

**A FIRST PHASE ARCHAEOLOGICAL SURVEY OF  
KLEIN SPRINGFONTEIN, CAPE WEST COAST.**

**Prepared for**

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**by**

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## **INTRODUCTION**

The Agency for Cultural Resource Management (ACRM) has been instructed by Crowther Campbell and Associates to undertake a first phase archaeological survey of three well field sites and one recharge pond of the proposed expansion of water extraction from the Atlantis aquifer, to be developed by The Western Cape Regional Services Council (RSC).

The report contains the findings and recommendations of the initial archaeological impact assessment. The survey is designed to minimise the negative impact of the proposed well fields and recharge pond on possible important archaeological sites.

## **THE ARCHAEOLOGICAL SIGNIFICANCE OF KLEIN SPRINGFONTEIN**

The archaeology of Klein Springfontein is not very well known. Some work has been undertaken in the coastal zone on its southern fringe, where several deflated Later Stone Age (LSA) shell middens and surface spreads of fossil bone occur, but no systematic surveys nor excavation work has taken place there. South of Klein Springfontein, however, are two of the most important fossil sites in the south-western Cape. The sites of Duinefontein 1 and 2 are both of international significance. Fossil bones occur in great density in undeflated red sands directly below the cover sand, as well as stone artefacts of Middle and Early Stone Age origin. The excavations at Duinefontein 2, for example, established the association of Middle Stone Age artefacts and bones of large animals, some now extinct, in levels representing buried land surfaces older than possibly the later Middle Pleistocene (120 000 years).

A report by ACRM commissioned by the Department of Environment Affairs in 1992 has determined that 66 archaeological sites are known to occur in the Melkbosstrand area. Of the two arbitrary zones identified on the 1:50 000 Melkbosstrand coastal map (map sheet no. 3318 CB), site densities are high in both zones. Farms which are part of, or close to, the proposed Western Cape RSC well field and recharge pond sites where archaeological and palaeontological sites are known, include Duinefontein, Klein Springfontein and Groot Springfontein. These three farms form part of a system of largely unvegetated drift sand, where archaeological visibility is good, and where sites of probably medium to high significance occur. The area is therefore of considerable archaeological significance and there is a need for proper management of the (archaeological) resources.

## INITIAL IMPACT ASSESSMENT

Four sites have been surveyed.

Area 1: The recharge zone is situated to the east of the west coast road (R27), north of the existing main Atlantis infiltration pond.

Area 2: The eastern well field is situated between the existing fence line of the ESCOM private nature reserve and the west coast road (R27).

Area 3: The western well field is situated on the coastal side of the nature reserve, within the pristine and undisturbed areas of the reserve.

Area 4: The dune well field is situated on the dynamic dune field to the east of the existing industrial waste infiltration ponds within the nature reserve.

## RESULTS OF THE IMPACT ASSESSMENT

Area 1. The area is well vegetated resulting in low archaeological visibility. A random foot survey failed to locate any archaeological evidence.

*Significance: Low*

Area 2. No archaeological evidence visible.

*Significance: Low*

Area 3. The area is moderately heavily vegetated resulting in low archaeological visibility. There is, however, an indication of the potential for archaeological material being recovered once clearing and earthmoving commences. Some Early Stone Age material, including one retouched hornfels flake, some unretouched hornfels flakes and chunks are visible in the main track on the Dikkop Trail, between Markers 2 and 4.

*Significance: Medium*

Area 4. This area consists of dynamic dune field. Archaeological visibility is good. A random foot survey located a number of dispersed scatters of Early Stone Age tools, mainly unretouched flakes and chunks in hornfels, as well as some pieces of unidentified fossil bones, and some fragmented shell. The archaeological material is very clearly associated with the exposed calcrete beds in deflated areas between the active dunes.

*Significance: High*

## DISCUSSION

Areas 3 and 4 of the proposed expansion of water extraction from the Atlantis aquifer development form part of Klein Springfontein Farm, an area known to contain a number of archaeological sites. Surveys along the coastal portion of Klein Springfontein have resulted in the discovery of several deflated LSA shell middens and surface spreads of fossil bones. Scattered bone and stone artefacts have also been found protruding from the cliffs of late Pleistocene eolianite (dune rock) flanking the ocean on Klein Springfontein. The fossil sites of Duinefontein 1 and 2, two sites of international significance, have yielded thousands of pieces of bone, as well as stone artefacts of Middle and Early Stone Age origin.

These sites, including those noted in Area 4, are within the system of drift sand flanking the coastal strip for several kilometres north and south and for perhaps a kilometre inland. More recent (LSA) sites are almost certain to be located in deflated patches within the drift sands, and older Middle and Early Stone Age sites on undeformed red sands beneath the cover sand. The expectation of locating more sites, perhaps even in the moderately heavily vegetated areas of Areas 1 and 3, is reasonable.

## RECOMMENDATIONS

The following measures are proposed in order to minimise the negative impact of the proposed expansion of water extraction from the Atlantis aquifer.

1. Once the precise locations of the western and dune well fields (Areas 3 and 4) have been established, a detailed archaeological survey should be undertaken.
2. Construction of access roads to all proposed sites, earthmoving activities and laying of services, may expose and disturb potential important archaeological sites. These areas should be searched before such construction and earthmoving commences. This applies particularly to Areas 3 and 4.
3. Prior to any earthmoving activities taking place (including the digging of well points, exploratory and production holes, and the laying of services and trenching), contractors, site manager and workers should be informed of the very real likelihood of burial remains, and subsurface archaeological and fossil material being uncovered and the procedures to follow in the event of this occurring. An archaeologist may be called onto site to monitor these activities. This applies particularly to Areas 1 and 2.
4. There is the possibility of human burials being uncovered in the construction of the access roads and in the laying of services. Care should be taken not to disturb any skeletal material that may be uncovered and if this does occur, a professional archaeologist should immediately be informed and called on site to intervene. This applies to Areas 1, 2, 3 and 4.
5. If sites or burial remains are discovered in the construction phase, a reasonable amount of time, to be negotiated, should be allowed for the recovery of the archaeological material.

AREA	ARCHAEOLOGICAL VISIBILITY	SIGNIFICANCE
1	Low	Low
2	Low	Low
3	Low	Medium
4	High	High

Table 1. Klein Springfontein survey.