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26 September 2014

**Attention      Bernadet Pawandiwa**

Dear Ms Pawandiwa

**Application for Exemption from a Phase 1 Heritage Impact Assessment  
Proposed Jozini-Ingwavuma Water Supply Scheme, Zones 8-12, Jozini Local Municipality,  
uMkhanyakude District Municipality  
KwaZulu-Natal**

**Project description**

The proposed Jozini – Ingwavuma Water Scheme is located within the uMkhanyakude District Municipality and is bounded by the Pongola Dam to the south and Swaziland to the west. The Shemula Water Supply Scheme is located to the north of the proposed Jozini – Ingwavuma Water Scheme. The proposed project is aimed at providing residents within the region with a reliable, potable and sustainable water supply.

The scheme is divided into a number of phases with construction of the initial phases currently underway (**SAHRIS SAH13/4163**).

The Jozini – Ingwavuma Water Scheme: Zones 8 to 12 involves the provision of bulk water supply infrastructure to two areas within the scheme and includes the construction of the following infrastructure:

- The construction of bulk rising mains (max 350 mm).
- The construction of bulk gravity mains (max 300 mm).
- The construction of pump stations and reservoirs.
- The construction of the reticulation network (max 200 mm).
- The crossing underneath of roads, water ways and streams with pipe depths of up to 3 m below ground level; and the construction of associated air, scour and isolation valve chambers.
- The construction of reservoirs and pump stations.

In total, 34 km of pipeline will be constructed for Zones 8 to 12 and will include the construction of gravity pipelines and rising mains. The topography of the supply area is characterised by very steep and hilly terrain (Western Alignment) and low undulating hills (Eastern Alignment). As far as possible, the pipelines will follow existing roadways and tracks. (See Figures as uploaded to SAHRIS).

## Site assessment and recommendations

eThembeni staff conducted a field inspection of the scheme on 30 August 2014. The greater part of the pipeline reticulation will follow immediately adjacent to existing District and Auxiliary Roads. The “greenfield” alignments were not closely associated with any extant homesteads.

Observed archaeology in the study area comprises disjoint and widely scattered stone artefacts and *debitage* of Middle Stone Age (MSA) and Later Stone Age (LSA) origin. MSA artefacts are largely quartzite and LSA artefacts largely cryptocrystalline silicates (CCS). Early Stone Age (ESA) artefacts are recorded from the area but none were observed. These artefacts are in secondary contexts due to down-slope colluvial flow, settlement and agricultural activities, and road construction and grading. They do not constitute sites but form part of a past cultural landscape. We have rated them as being of low scientific significance. No further mitigation is recommended.

Historically older farming community sites have been masked by latter day settlement expansion and field clearance. Due to the paucity of perennial water along the crest and foothills of the Lebombo Mountains the same localities have continued to be reoccupied, thus masking older sites. Certainly during the Late Iron Age the eastern project area would have been eschewed for occupation due to the presence of *tsetse fly (nagana)*. An Iron Age archaeological footprint is thus invisible, this being exacerbated by down-slope colluvial flow, historically recent settlement and agricultural activities, and ongoing road construction and grading.

The SAHRIS Palaeontology Sensitivity Map places the scheme within a blue delimitation and thus of low palaeontological potential. The study areas are underlain by Jurassic aged igneous rocks of the Jozini Formation and dolerite intrusions through Karoo shales. Due to the igneous nature of these rocks, the study areas are allocated a low palaeontological sensitivity rating. No further palaeontological mitigation is required (Groenewald 2013).

The heritage resource of prime concern is unmarked ancestral graves. All graves are accorded the highest level of protection and may not be disturbed without both family consent and a permit from Amafa.

During the field inspection, graves at extant homesteads were observed to be within or immediately adjacent to the household precincts. Abandoned homesteads may however feasibly occur in proximity to the proposed route alignments, with attendant grave sites. These should however form part of the collective memory of local residents.

It is therefore recommended that the following protocol be made binding in the Record of Decision (R.o.D.):

“That during the Public Participation Process and again at the time of pegging the alignment the Community Liaison Officer (CLO) and the Environmental Control Officer (ECO) engage with households in close proximity to the alignment to ascertain the presence of unmarked or invisible grave sites. Local traditional leadership should also be participant in these engagements or at least informed.

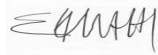
Any identified grave sites should ideally be left with a twenty metre (20m) buffer from construction activities and be fenced for the duration of such. Any closer infringement on a burial site will have to be negotiated with the household head concerned. If no consensus can be reached consideration should be given to moving the pipeline alignment away and past the grave site/s/

In the event of unintentional exposure of a grave or a request from a family for exhumation and re-interment the CLO/ECO shall immediately contact Amafa/KZN Heritage to obtain the necessary protocols and procedures for the management of such human remains”.

It is our considered opinion that the potential impact to heritage resources through implementation of the water scheme is very low given the above and that it is intended for the pipeline alignments to be within previously disturbed road verges. Consequently, on behalf of the uMkhanyakude District Municipality, we request exemption from a full Phase 1HIA for this phase of the Jozini-Ingwavuma Water Scheme.

Please could you convey Amafa’s decision on this matter to the appointed Environmental Practitioner, Mr Giles Churchill, of **ACER (Africa) Environmental Management Consultants**.  
[giles.churchill@acerafrica.co.za](mailto:giles.churchill@acerafrica.co.za)

Yours sincerely



Len van Schalkwyk and Elizabeth Wahl

#### Reference

**Groenewald, G. 2013. Desktop Palaeontological Assessment of the Jozini-Ingwavuma Water Supply Project, Nondabuya Pipeline and Regional Water Treatment Works. WSP Environmental (KZN).**