

**PHASE ONE HERITAGE IMPACT ASSESSMENT
OF THE PROPOSED NUNGWANE RAW WATER
PIPELINE, NEAR AMANZIMTOTI.**



ACTIVE HERITAGE cc.

For: Jeffares & Green

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22 August 2014

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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
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

EXECUTIVE SUMMARY

A heritage survey of the proposed Nungwane Raw Water Pipeline between Amanzimtoti and Umbumbulo identified no heritage sites within 50m from the preferred pipeline trajectory. The area is also not part of any known cultural landscape. There is no archaeological reason why the proposed development may not proceed as planned. However, 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:	Frans Prins (Active Heritage cc) for Jeffares & Green
Type of development:	The proposed raw water pipeline is approximately 17km. It runs from the Nungwane Dam to the Amanzimtoti Water Treatment Plant to the east. The proposed water pipe will have a with a diameter of 450mm. The preferred route traverses within the registered servitude.
Rezoning or subdivision:	Rezoning
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 approximately 5km to the south east of the village of Umbumbulo and approximately 4 km to the west of Amanzimtoti (Fig 1). The proposed pipeline start at the Nungwane Dam and runs for approximately 17km to the Amanzimtoti Water Treatment Works in the east (Figure 2). The study area can be approached from the R 603. The GPS coordinates for the proposed pipeline is as follows:

Start: 30°00' 24.66 S 30°44' 36.63" E

End: 30°03' 11.33" S 30°50' 59.16" E

BACKGROUND TO ARCHAEOLOGICAL HISTORY OF AREA

The Amanzimtoti area, including adjacent areas of the greater Ethekeeni Metropolitan area to its immediate north, has been relatively well surveyed for archaeological heritage sites by the KwaZulu-Natal Museum and subsequently by private heritage consultants in the last few years. Prior to 1950, the archaeological site distribution of the area was poorly known.

The available evidence, as captured in the Amafa and KwaZulu-Natal Museum heritage site inventories, indicates that the area contains a wide spectrum of archaeological sites covering different time-periods and cultural traditions. These range from Early Stone Age, Middle Stone Age, and Later Stone Age to Early Iron Age, Middle Iron Age, and Later Iron Age sites. Two notable Middle Stone Age sites, i.e. Umlatuzana near Marianhill and Segubudu near Stanger have been excavated in the last two decades and yielded impressive archaeological stratigraphies relating to the period associated with the origins of anatomically modern people. The Umhlatuzana shelter is situated approximately 25 km to the north of the study area. Apart from an impressive stone tool assemblage covering both Later and Middle Stone Age periods it has also yielded faunal remains of large mammals that became extinct during the early Holocene such as the giant buffalo (*Pelaravis* sp). Also notable is the Shongweni Later Stone Age shelter which was excavated in the 1970's by Dr Oliver Davies. Shongweni is situated approximately 10 km to the north of the study area in the Umlazi River Valley. This shelter yielded some of the earliest remains of domesticated cereals in South Africa. The same site also yielded some of the only San rock art in the greater Durban area (Mazel 1989; Mitchell 2002).

Around 1 700 years ago an initial wave of Early Iron Age People settled along the inland foot of the sand dunes on sandy but humus rich soils which would have ensured good crops for the first year or two after they had been cleared. These early agro-pastoralists

produced a characteristic pottery style known as Matola. The Matola people also exploited the wild plant and animal resources of the forest and adjacent sea-shore. The communities seems to been small groups of perhaps a few dozen slash-and burn cultivators, moving into a landscape sparsely inhabited by Later Stone Age San hunter-gatherers.

By 1500 years ago another wave of Iron Age migrants entered the area. Their distinct ceramic pottery is classified to styles known as “Msuluzi” (AD 500-700), Ndongondwane (AD 700-800) and Ntshekane (AD 800-900). The majority of these sites occur inland along the major river valleys of KwaZulu-Natal below the 1000m contour (Maggs 1989:31; Huffman 2007:325-462). Various sites of this period have been recorded along the Umgeni River to the north of the study area, especially in the area close to Inanda Dam.

Some of the shell middens recorded along the coastline of KwaZulu-Natal belongs to the very first Nguni-speaking agropastoralists who settled in the province. These sites have been dated to approximately 1200 years ago. In addition, sites belonging to the immediate ancestors of the present Zulu-speaking communities in the area have been located in various locations in the greater Durban area. A large percentage of more recently recorded sites occur along the dune cordon and slightly inland in the form of shell middens which were mostly created by Iron Age shellfish gatherers although some of the stratigraphic layers may extend back to Later Stone Age periods (Anderson pers.com). Shell middens with both later Stone Age and Iron Age cultural material occur near the mouth of the Umlazi River approximately 10km downstream from the study area.

Various colonial era and historical period sites occur in the greater Durban and Amanzimtoti areas. These date from about 1840 and are usually associated with the first European settlers in the area. These are older than 60 years and are therefore also protected by heritage legislation (Derwent 2006).

2 BACKGROUND INFORMATION OF THE SURVEY

2.1 Methodology

A desktop study was conducted of the archaeological databases housed in the KwaZulu-Natal Museum. The SAHRIS website was consulted for previous heritage surveys and heritage site data covering the project area. In addition, the available archaeological and heritage literature covering the greater Amanzimtoti area was also consulted.

A ground survey, following standard and accepted archaeological procedures, was conducted. Particular attention was focused on the occurrence of potential grave sites and other heritage resources along the alternative sewerage pipeline routes as outlined in the project brief.

2.2 Restrictions encountered during the survey

2.2.1 Visibility

Visibility was good.

2.2.2 Disturbance

No disturbance of any potential heritage features was noted.

2.3 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.

3 DESCRIPTION OF SITES AND MATERIAL OBSERVED

3.1 Locational data

Province: KwaZulu-Natal

Towns: Amanzimtoti and Umbumbulu

3.2 Description of the general area surveyed

The topography of the study area is principally defined by the Nungwane River Valley. The terrain is steeply undulating with the steep slopes of valleys and ridges dropping down into the valley. The study area is located in the Indian Ocean Coastal Belt (KwaZulu-Natal Coastal Belt) biomes of South Africa (Mucina & Rutherford, 2006). Land use and land cover consists of rural homesteads and associated small scale subsistence farming activities. However, settlement becomes more peri-urban with less emphasis on subsistence farming towards the west of the project area (Figure 3).

No archaeological sites or features occur on the footprint. Particular care was taken to locate graves in the near vicinity of the proposed pipeline. However, none occur within 50m from the preferred pipeline route. The area is not part of any known cultural landscape.

4 STATEMENT OF SIGNIFICANCE (HERITAGE VALUE)

4.1 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

5 RECOMMENDATIONS

The preferred route of the proposed Nungwane Raw Water Pipeline contains no heritage sites or features. The area is also not part of any known cultural landscape. There is no archaeological reason why the proposed development may not take place as planned. It should, however, be pointed out that the KwaZulu-Natal Heritage Act requires that operations exposing archaeological and historical residues should cease immediately pending an evaluation by the heritage authorities.

6 MAPS AND FIGURES

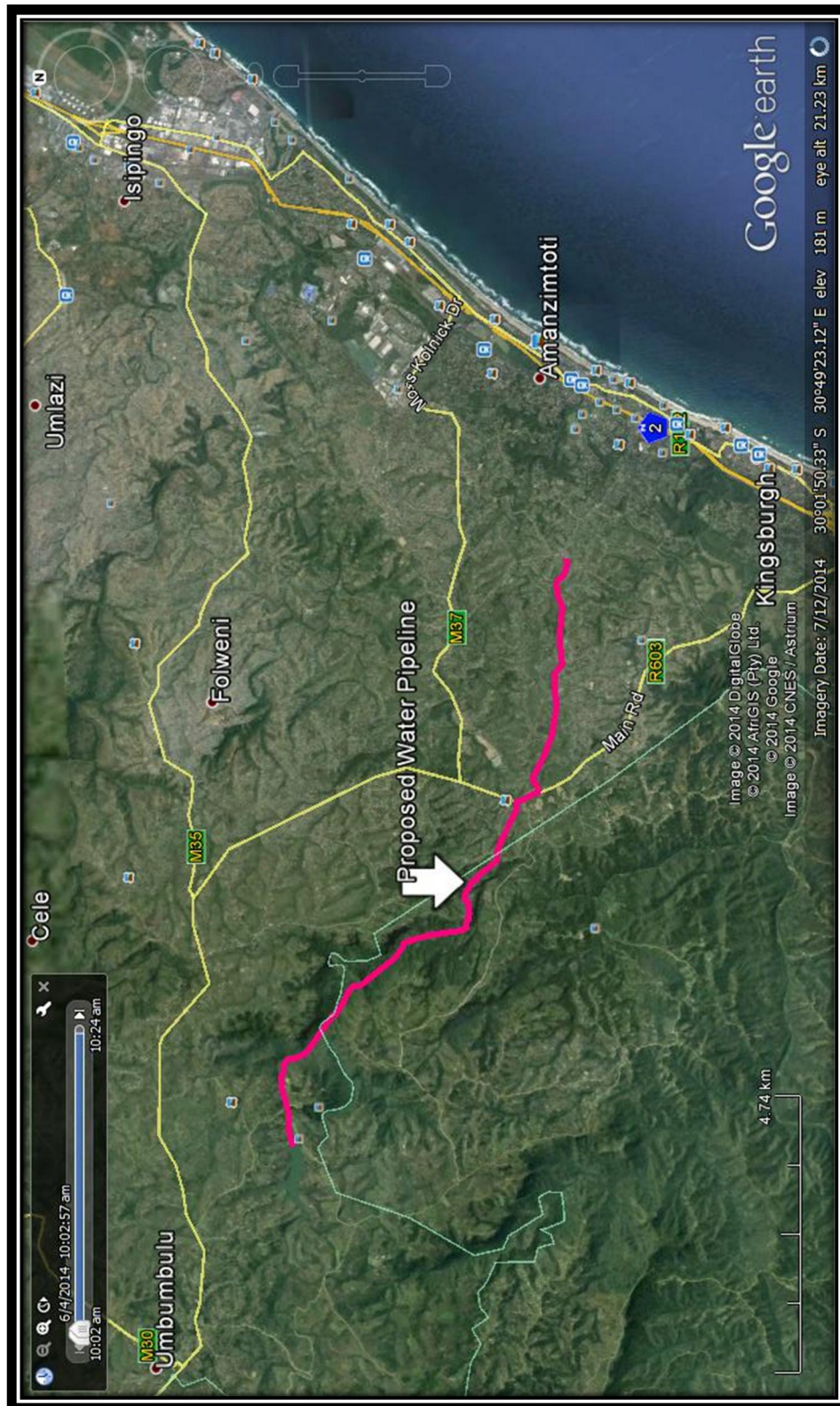


Figure 1. Google aerial photograph showing the location of the proposed Nungwane Raw Water Pipeline.



Figure 2. *The proposed Nungwane Raw Water Pipeline start at the Nungwane Dam and runs east towards Amanzimtoti.*



Figure 3. *Peri-urban settlements characterises the eastern section of the footprint. However, no graves were observed within 50m from the proposed pipeline.*

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