

**PROPOSED UPGRADE OF ROAD D954, MNAMFU,  
UGU DISTRICT MUNICIPALITY, KWAZULU-NATAL**

**Phase 1 Heritage Impact Assessment**

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**FOR: ECA Consulting  
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## EXECUTIVE SUMMARY

The applicant, KwaZulu Natal Department of Transport (DoT) proposes the upgrade of district road 954 from a gravel to a concrete surface from km 1+654 to km 3+180. The road will be upgraded to a 2 lane, 6.2m wide carriageway. The upgrade will include newly constructed stormwater infrastructure in the form of minor culverts, side drains, chutes as well as kerb and channel. The upgrade will also consist of a 1.5 m wide sidewalk as well as improvement to accesses and driveways.

The length of the upgrade is just over 1.5 km hence the upgrade triggers 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. Section 41 (1)(a) 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.

The D954 road is located in the settlement of Mnamfu / Turton in the Mtwalume area which is located along the KwaZulu-Natal South Coast.

An inspection of the project site was undertaken on 02 March 2021. Visibility was largely good but along some sections there was dense vegetation near the road which made access and visibility difficult. The area is disturbed by the movement of people, animals and vehicles as well as some small-scale vegetable farming close to the road.

The entire route of the proposed upgrade was inspected on foot. No heritage sites were found during the inspection. The specialist spoke to several residents walking along the road and they stated that there were no grave sites close to the D954 road and that graves could be found close to homesteads. It was stated that there are graves close to the dam which is located 75m south-east of the road.

The 1955 aerial photography image of the project area shows residences along the alignment of the road. Therefore, it is recommended that no structures (dwellings, general dealerships/stores, etc.) situated close to the road should be impacted by the road upgrade as at least one structure could be older than 60 years therefore protected by section 37 (1)(a) of the KwaZulu-Natal Amafa and Research Institute Act, 2018.

According to the South African fossil sensitivity map, much of the road falls into an area of low fossil insignificant fossil sensitivity whilst the last 300 falls into an area of high fossil sensitivity. In terms of a low fossil sensitivity zone, no further palaeontological studies are required but a protocol for chance fossil finds need to be adhered to. This chance fossil find protocol is included in Chapter 9 of this report. In terms of a high fossil sensitivity zone, a desktop palaeontological assessment is required. It is however, recommended that no desktop palaeontological study is undertaken as the road to be upgraded is already disturbed by vehicular and foot traffic as well as farming and residential activities that are taking place close to it thereby disturbing any fossil finds that may have been found in the area.

From a heritage perspective, the upgrade of district road D954 can proceed.

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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.

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### **SPECIALIST DETAILS**

<b>Name</b>	<b>Qualification</b>	<b>Professional Registration</b>
Jean Beater	MA (Heritage Studies) MSc (Environmental Management)	Member of Association of South African Professional Archaeologists (No. 349) Member of IAIAAsa (No. 1538)

## 1. INTRODUCTION

The applicant, KwaZulu Natal Department of Transport (DoT) proposes the upgrade of district road 954 from a gravel to a concrete surface from km 1+654 to km 3+180. The road will be upgraded to a 2 lane, 6.2m wide carriageway. The upgrade will incorporate newly constructed stormwater infrastructure in the form of minor culverts, side drains, chutes as well as kerb and channel. The upgrade will also consist of a 1.5 m wide sidewalk as well as improvement to accesses and driveways.

The Phase I HIA was undertaken to assess whether any heritage resources will be impacted by the proposed road upgrade.

## 2. LEGISLATIVE BACKGROUND

The length of the upgrade is just over 1.5 km hence the upgrade triggers 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. Section 41 (1)(a) 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”.

The upgrade of the road 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 NHRA, heritage resources are:

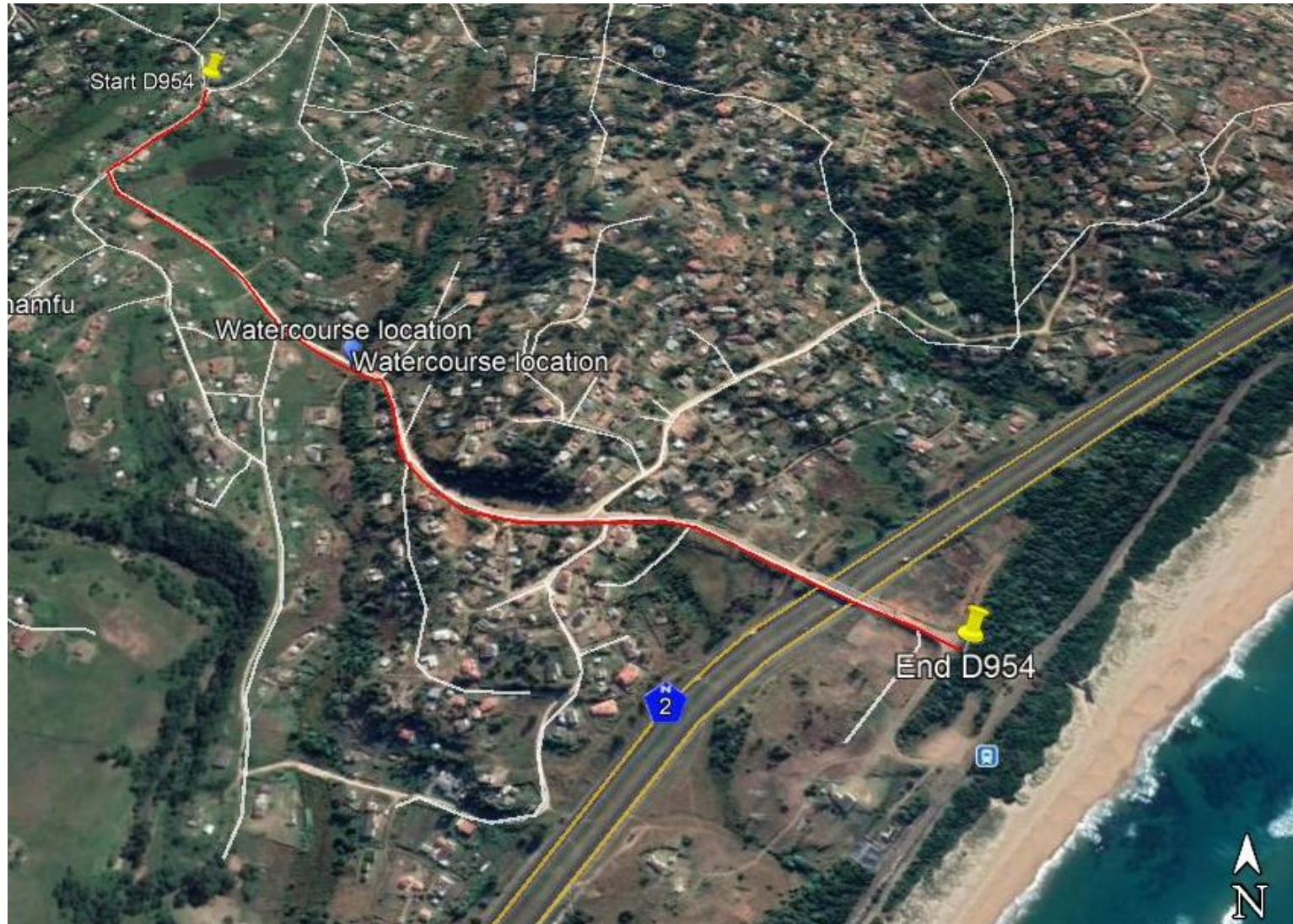
- (a) places, buildings, structures and equipment of cultural significance;
- (b) places to which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features of cultural significance;
- (e) geological sites 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

The D954 road is located in the settlement of Mnamfu / Turton in the Mtwalume area which is located along the KwaZulu-Natal South Coast.

The start and end coordinates of the road are as follows: Start: 30°30'39.98"S; 30°36'14.76"E and End 30°31'11.31"S; 30°36'46.11"E respectively. See **Figure 1** below.



**Figure 1: Aerial view of road to be upgraded indicated in red**



#### **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 upgrade of the D954 road. 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 and what type of heritage resources have or may be found in the area of development.

An inspection of the project site was undertaken on 02 March 2021. Visibility was largely good but along some sections there was dense vegetation near the road which made access and visibility difficult. The area is disturbed by the movement of people, animals and vehicles as well as some small-scale vegetable farming close to the road.

#### **6. HISTORICAL BACKGROUND OF PROJECT AND SURROUNDING AREA**

Archaeological evidence shows that Bantu-speaking agriculturists first settled in southern Africa around AD 300. The earliest agricultural sites in KwaZulu-Natal date to between AD 400 and 550. All are situated close to sources of iron ore, and within 15 km of the coast. Current evidence suggests it may have been too dry further inland at this time for successful cultivation. From AD 650 onwards, however, climatic conditions improved and agriculturists expanded into the valleys of KwaZulu-Natal, where they settled close to rivers in savanna or bushveld environments (eThembeni 2013:18).

The project area has not been systematically surveyed for archaeological sites but the greater Hibberdene and Port Shepstone areas to the south of the project area has been surveyed. Further south and inland the greater Oribi Gorge has also been intensively surveyed. The available

evidence indicates that the greater Hibberdene and Port Shepstone areas contains a wide spectrum of archaeological sites covering different time-periods and cultural traditions. Archaeological sites in the vicinity of the project area include 2 Middle Stone Age sites and 11 Later Stone Age rock art sites situated within the greater Oribi Gorge and adjacent areas. In contrast to inland areas where early agriculturists built with stone where remains of which are still visible, in regions around uMbumbulo and the South Coast (including presumably the study area), early agriculturists built with wattle and daub and the archaeological site visibility is far more compromised by the passing of time (Active Heritage 2018:4 – 7).

The Mtwalume River rises west of Highflats and flows south-east to enter the Indian Ocean 3 km south-west of Ifafa Beach. The name is Zulu and probably refers to a type of tree, the bark of which is used as a remedy for dysentery (Raper undated:322).

## 7. RESULT OF SITE INSPECTION

The entire route of the proposed upgrade was inspected on foot. No heritage sites were found during the inspection. The area is disturbed by vehicle and foot traffic as well as residences and informal gardening/farming situated adjacent to the road.

The specialist spoke to several residents walking along the road and they stated that there were no grave sites close to the D954 road and that graves could be found close to homesteads. It was stated that there are graves close to the dam which is located 75m south-east of the road, a considerable distance from the proposed upgrade.

The 1955 aerial photography image of the project area (**Figure 2**) shows residences along the alignment of the road since that time. No structures (dwellings, general dealerships/stores, etc.) situated close to the road should be impacted by the road upgrade (including the general store depicted in **Figure 4**) below as this structure could be older than 60 years therefore protected by section 37 (1)(a) of the KwaZulu-Natal Amafa and Research Institute Act, 2018, which refers to the protection of structures older or reasonably expected to be older than 60 years. No structure >than 60 years can be altered, demolished, damaged without prior approval of the Institute.



Figure 2: Aerial photograph of road showing a few residences close to D954 road



Figure 3: North-western start of road upgrade



**Figure 4: General store in close proximity to D954 road**



**Figure 5: Small-scale farming close to road**



**Figure 6: View northwards of condition of road**



**Figure 7: View of road and adjacent property**



**Figure 8: Section of tarred road and dwellings**

About 300m of the south-eastern section of the road close to the ocean and which crosses the N2 highway used to be tarred and sections of this are still visible but the tarred section has deteriorated over time as can be seen in **Figure 9** below.



**Figure 9: South-eastern end of road upgrade**

**Table 1: Potential heritage site found during inspection**

COORDINATES	HERITAGE RESOURCE	SIGNIFICANCE + MITIGATION MEASURES
30°30'47.31" S 30°36'11.80" E	General store / structure that could be older than 60 years.	Low heritage significance as there are many such structures in KZN; however, it is recommended that the structure is not impacted by road upgrade and that a 5 m buffer is placed between the store & upgrade activities

According to the South African fossil sensitivity map, much of the road falls into an area of low fossil insignificant fossil sensitivity as indicated by the blue colour in **Figure 10** below. However, the last 300m or so which is located closer to the ocean, fall into an area of high fossil sensitivity as indicated by the orange colour as depicted in the map below. In terms of a low fossil sensitivity zone, no further palaeontological studies are required but a protocol for chance fossil finds need to be adhered to. This chance fossil find protocol is included in Chapter 9 of this report.

In terms of a high fossil sensitivity zone, a desktop palaeontological assessment is required. It is however, recommended that no further palaeontological study is undertaken as the road to be upgraded is already disturbed by vehicular and foot traffic as well as farming and residential activities that are taking place close to it thereby disturbing any fossil finds that may have been found in the area.

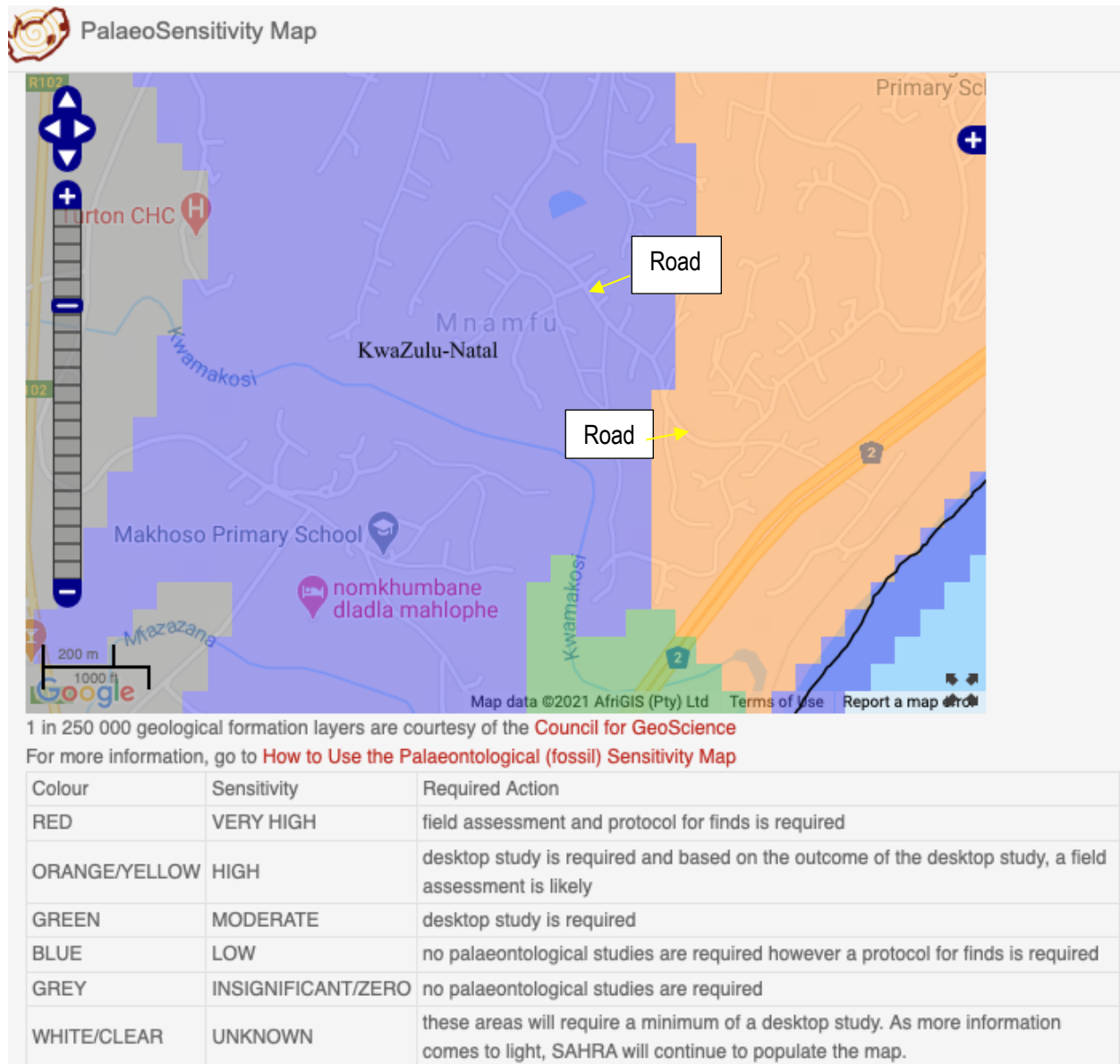


Figure 10: Fossil sensitivity of D954 road

## 8. RECOMMENDATIONS AND CONCLUSION

No heritage sites were found during the site inspection. The road is disturbed and local residents also indicated that there were no graves or other sites near the road. It is recommended that no structures located in close proximity to the road be damaged or altered in any way during the upgrade of the road. It is also recommended that no further palaeontological studies are needed due to the disturbed nature of the road.

From a heritage perspective, the proposed upgrade of district road D954 can proceed.



## 9. 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.

## 10. REFERENCES

Active Heritage. 2018. *Phase One Heritage Impact Assessment of the proposed Mtwalume sand wining mining, Ugu Municipality, KZN*

eThembeni Cultural Heritage. 2013. *Phase 1 Heritage Impact Assessment Report: Proposed Site Clearance for the Construction of a New SAPS Dududu Police Station, Vulamehlo Local Municipality, Ugu District, KwaZulu-Natal*

Raper, P.E. Undated. *Dictionary of Southern African Place Names*. HSRC