



SOUTH AFRICAN HERITAGE RESOURCES AGENCY
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FOR ATTENTION: **PHRA: Eastern Cape**

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**AMENDED REVIEW COMMENT ON
ARCHAEOLOGICAL, PALAEOONTOLOGICAL AND
HISTORICAL (BURIALS) IMPACT ASSESSMENTS**

BY ARCHAEOLOGY / PALAEOONTOLOGY UNIT OF THE HERITAGE RESOURCES AGENCY

South Africa has a unique and non-renewable archaeological and palaeontological heritage. Archaeological and palaeontological sites are protected in terms of the National Heritage Resources Act (Act No 25 of 1999) and may not be disturbed without a permit. Archaeological Impact Assessments (AIAs) and Palaeontological Impact Assessments (PIAs) identify and assess the significance of the sites, assess the potential impact of developments upon such sites, and make recommendations concerning mitigation and management of these sites. On the basis of satisfactory specialist reports SAHRA or the relevant heritage resources agency can assess whether or not it has objection to a development and indicate the conditions upon which such development might proceed and assess whether or not to issue permission to destroy such sites.

AIAs and PIAs often form part of the heritage component of an Environmental Impact Assessment or Environmental Management Plan. They may also form part of a Heritage Impact Assessment called for in terms of section 38 of the National Heritage Resources Act, Act No. 25, 1999. They may have other origins. In any event they should comply with basic minimum standards of reporting as indicated in SAHRA Regulations and Guidelines.

This form provides review comment from the Archaeologist of the relevant heritage resources authority for use by Heritage Managers, for example, when informing authorities that have applied to SAHRA for comment and for inclusion in documentation sent to environmental authorities. It may be used in conjunction with Form B, which provides relevant peer review comment.

ARCHAEOLOGICAL IMPACT ASSESSMENT

- a. PROVINCIAL HERITAGE RESOURCES AUTHORITY: **Eastern Cape**
- b. AUTHOR(S) OF REPORT: **Dr Johan Binneman**
- c. ARCHAEOLOGY CONTRACT GROUP: **Eastern Cape Heritage Consultants**
- d. CONTACT DETAILS: **PO Box 689, Jeffreys Bay, 6330, Tel: 042 962 096, cell: 072 800 6322**
- e. DATE OF REPORT: **May 2010**
- f. TITLE OF REPORT: **A Phase 1 Archaeological Impact Assessment of the Coega Industrial Development (IDZ), near Port Elizabeth, Nelson Mandela Bay Municipality, Eastern Cape Province**

PALAEOONTOLOGICAL IMPACT ASSESSMENT

- a. PROVINCIAL HERITAGE RESOURCES AUTHORITY: **Eastern Cape**
- b. AUTHOR(S) OF REPORT: **Dr John Almond**
- c. PALAEOONTOLOGY CONTRACT GROUP: **Natura Viva CC**
- d. CONTACT DETAILS: **PO Box 12410, Mill St, Cape Town, 8010. Tel: 021 432**

3622, Email: naturaviva@universe.co.za

- e. DATE OF REPORT: **March 2010**
- f. TITLE OF REPORT: **Palaeontological Heritage Assessment of the Coega IDZ, Eastern Cape Province.....**

HISTORICAL IMPACT ASSESSMENT (INCLUDING BURIAL GROUNDS AND GRAVES)

- a. PROVINCIAL HERITAGE RESOURCES AUTHORITY: **Eastern Cape**
- b.
- c. AUTHOR(S) OF REPORT: **Ms Jenny Bennie**
- d. CONTACT DETAILS: **Port Elizabeth Museum, PO Box 13147, Humewood, 6013, tel: 041 584 0650, cel: 082 783 6418**
- e. DATE OF REPORT: **May 2010**
- f. TITLE OF REPORT: **Historical Assessment (Historical component relating to the built environment and graves). Coega Industrial Development Zone near Port Elizabeth, Eastern Cape Province.**
- g. Please circle as relevant: components of EIA / EMP / **HIA** / CMP Other (Specify).
- h. REPORT COMMISSIONED BY (CONSULTANT OR DEVELOPER): **Eastern Cape Heritage Consultants CC on behalf of Coega Development Corporation (Pty) Ltd**
- i. CONTACT DETAILS: **Ms Andrea von Holdt, Private Bag X6009, Port Elizabeth, 6000. Tel: 041 403 0400, Fax: 041 403 0401, Cel: 082 657 4648, email: andrea.vonholdt@coega.co.za**
- j. COMMENTS: **This Review Comment is an amended version of the October comments compiled by SAHRA. The Coega Development Corporation required more clarity about the recommendations made by SAHRA as these recommendations will be included in the Heritage Management Plan for the heritage of the entire Coega IDZ.....**

Please see comment on next page.....

REVIEW COMMENT ON THE ARCHAEOLOGICAL / PALAEOLOGICAL / HISTORICAL (BURIALS) IMPACT ASSESSMENTS

By Dr Johan Binneman, on behalf of Eastern Cape Heritage Consultants
Date of the report: May 2010, Received: 05 July 2010,

A Phase 1 Archaeological Impact Assessment of the Coega Industrial Development (IDZ), near Port Elizabeth, Nelson Mandela Bay Municipality, Eastern Cape Province

By Dr John Almond, on behalf of NaturaViva
Date of the report: March 2010, Received: 29 March 2010

Palaeontological Heritage Assessment of the Coega IDZ, Eastern Cape Province

By Ms Jenny Bennie
Date of the report: May 2010, Received: 05 July 2010

Historical Assessment (Historical component relating to the built environment and graves). Coega Industrial Development Zone near Port Elizabeth, Eastern Cape Province.

INTRODUCTION

The Coega Industrial Development Zone (IDZ) is located about 20 km northeast of Port Elizabeth and covers about 12 000 ha. The area, mostly covered by thicket vegetation, is divided into 14 zones, each of which is already partially developed while the remaining parts are marked for future development.

The Heritage Impact Assessment compiled for the Coega Development Corporation aimed to assess the heritage resources in the area, specifically the presence of archaeology, palaeontology, built environment and burials grounds and graves. The results of these studies are intended to guide future development plans for Coega IDZ.

The findings of this Heritage Impact Assessment and the recommendations included in this Review Comment should therefore be taken into consideration for all future developments at Coega IDZ.

The southern boundary of the Coega IDZ runs along the ocean. From an archaeological and historical perspective most coastlines are particularly sensitive as populations tend to settle along the coastline in greater density. The shoreline of South Africa provided invaluable information regarding the development of modern human behaviour starting from the Middle Stone Age and proceeding deep into the Later Stone Age and beyond. The hunter gatherer populations dwelling here in the Holocene (< 10 000 years) left an invaluable record for understanding of South African past. This is shown by the presence of numerous stone tools and shell middens scattered across the coastlines and part of the interior.

Palaeontologically, the area is extremely sensitive: the Sundays River, the Kirkwood, the Alexandria and the Salnova formations, all present in the Coega IDZ, are some of the most fossiliferous in the country. For this reason, a series of formations and sites will require protection at all development stages.

It should be pointed out therefore that a lack of consideration of these valuable resources in planning and development can lead to their total destruction. For instance, important information has already been lost on the Coega IDZ because of previous developments which did not take into consideration heritage resources. The hope is that this Review Comment, consulted side-by-side with a Heritage Management Plan for the

Coega IDZ, will contribute to the preservation of the most significant heritage of the area for future generations.

DISCUSSION AND RECOMMENDATIONS

Below, all fourteen zones are dealt with individually, considering all resources identified in each of them from an archaeological, palaeontological, historical and burial grounds perspective.

ZONE 1

Part of this zone has already been developed and evidence is that water pipes and drainage channels have damaged heritage resources. Archaeologically, the survey of the area has not been satisfactory due to the presence of dense thicket.

Archaeological evidence has however been identified, namely as informal quartzite Middle Stone Age tools. Early Stone Age tools might co-exist, but they have not been recorded so far. Shell middens were previously excavated on the eastern side of the mouth of the River.

As this is a sensitive area of the Coega IDZ, it is necessary that short strips of vegetation are cleared under the supervision of an archaeologist, thereby allowing for documentation and/or rescue of any new discoveries.

An open channel storm water outlet is planned to cross over the dunes to the sea. It is likely that this will impact severely on shell middens, therefore SAHRA requires that when the proposed final position of the outlet pipe is decided, an archaeologist is consulted to identify possible damages to the shell middens of the area. If damage is envisaged, either the position of the stormwater outlet must be moved, in agreement with the archaeologist, or a Phase II Impact Assessment will be necessary. It is also required that an archaeologist be present on site during excavation due to the high sensitivity of the shoreline.

Palaeontologically, the Kirkwood formation underlies most of this zone which has been proved to be one of the most fossil productive unit in Southern Africa. High volume excavation of this formation and of the Sundays River Formation must be examined and sampled by a professional palaeontologist while fresh bedrock is still exposed. The presence of a palaeontologist is required on site soon after exposure.

There are no reports of burial grounds and graves in this zone.

ZONE 2

The landscape in zone 2 is similar to zone 1. Previous archaeological surveys of the zone were carried out in an AIA for the construction of two petrol stations. Because of previous development, the area is already highly disturbed, therefore, no monitoring is required on this area

Palaeontologically, the Kirkwood formation underlies most of this zone and it has been proved to be one of the most fossil productive unit in Southern Africa, even if not directly within the Coega IDZ yet. High volume excavation of this formation and of the Sundays River Formation must be examined and sampled by a professional palaeontologist while fresh bedrock is still exposed. The presence of a palaeontologist is required on site soon after exposure.

There are no reports of burial grounds and graves in this zone.

ZONE 3

Few scatters of quartzite Middle Stone Age tools were identified on zone 3. This zone is already highly disturbed with well developed infrastructures, including several buildings, already erected here, therefore, no monitoring is required on this area

Palaeontologically, the Kirkwood formation underlies most of this zone and it has been

proved to be one of the most fossil productive unit in Southern Africa, even if not directly in the Coega IDZ yet. High volume excavation of this formation and of the Sundays River Formation must be examined and sampled by a professional palaeontologist while fresh bedrock is still exposed. The presence of a palaeontologist is required on site soon after exposure.

There are no reports of burial grounds and graves in this zone.

ZONE 4

Several developments have already taken place in this zone, namely a few small quarries, power substations, power lines and pylons. Since for most of these there is no record of a Heritage Impact Assessment being compiled before development occurred, it is possible that heritage resources have already been impacted negatively. On the western boundaries of zone 4 red brown quartzite Early Stone Age flakes were identified along with few occasional quartzite Middle Stone Age tools. Vegetation clearing with small machineries and the least invasive methodology is required for this zone. If vegetation clearing results to be sensitive, then monitoring during excavation will also be required. After vegetation clearing a report must be sent to SAHRA for approval.

Palaeontologically, the Kirkwood formation underlies most of this zone and it has been proved to be one of the most fossil productive unit in Southern Africa, even if not directly in the Coega IDZ yet. High volume excavation of this formation and of the Sundays River Formation must be examined and sampled by a professional palaeontologist while fresh bedrock is still exposed. The presence of a palaeontologist is required on site soon after exposure.

There are no reports of burial grounds and graves in this zone.

ZONE 5

This zone is sensitive from a heritage perspective, as palaeontological deposits as well as graves were identified in this zone, where a manganese smelter is planned.

From an archaeological point of view, occasional scatters of Early and Middle Stone Age informal stone tools were found in secondary context. Mostly, these are located along the river gravel. Due to low visibility on most of zone 5, SAHRA requires that an archaeologist be present on site during vegetation clearing and an ECO is trained by an archaeologist as site monitor to recognise possible archaeological material.

Two important palaeontological sites have also been identified, one in the cliff section at the west end of the paired stormwater tunnels beneath the N2, and another one on the deep railway cutting west of the N2 to the south of the marshalling yard. Both these sites carry evidence of sedimentary contact between the Alexandria and the Kirkwood formations. The former exposes crustacean borrow of *Ophiomorpha*, whereas the second one shows trace fossils along the contact of the vertical section. Development taking place around these two sites must be monitored by a palaeontologist or by an ECO trained by a palaeontologist during excavations, to ensure protection of these deposits from disturbance.

Evidence in this zone is that previous cuttings in the Kirkwood formation were not examined by a palaeontologist, creating a lost opportunity in possibly identifying highly fossiliferous material. High volume excavation of this formation and of the Sundays River Formation must be examined and sampled by a professional palaeontologist while fresh bedrock is still exposed. The presence of a palaeontologist is required on site soon after exposure.

A two-grave cemetery, belonging to the Du Piesanie's family, was identified in zone 5. A larger grave is from 1942, whereas a smaller one dates back to 1947. The cemetery is fenced off, but it is very overgrown. The general recommendations for burial grounds and graves at the end of these reports need to be followed.

ZONE 6

The construction of roads and pipe lines had already been started in this zone. Recently, the zone was used for farming activities, but, at present, it is covered by thicket vegetation and some prospecting drilling is planned here by PetroSA.

Stone tools in secondary context from Early, Middle and occasional Later Stone Age are widely scattered over the zone, with higher concentration on the cobbles/pebble gravels tracks.

Due to low visibility of zone 6, SAHRA requires that an ECO is trained by an archaeologist as site monitor to recognise possible archaeological material.

Previous excavation and road cuts have exposed the lime-rich Alexandria formation and the Bluewater Bay Formation, which is its surface weathering products and which underlies most of zone 6. The Bluewater Bay Formation is mostly unfossiliferous.

Farm worker graves and farm graves are located on this zone. More details regarding the number of graves and the status of the graves are required as this information seems to be missing from the Historical Report. These can be part of the Heritage Management Plan, which must be approved by SAHRA.

ZONE 7

A secondary dune system stretches out across zone 7, which is otherwise quite well developed with bridges, roads, a power substation and a power line, buildings and quarry already built on it. The vegetation, as in most other zones, is quite thick, hampering the visibility of archaeological resources.

A scatter of fragmented marine shells associated with bone, stone tools and Khoe pottery was identified on a fairly large area of this zone, dating the occupation to about 1 800 years ago.

A series of Middle Stone Age tools was also uncovered where the area was bulldozed along the dunes. Evidence is that, while working to build a new road, few archaeological sites were destroyed.

As this is one of the most sensitive areas of the Coega IDZ, it is necessary that short strips of vegetation are cleared under the supervision of the archaeologist with small machineries which will allow for future inspections of the area, thereby allowing for documentation and/or rescue of any new discoveries.

In a long trench cut into the surface limestone, north of the Hougham Park farmstead an excellent exposure of large fossilized root systems in ancient dune sands formation are recorded, including some Plio-Pleistocene land snails. This exposure needs to be protected from development and disturbance, to do so, a palaeontologist or an ECO trained by a palaeontologist, must oversee all trenching and earth moving activities.

High volume excavation of the Sundays River Formation must be examined and sampled by a professional palaeontologist while fresh bedrock is still exposed. The presence of a palaeontologist is required on site soon after exposure.

The Hougham Park Homestead, The House and Cottage, identified as having potential heritage value, whose age, architectural significance, materiality and authenticity, has not been adequately addressed, should be incorporated in an expanded built environment biased study focusing on these aspects.

There are no reports of burial grounds and graves in this zone.

ZONE 8

This zone, comprising the Port of Ngqura, belongs to Transnet and it was not taken into consideration for this HIA.

ZONE 9

Most of the area along the river is likely to yield archaeological material of the pre-colonial period. It has also already been impacted, directly or indirectly, by previous developments, such as the brick making industry and its dumping of rubble. Other areas are still covered by very thick vegetation.

Few Middle Stone Age tools scatters were identified in connection with cobbles or gravels.

In this zone two sensitive palaeontological sites were identified: an abandoned clay quarry and an active limestone quarry, where current palaeontological research on fossil crabs is carried out by Dr de Klerk from the Grahamstown Museum. The eastern face of the clay quarry and the faces of the limestone quarries must be safeguarded and preserved, including the large blocks at the western end of the limestone quarry.

High volume excavation of the Sundays River Formation must be examined and sampled by a professional palaeontologist while fresh bedrock is still exposed. The presence of a palaeontologist is required on site soon after exposure.

A cemetery with a community plaque is also located on this zone. More details regarding this cemetery are required for the Heritage Management Plan as no information about the number of graves in the cemetery, their age or state of the cemetery itself is given in the historical report.

ZONE 10

This zone is mostly formed by secondary dune systems, where the incidence of occurrence of archaeological material is possibly at its highest. Most of it is now covered in thick vegetation with *Acacia* being the most common plant.

Middle and Later Stone Age and Holocene sites were identified in this zone by previous surveys and impact assessments. It is supposed that a few of these sites are now located under shifting dunes, as they are not retraceable in the positions in which they were previously recorded.

Both previous and current surveys have identified low significance Middle and Later Stone Age tools, mostly scatters, along the Western beach adjacent dune fringe. The raw material used was mostly locally available quartzite cobbles and occasional black hornfels.

Along the shifting dune areas the following archaeological features were recorded:

- three small low sensitivity shell midden scatters of *Perna perna*,
- a scatter of very likely KhoeSan pottery fragments among the grass on a large deflation bay with few fragments of *Donax serra* nearby,
- a *Perna perna* shell scatter with few associated bone fragments,
- a *Perna perna* shell midden scatter with few associated possibly KhoeSan pottery fragments and stone tools

Before these can be impacted, each of them needs to be recorded and a report from the recording must be sent to SAHRA. After this, the developer shall apply for a destruction permit from SAHRA. If from the recording of the site, its significance deems to be higher than expected, it will be necessary for the archaeologist to apply for a Phase II permit to allow for a gathering of more information (which may include dating) and further evaluation of the site. After completion of a Phase II report, a destruction permit can be requested from SAHRA by the developer.

Along the shifting dune areas a scatter of few quartzite stone tools and pottery fragments were also recorded. A destruction permit needs to be applied for by the developer before destruction of the site.

The Easter beach and dune area has already been mostly disturbed by driving of off-road vehicles, which caused disturbance of scattered stone tools, located on the calcrete and quartzite gravel. A small shell midden of *Perna perna* was identified near the foot of the inland shifting dune with some associated quartzite stone flakes. Before disturbance of the site, it should be recorded and the report from the recording sent to SAHRA; after this a destruction permit needs to be applied for. A Scatter of Middle and Later Stone Age stone tools on an exposed calcrete floor was also recorded. In this case only a destruction permit needs to be applied for before disturbance of the site.

Since this is one of the most sensitive areas of the Coega IDZ, it is necessary that short strips of vegetation are cleared under the supervision of the archaeologist by hand or with small machineries or with the least invasive method, thereby allowing for documentation and/or rescue of any new discoveries. Besides vegetation clearing, an archaeologist must be present on site to monitor all earth moving activities.

From a palaeontological point of view, a low coastal rock platform shows both good exposure of the contact between the Salnova and the Sundays River Formations and an ancient fossiliferous dune sand of Nahoon Formation. This must be protected from damage and development: a palaeontologist or an ECO trained by a palaeontologist must monitor all earth moving activities involving this contact. Any excavations in the Salnova formation must be examined and sampled by a professional palaeontologist WHILE fresh bedrock is still exposed. The presence of a palaeontologist is required on site soon after exposure.

Two burial grounds, belonging one to the Hougham Park farm workers and one to the farm members, have been identified. The family cemetery comprises 15 graves dating from 1860 to 1995. It was more difficult for the consultant to identify how many burials comprised the adjacent farm workers' cemetery, as it is highly overgrown. The general recommendations for burial grounds will need to be followed to discover the exact extent of the cemetery and the precise number of burials in it.

ZONE 11

The area is quite undisturbed, mostly covered by thick vegetation.

Scatters of stone tools have been identified all over the zone, but no working site was visible. Higher concentration of stone tools was recorded in areas around dry pans and wetlands. These areas should be recorded before destruction, after this a report must be sent to SAHRA and the developer may apply for a destruction permit for the sites.

Previous excavation and road cuts have exposed the lime-rich Alexandria formation which is generally highly fossiliferous with abundant and diverse invertebrate faunas, and the Bluewater Bay formation, its surface weathering products, generally unfossiliferous. Any excavations in the Salnova formation must be examined and sampled by a professional palaeontologist WHILE fresh bedrock is still exposed. The presence of a palaeontologist is required on site soon after exposure.

There are no reports of burial grounds and graves in this zone.

ZONE 12

Part of this area was mostly used for farming activities and today development has yet to occur. Very thick vegetation hampered recognition of the extent of the stone tools scatters. For this reason, an archaeologist needs to be present on site during vegetation clearing of selected (by an archaeologist) strips with small machineries or the least invasive methodology available. If vegetation clearing results in the discovery of sensitive material, then monitoring during excavation, or a Phase 2 mitigation depending on the situation, will also be required. After vegetation clearing a report must be sent to SAHRA for review and guidance on the way forward.

Any excavations in the Salnova formation must be examined and sampled by a professional palaeontologist WHILE fresh bedrock is still exposed. The presence of a palaeontologist is required on site soon after exposure.

There are no reports of burial grounds and graves in this zone.

ZONE 13

In this zone, as in many others, very thick vegetation put at risk the recognition of the extension of the few identified stone tools scatters. In other areas the vegetation is mostly composed of low grass, dense patches of bushes and small trees. A peaking power plant and other development have already occurred in the area.

An archaeologist needs to be present on site during vegetation clearing of selected (by an archaeologist) strips. Small machineries or the least invasive methodology is required for these strips. If vegetation clearing results in the discovery of sensitive material, then monitoring during excavation, or a Phase 2 mitigation according to the situation, will also be required. After vegetation clearing a report must be sent to SAHRA for review and guidance on the way forward.

At Tossies Quarry South, evidence of an excellent exposure of contact between the Alexandria and the Sundays River Formations is recorded. This must be preserved to ensure that the contact is kept for future research.

A richly fossiliferous area is recorded in the erosion gully North of the Tossies Quarry North. This must be protected from disturbance and development, therefore a palaeontologist or an ECO trained by a palaeontologist, must monitor the excavations.

Any excavations in the Salnova formation must be examined and sampled by a professional palaeontologist WHILE fresh bedrock is still exposed. The presence of a palaeontologist is required on site soon after exposure.

A cemetery close to the railway was also identified. More information regarding it is required in the Heritage Resources Management Plan. This must include: how many graves there are, how old these graves are and what their preservation is.

ZONE 14

This is mostly a grazing area with small scale farming activities. Very little development has occurred on it yet and a wind farm proposed on this zone. Thicket vegetation dominates the landscape. Scatters of Early and Middle Stone Age stone tools are present in the area, with their concentration increasing towards the old pan area and on pebble/cobble gravel. An archaeologist needs to be present on site during vegetation clearing of selected (by an archaeologist) strips with small machineries or the least invasive methodology available. If vegetation clearing results in the discovery of sensitive material, then monitoring during excavation, or a Phase 2 Mitigation according to the situation, will also be required. After vegetation clearing a report must be sent to SAHRA for approval.

A deep erosion gully at the edge of the escarpment in the SW portion of Bontrug 301 in this zone records the first and only known evidence of scaphopod molluscs from the Sundays River Formation, whereas an abandoned clay pit in the same zone is highly fossiliferous. Both these must be protected from disturbance and development: a palaeontologist or an ECO trained by a palaeontologist must monitor the excavations to ascertain that the two sites are not negatively impacted upon.

OTHER GENERAL SAHRA RECOMMENDATIONS

- All graves, including the unmarked ones, must be protected and conserved. Vegetation clearing is necessary where graves are overgrown, the extent of all graveyards, where missing, must be inspected and properly identified. A specialist must be employed for this. A proper fence, where not existent, must be built around them including entry gates to allow visits by the family and community. The fence must be placed at least two meters away from the perimeter of the graves. No development is allowed within 15 meters from the fence line surrounding the graves. Alternatively, if the area where the burials are located falls within the development footprint, then provisions stipulated in section 36 of the National Heritage Resources

Act (Act No. 25 of 1999) are applicable, and relocation of these might proceed provided that a full public consultation process is followed (see Appendix 1 and SAHRA Regulations).

- The Heritage Management Plan must include a clear map of all graves and burial grounds reported in the Historical Assessment Report, including the unmarked ones and including those identified outside the study area, for record of SAHRA.
- SAHRA must be informed of any development occurring in the Coega IDZ. SAHRA will then decide whether further assessment is necessary, in the light of the findings of the Heritage Impact Assessment and of the recommendations included in this Review Comment and in the Heritage Management Plan.
- The Heritage Management Plan must provide details on the possible archaeological and palaeontological mitigation process with an explanation of the issues encountered, of the responsibilities and of the permitting process.
- The consultant responsible for the Heritage Management Plan must ensure that constant engagement is undertaken with the different heritage specialists and SAHRA during the assemblage of the document.
- A plan should be made where the material can be stored on site. It is suggested that a display space is organised on the Coega IDZ premises, if Coega IDZ agrees with it, for educational and display purposes. This could also be a training ground for the ECO who is expected to regularly monitor the implementation of mitigation measures. A trained archaeologist and a trained palaeontologist should be involved in the project. Details of this arrangement, if any, should be presented in the HMP.
- It is recommended that all sensitive paleontological areas are clearly marked on the Coega IDZ maps so that no development is planned in those areas or a proper mitigation (Phase 2) is planned in advance.
- It is indispensable and highly recommended that all development planning is based on the HIA and HMP and should make use of geological maps 1:250 000 or 1: 50 000 to understand the geology of the area, recognise where the sensitive formations are and in no circumstances negatively impact upon them.
- A brief Spatial Development Framework of the site should be done in order to locate these built constructs within the larger development.
- The completed information should be submitted, in the absence of a functional PHRA, to the SAHRA Western Cape/Built environment office for assessment (Mr Greg Ontong gontong@wc.sahra.org.za or Mrs Beverley Crouts-Knipe, bcrouts-knipe@wc.sahra.org.za).
- Developments which might affect the sea bed will have to be considered by the Underwater Heritage Unit at SAHRA to make sure that no shipwrecks are affected by the projects (Mr Jonathan Sharfman, jsharfman@wc.sahra.org.za or Mr Shawn Berry, sberry@wc.sahra.org.za).
- **Preservation of all heritage resources is always the most preferred option.**

CONCLUSION

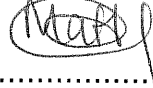
The recommendations expressed by SAHRA in this review comment are to be considered as general guidance for the zones taken into considerations. Each development will have to be considered individually by SAHRA in the light of the findings of this Heritage Impact Assessment, and of the plan of action to be explained in the Heritage Management Plan.

This Heritage Impact Assessment cannot in any ways ascertain that new archaeological or palaeontological discoveries will not be made during construction. If any evidence of archaeological sites or remains (e.g. shell middens, remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, shipwrecks, marine shell and charcoal/ash concentrations), unmarked human burials, fossils or other categories of heritage resources are found during construction, SAHRA APM Unit (Mariagrazia Galimberti/Nonofho Ndobochani 021 462 4502) must be alerted immediately, and an accredited professional archaeologist or palaeontologist must be contacted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance a Phase 2 rescue

operation might be necessary. On receipt of a satisfactory mitigation (Phase 2) permit report from the archaeologist and/or palaeontologist, SAHRA APM Unit will make further recommendations in terms of the possible destruction or preservation of the heritage resources.

SIGNATURE OF ARCHAEOLOGIST PROCESSING REPORT: 

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SIGNATURE OF SAHRA HEAD ARCHAEOLOGIST: 

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NAME OF HERITAGE RESOURCES AGENCY: SAHRA.....

PLEASE NOTE THAT THE COMMENT (ABOVE OR APPENDED) CONSTITUTES THE COMMENT OF THE HERITAGE RESOURCES AGENCY ARCHAEOLOGIST AND THAT ANY DEVELOPMENT THAT INVOLVES DESTRUCTION OF ANY ARCHAEOLOGICAL/PALAEONTOLOGICAL SITE IS STILL SUBJECT TO A PERMIT/PERMISSION FOR DESTRUCTION OF SUCH SITE GIVEN TO THE DEVELOPER BY THE RELEVANT HERITAGE RESOURCES AGENCY ARCHAEOLOGICAL AND PALAEONTOLOGICAL PERMIT COMMITTEE (THIS WILL BE SUBJECT TO APPROVAL OF THE PHASE 2 OR ARCHAEOLOGICAL/ PALAEONTOLOGICAL MITIGATION AS NECESSARY). THIS REPORT MAY BE TAKEN ONLY AS APPROVAL IN TERMS OF SECTION 35 OF THE NATIONAL HERITAGE RESOURCES ACT. THE PROVINCIAL MANAGER OF THE HERITAGE RESOURCES AUTHORITY MUST ADVISE AS TO APPROVAL IN TERMS OF HERITAGE ISSUES ENCOMPASSED BY OTHER ASPECTS OF THE LEGISLATION, SUCH AS ISSUES OF THE BUILT ENVIRONMENT (STRUCTURES (E.G. FARM HOUSES), OVER 60 YEARS), INDIGENOUS KNOWLEDGE SYSTEMS OR OF CULTURAL LANDSCAPES AS THIS IS NOT WITHIN THE SCOPE OF THE ARCHAEOLOGIST.

PLEASE NOTE THAT SAHRA IS NOW RESPONSIBLE FOR GRADE I HERITAGE RESOURCES (AND EXPORT) AND THE PROVINCIAL HERITAGE RESOURCES ARE RESPONSIBLE FOR GRADE II AND GRADE III HERITAGE RESOURCES, EXCEPT WHERE THERE IS AN AGENCY ARRANGEMENT WITH THE PROVINCIAL HERITAGE RESOURCES AUTHORITY.

APPENDIX 1

Protection of Graves

In terms of the National Heritage Resources Act (No. 25 of 1999) graves older than 60 years (not in a municipal graveyard) are protected. Human remains younger than 60 years should be handled only by a registered undertaker or an institution declared under the Human Tissues Act.

Anyone who wishes to develop an area where there are graves older than 60 years is required to follow the process described in the legislation (section 36 and associated regulations). The specialist will require a permit from the heritage resources authority:

1. Determine/ confirm the presence of the graves on the property. Normally the quickest way to proceed is to obtain the service of a professional archaeologist accredited to undertake burial relocations. The archaeologist will provide an estimate of the age of the graves. There may be a need for archival research and possibly test excavations (permit required).
2. The preferred decision is to move the development so that the graves may remain undisturbed. If this is done, the developer must satisfy SAHRA that adequate arrangements have been made to protect the graves on site from the impact of the development. This usually involves fencing the grave(yard) and setting up a small site management plan indicating who will be responsible for maintaining the graves and how this is legally tied into the development. It is recommended that a distance of 15 m is left undisturbed between the fence around the graves and the development.
3. If the developer wishes to relocate or disturb the graves:
 - a. A 60-day public participation (social consultation) process as required by section 36 (and regulations), must be undertaken to identify any direct descendants of those buried on the property. This allows for a period of consultation with any family members or community to ascertain what their wishes are for the burials. It involves notices to the public on site and through representative media. This may be done by the archaeologist, who can explain the process, but for large or sensitive sites a social consultant should be employed. Archaeologists often work with undertakers, who rebury the human remains.
 - b. If as a result of the public participation, the family (where descendants are identified) or the community agree to the relocation process then the graves may be relocated.

- c. The archaeologist must submit a permit application to SAHRA for the disinterment of the burials. This must include written approval of the descendants or, if there has not been success in identifying direct descendants, written documentation of the social consultation process, which must indicate to SAHRA's satisfaction, the efforts that have been made to locate them. It must also include details of the exhumation process and the place to which the burials are to be relocated. (There are regulations regarding creating new cemeteries and so this usually means that relocation must be to an established communal rural or formal municipal cemetery.)
- d. Permission must be obtained before exhumation takes place from the landowner where the graves are located, and from the owners/managers of the graveyard to which the remains will be relocated.
- e. Other relevant legislation must be complied with, including the Human Tissues Act (National Department of Health) and any ordinances of the Provincial Department of Health). The archaeologist can usually advise about this.