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**ARCHAEOLOGICAL STUDY:  
PROPOSED PINNACLE POINT  
DEVELOPMENT**

Prepared for

**CODEV**

By

Agency for Cultural Resource Management

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### Executive summary

Two archaeological sites were located during a baseline study of a portion of Erf 2001, the site for the proposed Pinnacle Point Development, located approximately four kilometers west of Mossel Bay.

The sites were located in disturbed contexts (the shooting range and among disturbed gravels on the northern boundary of the site), and have been given low significant ratings. As a result no archaeological mitigation is required. Isolated stone tools were also found in the remainder of the site.

The impact of the proposed Pinnacle Point development on archaeological sites in Erf 2001 is therefore considered to be low to negligible. The probability of locating important sites during implementation of the proposed project is also considered to be low.

A further twenty six archaeological sites were located during the baseline study of a portion of Erf 3438 which consists of cliffs along the coast which drop sharply to the sea. Erf 3438 is proclaimed public open space, but it is the stated intention of the Pinnacle Point development company to manage both the development site (Erf 2001) and Erf 3438 in an environmentally sustainable way.

Fifteen cave/shelter sites were recorded in the coastal cliffs, of which at least three are considered to be of immense archaeological importance, both nationally and internationally. Potentially significant archaeological deposits in some of the caves have already been disturbed as a result of both human impact and natural processes. The sites are also badly littered and neglected.

Large numbers of Middle Stone Age tools (the period dating to between 20 000 and 200 000 years ago) were found in the caves. Large coastal cave sites dating to after the late Pleistocene are rare along the South African coastline and these finds are a significant new archaeological discovery.

The Pinnacle Point caves and shelters will not be impacted by the physical development of the proposed project. However, secondary impacts such as increased visitation to the area as a result of the proposed project may impact further on these sites in a negative way.

Fourteen Middle Stone Age open sites comprising scatters of stone tools, as well as four Later Stone Age shell middens were also located in Erf 3438. The open sites occur on Pinnacle Point, in the foot path above the coastal cliffs and on mainly south-facing slopes overlooking the sea.

The majority of the open sites comprise low density, scattered and disturbed remains of stone implements, and have been given low-medium significance ratings. One of these sites, however, is a quarry or workshop site with large numbers of flaked tools and stone debris, and has been given a high significance rating. The open sites are mostly located in a vegetation zone (Limestone Fynbos) considered conservation worthy, and as a result will not be impacted by the proposed development.

Two shell middens were located on the coast near the western boundary of Erf 3438 and have been severely disturbed as a result of informal road construction. It is unclear whether the proposed development will impact further on the shell middens, but some archaeological sampling of the middens is recommended.

Two more shell middens, one severely disturbed, were also found on the sandy beach below the steep coastal cliffs. A controlled test excavation of the disturbed shell midden is recommended.

A feature of the proposed Pinnacle Point development is the implementation of an Environmental Management Plan (EMP). It is crucial that an EMP be implemented which protects the archaeological sites, particularly the caves, at Pinnacle Point from further neglect and disturbance. Such a plan, incorporating the rich archaeology of the area, will 'add value' to the planned development and also enhance the positive impacts of the development. (H\*)

With regard to the proposed Pinnacle Point development, the following archaeological recommendations have therefore been made.

1. National Monument Protection status for (some of) the cave sites should be investigated.
2. An archaeological hiking trail starting at the Cape St Blaize cave at Mossel Bay and incorporating the quarry/workshop site above the cliffs, the Pinnacle Point caves, and perhaps the shell middens.
3. The shell midden in PP 6 should be rescued from further damage which has occurred mainly as a result of natural processes.
4. The establishment of a site museum at one of the Pinnacle Point caves.
5. The development of a cultural and environmental centre above the cliffs at Pinnacle Point.
6. We recommend a partnership between the developers, the National Monuments Council (NMC), all role players including the (Mossel Bay) Local Authority, Publicity and Tourism Association, the Mossel Bay Museum, and other

interested and affected parties, to develop, manage, support and sustain such a project.

Fisherman and day visitors should be encouraged to keep the cave sites clean of litter, and should be discouraged from making fires in the caves and disturbing the archaeological deposits.

The construction of low impact wooden boardwalks and platforms, display cabinets, information boards and the production of bilingual pamphlets should also be considered. Visitor controls and regular maintenance of the caves should be implemented.

The aim of the project is to protect the caves and other sites against deliberate and accidental damage, educate the general public, including tourists and school groups, and encourage users to maintain the integrity of the sites and the public open space.

The approval, implementation, development and promotion of an archaeological site museum, information centre, and hiking trail, and the integration of the history of indigenous people into the management and conservation plan of the proposed development, will be unique for a commercial development project in South Africa.

## 1. Introduction

### 1.1 Background and brief

The Agency for Cultural Resource Management has been requested by Coastal Conservation and Development Rehabilitation Services (CODEV) to undertake a baseline archaeological survey of a portion of Erfs 2001 and 3438, the site of the proposed Pinnacle Point Development.

The proposed development consists of an 18 hole golf course, including clubhouse, hotel and/or clustered residential units, and recreational facilities.

Plans and drawings of the proposed development have not yet been produced, subject to local authority approval of the development, and the implementation of an Environmental Management Plan (EMP).

The aim of the archaeological study is to locate, identify and map archaeological sites that may be impacted by the planning, construction and implementation of the proposed project and to propose measures to mitigate against the impact.

### 1. Terms of reference

The terms of reference for the archaeological study were:

1. to determine whether there are likely to be any Archaeological sites of significance in Erfs 2001 and 3438;
2. to identify and map any sites of archaeological significance;
3. to assess the status and significance of any impacts resulting from the proposed development; and
4. to identify mitigatory measures to protect and maintain any valuable archaeological sites that may exist.

### 1. The study site

The study site for the proposed Pinnacle Point development is illustrated in Figure 1.

The study area is situated approximately four kilometers west of Mossel Bay along the coast in the area surrounding the Pinnacle Point sewerage works. The property extends from the coast inland to approximately the shooting range and covers approximately two kilometers of coastline.



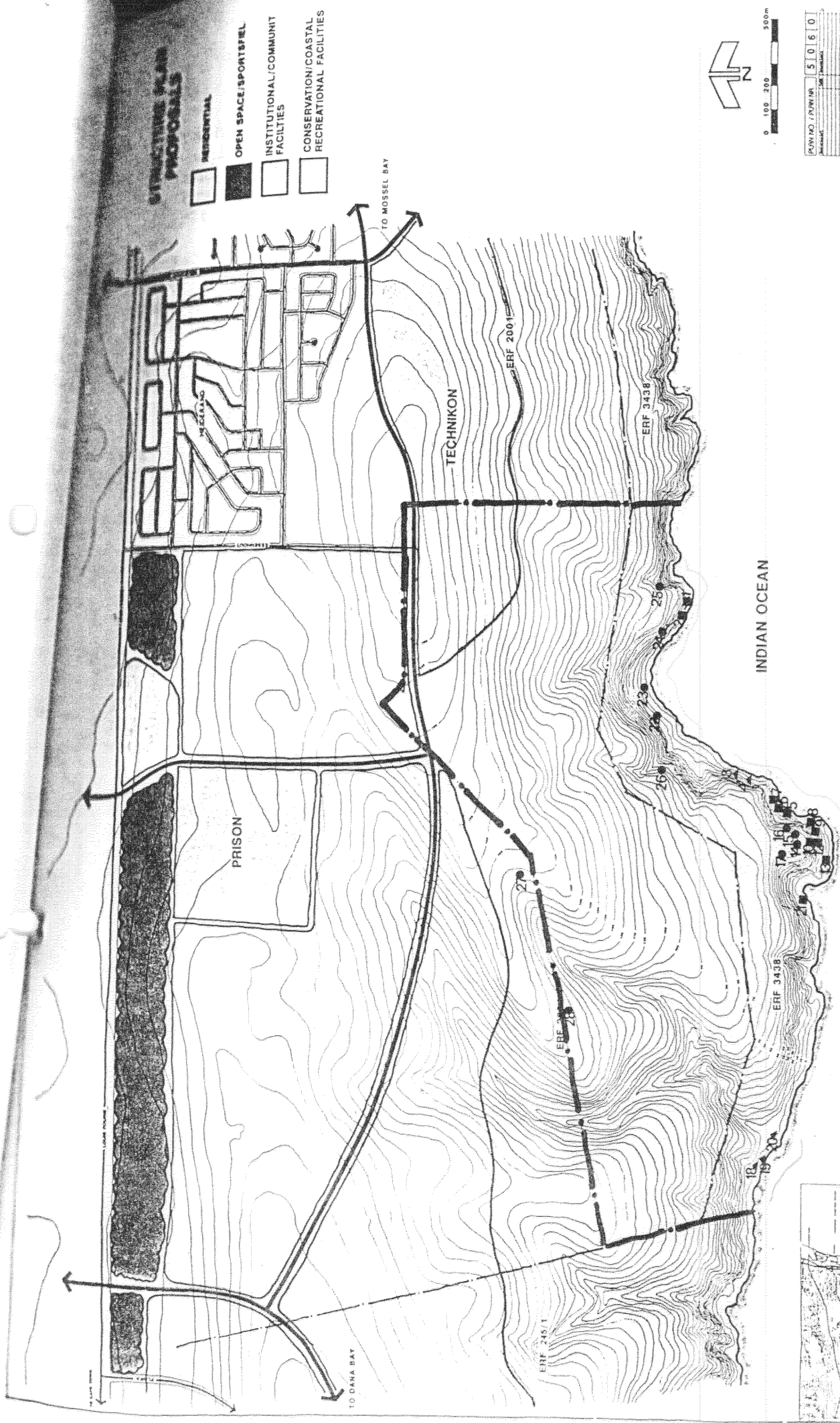
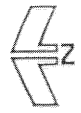


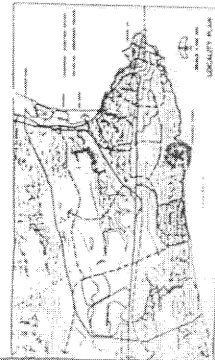
Figure 1. Pinnacle Point: study site and location of archaeological sites. ■ = caves. ▲ = shell middens. ● = open sites.



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DATE	1997/01/01
SCALE	1:5000

THE PLANNING PARTNERSHIP  
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22

topographically the area consists of cliffs along the coast which drop sharply to the sea. Behind the cliff's the land slopes upward at a slope of approximately 1:15 to a crest around the 195 m contour in the north-eastern corner of the study area.

Erf 3438 is proclaimed public open space, but it is the stated intention of the Pinnacle Point development company to manage both the development site (Erf 2001) and Erf 3438 in an environmentally sustainable way.

Erf 2001 is well vegetated, resulting in extremely low archaeological visibility. The vegetation is a mix of both indigenous and alien vegetation.

Erf 3438 consists of mainly cliffs along the coast which drop sharply to the sea. Sandy beaches also occur. Archaeological visibility is high, and the majority of sites were found here.

#### 4. Study approach and documentation of sites

##### 4.1 Method of survey

The approach followed in the baseline archaeological study entailed a detailed foot survey of the portion of Erf 2001 to be developed and managed. The survey also covered the portion of Erf 3438 comprising the steep coastal cliffs and sandy beach.

In addition to the field study, an examination of the existing records in the South African Museum (SAM) was also undertaken. According to the records of the SAM Archaeological Data Recording Centre, only one site (a shell midden) has been recorded in the study area, at Pinnacle Point. Early Stone Age<sup>1</sup> (ESA) scatters are known from Boplaas north of the study site (Kaplan 1994). The Cape St Blaize cave at Mossel Bay is also well known.

##### 4.2 Documentation of sites

The archaeological sites located in the study area are described according to accepted archaeological recording techniques. These include a written scientific description of each site. A photographic record of each important site was also made. Sites were plotted on the 1: 10 000 orthophotos (3422 AA 17 & AA 22 D'almeida and 3422 AA 18 & AA 19 & AA 23 Mossel Bay). Global Positioning System (GPS) readings for each site was also taken.

1. A term referring to the period between 2.5 and 200 000 years ago.

### 3. Results of the impact assessment

Twenty eight archaeological sites were located during the archaeological survey of Pinnacle Point. Twenty six sites were located in Erf 3438 and two in Erf 2001 (Figure 1).

PP refers to Pinnacle Point.

#### PP 1. GPS Reading S 34°12.18 E 22°05.92

PP 1 is a very large cave about 25 m wide and 90 m deep located in the steep coastal cliffs (Figure 2). Large numbers of Middle Stone Age<sup>2</sup> (MSA) tools are present on a steep talus in front of the cave. Wet and disturbed MSA deposit occurs near the front of the cave, as well as some dry Later Stone Age<sup>3</sup> (LSA) deposit against the shelter wall near the front of the cave. Large amounts of roof spall occur inside the cave. The cave is accessible to the public and some disturbance inside the cave has taken place.

Significance of finds: high

Suggested mitigation: The cave should be incorporated into a proposed archaeological hiking trail

#### PP 2. GPS Reading S 34°12.19 E 22°05.84

PP 2 is a small inconspicuous cave at the base of the sandstone ridge on the beach, about 100 metres south of PP 1 (Figure 1). The site has been used in modern times and is disturbed. A small amount of sand and shell deposit occurs inside the shelter. Two flakes and one ostrich eggshell bead was found.

Significance of finds: medium-low

Suggested mitigation: none required

#### PP 3. GPS Reading S 34°12.16 E 22°05.67

PP 3 is a widespread scatter of mostly undisturbed patches of fragmented marine shell located in open spaces on a vegetation-covered sand dune on the sandy beach below Pinnacle Point (Figure 1). The LSA midden is dominated by limpets, with mussel and turbo shell occurring. A few stone flakes were also found.

Significance of finds: high

Suggested mitigation: The midden should be incorporated into a proposed archaeological hiking trail

2. A term referring to the period between 20 000 and 200 000 years ago.

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

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PP 4. GPS Reading S 34°12.26 E 22°05.57

PP 4 is a large severely disturbed LSA shell midden located in the path leading down to the beach at Pinnacle Point (Figure 1). Patches of fragmented shell occur in open spaces on the eroded dune and some in-situ shell occurs in the path cutting. PP 3 and PP 4 are probably part of a complex of shell middens that once occurred on the beach at Pinnacle Point.

Significance of finds: medium

Suggested mitigation: A small, controlled testing of the site is recommended

PP 5. Poor GPS coverage

PP 5 is a large east-facing overhang situated at the bottom of the steep coastal cliffs below Pinnacle Point (Figure 3). The site has been disturbed by fisherman and other coastal users and is badly littered. Modern fires have been made in the cave. However, large amounts of undisturbed archaeological deposit still occurs in the overhang and in tunnels and recesses in the site. Small conglomerates of shell midden and stone are cemented in the walls in parts of the overhang. Numerous MSA tools occur in front of the overhang and on the steep talus in front of the shelter.

Significance of finds: high

Suggested mitigation: A site museum to be established inside the shelter

PP 6. Poor GPS coverage

PP 6 is shallow and low overhang formed in a steep crevice about 20 metres from PP 5 (Figure 4). A path leading from above the cliffs at Pinnacle Point leads down past this site as well as past PP 5. Large amounts of MSA stone tools occur in the path and on the slope next to the path. A substantial amount of MSA shell midden has been flushed out the site. The remains of some eroding midden occurs on the steep sloping floor of the shelter. Some in-situ MSA shell midden with stone implements occurs at the back wall of the site.

Significance of finds: high

Suggested mitigation: The shell midden should be rescued from further damage which has occurred mainly as a result of natural processes

PP 7. GPS Reading S 34°12.29 E 22°05.47

PP 7 is a small east-facing overhang with finely fragmented shell immediately below the cliffs at Pinnacle Point. The site is located about 25 metres above PP 6 on the narrow path leading down to PP 5. No artefacts were found in the shelter.

Significance of finds: low

Suggested mitigation: none required

PP 8. Poor GPS coverage

PP 8 is large south-east facing cave below the steep cliffs at Pinnacle Point (Figure 1). No archaeological deposit occurs in the cave. A few MSA implements were found outside the cave.

Significance of finds: low

Suggested mitigation: none required

PP 9. Poor GPS coverage

PP 9 is a large dome-shaped south-east facing cave recessed into the steep coastal cliffs about 20 metres from PP 8 (Figure 1). A thick accumulation of wind blown white beach sand occurs at the back of the shelter. Some MSA implements were found at the front of the cave.

Significance of finds: low

Suggested mitigation: none required

PP 10-PP 12. Poor GPS coverage

PP 10-12 are located on a very steep path below Pinnacle Point (Figure 1). They comprise a series of shallow overhangs or recesses in the steep cliffs. Some archaeological deposits occurs in the sheltered portions of the sites with some MSA implements occurring on the path and on the steep slope.

Significance of finds: medium-high

Suggested mitigation: none required

PP 13. GPS Reading S 34°12.44 E 22°05.37

PP 13 is an large cave located in the steep cliffs below Pinnacle Point (Figure 5). Large numbers of MSA tools have accumulated on the cobble beach below the cave where they have washed over the edge of the talus slope. Large numbers of MSA tools were also found at the front of the

(44)

on the talus, as well as toward the back of the cave. It appears that a large volume of MSA deposit has been flushed out of the cave, but a significant amount of compacted MSA shell midden with stone and burnt bone has consolidated against the cave wall (Figure 6). Archaeological deposit also occurs at the back of the shelter, but appears to be partially disturbed.

Three more caves/shelter make up this complex of sites (Figure 5). MSA implements were found on the talus in front of these caves as well as within the caves. Archaeological deposit also occurs in these sites.

Significance of finds: high

Suggested mitigation: The caves should not become accessible to the public

PP 14. GPS Reading S 34°12.44 E 22°05.31

The site occurs above Pinnacle Point and comprises MSA implements in the gravel road and in open spaces among the Limestone Fynbos vegetation (Figure 1).

Significance of finds: low

Suggested mitigation: none required

PP 15. GPS Reading S 34°12.43 E 22°05.39

The site occurs immediately above the steep path leading past PP 10-12 (Figure 1). MSA implements were found in the path and in a small erosion gully next to the path. Some MSA tools are visible embedded in the path cutting.

Significance of finds: low

Suggested mitigation: none required

PP 16. GPS Reading S 34°12.33 E 22°05.48

A small scatter of fragmented shell with a few MSA stone implements was located about two metres above the path at Pinnacle Point (Figure 1).

Significance of finds: low

Suggested mitigation: none required

PP 17. GPS Reading S 34°12.42 E 22°04.86

MSA implements were found in open spaces among Limestone Fynbos vegetation and in the foot path above the cliffs at Pinnacle Point (Figure 1).

Significance of finds: low

Suggested mitigation: none required

41

PP 18. GPS Reading S 34°12.36 E 22°04.52

A large extensive scatter of fragmented shell remains located on a disturbed dune ridge overlooking the beach on the western boundary of the proposed development site (Figure 1). Limpet and mussel dominate and a few LSA bones and chunks were also found.

Significance of finds: medium-high

Suggested mitigation: It is unclear whether the proposed development will impact further on the shell midden, but some archaeological sampling of the midden is recommended

PP 19. GPS Reading S 34°12.37 E 22°04.57

The severely disturbed remains of a LSA shell midden were located on the beach below PP 18. Informal road construction has severely impacted on PP 18 and PP 19. A 15 cm thick layer of in-situ shell with some stone occurs in places in the road cutting and on the low frontal sand dunes (Figure 7).

Significance of finds: high

Suggested mitigation: It is unclear whether the proposed development will impact further on the shell midden, but some archaeological sampling of the middens is recommended

PP 20. GPS Reading S 34°12.37 E 22°04.65

A few small patches of very dispersed fragmented shell were located on a steep south-facing sand dune about 50 metres from PP 19 (Figure 1).

Significance of finds: low

Suggested mitigation: none required

PP 21. GPS Reading S 34°12.51 E 22°05.29

PP 21 is a large cave located at the bottom of the steep coastal cliffs at Pinnacle Point (Figure 1). A wind blown white beach sand deposit occurs inside the cave. A few MSA implements were also found near the entrance of the site.

Significance of finds: low

Suggested mitigation: none required

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PP 22. GPS Reading S 34°12.17 E 22°05.49

MSA implements were located in extensive scatters on south-facing slopes among Limestone Fynbos vegetation and exposed limestone (calcrete) surfaces overlooking the coastal cliffs and the beach at Pinnacle Point (Figure 1).

Significance of finds: low

Suggested mitigation: none required

PP 23. GPS Reading S 34°12.07 E 22°05.82

PP 23 comprises an MSA quarry/workshop site on a south-facing slope overlooking the beach at Pinnacle Point (Figure 1). Large numbers of flaked stone and flake debris were found among quartzite boulders as well as close to the foot path above the cliffs.

Significance of finds: high

Suggested mitigation: The site should be incorporated into the proposed archaeological hiking trail

PP 24. GPS Reading S 34°12.15 E 22°05.91

Large numbers of MSA implements were found in disturbed gravels in the foot path above the cliffs at Pinnacle Point (Figure 1).

Significance of finds: medium-low

Suggested mitigation: none required

PP 25. GPS Reading S 34°12.19 E 22°06.00

MSA flakes were found scattered among a sandstone outcrop close to the foot path above the cliffs at Pinnacle Point (Figure 1).

Significance of finds: low

Suggested mitigation: none required

PP 26. GPS Reading S 34°12.13 E 22°05.50

MSA implements were found on exposed calcrete beds on south-facing slopes above the foot path at Pinnacle Point (Figure 1). Some ESA tools were also found.

Significance of finds: low

Suggested mitigation: none required



GPS Reading S 34°11.55 E 22°05.58

MSA flakes were found among disturbed gravels on the northern boundary of Erf 2001 (Figure 1).

Significance of finds: low

Suggested mitigation: none required

GPS Reading S 34°11.83 E 22°05.30

MSA flakes were found in the parking area at the shooting range (Figure 1). MSA flakes were also found on south-west facing slopes in the vicinity of the shooting range.

Significance of finds: low

Suggested mitigation: none required

#### 6. Impact statement

Erf 2001 is a mix of both indigenous and alien vegetation resulting in low archaeological visibility. The site is also disturbed as a result of limited development, for example, the shooting range, quarries, roads, and sewerage works. The density of archaeological sites found in Erf 2001 is low. Only two sites were located. Some isolated stone tools were also found in some open spaces on the remainder of the site.

Archaeological visibility is high on the south-facing Limestone Fynbos covered slopes in Erf 3438. Save for PP 23, the majority of these open-air sites have been given low and medium-low significance ratings.

The impact of the proposed Pinnacle Point development on archaeological sites in Erf 2001 and on the south-facing slopes of Erf 3438 overlooking the steep coastal cliffs, is considered to be low to negligible. The open sites are mostly located in a vegetation zone (Limestone Fynbos) considered conservation worthy, and as a result will not be impacted by the proposed development. The probability of locating important sites during implementation of the project is also considered to be low.

In contrast, archaeological visibility among the steep coastal cliffs at Pinnacle Point is high, and includes important caves sites and shell middens. The proposed Pinnacle Point development will not impact directly on the archaeological sites, most of which are already disturbed and neglected. However, secondary negative impacts may occur as a result of increased visitation to the area should the proposed development proceed.

An Environmental Management Plan incorporating the rich archaeology of the area will, however, 'add value' to the planned development and also enhance the positive impacts of the development.

### Legislation

Archaeological sites are protected by the National Monuments Act (Act No. 28 of 1969 as amended). It is an offence to disturb, remove, or destroy from its original site, or excavate any such site without a permit from the National Monuments Council.

Regardless of any archaeological mitigation being undertaken on the study site, a permit to destroy archaeological sites on Erfs 2001 and 3438 sites must be applied for by the developer from the National Monuments Council prior to any development occurring.

### 4. Recommendations for archaeological mitigation

With regard to the proposed Pinnacle Point Development, the following recommendations are made.

1. No archaeological mitigation in Erf 2001 is required.

2. It is unclear whether the proposed development will impact on the already severely disturbed shell middens (PP 4, PP 18 & PP 19), but some archaeological sampling of the middens is recommended.

In the context of the implementation of a sustainable Environmental Management Plan (EMP) for the proposed Pinnacle Point development, the following archaeological recommendations are made.

1. National Monument Protection status for (some of) the cave sites at Pinnacle Point should be investigated.

2. The establishment of an archaeological hiking trail starting at the Cape St Blaize cave in Mossel Bay and incorporating some of the Pinnacle Point caves and possibly the open quarry site (PP 23) and some of the shell middens.

3. The shell midden in PP 6 should be rescued from further damage which has occurred mainly as a result of natural processes.

4. The establishment of a site museum at PP 5 (see Appendix 1).

5. The establishment of an cultural and environmental information centre above the cliffs at Pinnacle Point.

6. We recommend a partnership between the developers, the National Monuments Council (NMC), all role players including the (Mossel Bay) Local Authority, Publicity and Tourism Association, the Mossel Bay Museum, and other interested and affected parties, to develop, manage, support and sustain such a project.

visitors such as fisherman and day visitors should be encouraged to keep the cave sites clean of litter, and discouraged from making fires in the cave and disturbing the archaeological deposits.

2.3 The construction of low impact wooden boardwalks and platforms, display cabinets, information boards and the promotion of bilingual pamphlets should also be considered.

2.4 Visitor controls and regular maintenance of the caves should be implemented.

2.5 The site should be inspected daily by Pinnacle Point development personnel. Litter should be removed and the integrity of the displays maintained.

The aim of the project is to protect the caves and deposit against deliberate and accidental damage, educate the general public, including tourists and school groups, and encourage users to maintain the integrity of the sites and the public open space.

The approval, implementation, development and promotion of an archaeological interpretive centre, site museum and hiking trail, starting at Cape St Blaize and incorporating the Pinnacle Point caves, and the integration of the history of indigenous people into the management and conservation plan of the proposed development, will be unique for a commercial development project in South Africa.

The above recommendations are subject to approval by the National Monuments Council Archaeological Plans Committee.

## 9. References

Kaplan, J. 1993. The state of archaeological information in the coastal zone from the Orange River to Ponta do Oura. Report prepared for the Department of Environmental Affairs and Tourism. Agency for Cultural Resource Management: Riebeeck West.