PROPOSED PEDESTRIAN BRIDGES NEAR NCOMBO AND ESKIHAWINI, UMHLATUZE LOCAL MUNICIPALITY, KWAZULU-NATAL

Phase 1 Heritage Impact Assessment

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FOR: **ECA Consulting**
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EXECUTIVE SUMMARY

The uMhlatuze Local Municipality proposes to build eight (8) pedestrian bridges within the Municipality in order to assist local residents in safely crossing watercourses. Only bridges No. 10 and 11 are longer than 50m hence triggering the requirements for a Heritage Impact Assessment (HIA). The length of the proposed pedestrian bridges is over 50m hence they trigger section 41 (1)(b) 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. Section 41 (1)(b) refers to the construction of a bridge or similar structure exceeding 50m in length.

The location of both pedestrian bridges is in rural communities. Bridge No. 10 is located in Ncombo whilst bridge No. 11 is located about 5km south-west of Esikhawini and about 2 km from the Indian Ocean. Bridge No. 10 is located about 14 km south-west of Richards Bay and Bridge No. 11 is located about 20 km south-west of Richards Bay.

An inspection of the sites for the bridges was undertaken on 04 February 2021 and on 29 April 2021. The immediate area around both bridges was very wet and swamp-like because of the large amount rain that had fallen over the summer season.

Bridge No. 10

The stream to be crossed by the pedestrian bridge was very full, flowing strongly and could not be crossed by foot during the site inspection. The area on both sides is swampy and very overgrown by vegetation. The residents were using branches to cross from one side to the other. On the north-western bank of the stream, a eucalyptus plantation was found, whilst on the southern bank, there is some small-scale farming of vegetables and crops taking place.

The specialist spoke to two residents who were aware of the proposed pedestrian bridge. They live on the southern side of the proposed bridge They said that there were no graves in the area of bridge. No heritage sites were found during the site inspection.

According to the fossil sensitivity map, the site falls within an area of low fossil sensitivity. No further studies are required; however, a protocol for chance finds is required. This protocol is included in Chapter 10 of this report.

Bridge No. 11

The stream has a thick layer of riparian vegetation in it and on either side of it. During the inspection no heritage sites were found. A local resident whose house is situated close to the

pedestrian bridge stated that to her knowledge there were no grave sites in the immediate and surrounding area of the bridge.

According to the South African fossil sensitivity map, the site falls within an area of low fossil sensitivity. No further studies are required; however, a protocol for chance finds is required. A fossil chance find protocol is included in Chapter 10 of this report.

In terms of the other bridges that are shorter than 50m, it is the understanding of the heritage specialist that heritage assessments are not required for these bridges. The bridges are all situated within the uMhlatuze Local Municipality. Some are situated along the R102 and some are located closer to Empangeni. All these bridges are situated in residential areas where the crossing of streams has become problematic or a hazard. Therefore, the environment of these proposed bridges is already disturbed by human activity and settlement and risk of the bridges impacting on heritage resources is considered to be very low.

A site inspection of the sites of No. 10 and No. 11 pedestrian bridges revealed no heritage resources at the sites. It is therefore recommended that the construction of the bridges proceed from a heritage perspective as long as the mitigation measures provided in Chapter 10 of the report are adhered to.

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I, Jean 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.

SPECIALIST DETAILS

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

1. INTRODUCTION

The uMhlatuze Local Municipality proposes to build eight (8) pedestrian bridges within the Municipality in order to assist local residents in safely crossing watercourses. Only bridge No. 10 and bridge No. 11 are longer than 50m hence triggering the requirements for a Heritage Impact Assessment (HIA).

A Phase I HIA was undertaken to assess whether any heritage resources will be impacted by the construction of the proposed pedestrian bridges.

2. LEGISLATIVE BACKGROUND

The length of both pedestrian bridges is over 50m hence they trigger section 41 (1)(b) 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. Section 41 (1)(b) refers to: “the construction of a bridge or similar structure exceeding 50m in length”.

The bridges 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.

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

3. LOCATION

Bridge No. 10

The pedestrian bridge is situated in the rural settlement of Ncombo about 14km south-west of Richards Bay and about 1.30km south of Qhubu Lake (see **Figure 1**). The bridge is at located at 28°51’47.39” S 31°57’55.38” E (see **Figure 2**).

Bridge No. 11

The location of the pedestrian bridge is in a rural community which is located about 5km south-west of the town of Esikhawini and about 2km from the Indian Ocean (**Figure 3**). The site is located about 20m south-west of Richards Bay. The approximate mid-point of the bridge is 25°54’53.84” S 31°52’44.69” E (**Figure 4**)

Figures 5 and **6** shows the relevant portions of the 1:50 000 topographical map dated 1957 (2831DD) where the pedestrian bridges are proposed to be constructed. The map indicated that both sites were uninhabited at that time, with kraals/homesteads situated some distance from the proposed bridges. Some cultivation is shown near bridge No. 11.

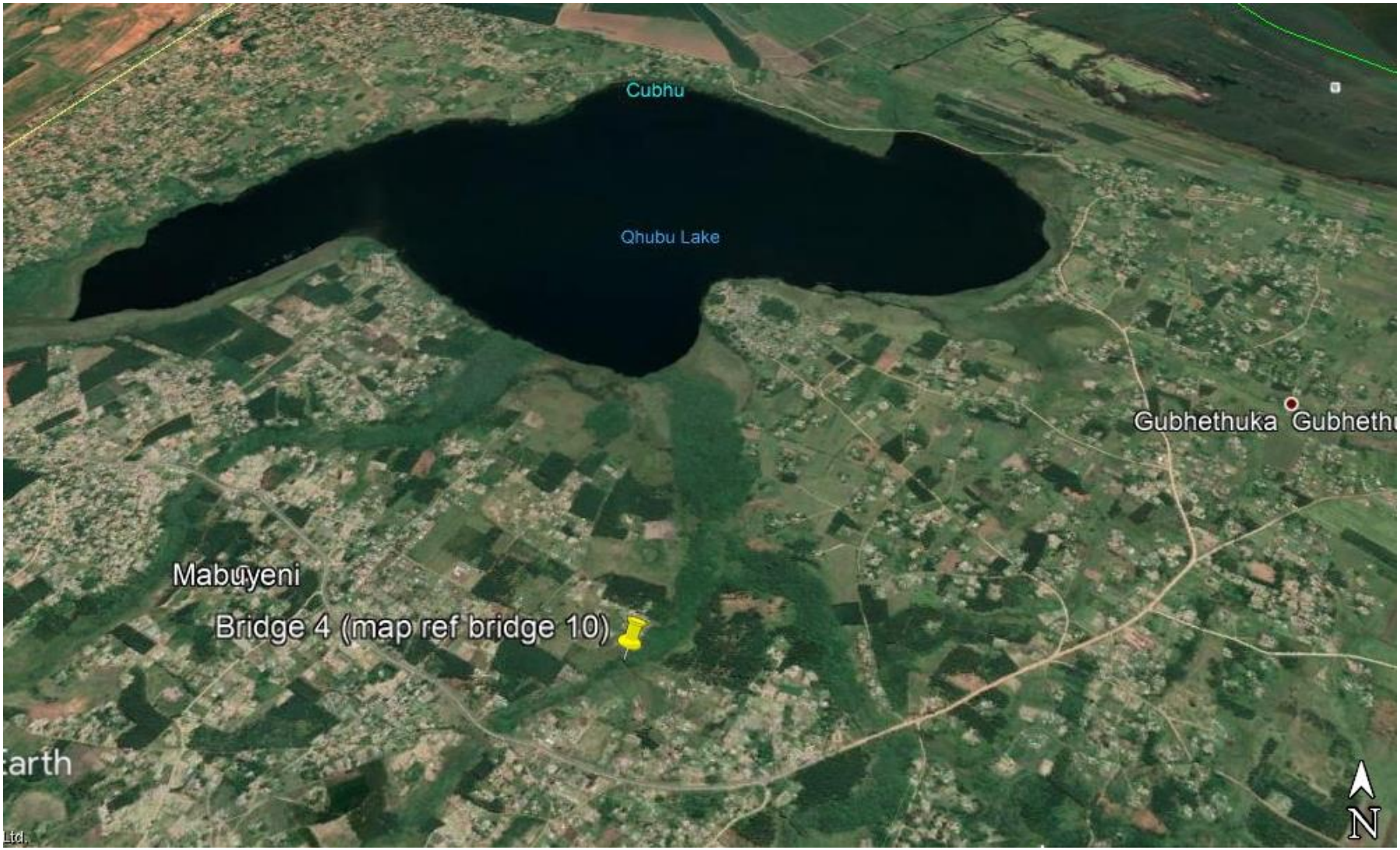


Figure 1: Surrounding environment for bridge No. 10

Figure 2: Closer view of bridge No. 10 and surrounds

Figure 3: Aerial view of site showing location in relation to the sea and the N2 highway

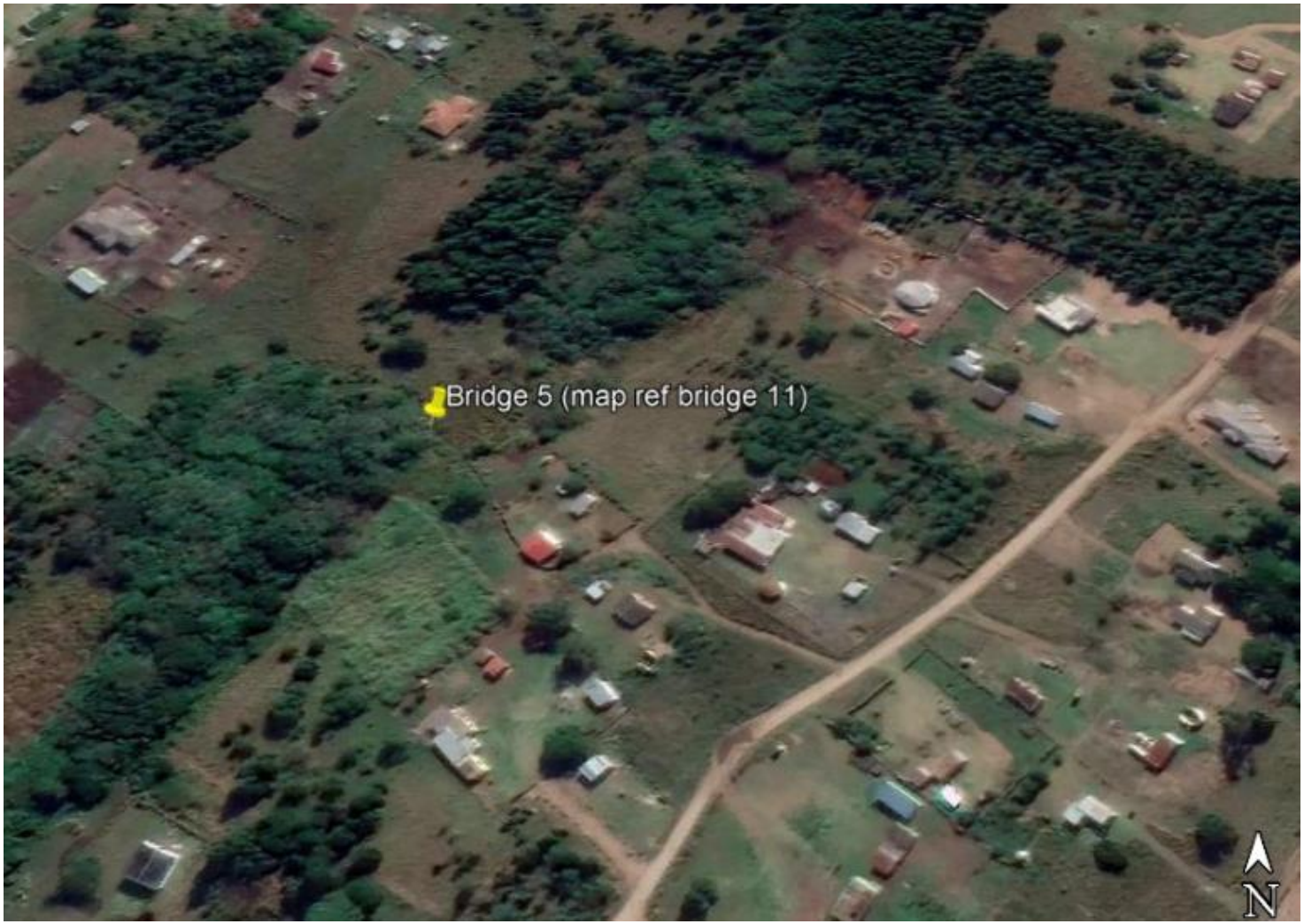


Figure 4: Closer view of proposed location of pedestrian bridge No. 11

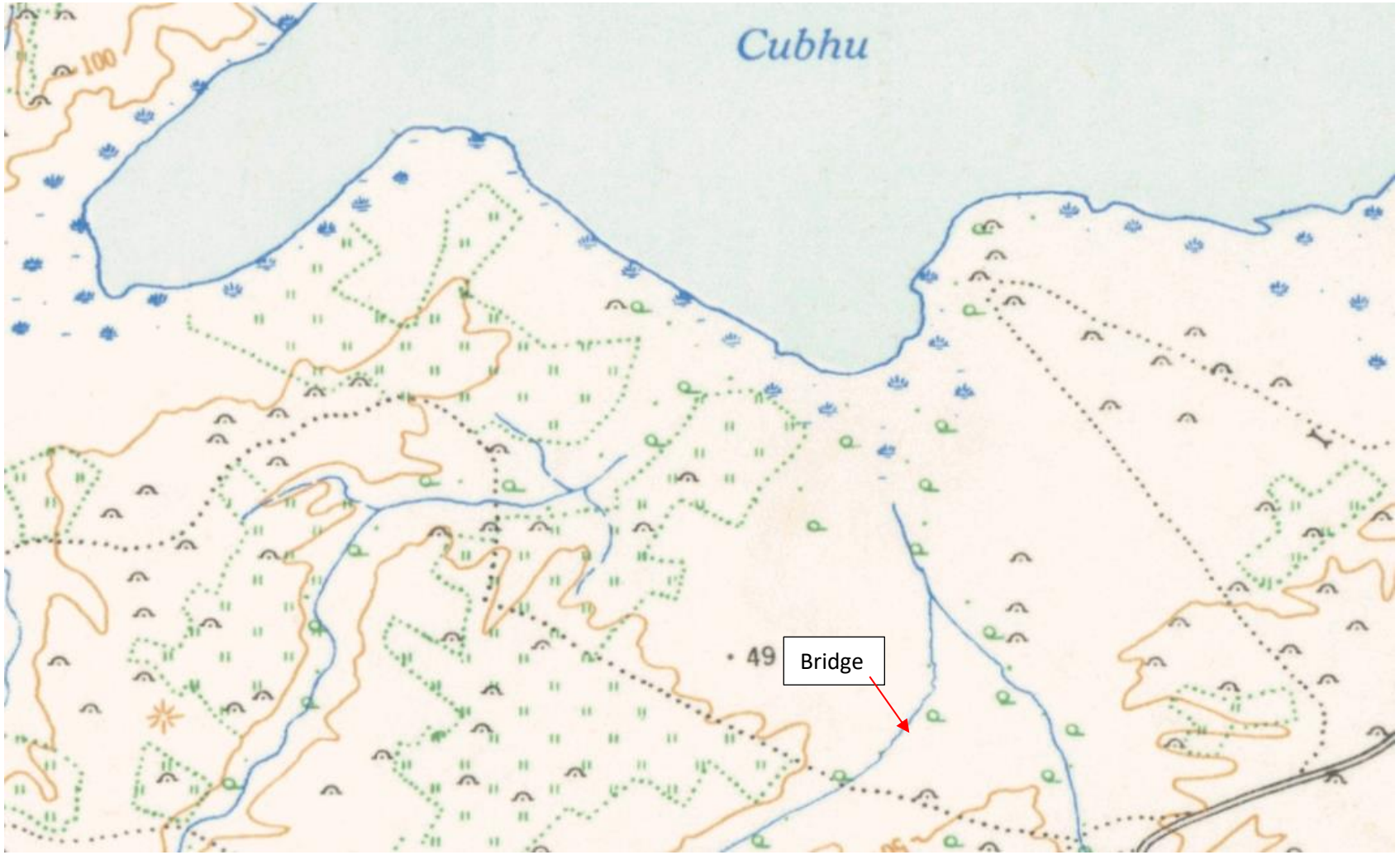


Figure 5: 1957 topographic map of bridge No. 10 and surroundings

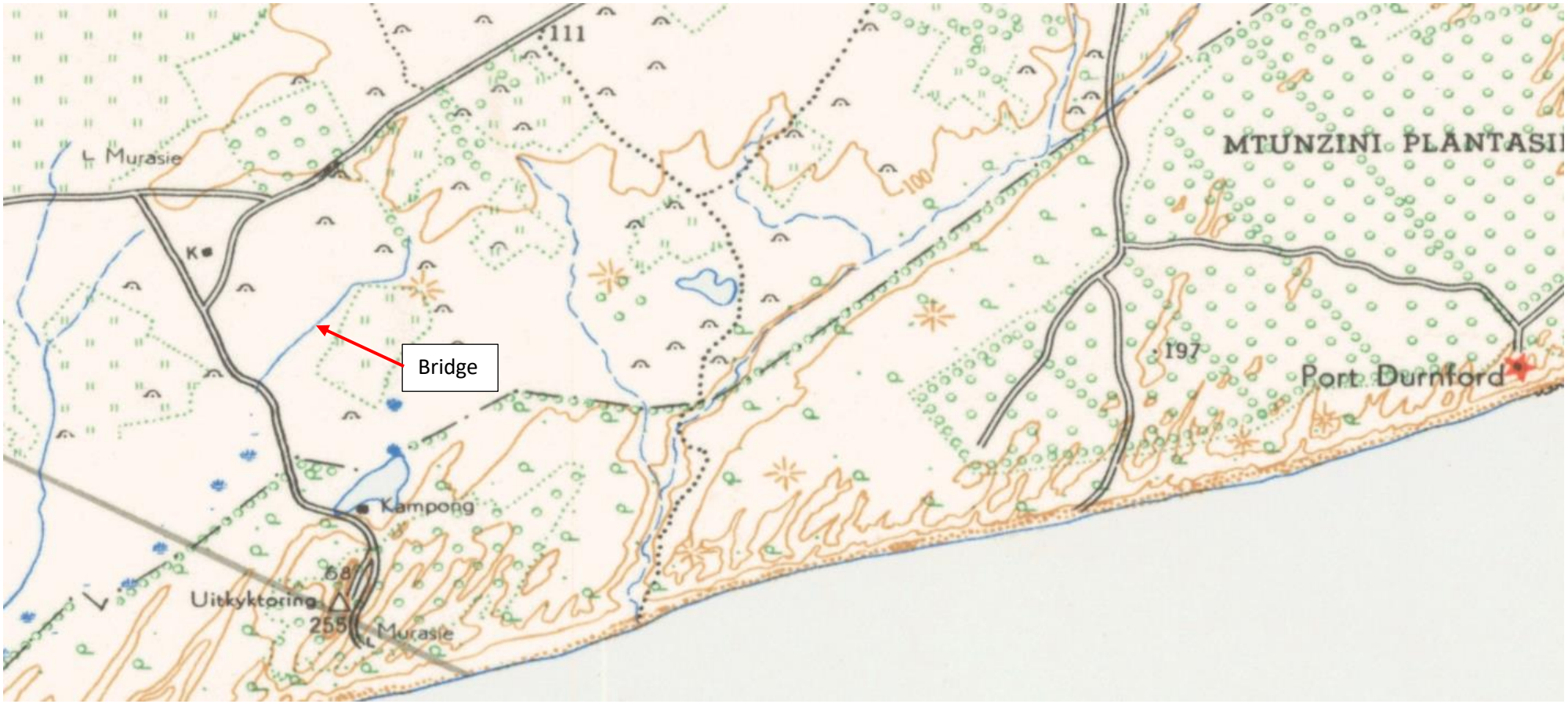


Figure 6: Portion of 1957 topographic map (2831DD) showing bridge No. 11 and surrounding environment

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

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

5. METHODOLOGY AND CONSTRAINTS

A survey of literature, including other heritage impact assessment reports that may have been completed for the larger area, was undertaken in order to ascertain the history of the area in which the bridges will be located and what type of heritage resources have or may be found in the areas of development.

An inspection of the bridge No. 11 was undertaken on 04 February 2021 and of bridge No. 10 on 29 April 2021. The immediate area around both sites was very wet and swamp-like because of the large amount rain that has fallen and the need for both bridges was clear as crossing both streams was challenging and difficult.

6. HISTORICAL BACKGROUND OF PROJECT AND SURROUNDING AREA

In Southern Africa, the archaeology is divided into the Stone Age, Iron Age and the Historical Period. The greater Richards bay area and surrounding regions have a long history of occupation by Stone Age hunter gather groups, Iron Age farming communities and Colonial settlers (de Bruyn 2019:25). The archaeological history of KwaZulu-Natal (KZN) dates back to about 2 million years and possibly older marking the beginning of the Stone Age period. Two known Early Stone Age sites occur in the proposed land of 5333 Richards Bay, where artefacts such as hand-axes and cleavers have been found. During the survey for the proposed expansion to the Richards Bay harbour, ESA and Middle Stone Age (MSA) stone tools were found on the surface of a disturbed area (de Bruyn 2019: 27, 28).

Ceramics of the Mzonjani Facies from the Early Iron Age period have also been located around Richards Bay. Mzonjani settlements provide the earliest evidence of Iron age settlement in KZN. Ceramic pottery styles of the Kalundu Tradition, including Msuluzi (AD 500-700), Ndondondwane (AD 700-800), and Ntshekane (AD 800-900), which are found in the broader areas around Durban and Richards Bay and near the Tugela River.

The early historical period of the Mhlathuze lagoon and environs comes from a few written records from stranded European mariners, traders and their clients who passed through the area from the 15th century onwards. The Mhlathuze and Nsezi marshes that extend some 20km inland were a formidable barrier to these travellers who were forced inland along the Empangeni ridge before proceeding further (Cubbin 1997:7-8).

An archaeological survey of the proposed Exxaro Port Durnford mining lease, located about 9km west of the proposed bridge, found several sites associated with the Anglo-Zulu War (1879), including the locations of Fort Napoleon and of General's Hill. According to the report, these areas are of great significance to the Anglo-Zulu war as it is from these hills where the British initiated their campaign against the Zulu Kingdom after their defeat at the Battle of Isandlwana and Eshowe (Umlando 2008:15). It is possible that the area in which the bridges are to be located could have seen movement of soldiers during this war. However, with time and the expansion of residential development, it is unlikely that intact remains or artefacts would be found.

During the early 20th century, large industries moved into the area of Richards Bay and other commercial activities around Empangeni. As a result, a large population migrated to Empangeni and Richards Bay since these areas provided people with job opportunities· that required both skilled and unskilled labour. In response to this, ESikhawini was developed in 1976 into a black township consisting of middle-income residents (Ngubane 2009:13).

7. RESULT OF SITE INSPECTION

Bridge No. 10:

The stream to be crossed by the pedestrian bridge was very full (see **Figure 7**) and flowing strongly and could not be crossed by foot. The area on both sides is swampy and very overgrown by vegetation. The residents were using branches to cross from one side to the other. On the north-western bank of the stream, a eucalyptus plantation was found, whilst on the southern bank, there is some small-scale farming of vegetables and crops taking place. Residences are situated some distance from the site of the proposed pedestrian bridge.

The specialist spoke to Mr. Nkosinathi Sibiya and Mr Siphamandla Mthethwa who were aware of the proposed pedestrian bridge. They live on the southern side of the proposed bridge They said that there were no graves in the area of bridge and that graves were located about 2 km east of the site. No heritage sites were found during the site inspection.

Figure 7: View across stream looking southwards

Figure 8: Makeshift crossings using branches

Figure 9: View looking from stream northwards

Figure 10: View looking northwards showing extent of stream crossing

Figure 11: View looking south with back to stream

Bridge No. 11:

Mrs/Ms Thandekile Dludla lives in the dwelling closest to the proposed pedestrian bridge on the southern banks of the stream. She stated that there were no graves to her knowledge in the immediate and surrounding area. The stream has a thick layer of riparian vegetation in it and on either side of it. During the inspection no heritage sites were found.

Figure 12: Southern end of stream showing vegetation and boulders currently used for crossing

Figure 13: Water clogged northern end of stream crossing

There are no residences in close proximity to the northern bank of the stream. **Figures 14-15** show the surrounding vegetation on the northern bank of the stream.

Figure 14: Vegetation on northern side of stream

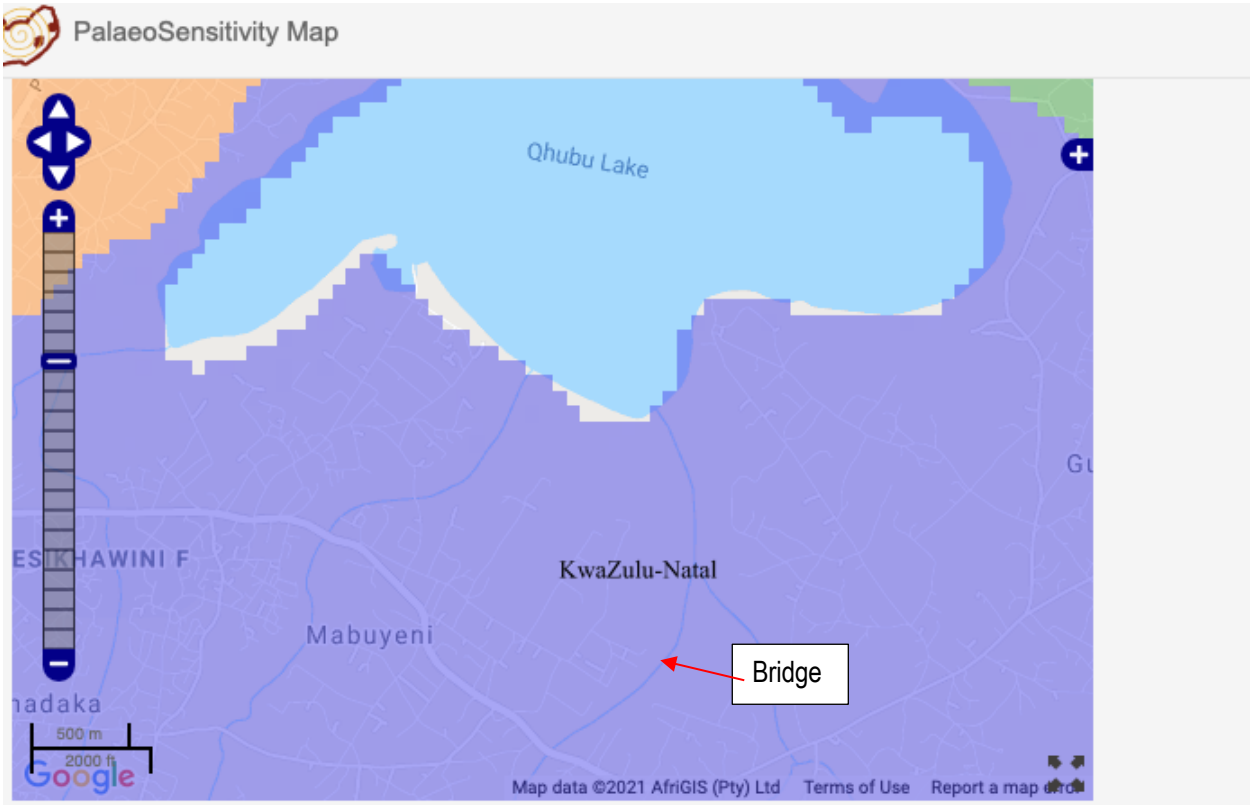
Figure 15: Forested area on northern banks of stream

Figure 16: Resident crossing stream

On the southern bank of the stream, informal small-scale vegetable farming is taking place.

Figure 17: Vegetation along southern bank of stream

According to the South African fossil sensitivity map, both bridges fall within areas of low fossil sensitivity as indicated by the blue colour in **Figures 18** and **19** below. No further studies are needed but a protocol for chance finds must be provided. This chance find protocol is included in Chapter 10 of this report.

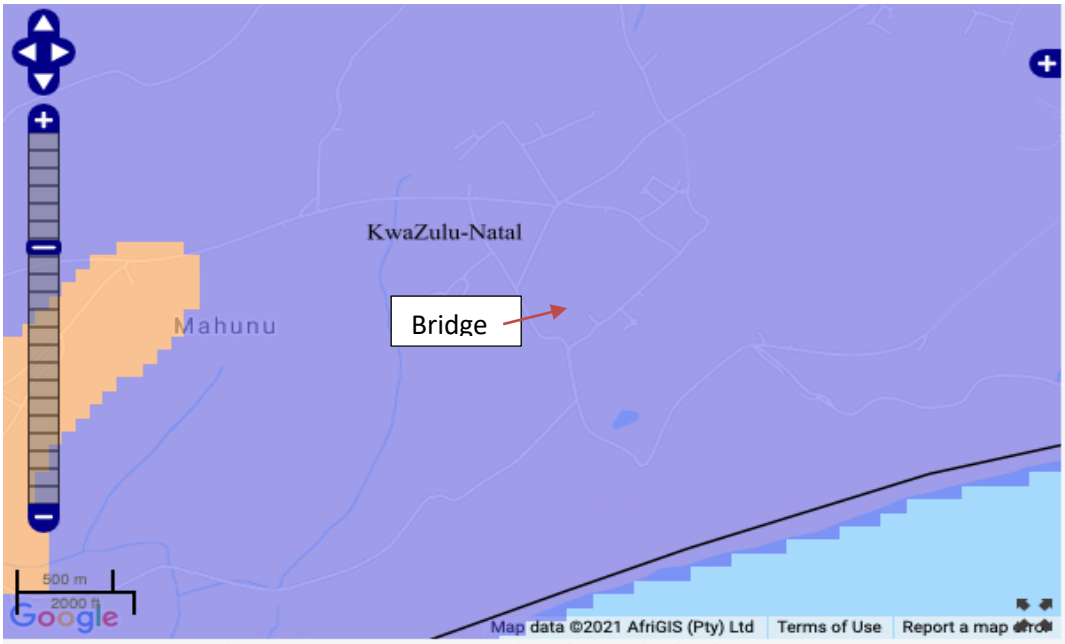


1 in 250 000 geological formation layers are courtesy of the Council for GeoScience

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 18: Fossil sensitivity of bridge No. 10 as indicated



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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 19: Fossil sensitivity of pedestrian bridge No. 11 as indicated

8. STATEMENT REGARDING OTHER PEDESTRIAN BRIDGES

Proposed pedestrian bridges 1, 2, 8, 12, 16 and 18 are shorter than 50m hence they do not trigger section 41 of the KwaZulu-Natal Amafa and Research Institute Act, 2018. It is therefore the understanding of the heritage specialist that heritage assessments are not required for these bridges. The bridges are all situated within the uMhlatuze Local Municipality. Some are situated along the R102 and some are located closer to Empangeni. All the bridges are situated in residential areas where the crossing of streams has become problematic or a hazard. Therefore, the environment of these proposed bridges is already disturbed by human activity and settlement and risk of the bridges impacting on heritage resources is considered to be very low.

9. CONCLUSIONS

A site inspection of the proposed pedestrian bridges (bridges No. 10 and 11) revealed no heritage sites. It is therefore recommended that the construction of both bridges proceed from a heritage perspective as long as the mitigation measures provided below are adhered to.

10. MITIGATION MEASURES

- For any chance heritage finds (graves, etc.), 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 (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.
- 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 as well as the Institute must be contacted. No SAPS official may remove remains (recent or not) until the correct permit/s have been obtained.
- The following should be adhered to in terms of chance fossil finds:
    - When construction activities begin, any rocks disturbed during this process 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.
    - Photographs of possible fossils should be sent to a palaeontologist for 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 dumps 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, permit must be obtained from the Institute. Annual reports must be submitted to the Institute as required by the relevant permits.

11. REFERENCES

Cubbin, T. 1997. A history of Richards Bay 1497 – 1970's in *Zululand Annals Vol. iii. Zululand History Society*.

NGT Holdings. 2019. *The East Coast gas 400kV power lines, located in Richards Bay, within the Umhlathuze Local Municipality in the King Cetshwayo District Municipality in the KwaZulu-Natal Province*.

Ngubane, M.S. 2009. *Planning for Recreational Facilities and Open Spaces: A Case Study of ESikhawini Township at Umhlathuze Municipality, KwaZulu Natal*

Umlando. 2008. *Archaeological survey of proposed Exxaro Port Durnford mining lease*