

A PHASE 1 ARCHAEOLOGICAL HERITAGE IMPACT ASSESSMENT OF THE PROPOSED REZONING AND SUBDIVISION OF PORTIONS 55, 56, 62 AND 81 OF THE FARM MAITLAND MINES NO. 478, UITENHAGE, PORT ELIZABETH DISTRICT, EASTERN CAPE PROVINCE, TO ESTABLISH LODGE DEVELOPMENTS AND A NATURE RESERVE

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This report follows the minimum standard guidelines required by the South African Heritage Resources Agency for compiling Phase 1 Archaeological Heritage Impact Assessment (AHIA) reports.

SUMMARY

Purpose of the study

To conduct a Phase 1 Archaeological Heritage Impact Assessment of Portions 55, 56, 62 and 81 of the Farm Maitland Mines No. 478, Uitenhage, Port Elizabeth District, Eastern Cape Province; to evaluate the importance of the archaeological heritage sites, the potential impact of the development and to make recommendations to minimize possible damage to these sites.

The investigation

The proposed property for development is covered by dense coastal dune fynbos, alien vegetation and shifting sand dunes. A number of archaeological sites, all shell middens and scatters were found on the exposed fossil dune floors in the shifting dune areas along the coast and inland. A massive *Donax serra* shell midden is situated in the beach zone. Although all the sites fall outside the footprint, the development will indirectly impact on them and a preventative management plan against possible damage must be introduced.

Cultural sensitivity

The proposed property for development is situated on the coast and is culturally a very sensitive area and the possibility of finding archaeological sites/material is high. The survey indicates that the immediate coastline is rich in archaeological sites.

Recommendations

1. All construction work must be monitored. Construction managers/foremen must be informed before construction starts, on the possible types of heritage sites which may be encountered during construction. Alternatively, a person must be trained as a site monitor to report to the foreman when archaeological sites are found.

2. No vehicles must be allowed to enter the beach and/or dune areas.
4. If any concentrations of archaeological material are exposed during construction, all work in that area should cease and it should be reported immediately to the nearest museum or archaeologist or to the South African Heritage Resources Agency.
5. Landowners and visitors to the proposed development must be alerted to the importance, sensitivity, conservation and protection of the cultural heritage of the region to avoid possible damage to heritage features or removal of material from heritage sites anywhere in the region.

PROJECT INFORMATION

Status

The report is part of an Environmental Impact Assessment.

The type of development

The establishment of a lodge developments and a nature reserve.

The Developer

Project Development Professionals
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The Consultant

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Terms of reference

The original proposal was to conduct a Phase 1 Archaeological Heritage Impact Assessment of the proposed rezoning and subdivision of Portion 55, 56, 62 and 81 of the Farm Maitland Mines No. 478, Uitenhage, Port Elizabeth District, Eastern Cape Province; to evaluate the importance of the archaeological heritage sites, the potential impact of the development and to make recommendations to minimize possible damage to these sites.

BRIEF ARCHAEOLOGICAL BACKGROUND

Literature review

Little systematic archaeological research has been conducted in the immediate area. However, the Albany Museum has large collections and reports on archaeological sites from the region.

The oldest evidence of the early inhabitants in this area are large stone tools, called handaxes and cleavers, which can be found amongst the gravels which line the hilltops and at old spring deposits in the region (Deacon 1970). These large stone tools are from a time period called the Earlier Stone Age (ESA) and may date between 1,5 million and 250 000 years old. The large hand axes and cleavers were replaced by smaller stone tools called the Middle Stone Age (MSA) flake and blade industries. Evidence of MSA sites occur throughout the region and date between 200 000 and 30 000 years old. Fossil bone may in rare cases be associated with MSA occurrences. (Deacon & Deacon 1999).

The nearby coastal region is very rich in archaeological remains (Binneman & Webley, pers. observ/research.). Reports on archaeological features between Port Elizabeth and Van Stadens River Mouth were made in 1954 and again in 1962/64 by Mr W.H.R. Gess (Albany Museum Collections). These notes were published by Mr J. Rudner (1968). Rudner mentioned the remains of several Khoi pots of which are housed in the Port Elizabeth Museum and the Iziko Museums in Cape Town. The most common archaeological sites are shell middens (large piles of marine shell) found usually concentrated opposite rocky coasts (people popularly refer to these as 'strandloper middens'). These were campsites of San, Khoi and KhoiSan groups who lived along the immediate coast and collected marine foods. Large stone features are often associated with shell middens. Mixed with the shell are other food remains, cultural material and often human remains are found in the middens. Human remains may also be buried in, or close to the middens. These middens date from the past 8 000 years and may occur to some 5 km inland from the coast. (Binneman 2001, 2005). Also associated with middens are large stone floors which were probably used as cooking platforms (Binneman 2001, 2005). Some 2 000 years ago Khoi pastoralists occupied the region and lived mainly in small settlements. They were the first food producers in South Africa and introduced domesticated animals (sheep, goat and cattle) and ceramic vessels to southern Africa.

References

- Binneman, J.N.F. 2001. An introduction to a Later Stone Age coastal research project along the south-eastern Cape coast. *Southern African Field Archaeology* 10:75-87.
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- Deacon, H.J. 1970. The Acheulian occupation at Amanzi Springs, Uitenhage District, Cape Province. *Annals of the Cape Provincial Museums*. 8:89-189.
- Deacon, H.J. & Deacon, J. *Human beginnings in South Africa*. Cape Town: David Phillips Publishers.
- Rudner, J. 1968. Strandloper pottery from South and South West Africa. *Annals of the South African Museum* 49:441-663.

Museum/University databases and collections

The Albany Museum in Grahamstown, Bayworld, and Iziko Museums in Cape Town house collections and information from the region.

Relevant impact assessments:

Binneman J.N.F. 2009. A phase 1 archaeological heritage impact assessment of the proposed rezoning and subdivision of Portion 30 of the Farm Maitland Mines No. 478, Uitenhage, Port Elizabeth District, Eastern Cape Province. Report for CEN Integrated Environmental Management Unit, Port Elizabeth.

DESCRIPTION OF THE PROPERTY

Area surveyed

Location data

Portion 55, 56, 62 and 81 of the Farm Maitland Mines No. 478, Uitenhage, Port Elizabeth District, Eastern Cape Province, is situated between Maitland River Mouth (east) and Blue Horizon Bay (west) some 30 kilometres from Port Elizabeth (Maps 1-2). The proposed property for development is located on a high Holocene dune system which slopes steeply towards Maitland River to the east and the coast to the south (Map 3-4). Dense coastal dune fynbos and alien vegetation cover the property (Figs 1-4). The proposed development site is approximately 308.3 ha in size.



Figs 1-4. General views of the proposed property for development. Note the dense coastal dune vegetation and the shifting sand dunes.

Map

1:50 000 3425 CD, 3425 AB Uitenhage

ARCHAEOLOGICAL INVESTIGATION

Methodology

The survey was conducted on foot by two people. GPS readings were taken of all important features and were also digitally recorded. The development will take place on Holocene sand dunes overlying fossil dunes of probably Pleistocene age. Apart from inland intrusions of dune sand towards, and along the Maitland River, most of the property is covered by dense alien vegetation and coastal dune fynbos. These conditions made it difficult to find archaeological sites/remains. Archaeological sites were only observed where the underlying hard fossilized dune surfaces were exposed. Only the exposed areas along the foot of the dune and erosion gullies could be investigated. Many shells middens were found in these exposed areas. Although it was not possible to survey the entire property due to the impenetrable vegetation, these sites are an indication of what the remainder of the property may be like. Construction water pipeline to Port Elizabeth destroyed and damaged a number of sites. Only open-air shell midden/shell scatters dating from the Holocene Later Stone Age (past 10 000 years) were found.

Classification of sites

The South African Heritage Resources Agency's minimum standards guidelines have been followed for the field rating/significance of the sites (see Appendix C). All the sites were open-air shell middens and shell scatters dating from the Holocene Later Stone Age. The following rating system was used for shell occurrences/ accumulations:

1. Shell middens: accumulation/concentration of shell at least 1 shell depth and 0,50 x 0,50 m.
2. Midden scatters: concentrations of shell fragments (but also occasional whole shells) with no evident depth spread over a restricted or large area.
3. Shell scatters: random spreads of mainly shell fragments over a restricted or large area with no evident depth.

Description of the sites

The shell middens and scatters all consisted of only *Donax serra* shell (white sand mussel).

Site 1: Shell midden on the fossil dune ridge – 33.59.066S; 25.17.268E (Figs 5 & 6).

- Small *Donax serra* shell midden.
- Site is most probably disturbed by nearby vehicle track and is of low significance.
- A General Protected IV C site and generally of low significance.
- The site falls outside the footprint, but is indirectly under threat from the proposed development.

Site 1 was a small *Donax serra* shell midden on the edge of a high fossil dune ridge overlooking the beach (Figs 5-6). The shell midden was 8 x 2 metres in size and two shells deep in places. Apart from one flaked cobble no other archaeological remains were observed.



Figs 5-6. A *Donax serra* shell midden (Site 1) on the fossil dune ridge next to an old vehicle track.

Site 2: Shell scatter – 33.58.782S; 25.17.067E (Figs 7-8).

- Shell scatter. Exact size is unknown, but is most probably part of a larger accumulation which may be covered by vegetation.
- A General Protected IV C site and generally of low significance.
- The site is situated outside the footprint, but is indirectly under threat from the proposed development.

This shell scatter with stone tools was situated on an exposed fossil dune floor at the bottom of a high vegetated sand dune (Figs 7-8). The exact size is not known because most of it is probably covered by dune sand and vegetation. Apart from the silcrete stone tools, no other cultural materials or food remains were found.



Figs 7-8. The location of the shell scatter and stone tools (Site 2) on the exposed fossil dune floor.

Site 3: Shell midden and midden scatters– 33.58.864S; 25.17.064E and 33.58.852E; 25.17.043S (Figs 9-10).

- Shell midden and midden scatters.
- Generally Protected IV B site. This site should be recorded/sampled before destruction (generally Medium significance).

- These sites are situated outside the footprint, but are indirectly under threat from the proposed development.

A shell midden and several scatters were situated on an exposed fossil dune floor in the inland dune invasion. The midden was a few shells thick in places and measured approximately 12 x 2 metres in size. Apart from a few stone tools no other food remains or cultural materials were observed (Figs 9-10). There was another midden scatter southwest of the shell midden and measured 7 x 5 metres in size.



Figs 9-10. View of shell midden at Site 3.

Site 4: Water pipeline area - 33.58.873S; 25.16.986E and 33.58.886S; 25.16.965E (Figs 11-16).

- Shell middens and midden scatters.
- Local Grade IIIB sites of high significance. The *in situ* middens could be mitigated and (part) retained as a heritage register sites.
- The sites are situated outside the footprint, but indirectly under threat from the proposed development.

The Site 4 area was a small exposed fossil dune floor with a number of shell middens and shell scatters some 100 metres southwest of Site 3. The water pipeline to Port Elizabeth also runs through this area part of the property and several shell middens were disturbed and destroyed during the construction (Map 3) (Figs 11-16). The exposed area was some 50 x 20 metres and apart from the several damaged middens and scatters there were also two prominent shell middens. Shell midden 4(i) was approximately 10 x 2 metres and 25 centimetres thick. Shell midden 4(ii) was some 3 metres east of 4(i) and measured 8 x 4 metres and was 20 centimetres thick. Apart from a few stone in the general vicinity no other cultural material or food remains were observed.



Figs 11-16. Views of the water pipeline area. The pipeline is visible in the top right image, shell midden 4(i) (bottom left) and 4(ii) (bottom right).

Site 5: Shell midden scatters - 33.58.808S; 25.16.965E (Figs 17-18).

- Several shell midden scatters.
- A General Protected IV C site and generally of low significance.
- The sites are situated outside the footprint, but indirectly under threat from the proposed development.

Several thin midden scatters were exposed on the high calcrete ridge overlooking the beach, but apart from occasional stone tools were not associated with any other archaeological remains.



Figs 17-18. A general views of the midden scatters at Site 5.

Site 6: Large shell midden - 33.58.886S; 25.16.672E (Figs 19-22).

- Shell midden.
- A local Grade IIIA site of high significance. The site should be retained as a heritage register site and so mitigation as part of the development process is not advised.
- The sites are situated outside the footprint, but indirectly under threat from the proposed development.

This very large *Donax serra* shell midden was situated in the beach zone and well exposed and visible from a distance. It is approximately 30 x 20 metres and between 0,30 and 0,50 metres thick (Figs 19-22). Surprisingly, apart from marine shell no other food remains were observed. Occasional quartzite stone tools, pottery, and *Donax serra* ‘scrapers’ and pendants were found. The presence of Khoi pottery relatively dates the midden younger than 1 800 years old and represents one of the largest shell middens in the region. Unfortunately, protecting the midden is difficult because it is exposed to the damaging effects of the natural elements. However, the numerous vehicle tracks on the slope of the midden and surrounding areas indicated that the main disturbance to the feature was caused by human activities. It is not possible to control public access along the beach, but it would assist in protecting the feature if access of vehicles from the proposed property for development is stopped. Landowners and visitors to the development must also be made aware sensitive nature and importance of the shell midden.



Figs 19-20. Different views of the shell midden. Note the vehicle tracks on the slope.



Fig. 21-22. A views of the shell midden slope and the thick, compact deposit of shell.

CONSERVATION OF ARCHAEOLOGICAL SITES

During the survey it was noticed that off-road motorcycle(s) entered the property at the gate at the top of the high dune ridge a few days before (see Map 3). The tracks were visible all the way down the dune along the cleared path next to the fence to the dunes and beach below. Whether this is a regular practise is not known, but judging from the large number of tracks in the dunes and over the shell middens and scatters it would appeared if this happens frequently (Figs 23-26). Archaeological sites are protected by legislation (National Heritage Resources Act of 1999) and it is therefore illegal to damage these features (see Appendix A). The landowners/developers as the custodians of the heritage on their property must introduce a management plan to prevent any future damage to the archaeological heritage sites.



Fig. 23-26. Different views of vehicle damage to archaeological sites.

Discussion

The dense vegetation cover of the proposed property for development made it impossible to find many archaeological sites inland from the edge of the dune. However, the few shell middens found along the edge of the dune and in the erosion gullies indicated clearly that there are probably many sites covered by vegetation and dune sand inland. This assumption is supported by the fact that the majority of the shell middens were found up to 3-4 metres from the surface. The huge shell midden found during the survey on the property must be protected against any possible damage. The majority of these sites may date from the past 6000 years, but there may also be other sites dating much older. The property is situated close to the coast and is therefore a sensitive area for archaeological sites and development must be closely managed and monitored to avoid any damage to sites/materials.

RECOMMENDATIONS

The proposed property for development is situated on the coast and due to the archaeological sensitivity of the property, the following recommendations are made:

1. All construction work must be monitored. A person must be trained as a site monitor to report to the foreman when archaeological sites are found. This person must monitor all levelling and trenching activities during the construction phase.
2. No vehicles must be allowed to enter the dune and/or beach area to avoid possible damage to archaeological sites.
3. Construction managers/foremen should be informed before construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites.
4. If any concentrations of archaeological material (especially human remains) are exposed during construction, all work in that area should cease and it should be reported immediately to the nearest museum/archaeologist or to the South African Heritage Resources Agency, so that a systematic and professional investigation can be undertaken. Sufficient time should be allowed to remove/collect such material (See Appendix B for a list of possible archaeological sites that may be found in the area). Recommendations will follow after the investigation and may include:
 - A Phase 2 Mitigation process to systematically excavate and to remove the archaeological deposits before construction of the development continues.
5. Landowners and visitors to the development must be made aware of the importance, sensitivity, conservation and protection of the cultural heritage of the region to avoid possible damage to heritage features or removal of material from heritage sites anywhere in the region. The developers should consider a small display/information centre at a central place in the resort/hotel complex where relevant information can be displayed regarding the archaeological heritage resources of the area. This must include a 'management strategy' which must inform the visitors/tourists about the protection, conservation and protocol of visiting these heritage resources. The information must also be displayed on information boards in public places and along paths to the coast. Such facilities will be a constructive

contribution towards the potential protection and conservation of the heritage resources of the region and may prove to be a valuable 'investment' to the development.

Motivation for Recommendation 5.

Archaeological heritage resources are non-renewable and also protected by the South African National Heritage Resources (NHRA) Act 25 of 1999. The main concern is to protect and conserve the sites and their contents. There is no doubt that the development will have an impact and ripple effect on the archaeological heritage resources of the region. The impact will be indirect, but will increase over time. It is therefore the responsibility of the developers to inform potential visitors/tourists to the development of the importance of the archaeological heritage of the area.

The immediate and adjacent areas to the proposed development are rich in archaeological heritage sites with extremely valuable, important and unique archaeological deposits. There are sites within walking distance from the development and many others within a short driving distance. These sites and others will be 'discovered' by visitors during their stay/visit.

GENERAL REMARKS AND CONDITION

Note: This report is a phase 1 archaeological heritage impact assessment/investigation only and does not include or exempt other required heritage impact assessments (see below).

The National Heritage Resources Act (Act No. 25 of 1999, section 35) (see Appendix A) requires a full Heritage Impact Assessment (HIA) in order that all heritage resources, that is, all places or objects of aesthetics, architectural, historic, scientific, social, spiritual linguistic or technological value or significance are protected. Thus any assessment should make provision for the protection of all these heritage components, including archaeology, shipwrecks, battlefields, graves, and structures older than 60 years, living heritage, historical settlements, landscapes, geological sites, palaeontological sites and objects.

It must be emphasised that the conclusions and recommendations expressed in this archaeological heritage sensitivity investigation are based on the visibility of archaeological sites/features and may not therefore, reflect the true state of affairs. Many sites/features may be covered by soil and vegetation and will only be located once this has been removed. In the event of such finds being uncovered, (such as during any phase of construction work), archaeologists must be informed immediately so that they can investigate the importance of the sites and excavate or collect material before it is destroyed. The onus is on the developer to ensure that this agreement is honoured in accordance with the National Heritage Act No. 25 of 1999.

It must also be clear that Archaeological Specialist Reports (AIA's) will be assessed by the relevant heritage resources authority. The final decision rests with the heritage resources authority, which should grant a permit or a formal letter of permission for the destruction of any cultural sites.

APPENDIX A: brief legislative requirements

Parts of sections 35(4), 36(3) and 38(1) (8) of the National Heritage Resources Act 25 of 1999 apply:

Archaeology, palaeontology and meteorites

35 (4) No person may, without a permit issued by the responsible heritage resources authority—

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;*
- (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;*
- (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.*

Burial grounds and graves

36. (3) (a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority—

- (a) *destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;*
- (b) *destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or*
- (c) *bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.*

Heritage resources management

38. (1) *Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorized as –*
- (a) *the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;*
 - (b) *the construction of a bridge or similar structure exceeding 50m in length;*
 - (c) *any development or other activity which will change the character of the site –*
 - (i) *exceeding 5000m² in extent, or*
 - (ii) *involving three or more erven or subdivisions thereof; or*
 - (iii) *involving three or more erven or divisions thereof which have been consolidated within the past five years; or*
 - (iv) *the costs of which will exceed a sum set in terms of regulations by SAHRA, or a provincial resources authority;*
 - (d) *the re-zoning of a site exceeding 10 000m² in extent; or*
 - (e) *any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must as the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.*

APPENDIX B: IDENTIFICATION OF ARCHAEOLOGICAL FEATURES AND MATERIAL FROM COASTAL AREAS: guidelines and procedures for developers

Shell middens

Shell middens can be defined as an accumulation of marine shell deposited by human agents rather than the result of marine activity. The shells are concentrated in a specific locality above the high-water mark and frequently contain stone tools, pottery, bone and occasionally also human remains. Shell middens may be of various sizes and depths, but an accumulation which exceeds 1 m² in extent, should be reported to an archaeologist.

Human Skeletal material

Human remains, whether the complete remains of an individual buried during the past, or scattered human remains resulting from disturbance of the grave, should be reported. In general the remains are buried in a flexed position on their sides, but are also found buried in a sitting position with a flat stone capping and developers are requested to be on the alert for this.

Fossil bone

Fossil bones or any other concentrations of bones, whether fossilized or not, should be reported.

Stone artefacts

These are difficult for the layman to identify. However, large accumulations of flaked stones which do not appear to have been distributed naturally should be reported. If the stone tools are associated with bone remains, development should be halted immediately and archaeologists notified.

Stone features and platforms

These occur in different forms and sizes, but easily identifiable. The most common are an accumulation of roughly circular fire cracked stones tightly spaced and filled in with charcoal and marine shell. They are usually 1-2 metres in diameter and may represent cooking platforms for shell fish. Others may resemble circular single row cobble stone markers. These occur in different sizes and may be the remains of wind breaks or cooking shelters.

Historical artefacts or features

These are easy to identify and include foundations of buildings or other construction features and items from domestic and military activities.

APPENDIX C: FIELD RATING OF THE SITES (to comply with section 38 of the national legislation).

National: This site is considered to be of Field Rating/Grade I significance and should be nominated as such (mention should be made of any relevant international ranking);

Provincial: This site is considered to be of Field Rating/Grade II significance and should be nominated as such;

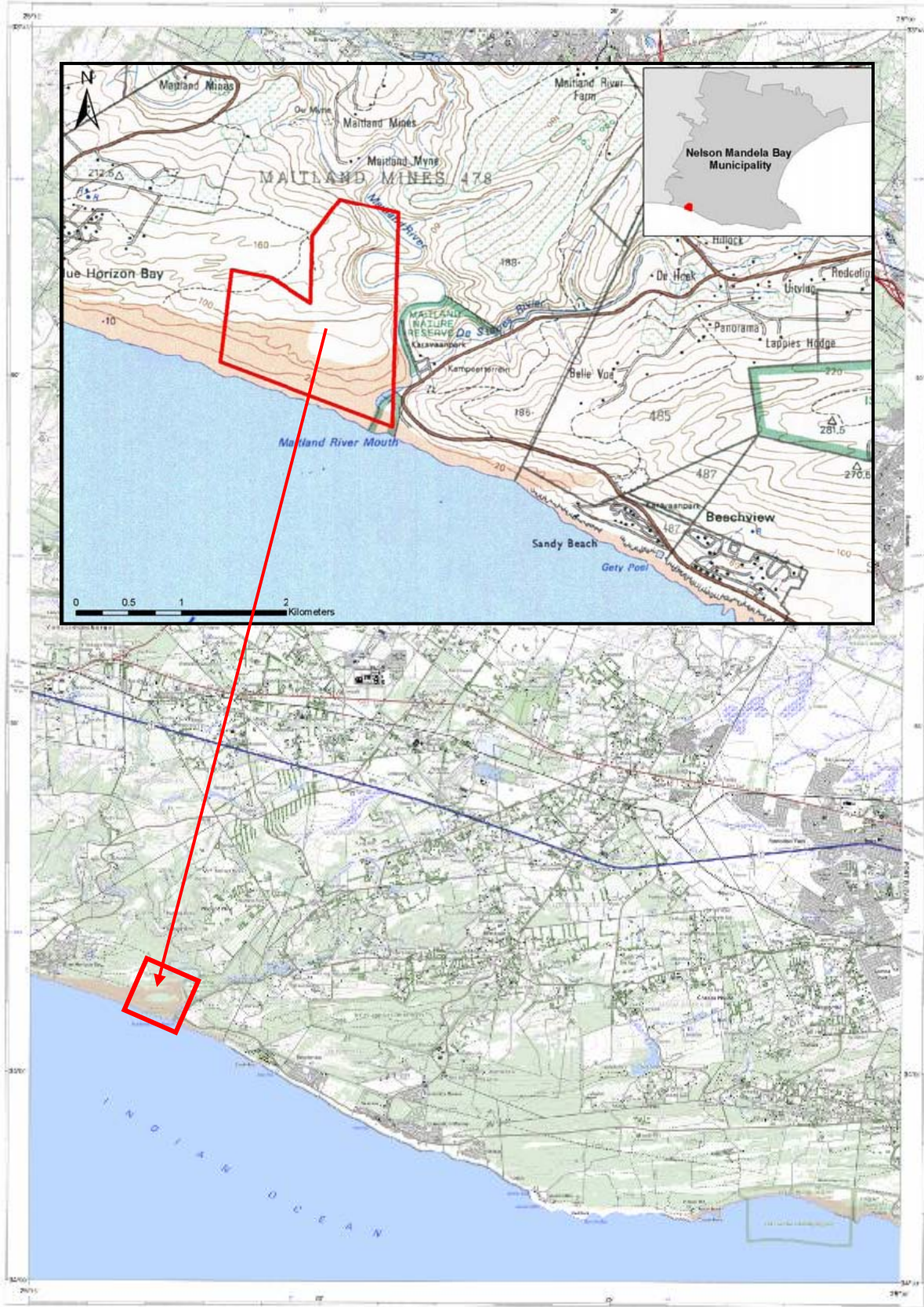
Local: This site is of Field Rating/Grade IIIA significance. The site should be retained as a heritage register site (High significance) and so mitigation as part of the development process is not advised.

Local: This site is of Field Rating/Grade IIIB significance. It could be mitigated and (part) retained as a heritage register site (High significance);

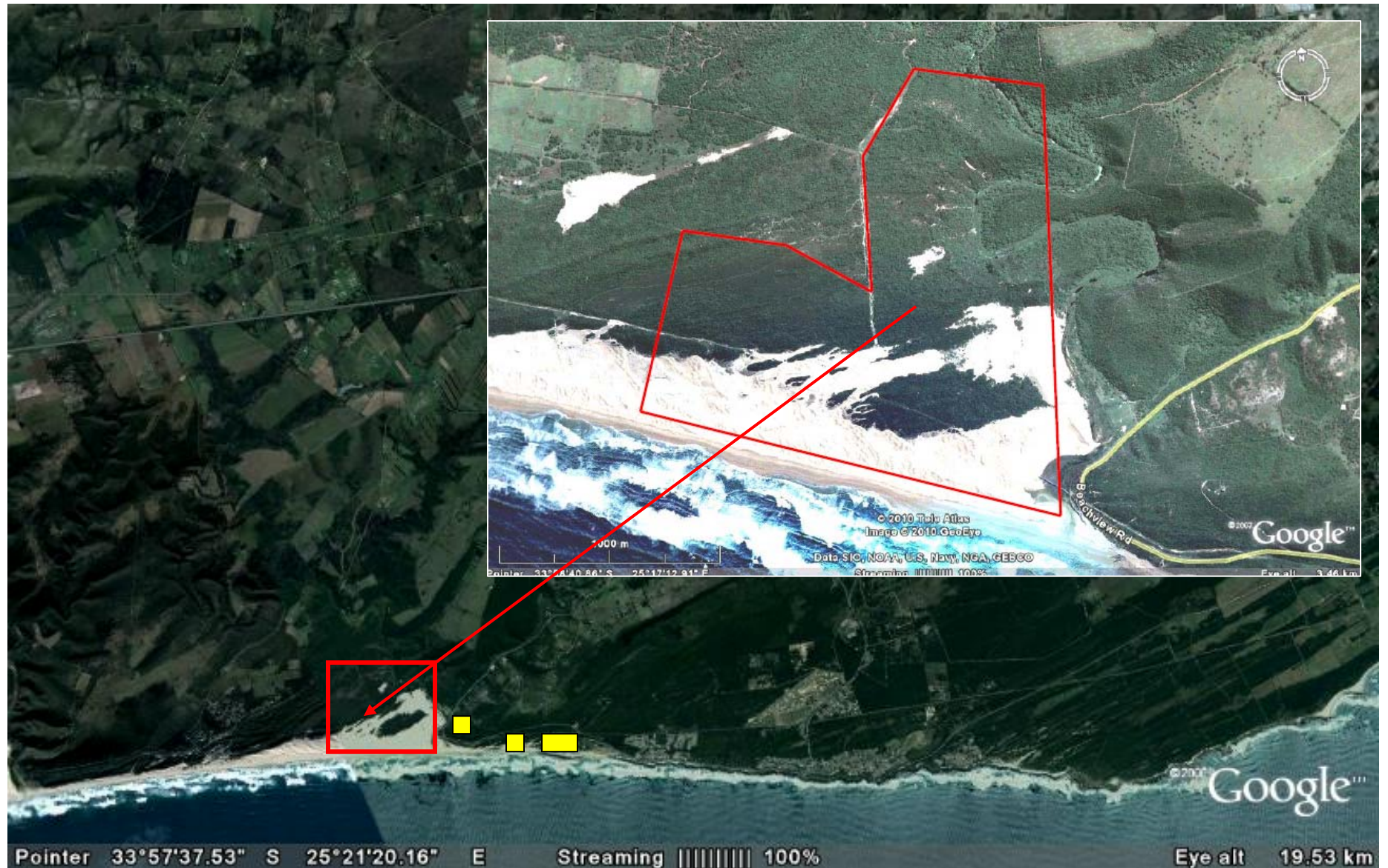
Generally Protected A (Field Rating IV A): This site should be mitigated before destruction (generally High/Medium significance);

Generally Protected B (Field Rating IV B): This site should be recorded before destruction (generally Medium significance);

Generally Protected C (Field Rating IV C): This site has been sufficiently recorded (in the Phase 1). It requires no further recording before destruction (generally Low significance).



Map 1. 1:50 000 Maps indicating the location of the proposed development. The red square mark the approximate location of the proposed development (insert map courtesy CEN Integrated Environmental Management Unit).



Map 2. Aerial photographs of the location of the proposed development (red block). The yellow squares indicate the location of large numbers of shell middens close to the area surveyed.



Map 3. Aerial photograph of the location of the archaeological sites (pink pins). The yellow arrow marks the gate and the blue stippled line the entrance route of the off-road motorcycles to the beach.



Map 4. Layout plan of the proposed development (map courtesy of the developers).