



an agency of the
Department of Arts and Culture

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CaseID: 12801

Date: Thursday January 31, 2019
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Interim Comment

In terms of Section of the National Heritage Resources Act (Act 25 of 1999)

Attention: National Department of Public Works

Planning & Design for the Maintenance and / or Upgrade of the Patrol Roads and Fencing on the Borders between the Republic of South Africa (RSA), Swaziland & Mozambique, being undertaken by the National Department of Public Works (DPW), KwaZulu-Natal and Mpumalanga Provinces

The Department of Public Works intends upgrade maintain the borders which stretches from the Mozambique-South African border immediately south of Ponta de Ouro, then along the entire length of the Swaziland – South African border to the point where the Swaziland, Mozambique and South African borders once again meet at Zulu Crossing (immediately south of a settlement named Mbuzini) in the Mpumalanga Province. The total extent of the development area covers 520km and includes relevant access roads and borrow pits.

Amafa; the Provincial Heritage Resources Authority responsible for KZN will comment on their designated section of the development area. SAHRA's comment on the other hand will be on sections within the Umjindi, Mkhondo, Msukaligwa, eHlanzeni, Nkomazi and Albert Luthuli Local Municipalities of the Mpumalanga.

Royal Haskoning DHV (Pty) Ltd has been appointed by Department of Public Works to undertake a Basic Assessment process in support of an Environmental Authorisation (EA) application in terms of National Environmental Management Act, Act 107 of 1998 (NEMA) and a Water Use License in terms of the Water Use Licence Regulations, March 2017 promulgated in terms of the National Water Act, 36 of 1998. In respect of listed activities in the Environmental Impact Assessment (EIA) Regulations 2017, as amended.

As part of the proposed development, Active Heritage CC was contracted to conduct the Heritage Impact Assessment (HIA) as part of the EA application in terms of section 38(8) of the National Heritage Resources Act, act 25 of 1999 (NHRA). SAHRA initially responded in an Interim Comment dated 23/10/2018, that both the HIA and PIA reports must be amended to clearly define the Mpumalanga and KZN sections being assessed. Both reports have since been submitted.

Prins, F. November 2018. Cultural Heritage Impact Assessment of the Proposed Border Road, including 20 Borrow Pits, Swaziland.

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The author states that archaeological sites exist in the development area and these include Early Stone Age, Middle Stone Age, Later Stone Age, Later Iron Age, Rock Art, and Later Iron Age/historical period sites. The conducted desktop study revealed that the development area has not been systematically surveyed as many grave sites were discovered in the environs. The author determines that there will be no impacts to heritage resources as they located far from the proposed development activities

Butler, E. October 2018. Palaeontological Field Assessment of The Proposed Swaziland-Mozambique Border Patrol Road and Mozambique Barrier Structure.

The author concludes that the proposed area is underlain by various sedimentary rocks of which the Quaternary and the Undifferentiated Karoo (Ecca Group, Dwyka Group, Beaufort Group) have a high palaeontological sensitivity. Various igneous rocks form large parts of the area and are unfossiliferous and therefore of zero palaeontological sensitivity. During a field-survey no fossiliferous outcrops were found in the development footprint although the possibility of finding fossils is high. A general low palaeontological sensitivity is allocated to the development footprint.

Recommendations: In the unlikely event that fossil remains are uncovered during any phase of construction, either on the surface or unearthed by new excavations and vegetation clearance, the ECO in charge of these developments ought to be alerted immediately. These discoveries should be protected (preferably *in situ*) and the ECO must report to SAHRA so that suitable mitigation (collection and recording) can be carry out by a professional paleontologist.

Preceding any collection of fossil material, the specialist would need to apply for a collection permit from SAHRA. Fossil material must be curated in an accredited collection (museum or university collection), while all fieldwork and reports should meet the minimum standards for palaeontological impact studies proposed by SAHRA.

Interim Comment

SARHA Archaeology, Palaeontology and Meteorites (APM) Unit issued Interim Comments requesting an impact assessment to be undertaken and included in both the PIA and HIA reports, as well as a separation of sites located in Mpumalanga and KwaZulu-Natal. However those reports were removed from the case, SAHRA requires the original documents to be reuploaded to the case along with the amended heritage reports.



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The amended HIA report still does not adhere to the above request, therefore SAHRA cannot provide comments on this case. The HIA must be amended again to contain an impact assessment with distances to proposed border road upgrades and borrow pits. This must be specific to each respective province as well as photographs of the identified sites, especially if they are located less than 100m away from the proposed road upgrades and proposed borrow pits. The report must comply with the 2007 Minimum Standards for the Archaeological Component of the Heritage Impact Assessment Report.

The geological maps provided in the PIA indicate that the Mpumalanga section of the proposed area is underlain by the potentially fossiliferous Nsuzze Group, Quaternary deposits, Mozaan Group (Pongola Supergroup), Onverwacht and Fig Tree Groups (Barberton Sequence) and Clarens Formation (Stormberg Group, Karoo Supergroup) as well as non-fossiliferous igneous or metamorphic rocks of the De Kraalen Greenstone belt, Ushushwana Complex, Amsterdam Formation, Mpuluzi granite, Suite Thole, Moodies Group (Barberton Sequence), Jozini Formation (Lebombo Group, Karoo Igneous Province), Letaba Fm (Lembombo Group, Karoo Igneous Province), Tshokwana Granophyre.

Potential fossil occurrences:

- SW: Stromatolites have been recorded in the Nsuzze Group in KwaZulu-Natal.
- SW: Quaternary fossil assemblages are generally rare and low in diversity. They may in some cases occur in extensive alluvial and colluvial deposits cut by dongas and may comprise of mammalian teeth, bones and horn corns, reptile skeletons, fragments of ostrich eggs, microfossils, non-marine mollusc shells, freshwater stromatolites, plant material such as foliage, wood, pollens and peats, as well as trace fossils like vertebrate tracks, burrows, termitaria (termite heaps/ mounds) and rhizoliths (root casts).
- S & SW: Stromatolites might be present in banded iron formation of the Mozaan Group (Pongola Supergroup).
- NW & N: Archaean microbial trace fossils (bacterial borings) and microfossils and have been documented from cherts and volcanic glasses in the Fig Tree Group and Onverwacht Group of the Barberton Sequence.
- NE: The Clarens Formation is known to contain fossils of vertebrates (notably dinosaurs such as *Euskelesaurus* and *Massospondylus*), invertebrates, trace fossils (such as *cruziana* and *skolithos*;

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controversial fossil termitaria), petrified logs, dinosaur trackways (possibly *Massospondylus*, *Syntarsus* / *Coelophysis*) and possible dinosaur eggshells.

In addition to the recommendations provided by the author of the PIA, the ECO must monitor any earth works in the potentially fossiliferous rocks listed above.

Should you have any further queries, please contact the designated official using the case number quoted above in the case header.

Yours faithfully

Nokukhanya Khumalo
Heritage Officer
South African Heritage Resources Agency

Phillip Hine
Acting Manager: Archaeology, Palaeontology and Meteorites Unit
South African Heritage Resources Agency

ADMIN:

Direct URL to case: <http://www.sahra.org.za/node/510804>
(DEA, Ref:)