

**ARCHAEOLOGICAL SHOVEL TESTING
PORTION 23/7 OF THE FARM UITKOMST
PATERNOSTER
VREDENBURG-SALDANHA MUNICIPALITY
WESTERN CAPE PROVINCE**

Report prepared for

PATERNOSTER PROPERTY (PTY) LTD

By

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Executive summary

Portion 23/7 of the Farm Uitkomst, Paternoster on the Cape West Coast, contains significant archaeological heritage remains in the form of shell middens.

Most of the remains comprise shellfish but quantities of bone, stone flakes, ostrich eggshell and beads occur in some of the deposits.

The following recommendations are made:

- Systematic excavation and sampling of archaeological deposits in order to salvage important historical information.

1. INTRODUCTION

1.1 Background

Paternoster Property (Pty) Ltd instructed the Agency for Cultural Resource Management (ACRM) to undertake shovel testing of archaeological shell midden deposits in Portion 23/7 of the Farm Uitkomst, in Paternoster, Vredenburg-Saldanha District, in the Western Cape Province (Figure 1).

Potentially significant archaeological heritage remains in the form of shell middens were recorded in Portion 23/7 during the course of a Phase 1 Archaeological Impact Assessment of the property (Kaplan 2003). Shovel testing was subsequently recommended in order to determine the significance (i.e. spatial extent, depth and variability) of the below ground archaeological deposits on the site.

Shovel testing is an acceptable archaeological practice, as a means of determining the depth and variability of archaeological remains (both subsistence and cultural), in order to determine the extent of further archaeological investigations of specific areas that may be required on the site.

ACRM was instructed by Paternoster Property (Pty) Ltd to apply for a permit to undertake the required shovel testing on the affected property.

1.2 Description of the affected property

Portion 23/7 of the Farm Uitkomst Paternoster (at approximately S 32° 48 420 E 17° 53 817 set on map datum WGS 84) is located directly alongside Mosselbank Road in Paternoster. The property comprises a high, prominent sand dune, which has been bisected by construction of Mosselbank Road, an activity that in itself should have required an archaeological assessment given the known (archaeological) sensitivity of the area.

A large, but severely degraded Later Stone Age¹ (LSA) shell midden occurs on the surface of the dune top on the affected property (Figure 2). The uppermost deposits of the midden have very likely been destroyed as a result of heavy trampling and pedestrian and vehicle traffic moving over the top of the dune, creating a very visible, wide track across the dune. Several low partially vegetated hummocks on top of the dune appear to contain in-situ shellfish deposits.

The damaged top of the midden comprises heavily crushed and fragmented shell, including Black Mussel (Choromytilus meridionalis), limpets (genus Patella) and some White Mussel (Donax Serra). One quartz chunk, several silcrete and quartzite flakes, a silcrete chunk and a silcrete core, and several quartzite cobbles/manuports were also found located during the course of the baseline study (Kaplan 2003).

A relatively well preserved, in-situ layer, of shellfish deposits are also visible in the cutting alongside Mosselbank Road (refer to Figure 7 in Kaplan 2003).

Black mussel dominates the shellfish deposits in the cutting alongside Mosselbank Road, with smaller amounts of White Mussel and limpets species (genus Patella) occurring. Burnt shellfish remains are also visible in the cutting.

¹ A term referring to the last 20 000 years of precolonial history in southern Africa.

Some bird and tortoise bone was noted within the shellfish deposits, and spilling down the dune slope into the road reserve. A few stone tools were also noted on the eroding slopes, including several quartz flakes, chunks, a core, and a silcrete flake (Kaplan 2003).

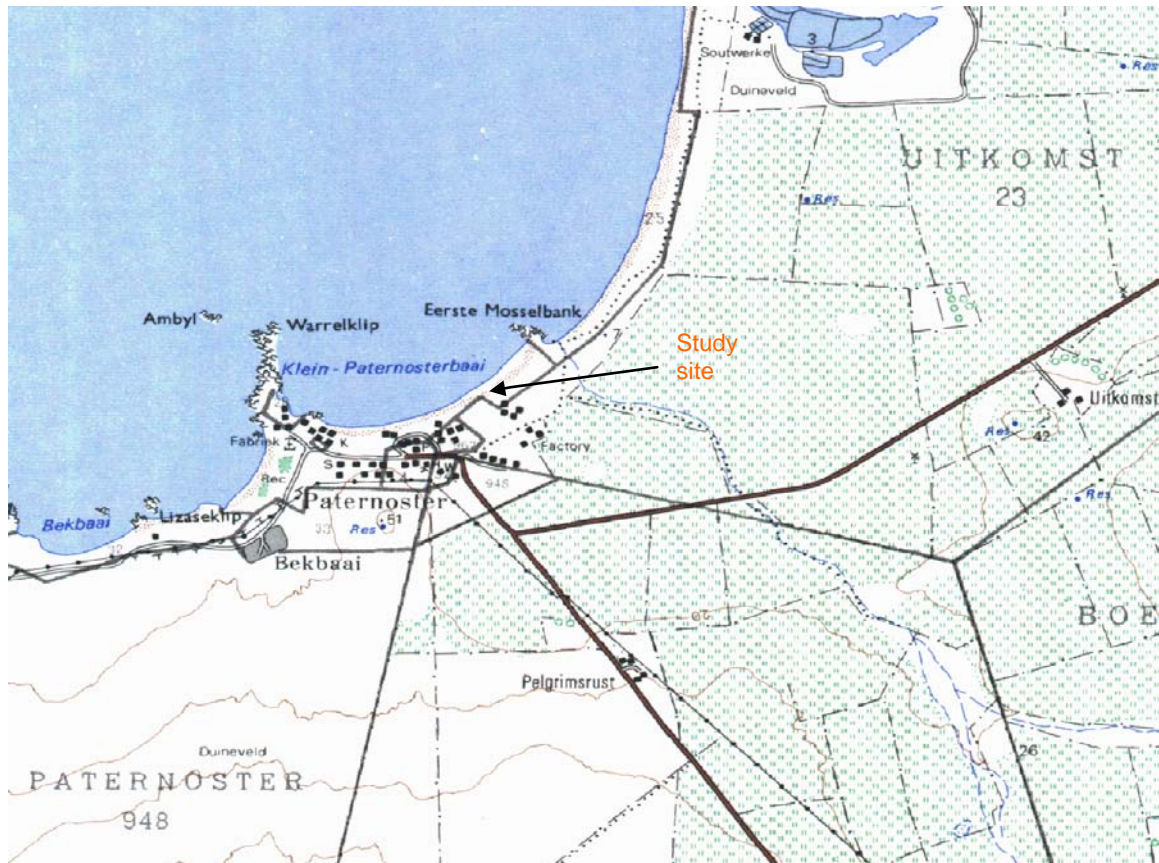


Figure 1. Site locality map (1:50 000 Map Reference No. 3217 DB & DD Vredenburg).



Figure 2. Portion 23/7 of Farm Uitkomst.

1.3 Archaeological background of the study area

A number of archaeological impact assessments have been undertaken in Paternoster in recent years, in direct response to an increase in the demand for residential development in the area (Halkett & Hart 1992a,b; Halkett & Mutti 1998; Hart & Halkett 1995, 1998a,b; Kaplan 2002, 2003, 2004, 2005a).

Many sites have been identified and recorded during the course of these surveys, a number of which have also been excavated and sampled (Hart & Halkett 1996; Halkett 1996; Kaplan 2005b, Yates 1998, 2003, 2004a,b).

Excavations and sampling of archaeological deposits in Paternoster appear to indicate that the majority of the sites date within the last 3000-4000 years and overlap the period both before and after the arrival of Khoekhoe pastoralists with domestic stock and pottery.

Later Stone Age² (LSA) shell middens in Paternoster appear to be aligned among the higher frontal dunes alongside Mosselbank road. This appears to be a coherent pattern of shell midden distribution in Paternoster. The flatter vegetated dunes west of Mosselbank road appear to contain very little archaeological remains (Kaplan 2005a).

² A term referring to the last 20 000 years of precolonial history in southern Africa.

Shovel testing on Portion 37 of the Farm Uitkomst 23 also revealed the presence of a Khoisan burial (Yates 2004a).

Portion 23/7 of the Farm Uitkomst Paternoster, located close to the rocky shoreline at Mosselbank, was clearly a focus of prehistoric human activity.

2. STUDY APPROACH

2.1 Fieldwork

ACRM applied for and was issued a Permit (No. 2004-12-002) by Heritage Western Cape, the delegated provincial heritage authority, to dig a series of Test Pits on Portion 23/7 of the Farm Uitkomst, in order to determine the significance of the below-ground archaeological deposits.

Seven Test Pits at selected points on the property were undertaken (Figure 3).

Shovel testing took place on the 18th February 2005.

The archaeological deposits were sieved through a 3mm wide mesh sieve, and sorted for artefacts on site. Cultural remains, including bone, stone tools, ostrich eggshell, etc, was bagged and transported to Riebeek West for preliminary analysis.

No bulk samples of shellfish were kept.



Figure 3. Farm 23/7 Uitkomst. Location of test pits.

2.2 Assessment of significance

The potential for buried archaeological deposits to yield information about past human activities served as the guiding principle for the assessment. Significance of archaeological deposits was based on the diversity and quantity of biological and cultural remains generated.

Greater significance was attributed to archaeological deposits with cultural traces such as stone artefacts, ostrich eggshell and pottery, and biological remains such as mammal, bird and reptile bones, than was the case where the remains consisted of marine shell alone.

3. THE AFFECTED HERITAGE RESOURCES

3.1 General observations

Shovel testing has established that the most prominent archaeological feature in Portion 23/7 of the Farm Uitkomst is a compacted shell midden on top of the dune exposed in Test Pits (TP) 6 and 7 (refer to Figure 2).

Shovel testing in TP 7, on a low dune hummock, revealed a 60-70 cm thick layer of archaeological deposits characterised by dense shell dominated by Black Mussel and limpets (genus Patella). Large amounts of bone (both terrestrial and marine), charcoal, and moderate amounts of ostrich eggshell and stone artefacts, occur in these deposits. The bulk of the fauna in TP 7 consists of tortoise, bird and many crayfish mandibles, but a range of small and medium sized antelope, fish, snake, and possibly seal, were also found.

Cultural evidence comprises a small quantity of flaked stone. One incomplete ostrich eggshell bead was recovered, including several large and smaller pieces of ostrich eggshell. No pottery was found.

Shovel testing in Test Pit 6, on a slightly raised dune hummock on the edge of the dune top, revealed a 10-20 cm thick layer of archaeological deposit about 30 cm below the surface. Like TP 7, Black Mussel dominate the shellfish remains in TP 6, with some limpet (genus Patella) also occurring. Bone densities are, however, disproportionately less in these deposits when compared to TP 7, and are overwhelmingly dominated by tortoise. No crayfish, bird or antelope bone was found. Only one piece of partially ground hematite and one small round quartzite pebble was found. No ostrich eggshell, beads or pottery was found. Several silcrete flakes and a silcrete core were, however, noted very close to the dune hummock.

Given their relatively close proximity to each other (about 25 m apart), and the overwhelming dominance of Black Mussel shell in the shovel deposits, TP 6 and 7 most likely represent the remains of a single site. Although there is a significant tailing off of volumes of shellfish and biological and cultural remains recovered from TP 6.

It is also very likely that disturbance to the sand dune over many years (as a result of pedestrian and vehicle activity³) has resulted in the irrecoverable loss of significant archaeological shell midden deposits.

Elsewhere on the site, archaeological deposits are much more modest, however.

It is interesting to note that TP 1 (the in-situ shell midden deposits in the cutting alongside Mosselbank Road) generated a small shellfish sample and very little terrestrial fauna and cultural artefacts. These deposits have eroded very badly between 2003 and 2005. Some recent trampling and disturbance of the deposits is also clearly evident.

A thin, discontinuous layer (not more than 1-2 cm thick) of shell, with some bone and a few stone artefacts, were generated from TP 2.

Some shell, bone and cultural remains were generated from TP 3, 4 and 5, but these comprise very ephemeral deposits and are generally very poor in both molluscan and non-molluscan faunal content.

3.2 Description of heritage resources⁴

Test Pit 1 (see Figure 4)	
Stratigraphy	
0.0-0.08m	Thin layer, between 3 & 8 cm thick, of shell midden deposit.
0.08-1.25m	Yellow/white dune sand. Sterile.
Biological & cultural evidence	
0.0-0.08m	Shellfish dominated by Black Mussel (<i>Choromytilus meridionalis</i>) and some limpet species (genus <i>Patella</i>) One quartz flake and two pieces of ostrich eggshell found. See also Kaplan 2003.

Test Pit 2	
Stratigraphy	
0.0-0.65m	Light grey, fine sandy deposit, with a few pieces of displaced shell.
0.65-0.70m	Very thin discontinuous lens of shellfish.
0.70-1.3m	Yellow/white dune sterile with some fine rootlets. Essentially sterile
Biological & cultural evidence	
0.0-0.10m	Small fragments of Black Mussel, some Limpet (genus <i>Patella</i>), White Mussel (<i>Donax Serra</i>) glass, plastic, rusted metal bits, building rubble, modern ceramics. Two pieces of tortoise bone found.
0.10-0.70m	Shellfish dominated by Black Mussel and Limpet (genus <i>Patella</i>). More than 20 pieces of tortoise bone (<i>Chersina angulata</i>) found, including some fish and bird. One quartz flake and one quartzite chip found.
0.70-1.3m	Small sample of shellfish dominated by Black Mussel, but with some large whole limpet (genus <i>Patella</i>) occurring. Eight pieces of tortoise bone, one small seal (<i>Arctocephalus pusillus</i>) jawbone, one quartz chunk, and one split quartzite cobble found. All possibly displaced from the overlying deposits.

³ Quad bikes were regularly seen driving over the dune during the December school holidays while the consultant was conducting an excavation on an adjacent property.

⁴ Note that this is just a small sample of deposit sieved and sorted and does not represent the total volume of deposit shovel tested.



Figure 4. Test Pit 1 alongside Mosselbank Road.

Test Pit 3	
Stratigraphy	
0.0-0.20m	Crushed and fragmented shellfish remains, humic material and modern domestic material.
0.20-0.45m	Light grey sandy deposit with displaced shellfish fragments and some humic material.
0.45-1.10m	Yellow/white dune sand. Sterile.
Biological & cultural evidence	
0.0-0.20m	Fragments of Black Mussel, White Mussel, rusted metal, hard & soft plastic, modern ceramics, building rubble and other domestic material.
0.20-0.45m	Small sample of shellfish dominated by Black Mussel and Limpet (genus <u>Patella</u>). Five pieces of tortoise, one piece of ostrich eggshell, one quartz flake and two quartzite flakes.
0.45-1.10m	Some Black Mussel and whole limpet. No cultural remains found.

Test Pit 4	
Stratigraphy	
0.0-0.20m	Crushed shellfish, rootlets and humic material.
0.20-0.45m	Light grey coloured fine, sandy deposit, small rootlets, some shellfish fragments, and tiny discontinuous lens of Black Mussel
0.45-1.0m	Light orange sandy deposit with some larger pieces of shellfish and some whole shell.
1.0-1.40m	Yellow dune sand. Large roots, some shell bits, probably displaced.
Biological & cultural evidence	
0.0-0.20m	Black Mussel fragments some White Mussel, glass, metal bits, and plastic.
0.20-0.45m	Small sample of shellfish dominated by Black Mussel, some limpet (genus <u>Patella</u>) fragments. One piece of tortoise bone found.
0.45-1.0m	Small sample of shellfish dominated by Black Mussel, including some whole pieces and a few large limpets (<u>Patella argenvillei</u>). Six pieces of tortoise bone, one bird bone, one quartz flake.
1.0-1.40m	Seemingly sterile, but small fragments of Black Mussel and one whole limpet (<u>Patella argenvillei</u>) – probably displaced. No cultural remains noted.

Test Pit 5	
Stratigraphy	
0.0-0.10m	Small amounts of crushed shellfish, rootlets and humic material..
0.10-0.50m	Light grey coloured sandy deposit with some fragmented shellfish. Rootlets present.
0.50-1.10m	White dune sand. Sterile.
Biological & cultural evidence	
0.0-0.10m	Tiny fragments of Black Mussel. No cultural material present.
0.10-0.50m	Fragments of Black Mussel, including a few larger pieces. Several small whole limpets (genus <u>Patella</u>). One piece of tortoise bone, and one split quartzite cobble.
0.50-1.10m	Black mussel fragments, including a few larger pieces. One large whole limpet (<u>Patella argenvillei</u>). Several small whole limpet (<u>Patella cochlear</u> and <u>Patella miniata</u>). No cultural material present.

Test Pit 6 (see Figure 5)	
Stratigraphy	
0.0-0.40m	Thick shell midden deposits interspersed with soft light grey ash in fine, grey coloured sandy deposit. Lots of charcoal present.
0.40-0.70m	Thick shell midden deposit in sandy, ashy deposit, dipping and climbing and interspersed with fine wind-blown sandy deposit. Less charcoal appears to be present in these deposits.
0.70-1.30m	Yellow dune sand with some displaced shell. Seemingly sterile.
Biological & cultural evidence	
0.0-0.70m	Shell is overwhelmingly dominated by Black Mussel with large whole limpet (<u>Patella argenvillei</u> , <u>Patella granatina</u> and some <u>Patella cochlear</u>) occurring. A large sample of bone was recovered, dominated by tortoise, bird and large numbers of crayfish (<u>Jasus lalandi</u>) mandibles. Small and medium sized antelope, fish (snoek positively identified), snake and possibly seal also present. Nine pieces of ostrich eggshell, one incomplete ostrich eggshell bead, two quartz flakes, and about 20 small rounded quartzite and quartz pebbles also found.
0.70-1.30m	Some Black Mussel fragments, two quartz flakes, one quartzite flake, one quartzite chunk, and two piece of ostrich eggshell – all probably displaced.

Test Pit 7 (see Figure 6)	
Stratigraphy	
0.0-0.20m	Crushed shellfish fragments with humic material in a light grey coloured sandy deposit with rootlets.
0.20-0.30m	Light grey coloured, fine sandy deposit with shell bits and small shell fragments.
0.30-0.40m	Shell midden deposit in a light grey coloured sandy deposit.
0.40-0.60m	Loose shell dispersed in orange/grey coloured sandy deposit.
0.60-1.10m	Yellow sand with displaced shell. Essentially sterile.
Biological & cultural evidence	
0.0-0.20m	Shell fragments dominated by Black Mussel and some limpet fragments. Modern domestic items including plastic, building rubble, and cup handle.
0.20-0.30m	Shell fragments dominated by Black Mussel with some limpet fragments. No cultural material present.
0.30-0.40m	Shellfish overwhelmingly dominated by Black Mussel with some large whole limpet (<u>Patella argenvillei</u>) and smaller whole limpet (<u>Patella granatina</u> and <u>Patella cochlear</u>) occurring. Small sample of bone dominated by tortoise. One piece of ochre and one quartzite pebble also found.
0.40-0.60m	Dispersed black Mussel and limpet (genus <u>Patella</u>). Two pieces of tortoise bone. No cultural material present.
0.60-1.10m	Black Mussel fragments, probably displaced.



Figure 5. Test Pit 6.



Figure 6. Test Pit 7.

4. RECOMMENDED ACTIONS

4.1 Overview

Table 1 below presents the proposed mitigation actions in Portion 23/7 of the Farm Uitkomst Paternoster.

Area	Mitigation Actions
Test Pit 1	None
Test Pit 2	Shellfish sampling
Test Pit 3	None
Test Pit 4	None
Test Pit 5	None
Test Pit 6	Systematic excavation
Test Pit 7	Systematic excavation

4.2 Areas of archaeological heritage around Test Pit 6

Archaeological heritage deposits in TP 6 have the potential to yield important historical information. The deposits contain significant in-situ shell midden deposits, with large amounts of bone, charcoal, and relatively moderate amounts of ostrich eggshell and stone artefacts. One incomplete ostrich eggshell bead was also found.

Archaeologists undertaking excavations must:

- Establish and document the location of a 1.0 m grid system at and around Test Pit 6;
- Excavate surrounding deposits using this grid as the basic mapping control;
- Where possible, follow the natural stratification during the excavation to remove the full depth of the archaeological sediments over the excavation area;
- Sieve the deposits through a minimum mesh size of 3 mm
- Implement professional excavation procedures in the recovery and treatment of finds, including charcoal;
- Sample shellfish both through depth and across space;
- Make a record of the volume, stratification and nature of the archaeological sediments;
- Maintain thorough written, mapping and photographic records throughout the process; and
- Budget for and acquire a sufficient number of radiocarbon dates to determine the age of the depositional sequence

The following are the recommended extent for excavation, based on an assessment of the depth and richness of the deposits.

Area	Extent of excavation
Test Pit 6	5 x 4 metres

4.3 Areas of archaeological heritage around Test Pit 7

Archaeological heritage deposits in TP 7 have the potential to yield important historical information. The deposits contain significant in-situ shell deposits, but only moderate amounts of bone, and stone artefacts. Given the proximity of the two 'sites' to each other, it is likely TP 6 and TP 7 represent the remains of a single site.

Archaeologists undertaking excavations must:

- Establish and document the location of a 1.0 m grid system at and around Test Pit 07;
- Excavate surrounding deposits using this grid as the basic mapping control;
- Where possible, follow the natural stratification during the excavation to remove the full depth of the archaeological sediments over the excavation area;
- Sieve the deposits through a minimum mesh size of 3 mm
- Implement professional excavation procedures in the recovery and treatment of finds, including charcoal;
- Sample shellfish both through depth and across space;
- Make a record of the volume, stratification and nature of the archaeological sediments;
- Maintain thorough written, mapping and photographic records throughout the process; and
- Budget for and acquire a sufficient number of radiocarbon dates to determine the age of the depositional sequence

The following are the recommended extent for excavation, based on an assessment of the depth and richness of the deposits.

Area	Extent of excavation
Test Pit 7	3 x 3 metres

Note: Excavations in TP 7 should be seen as a 'topping up' of the sample of archaeological deposits in TP 6.

Alternatively, a larger sample (5 x 5 meters) should be excavated from TP 6. This is the archaeologists preferred option.

4.4 Areas of archaeological heritage around Test Pit 2

Archaeological heritage deposits in TP 2 have the potential to yield relevant historical information. The deposits are quite deep (up to 0.70-1.0 m deep) and do not appear to contain much cultural and biological remains in high densities. However, fairly moderate amounts of bone and cultural remains relative to the amounts of deposits sampled were observed. Sampling of the shellfish remains in the area of TP 2 should provide results relative to the information potential of these deposits.

Archaeologists undertaking shellfish sampling must:

- Dig spade trenches of at least 3m length into the middens to the greatest depth of the deposits;
- Make a formal record of the stratification and nature of the sediments revealed in the profiles;
- Identify, where possible, appropriate sampling points of spatially separated samples;
- Endeavour, where possible, to follow the natural stratification in taking the individual samples, taking care to avoid animal burrows if present, and fulfilling the requirements of adequate size for each sample;
- Note the volume the deposit in each sample and sieve the deposits through a minimum mesh size of 3 mm (and note the implemented size); and
- Maintain thorough written and photographic records throughout the process, and
- Budget for and acquire a sufficient number of radiocarbon dates to determine the age of the depositional sequence

5. CONCLUSIONS

Construction of Mosselbank Road as well as human pressure associated with a significant increase in residential development in Paternoster has impacted negatively on shell midden deposits in Portion 23/7 of the Farm Uitkomst.

Archaeological shovel testing on the affected property has determined that there are two or three areas on the site where important below ground archaeological deposits occur. These are the areas around Test Pits 6 and 7 and 2. Most of the remains comprise shellfish but quantities of bone, charcoal, stone flakes, ostrich eggshell and beads occur in some of the deposits tested.

These areas have considerable potential to yield important historical information.

In summary, the following mitigation measures are recommended:

- Areas around Test Pits 6 and 7 require implementation of systematic excavation of a size detailed in this report.
- Areas around Test Pit 2 require sampling of the shellfish remains in the manner detailed in this report.

6. ACKNOWLEDGEMENTS

Fieldwork team:

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