

**SECTION 24G APPLICATION FOR SAND MINING
OPERATION ON REMAINDER OF PORTIONS 130, 132
AND 133, CLIFFDALE, ETHEKWINI MUNICIPALITY,
KWAZULU-NATAL**

Phase 1 Heritage Impact Assessment

18 June 2021

**FOR: Afzelia Environmental Consultants
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EXECUTIVE SUMMARY

The Applicant, Umsunguli Group (Pty) Ltd, had an approved mining permit that was issued on 19 February 2015 to legally mine silica sand from the Umsunguli borrow pit. The original permit was valid for a period of 2 years. The Applicant renewed the permit the allotted 3 times (up to one year each time) in terms of the Mineral and Petroleum Resources Development Act (Act No. 28 of 2002; MPRDA). The approved mining permit expired in February 2020 and the Applicant continued to mine silica sand from the borrow pit. On 10 December 2020, the Department of Mineral Resources conducted an inspection of the site. The findings of the inspection revealed that the Applicant had contravened Section 24F(1)(a) of NEMA (as amended), in that they commenced with an activity listed or specified in terms of section 24 (2) (a) without environmental authorisation or/and a mining permit. To ensure that the operations are brought up to a compliant level and maintained, the Applicant has decided to lodge a S24G application with DMR to rectify the contravention.

The proposed mining right application area covers an area of approximately 9.6 ha. A total mineable resource area is estimated at approximately 5.5 ha. Approximately 1.0 ha will be used for infrastructure which will mainly consist of access roads, drainage furrows/berms and an access control point. The balance of the area of ± 3.1 ha is lost due to potential geological structures which traverses the property from NNE to SSW.

The proposed sand mining area has a footprint of 9.6 hectares (96000 m²) therefore it 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 require an HIA. The relevant sub-section refers to: any development or other activity which will change the character of a site- (i) exceeding 5000 m².

The site is located within the municipal areas of eThekweni Metropolitan Municipality, 45km west of Durban and can be accessed from the N3. The coordinates of the approximate mid-point of the Umsunguli borrow pit are 29°47'26.82"S | 30°41'43.35"E.

An inspection of the sand mining area was undertaken on 10 June 2021. The sand mining area is situated on a hilltop hence the topography was steep where mining is proposed. The vegetation was fairly thick in a few pockets but visibility was, in general, good.

During the inspection of the borrow pit and surroundings, no heritage sites were found. This may, in large part, be due to the very disturbed state of the area through sand mining as well as

the steep topography on all sides of the borrow pit. In addition, some of the area could have been used in the past for market gardening.

The 1953 aerial image of Cliffdale shows a largely undeveloped area apart from market gardening taking place immediately east, south-east of the borrow pit. The 1968 aerial image shows an area again largely undisturbed but with more extensive market gardening visible especially to the east of the borrow pit site and road. The relevant section of the 1968 topographical map shows a power line crossing the project area and a footpath with housing located some distance from the borrow pit.

The South African fossil sensitivity map indicates that the borrow pit falls in an area of low fossil sensitivity. An area of low fossil sensitivity means that no further palaeontological studies are necessary but that a protocol for chance fossil finds is required. A Chance Find Protocol is included in Chapter 9 of this report.

No heritage resources or sites were found during the inspection of the existing sand mining area and the proposed area to be mined. This is due to the very disturbed state of the area through sand mining as well as the steep topography on all sides of the existing borrow pit where additional mining is proposed. In addition, some of the area to be mined may have been used in the past for market gardening.

It is therefore concluded that the continued mining of the Umsunguli borrow pit will not impact heritage resources.

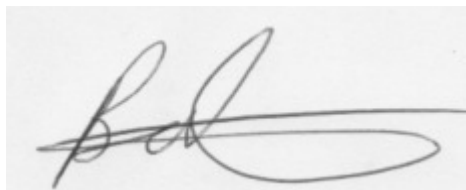
TABLE OF CONTENTS

EXECUTIVE SUMMARY	ii
TABLE OF CONTENTS	iv
AUTHOR DETAILS	v
1. INTRODUCTION AND BACKGROUND INFORMATION	6
2. LEGISLATIVE BACKGROUND	6
3. LOCATION	8
4. TERMS OF REFERENCE	8
5. METHODOLOGY	8
6. HISTORICAL BACKGROUND OF THE STUDY AREA	10
7. RESULTS OF SITE INSPECTION	11
8. CONCLUSION	19
9. MITIGATION MEASURES	20
10. REFERENCES	22

FIGURES

Figure 1: Sand mining area showing existing and planned mining outlined in cerise	9
Figure 2: Proposed mining area outlined in blue (Afzelia 2021)	10
Figure 3: 1953 aerial photograph of Clifffdale with borrow pit indicated with yellow outline.....	12
Figure 4: 1968 aerial photograph of site	13
Figure 5: Project area indicated within red outline.....	14
Figure 6: Proposed mining area on eastern slope below existing borrow pit	14
Figure 7: Eastern slope looking up towards existing borrow pit.....	15
Figure 8: Southern-eastern mining area with some detritus from existing mining	15
Figure 9: View southwards showing market gardens	16
Figure 10: Proposing mining and existing mining areas.....	16
Figure 11: Existing borrow pit	17
Figure 12: Western side of borrow pit	17
Figure 13: View across proposed mining area looking southwards.....	18
Figure 14: View up western slope with existing borrow pit on crest of hill.....	18
Figure 15: Fossil sensitivity of borrow pit indicated with yellow outline.....	19

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

Name	Qualification	Professional Registration
Jean Beater (JLB Consulting)	MA (Heritage Studies)	Member of Association of South African Professional Archaeologists (No. 349)
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1. INTRODUCTION AND BACKGROUND INFORMATION

The Applicant, Umsunguli Group (Pty) Ltd, had an approved mining permit that was issued on 19 February 2015 to legally mine silica sand from the Umsunguli borrow pit. The original permit was valid for a period of 2 years. The Applicant renewed the permit the allotted 3 times (up to one year each time) in terms of the Mineral and Petroleum Resources Development Act (Act No. 28 of 2002; MPRDA). The approved mining permit expired in February 2020 and the Applicant continued to mine silica sand from the borrow pit. On 10 December 2020, the Department of Mineral Resources (DMR) conducted an inspection of the site. The findings of the inspection revealed that the Applicant had contravened Section 24F(1)(a) of NEMA (as amended), in that they commenced with an activity listed or specified in terms of section 24 (2) (a) without environmental authorisation or/and a mining permit. DMR issued a compliance notice in terms of section 31L of the NEMA, 1998 to bring the Applicant back into compliance. To ensure that the operations are brought up to a compliant level and maintained, the Applicant has decided to lodge a S24G application with DMR to rectify the contravention (Afzelia 2021:1) which includes the undertaking of specialist studies.

The proposed mining right application area covers an area of approximately 9.6 ha. A total mineable resource area is estimated at approximately 5.5 ha. Approximately 1.0 ha will be used for infrastructure which will mainly consist of access roads, drainage furrows/berms and an access control point. The balance of the area of ± 3.1 ha is lost due to potential geological structures which traverses the property from NNE to SSW. The economic mineralisation is found at the surface with little or no overburden other than a 0.5m zone that will be removed and stockpiled as top-soil, and extends to a maximum mining depth of ± 20 m (Afzelia 2021:2).

A Phase I Heritage Impact Assessment (HIA) was undertaken to assess whether any heritage resources will be impacted by the continued mining of the Umsunguli borrow pit.

2. LEGISLATIVE BACKGROUND

The proposed sand mining area has a footprint of 9.6 hectares (96000 m²) therefore it 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 require an HIA. The relevant sub-section refers to: *“any development or other activity which will change the character of a site- (i) exceeding 5000 m²”.*

The proposed mining of the borrow pit may also impact graves, structures, archaeological and palaeontological resources that are protected in terms of sections 37, 38, 39, and 40 of the KwaZulu-Natal Amafa and Research Institute Act, 2018.

Section 3 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) lists heritage resources 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; and
- (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).

3. LOCATION

The site is located within the municipal areas of eThekweni Metropolitan Municipality, 45km west of Durban and can be accessed from the N3. The centre point of the operational site lies +- 3.5km west of Assagay, +-3km to the south of Drummond and immediately east of and adjacent to Cliffdale. The coordinates of the approximate mid-point of the Umsunguli borrow pit are 29°47'26.82"S | 30°41'43.35"E.

4. TERMS OF REFERENCE

Undertake a Phase 1 HIA in order to determine the possible existence of heritage resources, as listed above in Chapter 2, that could be impacted by the proposed mining as indicated in **Figure 2** above. Provide mitigation measures to limit or avoid the impact of the project on heritage resources (if any).

The heritage specialist will submit the HIA report to the provincial heritage resources authority, namely the KwaZulu-Natal Amafa and Research Institute (hereafter referred to as the Institute), for their consideration and comment.

5. METHODOLOGY

A survey of literature, including other heritage impact assessment (HIA) reports completed for the wider 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.

In addition, historical aerial images and topographic maps of the area were consulted that were retrieved from the Department of Rural Development and Land Reform's CDNGI Geospatial Portal (www.cdngiportal.co.za).

An inspection of the sand mining S24G application area was undertaken on 10 June 2021. The sand mining area is situated on a hilltop hence the topography was steep where mining is proposed. The vegetation was fairly thick in a few pockets but visibility was, in general, good.



Figure 1: Sand mining area showing existing and planned mining outlined in cerise

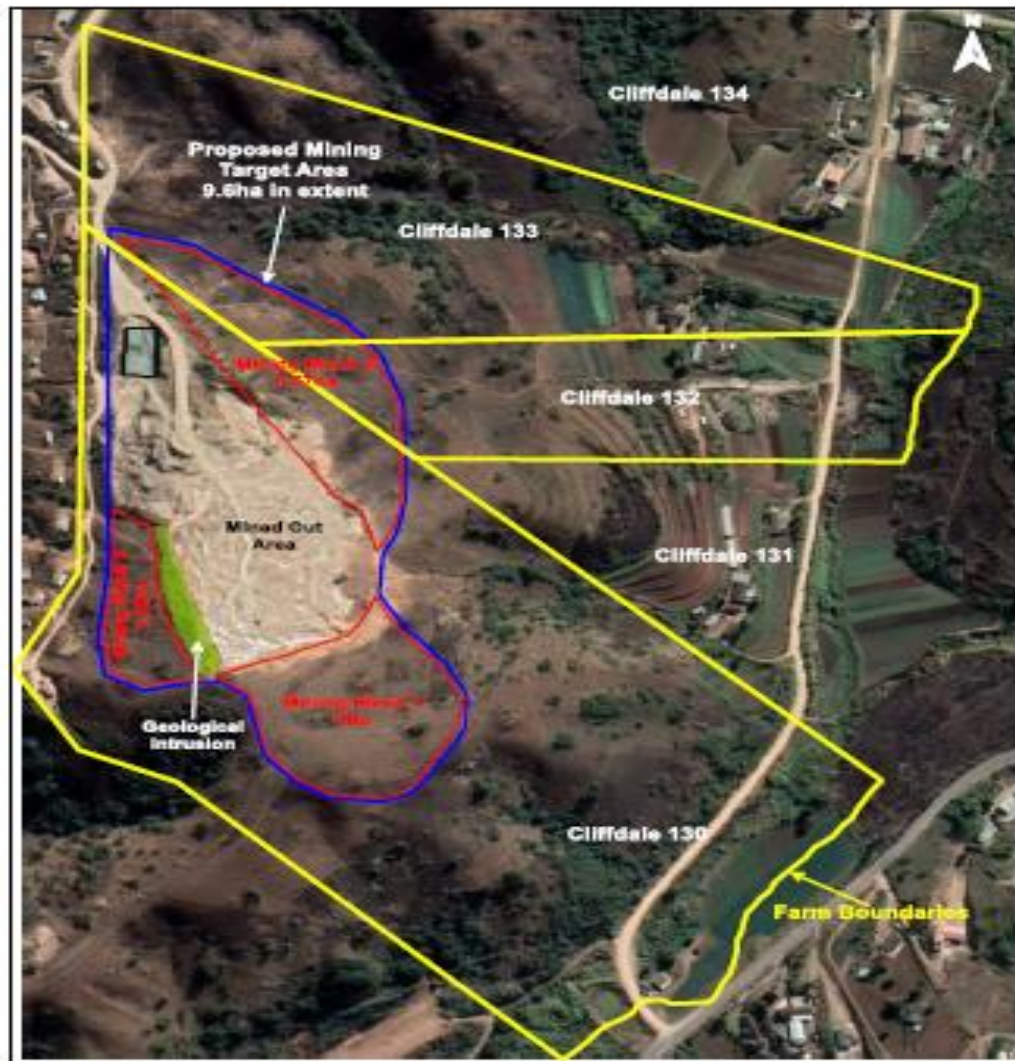


Figure 2: Proposed mining area outlined in blue (Afzelia 2021)

6. HISTORICAL BACKGROUND OF THE STUDY AREA

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. Most EIA sites in KwaZulu-Natal are classified according to ceramic styles. EIA villages in KwaZulu-Natal were often about eight hectares in size and probably contained a hundred or more people, and were found in the lower-lying and savannah areas, below an altitude of 1 000 metres. They were most common along major rivers and in the coastal belt, where there was good, deep soil, year-round grazing, and timber for building and fuel. The beginning of the Late Iron Age (LIA) marked a period of significant change in pottery styles and living patterns. Settlements were no longer located in river valleys, but were built on higher ground where homesteads would benefit from

cooling breezes and had good views for strategic purposes. Settlements appear to have been much smaller, implying a change away from the large EIA villages and towards the individual family homesteads of the historic Nguni-speaking peoples (eThembeni 2008:13-14).

Cliffdale is known for its market gardens which still persist today. According to Govindasamy (1987:2), market gardeners have been a fairly well-defined section of the Indian community in Natal since the earliest days of Indian settlement. S.R. Maharaj was the first Indian to settle in Cliffdale in 1931 and was instrumental in bringing 15 other families to settle in Cliffdale. Many of the pioneers were gardeners by trade and many leased lands owned by whites. In 1947, a landowner, Mrs Kingham, began to sell plots of land to Indians (Govindasamy 1987:5-6). The gardeners lived in shacks as well as wattle and daub houses. The area around the house was cultivated. Even the slopes of Cliffdale were ploughed and crops cultivated (Govindasamy 1987:7).

In the late 1970s there was debate as to whether or not Cliffdale should become a White group area. The residents opposed this and Cliffdale finally got gazetted as an Indian area in 1978. However, there were forced removals of African residents from the area from 1982 during the apartheid regime (Association for Rural Advancement 1983:1).

7. RESULTS OF SITE INSPECTION

The specialist met Mr Robert Gaza on site who is the manager of the borrow pit. He said he was unaware of heritage sites in the area. He also informed the specialist that the surrounding community developed after the borrow pit had commenced with mining of sand. From back-dated images on Google Earth, the first dwellings to be located close to and west / north-west of the borrow pit started to appear around 2013/2014.

During the inspection of the borrow pit and surroundings, no heritage sites were found. This may, in large part, be due to the very disturbed state of the area through sand mining as well as the steep topography on all sides of the borrow pit. In addition, some of the area could have been used in the past for market gardening. During the inspection, the specialist met a passer-by, Mr. Sibongile Thusi who lives in the community north/north-west of the borrow pit. He stated that he was unaware of graves or any other heritage sites in the project area.

The 1953 aerial image of Cliffdale shows a largely undeveloped area apart from market gardening taking place immediately east, south-east of the borrow pit. The D535 road and N3 highway are visible in the image. **Figures 3 – 5** all show a road that used to run through the site of the borrow pit. This road no longer exists south of the borrow pit.



Figure 3: 1953 aerial photography of Cliffdale with borrow pit indicated with yellow outline

The borrow pit falls towards the edge of the 1968 aerial image. This image shows an area again largely undisturbed but with more extensive market gardening visible especially to the east of the borrow pit and road.



Figure 4: 1968 aerial photograph of site

The relevant section of the 1968 topo-cadastral map (2930DC) shows a power line crossing the project area and a footpath with dwellings located some distance from the borrow pit.

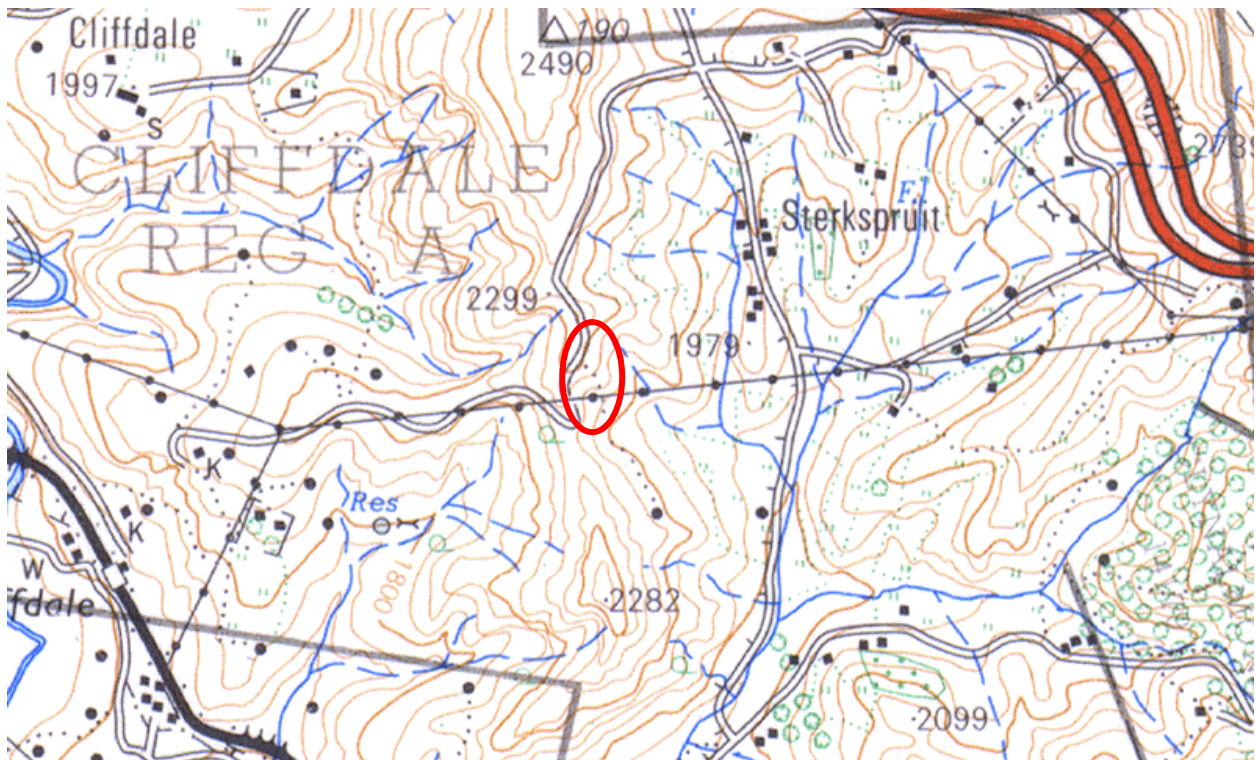


Figure 5: Project area indicated within red outline



Figure 6: Proposed mining area on eastern slope below existing borrow pit



Figure 7: Eastern slope looking up towards existing borrow pit



Figure 8: Southern-eastern mining area with some detritus from existing mining



Figure 9: View southwards showing market gardens



Figure 10: Proposing mining and existing mining areas



Figure 11: Existing borrow pit



Figure 12: Western side of borrow pit



Figure 13: View across proposed mining area looking southwards



Figure 14: View up western slope with existing borrow pit on crest of hill

The South African fossil sensitivity map indicates that the borrow pit falls in an area of low fossil sensitivity as indicated by the blue colour in **Figure 15**. An area of low fossil sensitivity means that no further palaeontological studies are necessary but that a protocol for chance fossil finds is required. A Chance Find Protocol is included in **Chapter 9** below.

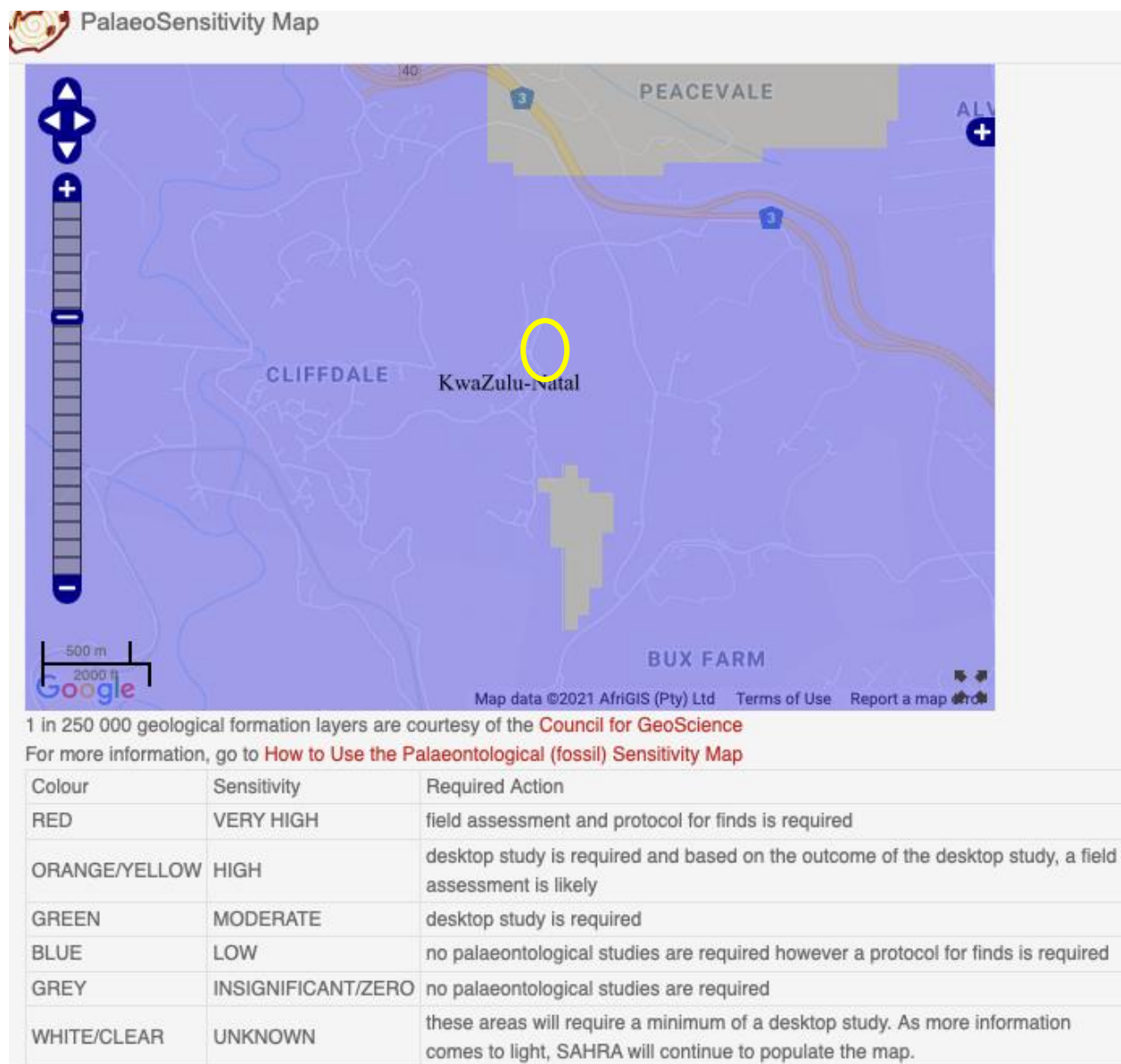


Figure 15: Fossil sensitivity of borrow pit indicated with yellow outline

8. CONCLUSION

No heritage resources or sites were found during the inspection of the existing sand mining area and the proposed area to be mined. This is due to the very disturbed state of the area through sand mining as well as the steep topography on all sides of the existing borrow pit where

additional mining is proposed. In addition, some of the area to be mined may have been used in the past for market gardening.

It is therefore concluded that the continued mining of the Umsunguli borrow pit will not impact heritage resources.

9. MITIGATION MEASURES

- For any chance heritage finds (such as graves, etc.), all work must cease in the area affected and the Manager in charge of the borrow pit must be informed. A heritage specialist must be called to site to inspect the finding/s. In addition, the provincial heritage resource agency, the Institute, 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 the Institute if heritage resources are to be removed, destroyed or altered.
- All heritage resources found in close proximity to the area to be mined must be protected by a 5 m buffer in which no mining and associated activities can take place. The buffer material (danger tape, fencing, etc.) must be highly visible to all those working in the borrow pit.
- 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 the project site that could potentially be human remains, the South African Police Service (SAPS) as well as the Institute must be informed. No SAPS official may remove remains until the correct permit/s have been obtained.
- The following protocol should be adhered to in terms of chance fossil finds:
 - When mining begins, any rocks disturbed during this process must be inspected 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.
 - Photographs of possible fossils should be sent to a palaeontologist for a preliminary assessment.
 - If there is any possible fossil material found by the environmental officer/miners then the qualified palaeontologist must be sub-contracted in order for them to visit the site to inspect the selected material and check the site where feasible.
 - Fossil plants or vertebrates that are considered to be of good quality or scientific interest by the palaeontologist must be removed, catalogued and housed in a

suitable institution where they can be made available for further study. Before the fossils are removed from the site, the necessary permit/s must be obtained from the Institute. Annual reports must be submitted to the Institute as required by the relevant permits.

10. REFERENCES

Afzelia Environmental Consultants. 2021. *Background Information Document. Section 24G Application for the current sand mining operation on the Remainder of Portion 130, 132 and 133 Cliffdale, located in the eThekweni Local Municipality, within the Province of KwaZulu-Natal*

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