

PROPOSED ST FRANCIS GOLF ESTATE

PHASE 1 HERITAGE IMPACT ASSESSMENT

FINAL REPORT

Prepared For:

SRK Consulting

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6 August 2003

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Executive Summary

The proposed development of a golfing estate adjacent to St Francis Bay will involve major alteration to the landscape including considerable earth movement. In accordance with requirements of Environmental Impact Assessments, the Mossel Bay Archaeology Project was appointed to conduct the Heritage Impact Assessment.

Previous archaeological research in the St Francis area revealed the presence of numerous sites including some of National and potentially International significance (Binneman 1996). Several of these sites are located in the Sand River Dune Fields adjacent to the proposed site for the golfing estate. More recent archaeological sites (last 10 000 years) are of particular interest and significance to a local Khoisan group in Humansdorp as their ancestors were almost certainly responsible for depositing some of the material at those sites. No sites of historic significance occur on the site of the proposed golf course, though two recent graves were located and require further investigation and consideration in consultation with the local community and authorities.

It is unlikely that the proposed development will have obvious adverse affects on the general Heritage Environment (ambience, sense of place, built structure, historic landscape, oral histories, etc), but these issues should be investigated during the mitigation phase.

During the fieldwork for this study, 23 archaeological sites were discovered. Because archaeological sites are protected by law, and are completely irreplaceable and unrenewable, mitigation prior to, during and after the construction phase of the development will be required. All discovered sites should be sampled and Sites 13, 14, 21 and 22 require special attention and Sites 13 and 21, and potentially Site 14, must be preserved in perpetuity. A management plan for conservation must be devised in consultation with the South African Heritage Resources Agency, the Provincial Heritage Resources Authority, archaeologist(s) and the Khoisan group in Humansdorp. Full-time monitoring of all earth moving must be undertaken under the supervision of a professional archaeologist, as sites will certainly be uncovered during the construction phase. Writing and providing guidelines for non-archaeologists to recognize and assess the significance of archaeological sites is not feasible. It takes many years of study, training and experience to attain the necessary expertise to recognize and adequately assess the significance of archaeological sites. It follows that a professional archaeologist must be employed to deal with Heritage Resources.

If mitigatory measures are adopted and adhered to, then the proposed development is environmentally acceptable. Assuming adequate mitigation is employed, the development option is preferred over the “no-go” alternative, as the former will provide scientists an opportunity to gain insight into the pre-history of the area and also present an opportunity to conserve and manage the more significant sites for future generations and scientists. Moreover, incorporating certain archaeological sites into the proposed development will add significant value to the golfing estate and provide an additional source of interest and attraction. Archaeological sites are also potential sources for education and tourism.

1. Introduction

The Mossel Bay Archaeology Project (MAP) was appointed to undertake a specialist study to determine the potential impact of the proposed St Francis Golf Estate on the heritage (archaeological) resources of the area. The proposed development will include:

- An 18 hole links golf course;
- Approximately 400 erven for residential development (Residential 1);

- A club house and hotel;
- Three areas to be zoned as Residential 2 (for development as cluster homes);
- A mashee (short golf course) and practice area;
- Two small areas zoned as undetermined, that may later be developed as commercial or business areas (including the possibility of a service station); and
- Roads, reservoirs, and related infrastructure.

1.1 Background

The objectives of the Heritage Impact Assessment (HIA) include the following:

- To assess the potential impacts associated with the proposed development and compare these with the "no-go" alternative;
- To identify mitigatory options to minimise potential negative impacts and enhance positive impacts; and
- Indicate the environmentally preferred alternative.

The terms of reference (TOR) for the HIA are to:

- a) review available data regarding sites of archaeological or historical importance in the immediate vicinity of the proposed development (dealt with in Section 2)
- b) identify any sites of archaeological or historical importance within the development area (dealt with in Section 3)
- c) describe the historical and/or archaeological significance of sites typical to the immediate area and any sites that may be identified within the development area (dealt with in Sections 2 and 3)
- d) assess the impact of the proposed development on the historical or archaeological sites described (dealt with in Section 4)
- e) recommend measures that should be implemented during the construction phase should any potential sites be uncovered (including guidelines on how to identify sites of potential significance) (dealt with in section 5)
- f) consult with the client to identify and consider (recent) graves believed to be located on the site (dealt with in Sections 1.3, 3, 4 and 5)

1.2 Study Area

Figure 1 shows the location of the proposed site for the St Francis Golf Estate on the farm Goede Geloof. Binneman (1996) surveyed the Sand River Dune Fields on the same farm in the early 1980s during archaeological research for his PhD. Figure 2 shows the rough outline of the area studied during the fieldwork for this HIA.

1.3 Approach to the Study

Prior to conducting the fieldwork for this study, the Albany Museum in Grahamstown was contacted to acquire background information on the archaeology of the St Francis Bay area. Unfortunately Dr Binneman, who is most familiar with this area, was in the field, but Dr Webley indicated that the study area was as yet un-surveyed and that sites were likely to occur, as they are common in the Sand River Dune Fields adjacent to the study area. Mr. Lionel Donnelly was contacted and he provided a topographic map of the study area, useful environmental information, and pointed out the location of the above-mentioned graves as well as the perimeter of the proposed development.

Most of the study area was previously cleared of alien vegetation (rooikrantz), but the bulk of the ground surface is covered with grass, shrub and occasional milkwood trees. Only the cleared area was studied, as the un-cleared areas of the property are impenetrable. Only about 5 to 10% of the ground surface is exposed for visual inspection and this was therefore the major limiting factor to conducting a comprehensive study of the area. An area of very dense vegetation (Figure 2) in the study area could not be investigated. According to Mr. Donnelly the study area was formerly a dune field (as recently as the 1960s) and such localities were popular habitation sites during pre-historic times as is evidenced by numerous archaeological sites in the dune fields near Elands Bay on the West coast of South Africa. Sites in dune fields are continually covered and uncovered by moving sand bodies, rendering them vulnerable to weathering and destructive agents. So, the vegetation currently capping the dunes has stabilized them and thus protects the archaeological remains lying in and under them. It is highly probable, therefore, that numerous archaeological sites are currently covered by sand dunes and/or vegetation and are therefore not visible on the surface.

On 22 and 23 July 2003 the study area (Figure 2) was traversed by vehicle in a systematic manner and all exposed ground surfaces were inspected on foot. Wherever archaeological material was identified, the location was fixed with a Geographical Positioning System (GPS) and the nature and contents of sites were recorded in a notebook. A comprehensive digital photographic record was made of sites and significant finds, and this is available on request. These strategies are consistent with methods used for Phase 1 HIAs.

Due to the above-mentioned limitations and time constraints, only 60 to 70% of the study area was investigated thoroughly, but an archaeologist should study the remaining area during the mitigation phase. The mitigation phase - sampling of sites and devising a Heritage management plan - must be conducted either before the construction phase, or in tandem with it, provided that the construction team avoids areas of known sensitivity until archaeologists recover adequate samples. Areas of known sensitivity should be clearly demarcated so that the construction team can easily avoid them.

2. Description of the Affected Environment

Heritage resources differ in a fundamental and crucial way from most other environmental resources; they are entirely irreplaceable and unrenowable. The rapid and widespread development in the St Francis Bay area is therefore a serious threat to heritage resources in the area. Unless long-term conservation and management plans are put in place, the heritage resources of the affected environment are in grave danger of being lost forever.

Because members of the Albany Museum are familiar with the archaeology of the St Francis Bay area, I copy the following discussion, with minor revisions, from a Heritage Impact Assessment (HIA) report submitted to SRK Consulting by Dr Webley (2002 pp 3-4).

The archaeology of the Cape St Francis area was studied by Dr J Binneman (Albany Museum) during the 1980s and detailed information is available in his PhD dissertation (Binneman 1996).

*There are a number of distributions of Middle Stone Age (see Terminology) stone artefacts in the Sand River Dune Fields. Some of these stone scatters are associated with fossilized bone remains. This is very significant for research into the origins of modern humans (a hot topic in archaeology and paleoanthropology), particularly since evidence for the earliest anatomically modern humans (*Homo sapiens sapiens*) comes from Klasies River Cave on the nearby Tsitsikamma coast. It is conceivable that some of the bones associated with the above-mentioned Middle Stone Age sites may include fragments from early modern humans.*

Such remains are critical to research into the origins of modern humans, especially in the light of recent discoveries at sites like Klasies and Blombos Cave.

“The archaeology of the study area, however, relates primarily to Holocene (last 10 000 years) occupation by San hunter-gatherers and later by Khoekhoen pastoralists.” This time period is called the Later Stone Age (see Terminology).

“The coastal shell middens (see Terminology) are divided into three groups that are most common in the St Francis area.

- 1. Shell middens without pottery and with large quartzite implements, are classified as the Kabeljous Industry (first identified at a site on the Kabeljous River near Jeffreys Bay). This industry dates to between 3000 and 1800 years before present (BP).*
- 2. A second group of shell middens, also without pottery, but with microlithic tools, is called the Wilton Industry. These date to between 5180 and 1900 BP.*
- 3. Binneman excavated an open-air shell-midden in a deflation hollow in the Sand River Dune Fields that was named Goedgeloof (after the adjoining farm). This pastoralist site represents the oldest dates for sheep and pottery in the Eastern Cape. The pottery has been dated to 1770 BP (AD 180) and the sheep to 1560 BP (AD 390). Interestingly, the most common shellfish utilized by these peoples was pencil bait (*Solen capensis*) and these were almost certainly collected from the Kromme River estuary which has the highest population of pencil bait in the Eastern Cape. The site of Goedgeloof is located some 5km from the St Francis Bay coast showing that the occupants of the site were traveling considerable distances to collect their food.”*

In addition to middens, a number of graves were found in the Sand River Dune Field area adjacent to the proposed site for the St Frances Golf Estate. “These generally represent Khoisan individuals who are frequently buried in a flexed (fetal) position. They may be buried with grave goods such as grindstones or ostrich eggshell bead necklaces. Of importance is the discovery of the remains of a Negroid individual just north of the Kromme River some years ago. This individual was buried some 700 years ago and this is the earliest Negroid found this far south on the South African coast.”

Furthermore, the Cape St Francis region contains remnants of ancient landscapes with associated fossilized remains of animals that died around waterholes. Such remains are important to inform scientists about ancient and altered environments and ecosystems.

Very little archaeological research has been conducted in this area, and currently, very little is known about the frequencies of, and variation in sites in the region. Given this and the fact that no two archaeological sites are the same, every site that is in potential danger of being destroyed has the potential to play a significant and critical role in piecing together the picture of prehistory in the area. Protecting and sampling endangered sites is therefore critical in benefiting from and managing our Heritage Resources.

In view of the above as well as the results of the field work conducted for the HIA, the heritage resources (archaeological sites) within the proposed site for the St Francis Golf Estate are, in my opinion, highly sensitive (very low tolerance to disturbance) and will be permanently destroyed and altered by the proposed development unless adequate mitigatory measures are adopted.

3. Identification of Heritage Sites During the 2003 Survey

On 22 and 23 July 2003 a survey covering about 70% of the study area revealed the

presence of 23 pre-historic archaeological sites (see Figure 2). This is a high density of archaeological sites for the size of the area covered. Due to the limitations described above the area could not be surveyed comprehensively. Nevertheless, the results indicate that it is highly probable that additional sites are located in the study area. No sites or structures - other than the two graves - of apparent historical significance were identified in the study area.

The various sites with their coordinates (map datum WGS 84) and a brief description are given below (see Figure 2 for site locations).

Graves

S 34⁰ 09.339'
E 24⁰ 49.030'

In accordance with TOR: f), Mr. Lionel Donnelly was consulted regarding the identification and location of graves in the study area. Two graves, facing East, are situated atop a small dune some 100 meters East of the ruins of three cottages (see Figure 2). Both graves' outlines and headstones are simplistic and constructed of brick and plaster (Plates 1 and 2). The headstones resemble a simple Cape Dutch style gable. The graves are recent and almost certainly associated with the three "labourers' cottages" to the West. This needs to be confirmed through further investigation. According to Mr. Donnelly the previous landowner built the "labourers' cottages" in the 1950s. This suggests that the graves are likely no older than about 50 years. Although the graves were not cleared of vegetation, no inscriptions were readily visible on the headstones or plaster surfaces.

The smaller grave is roughly 1.5m or less in length and some 60cm wide and likely contains a very small adult or young individual. A concrete cross lies on top of the grave (Plate 1). The horizontal arm of the cross retains an imprint of what was likely a name-plaque, which is now missing. Also lying on top of the grave is a broken glass jar with a screw top design, which at some point probably contained fresh flowers. A small plastic plant container is also associated with this grave.

The larger grave is a little under 2m long and about 1m wide. A broken plastic container holding a few complete marine shells was found about 1.5 meters North of this grave (Plate 3).

Cottages 1 and 2

S 34⁰ 09.356'
E 24⁰ 48.968'
and
S 34⁰ 09.400'
E 24⁰ 48.979'

The ruins of three "labourers' cottages" are located some 100 meters West to North-West from the above-mentioned graves. Cottage 1 is a single structure and two cottages identical to the first are located at Cottage 2 (see Figure 2). The structures are 9m by 3m in area, and each have a single entrance, a window at the front, a window in the North facing wall and 2 or 3 high, narrow windows at the back. According to Mr. Donnelly the previous landowner built them in the 1950s. The structures are made of large molded cement "bricks" and plaster. The roof beams are of wood and remains of the roof are of corrugated asbestos or fiber-cement. Single wooden panels on the interior walls suggest that the buildings were partitioned with very flimsy material. All that remains of the buildings are their "shells".

Material remains associated with the buildings are modern. Items include fragments of clothing, plastic bags, slip slops, plastic and glass containers, a plastic music cassette, etc.

Site 1

S 34⁰ 09.990'
E 24⁰ 48.632'

The site is situated immediately North of the vehicle track near the "Modern Ruins". This is a low-density scatter of predominantly stone artefacts including; a Middle Stone Age flake, a classic upper grindstone, a large core, a small blade in silcrete with Howiesons Poort features and a few fossilized fragments of humerus bone from a size III/IV bovid. The latter was located at S 34⁰ 10.006' E 24⁰ 48.571'. The scatter extends some 150 by 20m and is in an exposed and deflated area.

Site 2

S 34⁰ 10.004'
E 24⁰ 48.538'

This is a low-density scatter of stone artefacts, marine shell, pottery, ochre and bone. A few cracked quartzite cobbles were found as well as large cores and a hammer stone. Marine shell includes arikreukel and limpet. Bones of tortoise, dune molerat as well as larger bovid were observed. A small, unfinished ostrich eggshell bead was found. Some material is polished and this is likely the result of sandblasting by wind. The scatter is in an exposed and deflated area roughly 70 by 20m and becomes denser to the West.

Site 3

S 34⁰ 09.994'
E 24⁰ 48.475'

This site appears similar to Site 2 and is located in an exposed and deflated area.

Site 4

S 34⁰ 09.976'
E 24⁰ 48.490'

This site appears similar to Site 2 and occurs in an exposed and deflated area, but is less dense and contains some stone artefacts in quartz. Quartz was not seen at Site 2.

Site 5

S 34⁰ 10.028'
E 24⁰ 48.529'

This is a low-density scatter of Middle Stone Age and Later Stone Age stone artefacts and fossilized as well as non-fossilized bone. Two teeth of a large carnivore were found as well as two small bladelet cores in quartz. The latter were about 2cm in their maximum dimension. The scatter is some 50 by 20m and occurs on an exposed and deflated surface. No marine shell or pottery was observed.

Site 6

S 34⁰ 09.975'
E 24⁰ 48.407'

This is a low-density scatter of stone artefacts (possibly some of Middle Stone Age origin), bone and marine shell (limpet and chiton). Some artefacts appear polished, probably by sandblasting. The site is in an exposed and deflated area of some 40 by 10m.

Site 7

S 34⁰ 10.050'
E 24⁰ 48.410'

This is an exposed and deflated area containing a few stone artefacts and no less than fifty shards of pottery, which appear to come from the same vessel. One large fragment has two hand-made perforations.

Site 8

S 34⁰ 10.049'
E 24⁰ 48.238'

This is a low-density scatter of Later Stone Age stone artefacts (mostly in quartzite), marine shell (limpet and arikreukel), bone, a large lower grindstone located at S 34⁰ 10.060' E 24⁰ 48.210' and a classic hammer stone. The scatter is in an exposed and deflated area of about 60 by 15m.

Site 9

S 34⁰ 10.050'
E 24⁰ 48.179'

This is a small sand mound or dune with medium to high densities of a wide variety of marine shell (abalone, arikreukel, mussel, limpet, periwinkle, etc.). Stone artefacts in quartzite were also noted. Only saw a single fragment of bleached bone. A small heap from a burrowing animal contains archaeological material, which suggests that this deposit has some depth to it.

Site 10

S 34⁰ 09.632'
E 24⁰ 48.339'

This is a small exposure (not deflated) atop a small dune with a low-density scatter of marine shell and a few pieces of quartzite cobbles (manuports [see Terminology]). Some of the latter appear fire-cracked and others have flake scars. No pottery or bone was seen.

Site 11

S 34⁰ 09.538'
E 24⁰ 48.316'

This is an exposed but not deflated surface of about 10 by 15m with a low-density scatter of marine shell (arikreukel, whelk and chiton). No stone, bone or pottery was seen.

Site 12

S 34⁰ 09.994'
E 24⁰ 48.475'

This is an exposed but not deflated surface of about 10 by 10m with a low-density scatter of limpet and arikreukel shell. No other archaeological material was seen.

Site 13a and 13b

S 34⁰ 09.743'
E 24⁰ 48.547'

This is a classic shell midden and by far the largest and densest seen thus far (Plates 4 and 5). Site 13b appears to be an extension of 13a and is truncated by a vehicle track. The following description applies to both 13a and 13b. The site is situated atop a dune with a commanding view over the Sand River Dune Fields to the North, the Kromme River mouth to the North East and the St Francis Bay shoreline to the East and North East (Plate 6). The "Main House Ruins" are about 450m to the west of Site 13a (see Figure 2). The site is approximately 2km from the above-mentioned localities. The midden is dominated by shellfish including various species of limpet (some extraordinarily large specimens), periwinkle, arikreukel, whelk, barnacle (some clearly "riding" on mussel shells), abalone, white mussel, mussel, chiton and so on. Some shellfish is burnt and it is likely that in tact hearths are preserved in the midden. In addition to the wide array of shellfish are shards of pottery, flaked quartzite cobbles/cores, quartzite flakes and pieces of ochre. No bone was seen. The midden is at least 20 by 30m in extent and about 3m high.

Site 14

S 34⁰ 09.749'
E 24⁰ 48.475'

This site is also in an exposed, but not deflated area of approximately 20 by 10m atop a low dune some 110m West of Site 13a. It is a shell midden with a high density and wide variety of marine shells like described for Site 13. Some shell is clearly burnt. Pottery, bone, flaked quartzite and an upper grindstone was also seen. This site has the same commanding view of the surrounding landscape as described for Site 13.

Site 15

S 34⁰ 09.815'
E 24⁰ 48.372'

This is a deflation hollow with a low-density scatter of arikreukel, pencil bait and periwinkle. Numerous shards of pottery were seen, but bone and stone artefacts were absent. The exposed and deflated area is approximately 20 by 10m.

Site 16

S 34⁰ 09.845'
E 24⁰ 48.669'

This is a medium to low-density shell midden with a wide variety of shellfish remains including various species of limpet, arikreukel, mussel, white mussel, whelk and periwinkle. A few pieces of flaked quartzite were seen, but bone and pottery are absent. The site is located on the Northern edge of a high dune some 250m from the "Main House Ruins". Most of the site is covered with grass and estimating its extent is therefore difficult, but the exposed portion of it is about 20 by 10m. Like Sites 13 and 14, the view of the surrounding landscape is good and the site is sheltered from southerly winds by a dune to the South.

Site 17

S 34⁰ 09.855'
E 24⁰ 48.519'

This is a low-density scatter of pottery in an exposed and deflated area of about 10 by 15m. The pottery shards appear to be the remains of a single vessel. A spout fragment of a "pot" was also found.

Sites 18,19 and 20

S 34⁰ 09.897'
E 24⁰ 48.477',
S 34⁰ 09.900'
E 24⁰ 48.461'
and
S 34⁰ 09.898'
E 24⁰ 48.418'

These are exposed and deflated areas of about 10 by 5m each, with low-density scatters of limpet, mussel, arikreukel and pieces of flaked and cracked quartzite. No bone or pottery was seen at these sites.

Site 21

S 34⁰ 09.897'
E 24⁰ 48.246'

This is a very large shell midden situated on and down the slopes of a dune and its extent is approximately 70 to 100 by 50m (Plates 7 and 8). It contains a high density and wide variety of shellfish remains including various species of limpet (some of which are unusually large), mussel, white mussel, chiton, periwinkle, arikreukel, abalone, oyster, and so on (Plate 9). One oyster shell displays utilization that is unequivocally humanly produced (Plates 10 and 11). Other observations include a large lower grindstone, many pieces of flaked quartzite in a variety of colours and of differing quality as well as burnt marine shell. No bone or pottery was seen, but all the shellfish may swamp them and bone that was on the surface may not have survived weathering processes. This site does not have a view of the shore at this time, but being in a dune field, it may have had a different view in the past.

Site 22

S 34⁰ 09.915'
E 24⁰ 48.177'

This site is in an exposed and deflated area of about 10 by 5m and is located some 50m East to South-East of Site 21 (Plate 12). It is possible that it is associated with Site 21. It is a fairly dense scatter of stone including many pieces of flaked and fire cracked quartzite, large and small flakes in quartzite, fragments of grindstone(s), a anvil/hammer stone (Plates 13 and 14), a broken hammer stone/anvil, fire cracked cobbles, marine shell (mostly arikreukel, but also limpet, mussel and white mussel, and some of which is burnt), pottery and bone including a molar from a large bovid. This site contains the highest density of stone seen thus far and is very different in nature from all sites recorded in the study area.

Site 23

S 34° 09.919'

E 24° 48.307'

This is a low-density scatter of whelk, arikreukel and stone artefacts in quartzite. The site occurs in an exposed but not deflated area of about 10 by 5m.

Table 1. Age, significance and required mitigation for discovered archaeological sites. Lumped sites share certain characteristics. “Investigate to sample”, means that the site(s) in question require additional assessment prior to sampling.

Site Number	Period/Age	Potential Significance	Mitigation
1	LSA & MSA	International / National	Sample
2, 3, 4	LSA	National	Investigate to sample 3 & 4
5	LSA & MSA	International / National	Sample
6	LSA & possibly MSA	National	Investigate to sample
7	LSA	National	Sample
8	LSA	National	Sample
9	LSA	National	Sample
10	LSA	National	Sample
11, 12	LSA	Low significance	Monitor during earth moving
13	LSA	National	Sample & Conserve
14	LSA	National	Sample & possibly conserve
15	LSA	National	Sample
16	LSA	National	Sample & possibly conserve
17	LSA	National	Complete collection
18, 19, 20, 23	LSA	National	Sample
21	LSA	(Inter)National	Sample & Conserve
22	LSA	(Inter)National	Complete collection

4. Sources of Risk, Impact Identification and Assessment

Law (the National Heritage Resources Act, No 25 of 1999) protects all archaeological sites and they may not be destroyed, damaged, excavated, altered, defaced or disturbed without a permit issued by the South African Heritage Resources Agency (SAHRA) or a Provincial Heritage Resources Authority (PHRA).

The proposed development should not have obvious adverse affects on the general Heritage Environment (ambience, sense of place, built structure, historic landscape, oral histories, etc), but these issues should be investigated during the mitigation phase.

Numerous archaeological sites are situated within the proposed site for the St Francis Golf Estate and therefore the area is very sensitive to development and the archaeological sites have a very low tolerance to any disturbance. Unlike most other environmental resources, heritage resources can never be replaced, replicated or renewed and this makes them particularly vulnerable to permanent destruction. Any form of excavation, earth movement and vehicular or pedestrian traffic will disturb, alter and/or destroy these archaeological sites.

The Khoisan group in Humansdorp may have a vested interest in the conservation and management of archaeological sites in the study area, as their ancestors were the people responsible for producing many of the Later Stone Age and pastoralist sites. It is therefore recommended that this group be consulted in this regard. A Khoisan cultural center has already been built in Humansdorp and archaeological materials from the study area may be used for displays in the cultural center. This must be cleared with SAHRA and/or the PHRA and other relevant local authorities.

Middle Stone Age sites are of National and International interest and scientific importance whereas Later Stone Age sites are mostly of National interest and scientific significance, but in some cases of interest and scientific value at the International level.

In addition to the above, there are two graves on the property that must be investigated to ascertain the identity of those buried there, as well as possible living relations. Such affected/interested parties must be consulted regarding the long-term plans for these graves. Because these graves are younger than 60 years an archaeologist cannot deal them with. It is recommended that the local community, particularly people still living on the property, and/or authorities be consulted in this regard.

The impact assessment of the proposed development on Heritage Resources is summarized in Table 1. The assumption in the “With Mitigation” columns is that all mitigatory measures recommended in this document are adopted and adhered to.

Table 2. Loss of Heritage Resources (archaeological sites)

	CONSTRUCTION		OPERATION	
	Without Mitigation	Assuming Mitigation	Without Mitigation	Assuming Mitigation
Extent	(Inter)National	National	(Inter)National	National
Duration	Permanent	Permanent	Permanent	Permanent
Intensity	High	High	High	High
Probability	Definite	Definite	Definite	Definite
Significance	High	Medium	High	Medium
Status	Negative	-ve & +ve	Negative	-ve & +ve
Confidence	High	High	High	High

If no measures are adopted to mitigate impacts then the “no-go” alternative is the preferred option. Assuming that the “no-go” alternative means that nothing is done on the property in question, then the only potential impact on archaeological sites is natural weathering and decay of archaeological materials. The negative impact of this option is that the large number of sites in the study area will not be studied further and thus cannot add to our knowledge of indigenous cultures.

The positive impact on the Heritage Resources of the area is that the development offers an opportunity to sample and study a large number of sites that would otherwise lie dormant and deteriorate with time. Over the past ten years or so, archaeology has become more prominent in the media and is starting to attract the attention and investment it deserves. A few large and significant sites are situated in the study area and these, once adequately sampled and studied, can be protected and incorporated into the development in such a manner as to offer an additional source of attraction and interest for the proposed golfing estate.

5. Recommended Mitigation Measures and Management Actions

The graves on the property must be investigated to ascertain the identity of those buried there, as well as possible living relations. Such affected/interested parties must be consulted regarding the long-term plans for these graves. Because these graves are younger than 60 years an archaeologist cannot deal them with. The local community, particularly people still living on the property, and/or authorities should be consulted in this regard.

Because archaeological sites are protected by law, as described above, permits will be required from either SAHRA or PHRA in the event that the recorded sites are disturbed in any way during development. Since archaeological deposits are entirely irreplaceable and not renewable, it is necessary for an archaeologist to adequately sample all sites in the affected area. In the case of small and very low-density sites, they should be sampled and/or excavated entirely. The following sites must be protected, conserved and managed in a sustainable fashion; Sites 13, 14, 21 and 22. Due to weathering processes and decay, it may be best to excavate Site 22 completely. These sites must be protected from development and an archaeologist should excavate an adequate sample for analysis in order to provide information for scientific and display purposes. A management plan for these sites should be devised in consultation with SAHRA, PHRA, archaeologists, the developers and interested and affected parties. With appropriate displays and balustrades (for their protection), these sites should be incorporated as points of interest in the golfing estate and thus add value to the development.

Due to the large number of archaeological sites discovered during the fieldwork for this study, it is necessary that full-time monitoring of all earth movement be undertaken during the construction phase. This work can be done by trained assistants, but must be supervised by a professional archaeologist. The archaeologist should be given sufficient time and resources to mitigate (excavate) in the event that an archaeological site is exposed as the result of earth moving.

Writing and providing guidelines for non-archaeologists to recognize and assess the significance of archaeological sites is not feasible. It takes many years of study, training and experience to attain the necessary expertise to recognize and assess the significance of archaeological sites adequately. It follows that a professional archaeologist must be employed to deal with Heritage Resources.

6. Environmental Acceptability and Comparison of Alternatives

Provided that mitigatory and management measures - as recommended above - are employed, the proposed development is acceptable. Although the "no-go" alternative does not have the same negative impacts as the proposed development, the latter has the positive impact of enabling archaeologists to learn more about the pre-history of the area as well as providing the development with an additional source of interest and attraction. Furthermore,

additional archaeological investigation and conservation of the above-mentioned sites will provide interest groups, such as the Khoisan group in Humansdorp, with valuable information and display material concerning their culture and history.

7. Conclusions and Recommendations

Numerous valuable and irreplaceable archaeological sites were identified during the fieldwork for this HIA. Law protects all archaeological sites and any disturbance of sites discovered in the area earmarked for development requires permits from SAHRA or the PHRA. Because information contained in archaeological sites will be lost forever if they are destroyed, it is strongly recommended that all sites be sampled and that smaller sites are excavated entirely. The larger and more prominent sites (Sites 13, 14 and 21) must be sampled and a management plan must be established for their protection and conservation. The Khoisan group in Humansdorp should be consulted regarding their interest in the archaeology of the area. Provided the recommended mitigation measures described in the body of this document are adopted and adhered to, the development option is preferred over the “no-go” alternative, as it offers the opportunity to gain insight into the pre-history of the area and to conserve archaeological sites for future generations and scientists. Incorporating prehistory and the archaeological sites as features of the development will be a major source of value, interest and attraction for the golfing estate.

8. Terminology

Middle Stone Age: This period in pre-history dates between 250 000 and 40 000 years ago.

Later Stone Age: This period in pre-history dates between 40 000 years ago and colonial times.

Middens: Are usually mounds or heaps of discarded food or other remains. Shell middens are usually comprised mostly of shellfish remains and shells swamp other cultural remains.

Howiesons Poort: A Stone Age industry dating to the later part of the Middle Stone Age.

Manuport (literally meaning – carried by hand): An object (usually stone not displaying artefactual characteristics) that was brought by a person to its present location.

9. 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. Submitted to SRK Consulting.

Acknowledgements

Information provided by Mr. Lionel Donnelly is much appreciated.

Figures and Plates



Plate 1. Small grave with associated concrete cross, viewed from the West. A5 notebook for scale.



Plate 2. Large grave with associated marine shells viewed from the East. A5 notebook for scale.



Plate 3. Plastic bowl with marine shells associated with larger grave. A5 notebook for scale.



Plate 4. Site 13a viewed from the North.



Plate 5. Close up view of Site 13a with lip balm for scale.

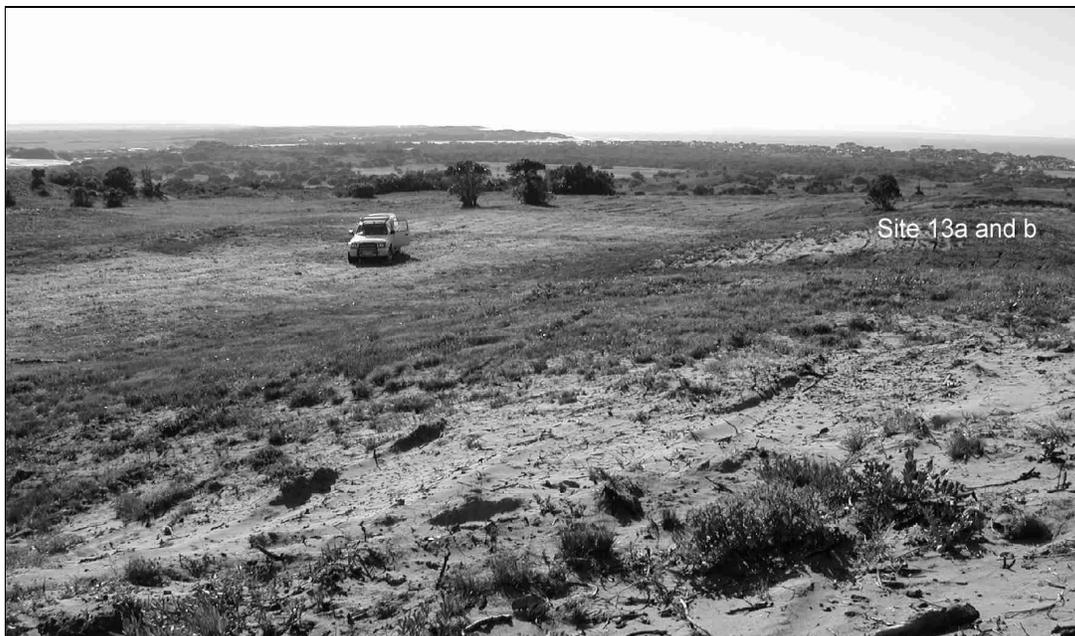


Plate 6. View toward the North East from Site 13a and 13b. Sand River Dune Fields just visible on the left and the Kromme River mouth in the center.



Plate 7. Site 21 viewed from the North East.



Plate 8. Site 21 – photograph taken of the top of the site, facing South to South-East.



Plate 9. Close up of the surface of Site 21 showing shellfish and artefactual stone. The lip balm is for scale.



Plate 10. Ventral view of a worked oyster shell found at Site 21. The top linear surface is the worked or utilized edge.

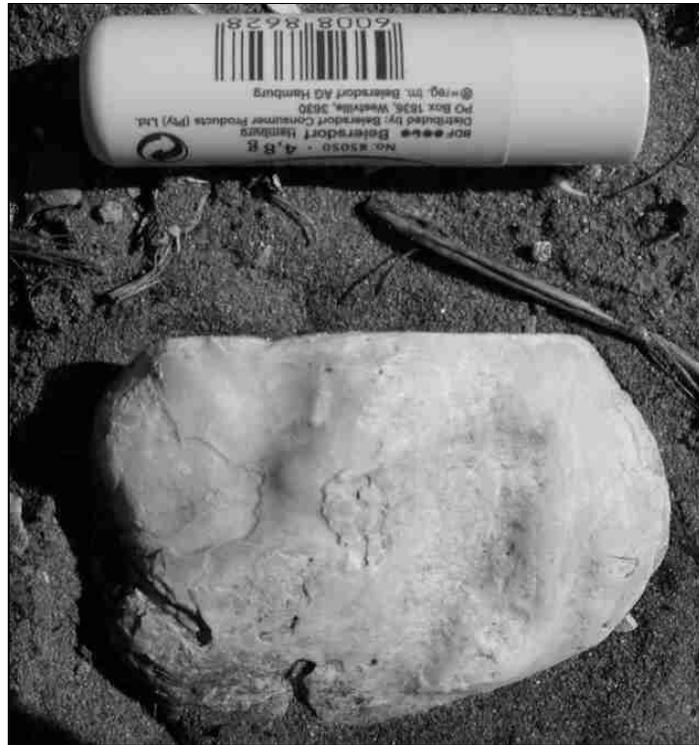


Plate 11. Dorsal view of a worked oyster shell found at Site 21. The top linear surface is the worked or utilized edge.

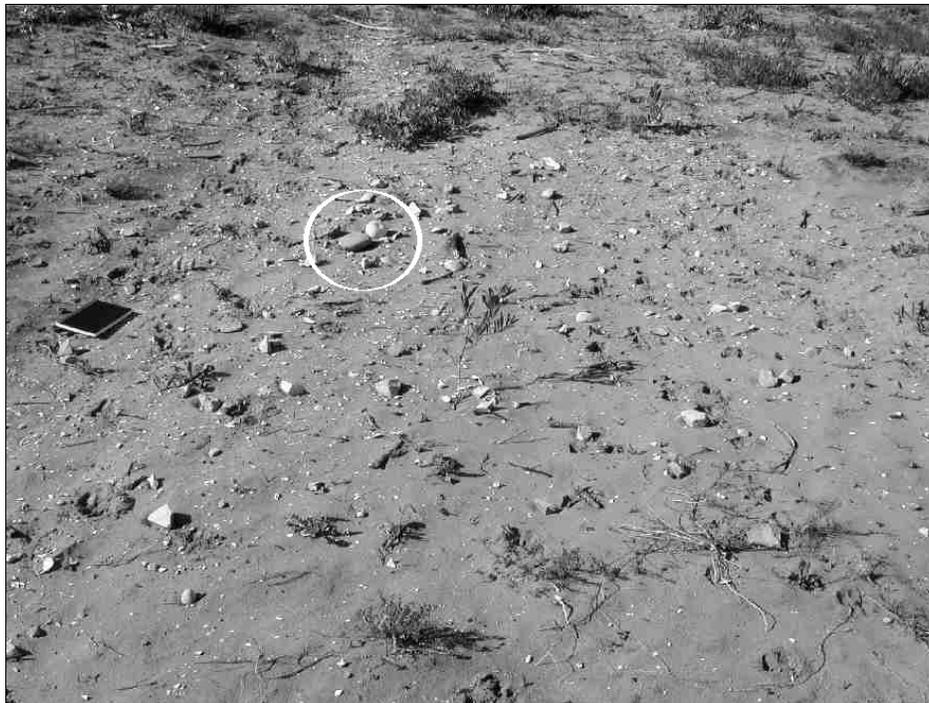


Plate 12. Site 22 - showing deflated exposure with stone artefacts including a lower grindstone and anvil/hammer stone in the circle. The A5 notebook is for scale.



Plate 13. Site 22 – close up of a grindstone/hammer stone at the bottom and an anvil/hammer stone at the top. Lip balm for scale.



Plate 14. Site 22 – close up of anvil/hammer stone showing pecking that is typical damage on hammer stones. Lip balm for scale.