

**APPLICATION FOR EXEMPTION FOR UNDERTAKING
PHASE 1 HIA FOR
WHITE UMFOLOZI RIVER CAUSEWAY CROSSING
(BABANANGO VALLEY), ULUNDI LOCAL
MUNICIPALITY, KWAZULU-NATAL**

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**For: Emcakweni Community Trust
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SPECIALIST DETAILS

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1. INTRODUCTION

The proposed development is for the construction of a 200m long and 4m wide causeway crossing over the White Umfolozi River in the Babanango Valley. The proposed causeway will provide a quick, easy and safe access between the northern and southern sections of the White Umfolozi River. The causeway will replace an existing derelict and unsafe causeway (as determined by Engineering Consultants) further downstream. On both the northern and southern sections of the proposed causeway there are existing dirt tracks which will be lengthened to connect to the proposed causeway itself (IDM Environmental 2019:11).

The development of the Umfolozi River causeway forms part a broader plan to create accessibility between the northern and southern sections of the proposed new Babanango Game Reserve (BGR) (see **Figure 1** below). The majority of the land making up the proposed BGR is currently owned by the Emcakweni Community Trust (ECT), which expressed interest in entering into a Biodiversity Stewardship Programme in 2012. The Trust required an investment partner to assist it and its constituent beneficiaries/community in achieving this goal. African Habitat Conservancy (Pty) Ltd has agreed to invest with the Trust and support it for these and associated conservation and community upliftment purposes. The long-term goal is to develop and manage a financially viable private game reserve (Big Five) and the restoration of the biodiversity, the cultural history and scenic splendour of the region. The proposed causeway crossing forms one small component of the broader programme and conservation goals for the area (IDM Environmental 2019:11).

2. LOCATION OF THE SITE

The site of the proposed causeway crossing is located on the properties of Non Pareil, 721/GU (to the North/East) and Portion 4 of Doornkroon, 412/GU (to the South/West). The causeway crossing is approximately 51km south east from Vryheid, approximately 28km west from Ulundi and approximately 7km to the north east of the small town of Babanango in the Zululand District of Northern KwaZulu-Natal (IDM Environmental 2019:15). The coordinates for the causeway are 28° 13' 45.06"S 31° 03' 20.95"E. See **Figure 2** below.

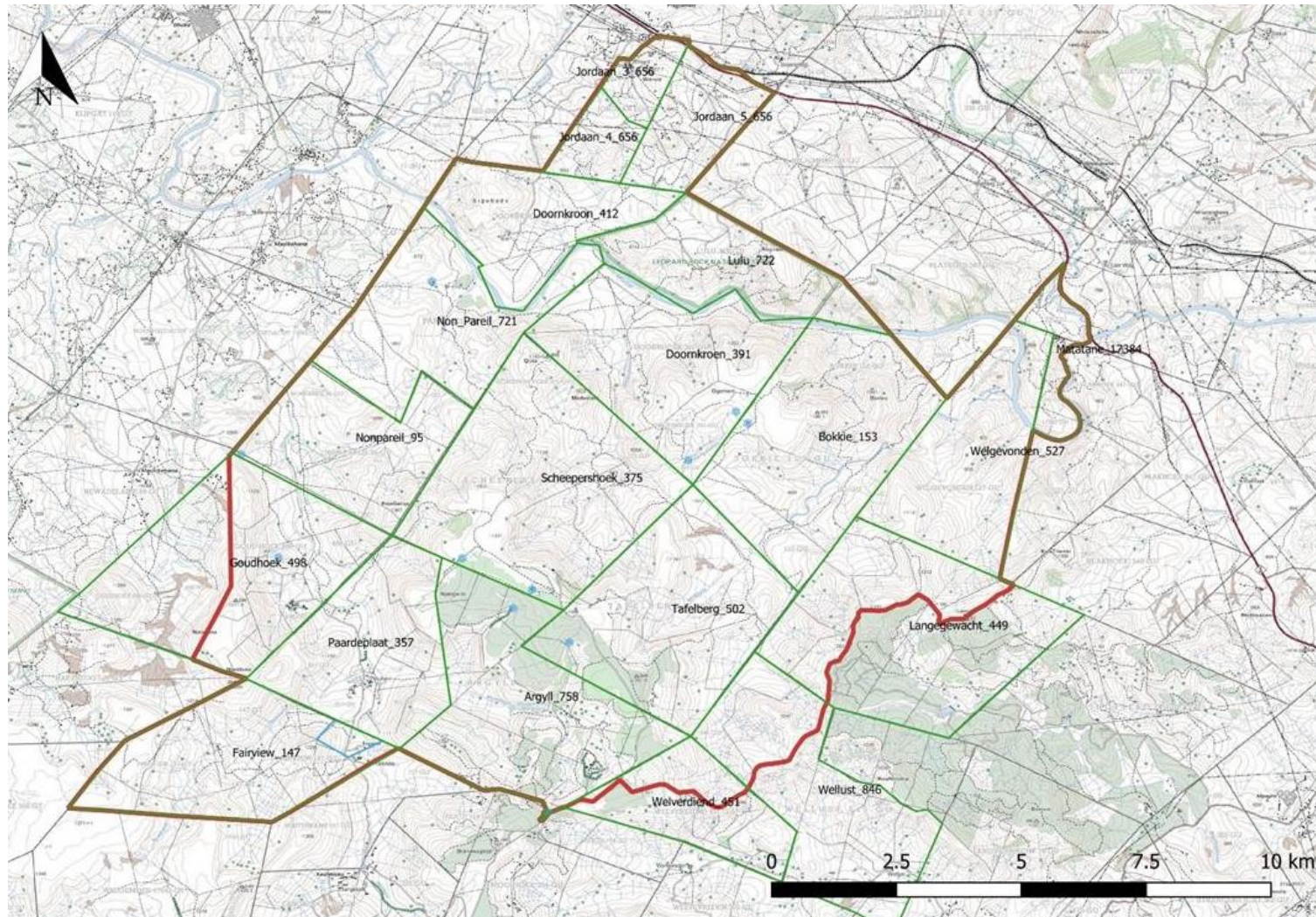


Figure 1: Boundary of Babanango Game Reserve



Figure 2: Site of causeway crossing

3. LEGISLATIVE CONTEXT

The proposed causeway will be 200m in length; the track on the northern side of the causeway will be extended by 92m and the track on the southern side will be extended by 304m (a total of 596m) hence the project will trigger section 41(1) (a) 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 subsection refers to: *“the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length”*.

Due to the position of the causeway crossing in the White Umfolozi River and the transformed environment in which the extension of the vehicle tracks will take place, an application for exemption from undertaking a Phase 1 Heritage Impact Assessment (HIA) is been made.



Figure 3: View of proposed causeway and track extensions

4. DESIGN OF CAUSEWAY CROSSING

The proposed causeway will be constructed in a rocky portion of the White Umfolozi River. The drift is level at the base, but follows the rock profile closely and will be concrete lined up to the 1:100-year flood level. The causeway has been designed to allow the flow of water during the normal dry weather conditions through concrete culverts below the road. Occasional larger floods will pass through the culverts and over the road surface. The causeway will contain bollards which are spaced 900mm apart. The bollards will be utilised to guide the crossing of the causeway and indicate water levels. If the bollards are not visible, no vehicle may cross, as river flows would be high. The culverts will be located in the low spots of the rock profile to allow for low flow conditions. Either side of the drift is sloped, so that it is more forgiving to water flow and does not have vertical barriers, inhibiting flow (IDM Environmental 2019:25).



Figure 4: Example of development of proposed causeway

Currently there exists established sand and gravel tracks on either side of the proposed White Umfolozi River causeway crossing. On both the northern and southern sections of the proposed causeway these existing tracks will be extended/lengthened to the proposed causeway. Routing of these tracks to the causeway will take the route that will result in the least riparian vegetation being cleared.

5. MOTIVATION FOR EXEMPTION FROM PHASE 1 HIA

A Phase 1 HIA undertaken for the proposed Babanango Game Reserve in August 2019 identified many heritage sites within the Reserve including Iron Age Zulu stone walled homesteads and graves. As the proposed causeway crossing will be constructed in a rocky portion of the White Umfolozi River, there is a low risk of finding heritage sites within or close to the River which in the high season flows very strongly. The turquoise dotted lines in **Figure 3** above indicate the 1:100-year flood line showing the extent to which the river can rise. It is therefore unlikely that heritage sites will be found close to the river and along the banks of the river.



Figure 5: Location of causeway crossing



Figure 6: Section of causeway crossing



Figure 7: View across causeway crossing

A survey of both sides of the river was undertaken to assess the area for heritage sites in terms of the extension of the tracks. No visible heritage sites were found. In addition, on the southern side, much of the extension takes place in an area already disturbed by past agricultural activities

(ploughed fields) as can be seen in **Figure 8** below. Such activity would have led to the destruction of heritage sites (if any).



Figure 8: Google Earth image showing previously farmed land on either side of river



Figure 9: View of area where tracks will be extended

The extension of tracks on the northern side of the river will be 92m in length. The area was also inspected and no heritage sites found. This extension also crosses transformed land making the existence of intact heritage sites highly unlikely.



Figure 10: Existing tracks to be extended

The SA fossil sensitivity map shows that the causeway crossing and track extensions fall into an area of insignificant fossil sensitivity which is indicated by the grey colour in **Figure 11** below. In terms of this category, no further studies are needed; however, a protocol is included for chance fossil finds during the construction of the proposed causeway crossing. This protocol can be found in Chapter 6 of this report.

6. CONDITIONS

If exemption from undertaking a Phase 1 HIA is granted for this project, then the following conditions must be met by the Applicant:

- For any chance heritage finds, all work must cease in the area affected and the Contractor must immediately inform the Project Manager/the responsible person from the BGR. The provincial heritage agency, the KwaZulu-Natal Amafa and Research Institute (hereafter referred to as the Institute) must also be informed.
- A heritage specialist must be called to site to assess the significance of the find.

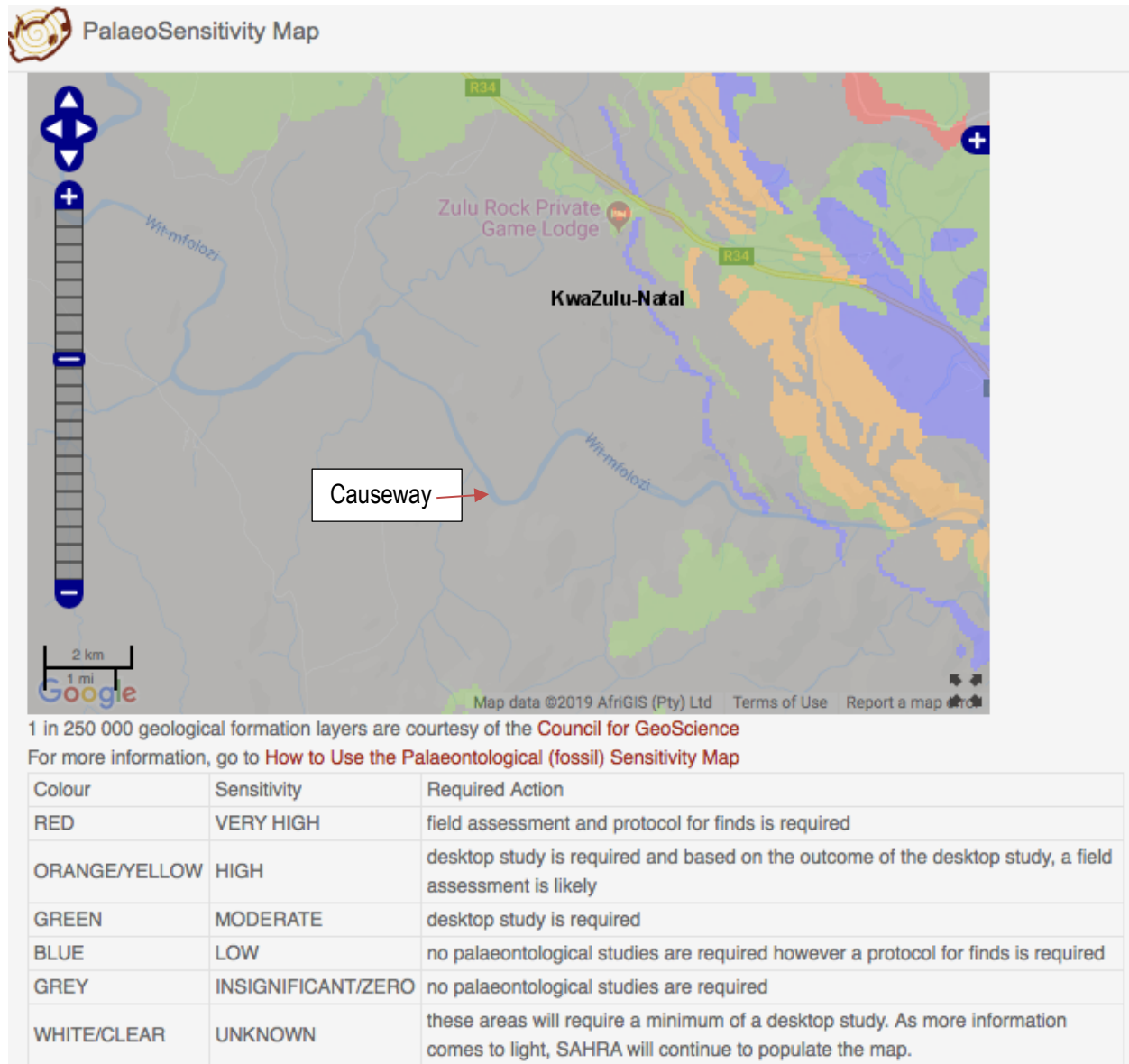


Figure 11: Fossil sensitivity of causeway and track extensions

- Permits must be obtained from the Institute if heritage resources are to be removed, destroyed or altered.
- Only once the heritage specialist gives the go-ahead can work in the area of the find recommence
- Under no circumstances may heritage material be destroyed or removed from site unless under direction of a heritage specialist.
- Should recent remains be found on site that could potentially be human remains, then the South African Police Service should also be contacted. No SAPS official may remove remains until the correct permit/s have been obtained.
- In terms of chance fossil finds, the following must be adhered to:

- When excavation takes place for the construction of the causeway, any rocks disturbed during this process should 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 preliminary assessment.
- If there are concerns regarding any fossil finds, then a palaeontologist must visit the site to inspect the selected material and check dumps where necessary.
- Fossil plants or vertebrates that are deemed to be of good quality 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 a permit must be obtained from the Institute. Annual reports must be submitted to the Institute as required by the relevant permits.

7. CONCLUSION

It is highly unlikely that the proposed causeway crossing will disturb heritage resources. An assessment of the area on either side of the river found no visible heritage sites and the disturbed and transformed nature of the surrounding area where the extension of the tracks will take place indicate a very low possibility of finding intact heritage sites in the area of development. It is therefore recommended that exemption from undertaking a Phase 1 HIA is approved for the causeway crossing and extension of tracks on both sides of the river.

8. REFERENCES

IDM Environmental. 2019. *Basic Assessment Report – Draft 1 for the White Umfolozi River Causeway Crossing (Babanango Valley), Zululand, KwaZulu-Natal.*