

9/2/044/0001

**PHASE 1: ARCHAEOLOGICAL IMPACT ASSESSMENT ALONG THE ST
FRANCIS BAY BEACH**

Prepared By:
Dr Lita Webley
Albany Museum
Somerset Street
Grahamstown
6139

Prepared for:
Geological & Environmental Services (GES)
P O Box 27996
Greenacres
6057

EIA Consultant

18 December 2006

NATIONAL HERITAGE RESOURCES ACT (1999)

The National Heritage Resources Act of 1999 makes provision for a compulsory HIA when an area exceeding 5000 m² is being developed (National Heritage Resources Act 25 of 1999: page 55). This is to determine if the area contains heritage sites and to take the necessary steps to ensure that they are not damaged or destroyed during development.

With regard burial grounds and graves, Section 36 (3) of the Act clearly stipulates that no person may, without a permit issued by the relevant heritage authority or SAHRA, (a) destroy, damage or exhume the grave of the victim of conflict; (b) destroy, damage or exhume any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority.

Subject to the provision of any other law, any person who in the course of development discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the relevant heritage authority which must, in co-operation with the South African Police Service and in accordance with the regulations of the responsible heritage authority, carry out an investigation to determine whether the grave is protected in terms of the Act or is of significance to any community

Section 34 of the Act stipulates that no person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit issued by the relevant provincial heritage resources authority. **Section 38 of the Act clearly indicates that any person constructing a road or similar linear developments exceeding 300m in length or developing an area exceeding 5000 m² in extent is required to notify the responsible heritage resources authority or SAHRA.** SAHRA will in turn advise whether an impact assessment report is needed before development can take place.

Living heritage (defined in the Act as including cultural tradition, oral history, performance, ritual, popular memory, skills and techniques, indigenous knowledge systems and the holistic approach to nature, society and social relationships) is also given protection under the Act. Section 24 of the Act makes provision for provincial heritage resources authorities to maintain a register of heritage resources and to set up management plans for their preservation.

INTRODUCTION AND TERMS OF REFERENCE

Dr Webley of the Albany Museum was approached by Mr M Rynhoud of Geological and Environmental Services (GES) regarding the placement of rock revetments along the St Francis Bay beach in December 2006. Mr Rynhoud of GES was instructed by numerous landowners and the Kouga Municipality to apply for assistance with obtaining authorisation and permits in order to affect repairs to rock revetments along the St Francis Bay beach (Figure 1). Specifically, he was requested to apply to DEAET for exemption from the ORV (off road vehicle) and EIA (environmental impact assessment) regulations in order to construct emergency repairs to the existing revetments, and to construct new rock revetments within 100m inland of the high water mark.



FIG 1.

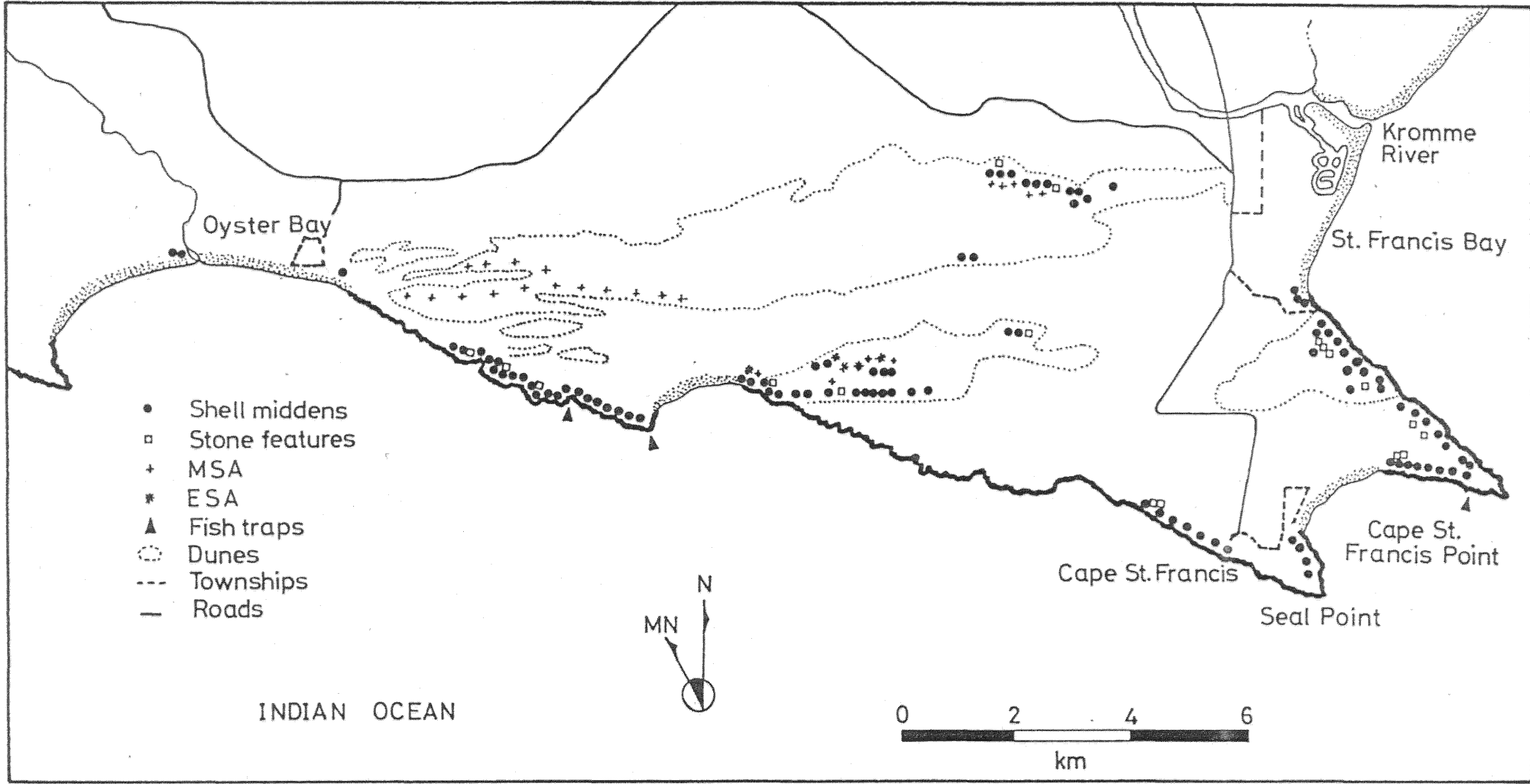


Figure 2. Map of the distribution of archaeological sites along the Cape St Francis coast.

Recent storms have resulted in higher than normal sea levels and erosion of the fore dune environment, resulting in a significant threat to the sea-front properties and municipal open space. The intention is to place the rock revetments along the sea-facing edge of the eroding dunes in order to prevent further erosion of the dunes and the properties behind the dunes.

It is proposed that the contractors, who will be building the revetments, will be accessing the beach from existing ramps and car parks damaged in recent storms. They will be transporting large quartzitic sandstone blocks which will be placed along the edge of the dunes. No excavation of the dune material is envisaged during this project. Sand to backfill behind the rock revetments will be sourced from the beach shingle below the high water mark, and will not come from the coastal dune system. The view is that the revetments will be of a permanent nature, and it is hoped that when the off-shore reefs are constructed, that the revetments will be covered in sand.

Mr Rynhoud advised Dr Webley that he had already received exemption from the EIA regulations from DEAET (Port Elizabeth) and that he was still waiting for the exemption from the ORV regulations. In response to a letter from the Gantkwa Khoisan First Nation regarding the possibility that the archaeological heritage of the coastal zone would be threatened during the construction of the revetments, GES noted the following:

- a) That as the coastal fore dunes continues to be eroded by storm events, this will impact on any archaeological sites in the area,
- b) That the construction of rock revetments will take place along the beach zone where tidal activity has already removed and/or destroyed any potential archaeological remains,
- c) That the intention of the project is to introduce geo-membranes and boulders to protect the dunes and associated archaeological materials,
- d) That the imported material will be carefully placed along the edge of the dune systems,
- e) That the importation of such material cannot have a negative impact on the archaeological environment. To the contrary, they are likely to have positive long-term consequences.

Mr J Reichert, representing the Gantkwa Khoisan First Nation, has insisted that it will be necessary for GES to apply to SAHRA for a letter of exemption from Section 38 of the NHRA regulations, which stipulates that any person constructing a road or similar linear developments exceeding 300m in length is required to notify the responsible heritage resources authority or SAHRA. It is in the light of the above that Dr Webley was requested to undertake a first phase archaeological assessment of the area in question.

The terms of reference are:

To walk along the St Francis Bay beach with the contractor to view the three areas where access to the beach will be required, as well as to view those areas of the coastal fore dune which will require the repair of existing and placement of new rock revetments. This is to ensure that no archaeological sites will be threatened by the developments.

ARCHAEOLOGICAL BACKGROUND TO THE AREA

The archaeology of the St Francis Bay and Cape St Francis area was studied by Dr J Binneman (Albany Museum) during the 1980s and the information is available in his PhD dissertation (1996). The archaeology of this area relates primarily to the Holocene (last 10 000 years) occupation by San hunter-gatherers and later by Khoekhoen pastoralists. The archaeological term used to describe the remains from this period is **Later Stone Age (LSA)**. There are many hundreds of **coastal shell middens** (see Terminology) in this area (Figure 2). In addition to the middens, a number of **graves** have also been found in recent years during construction of new houses in the St Francis Bay area. The area is particularly rich in archaeological material.

SURVEY METHODOLOGY

The stretch of coastline, from the Kromme River estuary to Harbour Road, consists of both private properties and land belonging to the Kouga Municipality and is currently almost entirely protected by rock revetments. The present situation contrasts with a few years ago when Dr Webley observed only a few revetments along this stretch of coast. Clearly many revetments have been constructed in the last 5 years without any environmental or archaeological impact assessments. The present project has been funded by the private landowners, many of whom are in danger of loosing their properties. The Municipality has not shown an interest, or possibly may not have the funds, to support the construction of revetments along the sections of public lands.

I was accompanied by Mr M Rynhoud of GES, as well as Mr A Tonkin and Mr E Horne (of the St Francis Bay Beach Trust). The survey, undertaken on the 14 December 2006, commenced at the Hobie Beach access point at the end of Alda Bara Run. This is one of the proposed access routes by which rocks will be brought onto the beach to repair existing revetments and to construct new ones.

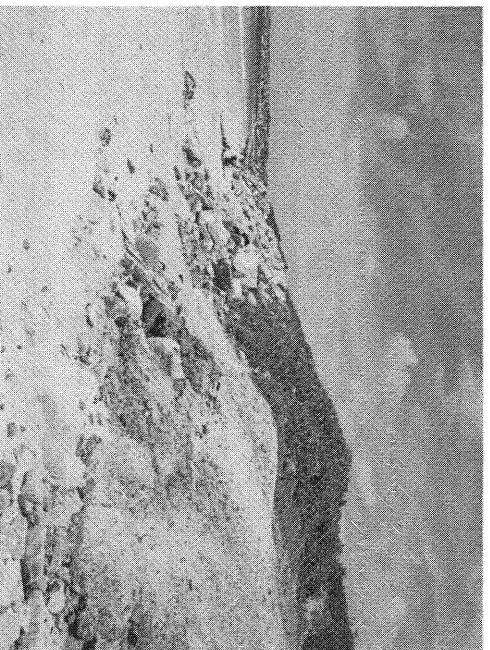


Fig. 3: The current access onto Hobie Beach at the end of Alda Bara Run, looking southward.

We walked along the beach at the end of both Peter Crescent and George Avenue (Fig. 4) which adjoins public lands belonging to Kouga Municipality. There are no revetments along the dunes managed by the Municipality. The current pipeline for transporting the slurry, which is used to fill behind the revetments, runs along the high water mark.

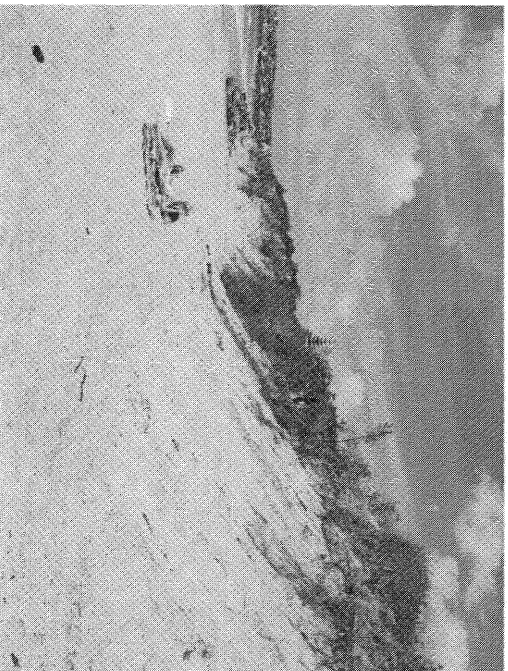


Fig. 4: This stretch of dunes (looking southward) is not protected by rock revetments as the land above the high water mark is managed by the Kouga Municipality. The revetments are visible at the end of the beach.

We walked along the stretch of beach at the Ann Road car park to view the second main access point by which it is proposed to bring the quartzitic boulders onto the beach. This section of road running parallel to the sea has been partially washed away by recent storm damage. The abutment blocks at this car park have been washed away and the cement blocks incorporated into the revetments.

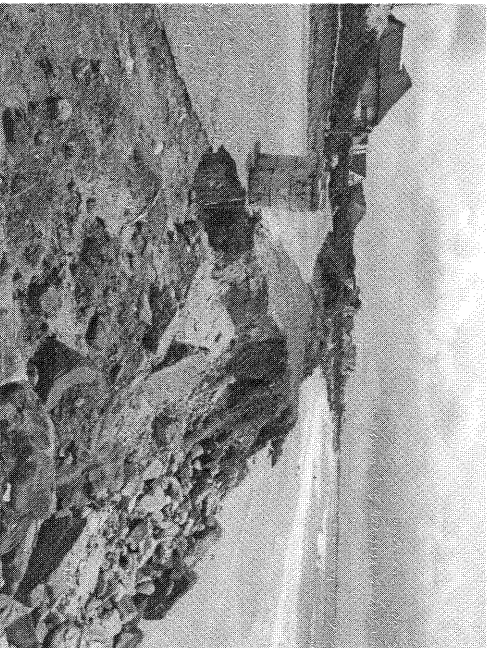
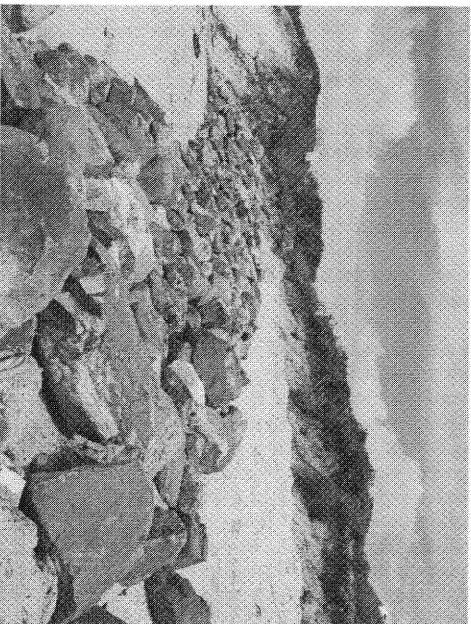


Fig. 5: Ann Road car park, looking northward, with evidence for the erosion of the road.

In walking southward along the beach from Ann Road to Neville Road car park, it was pointed out that an independent contractor had recently repaired and extended some rock revetments for a private homeowner who believed that his house was threatened. He did not obtain permission from DEAET in Port Elizabeth to undertake this construction. These new revetments are on public open space and not on the stand belonging to the homeowner. Permission should therefore have been obtained from the Kouga Municipality. The contractor used beach shingle which was placed behind the rock revetments (Fig. 6). The SFB Beach Trust informed DEAET in Port Elizabeth but unfortunately, the damage has already been done.

→ as possible sites, best



shingle

Fig. 6: Recent repairs and extension of revetments to the south of Ann Road, showing the beach shingle placed behind the revetments.

Further, in place of using existing access points onto the beach, the contractor built a new access point by destroying a portion of the dunes close to the toilet block at the Main Beach at the Neville Road car park (Fig. 7), thus allowing him to gain access to the beach in order to provide rock revetments for the property owner described above. The Neville Road car park is owned by the Kouga Municipality, and it is unlikely that they will fund the construction of revetments along the car park area.

→ possible observation

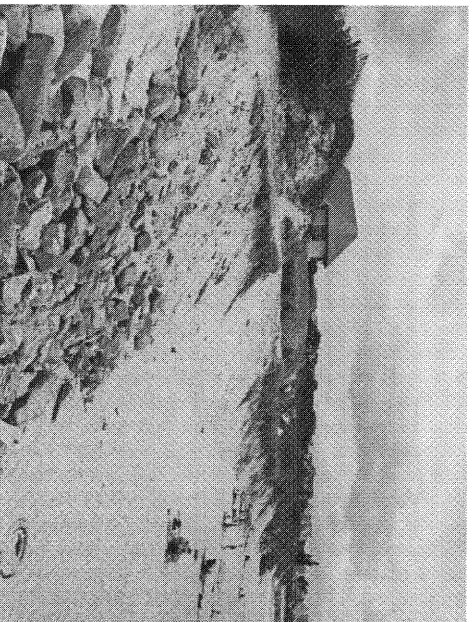
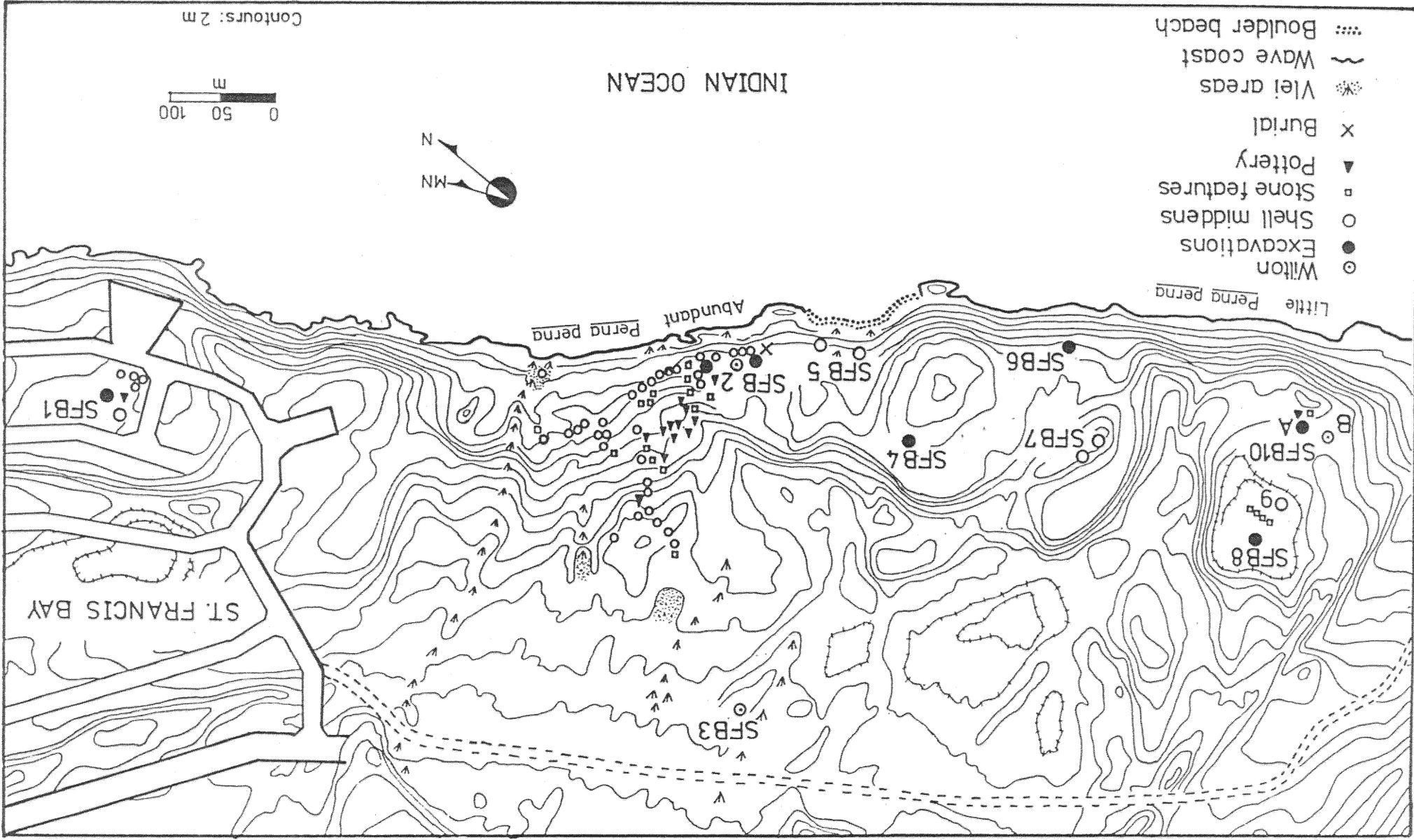


Fig. 7: The view northwards from the Neville Road car park showing the access point, constructed by an earlier contractor, in front of the house.

Fig 8 Detailed map of archaeological sites and features at St Francis Bay and Dune Field areas as recorded during 1982.



IMPACT IDENTIFICATION AND ASSESSMENT: ARCHAEOLOGICAL SENSITIVITY

All archaeological sites are protected by the National Heritage Resources Act (No 25 of 1999). It is an offence to destroy, damage, excavate, alter, deface or disturb archaeological sites without a permit issued by the South African Heritage Resources Agency (SAHRA).

The St Francis Bay area is particularly rich in archaeological shell middens. The placement of rock revetments within 100m from the high water mark along the beach can potentially damage or destroy archaeological sites located on the coastal foredunes. Any damage to archaeological sites is permanent. This is because archaeological sites are non-renewable and once destroyed, the information is lost forever.

NO SITES
The coastal survey failed to locate any archaeological sites or material in any of the dune slopes. No shell concentrations, stone, bone or pottery fragments were observed while walking along this stretch of the coast. It is possible that some sites may already have been lost due to coastal erosion, while others may have been destroyed through coastal development. Figures 2 and 8 (from Binneman 1996) indicate the density of coastal shell middens to the south of the main beach area at St Francis Bay during the 1980s.

In terms of the archaeology of this coastal belt within 100m of the high water mark, no mitigation measures need to be undertaken as no archaeological sites are threatened. My degree of confidence with regard this assessment is high.

CONCLUSIONS AND RECOMMENDATIONS

The impact of the placement of rock revetments on any potential archaeological sites located in the coastal foredunes at St Francis Bay (within 100m of the high water mark) is likely to be low. There is a very small possibility that enlarging the access routes onto the beach at Hobie Beach, Ann Road Car Park and Neville Road Car Park may damage potential archaeological sites buried under the soil surface, but in view of the condition of the access routes at present (Fig. 3) this seems to be unlikely. The will be no threat to the archaeological heritage of the area by burying the slurry pipeline, which will be used to replenish the beach, in the beach shingle as has been proposed.

It is likely that the revetments will in fact protect any archaeological sites which are located inland of the high water mark.

I would recommend that construction and repair to the revetments can take place but that every care should be taken to avoid destroying potential archaeological sites which may be located beneath the soil surface. When leveling of the soil at the three access sites takes place, contractors should look for the following features:

1. Dense accumulations of marine shells – evidence of a prehistoric shell middens.
2. Concentrations of stone tools in association with preserved bone.

3. Human remains including burials.

If any of the above are discovered, development should stop immediately and an archaeologist should be called in.

REFERENCES

- Binneman, J. 1996. Symbolic construction of communities during the Holocene Later Stone Age in the south-eastern Cape. Johannesburg: University of the Witwatersrand, PhD thesis.
- Webley, L. 2002. St Francis Bay proposed beach remediation – Phase 1 Heritage Impact Assessment Report.

TERMINOLOGY

Later Stone Age: LSA peoples were ancestral to the San (Bushmen) and lived in South Africa between 40 000 years ago and colonial times. During most of the Holocene (last 10 000 years) southern Africa was inhabited by small bands of mobile hunter-gatherer groups. Where these groups lived at the shore they generally exploited coastal resources such as marine shell and marine mammals. Sheep and pottery first occur in archaeological sites around 2000 years ago and they point to the arrival of a new economy in South Africa, that of pastoralism. These groups were probably the ancestors of the colonial Khoekhoen. Later Stone Age tools are typically made on fine-grained cherts and chalcedonies, although quartz tools are also very common. They are generally microlithic in size and conform to certain designs, such as scraper, segments and adzes. They are easy to recognize and date.

Middens: are open-air shell accumulations, which have resulted from human occupation in the area. They may date between 60 000 years ago and 300 years ago. Middens may measure between 1 m and 20 m in diameter. Generally there is a correlation between the shellfish in the midden and what is available on the rocks of the seashore nearby. Binneman has found that many middens along the Eastern Cape coast contain limpets (*Patella* sp), mussels (*Perna* sp), periwinkles (*Oxystele* sp), alikreukel (*Turbo* sp) and perlemoen (*Haliotis* sp). However, in the absence of a rocky shore, early peoples also exploited the white sand mussel (*Donax serra*) as well as pencil bait (*Solen capensis*). Middens consist primarily of shellfish but may also contain bone remains and cultural artifacts. They are the most common type of archaeological site is found within 5 km from the coast.

Burials: Many middens also contain human burials. The human remains are often buried in a flexed position with a capping of stone. The human remains are frequently buried with ostrich eggshell bead necklaces and may sometimes also have associated clay pots, etc.