

Our Ref:



an agency of the  
Department of Arts and Culture

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South African Heritage Resources Agency | 111 Harrington Street | Cape Town  
P.O. Box 4637 | Cape Town | 8001  
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Enquiries: Natasha Higgitt  
Tel: 021 462 4502  
Email: nhiggitt@sahra.org.za  
CaseID: 14484

Date: Friday July 22, 2022  
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## Final Comment

**In terms of Section 38(4), 38(8) of the National Heritage Resources Act (Act 25 of 1999)**

Attention: Khumbu Sibiya  
KwaZulu-Natal - Department of Transport

The proposed upgrade of D1867 project comprises of the construction of earthworks, layer works, ancillary works and surfacing from gravel to blacktop, storm water drainage, and major drainage structures as well as the construction of Mozana Bridge. The existing Road D1867 is approximately 7.5m wide and 10.9 km long with a road reserve of 30m and the project entails the upgrading and widening from 7.5m to 8.5m wide surfaced Type 4 Low Standard Secondary Road with a carriageway width consisting of 2 x 3.5m lanes and a 1.5m concrete paved footway. The design speed on the road is 60km/h. The proposed upgrade will start from KM 6+000 of the existing Road D1867 at approximately GPS coordinates: 27°16'51.34"S and 31°14'20.94"E to KM 16+900 of the existing Road D1867 at approximately GPS coordinates: 27°20'38.26" and 31°11'3.99"E. A portion of the road from km 6+600 to km 8+00 falls within Mpumalanga Province and the rest under KwaZulu Natal Province. The existing bridge structure has deteriorated to the degree that significant maintenance is required to keep the bridge in service. The replacement of the existing bridge is necessary due to the following:

- The existing one lane bridge is functionally deficient as it's widths do not satisfy the current KZN DOT standards in terms of horizontal curve and road gradient considering the amount of traffic that utilises the bridge.
- The width of the existing bridge cannot accommodate the road carriageway and the foot walkway.
- With the upgrade of the road to blacktop, the existing bridge has a potential to become a black spot due to increase traffic volume.

The recommended preferred build alternative consists of replacing the existing one-lane bridge with a two-lane bridge constructed south east of the existing bridge at about Km 7.2 at GPS coordinates: 27°17' 14.1" S, 31°13' 47.5" E. The proposed Mozana bridge deck will be 56m long continuous slab with 4 spans of 14m length. The bridge deck will be 11.12m to accommodates 2 x 3.5m wide lanes with shoulders of 0.75m wide on both side of the bridge and a 1.5m foot sidewalk on the south edge of the bridge. The total physical footprint of the bridge is approximately a 622,72m<sup>2</sup> and more than 10 cubic metres of soil, and other material will be excavated, removed, or moved during construction of the bridge. The bridge is designed for a 1:10 return flood to pass under the deck soffit. The abutments and three piers are founded directly on the rock within the riverbed and anchored with dowels. The GPS coordinates of the abutments and two piers are provided below from the direction of the start point of the road: Structure Latitude Longitude Abutment (E) 27° 17' 13.12" S 31° 13' 49.44" E Pier (D) 27° 17' 13.35" S 31° 13' 48.98" E Pier (C) 27° 17' 13.58" S 31°

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**13' 48.54" E Pier (B) 27° 17' 13.83" S 31° 13' 48.11" E Abutment (A) 27° 17' 14.09" S 31° 13' 47.70" E**  
**A 250mm thick approach slabs will be constructed under the roadway of the bridge. The approach slabs will be supported on the abutments at one end and rest on the fill towards the other end. The following are the specifications of the approach slab to be utilised in the construction of the bridge:**

- The slab will extend 4.5m from the curtain wall of the road centreline, with a fall of 100mm.
- The slab will be kept 100mm clear of the wingwall faces to prevent fouling of the wall, should settlement take place.
- The top of supporting rib will be 800mm below the finished road at the carriageway centreline.
- The approach slab will be designed for both earth load and NA loading over a span of 2m in longitudinal direction of the structure.
- Waterproof underlay or 40mm thick blinding will be provided under the approach.

Reinforced concrete solid type piers that are 0.6m thick founded on spread foundations are proposed for the bridge. The bridge deck is a four-span continuous cast in situ reinforced concrete slab. The bridge deck is continuous over the pier and bridge expansion joints are provided at the abutments. The bridge parapet will be of F type shaped reinforced concrete parapet and designed in accordance with TMH7: Part 2 clause 3.51.2 – Type 1 balustrades: 100kN impact force. The proposed bridge will be constructed while traffic is maintained on the existing bridge for use as a bypass during the construction of the new route. The existing bridge will not be removed following construction of the new bridge. construction of a new road of approximately 8.5m wide and 860m in length which will start from KM 6+800 at approximately GPS coordinates: 27°17' 11.00"S and 31°14' 01.60"E to KM 7+660 at approximately GPS coordinates: 27°17' 26.60"S and 31°13' 51.06"E. At Km 15.520 the road crosses an unchanneled valley bottom wetland (Wetland Unit UCVB1) from approximately GPS coordinates: 27°19' 38.15"S and 31°12' 41.64"E to approximately GPS coordinates: 27°19' 38.45"S and 31°12' 41.29"E. This wetland area will require rockfill under the road for about 50m long and 15 m wide and 0.750m thick to allow the water to run freely under the road where a six (6) stormwater culverts of size 900PC will be installed so as to prevent the water to be cut off from the wetland. The existing structures and stormwater pipes at Km 15.520 will be removed and decommissioned.

Afzelia Environmental Consultants have been appointed by the Kwa-Zulu Natal Department of Transport to conduct an Environmental Authorisation (EA) Application for the proposed upgrade of Road D1867 near Oranjedal and Tobolsk in the Kwa-Zulu Natal and Mpumalanga Province.

\*Please note that the following comments are issued only for the Mpumalanga portion of the development. Comments for the KZN portion of the development must be sought from the KwaZulu-Natal Amafa and Research Institute.



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A draft Basic Assessment Report (DBAR) has been submitted in terms of the National Environmental Management Act, 1998 (NEMA) and the Environmental Impact Assessment (EIA) Regulations. The proposed activities include the upgrading and widening of the road from 7.5 m to 8.5 m, sidewalks, re-alignment of sections, storm water draining and major drainage structures, and the construction of the Mozana Bridge. Existing borrow pits will be used as part of the construction.

Heritage reports have been included into the EA process as per section 24(4)b(iii) of the NEMA and section 38(3) and section 38(8) of the National Heritage Resources Act, Act 25 of 1999 (NHRA).

*\*Only results of the heritage specialist reports pertaining to the Mpumalanga section of the proposed development will be discussed below.*

The proposed footprint within the Mpumalanga portion of the development is located in an area of low palaeontological sensitivity and therefore no assessment of the impact to palaeontological resources is required.

*Beater, J. 2019. Phase 1 Heritage Impact Assessment: Proposed Upgrade of D1867 Road situated within the Phongola Municipality, Kwazulu-Natal and Mpumalanga Provinces.*

One burial ground consisting of at least 16 graves is located 13 m from the proposed road diversion. No other heritage resources were identified within the Mpumalanga section of the proposed development.

Recommendations provided in the report include the following:

- The proposed deviation will have a very high impact on the graves, as assessed. It can be reduced to a medium impact if the graves are fenced and well protected from activities related to the road upgrade. Graves and burial sites are protected by section 39 (1) of the KwaZuluNatal Amafa and Research Institute Act, which refers to the general protection of informal and private burial grounds and section 36 (3)(a) (b) of the NHRA. The relocation of the graves is not recommended as graves are highly significant to people and there are many traditional, cultural and personal sensitivities and norms concerning the removal of graves. It is therefore recommended that the proposed deviation is not considered and the upgrade take place along the existing road and bridge, an area which is already highly disturbed. If the road deviation proceeds, then the graves must be fenced with a 5 m buffer. If the risk is too high, then relocation of the graves could be considered as a last resort;

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- A Chance Finds Procedure is recommended to be implemented.

## Final Comment

\*The following comments only apply to the Mpumalanga portion of the proposed development. The following comments are made as a requirement in terms of section 3(4) of the NEMA Regulations and section 38(8) of the NHRA in the format provided in section 38(4) of the NHRA and must be included in the Final BAR and EMPr:

- 38(4)a – The SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit and the SAHRA Burial Grounds and Graves (BGG) Unit has no objections to the proposed development;
- 38(4)b – The recommendations of the specialist is supported and must be adhered to. Further additional specific conditions are provided for the development as follows:
- BGG Unit conditions: If the proposed road deviation proceeds, the identified graves must be relocated for reburial elsewhere as in-situ preservation is not feasible given the close proximity to the development footprint. Consultation in terms of the NHRA Regulations of 2000 (*Chapter XI Procedure for consultation regarding burial grounds and graves*) must be conducted to identify families of the deceased and obtain consent for the relocation. Proof of consultation must be submitted to SAHRA to obtain a grave relocation permit;
- 38(4)c(i) – If any evidence of archaeological sites or remains (e.g. remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, charcoal and ash concentrations), fossils or other categories of heritage resources are found during the proposed development, SAHRA APM Unit (Natasha Higgitt/Phillip Hine 021 462 5402) must be alerted as per section 35(3) of the NHRA. Non-compliance with section of the NHRA is an offense in terms of section 51(1)e of the NHRA and item 5 of the Schedule;
- 38(4)c(ii) – If any previously unknown human burials are uncovered in the KZN area, AMAFA must be consulted. If unmarked human burials are uncovered in the Mpumalanga area, the SAHRA Burial Grounds and Graves (BGG) Unit (Thingahangwi Tshivhase/Ngqabutho Madida 012 320 8490), must be alerted immediately as per section 36(6) of the NHRA. Non-compliance with section of the NHRA is an offense in terms of section 51(1)e of the NHRA and item 5 of the Schedule;
- 38(4)d – See section 51 of the NHRA regarding offences;
- 38(4)e – The following conditions apply with regards to the appointment of specialists:
- If heritage resources are uncovered during the course of the development, a professional archaeologist or palaeontologist, depending on the nature of the finds, must be contracted as soon as possible to

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inspect the heritage resource. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required subject to permits issued by SAHRA;

- The Final BAR and EMPr must be submitted to SAHRA for record purposes;
- The decision regarding the EA Application must be communicated to SAHRA and uploaded to the SAHRIS Case application.

Should you have any further queries, please contact the designated official using the case number quoted above in the case header.

Yours faithfully

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Natasha Higgitt  
Heritage Officer  
South African Heritage Resources Agency

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Phillip Hine  
Manager: Archaeology, Palaeontology and Meteorites Unit  
South African Heritage Resources Agency

**ADMIN:**

Direct URL to case: <https://sahrissahra.org.za/node/530458>  
(DEA, Ref: 14/12/16/3/3/1/2547)

Terms & Conditions:

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1. This approval does not exonerate the applicant from obtaining local authority approval or any other necessary approval for proposed work.
2. If any heritage resources, including graves or human remains, are encountered they must be reported to SAHRA immediately.
3. SAHRA reserves the right to request additional information as required.