

**PROPOSED MPUPHUSI RIVER SAND WINNING
PROJECT, NONGOMA LOCAL MUNICIPALITY,
ZULULAND DISTRICT, KWAZULU-NATAL**

Phase 1 Heritage Impact Assessment

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**FOR: ENVIROEDGE
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EXECUTIVE SUMMARY

As part of the Mandlakazi Bulk Water Supply Scheme, the bulk pipeline installation requires bedding material to be installed in pipeline trenches beneath laid pipe, so as to act as a protective layer, promote drainage, and prevent waterlogging within the trench. Suitable well graded and compacted bedding is required beneath, around and above the pipe. The proposed bedding material has been tested as part of the geotechnical investigation and found to be suitable for its intended purpose. The proposed mining site therefore shows evidence of sand that is free of clay, thus yielding material that is suitable for pipe bedding. The Zululand District Municipality has identified the study site as having suitable sand material in this regard.

This report is the Phase 1 Heritage Impact Assessment (HIA) for the proposed sand mining project in the Mpuphusi River.

The extent of the proposed sand mining is 4.9 hectares (49000 m²) hence it triggers Section 38 (1) (c) (i) of the National Heritage Resources Act, 1999 (Act No 25 of 1999) that lists activities that require a heritage impact assessment (HIA). The relevant sub-section, refers to developments categorised as—

- (c) any development or other activity which will change the character of a site—
 - (i) exceeding 5 000 m² in extent.

The sand mining area is located within the Mpuphusi River which is the divide between ward 5 and ward 18 of the Nongoma Local Municipality, Zululand District. The project area is located 16km north east of the town of Nongoma, between the villages of KwaNcongoma and Nzondane.

An inspection of the sand mining project area was undertaken on 24 July 2018. Visibility was good in the river and along the river banks and adjacent floodplain.

The extent of the proposed sand mining site was inspected on foot. Informal diggings were observed on the north-eastern river bank/floodplain and within the river towards the southern end of the delineated project area, more diggings were observed that is been undertaken by a back actor / loader which was found parked on the river bed.

Scatters of archaeological material were observed on the road leading into the river. However, due disturbance through the movement of humans and animals the material is sparse and without context. The river bed revealed no material. The adjacent floodplains and river banks were inspected and little to no archaeological material was discovered nor were any other heritage resources observed along and in these areas.

The South African fossil sensitivity map indicates that the project area falls into an area of very high fossil sensitivity. It is the understanding of this specialist that the EAP will undertake the necessary palaeontological study for the project.

No heritage resources were found during the site inspection of the area of the proposed sand mining project. Limited archaeological material observed during the inspection were found to be sparsely scattered largely due to disturbance by the river and human and animal movements.

From a heritage perspective, the proposed sand mining of a section of the Mpuphusi River can proceed once the palaeontological assessment has been undertaken. During the project, the mitigation measures provided in the report must be implemented.

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AUTHOR DETAILS

Name	Qualification	Professional Registration
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1. INTRODUCTION

The proposed sand winning / mining area is located within the Mpuphusi River which is the divide between ward 5 and ward 18 of the Nongoma Local Municipality, Zululand District.

As part of the Mandlakazi Bulk Water Supply Scheme, the bulk pipeline installation requires bedding material to be installed in pipeline trenches beneath laid pipe, so as to act as a protective layer, promote drainage, and prevent waterlogging within the trench. Suitable well graded and compacted bedding is required beneath, around and above the pipe. The proposed bedding material has been tested as part of the geotechnical investigation and found to be suitable for its intended purpose. The proposed mining site therefore shows evidence of sand that is free of clay, thus yielding material that is suitable for pipe bedding. The Zululand District Municipality has identified the study site as having suitable sand material in this regard.

This report is the Phase 1 Heritage Impact Assessment (HIA) for the proposed sand mining project in the Mpuphusi River.

2. LEGISLATIVE BACKGROUND

The extent of the proposed sand mining is 4.9 hectares (49000 m²) hence it triggers Section 38 (1) (c) (i) of the National Heritage Resources Act, 1999 (Act No 25 of 1999) that lists activities that require a heritage impact assessment (HIA). The relevant sub-section, refers to developments categorised as—

- (c) any development or other activity which will change the character of a site—*
- (i) exceeding 5 000 m² in extent*

In addition, the project may impact on graves, archaeological and palaeontological resources that are protected in terms of sections 34, 35, and 36 of the KwaZulu-Natal Heritage Act (No. 4 of 2008) as well as sections 35 and 36 of the National Heritage Resources Act (NHRA).

In terms of Section 3 of the NHRA, heritage resources are:

- (a) places, buildings, structures and equipment of cultural significance;
- (b) places to which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features of cultural significance;
- (e) geological sites of scientific or cultural importance;

- (f) archaeological and paleontological sites;
- (g) graves and burial grounds, including—
 - (i) ancestral graves;
 - (ii) royal graves and graves of traditional leaders;
 - (iii) graves of victims of conflict;
 - (iv) graves of individuals designated by the Minister by notice in the *Gazette*;
 - (v) historical graves and cemeteries; and
 - (vi) other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
- (h) sites of significance relating to the history of slavery in South Africa;
- (i) movable objects, including:
 - (i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
 - (ii) objects to which oral traditions are attached or which are associated with living heritage;
 - (iii) ethnographic art and objects;
 - (iv) military objects;
 - (v) objects of decorative or fine art;
 - (vi) objects of scientific or technological interest; and
 - (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).

The Phase I HIA was undertaken to assess whether any heritage resources will be impacted by the proposed sand mining of a section of the Mpuphusi River.

3. LOCATION

The sand mining area is located within the Mpuphusi River which is the divide between ward 5 and ward 18 of the Nongoma Local Municipality, Zululand District. The project area is located 16km north east of the town of Nongoma, between the villages of KwaNcongoma and Nzondane. The surrounding area is rural in nature with clusters of traditional and modern houses up to a kilometre away from the project site. Cattle were observed around and in the river.



Figure 1: Aerial image of project area outlined in green



Figure 2: View of project within wider area

4. TERMS OF REFERENCE

Undertake a Phase 1 Heritage Impact Assessment in order to determine the possible existence of heritage resources, as listed above, that could be impacted by the proposed sand mining project. Provide mitigation measures to limit or avoid the impact of the proposed sand mining project on heritage resources (if any).

The Environmental Assessment Practitioner (EAP) (Enviroedge), will submit the HIA report to the provincial heritage resources authority, Amafa aKwaZulu-Natali (Amafa), for their assessment and comment.

5. METHODOLOGY

A survey of literature, including other heritage impact assessment (HIA) reports completed for the surrounding area, was undertaken in order to ascertain the history of the area and what type of heritage resources have or may be found in the area of development. No HIAs have been undertaken within 5 km of the study area.

An inspection of the project area was undertaken on 24 July 2018. Visibility was good as the river was dry and inspection could take place within the river bed. Although vegetation growth on both sides of the river was thick, visibility remained good.

6. HISTORICAL BACKGROUND OF THE STUDY AREA

The greater Ulundi and Nongoma areas have been sporadically surveyed for archaeological sites with the most systematic surveys occurring in the Emakhosini Opate Park and at the Umfolozi-Hlulhuwe Nature Reserve. Fifty-nine Middle Stone Age (MSA) sites have been recorded in the Umfolozi-Hlulhuwe Nature Reserve which is situated roughly 50 km south east of the project area. MSA sites are associated with anatomically modern people and date back to approximately 40 000 to 200 000 years ago. The vast majority of these sites are open-air sites and therefore do not occur in archaeological context and have limited excavation value. Thirty five Later Stone Age (LSA) sites have been recorded in various localities in the nature reserve (Prins 2015:3).

Archaeological sites have also been recorded outside of the Umfolozi-Hlulhuwe Nature Reserve but knowledge of these is more limited. One MSA open air site was recorded immediately

adjacent to Nongoma in the 1970's but has been destroyed by development in recent years (Prins 2015:3).

The earliest agricultural sites in KwaZulu-Natal date to between AD 400 and 550. All are situated close to sources of iron ore, and within 15 km of the coast. Current evidence suggests it may have been too dry further inland at this time for successful cultivation (eThembeni 2013:20). From 650 onwards, however, climatic conditions improved and agriculturists expanded into the valleys of KwaZulu-Natal, where they settled close to rivers in savanna or bushveld environments. Several iron age furnaces occur in the Hluhluwe-Umfolozzi Game Reserve (Mitchell 2002:356).

There is evidence that shows by 1593, a mercantile trade, presumed to have come from Delagoa Bay had penetrated as far south as the Transkei and as far inland as the Nongoma area. Ivory was the main export, while beads and copper were the main imports (Maggs 1989:42).

The greater Nongoma area was once the home of King Zwide, a late 18th-century Ndwandwe monarch who was eventually defeated by Shaka at the beginning of the Mfecane wars. On 30 March 1883, a Zulu regiment, the Mandlakazi under Zibhebhu, defeated the uSuthu (another Zulu regiment representing King Cetshwayo kaMpande) in the Msebe Valley near Nongoma. The town itself was established in 1887 with the building of Fort Ivuna by the British as a buffer zone between the Zulu warring factions. It was originally called Ndwandwe but was later replaced by an earlier name given by the local tribesmen to the sacred area where the town stands: KwaNongoma ("place of the diviner or mother of songs"). In June 1888 Nongoma was destroyed by the uSuthu but later rebuilt. The fort was used during the Bambatha Rebellion of 1906.

7. RESULT OF SITE INSPECTION

The extent of the proposed sand mining site was inspected on foot. Informal diggings were observed on the north-eastern river bank/floodplain and, within the river towards the southern end of the delineated project area, more diggings were observed which is been undertaken by a back actor / loader which was found parked on the river bed. The driver could not be found during the site inspection (see **Figure 3** below).

Scatters of archaeological material were observed on the road leading into the river. However, due disturbance through the movement of humans and animals the material is sparse and without context. The river bed revealed no material. The adjacent floodplains and river banks were

inspected and little to no archaeological material was discovered nor were any other heritage resources observed along and in these areas.



Figure 3: Dry river bed with work taking place looking northwards

There appears to be no human habitation within a kilometre of the river and no people were encountered in or close to the project site during the site inspection.



Figure 4: Mpuphusi River looking northwards



Figure 5: River bank on eastern side of river



Figure 6: North-eastern floodplain looking southwards



Figure 7: Informal diggings on north-eastern floodplain



Figure 8: River looking south showing silt flats and river bank

Figure 8 above shows the river with silt flats which were inspected as well as the river banks and river gravels. No archaeological material nor other heritage resources were observed during the inspection.

The South African fossil sensitivity map indicates that the project area falls into an area of very high fossil sensitivity. It is the understanding of this specialist that the EAP will undertake the necessary palaeontological study for the project.

8. DISCUSSION AND CONCLUSION

No heritage resources were found during the site inspection of the area of the proposed sand mining project. Limited archaeological material (stone tools) observed during the inspection were sparsely scattered largely due to disturbance by river action and human and animal movements. Sections of the river are currently disturbed by informal diggings at the north and southern ends of the project area.

From a heritage perspective, the proposed sand mining of the Mpuphusi River can proceed once the palaeontological assessment has been undertaken. The mitigation measures provided below must be implemented during the project.

9. MITIGATION MEASURES

- For any chance heritage finds, all work must cease in the area affected and the Contractor must immediately inform the Project Manager. A registered heritage specialist must be called to site to inspect the finding/s. The relevant heritage resource agency (Amafa) must be informed about the finding/s.
- The heritage specialist will assess the significance of the resource and provide guidance on the way forward.
- Permits must be obtained from Amafa if heritage resources are to be removed, destroyed or altered.
- Under no circumstances may any heritage material be destroyed or removed from site unless under direction of a heritage specialist.
- Should any recent remains be found on site that could potentially be human remains, the South African Police Service (SAPS) as well as Amafa must be contacted. No SAPS official may remove remains until the correct permit/s have been obtained.

10. REFERENCES

eThembeni Cultural Heritage. 2013. *Phase 1 Heritage Impact Assessment Report of Proposed Esikhumbeni Stand-Alone Water Supply Scheme, Ulundi / Nongoma, Ulundi Local Municipality, Zululand District, KwaZulu-Natal*. Unpublished report.

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