

**EZINGOLWENI HATCHERY PROJECT, RAY  
NKONYENI LOCAL MUNICIPALITY, KWAZULU-NATAL**

**Phase 1 Heritage Impact Assessment**

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## EXECUTIVE SUMMARY

The Mshwemshwe Cooperative wishes to construct a hatchery in the Ezingolweni area. This report serves as the Phase 1 Heritage Impact Assessment (HIA) for the proposed Ezingolweni hatchery project.

The footprint of the proposed hatchery is 1.04 ha (10 400 m<sup>2</sup>) in size hence it triggers section 38 (1) (c) (i) of the National Heritage Resources Act (NHRA), 1999 (Act No 25 of 1999). This section relates to any development or other activity which will change the character of a site exceeding 5 000 m<sup>2</sup> in extent. The development could also impact on graves, structures, archaeological and palaeontological resources that are protected in terms of sections 33, 34, 35, and 36 of the KwaZulu-Natal Heritage Act (No. 4 of 2008) as well as sections 34, 35, and 36 of the NHRA.

The project is located at 30°52'23.4"S and 30°07'11.3" approximately 18 km south of Ezingolweni. It is situated along the north-western side of district road D1094 and approximately 2km from the Umtamvuna River which forms the boundary between KwaZulu-Natal and the Eastern Cape. A site inspection of the project area was undertaken on 12 June 2017.

The site is undeveloped with a thick grass cover. Cattle from surrounding homes graze on the site and two abandoned dwellings were found approximately 60 m north east of the proposed site of the hatchery. The area around these dwellings were inspected for possible graves but none were found. There are several dwellings that are occupied by people on the south western side of the proposed hatchery. These dwellings fall outside of the project area and no heritage sites were observed during the site inspection.

No heritage resources were found on or close to the project site during the site inspection. A resident indicated that to his knowledge, there were no graves on the site nor was the site of any importance to the immediate and surrounding community. The area is also not part of any known cultural landscape and no surface evidence of archaeological sites or artefacts were found during the inspection.

The South African Fossil Sensitivity Map indicated that the project area is situated in an area of moderate palaeontological / fossil sensitivity. An area of moderate sensitivity requires a desktop palaeontological assessment. As the project area is a greenfields site it was recommended that the desktop assessment be undertaken to assess whether any fossil finds will be affected by the proposed hatchery.

The desktop assessment established that the proposed hatchery site lies in the Carboniferous Dwyka Formation and Permian Ecca Group. Dwyka Group sediments are mostly tillites and these would not often contain fossils but occasionally there are fossil leaves and stems in the associated shales. Shales of the overlying Pietermaritzburg Formation are deep water deposits and do not contain fossils. The undifferentiated Ecca Group comprises shales and the age is unknown because there are no fossils.

The desktop assessment concluded that it was unlikely that any fossils would occur in the proposed project site and that the project can continue from a palaeontological perspective. Furthermore, no fossils have been recorded from this area. Nonetheless rocks of this type and age are potentially fossiliferous therefore a monitoring protocol as provided in the assessment is provided in case of chance finds of fossils during the construction of the hatchery.

It is therefore recommended that the proposed hatchery development should proceed together with the provision that the mitigation measures provided in this report and those provided in the palaeontological assessment are adhered to and implemented.

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**AUTHOR DETAILS**

<b>Verification</b>	<b>Name</b>	<b>Qualification</b>	<b>Professional Registration</b>
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## 1. INTRODUCTION

The Mshwemshwe Cooperative wishes to construct a hatchery in the Ezingolweni area close to the Ngcawusheni community.

This report serves as the Phase 1 Heritage Impact Assessment (HIA) for the proposed Ezingolweni hatchery project.

## 2. LEGISLATIVE BACKGROUND

The footprint of the proposed hatchery is 1.04 ha (10, 400 m<sup>2</sup>) in size hence it triggers section 38 (1) (c) (i) of the National Heritage Resources Act (NHRA), 1999 (Act No 25 of 1999). The relevant sub-section of the NHRA states that:

*“(1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as—*

*(c) any development or other activity which will change the character of a site —*

*(i) exceeding 5 000 m<sup>2</sup> in extent;*

*must notify the responsible heritage authority and furnish it with details regarding the location, nature and extent of the proposed development.*

The development could also impact on graves, structures, archaeological and palaeontological resources that are protected in terms of sections 33, 34, 35, and 36 of the KwaZulu-Natal Heritage Act (No. 4 of 2008) as well as sections 34, 35, and 36 of the NHRA.

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

- (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 Ezingolweni hatchery project.

### **3. LOCATION**

The project is located at 30°52'23.4"S and 30°07'11.3" approximately 18 km south of Ezingolweni. It is situated along the north-western side of district road D1094 (see **Figures 1 and 2** below). It is situated approximately 2km from the Umtamvuna River which forms the boundary between KwaZulu-Natal and the Eastern Cape.

### **4. TERMS OF REFERENCE**

Undertake a Phase 1 Heritage Impact Assessment in order to determine the possible existence of archaeological, palaeontological and cultural-historical sites or features in the project area that could be impacted by the proposed hatchery development.

Provide mitigation measures to limit or avoid the impact of the construction of the hatchery on heritage resources (if any).





Figure 1: Aerial view of project area





Figure 2: Google Earth image of project area

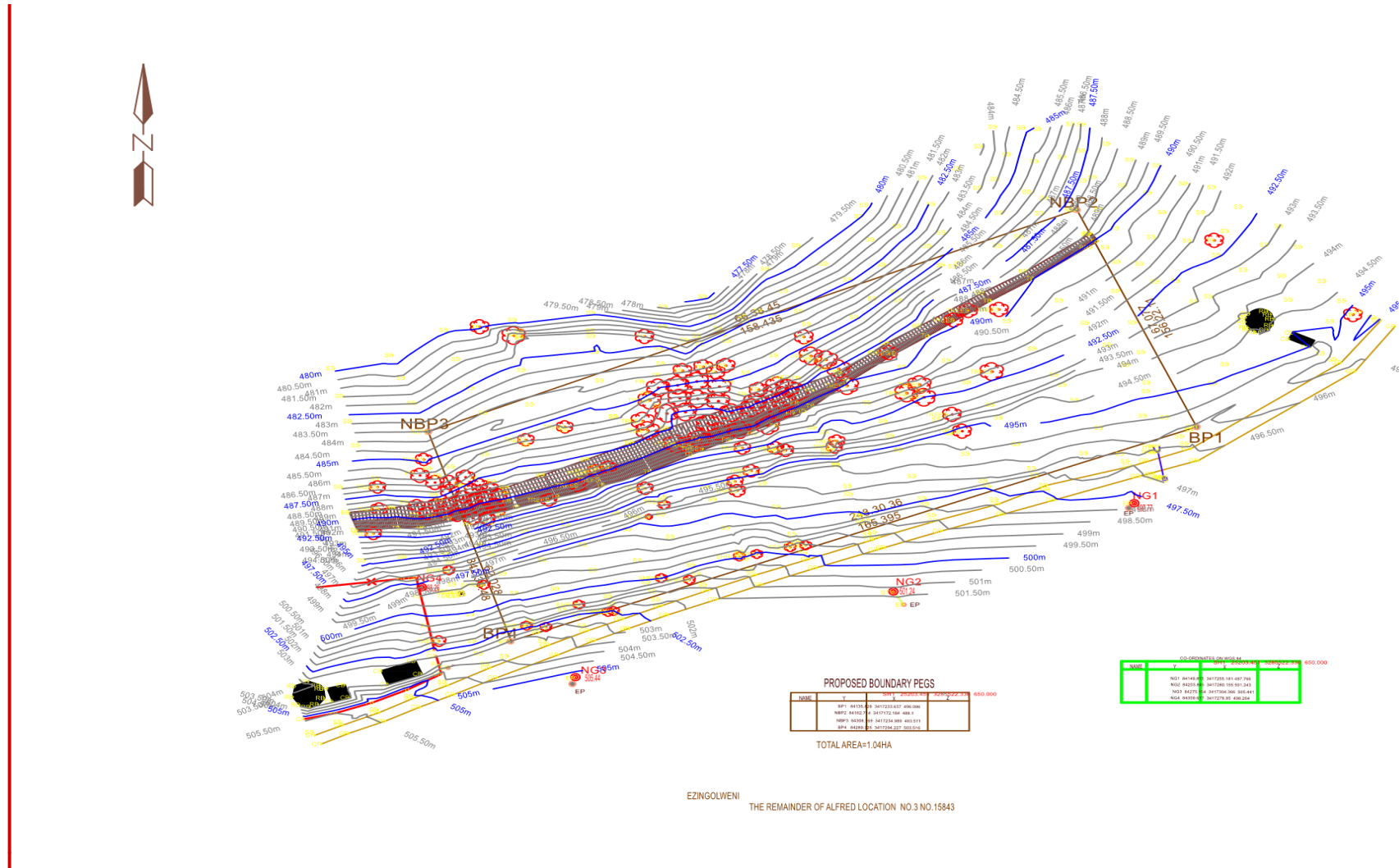


Figure 3: Plan of proposed hatchery

## **5. METHODOLOGY**

A survey of literature was undertaken of the larger area in order to place the project in a historical context. A few HIAs, undertaken in the wider geographical area, were found that provided some additional historical data regarding the area.

A site inspection of the project area was undertaken on 12 June 2017. The area was overgrown with a thick grass cover but, in general, visibility was good.

This HIA report will be submitted to the heritage authority of KwaZulu-Natal, namely Amafa aKwaZulu-Natali (Amafa), for their assessment and comment.

## **6. HISTORICAL BACKGROUND OF THE STUDY AREA**

Recent field-work based has suggested that in southern Natal during the last 3 500 years, hunter-gatherers would have occupied the Drakensberg in spring and summer, the coastal zone in winter, and the midlands of KwaZulu-Natal in autumn and late winter. This seasonal hypothesis has given rise to the speculation that while they were in the Drakensberg, the hunter-gatherers would have lived in large groups and would have operated from large home-base sites whilst in the coastal zones groups smaller sites would have been found (eThembeni 2008: 16).

The advent of the Iron Age saw the introduction of metallurgy as well as the introduction of agriculture, necessitating a more settled village way of life instead of the nomadic patterns of the Stone Age. It also provided for an increase in population density, as well as a more complex life-style. Richly decorated pottery is a hallmark of these early settlements. The earliest Iron Age sites in South Africa, including KwaZulu-Natal, relate to an eastern coastal and lowland cultural tradition with links as far north as the Kwale sites of eastern Kenya. This tradition has been named 'Matola', after a site in southern Mozambique (eThembeni 2008:16).

With the beginning of the Late Iron Age, settlements were no longer located in river valleys, but were built on higher ground where homesteads would benefit from cooling breezes and good views for strategic purposes. Steep slopes, wetlands and marshy areas were used for grazing domestic animals and gathering wild food and medicinal plants. Settlements appear to have been much smaller, implying that society underwent a change away from the large Early Iron Age villages and towards the individual family homesteads of the historic Nguni-speaking peoples



The evidence of written sources [from shipwrecked Portuguese and other mariners,] shows that, by the 1550s, while the coastal sourveld of Pondoland was thinly inhabited, coastal Natal from the Mtamvuna northwards was already well populated. A settlement of twenty hemispherical huts built of poles and thatch is described as being typical of the coast at that time. A later report confirms that such 'small villages' were the homes of kinship groups, each under the authority of a senior man (eThembeni: 17).

In KwaZulu-Natal, during the second half of the eighteenth century, stronger chiefdoms and paramountcies emerged. However, these were not fully grown states as there was no proper formal central political body established. This changed in the 1780's when a shift towards a more centralized political state occurred which was mainly characterized by population growth and geographical expansion of states. The most important and largest and strongest states at the time were the Mabhudu, Ndwandwe and Mthethwa including the smaller states including the Qwabe, Bhaca, Mbo, Hlubi, Bhele and Ngwane. The Zulu kingdom, established by King Shaka remained the most powerful in the region in the early years of the 19th century and by the time Shaka was assassinated in 1828, he had transformed the nature of Zulu society.

According to Beinart (1990:1), Ezingolweni (spelt Izingolweni in Beinart's report) was a small station, opened in early 1900, on a single track, narrow gauge line snaking through the hills inland from Port Shepstone. The line was built largely to open a transport route for agricultural produce from the still isolated districts of southern Natal. It was, however, the closest Natal station to the then Pondoland and rapidly became the railhead for migrant workers draining from the Transkei.

Izingolweni served another important function as soon as it was built. In 1912/1913, the devastating tick borne cattle disease of East Coast Fever reached Pondoland, having made its way slowly through Natal in the previous few years. Ox—wagon transport was greatly disrupted by the disease and Izingolweni quickly became a railhead for goods moving in and out of Eastern Pondoland (Beinart 1990: 31).

## 7. RESULTS OF SITE INSPECTION

The site is undeveloped with a thick grass cover. Cattle from surrounding homes graze on the site and two abandoned dwellings were found approximately 60 m north east of the proposed site of the hatchery. The area around these dwellings were inspected for possible graves but none were found. A community member with whom the specialist spoke confirmed that there were no graves associated with the two dwellings. According to the same resident, the families that used to reside in the dwellings had moved to eThekweni.



**Figure 4: Abandoned dwelling**



**Figure 5: Abandoned dwelling**

Several transects of the area to be developed were inspected on foot. The site and surrounding area appears to be terraced but, according to Mr. Ngongo, a resident and member of the cooperative, no farming has taken place on the site. No evidence was found of farming during the inspection. The site is located on a slope which is fairly steep.



**Figure 6: View of section of site with some terracing in background**



**Figure 7: Section of site of hatchery**

There are several dwellings that are occupied by people on the south western side of the proposed hatchery. These dwellings fall outside of the proposed hatchery and no heritage sites were observed during the site inspection.





**Figure 8: Close to south western boundary of hatchery**

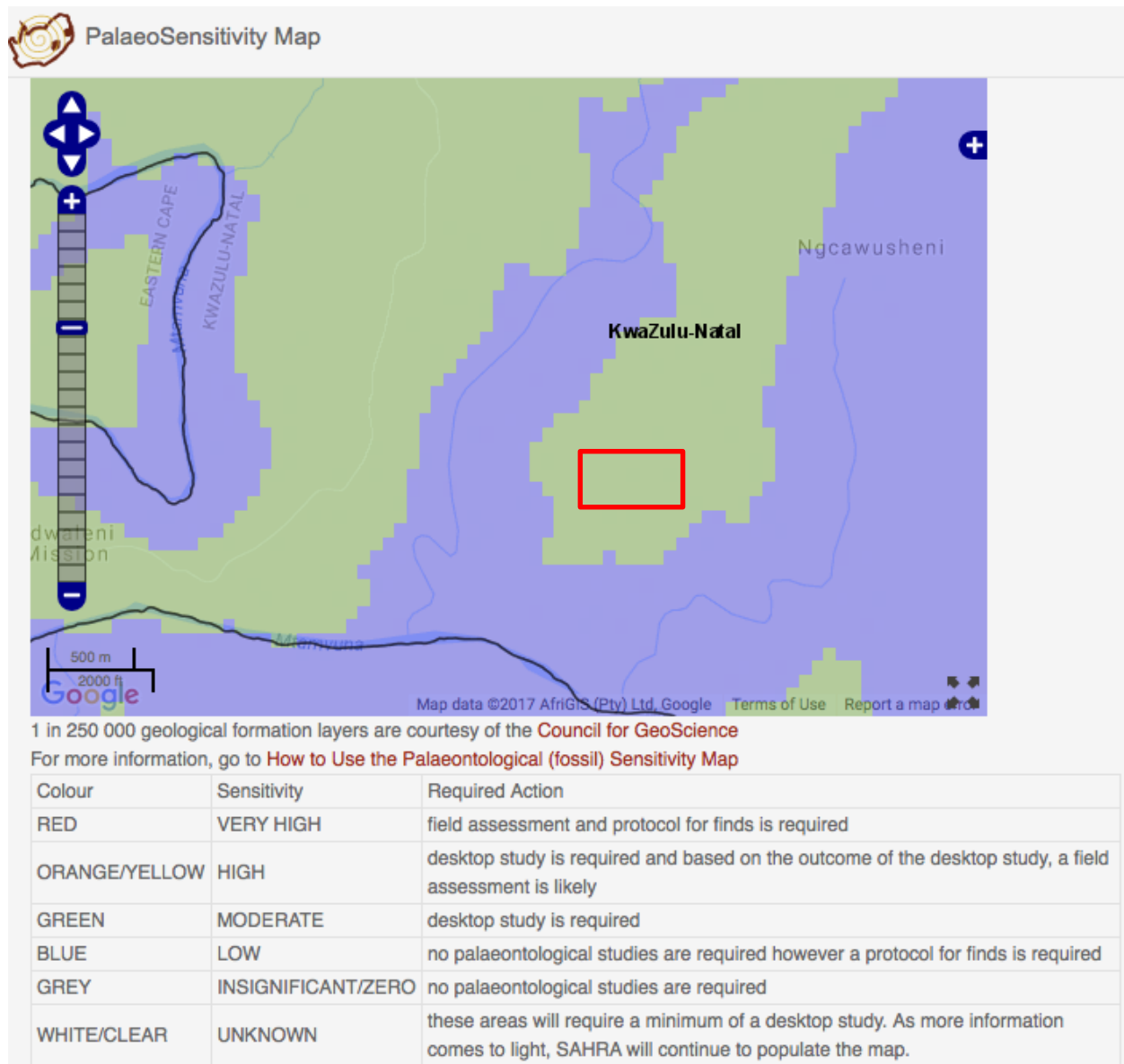
No heritage sites / resources were found on the project site during the site inspection. Mr. Ngongo confirmed that, to his knowledge, there are no graves on the site nor is the site of any importance to the immediate and surrounding community. The area is also not part of any known cultural landscape and no surface evidence of archaeological sites or artefacts were found during the inspection.

The South African Heritage Resources Agency's Fossil Sensitivity Map indicates that the project area is situated in an area coloured in green that indicates an area of moderate palaeontological / fossil sensitivity (see **Figure 9** below). As indicated in **Figure 9**, an area of moderate sensitivity requires a desktop palaeontological assessment. As the project area is a greenfields site it is recommended that the desktop assessment be undertaken to assess whether any fossil finds will be affected by the proposed hatchery.

According to desktop assessment, the proposed hatchery site lies in the Carboniferous Dwyka Formation and Permian Ecca Group. The oldest rocks in the area are the gneiss and granulite of the Mzimkulu Formation. These are highly metamorphosed and too old to contain any body fossils. Dwyka Group sediments are mostly tillites and these would not often contain fossils but occasionally there are fossil leaves and stems in the associated shales. Shales of the overlying Pietermaritzburg Formation are deep water deposits and do not contain fossils.



The undifferentiated Ecca Group comprises shales and the age is unknown because there are no fossils. The Natal Group quartzitic sandstone and arkoses are Ordovician to Silurian in age and could potentially contain ancient terrestrial fossils but none has been recorded from this area.



**Figure 9: Fossil sensitivity with approximate project area outlined in red**

The project area is undisturbed and there is a very small chance that fossil plants could be found where new excavations are made for the hatchery. It is unlikely that any fossils occur in the proposed building and infrastructure sites. Furthermore, no fossils have been recorded from this area. Nonetheless rocks of this type and age are potentially fossiliferous hence there could be a chance find thus a monitoring protocol is recommended and this procedure is included in the assessment. As far as the palaeontology is concerned the proposed development can go ahead.

## **8. RECOMMENDATIONS AND CONCLUSION**

No visible heritage sites or resources were found in the project area during the site inspection. Discussions with local residents indicated that there were no graves in the area nor areas of significance for the immediate and surrounding community. Due to the moderate fossil sensitivity of the project area, it was recommended that desktop palaeontological assessment be undertaken and any recommendations from this assessment must be implemented. The desktop assessment found that although there was a very slight chance of finding fossil plants, the project could proceed.

Based on the findings of this assessment and the palaeontological desktop assessment, it is recommended that the proposed hatchery development should proceed as long as the mitigation measures provided in Chapter 9 of this report and those provided in the palaeontological assessment are adhered to and implemented.

## **9. MITIGATION MEASURES**

- For any chance finds of heritage resources, such as grave/s or archaeological sites or residues, 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 for inspection. The relevant heritage resource agency (Amafa) must also be informed about the finding.
- The heritage specialist will assess the significance of the resource and provide guidance on the way forward.
- Written permission (permits) must be obtained from Amafa if heritage resources are to be removed, destroyed or altered.
- All heritage resources found in close proximity to the construction area must be protected by a 3m buffer in which no construction can take place. The buffer material (danger tape, fencing, etc.) must be highly visible to construction crews.
- Under no circumstances may any heritage material be destroyed or removed from site unless under direction of a heritage specialist.
- Should any remains be found on site that is potentially human remains, the South African Police Service (SAPS) should be contacted. No SAPS official may disturb or exhume such remains, whether of recent origin or not, without the necessary permission.

- If there are chance finds of fossils during construction, work in the area of the find must be stopped and a palaeontologist must be called to the site in order to assess the fossils and rescue them if necessary (with an Amafa permit). The fossils must then be housed in a suitable, recognized institute. See additional procedure in palaeontological assessment.

## 10. REFERENCES

Beinart, W. 1990. Transkeian migrant workers and youth labour on the Natal sugar cane estates 1918-1940 in *Structure and experience in the making of apartheid*. University of the Witwatersrand History Workshop ([www.wiredspace/wits.ac.za/bitstream/handle/10539/7961/HWS-17pdf?sequence=1](http://www.wiredspace/wits.ac.za/bitstream/handle/10539/7961/HWS-17pdf?sequence=1)).

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