

**PHASE ONE HERITAGE IMPACT ASSESSMENT  
OF THE PROPOSED, HLINZEKA ACCESS ROAD  
AND CAUSEWAY ON LOCAL ROAD L2717 NEAR  
NQUTU, KWAZULU-NATAL**



**ACTIVE HERITAGE cc.**

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**23/07/2015**

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## LIST OF ABBREVIATIONS AND ACRONYMS

EIA	Early Iron Age
ESA	Early Stone Age
HISTORIC PERIOD	Since the arrival of the white settlers - c. AD 1820 in this part of the country
IRON AGE	Early Iron Age AD 200 - AD 1000 Late Iron Age AD 1000 - AD 1830
IIA	Intermediate Iron Age
ISA	Intermediate Stone Age
LIA	Late Iron Age
LSA	Late Stone Age
MSA	Middle Stone Age
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998 and associated regulations (2006).
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999) and associated regulations (2000)
SAHRA	South African Heritage Resources Agency
STONE AGE	Early Stone Age 2 000 000 - 250 000 BP Middle Stone Age 250 000 - 25 000 BP Late Stone Age 30 000 - until c. AD 200

A First Phase Heritage Impact Assessment and survey of the proposed Hlinzeka access road and causeway on local road L2717 near Nqutu, KwaZulu-Natal identified numerous heritage sites in the greater project area. These included Later Iron Age Sites; Historical Stone walled Sites and Grave Sites. However, only one of these, a Later Iron Age Site, occurs within 50m from the proposed road trajectory. It is proposed that the developer shift the road trajectory slightly to the south in the immediate vicinity of this site in order to maintain a buffer zone of at least 20m around this site. None of the other sites observed need mitigation. The paleontologist report that the probability of impact by the development on intact fossil remains is considered low, but it is advised that any excavations into fine-grained, Dwyka Group shales should allow for inspection of fresh exposures by a qualified palaeontologist at the appropriate time, as these deposits could potentially be fossiliferous. Construction work may expose archaeological and fossil material and attention is drawn to the South African Heritage Resources Act, 1999 (Act No. 25 of 1999) and the KwaZulu-Natal Heritage Act (Act no 4 of 2008) which, requires that operations that expose archaeological or historical remains should cease immediately, pending evaluation by the provincial heritage agency.

## 1 BACKGROUND INFORMATION ON THE PROJECT

**Table 1. Background information**

Consultant:	Hanslab (Pty) Lmt sub-consulted Active Heritage cc to conduct the heritage impact assessment. Active Heritage cc sub-consulted Paleoservices cc to complete the palaeontological component of the study.
Type of development:	The KZN Department of Transport (DOT) proposes to upgrade the existing access road to a Type 7A Local Road (gravel road) which is (6m in width and 7.260Km in length) that conforms to DOT standards. The existing road will be upgraded in one of the Nqutu villages on local road L2717. The road transverses a watercourse, therefore DOT proposes to construct a causeway structure. For the establishment of this gravel road, a low level causeway will be constructed and is included as listed activity in this application (Fig 1).
Rezoning or subdivision:	Not applicable
Terms of reference	To carry out a Heritage Impact Assessment including the palaeontological component.
Legislative requirements:	The Heritage Impact Assessment was carried out in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) and following the requirements of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA) and the KwaZulu-Natal Heritage Act, 1997 (Act No. 4 of 2008).

### 1.1. Details of the area surveyed:

The Nqutu municipality is located within the Northern portions of Kwazulu-Natal and is one of four local municipalities found in the uMzinyathi district municipality (SDF, 2011). The site for the proposed development is located in one of the villages in the Nqutu municipality on local road L2717 (Figs 1 & 2).

The general topography of the region as per the site investigation was classified as undulating plains/low hills. The general gradient of the site is 1:15-1:20, which indicates generally a flat terrain. A watercourse in the village is present and development of a causeway structure will take place in order for community members to utilize, ensuring safety and movement across. The distance across the watercourse is approximately <20m.

The study area comprises of rural residential area intercepted by fields used for crop production, open areas used for grazing livestock and secondary roads (Fig 4). Most

residential areas are on undulating terrain with gentle slopes. In some areas particularly along the water ways and streams the area is distinctively incised by dongas and sheet erosion scars.

The proposed access road (L2717) is located at the following GPS coordinates:

<b>Starting point :</b>	28°19'06.56" S	30°50'09.65"E
<b>Middle/Additional point of the activity :</b>	28°17'54.87"S	30°48'46.61" E
<b>End point of the activity:</b>	28°17'00.16"S	30°47'15.51" E

## 1.2. Relevant Legislation:

According to the National Heritage Resources Act, 1999 (NHRA) (Act No. 25 of 1999), the heritage resources of South Africa include:

- 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 palaeontological 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).

## **2 SCOPE OF WORK**

This study aims to identify and assess the significance of any heritage and archaeological resources occurring on or adjacent to the proposed development. Based on the significance, the impact of the development on the heritage resources will be determined and appropriate actions to reduce the impact on the heritage resources put forward. In terms of the NHRA, a place or object is to be considered part of the national estate if it has cultural significance or other special value because of:

- a. its importance in the community, or pattern of South Africa's history;
- b. its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- c. its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- d. its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- e. its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- f. its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- g. its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;

- h. its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- i. sites of significance relating to the history of slavery in South Africa.

### **3 BACKGROUND TO HISTORY OF THE AREA**

#### **3.1 Archaeology**

Portions of the greater Nqutu area have been systematically surveyed for archaeological heritage sites in the past. These were mostly conducted by archaeologists attached to the then Natal Museum as well as by Amafa staff. Sixty sites are recorded in the data base of the KwaZulu-Natal Museum. These include fourteen Early Stone Age sites, eight Middle Stone Age sites, ten Later Stone Age sites, three rock painting sites, and forty Later Iron Age sites. The majority of the Early Stone Age sites occur in open air context in large dongas. Middle and Later Stone Age sites occur in context in four rock shelters. Two of these shelters also contain typical San fine line paintings. The majority of the known Later Iron Age sites are situated to the south east of Nqutu. They were located during a large scale survey of the area by archaeologists who were interested in the Later Iron Age ecology of Zululand (Hall 1980). They are demarcated by characteristic stone walling. Three stone walling typologies have been identified in the area namely Type A, C, and D (ibid).

The San were the owners of the land for almost 30 000 years but the local demography started to change soon after 2000 years ago when the first Bantu-speaking farmers crossed the Limpopo River and arrived in South Africa. Around 800 years ago, if not earlier, Bantu-speaking farmers also settled in the greater Nqutu area. Although some of the sites constructed by these African farmers consisted of stone walling not all of them were made from stone. Sites located elsewhere in the KwaZulu-Natal show that many settlements just consisted of wattle and daub structures. These Later Iron Age sites were most probably inhabited by Nguni-speaking groups who were the direct ancestors of the Zulu (Bryant 1965). However after 1840 some Southern Sotho-speaking Tlokwe people also settled in the area. With the expansion of the Zulu kingdom of King Shaka in the early 1820's the study area became firmly incorporated into this pre-capitalist kingdom. It is not surprising that this area played such a central



part in the colonial period history of KwaZulu-Natal. The Battle of Blood River, between Boer and Zulu, took place to west of the study area in 1838, but it was the Anglo-Zulu war of 1879 that was to a large part acted out in the immediate vicinity of the project area. These battle field sites as well as associated graves and buildings of the era are proclaimed heritage sites and are protected by provincial heritage legislation (Derwent 2006).

### **3.2 Anglo-Zulu War**

The Anglo-Zulu War was a military conflict between the British Empire and the Kingdom of Zululand, taking place from January 8 to July 4, 1879, in South Africa. The root cause of the Anglo-Zulu War was the discovery of diamonds in the region, in the land near the Vaal River, in 1867. This led to an increased British interest in the area. But there were two obstacles: the Boers (politically organized in the Orange Free State and the Republic of Transvaal), and the Kingdom of Zululand, which arose in the first half of the 19th century. During the 1870s, West Griqualand, which was the territory where diamonds had been discovered, was annexed to the British Empire. In December 1878, the British High Commissioner, Sir Henry Bartle Frere, sent an ultimatum to Cetshwayo, the King of Zululand. Having obtained no answer to the ultimatum, 15,000 British troops, under the command of Lord Chelmsford, began the invasion of Zululand by January 8, 1879.

The Anglo-Zulu War was savage and comprises a series of eight battles, beginning with the Battle of Isandlwana, at which 22,000 Zulu warriors defeated 1,800 British soldiers on January 22, 1879. Isandlwana was an unexpected blow to the morale of the British empire as it was the scene of the defeat of Imperial & Colonial forces on 22 January 1879 mostly from the 24 Regiment, Natal Carbineers and Natal Native Regiments. This epic battle took place in the southern section of the project area and a memorial on the site commemorates the brave warriors who gave their lives on this day (Derwent 2006). The defence of Rorke's Drift on 22 January 1879, to the south of the project area, followed the defeat of the British forces at Isandlwana and commenced at 16.30 pm and went on through the night to about 4 am. The Mission Station at the foot of the Oskarberg was held by 1st & 2nd Company of the 24th Regiment. It had been left under the command of Major Henry Spalding. The battle eventually left about 370 Zulu dead (4000 under the command of Prince Dabulamanzi kaMpande), and 17 British soldiers dead out of a force of about 100 men. The Zulu's

eventually withdrew. Having overcome three military defeats (Battle of Isandlwana, Battle of Intombe, and Battle of Hlobane), the British began gaining the upper hand as they obtained decisive victories in the last four battles of the war: Battle of Kambula (March 29), Battle of Gingindlovu (April 2), Battle of Eshowe (April 3), and Battle of Ulundi (July 4, 1879). After the defeat at Isandlwana, the British were determined to take revenge and defeat the Zulu's led by King Cetshwayo kaMpande, and crossed the White Umfolozi on 4 July 1879 with a force of approximately 5124 men. Led by Lord Chelmsford a, battle took place that day which led to the Zulu defeat. Fort Marshall, situated within the northern section of the project area, was occupied between May & July 1879 by the 24th Regiment. There are 11 soldiers buried there, most dying of wounds from the battle of Ulundi. The ramparts and graves are still visible. As a result of the British victory over the Zulus, the Kingdom of Zululand lost its independence and it became part of a British Colony (ibid).

## **4 BACKGROUND INFORMATION OF THE SURVEY**

### **4.1 Methodology**

A desktop study was conducted of the archaeological databases housed in the KwaZulu-Natal Museum. In addition, the available archaeological literature covering the greater Nqutu area was also consulted. The SAHRIS website was consulted to obtain background information on previous heritage surveys and assessments in the area.

A ground survey, following standard and accepted archaeological procedures, was conducted on the 18 July 2015.

In addition, members of local communities were approached to ask for the location of potential grave sites as well as other heritage features in the area.

### **4.2 Restrictions encountered during the survey**

#### **4.2.1 Visibility**

Visibility was good.

#### **4.2.2 Disturbance**

No disturbance of any heritage sites or features was noted.

**Details of equipment used in the survey**

GPS: Garmin Etrek

Digital cameras: Canon Powershot A460

All readings were taken using the GPS. Accuracy was to a level of 5 m.

**5 DESCRIPTION OF SITES AND MATERIAL OBSERVED****5.1 Locational data**

Province: KwaZulu-Natal

Towns: Nqutu

**5.2 Description of the general area surveyed**

Numerous heritage sites were observed in the greater project area. These included Later Iron Age Sites, Historical Period Sites, and Grave Sites. However, only two occur within 50m from the proposed access road upgrade. These include a modern Grave Site and a Later Iron Age stone walled site (Fig 3)(see below).

**5.3 Description of sites**

Two heritage sites were located in the immediate vicinity of the proposed access road upgrade (Fig 3). Their context and significance is summarised in Table 2.

**Table 2. Heritage sites located during the ground survey within 50m from the proposed access road..**

No	Heritage category	Description	Significance	Type of Mitigation	GPS coordinates
1	Grave Site 1 (Figs 3 & 5)	Rural graveyard. It contains 6 individual graves arranged in a linear pattern adjacent to each other. The graves are not marked and they are indicated by stone heaps. Most appear to be younger than 60 years old. These graves are situated 40m to the east of the proposed access road upgrade	Medium to high locally. (Table 3). All graves are protected by KZN provincial heritage legislation.	It is important to maintain a buffer zone of at least 20m around this Grave Yard. In order to maintain the integrity of the site it may be necessary to shift the trajectory of Access Road L2717 10m to the west of its present location in the near vicinity of the Grave Yard	S 28°17' 41.45" E 30° 48' 24.20"
2	Later Iron Age 2 (stone walled circle) (Figs 3 & 6)	Situated approximately 20m to the east of proposed Access Road L2717 (Fig 2). It consists of a stone walled circle of approximately 20m x 15m the remains of associated stone walling. There is also evidence for stone robbing.	Local grade 111b (Table 3)	This site has a high rating. A buffer zone of at least 20m should be maintained around this site. In order to maintain the integrity of the site the trajectory of Access Road L2717 should be moved at least 10m to the west of its present location in the near vicinity of the Site.	S 28°17' 07.19" E 30° 47' 43.56"

## 6 STATEMENT OF SIGNIFICANCE (HERITAGE VALUE)

### 6.1 Field Rating

The field rating criteria as formulated by SAHRA (Table 3) has been applied to all the heritage sites identified (Table 2). Both sites are protected by heritage legislation and may not be damaged or altered under any circumstance.

**Table 3. Field rating and recommended grading of sites (SAHRA 2005)**

Level	Details	Action
National (Grade I)	The site is considered to be of National Significance	Nominated to be declared by SAHRA
Provincial (Grade II)	This site is considered to be of Provincial significance	Nominated to be declared by Provincial Heritage Authority
Local Grade IIIA	This site is considered to be of HIGH significance locally	The site should be retained as a heritage site
Local Grade IIIB	This site is considered to be of HIGH significance locally	The site should be mitigated, and part retained as a heritage site
Generally Protected A	High to medium significance	Mitigation necessary before destruction
Generally Protected B	Medium significance	The site needs to be recorded before destruction
Generally Protected C	Low significance	No further recording is required before destruction

A desktop palaeontological study of the footprint indicates that the probability of impact by the development on intact fossil remains is considered low, but it is advised that any excavations into fine-grained, Dwyka Group shales should allow for inspection of fresh exposures by a qualified palaeontologist at the appropriate time, as these deposits could potentially be fossiliferous (Appendix 1).

## **7 SUMMARY AND RECOMMENDATIONS**

- The heritage impact assessment survey identified two heritage sites adjacent to and within 50m of the proposed Access Road L2717.
- It is important to maintain a buffer zone of at least 20m around each heritage site identified.
- In order to maintain these buffer zones it will be necessary to shift the trajectory of the Access Road L2717 slightly in the near vicinity of these heritage sites.
- Dwyka formations exposed along the proposed access road trajectory must first be inspected by a palaeontologist (ground survey) prior to any construction work.
- All the heritage sites identified are protected by heritage legislation and may not be altered or changed without mitigation

## 8 MAPS AND PHOTOGRAPHS

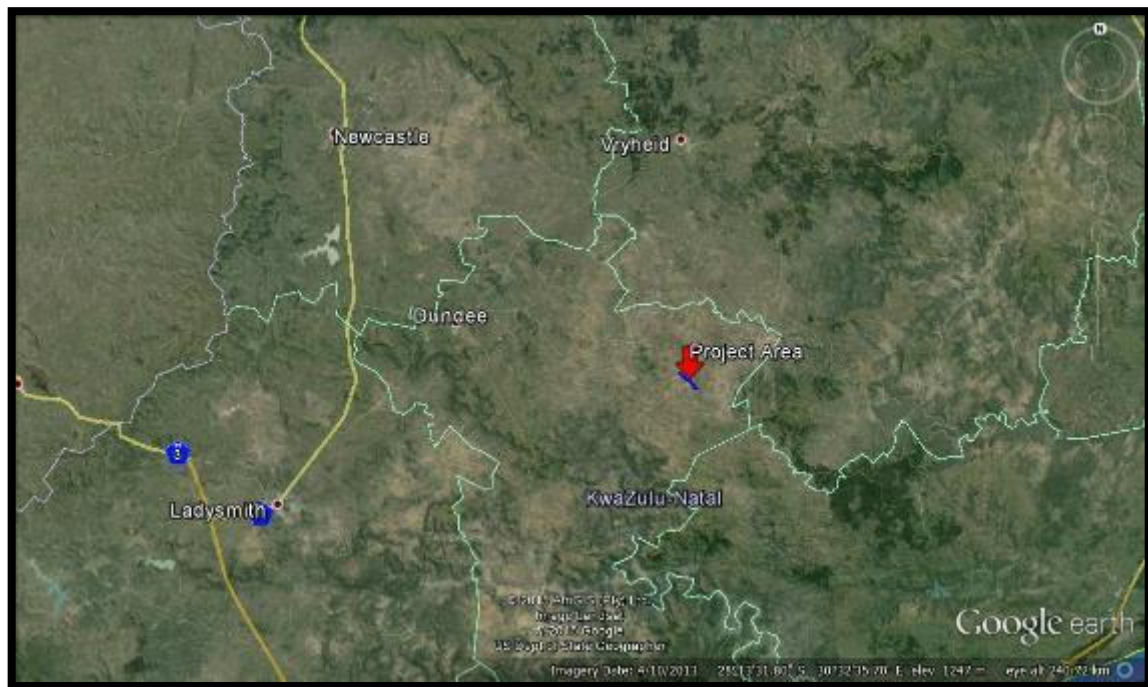


Figure 1: Google Earth Photograph showing the locality of the Project Area in KwaZulu-Natal.



Figure 2: Google Earth Photograph showing the locality of the proposed Access Road L2717 near Nqutu in northern KwaZulu-Natal.





Figure 3. Google Earth Aerial Photograph showing the location of heritage sites adjacent to the proposed Access Road L2717. Only Grave site 1 and Later Iron Age Site 2 occur closer than 50m from the proposed access road. No mitigation is necessary for the other sites observed.



Figure 4. Photograph of Access Road L2717.



Figure 5. Modern graves (unmarked) situated within 50m from the proposed Access Road L 2717.



Figure 6. Later Iron Age Stone Circle situated within 20m from the proposed Access Road L 2717.

## 9 REFERENCES

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**APPENDIX 1**

**Paleontological Desktop Assessment of the  
Hlinzeka access road and causeway on local road  
L2717 near Nqutu, KZN Province.**

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## **Executive Summary**

A desktop heritage impact assessment was conducted for the upgrading of an existing access road in one of the Nqutu villages on local road L2717. The existing road will be upgraded to a Type 7A Local Road (gravel road) that will be 6m in width and 7.260 km in length. The study area is largely underlain by tillites and shales of the Carboniferous Dwyka Group that is for the most part capped by younger, unconsolidated Quaternary overburden. The section terminates on lava outcrop of the Nondweni Group, which is not palaeontologically significant. It is expected that the proposed development will impact on Dwyka Group sedimentary bedrock and geologically recent superficial sediments (alluvium). The probability of impact by the development on intact fossil remains is considered low, but it is advised that any excavations into fine-grained, Dwyka Group shales should allow for inspection of fresh exposures by a qualified palaeontologist at the appropriate time, as these deposits could potentially be fossiliferous. The sedimentary bedrock component along the footprint is therefore assigned a rating of Generally Protected B (GP.B). It is unlikely that the proposed development will impact on fossil remains within the overlying Quaternary overburden. This component is assigned a rating of Generally Protected C (GP.C). 3

## Introduction

A desktop heritage impact assessment was conducted for an upgrading by the KZN Department of Transport (DOT), of an existing access road in one of the Nqutu villages on local road L2717. The existing road will be upgraded to a Type 7A Local Road (gravel road) that will be 6m in width and 7.260 km in length (**Fig. 1**).

## Methodology

The affected area was evaluated on the basis of existing field data, geological maps and published literature. The study area is rated according to field rating categories as prescribed by SAHRA (**Table 1**).

## Locality data

1 : 50 000 scale topographic map: 2830BD Fort Louis

1 : 250 000 scale geological map 2830 Dundee

General coordinates: 28°17'0.31"S 30°47'16.09"E to 28°19'6.96"S 30°50'9.31"E

The section begins in the village of Magala and crosses several watercourses to the south where it terminates on dolerite bedrock.

## Geology and Paleontological Background

The study area is largely underlain by tillites and shales of the Carboniferous Dwyka Group, which represents the lowermost unit of the Karoo Supergroup (Lindstrom 1987) (**Fig. 3**). The tillites were deposited by retreating ice sheets about 300 million years ago (McCarthy and Rubidge, 2005). The footprint is for the most part capped by younger, unconsolidated Quaternary overburden, made up of well-developed alluvial deposits. It terminates on lava outcrop of the Nondweni Group, which is not palaeontologically significant.

The Dwyka Group is generally considered to be moderately significant in terms of palaeontological heritage (SAHRIS Palaeontological Sensitivity Map, 2015) (**Fig. 4**). Dwyka shales from outside the province have previously yielded trace fossils, including fish and invertebrate trackways and as well as micro-fossil remains (foraminifera, bryozoans, sponge spicules and radiolaria) and a variety of marine invertebrates (MacRae, 1999).<sup>4</sup>

Fossil plants include lycopods, fossilized wood and plant micro-remains (spores and pollen) (Anderson and McLachlan 1976; MacRae 1999). There is currently no record of fossil remains or exposures from Dwyka outcrop and Quaternary sediments in the area.

## Impact Statement and Recommendations

It is expected that the proposed development will impact on Dwyka Group sedimentary bedrock and geologically recent superficial sediments (alluvium) that will especially be well developed near watercourses. The probability of impact by the development on intact fossil remains is considered low, but it is advised that any excavations into fine-grained, Dwyka Group shales should allow for inspection of fresh exposures by a qualified palaeontologist at the appropriate time, as these deposits could potentially be fossiliferous. The sedimentary bedrock component along the footprint is therefore assigned a rating of Generally Protected B (GP.B). It is unlikely that the proposed development will impact on fossil remains within the overlying Quaternary overburden. This component is assigned a rating of Generally Protected C (GP.C).

## References

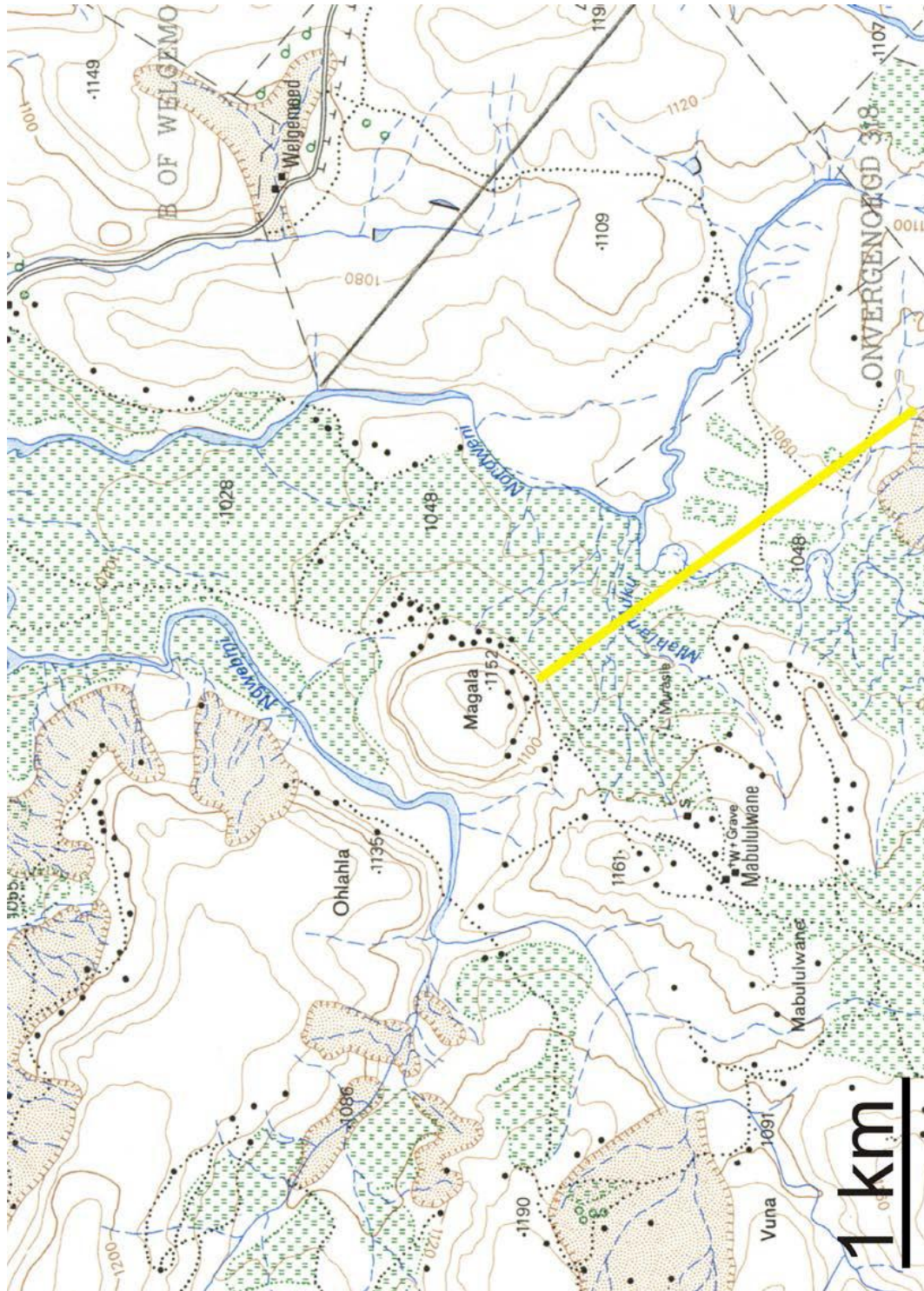
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## **Tables and Figures**

Table 1: Field rating as ascribed by SAHRA

<b>Field Rating</b>	<b>Grade</b>	<b>Significance</b>	<b>Mitigation</b>
National Significance (NS)	Grade 1	-	Conservation; national site nomination
Provincial Significance (PS)	Grade 2	-	Conservation; provincial site nomination
Local Significance (LS)	Grade 3A	High significance	Conservation; mitigation not advised
Local Significance (LS)	Grade 3B	High significance	Mitigation (part of site should be retained)
Generally Protected A (GP.A)	-	High/medium significance	Mitigation before destruction
Generally Protected B (GP.B)	-	Medium significance	Recording before destruction
Generally Protected C (GP.C)	-	Low significance	Destruction



Map of the study area (portion of 1:50 000 scale topographic map 2830BD Fort Louis).

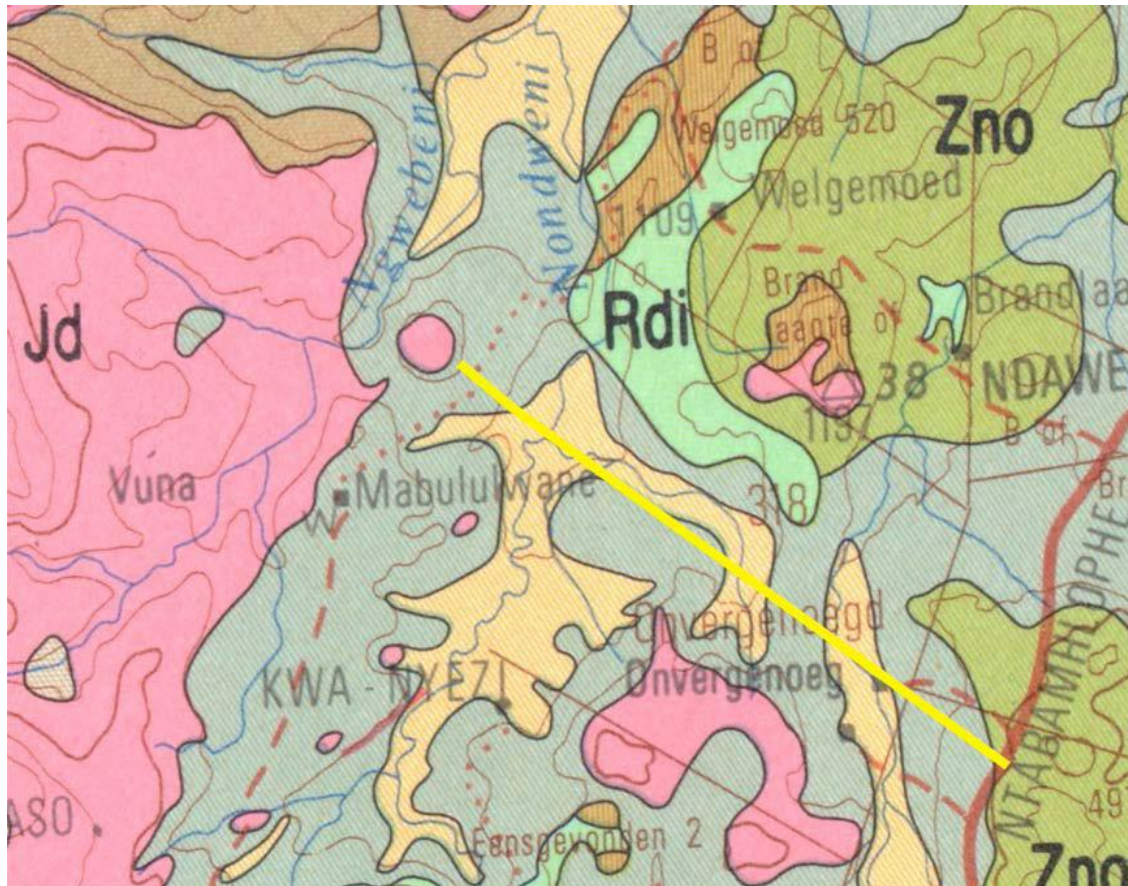


Figure 2. Portion of 1:250 000 scale geological map 2830 Dundee. The study area (yellow line) is underlain by Dwyka Group tillites and shales that is for the most part capped by geologically recent (Quaternary) alluvial deposits.

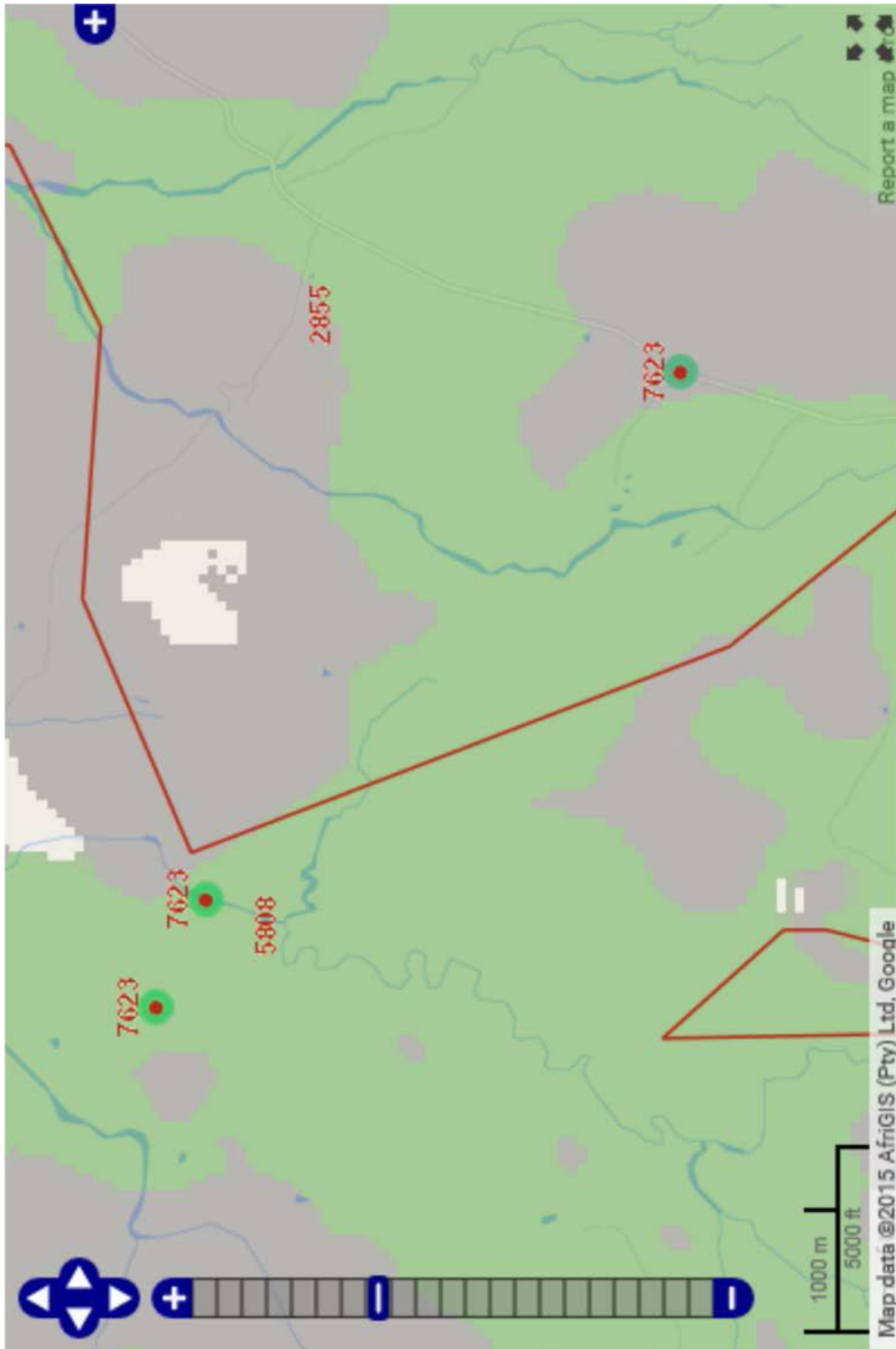


Figure 3. The study area in relation to palaeontologically sensitive areas according to the SAHRIS Palaeontological Sensitivity Map (2015). The green and grey areas are considered to be moderately sensitive and insignificant, respectively.