
Archaeological & Palaeontological Potential: Proposed Development Whale Cove (3419CB GANSBAAI)

G. Avery, Iziko South African Museum

March, 2006

Contents

G. Avery, Iziko South African Museum	1
Report on Archaeological & Palaeontological Potential: Proposed Whale Cove Development.....	1
Executive Summary	1
Introduction	2
Location	3
Method of Survey.....	4
Results of Survey.....	5
Conclusion	11
Recommendations.....	11
Heritage Permits Required	12
Acknowledgements.....	12
References Cited	12
Addendum to: Archaeological & Palaeontological Potential: Proposed Development Whale Cove (3419CB GANSBAAI).....	13

Report on Archaeological & Palaeontological Potential: Proposed Whale Cove Development

Executive Summary

Dr G Avery of Iziko South African Museum conducted a foot survey on the area to be affected by the proposed Whale Cove development on the old hotel site, Die Kelders comprising 12 individual erven (1072 to 1078, 1121, 1122, 1125, 1126 and 1183). The writer was commissioned by JBJ Architectural Designs cc to assess the archaeological and palaeontological potential within the footprint of the proposed development.

The proposed development will be located on Miocene-Pliocene aged aeolianites (limestone) of the De Hoopvlei Formation, Bredasdorp Group. Sparse fossils are known to occur within this Formation.

No artefactual material was observed on the areas observed, although visibility is obscured by the remnants of the old hotel. However, visibility was sufficient to determine that soil cover on the limestone was almost certainly thin. Any archaeological material that may have existed in the area would underlie the filled areas and rubble of the old Die Kelders Hotel, are likely to have been disturbed by previous building and are, therefore unlikely to be in a condition to warrant study. The possibility that burials might exist in small superficial solution cavities should be borne in mind, but is unlikely. Should any archaeological remains be encountered, work in that area must cease immediately and the recommendations outlined in this report must be set in motion.

No palaeontological material was visible on the exposed limestone surfaces or old cut. There is, however, a small possibility that fossil bones may be found within the limestone as excavation for infrastructure and foundations proceeds. This proved to be the case during the archaeological excavations at Die Kelders Cave 1 (Klipgat Cave), where sparse fossils were encountered and recovered when fallen roof blocks in the deposit were broken up for removal. Pre-training of personnel to be involved in the excavations into the limestone and monitoring by an appropriately qualified person during excavations should be sufficient to cover this eventuality.

All archaeological and palaeontological remains are strictly governed by the National Heritage Resources Act. The Environmental Management Plan (EMP) or similar for the project must, therefore, include a process to be followed in the event of archaeological or palaeontological material being encountered. Funds should be available to cover costs should such a contingency arise.

Provided that the recommendations in this report are followed, there is no archaeological or palaeontological reason why the proposed development should not be sited as proposed.

Introduction

JBJ Architectural Designs cc commissioned Dr G. Avery of Iziko South African Museum to assess the archaeological and palaeontological potential of the area to be affected by the proposed Whale Cove development at Die Kelders (Figure 1). This report supersedes an earlier report, which included this area, undertaken for Group 5 Project Development Services (Avery 1998).

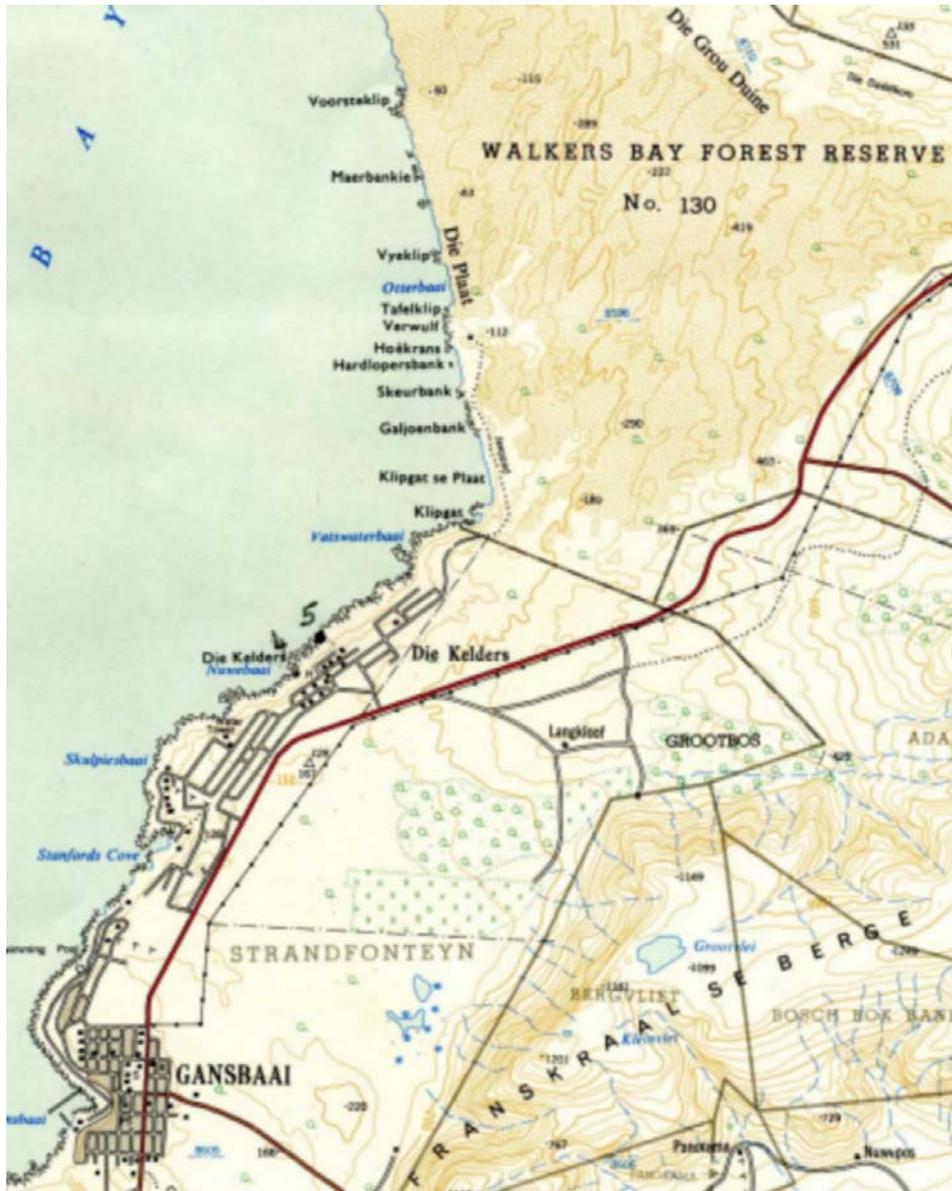


Figure 1. Location of Die Kelders village and Die Kelders Cave 1 (Klipgat Cave) on 1:50,000 map (3419CB GANSBAAI). Vertical=Magnetic North.

The area is adjacent to the coast on the eroded surface of Miocene-Pliocene age aeolianites (limestone) of the De Hoopvlei Formation, Bredasdorp Group (Malan 1990; Pether, Roberts, and Ward 2000). Soil cover, where observed, is minimal and the area has been heavily disturbed by previous building. Rubble, old structures and vegetation cover a large part of the surface.

Location

The proposed development is planned to occupy an area on the coast of Die Kelders. (Figures 2, 3 & 4). The twelve erven involved are indicated as Erf 1198 on Figure 2. This diagram was approved by the Surveyor General's office, but never attached upon; The 12 individual erven (1072 to 1078, 1121, 1122, 1125, 1126 and 1183), which Erf 1198 comprises are therefore the registered erven. A general GPS reading for the site was $34^{\circ} 33.326$ S $19^{\circ} 21.895$ E (EPE 3 m).

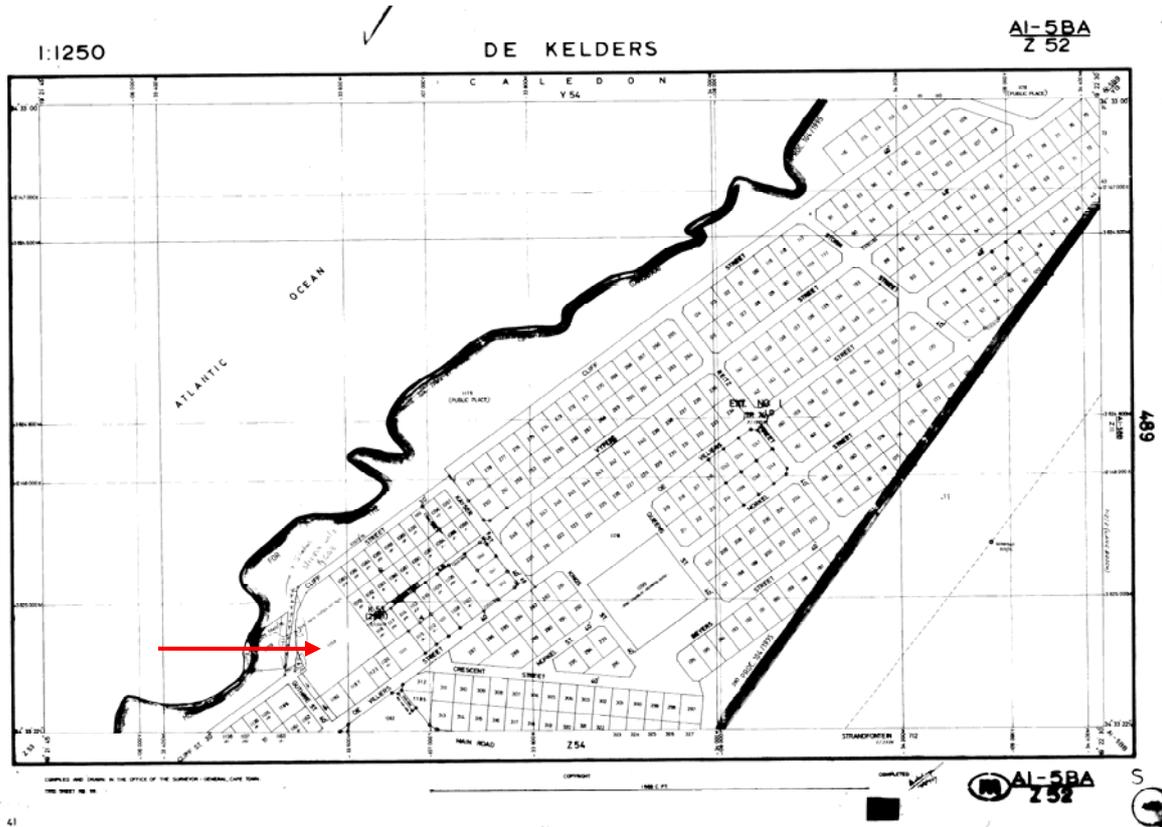


Figure 2. Location of Erf 1198(etc) within the urban layout of Die Kelders.



Figure 3. Aerial view of the location of the proposed Whale Cove development in relation to adjacent dwellings and the coast.

Method of Survey

A foot survey was conducted by G Avery. This was undertaken by walking transects across Erf 1198 from the boundaries of existing dwellings to Guthrie and Cliff Streets.

Relevant features were noted and digital photographs taken (see Figures).



Figure 4. View of site from Guthrie/Cliff Street intersection. Note remnant of Die Kelders Hotel retaining wall (left) and tarred parking area and cut into the limestone (arrowed right).

Results of Survey

Visibility was not possible over the whole site due to the existence of vegetation, building remnants, rubble, fill and the remaining concrete floor of the old “dance hall” and tarred parking area of the demolished Die Kelders Hotel (vide Figures 5 to 8, *et sec.*).



Figure 5. View towards Hermanus of demolished portion of front of hotel with steps (left), shelly sand fill used to level the slope and light rubble (adjacent to steps). This section is above the retaining wall visible in Figure 4.



Figure 6. Sandy shell fill



Figure 7. Remnant of soft shelly concrete contiguous with painted floor of old hotel.



Figure 8. View towards boundary of tarred parking area (foreground), concrete floor of old “dance hall” (middle towards right) and cut into the limestone (rear, arrowed), the surface of which is rising gently.

Sandy beach material (rolled shells, shell fragments and pebbles) visible in the vicinity of the old hotel structure appears to have been brought in as fill (Figure 6) to level the original slope and may have been used in the mortar (Figure 7). This material is not derived from archaeological shell middens.

While it is considered highly unlikely, should there be any remnants of pre-colonial habitation, it would be expected that they would lie under the remnant hotel structure or to the north east (Cliff Street).

Where observation was possible it was clear that natural soil cover was probably very thin, overall, although it may thicken in some areas towards the domestic dwellings on the boundaries. The gentle slope of the hill on which the old hotel was built appears to have been determined by the topography of the underlying De Hoopvlei Formation aeolianite, which can be seen on the surface outcropping in patches amongst rubble and vegetation and, which was cut into at the rear of the site (Figures 8 to 11). No fossil material was visible in the cut. It is assumed that the obscured surface areas of the site also follow this structure.



Figure 9. Gravel (foreground to structure), outcropping limestone (middle left) and structural remnant of old hotel.



Figure 10. Gravel with outcropping limestone sloping upward and portion of structure shown in Figure 9 (middle right).



Figure 11. View of outcropping limestone down slope towards Guthrie Street and structure, noted in Figures 9 & 10.

Although nothing was observed on the surface or in the cut, the underlying limestone may include fossils. During the excavation of Die Kelders Cave 1 (Klipgat) (Marean et al. 2000; Goldberg 2000), sparse (very) vertebrate fossils were encountered (Figure 12). It is not known whether such occurrences occur more widely, but the small possibility that fossils might be encountered during excavations into the limestone should be borne in mind. Recovery of such remains would be important, given that virtually nothing is known about fossil material associated with the De Hoopvlei Formation.



Figure 12. Examples of fossilized bones occurring in limestone blocks of a fallen roof section removed from the Die Kelders Cave 1 (Klipgat) excavation.

Conclusion

1. Visibility was obscured by vegetation and building rubble, but an adequate assessment of the archaeological potential was possible on exposed areas, since soil cover is virtually absent. It appears, however, that this may thicken towards the crest of the hill at the boundaries of the existing domestic dwellings. The likelihood that archaeological material will occur in these areas is very small.
2. No Pre-colonial artefacts were visible on the surface. Marine shell found originates from the previous building.
3. There is, therefore, no archaeological reason why the proposed development should not go ahead on this site.
4. No immediate mitigation is required with regard to material on the surface of the proposed development.
5. There is a small possibility that obscured archaeological material may be encountered when rubble/building remnants are removed. Such material would require recording and removal in a systematic manner by an appropriately-trained archaeologist.
6. There is a small possibility that vertebrate fossils may be encountered sub-surface during excavations into the limestone for foundations and services. This possibility does not preclude the development of the site and, should it occur, may provide opportunities for observations, which would not otherwise be possible. Such material would require recording and in a systematic manner by an appropriately-trained archaeologist/palaeontologist.
7. Should any archaeological or palaeontological material be encountered, appropriate steps would have to be taken to comply with national heritage legislation. The nature of such steps varies according to the significance of any find.

Recommendations

1. From an archaeological and palaeontological perspective the proposal should be allowed to proceed.
2. An archaeologist familiar with fossils should be retained to monitor the removal of rubble and the exposure of the underlying original surface and sub-surface digging of trenches, septic tanks, etc.
3. Contracting staff operating digging and stone-breaking equipment should be shown what the fossils are likely to look like (G Avery to demonstrate examples).
4. Any material recovered will be retained along with details of its location and deposited in the collections of Iziko South African Museum.
5. A process to be followed in the event of bones, sub-surface artefacts or archaeological remains being encountered must be included in the Environmental Management Plan (EMP) or similar and must include the following:
 - that work in the affected area must cease immediately.

- that the archaeologist retained will assess the significance of the find, report the find to the developer's designated representative and the heritage authority(s), as appropriate, and advise on steps to be taken, which may, if necessary, include application for a permit (in the archaeologist's name) to recover the material systematically.
- that funds will be available to cover any costs of recovering and curating such remains with minimal delay to the development.

Heritage Permits Required

1. A permit from the Western Cape Provincial Heritage Resources Agency would be required before any archaeological or palaeontological material encountered could be further disturbed, damaged or removed.
2. A permit from the South African Heritage Resources Agency (SAHRA) would be required should human remains be encountered during excavations for buildings and services.

Acknowledgements

John and Brenda Longo (JBJ Architectural Designs) provided information and the images for Figures 2 and 3. Wilfred Chivel provided access to the fossil-bearing blocks.

References Cited

- Avery, G. 1998. Report on Archaeological Investigation of Erf 1069 and 1072, Die Kelders (3419CB). For Group Five Project Development Services5. Cape Town: South African Museum. 5pp.
- Goldberg, P. 2000. Micromorphology and site formation at Die Kelders Cave I, South Africa. *J. Human Evolution* 38 (1):43-90.
- Malan, J. A. 1990. The Stratigraphy and Sedimentology of the Bredasdorp Group, Southern Cape Province. Thesis, University of Cape Town, Cape Town.
- Marean, C. W., P. Goldberg, G. Avery, F. E. Grine, and R. G. Klein. 2000. Middle Stone Age stratigraphy and excavations at Die Kelders Cave 1 (Western Cape Province, South Africa): the 1992, 1993, and 1995 field seasons. *J. Human Evolution* 38 (1):7-42.
- Pether, J., D.L. Roberts, and J.D. Ward. 2000. Deposits of the west coast. *Oxford Monographs on Geology and Geophysics* 40:33-54.



Dr Graham Avery
Archaeozoologist
Iziko South African Museum

31 March 2006

Addendum to: Archaeological & Palaeontological Potential: Proposed Development Whale Cove (3419CB GANSBAAI).

Following a second visit to the site on 19 April, the following addenda are made regarding the original report of 31 March 2006.

1. Removal of surface vegetation has improved visibility and exposed three (probable septic tanks) areas where sub-surface disturbance has taken place. It also revealed a geotechnical test pit (1998 investigation), where it was clear that intact soil depth to the north/north east corner of the site comprised calcareous rubble or colluvium resting on the limestone.
2. Closer examination of the retaining walls along Cliff Street has made possible more accurate assessment of the limestone-controlled profile of the site, the extent of the building fill and potential for encountering sub-surface archaeological material.

The resultant observations indicate the following:

- a) Given the disturbed nature of the site and the fact that the limestone profile closely follows the base of the old hotel building and essentially forms the upslope surface, the possibility that any undisturbed archaeological material, if such ever existed on the site, would still be preserved intact, is considered to be nil.
- b) There is, therefore no reason to monitor the site clearing for archaeological material.
- c) The extremely small possibility that human remains may be encountered should, nevertheless, still be born in mind, however unlikely this is.
- d) The procedure proposed should any fossils be encountered can be simplified, viz.
 - i The site manager and digging contractor will be trained by Dr Graham Avery and Mr Wilfred Chivel (Gansbaai resident) to recognize fossils of the type that might be expected (using the originals from DK 1 (Klipgat).
 - ii To provide control during the process, blocks of limestone removed during levelling and the excavation of foundations and tanks, etc., will be set aside, in groups relating to provenience, for checking by Mr Chivel. He is the most appropriate person to monitor this—he is familiar with the material and stratigraphic issues, having been the original finder of the fossils within the Klipgat roof fall material when it was broken up and removed.
 - iii To save time should fossils be found G Avery will apply for a salvage permit ahead of the excavation process.

Dr Graham Avery
Archaeozoologist
Iziko South African Museum

31 March 2006