

**PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT  
PROPOSED DEVELOPMENT OF THE KRAALBAAI  
REST CAMP  
WEST COAST NATIONAL PARK**

Prepared for

**ENVIROAFRICA**

**Client: South African National Parks**

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## **Executive summary**

EnviroAfrica, on behalf of the South African National Parks (SANParks) requested that the Agency for Cultural Resource Management conduct a Phase 1 Archaeological Impact Assessment for the proposed development of a rest camp site at Kraalbaai in the West Coast National Park, in the Western Cape Province.

Two rest camp Options are proposed.

Option 1 (the preferred site) is located on the western shore of the Langebaan Lagoon where, via the existing Kraalbaai jetty, up to 10 chalets or rest camps will be built in the Lagoon.

Option 2 is located on a piece of land immediately west of the Kraalbaai jetty, where a similar number of rest camps will be constructed.

The proposed site is currently zoned Indeterminate.

The applicant, South African National Parks, is applying for Resort Zone I status in order to affect the proposed development.

The extent of the proposed development falls within the requirements for an archaeological impact assessment as required by Section 38 of the South African Heritage Resources Act (No. 25 of 1999).

The aim of the study is to locate and map archaeological heritage sites and remains that may be negatively impacted by the planning, construction and implementation of the proposed project, to assess the significance of the potential impacts and to propose measures to mitigate against the impacts.

A 'Notification to Heritage Western Cape of Intent to Develop' form has been completed by the archaeologist and submitted to Heritage Western Cape Built Environment and Landscape Committee (BELCOM) for comment.

A copy of the Phase 1 Archaeological Impact Assessment report has been included with this submission.

With regard to Option 1, no archaeological heritage remains were located during the study.

With regard to Option 2, extensive scatters of relatively well preserved shell midden deposits, with stone tools, some ostrich eggshell and tortoise bone were located on the steep west facing, well-vegetated slopes of the fossil dunes overlooking the Langebaan Lagoon.

The heritage remains in Option 2 have been partially damaged and disturbed as a result of visitors using informal tracks down to the beach and, related processes such as erosion. Overall, the archaeological remains are relatively well protected, however.

**The archaeological heritage remains in Option 2 have been graded high local significance.**

Shell midden remains and a small handful of stone tools were also located about 30m north west of the existing public parking facility at Kraalbaai, as well as alongside the boundary fence of the Posberg Nature Reserve, in open spaces among low bush and scrub on unconsolidated white sands. The archaeological remains are spread fairly unevenly in this area, however, and are quite disturbed and degraded, as a result of dumping, informal footpaths, dune mole rat activity and extensive animal burrowing.

**The archaeological heritage remains have been graded medium-low local significance.**

Dispersed and scattered bits of shell midden material and a few stone flakes were also located on a small piece of land immediately north of the SANParks wooden hut alongside the Kraalbaai Jetty.

**The archaeological heritage remains have been graded low local significance.**

From an archaeological perspective, Option 1 is the preferred site as it will not impact negatively on archaeological heritage remains, although excavations for associated bulk services may impact negatively on important heritage remains such as buried shell middens and pre-colonial human remains.

Option 2 is considered to be a very vulnerable and threatened (archaeological heritage) site.

It is important to note, also, that cumulative impacts, such as an increase in the number of visitors to the proposed new facility, will continue to impact negatively on sensitive and fragile archaeological remains in Option 2 and the surrounding area. These impacts will need to be carefully managed in order to protect sensitive archaeological sites, especially those in the proposed Option 2 area.

With regard to the proposed development of the Kraalbaai Rest Camp, the following recommendations are made.

- From an archaeological perspective, Option 1 is the preferred site

Should Option 2 be chosen as the preferred rest camp site, the following essential mitigation actions will be required

- Systematic sampling of shell midden deposits.

Other mitigation actions include:

- Bulk earthworks and excavations for services must be monitored by a professional archaeologist.
- Should any human remains be disturbed, exposed or uncovered during earthworks, these should immediately be reported to the South African Heritage Resources Agency (Mrs Mary Leslie @ 021 462 4502).

Proposed archaeological management actions include the following:

- Visitors to Kraalbaai must only use the dedicated boardwalks leading down to the beach. All informal footpaths in the study area must be closed off and rehabilitated.
- The erection of information signage should also be considered, alerting visitors to the presence of archaeological sites in the area and the need to protect and conserve them.
- Pamphlets and brochures should be produced and handed out to visitors at the entrance to the park highlighting the overall archaeological importance of the West Coast National Park, with particular reference to popular public sites such as Kraalbaai and Preekstoel.
- Archaeological training of Parks Board staff members should be implemented.

## **1. INTRODUCTION**

### **1.1 Background and brief**

EnviroAfrica<sup>1</sup>, on behalf of the South African National Parks (SANParks) requested that the Agency for Cultural Resource Management conduct a Phase 1 Archaeological Impact Assessment for the proposed development of a rest camp site at Kraalbaai in the West Coast National Park, in the Western Cape Province.

Two rest camp Options are proposed.

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The aim of the study is to locate and map archaeological heritage sites and remains that may be negatively impacted by the planning, construction and implementation of the proposed project, to assess the significance of the potential impacts and to propose measures to mitigate against the impacts.

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## **2. TERMS OF REFERENCE**

The terms of reference for the archaeological study were:

- to determine whether there are likely to be any archaeological sites of significance within the proposed site;
- to identify and map any sites of archaeological significance within the proposed site;
- to assess the sensitivity and conservation significance of archaeological sites within the proposed site;

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<sup>1</sup> EnviroAfrica is represented by Mr Bernard de Wit: Fax (021) 8555338

- to assess the status and significance of any impacts resulting from the proposed development, and
- to identify mitigatory measures to protect and maintain any valuable archaeological sites that may exist within the proposed site

### 3. THE STUDY SITE

A locality map is illustrated in Figure 1.

Kraalbaai (on a portion of the Farm Stoffbergfontein No. 265) is located on the western shore of the Langebaan Lagoon in the West Coast National Park.

Previously privately owned, the farm was acquired by SANParks in 1997.

An aerial photograph of the study area indicating Options 1 and 2 is illustrated in Figure 2.

Views of Option 1 and Option 2 are illustrated in Figures 3 and 4

A proposed site layout plan is illustrated in Figure 5. Services will be located alongside existing roads and will be kept together. There will be a sewerage assembly tank from where all sewerage will be pumped with a pressure line along the Postberg fence line across the top of a large dune. A French drain will also be constructed behind the dune. The reception building as indicated on the plan will move to the point of access control 1. The new parking area will only be for guests. The existing parking area and roads will not be upgraded.

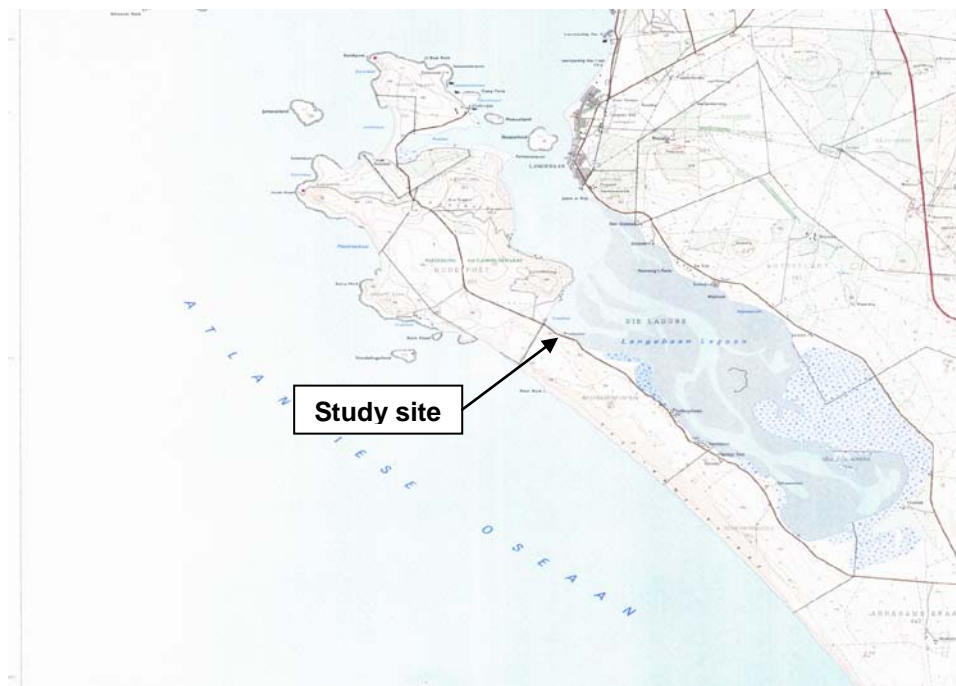


Figure 1. Site locality (3317 BB Saldanha Bay)



Figure 2. Aerial photograph of Kraalbaai indicating Options 1 (red) and 2 (green).



Figure 3. View of Kraalbaai facing north. Option 1 is located north of the jetty. Arrow indicates Option 2.



Figure 4. View of Option 2 facing south. Arrow indicates the proposed site.

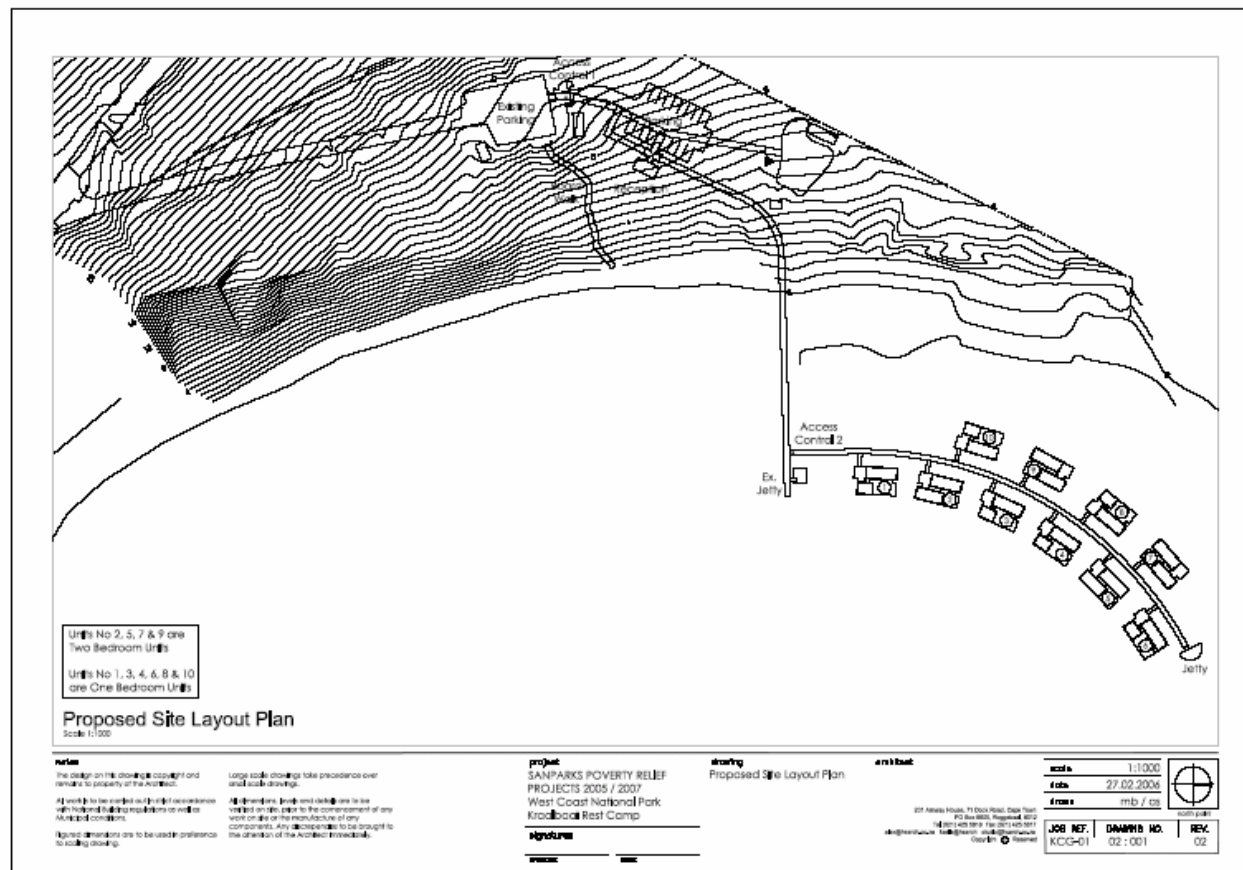


Figure 5. Proposed site layout plan.



## **4. APPROACH TO THE STUDY**

### **4.1 Method of survey**

The approach followed in the archaeological study entailed a detailed foot survey of the proposed site and surrounding area.

A desktop study was also undertaken.

The site visit and assessment took place on the 27<sup>th</sup> of October 2005.

## **5. A BRIEF OVERVIEW OF THE ARCHAEOLOGICAL SIGNIFICANCE OF LANGEBAAN AND THE WEST COAST NATIONAL PARK**

Archaeological visibility in Langebaan is extremely high, where more than 40 sites have been recorded between Lentjiesklip 1 and Lynch Point on the eastern shore of the Langebaan Lagoon (Hart & Halkett 1992; Kaplan 1993, 1999; Parkington & Poggenpoel 1987). Studies have shown that the rocky shoreline at Lentjiesklip and Lynch Point acted as foci that attracted Later Stone Age<sup>2</sup> (LSA) people as they offered greater opportunities for the exploitation of marine foods particularly shellfish (Hart 1991; Kaplan 2000).

The archaeology suggests that the pattern of occupation of the Langebaan area in pre-colonial times involved people locating themselves at the coast where large quantities of shellfish was consumed, as well as seals, fish, bird, tortoise and small antelope. Evidence also suggests that LSA people may have been scheduling their visits to collect lower tidal zone shellfish such as limpets and perlemoen (Hart 1991).

Excavations at Lentjiesklip 4 (Parkington *et al* 1988) and Lentjiesklip 2 (Hart 1991) show that some of the sites in the region date to between 4000 and 1800 years ago (Hart 1991), some of which have been found buried up to three metres below the sand body. The domestic and material cultural items generated from these and other excavations indicate a wide range of human responses to opportunities and needs over time. A human burial was also uncovered during excavation of a service trench at Lentjiesklip 2 (Hart 1991).

A desk-top study undertaken on behalf of the Department of Environment Affairs and Tourism (Kaplan 1993) established that many sites also occur on the western shore of the Langebaan Lagoon, at Posberg, Kreefbaai, Kraalbaai, Stofbergfontein and Geelbek (on the south eastern shore).

Archaeological excavations have also been conducted in the Posberg Nature Reserve (Smith *et al* 1992:36), which gives a broad picture of aboriginal material culture and economic remains within the past 1000 years in the area.

Excavations at Oudepost I, a 17<sup>th</sup> century Dutch colonial outpost at Kraalbaai, has also provided evidence for interaction between soldiers at the small garrison and local Khoi pastoralists more than 300 years ago (Schrire 1992).

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<sup>2</sup> A term referring to the final 20 000 years of pre-colonial history in southern Africa

A recent survey for the proposed upgrading of the Preekstoel day visitor facility about 2 kms south of Kraalbaai located several relatively well-preserved (but damaged) sites on the fossil dunes above the beach overlooking the Lagoon (Kaplan 2005).

It is also well established that vertebrate fossils and archaeological occurrences in the Langebaan Limestone (calcrete) formations and associated deposits in the region are extremely valuable sources of information on the sedimentary, chronological, palaeoenvironmental and palaeoecological context of the development of modern human behaviour during the Middle Stone Age<sup>3</sup> (MSA) and perhaps even the Early Stone Age<sup>4</sup> (ESA) (Avery 1997).

More recently, 120 000 year old fossil footprints were discovered in ancient fossil dunes at Kraalbaai (Roberts 1996), among the oldest modern human footprints in the world.

The reasons for the abundance of fossil archaeological and palaeontological remains in the Langebaan area is in part related to the highly calcareous character of the aeolianites (fossil dunes) and shallow marine sediments. Bones and implements are readily preserved by the rapid carbonate cementation of the strata in which they become entombed.

## **6. LEGISLATIVE REQUIREMENTS**

### **6.1 The National Heritage Resources Act (Act No. 25 of 1999)**

`...any development or other activity which will change the character of a site exceeding 5 000m<sup>2</sup>, or the rezoning or change of land use of a site exceeding 10 000 m<sup>2</sup>, requires an archaeological impact assessment in terms of the National Heritage Resources Act (No. 25 of 1999).

#### **6.1.1 Structures (Section 34 (1))**

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 South African Heritage Resources Agency (SAHRA), or Heritage Western Cape.

#### **6.1.2 Archaeology (Section 35 (4))**

No person may, without a permit issued by the SAHRA or Heritage Western Cape, destroy, damage, excavate, alter or remove from its original position, or collect, any archaeological material or object.

#### **6.1.3 Burial grounds and graves (Section 36 (3))**

No person may, without a permit issued by SAHRA or Heritage Western Cape, destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years, which is situated outside a formal cemetery administered by a local authority.

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<sup>3</sup> A term referring to the period between 200 000 and 20 000 years ago.

<sup>4</sup> A term referring to the period between 2 million and 200 000 years ago.

## 7. CONSTRAINTS AND LIMITATIONS

There were no limitations or constraints associated with the proposed study, although Option 1 (the preferred rest camp site) was not searched as it is located in the Lagoon.

## 8. FINDINGS

### 8.1 Option 1

With regard to Option 1, no archaeological heritage remains were located during the study.

### 8.2 Option 2

#### **Kraalbaai 1 (GPS reading S° 33 08 611 E 18° 01 406)**

Extensive scatters of relatively well preserved shell midden remains, with stone tools, ostrich eggshell and some tortoise bone were located on the steep, west facing, well vegetated slopes of the fossil dunes overlooking the Langebaan Lagoon (Figure 6 & refer to Figures 4 & 9). These fossil dunes (or aeolianites) are also littered with loose calcrete nodules and several flat outcroppings of calcrete on the upper slopes. Shellfish remains are very visible in open patches on the mid-lower slopes, sometimes spilling over the edge of the cliffs down onto the beach. The shellfish does not only appear to be confined to the surface, however, and several dense patches of in-situ shell midden deposits also seem to occur, most noticeably where erosion on the cliff edge has taken place.

Shellfish remains are visible all along the cliff face, extending beyond the main boardwalk leading down to the beach at Kraalbaai, where it appears to thin out considerably. The shellfish is dominated by Scutellastra and Cymbula sp. with some Black Mussel (Choromytilus meridionalis) and whelk also occurring. Some whole shell and larger fragments of the above species also occur. The marine shellfish on Kraalbaai 1 and the other sites described below has quite obviously been transported to the site from some distance, the coast being about 1.5 kms away.

With regard to cultural items, stone tools, including modified and unmodified flakes, bladelets, chunks, small round cores, one small thumbnail scraper, several hammer stones, one upper grindstone and one anvil, in quartzite, indurated shale, calcrete, silcrete and quartz were counted. Stone tools densities are relatively low, however. Some ostrich eggshell was also noted, as were two weathered White Sand Mussel (Donax Serra) scrapers. No pottery was found on the site.

The archaeological heritage remains in Kraalbaai 1 have, unfortunately, been partially damaged and disturbed as a result of visitors using informal tracks down to the beach and, related processes such as erosion.

Overall, the archaeological sites are relatively well protected, however.

**The archaeological heritage remains have been graded high local significance.**



Figure 6. Kraalbaai 1. View of the site facing north. Shellfish remains are extensive in open patches on the mid-lower slopes of the proposed site.

#### **Kraalbaai 2 (GPS reading S° 33 08 556 E 18° 01 380)**

Shell midden remains and a small handful of stone flakes were located about 30 m north west of the existing public parking facility at Kraalbaai, as well as alongside the boundary fence of the Posberg Nature Reserve, in open spaces on unconsolidated white beach sands among low bush and scrub (Figure 7). Loose chunks and nodules of calcrete also occur in this area. The highly fragmented shellfish remains are spread fairly unevenly over the area, and are quite disturbed and degraded, as a result of dumping (glass, plastic, building rubble, tins, and rusted metal), informal footpaths, dune mole rat activity and extensive animal burrowing. Very little whole shell occurs, and only a few pieces were counted. Some shellfish is associated with dune mole dumps, suggesting that at least some archaeological deposits also occur below the surface.

The shellfish is dominated by Scutellastra and Cymbula sp. while some Black Mussel also occurs. Whelk and Diloma tigrina were also noted.

Very few stone tools were counted, only a few unmodified flakes and chunks in quartzite. No pottery or ostrich eggshell was found.

**The archaeological heritage remains have been graded medium-low local significance.**



Figure 7. Kraalbaai 2. View of the site facing north. Shellfish remains are thinly dispersed in the open patches in the foreground. Note the SANParks wooden hut to the right of the plate.

### **Kraalbaai 3 (GPS reading S° 33 08 529 E 18° 01 391)**

Small, thin patches of dispersed and scattered shell midden material and a few stone flakes were located on a pie-shaped, grass and bush-covered, piece of land immediately north of the SANParks wooden hut alongside the Kraalbaai Jetty (Figure 8). Dumping of domestic refuse and litter is evident as well as the discarded remains from old braais (charcoal and cut bone). The shellfish occurs on unconsolidated beach sands, some of which is associated with dune mole rat activity, suggesting that below ground archaeological material may also occur below the surface.

The shellfish is dominated by Scutellastra and Cymbula sp. while some Black Mussel also occurs. Very little whole shell was counted. It is interesting to note that some compacted fossil shell was found, embedded in lumps and conglomerates of soft calcrete which appear alongside the Posberg fence line. The fossil shellfish comprises mainly small bivalves.

Some shellfish was also noted in the road reserve, and beneath the wooden SANParks hut as well as bits and pieces of shell in the restricted parking area alongside the wooden jetty.

**The archaeological heritage remains have been graded low local significance.**



Figure 8. Kraalbaai 3. View of the site facing south. Shellfish remains are very thinly dispersed among the thick grass to the right of the plate.



Figure 9. Aerial photograph of Options 1 and 2 illustrating the archaeological heritage remains described above.

## 9. IMPACT STATEMENT

From an archaeological perspective, Option 1 is the preferred site for the proposed Kraalbaai rest camp as it will not impact negatively on archaeological heritage remains.

Excavations for associated bulk infrastructure and services may, however, impact negatively on important heritage remains such as buried shell middens and human burials.

Option 2 is considered to be a very vulnerable and threatened archaeological site. Construction of a rest camp in Option 2 will impact negatively on important heritage remains.

It is important to note that cumulative impacts, such as an increase in the number of visitors to the proposed new facility, will continue to impact negatively on sensitive and fragile archaeological remains in Option 2 and the surrounding area. These impacts will need to be carefully managed in order to protect sensitive archaeological sites, especially those in the Option 2 area.

## 10. RECOMMENDATIONS

With regard to the proposed development of the Kraalbaai Rest Camp, the following recommendations are made.

- From an archaeological perspective, Option 1 is the preferred site

Should Option 2 be chosen as the preferred rest camp site, the following essential mitigation actions will be required

- Systematic sampling of shell midden deposits in Kraalbaai 1.

Other actions include:

- Bulk earthworks and excavations for services must be monitored by a professional archaeologist.
- Should any human remains be disturbed, exposed or uncovered during earthworks, these should immediately be reported to the South African Heritage Resources Agency (Mrs Mary Leslie @ 021 462 4502).

Proposed archaeological management actions include the following:

- Visitors to Kraalbaai must only use the dedicated boardwalks leading down to the beach. All informal footpaths in the study area must be closed off and rehabilitated.
- The erection of information signage should also be considered, alerting visitors to the presence of archaeological sites in the area and the need to protect and conserve them.

- Pamphlets and brochures should be produced and handed out to visitors at the entrance to the park highlighting the overall archaeological importance of the West Coast National Park, with particular reference to popular public sites such as Kraalbaai and Preekstoel.
- Archaeological training of Parks Board staff members should be implemented.



## 11. REFERENCES

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