PROPOSED CONSTRUCTION OF A 771 M BOARDWALK FROM THE LIGHTHOUSE TO THE SOUTHERNMOST POINT, CAPE AGULHAS, AGULHAS NATIONAL PARK, WESTERN CAPE PROVINCE

(Assessment conducted under Section 27 and Section 38(8) of the National Heritage Resources Act 25 of 1999)

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EXECUTIVE SUMMARY

The Archaeology Contracts Office at the University of Cape Town was appointed by Enviroworks, on behalf of the client, SANParks, to conduct an archaeological impact assessment for the construction of a boardwalk between the Lighthouse at Cape Agulhas and the southernmost point parking area in the Agulhas National Park (a distance of 771m).

The Lighthouse falls in Portion 4 of the Farm 281 while the southernmost point falls in Portion 36 of Farm 281. Portion 4 was declared a National Monuments in 1973 and has therefore reverted to a Provincial Monument (Grade 2) in terms of the National Heritage Resources Act, No 25 of 1999. The responsible heritage authority is Heritage Western Cape. *Portion 36 however, was not declared but falls within the Agulhas National Park. National Parks are considered Grade 1 sites, and therefore fall under the jurisdiction and authority of the South African Heritage Resources Agency (SAHRA).*

The proposed **first section** of the boardwalk (477m in length) starts at the current southernmost point parking lot, and travels in an easterly direction to the open parking area on the southern side of Suiderstrand, below the lighthouse. The **second section** (294m) starts at the eastern side of the parking area, runs eastward to a short distance, and turns north to cross the Suiderstrand gravel road, and up the hill to the Lighthouse.

The route of the boardwalk will follow the old track/roads to mitigate any impact on the environment. It is anticipated that this project will be subject to a full EIA as it falls in the coastal zone and is 100m from the sea.

A field survey was conducted on the 10 August 2010. Lita Webley was accompanied by SANParks staff.

The proposed boardwalk will improve access to the southernmost point of Africa. It will funnel visitors along a restricted path, preventing them from creating new paths across the landscape (and over archaeological sites). It will therefore promote the conservation of archaeological sites in the area.

It is not anticipated there will be significant impacts to the archaeological heritage. A large section of the boardwalk will be across beach cobbles. There is a section which will be constructed on a sandy footpath. At least two ephemeral scatters of marine shell were recorded and there may be more buried beneath the surface. The sinking of wooden poles into the existing sandy pathway may result in the destruction sub-surface archaeological remains. It is difficult to assign significance to the two scatters as they may represent buried shell middens or be the remnants of degraded middens. They are considered to have low local significance. It is recommended that an archaeologist monitor the sinking of the wooden poles, especially at the location of the two sites.

The boardwalk will link the Lighthouse (A Grade 1 site) with the southernmost point of Africa, an area of great geographic significance. It is unlikely to have a significant visual impact on the coastal zone. Boardwalks are standard in most conservation areas; they are low to the ground and made of an organic material which is not intrusive. They are not permanent and may be removed when required. However, the handrails may intrude on line of sight of visitors travelling by car along the Suiderstrand gravel road and it is suggested that handrails are avoided where safety standards permit.

1. INTRODUCTION

The Archaeology Contracts Office at the University of Cape Town was appointed by Enviroworks, on behalf of the client, SANParks, to conduct an archaeological impact assessment for the construction of a boardwalk connecting the Cape Agulhas Lighthouse with the southernmost point of southern Africa (at Cape Agulhas National Park).

The proposed construction of the boardwalk does not form part of the Agulhas Lighthouse Precinct Project, although it will contribute to the general improvement of visitor facilities.

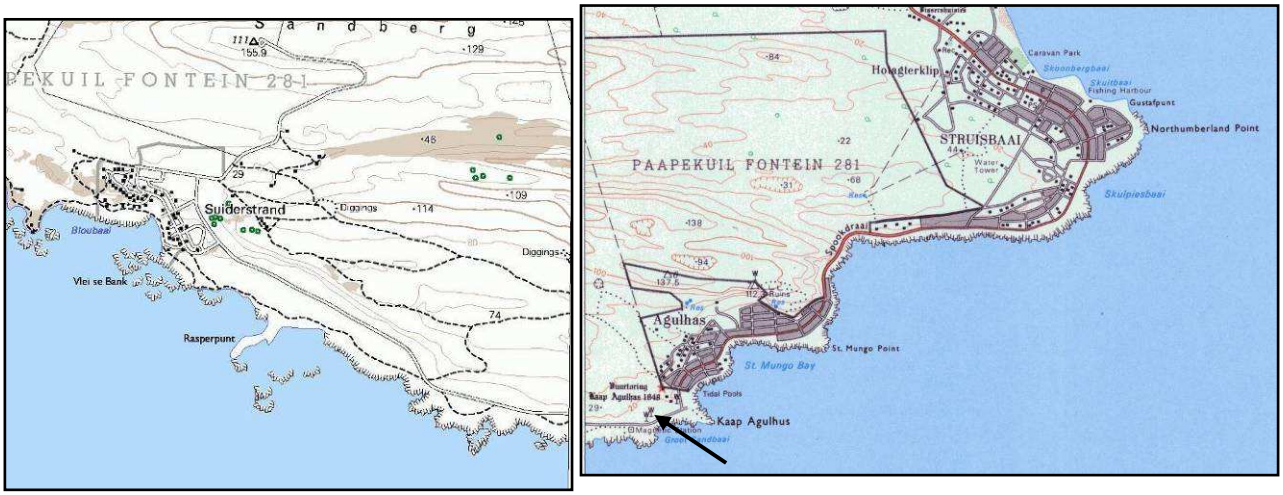

Figure 1: 1:50 000 map (3419 DB & DD and 3420 CA & CC) showing the location of the proposed boardwalk with respect to Cape Agulhas and Struisbaai on the Cape south coast.

2. DEVELOPMENT PROPOSALS

SANParks proposes to construct a boardwalk between the Lighthouse and the southernmost point of Africa, a total distance of 771m. The southern point of Africa falls on Portion 36 of Paapekuil Fontein 281, while the Lighthouse falls on Portion 4 of Farm 281.

The boardwalk will allow visitors to walk from the lighthouse to the southernmost tip, without disturbing the vegetation and creating additional tracks across the landscape. The proposed boardwalk will follow previously disturbed areas and specifically old tracks/roads to mitigate impact on the environment.

The boardwalk will be constructed in two sections. The first section (477m in length) will begin at the current southernmost point parking place, going in an easterly direction towards the open parking area on the southern side of the Suiderstrand road below the lighthouse (Figure 2). This parking area may also alleviate the existing traffic and parking problems experienced at the current southernernmost point parking area.

The second section of the boardwalk (294m) will start at the eastern side of the parking area and run eastward for a short distance before turning north to cross the

Suiderstrand gravel road. Here carefully planned crossing will have to be implemented to get visitors safely across a sometimes very busy gravel road. The boardwalk will continue up the slope, along an existing sandy track, to the lighthouse. A second alternative (not shown here) is to take the route further eastward, so that it crosses the gravel road to join the existing trail between the lighthouse and the old TNPA offices (new restaurant area).

The total length of the boardwalk is 771m. It is anticipated that a full EIA will be required as the development falls in the coastal zone and is within 100m of the high water mark.

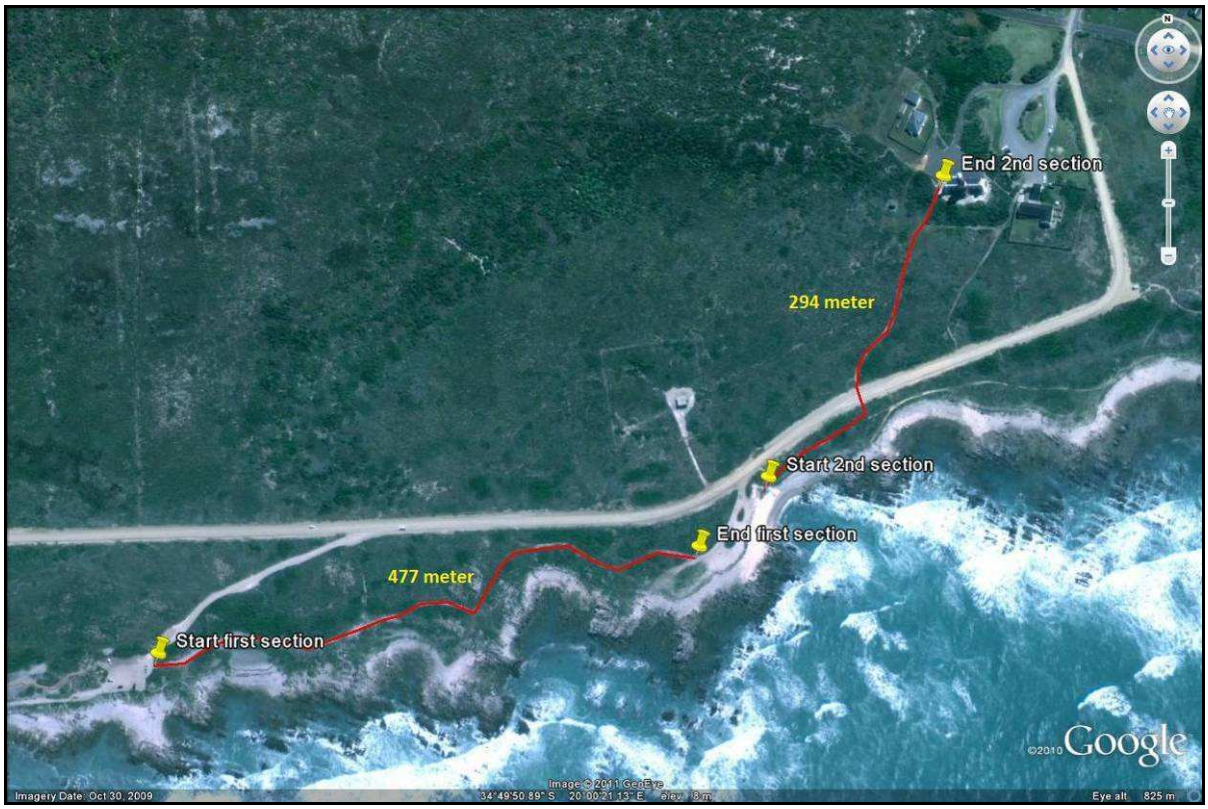

Figure 2: An aerial view of the proposed boardwalk (map supplied by client).

Plate 1: View of the existing boardwalk between the southernmost point and the parking area, showing the design of the boardwalk which is proposed for the next phase of work (connecting the existing boardwalk to the lighthouse).

3. TERMS OF REFERENCE

The assessment includes:

- A desk top study to determine the pre-history and history of the property;
- A site visit to locate and map heritage resources;
- The rating of significance of heritage resources on the property;
- An assessment of whether the construction of the boardwalk will result in a loss of significant heritage resources;
- Recommendations for mitigation if necessary.

4. LEGISLATION

The National Heritage Resources Act, No 25 of 1999 (Section 38 (1)) makes provision for a compulsory notification of the intent to development when any development exceeding 5000 m² in extent, or any road or linear development exceeding 300m in length is proposed.

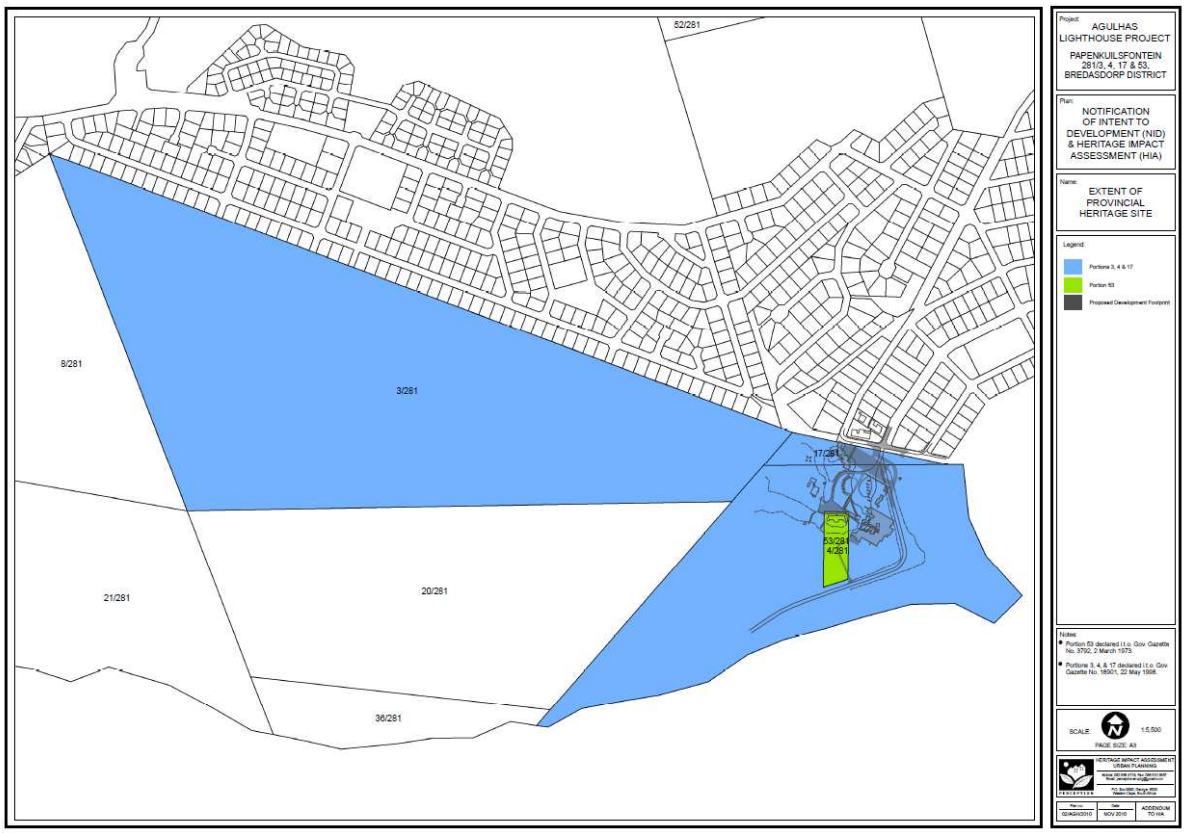

Figure 3: The location of the Provincial Heritage Site at Agulhas. Portions 3, 4 and 17 (in blue) were declared in 1998 and Portion 53 (green) in 1973. The most southernmost point is located on Portion 36 of Farm 281 (Map kindly supplied by Perception Heritage Planning).

The NHRA provides protection for the following categories of heritage resources:

- Cultural landscapes (Section 3(3))
- Buildings and structures greater than 60 years of age(Section 34)
- Archaeological sites greater than 100 years of age(Section 35)

- Palaeontological sites and specimens
- Shipwrecks and aircraft wrecks
- Graves and grave yards (Section 36).

The southern point falls on Portion 36 of Paapekuil Fontein 281which is situated within the Agulhas National Park. National Parks are considered Grade 1 sites, and therefore fall under the jurisdiction and authority of the South African Heritage Resources Agency (SAHRA).

Portion 4 of Farm 281however, was declared a National Monument in 1973 (Government Gazette Date: 1973-03-02. Gazette Number: 3792). National Monuments revert to Provincial Monuments (Grade 2) in terms of the National Heritage Resources Act, No 25 of 1999. The responsible heritage authority is Heritage Western Cape.

5. BACKGROUND TO THE PROPERTY

Previous work in this area includes a general archaeological survey of the farm Paapekuilsfontein 281 by Kaplan (1997); a heritage impact assessment of Portion 15 of the farm Paapekuilsfontein 281 by Hart (2004); a Phase 1 Archaeological Impact Assessment (AIA) for a proposed tourist rest camp facility at Pietie se Punt in the Agulhas National Park by Kaplan (2007) and an Archaeological Impact Assessment for the proposed Cape Agulhas Lighthouse Precinct Development by Kaplan (2010).

5.1 Archaeological Background

Archaeological research has shown that people have occupied the Agulhas area for well over a million years. Middle Stone Age (MSA) and Early Stone Age (ESA) tools are reported to occur locally. Research during the 1970s by archaeologists at the South African Museum provided the first detailed insights into the prehistory of the southern Cape to the west of Cape Agulhas. Excavations by F Schweitzer (1979) at Die Kelders near Gansbaai produced early evidence for the introduction of pottery and domestic stock around 2000 years ago. Other excavations were carried out at Byneskranskop 1 (Schweitzer & Wilson 1982) and again revealed a sequence of occupation extending back several thousand years. Excavations of shell middens at Pearly Beach by Avery (1974 & 1976) showed that the remains of early domestic sheep were to be found in some of the coastal middens as well.

In 1984, archaeologists from the South African Museum and the University of Cape Town surveyed an area to the west of Struisbaai (Hall 1984). The study showed that the dunefield had been favoured for occupation during the late Holocene (last 5000 years). People were settling in deflation bays between dunes and on the inland edges of the dune systems.

Substantial concentrations of shellfish remains (shell middens) are densely clustered inshore of the rocky shoreline. It is here that large quantities of shellfish species were exploited, processed, and consumed by LSA hunter-gatherers. Surveys of surrounding areas have indicated a high density of archaeological sites. Kaplan identified 15 shell middens in his 1997 survey, frequently located on the tops and sides of well vegetated dunes in the extensive coastal plain. In his 2004 survey of

Portion 15 of Farm 281 at Suiderstrand, Hart reported at least 11 shell middens, and in his 2007 to the west of Rasperpunt, Kaplan identified 12 shell middens spread unevenly among the low dunes.

Well-preserved *visvywers* (tidal fish traps) occur at Cape Agulhas, Rasperpunt and Suiderstrand (Kaplan 1997). Although considered for many years to have been constructed by pre-colonial LSA people - possibly the same people responsible for the accumulation of shell middens that occur along the rocky shoreline (Avery 1974, 1976) recent studies by Hine (2010) have suggested that they may have been built by 19th and 20th century local farmers.

Closer to the study area; sites have been recorded in the immediate vicinity (Hall 1984; Hart 2004; Kaplan 1997, 2007, 2010) and are described to occur at Die Walle, Hoek se Baai, Gruis se Baai, Oubaai, Bloubaai, Vlei se Bank, Rasperpunt and Cape Agulhas.

In his archaeological survey of the Cape Agulhas Lighthouse Precinct, Kaplan (2010) reported on some fragments of shell and a few stone flakes associated with dune mole activity in a footpath (Site CAG3) from the lighthouse down to the Suiderstrand gravel road.

Figure 4: The location of archaeological sites identified by Kaplan (2010) during his survey of the Lighthouse Precinct. The red line indicated the route of the proposed boardwalk along the existing sandy track.

Other sites in the vicinity identified by Kaplan (2010), which is of relevance to this study, are CAG5 which is a cave in the limestone cliff and CAG4 which is unknown diggings in the limestone cliff (Figure 4). This report was not accepted by Heritage Western Cape who (Unique ID: 1257) indicated that the AIA did not adequately assess the significance of the site.

5.2 Historical Background

According to de Kock & Schultz (2010) the six mile stretch of dune to the west of the lighthouse had become destabilised in 1899 due to over-grazing and threatened to cover the lighthouse. The dune was stabilised with strip planting of “marram grass” perpendicular to the coast. The possibility therefore exists that:

a) Archaeological sites have been deeply covered by dunes and vegetation;
b) Archaeological sites may have been disturbed/damaged by the stabilisation project.

De Kock and Schultz (2010) also believe that the area around the Lighthouse and keeper’s house has been extensively transformed by human activity over the last 100 years.

6. DESCRIPTION OF THE AFFECTED ENVIRONMENT

The boardwalk is within 100m of the highwater mark, and follows the shoreline. For a large portion of the trail, it traverses beach cobbles, in other areas it follows a sandy path that winds along the beach just above the high water mark.

Plate 2: View of the rocky coastline along which the boardwalk will be constructed.

Plate 2: The boardwalk will follow the path along the beach cobbles above.

Plate 3: The boardwalk will follow the sandy path. Notice the large rocky outcrop on the left.

Plate 4: The boardwalk will follow the existing footpath up the hill, terminating at the base of the lighthouse.

7. SURVEY METHODS

The property was visited by Lita Webley 10 August 2011. She was accompanied by Curt Jones of the Agulhas National Park. The survey was conducted on foot, and a Garmin GPS unit was used to record sites. Digital photographs were taken where appropriate.

6.1 Limitations

There were no limitations to the survey as the proposed boardwalk will follow an existing footpath from the lighthouse down to the coast, and then along the coast to the parking area at the southernmost point.

8. RESULTS OF THE SURVEY

The survey identified two shell middens (Table 1).

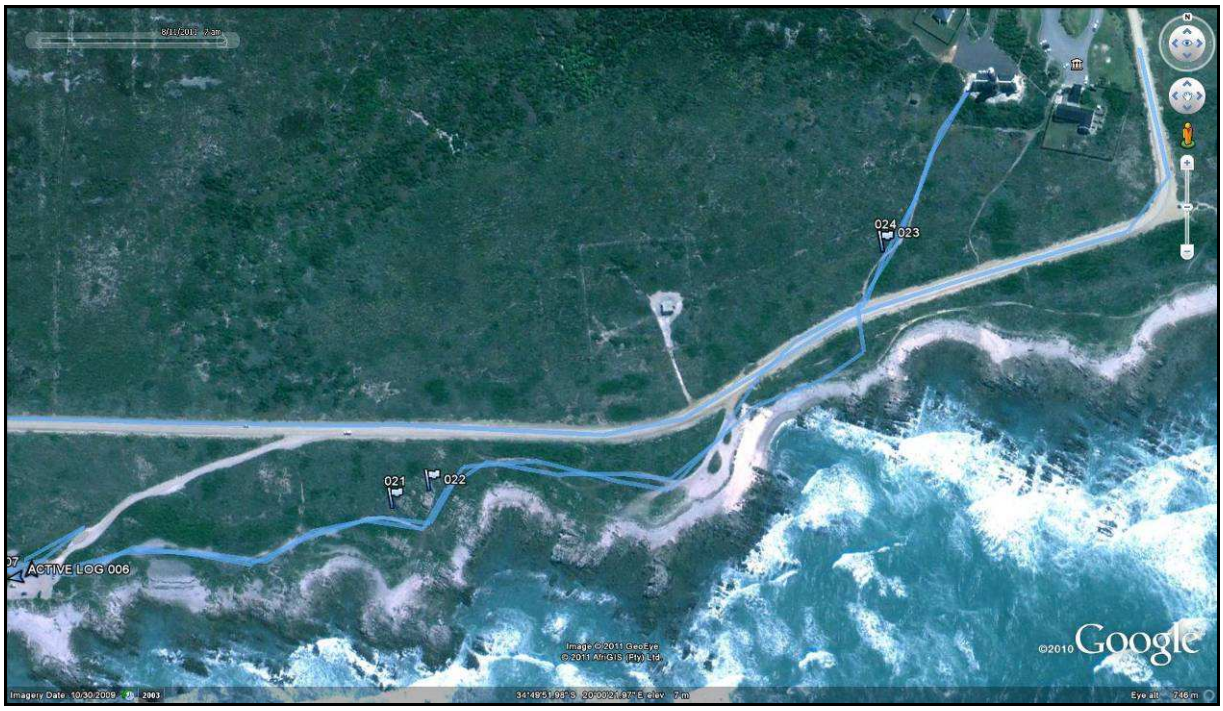

Figure 5: The location of the sites identified during the survey.

The sandy path winds around rocky outcrop (Plate 3). Sites 21 and 22 comprise a scatter of shells around this large rock. The midden has been disturbed by old fireplaces, a concrete slab and broken bottle glass but there is a light scatter of shell (*Turbo sarmaticus* and several species of limpet) which has slipped onto the pathway. There may be some intact midden behind the rocky outcrop but it is not possible to determine this because of the overlying vegetation.

Plates 5-7: Views around the rocky outcrop showing the scatter of shell as well as disturbance to the site. The red arrow indicates the area of densest shell which flows down onto the existing path.

Sites 21 and 22 are in close proximity to a concrete plinth bearing the words: Magnetic Station. This plinth is presumably used for scientific measurements. It is situated on the side of the path and it will not be damaged by the construction of the boardwalk.

Plate 8: Concrete plinth located on the side of the sandy track.

Site 23/24 is a very ephemeral scatter of marine shell in the footpath leading down from the Lighthouse. Kaplan (2010) also recorded a shell scatter on the path running parallel (Site CAG3 and Figure 4) to this, suggesting that there may have been a number of shell middens along the base of the hill on which the lighthouse is situated (Plate 4). The fragments are small and comprise some weathered limpet with some operculum of *Turbo sarmaticus*. No stone artefacts or any other associated material was observed.

9. ASSESSMENT OF IMPACT AND SIGNIFICANCE

Since there are no structures on the property protected by the NHRA, the main heritage indicators are:

- The pre-colonial archaeological heritage;
- The cultural landscape relating to the geographic significance of the southernmost point.

A sizeable portion of the proposed boardwalk will cross beach cobbles and it is not anticipated that there will be any sub-surface impacts on this section.

It is more difficult to determine the impact of the boardwalk on the section of sandy path. At least two scatters of shell were discovered beneath, or in close proximity to, the proposed boardwalk. The construction of the boardwalk will presumably require some excavation into the existing path to sink wooden poles. Excavations may result in the destruction of sub-surface remains.

9.1 Significance

Our survey identified the following:

- The two scatters of marine shell may represent buried shell middens or be the remnants of degraded middens. It is therefore difficult to assign significance. It is probably fair to say that they may have low local significance;

- The boardwalk will link the Lighthouse (A Grade 1 site) with the southernmost point of Africa, an area of great geographic significance.

9.2 Impact

It is important to note that an archaeological site is finite, once it is damaged or destroyed, it cannot be renewed.

During the Construction Phase of the track, we may anticipate that:

- Sinking of wooden poles into the existing sandy pathway may result in the destruction sub-surface archaeological remains. At least two such localities were identified and there may be more hidden beneath the surface;
- The boardwalk is unlikely to have a significant visual impact on the coastal zone. Boardwalks are standard in most conservation areas; they are low to the ground and made of an organic material which is not intrusive. They are not permanent and may be removed when required. However, the handrails may

intrude on line of sight of visitors travelling by car along the Suiderstrand gravel road and it is suggested that handrails are avoided where safety standards permit.

9.3 Conservation

The construction of a boardwalk is likely to improve the conservation of the middens which are currently exposed on the footpath as well as buried middens. It will also prevent further degradation of the area as visitors create their own footpaths across the landscape.

10. RECOMMENDATIONS

The proposed boardwalk will improve access to the southernmost point of Africa. It will funnel visitors along a restricted path, preventing them from creating new paths across the landscape (and over archaeological sites). It will therefore promote the conservation of archaeological sites in the area.

It is not anticipated there will be significant impacts to the archaeological heritage. A large section of the boardwalk will be across beach cobbles. There is a section which will be constructed on a sandy footpath. At least two ephemeral scatters of marine shell were recorded and there may be more buried beneath the surface. The sinking of wooden poles into the existing sandy pathway may result in the destruction sub-surface archaeological remains. It is difficult to assign significance to the two scatters as they may represent buried shell middens or be the remnants of degraded middens. They are considered to have low local significance. It is recommended that an archaeologist monitor the sinking of the wooden poles, especially at the location of the two sites.

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11. REFERENCES

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Table 1: List of archaeological sites recorded during the assessment

Site Name	GPS co-ordinates	Discussion	Significance
021	S34 49 55.6 E20 00 16.0	An ephemeral scatter of marine shell distributed next to a rocky outcrop next to the footpath. Some shell has spilled into the path. Fragmentary shell (Turbo sarmaticus and various species of limpet), some quartzite cobbles (unflaked), broken glass. Evidence of fires (old braai places), also some concrete blocks built on the midden.	Low Local
022	S34 49 55.2 E20 00 17.0	An extension of Site 021, around the side of the outcrop. An ephemeral scatter of marine shell distributed next to a rocky outcrop next to the footpath. Some shell has spilled into the path. Fragmentary shell (Turbo sarmaticus and various species of limpet), some quartzite cobbles (unflaked), broken glass. Evidence of fires (old braai places), also some concrete blocks built on the midden.	Low Local
023/024	S34 49 49.5 E20 00 29.5	An ephemeral scatter of shell in the footpath leading to the Lighthouse. The fragments are small and comprise some weathered limpet with some operculum of *Turbo sarmaticus*. No stone artefacts or any other associated	Low Local

		material was observed.	