given secondary, if any, consideration throughout this EIA by both KZN NCS and SNA. The archaeological component is clearly not given the same weight as the social and environmental components in this project.

The Western Loop and Catalina Jetty Initial Report

The Institute for Cultural Resource Management (ICRM) was contracted by ACER (Africa) to undertake an archaeological survey of the Western Loop and the rerouting of the Catalina Jetty road. There has been considerable delay in the finalisation of both routes from KZN NCS and SNA, and the routes have been surveyed over various stages. This report is a brief summary of the finds from both surveys.

Catalina Jetty

The initial route was surveyed a week before the second survey. The initial survey located two archaeological sites, of which one requires mitigation. The second site (CJ2) would be located in the middle of the road, and I had suggested an on site meeting to discuss the location of the road. The meeting had not occurred, however, each site had been plotted on the orthophoto and handed to SNA. The new route had no archaeological sites recorded; however, the route still went through CJ2. An on site meeting discussed the rerouting of this route, and the route bypassed CJ2 by several meters. Both SNA and I were on site during this rerouting and I was given the assurance that CJ2 would not be affected. The location of the new route in relation to the archaeological site has been photographed.

Western Loop:

The Western Loop Road occurs over several existing roads and/or tracks. The vegetation in many areas is very dense making archaeological visibility very difficult. SNA had, however cleared the vegetation down to the surface of the soil. This allowed for a higher chance of locating archaeological sites.

Two archaeological sites were recorded along this route. Both sites are within 50 m of each other and their locations have been marked on the orthophoto. In addition to this, SNA has been shown both of the sites and we had an impromptu site meeting. The danger tape besides these tapes have also been marked indicating the site name, and the management for each site. I have requested that this management plan be noted on the site information book housed at SNA offices.

WL1

This site is located on the edge of the existing track and over an area of approximately 30 m in diameter. The current road has already affected the site. The site consists of several shell concentrations and ceramics. The shell consists of *Perna perna* and oyster fragments on the

surface. This indicates that subsurface middens are likely to our. A few ceramic fragments were located of which one was decorated. The decorated sherd had a flat lip and rim with a double row of circular impressions on the body. The site is a settlement with an archaeological deposit dating to the Late Iron Age.

Significance:

The site is of medium archaeological significance as it has a deposit, well preserved remains and potential settlement patterns.

Mitigation:

The new road will affect this site. The developer has four options regarding this site:

5. Reroute the road past the site. This new route will require an archaeological survey as well.
6. Undertake archaeological excavations to negate any negative impacts on the site. These excavations would our in the affected area of the site.
7. The road should be moved to the wetlands side of the road around this site. This is unlikely to impact on the wetland.
8. The road should be made narrower near this site. By narrower I would suggest a change from 7 m in width to 5 m in width over a distance of approximately 25 m.

WL2:

WL2 is located on the dune opposite WL1, i.e. 50 m away. The site consists of several shell middens pottery and a cattle byre. The outer edge of the site has several sisal plants that are on the edge of the existing track. The shell middens consists of *P. perna* fragments and their location suggests that several houses are located in the area behind the shell middens is the cattle byre. Sisal plants currently demarcate the outer boundary of the cattle byre. The site occurs over a 35 m meter radius, although this may widen if excavations occur.

The site has been shown to SNA and the danger tape has been marked with the site number.

Significance: The site is of medium archaeological significance since it has visible spatial patterns (houses and cattle byre) and well preserved features and artefacts.

Mitigation: The Western loop will probably not affect this site, provided that its current location is not altered. If the road does not extend beyond the fist row of sisal plants beside the road, then no impact will occur and no mitigation would be required. However, if the road extends beyond this area then it may very well impact the site, and archaeological excavations would have to occur.

CONCLUSIONS

Both the Western Loop and Catalina Jetty roads have been surveyed and no further archaeological work is required provided that the roads do not impact on the sites. If the Western Loop is rerouted past the archaeological sites then this new route would need to be surveyed as well. These sites have been located on an orthophoto and shown to SNA. The rerouting of the Catalina Jetty road is however of concern and highlights an ongoing problem with the archaeological sites and the development program. The site CJ2 was demarcated on the map and discussed with the RE of SNA. SNA chose to reroute the original route, however, this route still went near CJ2. Clearly SNA has not studied the archaeological map with the demarcated sites, when it comes to the consideration of sites and route planning. Similar problems occur on other sites and are mentioned in my report to KZN Heritage.

Copy of Email Report to ACER and KwaZulu-Natal Heritage Regarding Damage to WL1[4]

RE: St. Lucia Eastern Seaboard archaeology - report for western loop

Janice

As requested here is the report regarding the damage to an archaeological site along the Western Loop. The numbering system is according to your fax.

(1) The site is a series of small shell middens and artefacts on a raised area above the existing track. The existing track has damaged a section of the archaeological site; however, few artefacts were seen along the track itself, or in the sections of the track cuttings. The existing track did not cut deeply into the sections of the site. The initial report noticed that the site had decorated pottery, shell middens with potential deposit, and that it occurred over an estimated 40 m area. An archaeological deposit and possible spatial pattern was also noticed. The site was photographed.

Subsequently to the damage of the site three shell middens and one scatter of shell were visible in the track cuttings. The piece of decorated pottery observed during the initial recording could not be seen. I estimate that the new track has removed at least 1m of the site; although I cannot be sure as to the exact extent of the damage until photographs have been developed and the engineering maps have been consulted. This damage to the site is enough to have damaged the shell middens, and thus affect the interpretation of intra-site and inter-midden activities.

(2) While we were recording the site, the RE, and 2 - 3 other people, passed us in the 4 x 4. This was on the 14/03/2001.The on site discussions with the RE included the management plan for the damaged site as well as the other site nearby. The RE was given 3 options regarding this site. First, allow time for archaeological excavations to salvage the site before damage. Second, to detour the Western Loop past this site, subject to an archaeological survey. Third, to move the road closer to the wetland, and not cut in towards the site, i.e. bypass the site by moving the road around the one tree and cutting back to the road near the river/stream crossing. The RE suggested that they would probably reroute the road.

(3) I shall fax through a copy of the site record form to you shortly. The site record form is the Natal Museum's standard form for recording archaeological sites. The report is attached and in RTF format.

[4] Sent: Mon 4/30/01 2:57 PM. First two paragraphs of original email have been deleted, as they have no relevance to this report.

(4) The exact location and extent of the site was shown to the RE whilst the he was on site. I had used the existing danger tape to demarcate the boundaries of the site. The whole site was not demarcated; rather pieces of danger tape were used to "dot" the extent of one side of the site. This is the same process that was used for the demarcation of the site along the Perrier's Rock Road. In addition to this, I wrote in permanent marking pen the site number and mitigation required on the danger tape.

After the survey of the Western Loop was completed I went to the RE's office to write a note in the site diary. The RE was not in his office, so I left a note on his desk giving written instruction regarding the Western Loop sites. I also requested that this note be attached to the site diary. My two assistants are witnesses to this note.

Email to ACER regarding partial damage to SLD16[5]

Janice

I am also concerned in that the area demarcated for the proposed Catalina Jetty Picnic Site has been disturbed. It appears that the area was used for a camping site. The archaeological site has had excavations dug into the soil that has been subsequently covered up and some poles were placed into the ground. While I realise that this is not ACER (Africa's) brief, I believe that KZN NCS(?) has not noted the archaeological component of the Archaeological report. Can you please pass on this email to the relevant person in KZN NCS, or email me their contact details.

Regards
Gavin Anderson

Reply from:

EZEMVELO KZN WILDLIFE

Private Bag X01
St Lucia Estuary
3936
(035) 590 1342

TO: J Tooley
G Anderson

cc: T Hornby
S Naicker

Re: Eastern Shores Archaeological Sites

With regard to the e-mail dated 30th April 2001 sent to Mrs J Tooley from Mr G Anderson regarding the proposed Catalina Jetty Picnic Site, the following points must be made:

- The site for the proposed Catalina Bay Picnic Site has not been finalised. This matter was discussed at the Managed Contracts meeting held on the 2nd May 2001, whereby the ECO team were actioned to carry out a field excursion to determine the viability of the current site which is utilised by EKZNW staff as opposed to the cleared site situated further

[5] Sent: Mon 4/30/01 9:55 AM. First two paragraphs of original email have been deleted, as they have no relevance to this report.

south.

- The cleared area south of the current Catalina jetty site was used by an external company for a period of four days. The area was mown by the EKZNW and it was stipulated that under no circumstances must the area be damaged in any way (no holes, open fires, removal of vegetation,etc). These stipulations were adhered to by the company.
- Follow up visits to the cleared area were carried out on the 15th April and 3rd May by EKZNW staff. Other than minor trampling, no indication of disturbance to the area was found. Holes in the ground at the site were clearly made by warthog and trampling by hippo near the shoreline is apparent.

The field visit carried out by EKZNW staff on the 3rd May has resulted in a proposed site and site layout. This will be forwarded in the form of a report and the relevant people will be notified timeously by the Resident Engineer (SNA) before construction takes place.

L.M.Booth
Chief Research Technician
South Maputaland

L.M.Booth
Chief Research Technician (South Maputaland)

Gavin Anderson wrote:

> Janice
> Thank you for the forward email.
> I must disagree with Lynne Booth's letter/email. I can well distinguish the difference between naturally (or warthog in this case) holes and those made by humans. In this case there were several marks in the ground, all in the shape of an X (if I remember correctly there are 4 in total). In addition to this, the postholes I refer to were not natural holes either.
> Evidence of fireplaces, and ground that had been leveled for tents was also evident along the more eastern parts of the camp. My assistants can confirm this if needed.
> I trust that this settles the matter from the archaeological side.
>
> Yours sincerely
> Gavin Anderson
>

> Herewith, a copy of a letter which Lynne Booth, Ezemvelo KZN Wildlife
> requested I forward to you in response to Gavin's report of damage to an
> archaeological site at Catalina Bay.
>
> Kind regards,

- Janice Tooley

Appendix B

Location of archaeological sites

Geographical co-ordinates of archaeological sites

Site Name	Age	Longitude	Latitude
SLD1	Indet	28 16" 57"	32 28' 33"
SLD2	IA	28 17' 04"	32 28' 37"
SLD3	LIA/HP	28 16' 53"	32 28' 21"
SLD4	LIA	200m from SLD 3	
SLD5	LIA/HP	400m downhill from Perrier Reservoir	
SLD6	LIA/HP	28 27' 10"	32 27' 57"
SLD7	LSA & LIA/HP	28 17' 10"	32 27' 52"
SLD8	ISA/IA	28 16' 41"	32 29' 07"
SLD9	LIA/HP	28 16' 09"	32 28' 32"
SLD10	EIA	28 14' 51"	32 29' 16"
SLD11	EIA	28 14' 45"	32 29' 20"
SLD12	LIA/HP	28 11' 25"	32 31' 08"
SLD13	?LIA	28 11' 40"	32 31' 04"
SLD14	ISA/IA	28 11' 24"	32 31' 01"
SLD15a/b	LIA?	28 13' 39"	32 29' 19"
SLD16	HP	Catalina Jetty	
SLD17	LIA/HP	28 11’ 00”	32 31’ 48”
SLD18	LIA/HP	28 12’ 27”	32 30’ 03”
SLD19	LIA/HP	28 11’ 20”	32 31’ 23”
SLD20	LIA/HP	28 11’ 07”	32 31’ 37”
OCV1	EIA	28 11’ 16”	32 30’ 37”
WL1	LIA/HP	28 08’ 56”	32 30’ 12”
WL2	LIA/HP	28 08’ 56”	32 30’ 13”
CVR1	LIA/HP	28 10’ 05”	32 32’ 18”
CVR2	LIA/HP	28 10’ 02”	32 32’ 20”
CVR3	LIA/HP	28 09’ 44”	32 32’ 26”
CVR4	LIA/HP	28 09’ 37”	32 32’ 28”
CVR5	LIA	S 28 08’ 50”	E 32 32’ 42”
CVR6	LIA	S 28 08’ 59”	E 32 32’ 45”
CVR7	LIA	S 28 09’ 09”	E 32 32’ 44”
CVR8	LIA	S 28 09’ 09”	E 32 32’ 43”
CVR9	LIA	S 28 09’ 13”	E 32 32’ 41”
CVR10	LIA	S 28 09’ 35”	E 32 32’ 29”
CVR11	LIA/HP	S 28 08’ 41”	E 32 32’ 42”

CJ1	LIA/HP	28 13’ 19”	32 29’ 26”
CJ2	LIA/HP	28 13’ 23”	32 29’ 24”
2832BA 32	LIA	28 11' 35"	32 31' 32"
2832BA 38	LIA	28 11' 22"	32 30' 57"
2832BA 78 - 79	LIA	28 10' 25"	32 32' 06-07"
2832AD 9- 31	LIA	28 19' - 20' 18" - 17"	32 25' - 26' 36" - 06"
2832AD 6	LIA	28 17' 23"	32 26' 53"
2832AD 74	EIA/LIA	28 19' 36"	32 26' 07"
2832AD 81	LIA	28 19' 38"	32 26' 18"
CH9680	LIA	28 11' 32"	32 30' 53"
CH10020	LIA	28 11' 23"	32 31' 01"