

**PHASE 1 HERITAGE IMPACT ASSESSMENT OF THE
PROPOSED BIOMASS PLANT IN ZONE 3, COEGA, PORT
ELIZABETH**

Prepared for: SRK Consulting
P O Box 21842
Port Elizabeth
6000

Prepared by: Dr Lita Webley
Albany Museum
Somerset Street
Grahamstown
6139

MAY 2006

STIPULATIONS OF THE NATIONAL HERITAGE RESOURCES ACT (1999)

The National Heritage Resources Act of 1999 makes provision for a compulsory HIA when an area exceeding 5000 m² is being developed (National Heritage Resources Act 25 of 1999: page 55). This is to determine if the area contains heritage sites and to take the necessary steps to ensure that they are not damaged or destroyed during development.

With regard burial grounds and graves, Section 36 (3) of the Act clearly stipulates that no person may, without a permit issued by the relevant heritage authority or SAHRA, (a) destroy, damage or exhume the grave of the victim of conflict; (b) destroy, damage or exhume any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority.

Subject to the provision of any other law, any person who in the course of development discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the relevant heritage authority which must, in co-operation with the South African Police Service and in accordance with the regulations of the responsible heritage authority, carry out an investigation to determine whether the grave is protected in terms of the Act or is of significance to any community

Section 34 of the Act stipulates that no person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

Section 38 of the Act clearly indicates that any person constructing a road or similar linear developments exceeding 300m in length or developing an area exceeding 5000 m² in extent is required to notify the responsible heritage resources authority or SAHRA. SAHRA will in turn advise whether an impact assessment report is needed before development can take place.

Living heritage (defined in the Act as including cultural tradition, oral history, performance, ritual, popular memory, skills and techniques, indigenous knowledge systems and the holistic approach to nature, society and social relationships) is also given protection under the Act. Section 24 of the Act makes provision for provincial heritage resources authorities to maintain a register of heritage resources and to set up management plans for their preservation.

INTRODUCTION AND BRIEF

This report presents the results of a Phase 1 heritage impact assessment undertaken on behalf of SRK Consulting to assess the possibility that heritage sites and material could be negatively impacted during construction of the proposed Biomass Plant in Zone 3 at Coega, Port Elizabeth. Dr L Webley of the Albany Museum was approached to undertake a phase 1 heritage assessment of the affected area.

HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

The Coega (or Koega) River was first mentioned by historical travellers in 1752. The name Coega is of Khoekhoen origin and means literally 'seacow' or hippopotamus. Coega Kop itself is shown on maps dating back to 1834 (Port Elizabeth Museum). The 'kop' has twin peaks, the one being quarried since the 1920s by the SA Railways and Harbours for the development of the Port Elizabeth Harbour, the other being mined since the 1970s by a private company. The 'kop' is reported to have been used as a navigation beacon by sailing ships wishing to enter the Port Elizabeth harbour in the past, however, it is likely to disappear soon with intensive quarrying. There are historical structures in the Coega Industrial Development Zone older than 60 years which are protected by legislation. However, in the survey of 1996 it was observed that most of the old buildings in the area had been badly maintained or vandalised by squatters and the Eastern Cape branch of SAHRA confirmed that there are no conservation-worthy buildings in the area.

No archaeological sites have been reported from this specific area. In a survey of the Coega River estuary undertaken in 1996 (Binneman and Webley 1997) the following were observed:

- 1) Stone artefacts in the river gravels located adjoining the estuary. The old river terraces in this area do contain occurrences of Acheulian (Early Stone Age) implements. However, they are no longer in primary context and are spread over such a wide area that development of a particular area is not likely to adversely affect our knowledge of this material. The stone artefacts were rated as low priority sites.
- 2) Large numbers of flaked stone and thirteen shell middens were reported from a calcrete floor about a half a kilometre from the river mouth. The stone artefact scatters were considered to be in secondary context and rated a low priority. The shell middens were rated as important and mitigation was recommended.
- 3) In addition, fossil bone accumulations, associated with the Middle Stone Age (30 000 to 120 000 years ago) as well as stone artefacts had been discovered in limestone deposits some 3 kilometres from the Coega estuary (towards Amsterdamplein) by Gess in 1969. The fossil bones included warthog, leopard, hyena, rhinoceros and ten different antelope species. No fossil bones were found during this survey.
- 4) Rudner (1968) reported on some shell middens to the west of the Coega River mouth but these could not be located and were probably buried under sand dunes and vegetation.

Figure 1 indicates the location of some of the archaeological and palaeontological material mentioned above.

In 1997 Binneman (1998) undertook mitigation measures and excavated six of the thirteen (13) shell middens threatened with destruction. Most of these shell middens were deflated and were of Later Stone Age (Holocene) origins. They contained very few potsherds suggesting that the middens were the result of San rather than Khoekhoen occupation.

RESEARCH METHODS

The area was surveyed on the 8 May 2006. It is difficult to locate the north-eastern boundary of the property because of the absence of any roads or fences. Using the GPS, the extent of the south-western boundary was determined, and this allowed the other sides to be calculated.

There are 10m wide strips of cleared areas along the road (south-west) and a 20m wide strip along the south-east side, bordering the fence. These areas have apparently been levelled using bulldozers. This has exposed the underlying soil structure and provides some indication of the sub-surface matrix.



There is a large manhole cover on the south-western edge of the site, close to the road, which has clearly disturbed the soil to a considerable depth. The soil here is a dark loamy brown, with many small nodules of limestone, reddish quartzite cobbles and the occasional small white quartzite pieces which are modern builders rubble introduced to make the road.

The north-western section of the area is different from the south-east. The soil surface is slightly more uneven, with little rises in the ground. These are often covered in dense scatters of fragmented and weathered limestone, and many small quartzite pebbles. The vegetation is also quite striking, consisting of more succulents.

The vegetation along the south-west section (along the fence) by contrast, is very different. There are more large shrubs, trees and grasses. The soil is a grey colour and there are no signs of the limestone/calcrete outcrops nor are there any quartzite pebbles, etc.

RESULTS

Site 1: The first artefact discovered was found close to the manhole cover discussed above. It is a small quartzite core made on fine-grained material. It is an isolated artefact and there are no other associated artefacts:

GPS
S 33.47.13,2
E. 25.38.01,5



Site 2: A small quartzite scraper (in a pinkish colour) was discovered in a clearing between the bushes. It is also an isolated artefact and there are no other associated artefacts:

GPS
S 33.47.10,9
E. 25.38.05,2



DISCUSSION OF RESULTS

A few flaked quartzite stone cores were discovered. However, they were randomly distributed and not concentrated in a specific area. This would seem to suggest that they are not *in situ*, conforming to the pattern observed during the 1996 survey of the coastal zone when it was observed that: “Large numbers of flaked stonewere reported from a calcrete floor about a half a kilometre from the river mouth. The stone artefact scatters were considered to be in secondary context and rated a low priority”.

ASSESSMENT OF SIGNIFICANCE AND POSSIBLE MITIGATION

Although technically speaking, an archaeological site can comprise a single stone artifact, no clear archaeological sites (in terms of any significant grouping of material) or heritage sites were found on the property and therefore no mitigation is necessary. However, it is quite conceivable that a site of significance could be buried under the surface of the soil.

The development of the area will result in considerable earth-moving and landscaping of the terrain. If there are any significant archaeological sites, they are likely to be destroyed. It is important to remember that archaeological and historical sites are non-renewable. Once destroyed, they cannot be returned to their original state. For this reason every effort must be made to monitor the site during earth-moving development.

CONCLUSIONS AND RECOMMENDATIONS

A specialist archaeological study of the Coega IDZ and the industrial harbour was commissioned and undertaken by the archaeologists at the Albany Museum in 1996. However, the study by Binneman and Webley focused only on the estuary and adjacent coastal region rather than on the entire zone. The reasons for doing so were (i) that there was no reason to suppose that the rest of the 10 000 ha property would include important cultural sites and (ii) that the area was heavily vegetated and it was not possible to survey the area properly.

In January 1997, Dr J Deacon, previously of the National Monuments Committee (now SAHRA) was approached by the CSIR Division of Water, Environment and Forestry Technology at Stellenbosch, to comment on the report by Binneman and Webley (see copy of report attached).

Deacon commented on the absence of a complete survey of the Zone, noting that it was difficult to determine whether this would have implications for the future. One of the implications of the COEGA IDZ is that all archaeological sites in the Zone will eventually be damaged or destroyed during the course of development. For this reason she recommended that **“it is vital that project-specific EIAs be done for each development so that an accurate record is kept of all archaeological sites. Planning for future stages of development must therefore include mandatory provision for the survey of sites once the vegetation cover has been removed, and for the subsequent mitigation of sites that may be considered significant. She recommended that archaeologists be consulted whenever specific sites are to be development and should be informed when any sites are found accidentally”**.

No significant archaeological sites, historical structures or graves were discovered during the survey of this particular area within Zone 3 of the Coega IDZ. There is a very sparse scatter of stone artifacts. However, it is possible that sites may be buried under the soil and grass surface. For this reason every care should be taken during the bulldozing of the area. Archaeological sites, including fossilized bone or human

remains, should be reported to SAHRA and to the archaeologists at the Albany Museum, immediately.

I would recommend that development of the area may take place but that every care should be taken to avoid destroying archaeological sites which may be located beneath the soil surface. When leveling of the soil takes place, contractors should look for the following features:

- 1) Concentrations of stone tools
- 2) Bones, including fossilized bones
- 3) Human remains, including burials
- 4) Remains of earlier (European) stone structures

If any of the above is discovered, further development of the property must stop immediately and archaeologists as well as the South African Heritage Resources Agency should be contacted to determine the significance of the discovery.

TERMINOLOGY

Early Stone Age: the earliest ESA assemblages date from 1,7 million years ago. By around 1,5 million years ago distinctive stone tools called handaxes appear and this seems to coincide with the appearance of *Homo erectus* peoples. These tools continue to be made in the same pattern until around 200 000 years ago.

Middle Stone Age: Stone tools from this period are quite different from those of the ESA; they are often made of fine-grained stone and they reflect a more controlled use of flaking properties. These tools date between 200 000 and 40 000 years ago.

Later Stone Age: LSA peoples were ancestral to the San (Bushmen) and lived in South Africa between 40 000 years ago and colonial times. Later Stone Age tools are typically made on fine grained cherts and chalcedonies, although quartz tools are also very common. They are generally microlithic in size and conform to certain designs, such as scraper, segments and adzes. They are easy to recognize and date.

Middens: are open-air shell accumulations, which have resulted from human occupation in the area. Middens may measure between 1m and 20m in diameter. They consist primarily of shellfish but may also contain bone remains and cultural artifacts. They are the most common type of archaeological site found within 5km of the coast.

REFERENCES

Binneman, J. 1994. Report on Phase 1 survey of visible archaeological features at Schelmhoek and Hougham Park. Unpublished report for PPC.

Binneman, J. 1998. Coega Industrial Development Zone: Cultural Sensitivity Report: Phase 2 Report.

Binneman, J. & Webley, L. 1996. Proposed Eastern Cape Zinc and Phosphoric Acid Project: Baseline Report: Sensitivity of Cultural Sites for African Environmental Solutions.

Binneman, J. & Webley, L. 1997. Coega Industrial Development Zone: Cultural Sensitivity Report for African Environmental Solutions.

Deacon, HJ & Deacon, J. 1999. Human Beginnings in South Africa: Uncovering the secrets of the Stone Age. David Philip: Cape Town.

Gess, W.H.R. 1969. Excavations of a Pleistocene bone deposit at Aloes near Port Elizabeth. South African Archaeological Bulletin 24: 31-32.

Rudner, J. 1968. Strandloper pottery from South and South West Africa. Annals of the South African Museum 49 (2).