



**SOUTH AFRICAN HERITAGE RESOURCES AGENCY**  
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FOR ATTENTION: **Heritage of Northern Cape, PHRA  
 Eastern Cape, Heritage of Western Cape**

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## REVIEW COMMENT ON ARCHAEOLOGICAL DESKTOP STUDY

**BY ARCHAEOLOGY/ PALAEOLOGY 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.*

- A. PROVINCIAL HERITAGE RESOURCES AUTHORITY: **Northern Cape and Eastern Cape**.....
- B. AUTHOR(S) OF REPORT: **Mr Frans Prins**
- C. ARCHAEOLOGY CONTRACT GROUP: **Active Heritage CC**
- D. CONTACT DETAILS: **P.O. Box 94, Howick, 3290, Email: feprins@gmail.com**
- E. DATE OF REPORT: **February 2011**
- F. TITLE OF REPORT: **EMP for the South Western Karoo Basin Gas Exploration Application Project CULTURAL HERITAGE: CENTRAL PRECINCT**
- G. Please circle as relevant: Archaeological component of EIA / **Draft EMP** / HIA / CMP/ Other (Specify) .....
- H. REPORT COMMISSIONED BY (CONSULTANT OR DEVELOPER): **Golder Associates Africa**
- I. CONTACT DETAILS: **Ms Marisa du Toit or Ms Annerine Prinsloo, P.O. Box 6001, Halfway House, 1685, Tel: 011 254 4944, email: centralkaroo@golder.co.za**
- J. COMMENTS: .....

## **REVIEW COMMENT ON ARCHAEOLOGICAL DESKTOP STUDY**

**Mr Frans Prins**

**Dated: February 2011, Received: March 2011**

### **EMP for the South Western Karoo Basin Gas Exploration Application Project CULTURAL HERITAGE: CENTRAL PRECINCT**

#### **INTRODUCTION**

Mr Prins undertook a desktop study to identify possible heritage resources in the 30 000 km<sup>2</sup> area defined as "Central precinct", proposed for gas exploration by Shell Exploration Company B.V. The company applied to the Petroleum Agency of South Africa (PASA) for the rights to exploration of potential shale gas in the Karoo Basin. Three different applications were put forward and the related EMPs will be submitted to PASA before the 14<sup>th</sup> of April 2011.

The exploration will entail three different phases: the first will consist mainly of a geophysical data acquisition process, the second phase will involve the drilling of up to eight exploration wells for each Precinct up to 5km depth to identify the shale layer. According to the EMP, the size of each well site will be approximately 100m x 100m. This will not include however the associated infrastructure, such as, for instance, the construction of new access roads or the upgrade of old ones and the establishment of campsites. Then third phase will endeavour hydraulic fracturing and testing on the gas bearing boreholes.

The desktop study carried out for this project took into consideration several sources of information compiling, as a result, a complete and comprehensive list of already identified and possibly identifiable heritage resources. No maps were provided as the literature source did not often report GPS co-ordinates. In the second phase of the Heritage Impact Assessment a map will however be required.

An important shortfall of the project is the absence of a palaeontological assessment, even in the form of a desktop or scoping study. The palaeontological heritage, for which the Karoo is internationally renowned, is mentioned in Chapter 4.11.2 of Volume 1 of the Draft EMP, but no professional assessment by a palaeontologist is included in the draft EMP. More specifically, the Tarkastad Subgroup and the Adelaide Subgroup have proved to be highly fossiliferous.

#### **DISCUSSION**

The Central Precinct comprises a 30 000 km<sup>2</sup> area spreading across Eastern, Western and Northern Cape.

After consulting the literature available, Mr Prins listed a series of sites which have been previously recorded in this precinct and that might be encountered during development. Evidence of Middle and Later Stone Age sites were identified as scatters of stone tools and open air sites, along with rock art and engraving sites and freshwater shell middens. Of a later pastoralist period are the kraals of the Zeekoe River Valley.

From the historical period, evidence of buildings and graveyards are recorded. About nineteen buildings are declared in this precinct as provincial heritage sites and another 153 are older than 60 years and therefore protected by the National Heritage Resources Act.

#### **SAHRA RECOMMENDATIONS**

The SAHRA Archaeology, Palaeontology and Meteorite unit recommends that:

- The proposed position (including the alternatives) of the drilling boreholes must be decided and assessed in consultation with an archaeologist and a palaeontologist. The specialists will provide with information regarding the presence of known heritage sites in the area.
- After the potential positions of the boreholes and all associated infrastructure have been decided in consultation with heritage specialists, a Heritage Impact Assessment must be compiled and submitted to SAHRA for comments. The

assessment will need to include a map indicating the position of all heritage sites identified both in the desktop and Phase 1 assessments in relation with the proposed position for the boreholes.

- o A Phase 1 Archaeological Impact Assessment comprehensive of a field survey must be included in the HIA.
- o A Palaeontological Impact Assessment must be submitted to SAHRA before any earth moving activities occur, SAHRA will then comment about the feasibility of the project. SAHRA will not be able to comment on any palaeontological aspects of the heritage until an assessment of the palaeontological potential is undertaken.
- o The boreholes will most likely affect the sense of place of the landscape, therefore it is requested that the cultural landscape and living heritage aspects of the Precinct are assessed during the Heritage Impact Assessment.
- It is requested that an archaeologist and a palaeontologist are consulted regarding the position of any prospecting drilling, trenching or earth moving activity. Monitoring might be required during these activities.
- Decisions on Built Environment (e.g. structures over 60 years), Cultural Landscapes and associated Living Heritage (e.g. sacred sites) must be made by the Provincial Heritage Resources Authority of the Northern Cape (Mr. Joas Sinthumule jsinthumule@ncpg.gov.za), for the Northern Cape Province and by Heritage of Western Cape (Ms Jenna Lavin, jlavin@pgwc.gov.za) for the Western Cape.
- Any alterations to the original plan must be discussed with the heritage specialists who will advise whether the revised plan is deemed suitable from a heritage perspective. The outcome of the discussion must be communicated to SAHRA and the relevant Provincial Heritage Resources Authorities.
- No archaeological or palaeontological site may be altered or destroyed without a destruction permit to SAHRA.

**CONCLUSION**

Before any drilling, trenching, prospecting or earth moving activity occur, SAHRA requires that a Heritage Impact Assessment is undertaken and submitted to SAHRA, Heritage of Northern Cape and Heritage of Western Cape for comments.

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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.