HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED CONSTRUCTION OF A 581M BOARDWALK AT RASPERPUNT (FARM 281/21), AGULHAS NATIONAL PARK, WESTERN CAPE PROVINCE

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

Prepared for:
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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, of 581m in length, in the Agulhas National Park. The motivation for the boardwalk is that it will allow local fishermen, who have in the past made use of fishing spots on the Rasperpunt peninsula, access to the coast.

The construction will involve bush clearance to a width of 2m, using a bush cutter. Wooden poles will be sunk into the soil to a depth of approximately 0.3m and anchored with a concrete block for stability where deemed necessary. The preferred route follows the most direct route from the Suiderstrand gravel road to the sea.

Rasperpunt falls within the Agulhas National Park and National Parks are considered Grade 1 heritage sites. This HIA is submitted in terms of Section 38(8) of the NHRA (No 25 of 1999). Heritage Western Cape requires an "HIA in terms of Section 38(3) of the NHRA (No 25 of 1999) assessing the impact on the identified archaeological and palaeontological resources" (Case No 120203JL14).

The Palaeontological Impact specialist, Dr John Pether, has commented that a "palaeontological study is not warranted as the boardwalk will traverse over geologically-young dunes of the Strandveld Formation" (email attached).

An archaeological survey was conducted on the 10 August 2010. Lita Webley was accompanied by SANParks staff who indicated the proposed route.

The proposed boardwalk across Rasperpunt peninsula will traverse (or be located in close proximity to) at least 15 Later Stone Age archaeological shell middens and a further calcrete exposure embedded with shell and with a surface scatter of LSA stone artefacts. Most of these "sites" are represented by a thin scatter of surface shell and it is difficult to comment on their heritage significance as most of the archaeological material is buried underneath the soil surface. Significance can only be determined if more sub-surface material is exposed. However, it is likely that many of the sites, like those along this coastline described by Kaplan (2007) and Hart (2004) are of high local significance.

Due to the high density of archaeological sites on the Rasperpunt peninsula, it is highly likely that any boardwalk across the area will result in an impact on below-ground archaeological sites.

However, local fishermen are currently walking across the peninsula to reach fishing spots along the coast and their tracks are resulting in the degradation of archaeological sites.

The construction of a boardwalk across the Rasperpunt peninsula is supported as it will:

- Regulate access to the coast;
- Protect archaeological sites from further degradation.

It is recommended that the construction of the boardwalk should be monitored by an archaeologist. If any sub-surface archaeological material is detected during the sinking of the post holes the archaeologist should be consulted about an alternative route.

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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, of 581m in length, which will allow access to fishing spots on the Rasperpunt (Figure 1) peninsula on the Cape south coast.

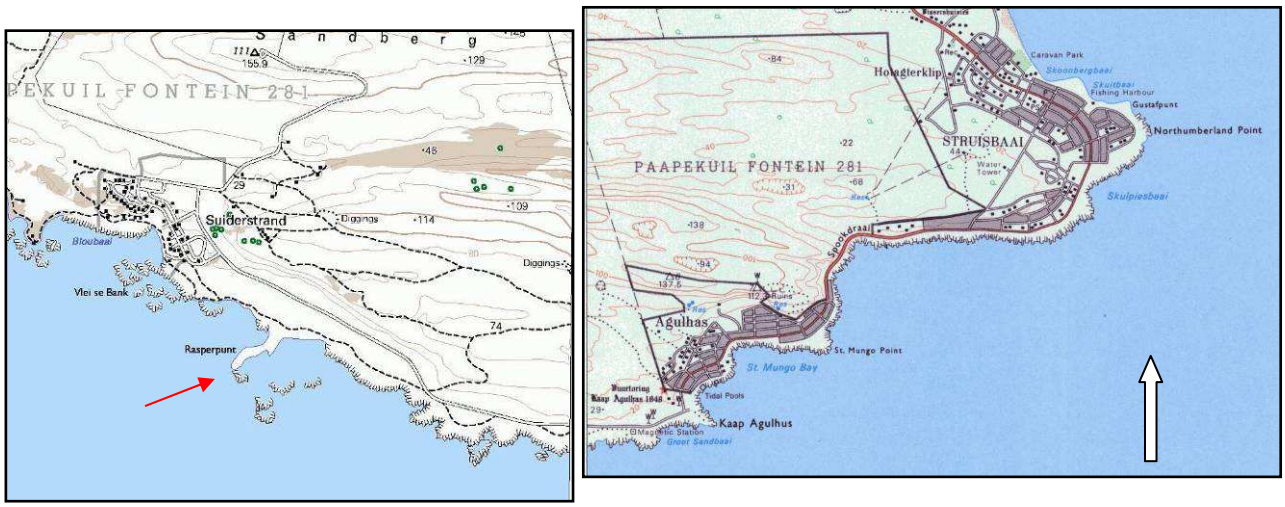

Figure 1: 1:50 000 map (3419 DB & DD and 3420 CA & CC) showing the location of Rasperpunt with respect to Cape Agulhas and Struisbaai on the Cape south coast.

2. MOTIVATION FOR BOARDWALK

The coastal area between Cape Agulhas and the small village of Suiderstrand (Figure 1) was traditionally accessed and used by the local fishermen, residents and visiting holiday makers. This was done both on foot and by vehicles driving in the coastal zone, creating a myriad of jeep tracks in the area in an uncontrolled and haphazard manner, mainly parallel to the coast.

The Agulhas National Park (ANP) has closed down all vehicle tracks that traverse the intertidal zone in order to preserve the coastal vegetation, but they have kept footpaths open so that fishermen can still access their favourite fishing spots.

3. DEVELOPMENT PROPOSALS

The ANP want to provide proper access to the area known as Rasperpunt from the main Agulhas to Suiderstrand road. They propose to construct a boardwalk 581.54 metres in length.

The aim is to clear a 2m wide stretch of bush to the fishing spot using a bush cutter. No ground works or civil works will be done.

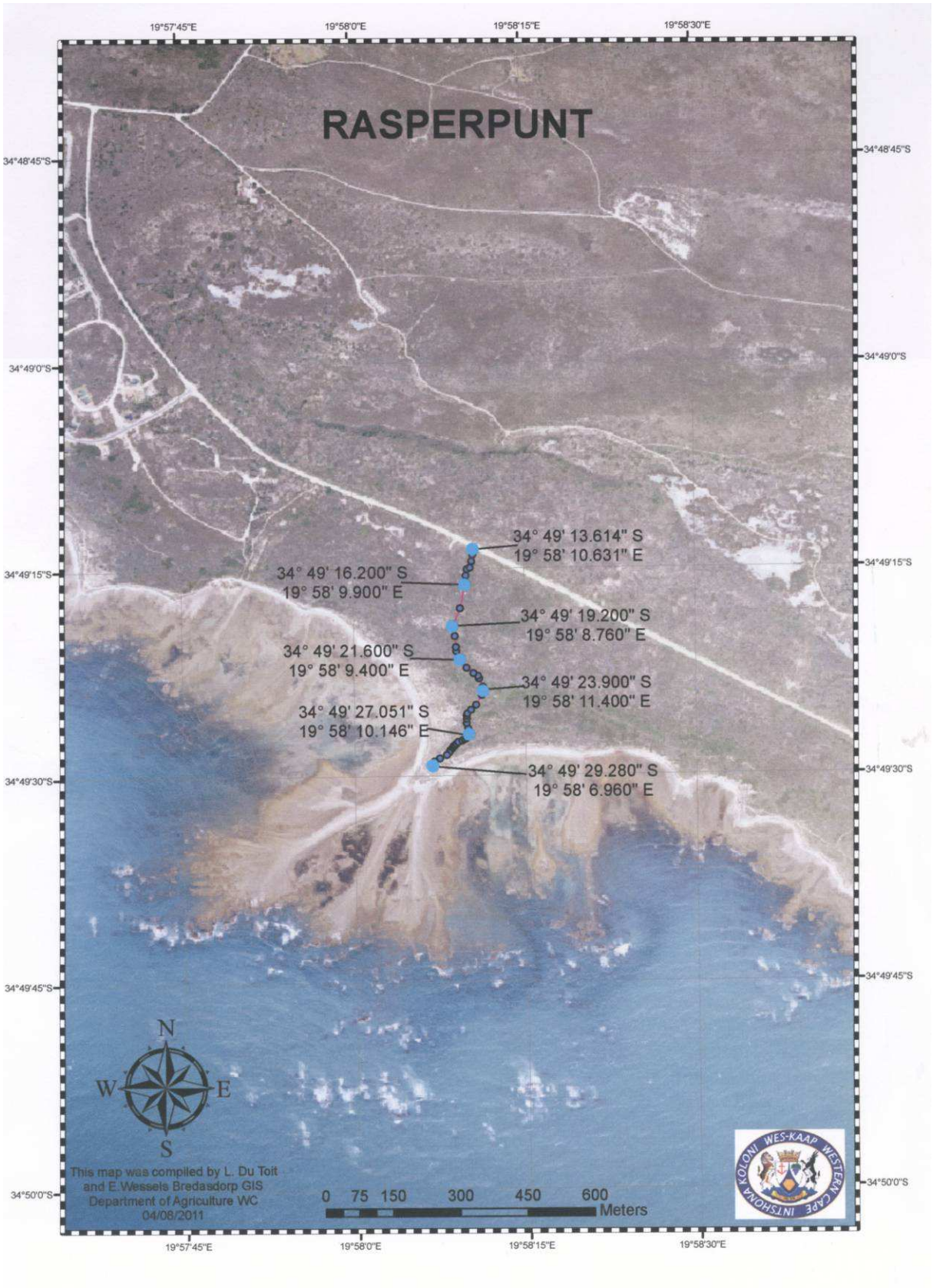

Figure 2: An aerial view of the proposed boardwalk from the Suiderstrand gravel road, to Rasperpunt. The new boardwalk will be approximately 581m in length.

The details of the boardwalk have not been finalised but it is anticipated that it will be constructed of wood and have wooden anchor poles which will be buried to a depth of 0.3m and anchored with a concrete block for stability where deemed necessary.

The proposed route takes the most direct route from the main gravel track. There are no real alternatives. Any route from the east or west may cross over sensitive primary dune.

4. 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.

5. 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 5000m² in extent, or any road or linear development exceeding 300m in length is proposed.

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).

Rasperpunt falls within the Agulhas National Park and National Parks are considered Grade 1 heritage sites. This HIA is submitted in terms of Section 38(8) of the NHRA (No 25 of 1999). Heritage Western Cape requires an “HIA in terms of Section 38(3) of the NHRA (No 25 of 1999) assessing the impact on the identified archaeological and palaeontological resources” (Case No 120203JL14).

6. 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).

6.1 Palaeontological Background

In an email dated 27 February 2012, Dr John Pether (the Palaeontological Impact Assessor) comments that the boardwalk will traverse over geologically-young dunes of the Strandveld Formation. Along the seaward (south) end of the boardwalk, post holes may intersect late Quaternary raised beach deposits with fossil shells however; the impact is minor and the raised beach fossil content if of local significance (see attached email).

6.2 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. He also suggested that the fish traps found in the area had been built by the same people (Khoekhoen herders) who were responsible for the accumulation of shell middens. It is now generally accepted by archaeologists that shortly after 2000 years ago, a new economic system was introduced into southern Africa, namely that of transhumant pastoralism.

In 1984, archaeologists from the South African Museum and the University of Cape Town surveyed an area to the west of Struisbaai (Hall 1984). They were interested in the way in which prehistoric people were using different types of environment in the area. An exhaustive survey showed that the majority of archaeological sites were located directly on the shoreline, or on the edge of the inland dune where large dunes overlook the coastal plain. 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.

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.

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. Archaeological sites in the study area are not only confined to the shoreline area, however. Large numbers of sites occur in the inland dune fields, as well as above the limestone cliffs overlooking the sea (Hall 1984, 1998a).

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.

Surveys of surrounding areas have indicated a high density of archaeological sites. In his general survey of the area in 1997, Kaplan identified at least **15** shell middens. He noted that shell midden material was located in open spaces and 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. Kaplan (2007) examined a number of areas to the west of Rasperpunt with a view to the establishment of tourist facilities at Pietie se Punt. He identified **12** shell middens during his survey observing the scattered remains of highly fragmented shellfish spread unevenly among the low dunes.

6.3 Historical Background

In addition to the large number of pre-colonial archaeological sites that occur, a number of historic farms, dating to early European settlement, also occur inside the ANP (Kaplan 2007). Early European stock farming in the area was complemented by subsistence farming, including vegetable gardens and the gathering of veldkos such as “suurvye”. Historic homesteads that occur within boundary of the Park include the farms Renosterkop, Rietfontein, Brandfontein and Ratelrivier. The homesteads at Renosterkop, with its typical Wolfneus gable, Rietfontein and Ratelrivier, are declared National Monuments.

7. DESCRIPTION OF THE AFFECTED ENVIRONMENT

The topography of the Rasperpunt peninsula is undulating, comprising coastal *strandveld* covering low coastal dunes. The shoreline is characterised by sheltered rocky bays and gulleys which contain a number of well preserved fish traps (viswyers).

8. SURVEY METHODS

The property was visited by Lita Webley 10 August 2011. She was accompanied by Emmerentia and Giel de Kock, as well as Curt Jones of the Agulhas National Park.

They indicated the exact route for the proposed boardwalk. The survey was conducted on foot, and a Garmin GPS unit was used to record sites. Digital photographs were taken where appropriate. However, dense vegetation meant that it was difficult to provide good illustrative material of the sites.

Plate 1: View south, toward Rasperpunt. The fish traps are not clearly visible. Photo taken along the route of the proposed boardwalk.

Plate 2: View northward, toward the low-lying limestone ridge which runs parallel to the coast. The proposed route will cross the calcrete exposure indicated in the photograph.

8.1 Limitations

The coastal plain between the Suiderstrand Road and the ocean is densely vegetated making surface visibility poor. The vegetation is up to 1.5m in height. Archaeological material is only visible in footpaths and in localised patches between bushes.

9. RESULTS OF THE SURVEY

At least 15 prehistoric shell middens (dating to the Late Stone Age) were recorded during the survey along, or immediately adjoining, the proposed boardwalk (Figure 3). The majority of the middens were located on the top of vegetated dunes or

eroding down slope in a dispersed scatter. A number of these middens were identified because they have been exposed in informal footpaths. Others were identified because of scatters of shells observed in areas of dune mole rat activity.

The contents of the sites are fairly homogenous. The middens are dominated by *Turbo sarmaticus* (alikreukel), *Haliotis* (perlemoen), *Scutellastra longicosta*, *Cymbula granatina & S. argenvillei* (limpets). Some of them have associated quartzite manuports, but none have any apparent flaked stone artefacts. None of the middens have associated bone, ostrich eggshell or pottery.

Site 005 is a single quartz core, with no apparent shell material nearby. Site 006 is a single quartzite lower grindstone.

Site 019 represents a broad scatter of stone artefacts on a calcrete exposure. These included a number of quartz cores, chunks and flakes. There area also a large number of red, fine-grained microlithic stone tools – of particular interest was a total of four thumbnail scrapers (Plates 7-12). The stone scrapers may be of mid-Holocene date but in the absence of dated sites from this area, it is difficult to be definitive about this.

Figure 3: The black line indicates the proposed route of the boardwalk and the archaeological shell midden sites, discovered during the survey, are indicated by the blue flags.

Plates 3 & 4: View of Site 001, bisected by the footpath with indication of the density of shells.

Plate 5: The arrow indicates the position of Site 004. It is slipping down the slope of this vegetated dune, and has been bisected by the footpath. The parking area is in the background.

Plate 6: Site 006, comprising a possible quartzite lower grindstone in the footpath.

Plate 7: It is proposed to bring the boardwalk across this exposure of calcrete.

Plates 8 & 9: Views of limpet shells embedded in the calcrete exposure.

Plate 10: Some of the quartz chunks and cores found on the calcrete exposure; **Plate 11:** View of some of the fine-grained silcrete flakes, bladelets and scrapers found on the site.

Plate 12: Four thumbnail scrapers made on a fine grained silcrete. They date to the Later Stone Age.

10. ASSESSMENT OF IMPACT AND SIGNIFICANCE

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

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

10.1 Significance

With regard the palaeontology of the coastal zone, Dr John Pether (the Palaeontological Impact specialist) comments that the "at seaward (south) end of the boardwalk, post holes may intersect with late Quaternary raised beach deposits with fossil shells. However, the impact is minor and the raised beach fossil content is of local significance".

The archaeological survey identified at least 15 shell middens on/or immediately adjacent to the proposed boardwalk (Figure 3). Similar shell middens at Pietie se Punt, to the west of Rasperpunt, were rated by Kaplan (2007) as of high local significance. It is difficult to rate the heritage significance of all the middens which were identified during the survey because the majority are only represented by a thin scatter of fragmented surface shell (Table 1). Presumably the bulk of the midden is preserved below the soil surface, and heritage significance can only be assigned when the site is exposed.

There is at least one scatter of Later Stone Age stone artefacts of high heritage significance. These stone tools are found on a calcrete exposure which appears to contain fossilised marine shell. The calcrete exposure may contain other fossilised material and it may be of palaeontological significance.

The tidal fish traps located off the coast at Rasperpunt are of high heritage significance.

With regard the significance of the cultural landscape in and around Rasperpunt, the proposed boardwalk:

- Falls within the ANP, an area of great wilderness and scenic landscape qualities;
- It lies along the coastline, to the west of Cape Agulhas, the southernmost tip of Africa, an area of great geographic importance;
- The Rasperpunt peninsula is of great archaeological significance because of its abundant shell middens and adjoining fish traps (viswyvers).

10.2 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 boardwalk, we may anticipate that:

- Vegetation clearing operations for the boardwalk will very likely expose shell midden material and possibly also burials;
- The excavation of post holes for the boardwalk may intersect with shell middens resulting in destruction of a portion of the site;
- The construction of the boardwalk will not have a direct impact on the tidal fish traps. However, there may be indirect impacts on the fish traps by local fishermen, who displace the stones while looking for bait as well as tourists who may walk on the fish traps;
- The visual impact of the development will be minimal as the boardwalk will wind among the dunes. It is not likely to impact on the cultural landscape.

During the Operational Phase of the boardwalk, we may anticipate that:

- Increased visitors to the area may result in pilfering of remains from the various sites (for example some shell middens at the coast have been stripped of their perlemoen shells);
- The visual impact of the development will be minimal as the boardwalk will wind among the dunes. It is not likely to impact on the cultural landscape.

10.3 Conservation

The basic requirements for conserving shell middens are;

- Take measures to slow down natural erosion (stabilize fragile cuttings or embankments);
- Keep people off the sites, make sure footpaths are directed away from sensitive material;
- Educate people and discourage people from illegally collecting artefacts;
- Keep roads and vehicles away from sensitive sites.

11. RECOMMENDATIONS

The proposed boardwalk across Rasperpunt peninsula will traverse (or be located in close proximity to) at least 15 Later Stone Age archaeological shell middens and a

further calcrete exposure embedded with shell and with a surface scatter of LSA stone artefacts. Most of these “sites” are represented by a thin scatter of surface shell and it is difficult to comment on their heritage significance. This will only be determined if more sub-surface material is exposed. However, it is likely that many of the sites, like those along this coastline described by Kaplan (2007) and Hart (2004) are of high local significance.

Due to the high density of archaeological sites on the Rasperpunt peninsula, it is highly likely that any boardwalk across the area will result in the disturbance of archaeological sites, regardless of the route taken.

However, local fishermen are currently walking across the peninsula to reach fishing spots along the coast and their tracks are resulting in the degradation of archaeological sites.

The construction of a boardwalk across the Rasperpunt peninsula is supported as it will:

- Regulate access to the coast;
- Protect archaeological sites from degradation.

It is recommended that the construction of the boardwalk should be monitored by an archaeologist. If any sub-surface archaeological material is detected during the sinking of the post holes the archaeologist should be consulted about an alternative route.

12. REFERENCES

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Schweitzer, FR & Wilson, ML. 1982. Byneskranskop 1: a late quaternary living site in the southern Cape Province, South Africa. Annals of the South African Museum 88(1):1-203.

Table 1: List of archaeological sites recorded during the assessment

Site Name	GPS co-ordinates	Discussion	Significance
001	S34 49 19.9 E19 58 08.1	Deflated midden cut through by footpath. It covers the top of the hill and extends several metres to the east (the point 017 marks the eastern edge of the midden). It is at least 20m long. It is difficult to determine the depth of deposit, as there is only a light scattering of shell in disturbed areas, but is feasible to suggest that it runs along the top of the hill/dune. There are a number of small quartzite beach cobbles (manuports), but with no sign of use. The midden comprises fragments of *Turbo sarmaticus* (alikreukel) and limpet (mainly *S. longicosta*).	High local
002	S34 49 20.8 E19 58 07.8	A further light scatter of fragmented shell, mainly small pieces of limpet and some T. sarmaticus fragments	Unknown
003	S34 49 20.9 E19 58 08.8	A further light scatter of fragmented shell, mainly small pieces of limpet and some T. sarmaticus fragments	Unknown
004	S34 49 28.7 E19 58 08.1	A very deflated shell midden sliding down the side of a dune, and cut by the old road. It is close to the parking area at the sea. It is mainly characterized by quartzite cobbles (manuports) and T.sarmaticus fragments.	Unknown
005	S34 49 27.6 E19 58 09.0	One quartz core, on the old road.	Low
006	S34 49 26.1 E19 58 10.0	One possible quartzite grindstone in the footpath, no apparent shell midden nearby	Low
007	S34 49 23.9 E19 58 10.8	A light scatter of shell, mainly small pieces of limpet and some T. sarmaticus fragments.	Medium local
008	S34 49 23.5 E19 58 09.6	A large midden on the side of a hill slipping down into a valley between the two hills/dunes. This midden is	High local

		different from the others as it contains a number of broken and complete perlemoen (*Haliotis midae*). The concentration of shell seems quite dense, but there is no apparent in situ material.	
009	S34 49 22.9 E19 58 10.0	Site 9-16 are in a line running along the base of a large hill/vegetated dune. Densely vegetated area, the shell is only visible as a light scatter of fragmented limpets and the larger, more dense fragments of *T. sarmaticus*. No obvious stone artefacts, pottery, bone or oes.	Unknown
010	S34 49 22.6 E19 58 10.0	Site 9-16 are in a line running along the base of a large hill/vegetated dune. Densely vegetated area, the shell is only visible as a light scatter of fragmented limpets and the larger, more dense fragments of T. sarmaticus. No obvious stone artefacts, pottery, bone or oes.	Unknown
011	S34 49 22.8 E19 58 10.9	Site 9-16 are in a line running along the base of a large hill/vegetated dune. Densely vegetated area, the shell is only visible as a light scatter of fragmented limpets and the larger, more dense fragments of T. sarmaticus. No obvious stone artefacts, pottery, bone or oes.	Unknown
012	S34 49 23.0 E19 58 11.2	Site 9-16 are in a line running along the base of a large hill/vegetated dune. Densely vegetated area, the shell is only visible as a light scatter of fragmented limpets and the larger, more dense fragments of T. sarmaticus. No obvious stone artefacts, pottery, bone or oes.	Unknown
013	S34 49 24.0 E19 58 11.5	Site 9-16 are in a line running along the base of a large hill/vegetated dune. Densely vegetated area, the shell is only visible as a light scatter of fragmented limpets and the larger, more dense fragments of T. sarmaticus. No obvious stone artefacts, pottery, bone or oes.	Unknown
014	S34 49 23.1 E19 58 12.9	Site 9-16 are in a line running along the base of a large hill/vegetated dune. Densely vegetated area, the shell is only visible as a light scatter of fragmented limpets and the larger, more dense fragments of T. sarmaticus. No obvious stone artefacts, pottery, bone or oes.	Unknown
015	S34 49 23.1 E19 58 12.1	Site 9-16 are in a line running along the base of a large hill/vegetated dune. Densely vegetated area, the shell is only visible as a light scatter of fragmented limpets and the larger, more dense fragments of T.	Unknown

		sarmaticus. No obvious stone artefacts, pottery, bone or oes.	
016	S34 49 23.0 E19 58 11.7	Site 9-16 are in a line running along the base of a large hill/vegetated dune. Densely vegetated area, the shell is only visible as a light scatter of fragmented limpets and the larger, more dense fragments of T. sarmaticus. No obvious stone artefacts, pottery, bone or oes.	Unknown
017	S34 49 19.9 E19 58 08.7	Deflated midden cut through by footpath. It covers the top of the hill and extends several metres to the east (the point 017 marks the eastern edge of the midden). It is at least 20m long. It is difficult to determine the depth of deposit, as there is only a light scattering of shell in disturbed areas, but is feasible to suggest that it runs along the top of the hill/dune. There are a number of small quartzite beach cobbles, but with no sign of use. The midden comprises fragments of *Turbo sarmaticus* (alikreukel) and limpet (mainly *S. longicosta*).	Unknown
018	S34 49 17.4 E19 58 08.9	A light scatter of shell, mainly small pieces of limpet and some T. sarmaticus fragments in the footpath	Unknown
019	S34 49 15.5 E19 58 09.8	The proposed boardwalk will cross a large calcrete exposure clearly visible on aerial photographs. There are some limpet shells embedded in the calcrete. There are also a large number of fine-grained red microlithic artefacts, including at least 4 scrapers, and some snapped bladelets. There are also a number of quartz chunks, cores and flakes. These artefacts are found scattered across the surface of the calcrete exposure.	High local

COMMENTS OF THE PALAEONTOLOGICAL IMPACT SPECIALIST

From: John Pether [mailto:jpether@iafrica.com]
Sent: 27 February 2012 01:10 PM
To: 'Christine'
Subject: RE: Quotation for a palaeontological report at Agulhas NP

Dear Christine,
In my opinion a palaeontological study is not warranted.
The boardwalk will traverse over geologically-young dunes of the Strandveld Formation.
Palaeontological impacts relate primarily to the depth and scale of bulk earth works.
I imagine the extent of subsurface disturbance is confined to post holes to locally anchor the boardwalk?
Material such as bones and shells in the dune sand will be in an archaeological context.
Along the seaward (south) end of the boardwalk, post holes may intersect late Quaternary raised beach deposits with fossil shells.
However, the impact is minor and the raised beach fossil content is of local significance.
Is archaeological monitoring a recommendation in the AIA?
Thanks and Regards,
John

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