

**PHASE ONE HERITAGE IMPACT ASSESSMENT
OF THE PROPOSED UPGRADE OF AN EXISTING
ROAD (L2514) TO A TYPE 7A GRAVEL ROAD
NEAR MSINGA, KWAZULU-NATAL**



ACTIVE HERITAGE cc.

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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 upgrade of an existing road (L2514) to a type 7a gravel road near Msinga, KwaZulu-Natal identified no archaeological and historical sites on the footprint. The area is also not part of any known cultural landscape. However, one modern grave is located within 34m from the proposed road upgrade. This grave is not threatened by the proposed development. Nevertheless the developers should take note that all graves are protected by provincial heritage legislation. It is therefore proposed that the developers maintain a buffer zone of at least 20m around this feature. Should this not be possible then the developers may request a Phase Two Heritage Impact Assessment including the options of grave relocation and reburial. This alternative option, however, is a costly and time consuming process involving extensive community consultation. There is no reason from a heritage point of view why the proposed development may not proceed on the remainder of the proposed access road as planned. 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.
Type of development:	The KZN Department of Transport (DOT) proposes to extend L2514 to a type 7A local gravel road, approximately 7 km in length and 6 m in width with a road reserve of 20m that conforms to DOT standards. The existing road will be upgraded in one of Msinga villages off D1273 on local road L2514. The existing track is 2.18km in length; therefore DOT proposes to extend the existing track to a further 4.41km. Two alternatives have been proposed. The extension of L2514 would provide access to basic amenities as well as access to Maswenkosi Primary School. The road transverses a watercourse, therefore DOT proposes to construct a causeway structure in the stream bed to allow for natural flow of the stream.
Rezoning or subdivision:	Not applicable
Terms of reference	To carry out a Heritage Impact Assessment.
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 study area is located to the north of Greytown in the Msinga Local Municipality and the uMzinyathi District Municipality (Fig 1). The offices of the Msinga Municipality is located in the town of Tugela Ferry. The site for the proposed development is located in one of the villages in the Msinga Municipality on local road L2514. The general topography of the region as per the site investigation was classified as being found on the side of a hill/slope. The general gradient of the site is 1:15-1:10, which indicates generally an undulating 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.

Two potential routes have been identified (Figs 2 - 4):

a) The preferred route was chosen based on the fact that there is an existing track and a portion of the road will be extended so as to minimize the impact to the receiving environment (Figs 5 – 6). The preferred alternative has shown to be the best practical option. The road design has taken numerous engineering methodologies into consideration which has a minimal impact on the environment, by improving drainage and reducing erosion along the road. The proposed route is transformed by existing footpaths and highly degraded, most natural vegetation have been invaded by alien vegetation along the track. The road will be designed according to DOT standards.

The GPS coordinates for the preferred route is given as:

- Starting point of the activity 28°40'28" S 30°36'12" E
- Middle/Additional point of the activity 28°41'17.03" S 30°34'42.59" E
- End point of the activity 28°41'41" S 30°33'16" E

b) The second alternative has been chosen as an additive choice as there is an existing track and a portion of the road will be extended. The alternative route transverses through a wetland area. The GPS coordinates for the alternative route is given as:

- Starting point of the activity 28°41'10.51" S 30°35'28.65" E
- Middle/Additional point of the activity 28°41'29" S 30°34'00" E
- End point of the activity 28°41'41" S 30°33'16" E

Causeway:

Based on DOT standard details for a causeway the approx. width is 8.45m and length is 7.4m which varies according to the stream width. A standard causeway will be constructed with a length of 30m and width of 8m which will be supported on pad foundation founded on bedrock. The GPS coordinates for the proposed causeway is given as: S 28°41'21" E 30°34'52"

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

The archaeological history of the Province of KwaZulu-Natal (KZN) dates back to about 2 million years and possibly older, which marks the beginning of the Stone Age. The Stone Age in KZN was extensively researched by Professor Oliver Davies formerly of the Natal Museum. The Stone Age period has been divided into three periods namely: Early Stone Age (ESA) dating between 2 million years ago to about 200 000 years ago, Middle Stone Age (MSA) dating between 200 000 years ago to about 30 000 years ago, and the Later Stone Age (LSA) which dates from 30 000 to about 2 000 year ago. The Stone Age period ends around approximately 2 000 years ago when Bantu speaking Age farmers from the north arrived in southern Africa. The Iron Age is also divided into three periods, namely: Early Iron Age (EIA) dating between AD 200 and AD 900, Middle Iron Age (MIA) dating between AD 900 and AD 1300, Late Iron Age (LIA) dating between AD 1 300 and 1 820.

3.1 Stone Age

3.1.1 Early Stone Age (ESA)

The ESA is considered as the beginning of the stone tool technology. It dates back to over 2 million years ago until 200 000 years ago. This period is characterised by Oldowan and Acheulean industries. The Oldowan Industry, dating to approximately between over 2 million years and 1.7 million years predates the later Acheulean. The Oldowan Industry consists of very simple, crudely made core tools from which flakes are struck a couple of times. To date, there is no consensus amongst archaeologists as to which hominid species manufactured these artefacts. The Acheulean Industry lasted from about 1.7 million years until 200 thousand years ago. Acheulean tools were more specialized tools than those of the earlier industry. They were shaped intentionally to carry out specific tasks such as hacking and bashing to remove limbs from animals and marrow from bone. These duties were performed using the large sharp pointed artefacts known as handaxes. Cleavers, with their sharp, flat cutting edges were used to carry out more heavy duty butchering activities (Esterhuysen, 2007). The ESA technology lasted for a very long time, from early to middle Pleistocene and thus seems to have been sufficient to meet the needs of early hominids and their ancestors. Although not identified on the footprint, ESA tools occurrence have been reported in other sites in KZN. Apart from stone artefacts, the ESA sites in this Province have produced very little as regards other archaeological remains. This has made it difficult to make inferences pointing to economical dynamics of the ESA people in this part of the world. The diet of ESA peoples has therefore had to be reconstructed on the basis of evidence from elsewhere that it comprised primarily of animal and plant foods (Mazel 1989).

3.1.2 Middle Stone Age (MSA)

The MSA dates to between 200 000 and 30 000 years ago, coinciding with the emergence of modern humans. The MSA technology is therefore believed to have been manufactured by fully modern humans known as *Homo sapiens* who emerged around 250 000 years ago. While some of the sites belonging to this time period occur in similar contexts as those of ESA, most of the MSA sites are located in rock shelters. Palaeoenvironmental data suggest that the distribution of MSA sites in the high lying Drakensberg and surrounding areas was influenced by the climate conditions, specifically the amount and duration of snow (Carter, 1976). In general, the MSA stone tools are smaller than those of the ESA. Although some MSA tools are made from prepared cores, the majority of MSA flakes are rather irregular and are probably waste material from knapping exercises. A variety of MSA tools include blades, flakes, scrapers

and pointed tools that may have been hafted onto shafts or handles and used as spearheads. Between 70 000 and 60 000 years ago new tool types appear known as segments and trapezoids. These tool types are referred to as backed tools from the method of preparation. Residue analyses on the backed tools from South African MSA sites including those in KZN indicate that these tools were certainly used as spear heads and perhaps even arrow points (Wadley, 2007). A few sites with impressive MSA deposits have been excavated in KZN. Perhaps the best known ones are Sibudu Cave and Umhlatuzana Cave to the south of the study area, and Border Cave to the north of the study area. All these sites provided impressive evidence for fine resolution data and detailed stratigraphy (Wadley & Jacobs, 2006).

3.1.3 Late Stone Age (LSA)

Compared to the earlier MSA and ESA, more is known about the LSA which dates from around 30 000 to 2 000 (possibly later) years ago. This is because LSA sites are more recent than ESA and MSA sites and therefore achieve better preservation of a greater variety of organic archaeological material. The Later Stone Age is usually associated with the San (Bushmen) or their direct ancestors. The tools during this period were even smaller and more diverse than those of the preceding Middle Stone Age period. LSA tool technology is observed to display rapid stylistic change compared to the slower pace in the MSA. The rapidity is more evident during the last 10 000 years. The LSA tool sequence includes informal small blade tradition from about 22 000 – 12 000 years ago, a scraper and adze-rich industry between 12 000 – 8 000 years ago, a backed tool and small scraper industry between 8 000 – 4 000 years and ending with a variable set of other industries thereafter (Wadley, 2007). Adzes are thought to be wood working tools and may have also been used to make digging sticks and handles for tools. Scrapers are tools that are thought to have been used to prepare hides for clothing and manufacture of other leather items. Backed tools may have been used for cutting as well as tips for arrows. It was also during Later Stone Age times that the bow and arrow was introduced into southern Africa – perhaps around 20 000 years ago. Because of the bow and arrow and the use of traps and snares, Later Stone Age people were far more efficient in exploiting their natural environment than Middle Stone Age people. Up until 2 000 years ago Later Stone Age people dominated the southern African landscape. However, shortly after 2 000 years ago the first Khoi herders and Bantu-speaking agro pastoralists immigrated into southern Africa from the north. This led to major demographic changes in the population distribution of the subcontinent. San hunter-gatherers were either assimilated or moved off to more marginal environments such as

the Kalahari Desert or some mountain ranges unsuitable for small-scale subsistence farming and herding. The San in the coastal areas of KZN were the first to have been displaced by incoming African agro pastoralists. However, some independent groups continue to practice their hunter gatherer lifestyle in the foothills of the Drakensberg until the period of white colonisation around the 1840's (Wright & Mazel, 2007). According to the KwaZulu-Natal Museum archaeological database Later Stone Age sites have been located in the Tugela River in the past but these are mostly restricted to surface scatters. Also dating to the LSA period is the impressive Rock Art found on cave walls and rock faces. Rock Art can be in the form of rock paintings or rock engravings. The province of KZN is renowned for the prolific San rock painting sites concentrated in the Drakensberg. Rock art sites do occur outside the Drakensberg including Zululand, however, these sites have not been afforded similar research attention as those sites occurring in the Drakensberg. Rock art sites have been recorded in the greater Msinga area. However, there are no rock art sites found within the immediate vicinity of study area, which may be due to the lack of the suitable geology.

3.2 Iron Age

3.2.1 Early Iron Age (EIA)

Unlike the Stone Age people whose life styles were arguably egalitarian, Iron Age people led quite complex life styles. Their way of life of greater dependence on agriculture necessitated more sedentary settlements. They cultivated crops and kept domestic animals such as cattle, sheep, goats and dogs. Pottery production is also an important feature of Iron Age communities. Iron smelting was practised quite significantly by Iron Age society as they had to produce iron implements for agricultural use. However no smelting sites were discovered in the study area as it is the northern KZN that is rich in abandoned iron smelting sites (Maggs, 1989). Although Iron Age people occasionally hunted and gathered wild plants and shellfish, the bulk of their diet consisted of the crops they cultivated as well as the meat of the animals they kept. EIA villages were relatively large settlements strategically located in valleys beside rivers to take advantage of the fertile alluvial soils for growing crops (Maggs, 1989). The EIA sites in KZN date to around AD 500 to AD 900. Extensive research in the province of this period led to it being divided in the following time lines according to ceramic styles (Maggs, 1989; Huffman 2007):

- _ Msuluzi (AD 500);
- _ Ndongondwane (AD 700 – 800);
- _ Ntshekane (AD 800 – 900).

The archaeological data base of the KwaZulu-Natal Museum indicates that ten Early Iron Age sites occur in the near vicinity of the study area. These include the well-known site of Ndongondwane (Van Schalkwyk et al 1997), as well as Mamba (Van Schalkwyk 1994a), and Woshi (Van Schalkwyk 1994b). All these sites, however, occur on the banks of the Tugela River to the north and east of the footprint.

3.2.2 Late Iron Age (LIA)

The LIA is not only distinguished from the EIA by greater regional diversity of pottery styles but is also marked by extensive stone wall settlements. However, in this part of the world, stone walls were not common as the Nguni people used thatch and wood to build their houses. This explains the failure to obtain sites from the aerial photograph investigation of the study area. Trade played a major role in the economy of LIA societies. Goods were traded locally and over long distances. The main trade goods included metal, salt, grain, cattle and thatch. This led to the establishment of economically driven centres and the growth of trade wealth. Keeping of domestic animals, metal work and the cultivation of crops continued with a change in the organisation of economic activities. Evidence for this stems from the fact that iron smelting evidence was not found in almost every settlement (Maggs, 1989; Huffman 2007).

3.3 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 10th September 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: Greytown. Tugela Ferry

Municipality: Msinga Local Municipality

5.2 Description of the general area surveyed

Although the footprint is disturbed due to overgrazing no heritage sites occur directly adjacent to the proposed road upgrades. The area is also not part of any known cultural landscape.

However, one modern grave was observed on a side track that deviates of the preferred route (Fig 5, 7 & 8). The grave consists of a marked grave stone and the site is also fenced in. The grave site is maintained by family members of the deceased who live in the adjacent homestead. Of significance in terms of the proposed development is that the grave is located approximately 33m to the south of the preferred route. The grave site is not threatened by the proposed development. The GPS coordinates for this modern grave are: S 28° 41' 22.32" E 30° 34' 44.34". Nevertheless, it is important to note that all graves are protected by provincial heritage legislation in KwaZulu-Natal. The developers are therefore advised to strictly respect a buffer zone of at least 20m around the grave site. Should this not be possible then the developers may request a Phase Two Heritage Impact Assessment including the options of grave relocation and reburial. This alternative option, however, is a costly and time consuming process involving extensive community consultation.

5.3 Description of heritage sites on the footprint

Not applicable as no heritage sites occur on the footprint.

6 STATEMENT OF SIGNIFICANCE (HERITAGE VALUE)

6.1 Field Rating

Not applicable, as no heritage sites occur on the footprint.

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

7 SUMMARY AND RECOMMENDATIONS

- The heritage impact assessment survey identified no archaeological, historical or living heritage sites adjacent to the proposed access road.
- Although gravers occur in the general vicinity of the project area none were observed directly adjacent to the proposed road upgrade.
- The project area is not part of any known cultural landscape
- The proposed development may proceed from a heritage perspective, however, developers should restrict all activities within a 30m buffer zone on either side of the proposed road upgrade.
- It is important to notice that all heritage sites, including graves, 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 at Msinga in northern KwaZulu-Natal

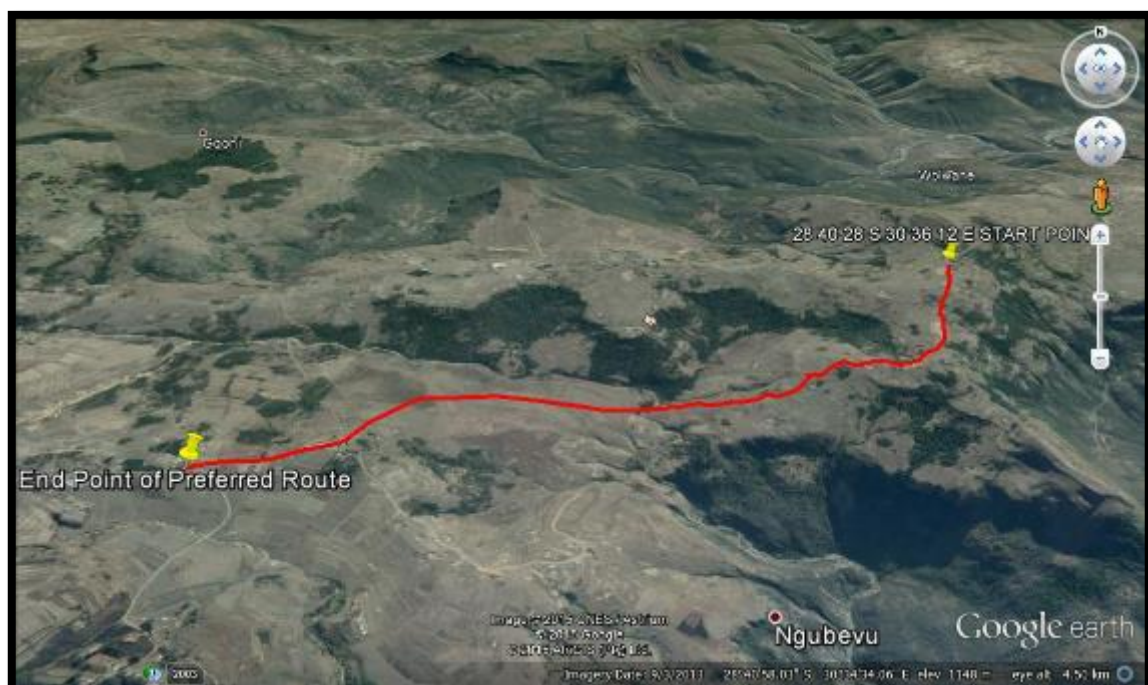


Figure 2. Google aerial photograph showing the trajectory of the proposed preferred route for the road upgrade of the L2514 at Msinga, northern KwaZulu-Natal (Source: Hanslab)

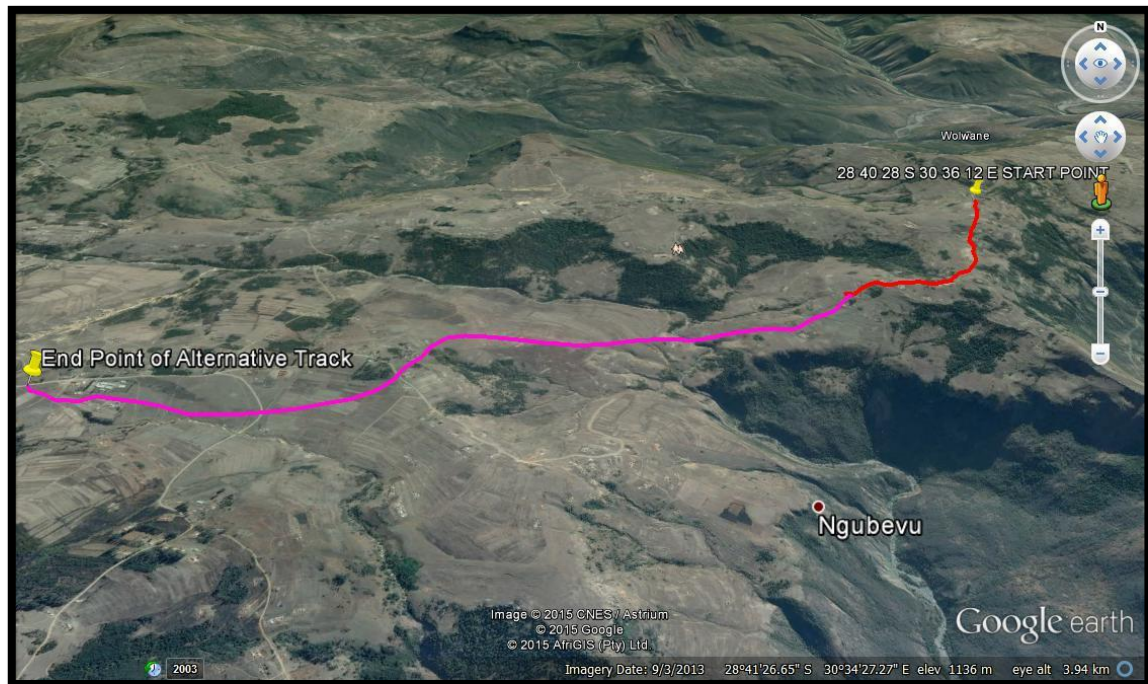


Figure 3. Google aerial photograph showing the location the alternative road trajectory (source: Hanslab)

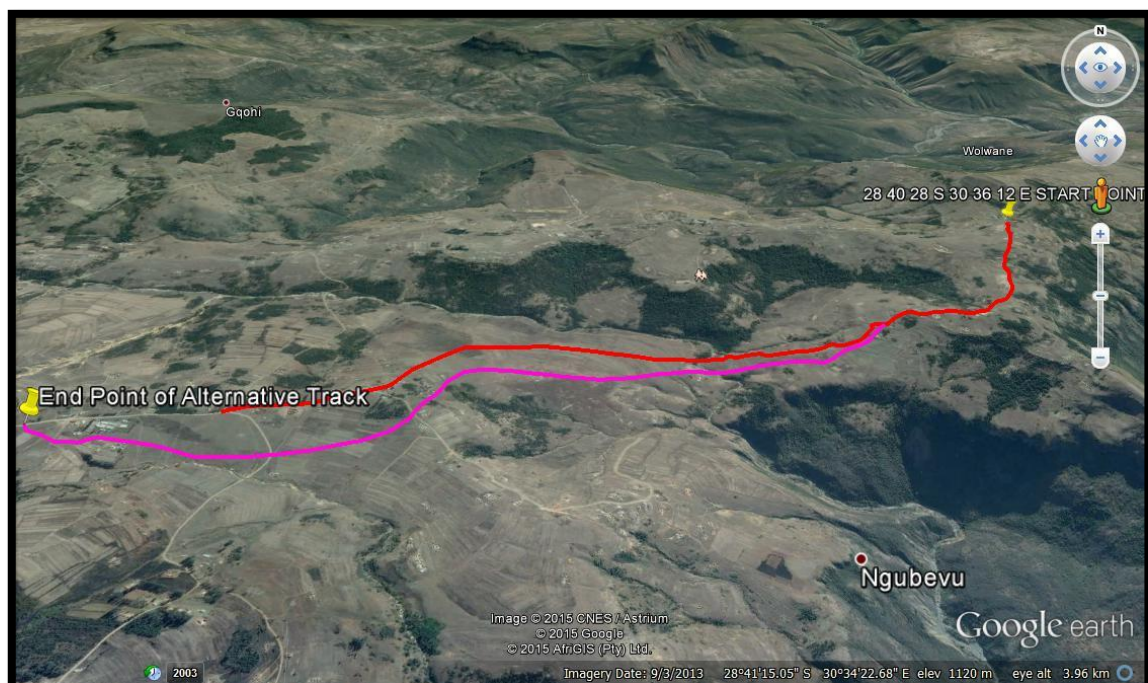


Figure 4. Google aerial photograph showing the location of both route trajectories at Msinga, northern KwaZulu-Natal (Source: Hanslab)



Figure 5. Google aerial photograph showing the location of a modern grave in the near vicinity of the preferred route (main track). The grave is situated approximately 34m from the preferred route but almost immediately adjacent to a side track.



Figure 6. Photograph of the existing track at L2514, Msinga.

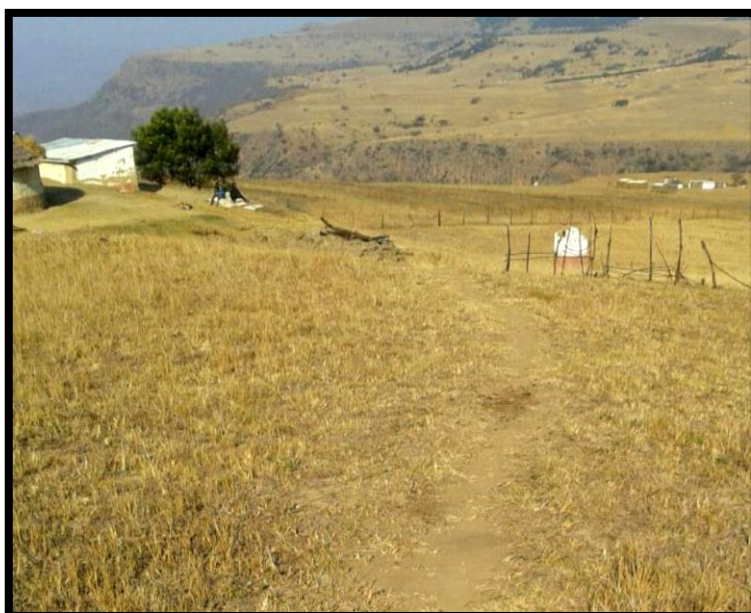


Figure 7. A side track in the near vicinity of the preferred route. A modern grave is situated adjacent to this side track on the right. However, no mitigation is necessary as the grave is situated more than 30m from the main track (the L2514).



Figure 8. *Photograph of a singular formal grave adjacent to a side track.*

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