



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

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REVIEW COMMENT ON ARCHAEOLOGICAL and PALAEOLOGICAL IMPACT ASSESSMENTS

BY ARCHAEOLOGY, PALAEOLOGY AND METEORITES UNIT OF THE SOUTH AFRICAN 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.

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- A. PROVINCIAL HERITAGE RESOURCES AUTHORITY: **Eastern Cape**
- B. AUTHOR(S) OF REPORT: **Ms Celeste Booth**
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- E. DATE OF REPORT: **February 2012**
- F. TITLE OF REPORT: **A Phase 1 Archaeological For The Proposed Upgrade Of The National Route R61 Section 2 Between Draairiver (Km 29,4) And Elinus Farm (Km 42,2) And Three Borrow Pits (BPA, Q3, And BPE) Near Cradock, Eastern Cape Province**
- B. AUTHOR(S) OF REPORT: **Dr Robert Gess**
- C. ARCHAEOLOGY CONTRACT GROUP: **Rob Gess Consulting**
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- E. DATE OF REPORT: **February 2012**
- F. TITLE OF REPORT: **Palaeontological survey and report for the proposed upgrade of Section 2 of the R61 road located between Graaf Reinet and**

Cradock

- G. Please circle as relevant: Archaeological and Palaeontological components of EIA / EMP / HIA / CMP/ **Other** (Specify) **BAR**
 - H. REPORT COMMISSIONED BY (**CONSULTANT** OR DEVELOPER): **SRK Consulting**
 - I. CONTACT DETAILS: **P.O. Box 21842, Port Elizabeth, 6000, Ms Tamarin Arthur, email: tarthur@srk.co.za**
 - J. COMMENTS:
- Please see comment on next page*

REVIEW COMMENT ON ARCHAEOLOGICAL AND PALAEOLOGICAL IMPACT ASSESSMENTS

Ms Celeste Booth

Dated: February 2012, Received: March 2012

A Phase 1 Archaeological For The Proposed Upgrade Of The National Route R61 Section 2 Between Draairiver (Km 29,4) And Elinus Farm (Km 42,2) And Three Borrow Pits (BPA, Q3, And BPE) Near Cradock, Eastern Cape Province

Dr Robert Gess

Dated: February 2012, Received: March 2012

Palaeontological survey and report for the proposed upgrade of Section 2 of the R61 road located between Graaff-Reinet and Cradock

INTRODUCTION

SRK Consulting undertook the Basic Assessment process for the upgrade and rehabilitation of section 2 of the Route 61 between Graaff-Reinet and Cradock.

A draft Basic Assessment Report, including an archaeological and a palaeontological impact assessment, was submitted to SAHRA on the 8th of March 2012.

The project entails the rehabilitation and widening of the road from 10.03 to 13.5 m, the demolition of the old bridge over the Great Fish River and the construction of a new one, the widening of the Draairivier bridge, the raising of the headwalks of two tributary sections, upgrading of culverts and sourcing of material from three borrow pits.

Three existing quarries and borrow pits (BPA, BPB and Q3) were also included in this assessment since they are proposed to be used as source of material for the upgrade of the road.

DISCUSSION

Both the archaeologist and the palaeontologist surveyed the area. The archaeologist carried out spot checks from a vehicle visiting on foot disturbed and exposed areas, such as rocky outcrops. According to the specialist the road reserve had already been highly disturbed by previous activities related to the maintenance of the road and no archaeological material was identified along the 12.8km

The archaeologist also visited the two existing borrow pits and the quarry but no archaeological material was identified besides two Middle Stone Age stone artefacts located in the vicinity of BPE.

From a palaeontological perspective this section of the R61 is underlain by mudstones and sandstones of the Elandsberg member of the Balfour Formation, of the Adelaide Subgroup, Beaufort Group, Karoo Supergroup intruded by the Karoo Dolerite Suite and overlain by Quaternary alluvial deposits. The Balfour Formation is expected to be palaeontologically sensitive with fossils belonging to the *Dicynodon* Assemblage Zone.

The palaeontologist surveyed all road cuttings along the 12.8km to identify the palaeontological sensitivity of this section. Dr Gess recorded a few plant fossils including sphenopsid plant stems and shallow water ripple surfaces, vertical invertebrate burrow casts, a faint impression of a *Glossopteris* leaf and a dicynodont tusk within the maxilla preserved as nodules within siltstone.

While the plant fossil are of low palaeontological significance, the vertebrate burrows and bones recorded as Points 3 and 4 in the report and close to Graaff-Reinet (31 57 52 S, 25 02 24 E) are of significance.

RECOMMENDATIONS

SAHRA agrees with the palaeontologist that mitigation in the form of excavation and recovery of the identified material must be undertaken. A photographic record must be

established immediately before, during and after mitigation. The palaeontologist will require a mitigation permit from SAHRA in terms of s. 35 of the National Heritage Resources Act (Act 25 of 1999). On receipt of a satisfactory mitigation (Phase 2) permit report from the archaeologist, SAHRA will make further recommendations in terms of the site such as its final destruction or additional sampling. Close collaboration with the site engineer and machine operator will be required.

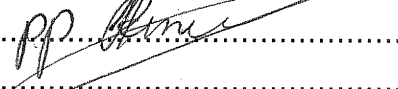
Moreover, cutting of the two road cuttings (Points 3 and 4 in the Palaeontological Impact Assessment) must be monitored by a palaeontologist.

CONCLUSION

If the recommendations made in this comment are adhered to, the SAHRA Archaeology, Palaeontology and Meteorites Unit has no objection to the development (in terms of the archaeological and palaeontological components of the heritage resources). If any new evidence of archaeological sites or artefacts, palaeontological fossils, graves or other heritage resources are found during construction, SAHRA (Mariagrazia Galimberti/Colette Scheermeyer, Tel: 021 462 4502) and a professional archaeologist or palaeontologist, depending on the nature of the findings, must be alerted immediately.

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NAME OF HERITAGE RESOURCES AGENCY: SAHRA