MUSA SPECIAL NEEDS SCHOOL, NONGOMA LOCAL MUNICIPALITY, KWAZULU-NATAL

Phase 1 Heritage Impact Assessment

13 December 2019

Updated February 2023

CLIENT: **Sam Dlamini**
SASHEQ

AUTHOR: **Jean Beater**
JLB Consulting

EXECUTIVE SUMMARY

The KwaZulu-Natal Department of Education is proposing to build the Musa Special Needs School for Zululand comprising learning-, eating-, recreation- and living spaces. The site is situated alongside and east of the R66 provincial road between the towns of Nongoma and Ulundi in KwaZulu-Natal.

The proposed development is approximately 4.9 hectares (49000m²) in size hence the development triggers section 41 (1) (c)(i) of the KwaZulu-Natal Amafa and Research Institute Act, 2018 (Act No 5 of 2018) which lists developments or activities that may require an HIA. The relevant section of the Act refers to developments or other activities which will change the character of the site – exceeding 5000m² in extent.

A site inspection of the project area was undertaken on 10 December 2019. The area has been previously cultivated with much of it currently lying fallow with a thick grass layer. Two small sections within the project area had been recently ploughed. The site inspection took place during a rain storm which made visibility difficult.

The area has previously undergone cultivation with much of the land currently lying fallow with a thick grass layer and pockets of thorn bushes. There is still visible evidence of furrows or access roads on the project area. The 1966 version of the 1:50000 topographical map of the project area (2831BA) shows the area has been used for cultivation even then indicating that there will be a very low chance of finding intact heritage resources on the site. No heritage sites were found during the site inspection.

The South African fossil sensitivity map indicates that the project area is situated in an area of very high fossil sensitivity. An area of very high fossil sensitivity requires an on-site field assessment. Due to the ongoing disturbance of the project area by cultivation, it is recommended that no further studies take place. A desktop palaeontological assessment that was undertaken of the previous site earmarked for the school (which falls into the same very high fossil sensitivity) found that based on the geology of the area and the palaeontological record, it could be assumed that the formation and layout of the basement rocks, dolomites, sandstones, shales, coals, quartzites, basalts and volcanic rocks in the project area are typical for the country and do not contain any fossil material. The shales of the Vryheid Formation could contain impression fossils of plants of the *Glossopteris flora*; however, these fossil plants are present in the shales and mudstones between coal seams but seldom within coal seams. Their distribution is also extremely sporadic and unpredictable. The assessment stated that it was unlikely that many fossils would occur in the proposed site in the shales between coal seams. Furthermore, no fossils have been recorded from the area therefore from a palaeontology perspective the proposed development can go ahead. The

report, nonetheless, stated that rocks of this type and age are potentially fossiliferous therefore if there are chance finds of fossils, a monitoring protocol should be implemented which is provided in Chapter 9 of this report. It is also recommended that the monitoring protocol be included in the Environmental Management Programme for the proposed school.

Comment received from the KwaZulu-Natal Amafa and Research Institute on 2 September 2022 required that a revised Heritage Impact Assessment be undertaken together with proof of public participation. A follow-up site inspection was undertaken on 6 February 2023 during which no heritage resources were found. Consultation with the Induna, Ward Councillor and community members confirmed that there are no graves nor other heritage sites on the project site.

It is therefore recommended that the construction of the proposed Musa special needs school can proceed with the proviso that the mitigation measures and recommendations provided in this report are implemented and adhered to.

TABLE OF CONTENTS

FIGURES

I, Jean Lois Beater, act as an independent specialist for this project and I do not have any vested interest either business, financial, personal or other, in the proposed activity other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014.

AUTHOR DETAILS

Verification	Name	Qualification	Professional Registration
Author	Jean Beater	MA (Heritage Studies) MSc (Environmental Management)	Member of the Association of South African Professional Archaeologists (No. 349) Member of IAIAsa (No. 1538)

1. INTRODUCTION

The KwaZulu-Natal Department of Education (DoE) is proposing to build the Musa Special Needs School for Zululand comprising learning-, eating-, recreation- and living spaces (Artek Architects 2014:1). The site is situated alongside and east of the R66 provincial road between the towns of Nongoma and Ulundi, in KwaZulu-Natal.

This report serves as the Phase 1 Heritage Impact Assessment (HIA) for the proposed Musa special needs school.

2. LEGISLATIVE BACKGROUND

The proposed development is approximately 4.9 hectares (49000m²) in size hence the proposed development triggers section 41 (1) (c)(i) of the KwaZulu-Natal Amafa and Research Institute Act, 2018 (Act No 5 of 2018) which lists developments or activities that may require an HIA. The relevant section of the Act refers to: *"developments or other activities which will change the character of the site – exceeding 5000m² in extent"*.

The project may also impact on graves, structures, archaeological and palaeontological resources that are protected in terms of sections 37, 38, 39, and 40 of the above Act.

In terms of Section 3 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), 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 school.

3. LOCATION

The project area is situated on Portion RE/13/15832 of the Farm Reserve No. 12 15832 which falls into Ward 14 of the Nongoma Local Municipality. The site is situated parallel to and east of the R66 provincial road that links Ulundi with Nongoma (see **Figure 1** below). The approximate centre of the project area is 28°00'19.03" S; 31°35'40.63" E.

4. TERMS OF REFERENCE

Undertake a Phase 1 HIA in order to determine the possible existence of archaeological, palaeontological and historical sites or features in the project area that could be impacted by the proposed school development.

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

Submit the Phase 1 HIA report to the provincial heritage resources authority, namely the KwaZulu-Natal Amafa and Research Institute (hereafter, referred to as the Institute) for their assessment and comment.

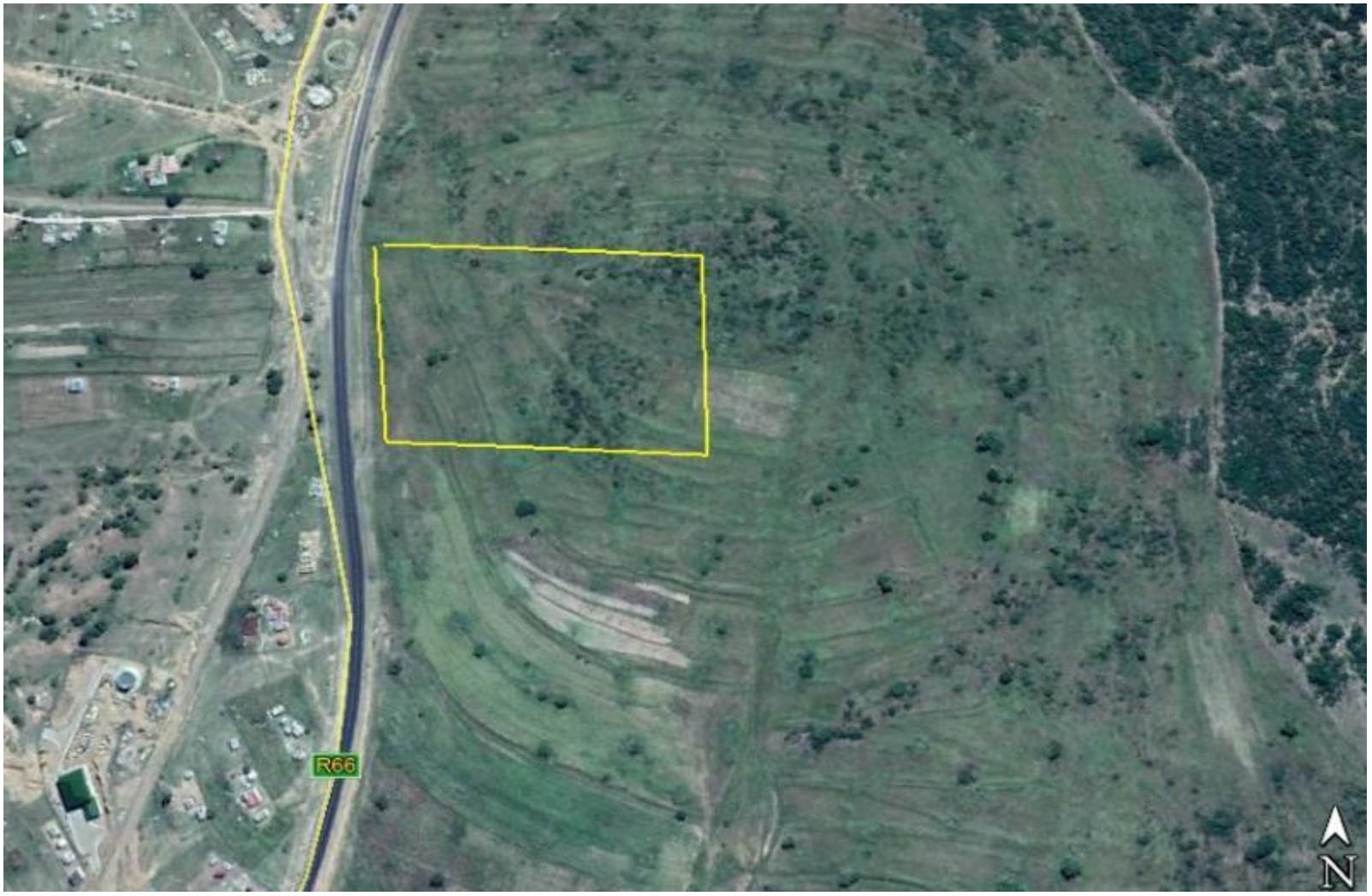


Figure 1: Google Earth image of site of school outlined in yellow

5. METHODOLOGY AND CONSTRAINTS

A survey of literature was undertaken, including previous HIAs undertaken in the wider project area, in order to place the project in a historical context and to establish what heritage resources had been identified in the immediate and wider project area.

A site inspection of the project area was undertaken on 10 December 2019. The area has been previously cultivated as can be seen in **Figure 1** above with much of it lying fallow currently with a thick grass layer. Two small sections within the project area had been recently ploughed.

The site inspection took place during a rain storm which made visibility difficult.

Based on comment received from the KwaZulu-Natal Amafa and Research Institute on 2 September 2022, a follow-up site inspection was undertaken on 6 February 2023.

6. HISTORICAL BACKGROUND

The greater Nongoma area has been sporadically surveyed for archaeological heritage sites with the most systematic surveys having occurred in the Umfolozi-Hluhluwe Nature Reserve. The available evidence indicates that there are six Early Stone Age sites have been recorded that date back to between 300 000 and 1.5 million years ago. Most of these are situated in dongas close to water with little in-situ material (Prins 2014:2). Fifty-nine Middle Stone Age sites have been recorded in the Umhfolozi-Hluhluwe Nature Reserve and thirty-five Later Stone Age sites have been recorded. Early Stone Age tools have been recorded in the greater Ulundi district. Two Early Stone Age Sites have been recorded near the town of Nongoma. Later Stone Age tools, belonging to the San and their immediate ancestors, occur in various localities in Zululand but none has been recorded close to Nongoma as yet (Prins 2014:3).

Around 1 700 years ago an initial wave of Early Iron Age people settled along the coast at the foot of sand dunes. These early people produced a characteristic pottery style known as Matola. The Matola people exploited the wild plant and animal resources of the forest and adjacent sea- shore. By 1500 years ago another wave of Iron Age migrants entered the area. The majority of recorded sites belonging to this period occur in the Tugela River Basin below the 1000m contour (Prins 2014:3).

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 project area is situated between Nongoma and Ulundi. Ulundi (oNdini), located over 34km from the site, was the seat of the Zulu King Cetshwayo kaMpande (Laband and Thompson 1989:194) and during the Anglo-Zulu War of 1879, Ulundi was attacked by the British. The Battle of Ulundi was the decisive battle that took place on the 4th July 1879 and marked the end of the Anglo-Zulu War, as well as the breakup of the Zulu nation. Cetshwayo was forced to flee but was captured in the Ngome forest in August and exiled to Robben Island (SAHO 2014:1)

The emaKhosini valley (Valley of the Kings) is situated in the immediate environs of Ulundi. This area also contains the military capital of King Dingane – the successor of Shaka. Sites associated with Zwide, the leader of the Ndwandwe clan who initially opposed Shaka, occurs closer to the project area not far from Nongoma. Historical era sites relating to the Anglo-Zulu War of 1879 also occur in the general area. Most of these sites are situated closer to Ulundi.

7. RESULTS OF SITE INSPECTION

The project area was inspected on foot. The area has previously undergone cultivation with much of the land currently lying fallow with a thick grass layer in places and pockets of thorn bushes. Two small areas had recently been ploughed.

Figure 2: Project area showing thick grass layer and thorn bushes

Figure 3: Recently ploughed section of project area

Figure 4 below shows evidence of remains of furrows that separated fields of cultivation. It could also show possible evidence of an access road.

Figure 4: Remains of a furrow or access road

Figure 5: View across project area

During the inspection undertaken on 6 February 2023, interviews were undertaken with Induna Mnguni, Ward Councilor Smanga Mbatha and community members, including Landiwe Mncwango regarding heritage sites on the project area. All those interviewed stated that there were no graves on the site and that they knew of no other heritage sites on the project site. They said that the site had always been used for agricultural activities.

Figure 6: Site inspection with community members

Figure 7: View over project site with fallow fields visible

Figure 8: View over project area looking southwards

The 1954 aerial image of the project area shows the site to be under cultivation for agricultural

purposes.

Figure 9: 1954 aerial image of project area

The 1966 version of the 1:50000 topographical map of the project area (2831BA) shows the area has been used for cultivation even then indicating that there should be a very low chance of finding intact heritage resources on the site.

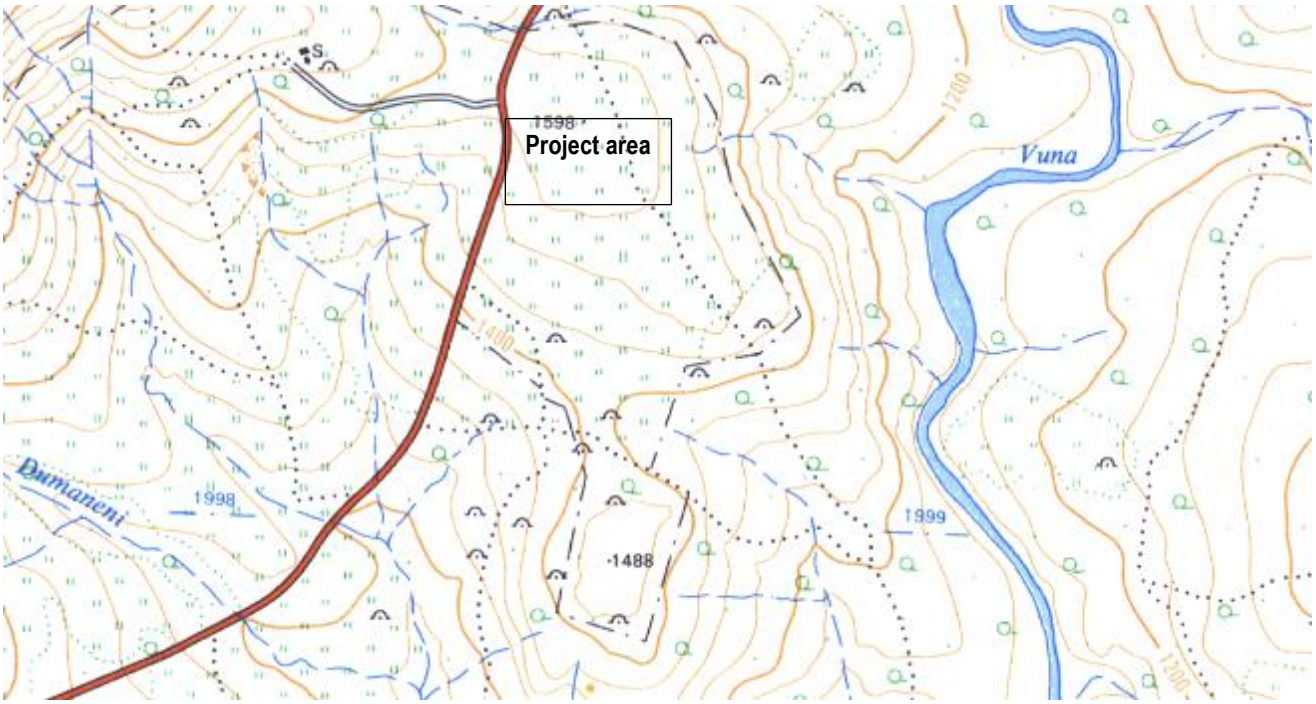
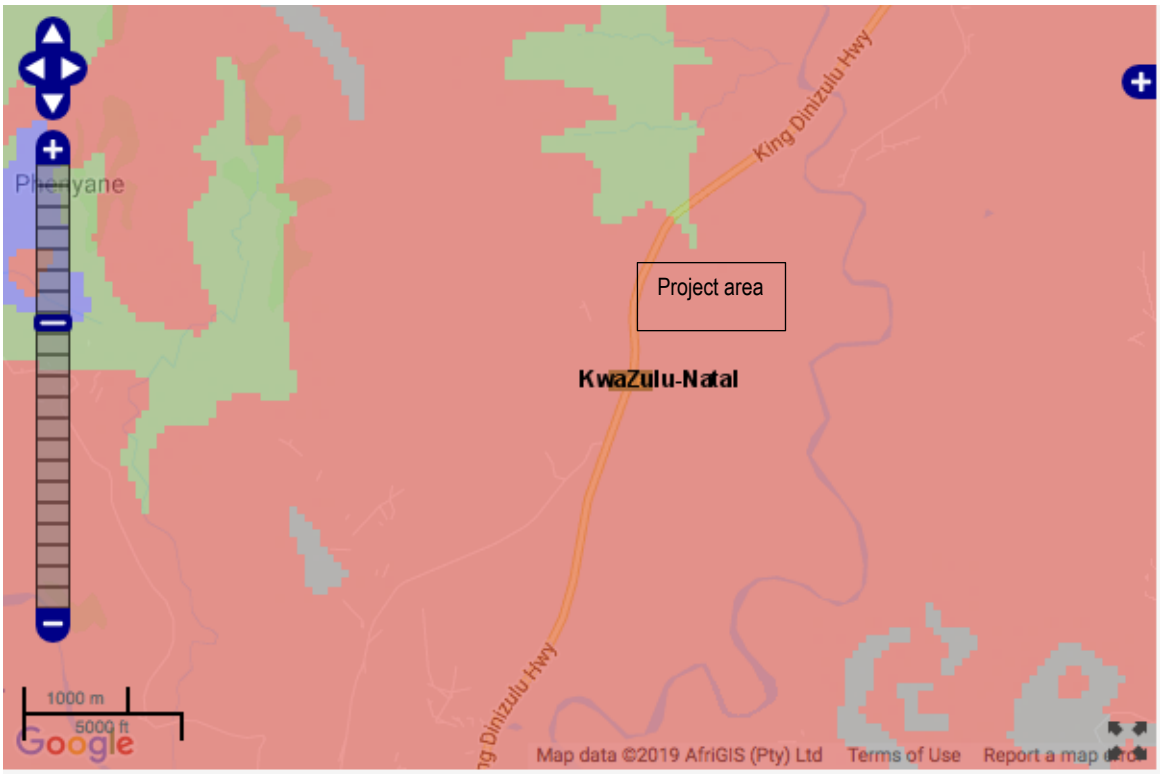


Figure 10: Relevant section of 2831BA topographical map (1966)

The South African fossil sensitivity map indicates that the project area is situated in an area of very high palaeontological / fossil sensitivity as indicated by the red colour on the map below (see **Figure 7**). An area of very high fossil sensitivity requires an on-site field assessment. Due to the ongoing disturbance of the project area by cultivation, it is recommended that no further studies take place.

In addition, a desktop palaeontological assessment that was undertaken of the previous site earmarked for the school (several kilometres north-east of the current site) found that based on the geology of the area and the palaeontological record, it could be assumed that the formation and layout of the basement rocks, dolomites, sandstones, shales, coals, quartzites, basalts and volcanic rocks in the project area are typical for the country and do not contain any fossil material. The shales of the Vryheid Formation could contain impression fossils of plants of the *Glossopteris flora*; however, these fossil plants are present in the shales and mudstones between coal seams but seldom within coal seams. Their distribution is also extremely sporadic and unpredictable. Furthermore, coal flora plant species are not rare as they have been recovered from other sites. The assessment therefore recommended that it was unlikely that many fossils would occur in the proposed site in the shales between coal seams. Furthermore, no fossils have been recorded from the area therefore from a palaeontology perspective the proposed development can go ahead. The report, nonetheless, stated that rocks of this type and age are potentially fossiliferous therefore if there are chance finds of fossils, a monitoring protocol should be implemented which is provided in Chapter 9 of this report. It is also recommended that the monitoring protocol be included in the Environmental Management Programme (EMPr) for this project (Bamford 2017:7-9).



1 in 250 000 geological formation layers are courtesy of the Council for GeoScience
For more information, go to How to Use the Palaeontological (fossil) Sensitivity Map

Colour	Sensitivity	Required Action
RED	VERY HIGH	field assessment and protocol for finds is required
ORANGE/YELLOW	HIGH	desktop study is required and based on the outcome of the desktop study, a field assessment is likely
GREEN	MODERATE	desktop study is required
BLUE	LOW	no palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO	no palaeontological studies are required
WHITE/CLEAR	UNKNOWN	these areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map.

Figure 11: Fossil sensitivity of project area

8. DISCUSSION AND CONCLUSION

No heritage resources were found in the project area during the site inspection undertaken in 2019 and again in 2023. The site appears to have been used for cultivation of crops for over 50 years.. During the 2023 inspection, discussions were held with the Induna, Ward Councilor and community members who all confirmed that there were no graves on the site nor any other heritage sites. They also confirmed that the site had been used for agricultural purposes for many years.

Although the project area falls into an area of very high fossil sensitivity, due to the ongoing disturbance of the project area, it is recommended that no further palaeontological studies need to be undertaken but that a monitoring protocol or programme is included in this report as well as the project EMPr. The

monitoring protocol must commence once excavations begin for the construction of the school.

It is therefore recommended that the construction of the proposed Musa special needs school proceed with the proviso that the recommendations and mitigation measures provided in this report are implemented and adhered to.

9. MITIGATION MEASURES

- For any chance finds of heritage resources, such as graves or archaeological sites, all work must cease in the area affected and the Contractor must immediately inform the Project Manager. A heritage specialist must be called to site for inspection. The Institute 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 must be obtained from the Institute 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 5m 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 could potentially be human remains, the South African Police Service (SAPS) should also be contacted. No SAPS official may disturb or exhume such remains, whether of recent origin or not, without the necessary permission.
- The monitoring protocol for potential fossil finds is as follows:
    - When excavations begin the rocks, must be given a cursory inspection by the environmental officer or designated person. Any fossiliferous material (trace fossils, plants, insects, bone, and coal) should be put aside in a suitably protected place. This way the construction activities will not be interrupted.
    - Photographs of similar fossil plants must be provided to the developer to assist in recognizing the fossil plants in the shales and mudstones. This information will be built into the EMPr's training and awareness plan and procedures.
    - Photographs of putative fossils can be sent to a palaeontologist for preliminary assessment.
    - If any of the fossil plants or vertebrates found are considered to be of good quality or scientific interest, then the paleontologist must go to site to inspect these. Then the

palaeontologist must be remove, catalogue and house the material in a suitable institution where they can be made available for further study.

- Before the fossils are removed from the site a permit must be obtained from the Institute/ the South African Heritage Resources Authority (SAHRA). Annual reports must be submitted to the Institute/ SAHRA as required by the relevant permits.
- If no good fossil material is recovered then no site inspections will be necessary. A final report by the palaeontologist can be sent to the Institute/SAHRA.
- If no fossils are found and the excavations have finished then no further monitoring is required.

10. REFERENCES

Artek Architects. 2014. *Concept Report: New Musa Special Needs School*. Unpublished report

Laband, J. and Thompson, P. The Reduction of Zululand, 1878 - 1904. In Duminy, A. and Guest, B. 1989. *Natal and Zululand: from Earliest Times to 1910. A New History*. Pg. 28-46. University of Natal Press. Pietermaritzburg.

Maggs, T. The Iron Age farming communities. In Duminy, A. and Guest, B. 1989. *Natal and Zululand: from Earliest Times to 1910. A New History*. Pg. 28-46. University of Natal Press. Pietermaritzburg.

South African History Online. 2014. *Battle of Ulundi begins*. (www.sahistory.org.za/dated- event/battle-ulundi-begins).