

**UGRADE OF BLOUKRANS AND QABANGO RIVER
BRIDGES AND CULVERTS, UMTSHEZI LOCAL
MUNICIPALITY
KWAZULU-NATAL**

Phase 1 Heritage Impact Assessment

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EXECUTIVE SUMMARY

The applicant, the KwaZulu-Natal (KZN) Department of Transport (DoT) proposes to upgrade the Bloukrans River crossing, the Qbango River crossing and three culverts along Road D489 within the Umtshezi Local Municipality (LM). The proposed upgrade of the river crossings and culverts are part of DoT's ongoing strategy to improve rural mobility and provide safer and more efficient pedestrian movement in the rural areas

The proposed upgrades will take place along the D489 gravel road that is in the process of being upgraded. The river crossings are situated east of the R74/R102 road that goes from the N3 highway to the town of Colenso. The town of Estcourt is situated approximately 12km south of the project area. A site inspection of the Bloukrans and Qbango bridges and the three culverts was undertaken on 29 September 2015.

The greater project area has an interesting history. In February 1838, Retief and his party were put to death by Dingane, the Zulu King and immediately after this, Zulu forces proceeded to attack Boer laagers in Natal. One of the laagers that was attacked was situated close to the Bloukrans River, where about 500 people were killed in the early hours of 16 February 1838. A memorial to those who died in the attack is situated less than 1 km from the Qbango Bridge site.

During the Anglo-Boer War of 1899-1902, a British armoured train was derailed on the farm Blaauwkrantz (Bloukrans) on 15 November 1899 by the Boers and 80 British soldiers were taken as prisoners including Winston Churchill. A memorial, known as the Churchill capture site, is situated approximately 5 km from the Bloukrans River Bridge.

No cultural heritage or archaeological resources were identified at the bridges and culverts during the site inspection. However, the fossil sensitivity map was consulted and it was found that the project area falls within an area of very high fossil sensitivity interspersed with areas of moderate sensitivity and areas of insignificant fossil sensitivity. It is recommended that a Phase 1 Palaeontological Impact Assessment (PIA) be undertaken to ascertain whether there will be any impacts by the proposed upgrades on fossils in the project area.

It is therefore recommended that the project only proceed from a heritage perspective, once the PIA has been undertaken dependent on the results of the PIA. In addition, the mitigation measures listed in section 9 must be adhered to during the construction phase of the project.

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LIST OF ABBREVIATIONS

Amafa	Amafa aKwaZulu-Natali
DoT	Department of Transport
HIA	Heritage Impact Assessment
KZN	KwaZulu-Natal
LM	Local Municipality
PIA	Palaeontological Impact Assessment
NHRA	National Heritage Resources Act
SAHRA	South African Heritage Resources Agency

AUTHOR DETAILS

Name	Qualifications	Professional Registration	Experience includes
Jean Beater	MA (Heritage Studies) MSc (Environmental Management – dissertation outstanding)	Member of Association of South African Professional Archaeologists (No. 349) Member of IAIAAsa (No. 1538)	Cultural heritage survey of several farms in Northern and Eastern Cape for proposed photovoltaic developments HIA for 88kV Distribution power line between Nongoma & Hlabisa, KZN HIA for Ndulinde substation and power lines near Utrecht, KZN HIA for proposed Numz Island recreational park near Tinley Manor Compile heritage component: Environmental Management Framework for Thukela DM HIA for raw water & potable water components of uMkhomazi Water Supply Project. HIA for Quha River Bridge, Umzumbe area

1. INTRODUCTION

The applicant, the KwaZulu-Natal (KZN) Department of Transport (DoT) proposes to upgrade the Bloukrans River Bridge, the Qbango River Bridge and three culverts along Road D489 within the Umtshezi Local Municipality (LM). The proposed upgrade of the river crossings and culverts are part of DoT's ongoing strategy to improve rural mobility and provide safer and more efficient pedestrian movement in the rural areas.

This report serves as the Phase 1 Heritage Impact Assessment (HIA) for the proposed upgrade of the above bridges and culverts.

2. LEGISLATIVE BACKGROUND

The combined length of the proposed bridges and culverts will be over 50 metres and will therefore trigger Section 38(1)(b) of the National Heritage Resources Act, 1999 (Act No 25 of 1999) that states the following:

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

(b) the construction of a bridge or similar structure exceeding 50 m in length; must notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

In addition, the project may 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 National Heritage Resources Act (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).

This Phase I HIA is undertaken to assess whether any heritage resources will be impacted by the proposed upgrades.

3. LOCATION

The proposed upgrades will take place along the D489 gravel road that is in the process of been upgraded. The river crossings are situated east of the R74/R102 road that goes from the N3 highway to the town of Colenso. The town of Estcourt is situated approximately 12km south of the project area. The co-ordinates for the proposed upgrades are as follows:

Bloukrans River Crossings: 28°51'26.52" and 29°49'12.90"E;

Qabango River Crossings: 28°51'18.33"S and 29°50'59.34"E

First Culvert: 28°52'54.25"S and 29°54'47.12"E

Second Culvert: 28°53'9.40"S and 29°55'18.54"E

Third Culvert: 28°53'17.44"S and 29°55'34.47"E

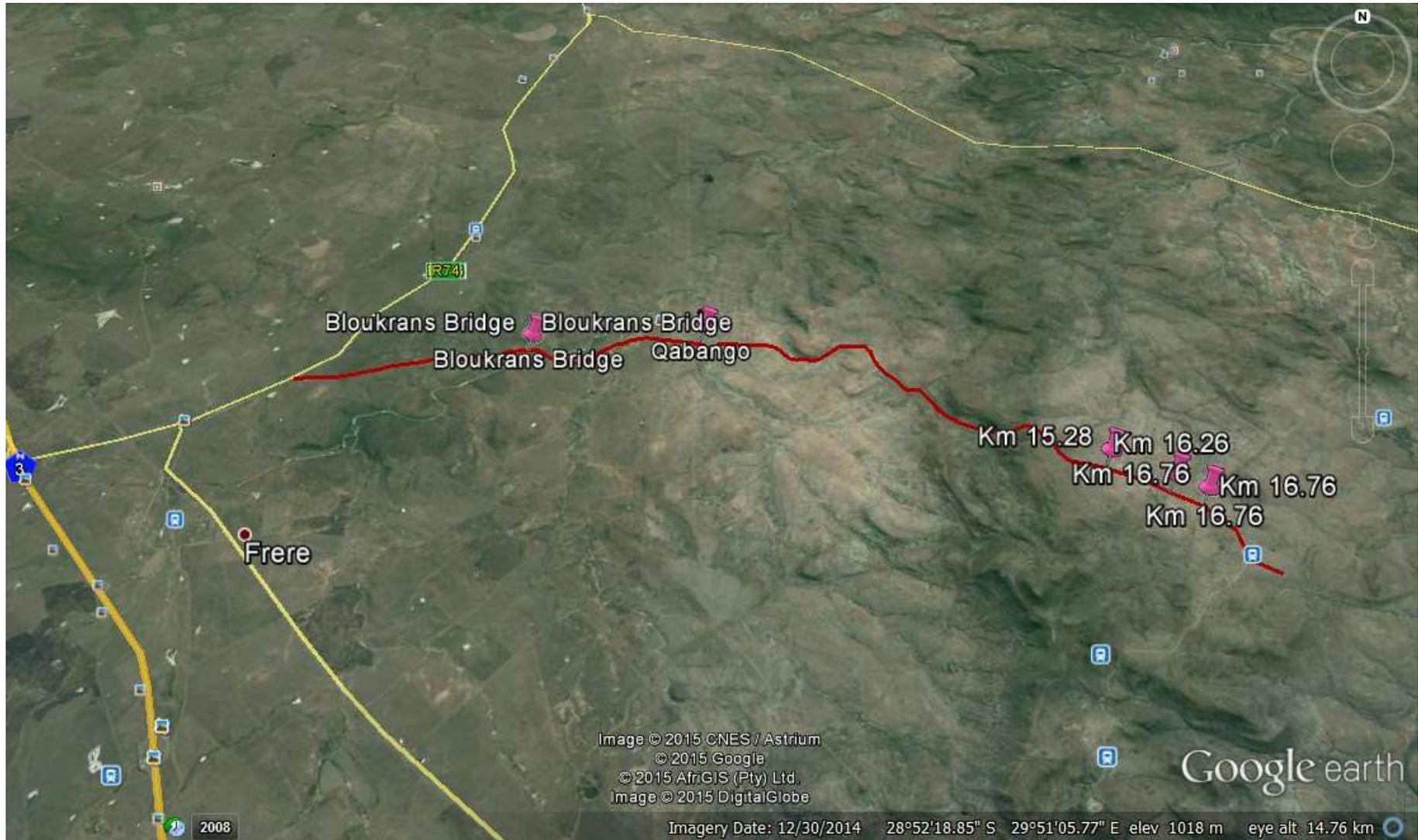


Figure 1: Project area and surrounds showing bridges and culverts

4. TERMS OF REFERENCE

Undertake a Phase 1 Heritage Impact Assessment in order to determine the possible existence of archaeological and historical sites or features in the project area that could be impacted by the proposed activity

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

5. METHODOLOGY

A survey of literature, including other Heritage/Archaeological Impact Assessment Reports completed in the area, was undertaken in order to place the development area in an archaeological and historical context.

A site inspection of the Bloukrans and Qbango bridges and the three culverts was undertaken on 29 September 2015. Site conditions were good.

6. HISTORICAL BACKGROUND OF THE STUDY AREA

According to Prins (2013:2), the greater Estcourt area has been relatively well surveyed for archaeological sites in the past. Some sites have been recorded by cultural resource consultants who have worked in the area during the last two decades whilst archaeologists from the then Natal Museum have made various visits to the area. The available evidence, as captured in the KwaZulu-Natal Museum heritage site inventories, indicates that the greater area in the vicinity of the study area contains a wide spectrum of archaeological sites covering different time-periods and cultural traditions. These include Early Stone Age site, Middle Stone Age sites, Later Stone Age sites, and Later Iron Age sites (including some Middle Iron Age Sites belonging to the Moor Park Tradition).

Prins (2013:2) states that most of the Stone Age sites occur in open air contexts as exposed by donga and sheet erosion. The Early Stone Age sites occur close to permanent water sources. The majority of Later Stone Age sites as well as rock art sites occur further west in the foothills of the Drakensberg. These generally occur in small shelters in the sandstone formations leading up

to the Drakensberg. Iron Age rock engraving sites also occur in the greater Estcourt area that are usually found on dolerite outcrops in areas with an altitude above 1000 metres above sea level.

The earliest known “stonewalling type” in the study area is known as Moor Park and this stonewalling type dates from 14th to 16th Centuries AD. The sites of Moor Park stonewalling are located on defensive positions on hilltops in the Midlands of KwaZulu-Natal, stretching from Bergville to Dundee some distance from the project area.

As related by Colenbrander (1989:83), late in September 1828, Shaka the founding father of the Zulus was murdered by Dingane and Mhlangane with Dingane replacing Shaka as King of the Zulus. By far, the most pressing dilemma faced by Dingane, according to Colenbrander (1989:87), was the growing white presence in the outer reaches of his kingdom with the gravest threat to the cohesion and integrity coming from the Voortrekkers. Late in 1837, the Voortrekker leader, Piet Retief, arrived at Mgungundlovu to negotiate the cession of all the territory south of the Thukela River with Dingane. Dingane agreed to this provided that the Voortrekkers retrieved several hundred cattle which had been raided from the Zulus (Colenbrander 1989:91). After retrieving said cattle, Retief and his party returned to Mgungundlovu in February 1838 where the Voortrekker party were put to death. Immediately after this, Zulu forces proceeded to attack Boer laagers in Natal in an apparent attempt to destroy the Voortrekkers.

One of the laagers that was attacked was at the Bloukrans River, where about 500 people were killed in the early hours of 16 February 1838. A memorial to those who died in the attack is situated less than 1 km from the Qbango Bridge site.

In early January 1879, shortly before the outbreak of the Anglo- Zulu War, the Natal Government proclaimed the laager outside the village of Estcourt as the central defensive post for the settlers of the region. It consisted of a blockhouse, three associate guardhouses and stables and was used as barracks for the Natal Mounted Police until 1900 (Laband 2009).

According to Jones and Jones (1999:73), in the early stages of the Anglo-Boer War, 1899-1902, Estcourt was garrisoned by 150 men of the Natal Royal Rifles and by a squadron of the Imperial Light Horse. Armoured reconnaissance trains were pushed northwards from Estcourt towards Colenso including the train that was ambushed by the Boer forces at Blaauwkrantz on 15 November 1899. Boer forces attempted to outflank the British at Estcourt but were defeated at Brynbella Hill/Willow Grange on 21 November 1899 and retired without threatening the town. Thereafter, Estcourt became an important staging post for troops involved in attempts to relieve the siege of Ladysmith.

Jones and Jones (1999:22) make reference to the Bloukrans (Blaauwkrantz) River stating that in the early stages of the Anglo-Boer War, the river was in flood with the result that the movements of the Boer forces was hampered. In addition, mention is made of the farm called Blaauwkrantz (Bloukrans) in the greater project area, where an armoured train was derailed on 15 November 1899 by the Boers. Eighty (80) British soldiers were taken as prisoners including Winston Churchill (who later became British Prime Minister during the Second World War of 1939-1945). A memorial, known as the Churchill capture site, is situated approximately 5 km from the Bloukrans River Bridge site.

7. DISCUSSION AND RESULTS

The D489 road along which the Bloukrans and Qbango River Bridges are found is in the process of being upgraded therefore there is construction activity taking place in the immediate area of the two bridges. The project area is situated in a rural area where subsistence farming occurs.

Bloukrans Bridge

The existing bridge will be upgraded to ensure the safe crossing by both pedestrians and vehicles. Mr. Khumalo, who was sitting near the bridge during the site inspection, informed the specialist that he was unaware of any heritage sites such as graves in the immediate vicinity of the bridge. No heritage sites were identified during the site inspection. The date of the bridge could not be established but it appears to be less than 60 years.



Figure 2: Bloukrans River Bridge

Parallel to Bloukrans Bridge is a culvert (see Fig. 3). It is unclear whether this culvert will also be upgraded. It is currently being used by the construction vehicles working on the D489 road. The age of this smaller culvert is unknown.



Figure 3: Culvert situated parallel to Bloukrans Bridge



Figure 4: Erosion along banks for Bloukrans River

Qbango Bridge

The existing bridge is to be upgraded to improve access and safety for the residents of the area. No heritage resources were noted in the vicinity of the bridge. Some school children, who were crossing the bridge, informed the specialist that they were unaware of heritage sites, such as graves in close vicinity of the bridge. There are some homesteads situated about 138 m east of the bridge. The age of the bridge is unknown but it is anticipated that it is less than 60 years.



Figure 5: Qbango River Bridge



Figure 6: Banks of Qbango River near bridge

First culvert

At this site, there is no existing culvert crossing the watercourse and it is anticipated that a culvert will be constructed to ensure the safe crossing of the watercourse. No heritage material or sites were found during the site inspection.



Figure 7: First culvert crossing

Second culvert:

The existing culvert is to be upgraded. The culvert appears to have been constructed in the last 10 years. No heritage resources were found in the area of the culvert upgrade and the closest settlement is situated about 170 m from the culvert.



Figure 8: Second culvert



Figure 9: Side view of second culvert

Third culvert

There is a fair amount of erosion taking place around the existing culvert but no heritage site nor material were found during the site inspection. The culvert is situated approximately 75 m from some residences. Subsistence farming within a fenced area appears to take place close to the watercourse that the culvert crosses but it is not expected that the culvert upgrade will impact on the farming activities.

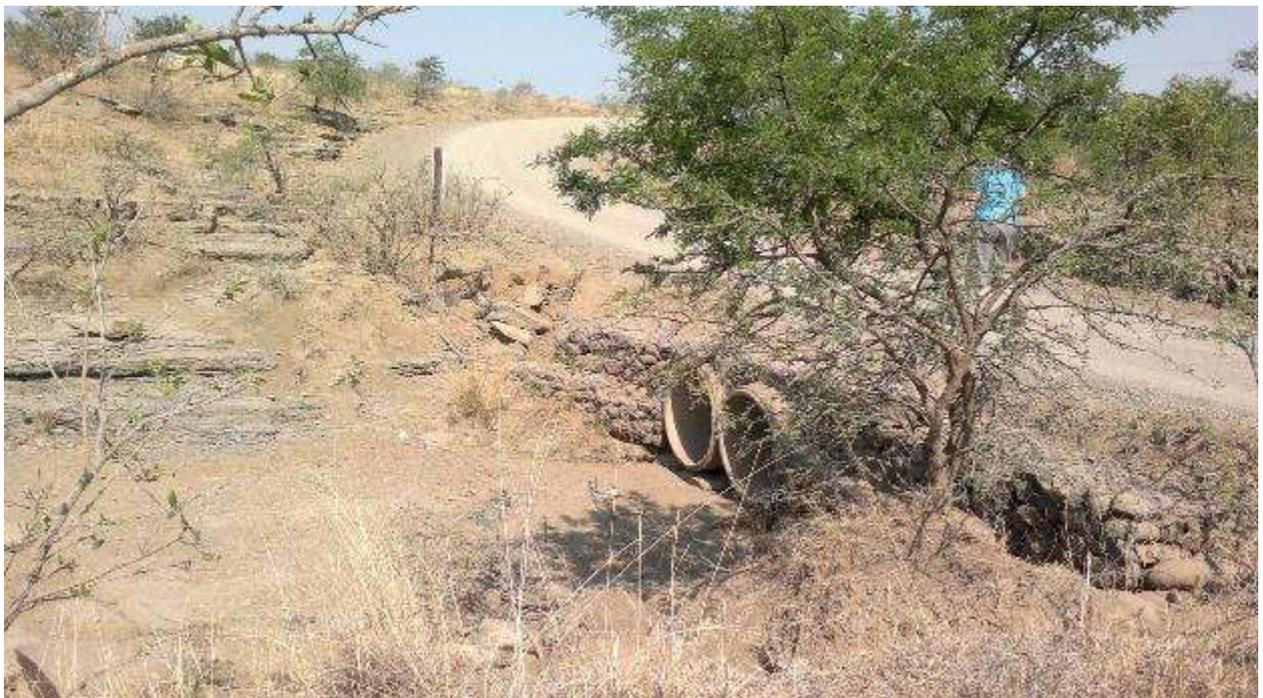


Figure 10: Third culvert



Figure 11: Third culvert

Palaeontological

The South African Heritage Resources Agency's (SAHRA) Fossil Sensitivity Map (see Fig. 12 below) indicates that the project area is situated in an area of very high fossil sensitivity interspersed with areas of moderate sensitivity and areas of insignificant fossil sensitivity. A telephonic discussion held with a palaeontologist confirmed that a field assessment is required due to the preponderance of areas of very high fossil sensitivity. It is therefore recommended that a Phase 1 palaeontological impact assessment (PIA) is undertaken by a palaeontologist to ascertain the potential impacts (if any) that the proposed upgrades could have on fossils in the project area.

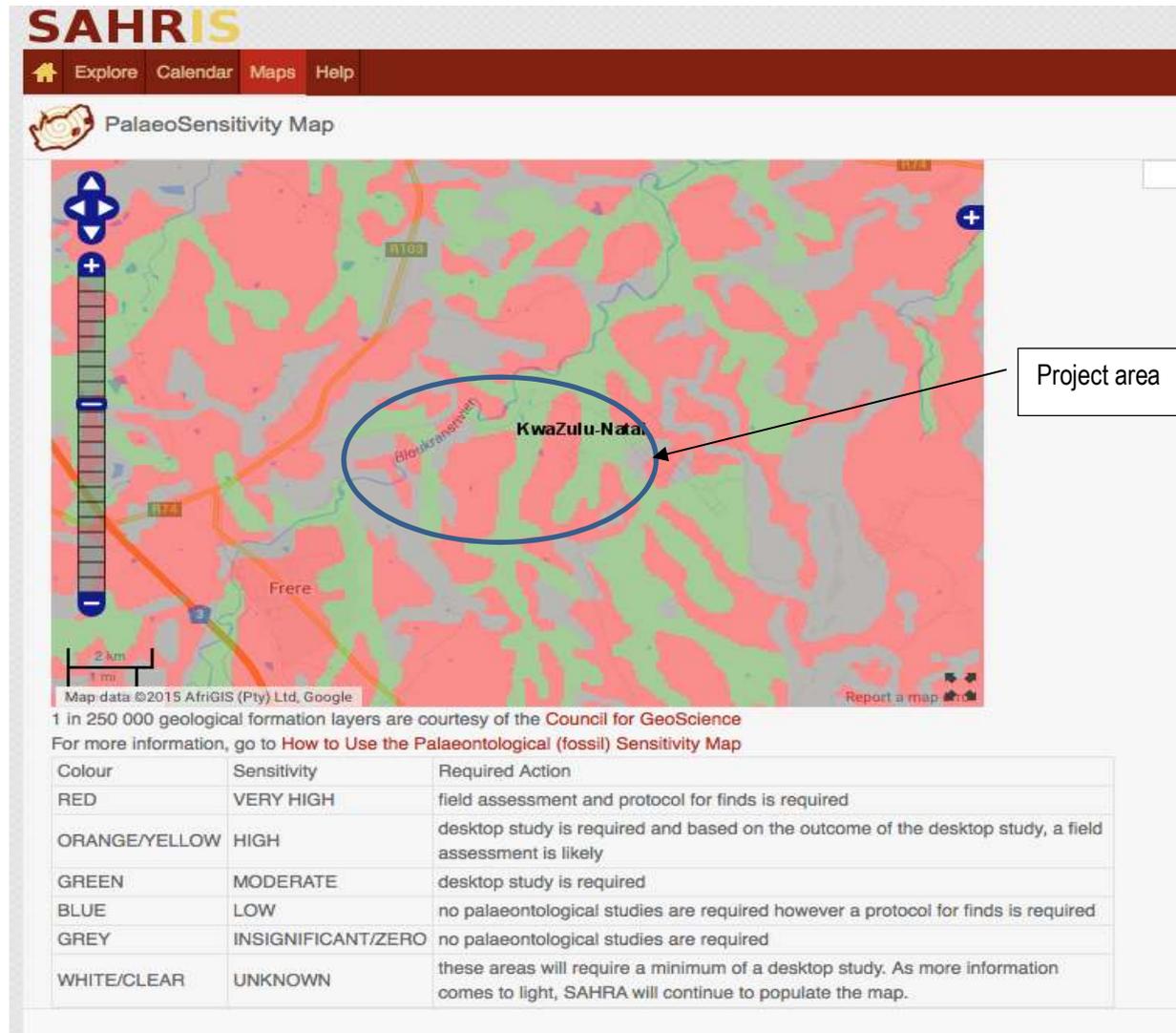


Figure 12: Fossil sensitivity of project area

8. RECOMMENDATIONS AND CONCLUSIONS

During the site inspection, no cultural heritage and archaeological sites were found at any of the bridges and culverts.

The SAHRA fossil sensitivity indicates that the site falls into a very high fossil sensitivity area interspersed with areas of moderate and insignificant sensitivity. It is therefore recommended that a Phase 1 PIA take place to assess the potential impact of the proposed upgrades on fossils in the project area.

It is therefore recommended that the project can only proceed from a heritage perspective, once the PIA has been undertaken dependent on the results of the PIA. In addition, the mitigation measures listed below must be enforced during the construction phase of the project.

9. MITIGATION MEASURES

- For any chance finds, all work will cease in the area affected and the Contractor will immediately inform the Project Manager. A registered heritage specialist must be called to site for inspection. The relevant heritage resource agency (Amafa) must be informed about the finding.
- The heritage specialist will assess the significance of the resource and provide guidance on the way forward.
- Permits to be obtained from Amafa if heritage resources are to removed, destroyed or altered.
- All heritage resources found in close proximity to the construction area are to be protected by a 10m 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 should also be contacted.
- If there are chance finds of fossils during construction, 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.

10. REFERENCES

Colenbrander, P. 1989. The Zulu Kingdom, 1828-1879. In Duminy, A. and Guest, B. (Eds.) *Natal and Zululand from earliest times to 1910. A new history*. Pietermaritzburg: University of Natal Press and Shuter & Shooter

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11. SPECIALIST DECLARATION OF INDEPENDENCE

I, **Jean Lois Beater**, declare that –

- I act as an independent specialist for this project
- I will perform the work relating to the project in an objective manner, even if this results in views and findings that are not favourable to the applicant
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the HERITAGE specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of section 24F of the Act.

Signature of the specialist:



Name of company (if applicable):

JLB Consulting

Date:

07 October 2015