

**HERITAGE SURVEY OF THE UMHLATUZANA TRUNK
SEWER**

**FOR KERRY SEPPINGS ENVIRONMENTAL
MANAGEMENT SPECIALISTS**

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INTRODUCTION

Umlando cc was contracted by Kerry Seppings Environmental Management Specialists cc to undertake a Heritage Impact Assessment of the proposed Umhlatuzana Trunk Sewer, KZN. The sewer line begins at the Hillcrest Waste Water Treatment Works and goes westwards towards the Umhlatuzana River and/or over the N3 and ends southwest near the Marianhill Toll Plaza (fig, 1). There are three alternative routes for the trunk line.

The affected area occurs mainly along the base of the river valleys. These valleys would have been periodically flooded and thus removing archaeological material. The valleys and higher areas are also under blue gum and wattle trees. The rest of the line occurs in sugar cane fields, alongside the road reserve and low cost housing (fig. 3).

The impacts on the area will be:

- Construction of the sewer trunkline
- Blasting

The report notes several heritage sites and these are of varying significance.

KWAZULU-NATAL HERITAGE ACT NO. 4 OF 2008

1) **“33. General protection: Structures.—**

- a) No structure which is, or which may reasonably be expected to be older than 60 years, may be demolished, altered or added to without the prior written approval of the Council having been obtained on written application to the Council.
- b) Where the Council does not grant approval, the Council must consider special protection in terms of sections 38, 39, 40, 41 and 43 of Chapter 9.

2) The Council may, by notice in the *Gazette*, exempt—

- (a) a defined geographical area; or
 - b) defined categories of sites within a defined geographical area, from the provisions of subsection where the Council is satisfied that heritage resources falling in the defined geographical area or category have been identified and are adequately protected in terms of sections 38, 39, 40, 41 and 43 of Chapter 9.
- 3) A notice referred to in subsection (2) may, by notice in the *Gazette*, be amended or withdrawn by the Council.
- 4) **34. General protection: Graves of victims of conflict.**—No person may damage, alter, exhume, or remove from its original position—
- (a) the grave of a victim of conflict;
 - (b) a cemetery made up of such graves; or
 - (c) any part of a cemetery containing such graves, without the prior written approval of the Council having been obtained on written application to the Council.
- 5) **35. General protection: Traditional burial places.**—
- a) No grave—
 - b) not otherwise protected by this Act; and
 - c) not located in a formal cemetery managed or administered by a local authority, may be damaged, altered, exhumed, removed from its original position, or otherwise disturbed without the prior written approval of the Council having been obtained on written application to the Council.
- (1) The Council may only issue written approval once the Council is satisfied that—
- (a) the applicant has made a concerted effort to consult with communities and individuals who by tradition may have an interest in the grave; and
 - (b) the applicant and the relevant communities or individuals have reached agreement regarding the grave.
 - (c) **36. General protection: Battlefield sites, archaeological sites, rock art sites, palaeontological sites, historic fortifications, meteorite or meteorite impact sites.**—

- d) No person may destroy, damage, excavate, alter, write or draw upon, or otherwise disturb any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, meteorite or meteorite impact site without the prior written approval of the Council having been obtained on written application to the Council.
- (1) Upon discovery of archaeological or palaeontological material or a meteorite by any person, all activity or operations in the general vicinity of such material or meteorite must cease forthwith and a person who made the discovery must submit a written report to the Council without delay.
- (2) The Council may, after consultation with an owner or controlling authority, by way of written notice served on the owner or controlling authority, prohibit any activity considered by the Council to be inappropriate within 50 metres of a rock art site.
- (3) No person may exhume, remove from its original position or otherwise disturb, damage, destroy, own or collect any object or material associated with any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, meteorite or meteorite impact site without the prior written approval of the Council having been obtained on written application to the Council.
- (4) No person may bring any equipment which assists in the detection of metals and archaeological and palaeontological objects and material, or excavation equipment onto any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, or meteorite impact site, or use similar detection or excavation equipment for the recovery of meteorites, without the prior written approval of the Council having been obtained on written application to the Council.
- (5) The ownership of any object or material associated with any battlefield site, archaeological site, rock art site, palaeontological site, historic fortification, meteorite or meteorite impact site, on discovery, vest in the Provincial Government and the Council is regarded as the custodian on behalf of the Provincial Government.” (KZN Heritage Act of 2008)

METHOD

The method for Heritage assessment consists of several steps.

The first step forms part of the desktop assessment. Here we would consult the databases. These databases contain most of the known heritage sites in KwaZulu-Natal, and known memorials and other protected sites, battlefields and cemeteries in southern Africa. We also consult with an historical architect, palaeontologist, and an historian where necessary.

The survey results will define the significance of each recorded site, as well as a management plan.

All sites are grouped according to low, medium and high significance for the purpose of this report. Sites of low significance have no diagnostic artefacts or features. Sites of medium significance have diagnostic artefacts or features and these sites tend to be sampled. Sampling includes the collection of artefacts for future analysis. All diagnostic pottery, such as rims, lips and decorated sherds are sampled, while bone, stone and shell are mostly noted. Sampling usually occurs on most sites. Sites of high significance are excavated and/or extensively sampled. Those sites that are extensively sampled have high research potential, yet poor preservation of features.

Defining significance

Heritage sites vary according to significance and several different criteria relate to each type of site. However, there are several criteria that allow for a general significance rating of archaeological sites.

These criteria are:

1. State of preservation of:

- 1.1. Organic remains:
 - 1.1.1. Faunal
 - 1.1.2. Botanical
- 1.2. Rock art
- 1.3. Walling
- 1.4. Presence of a cultural deposit
- 1.5. Features:
 - 1.5.1. Ash Features
 - 1.5.2. Graves
 - 1.5.3. Middens
 - 1.5.4. Cattle byres
 - 1.5.5. Bedding and ash complexes

2. Spatial arrangements:

- 2.1. Internal housing arrangements
- 2.2. Intra-site settlement patterns
- 2.3. Inter-site settlement patterns

3. Features of the site:

- 3.1. Are there any unusual, unique or rare artefacts or images at the site?
- 3.2. Is it a type site?
- 3.3. Does the site have a very good example of a specific time period, feature, or artefact?

4. Research:

- 4.1. Providing information on current research projects
- 4.2. Salvaging information for potential future research projects

5. Inter- and intra-site variability

- 5.1. Can this particular site yield information regarding intra-site variability, i.e. spatial relationships between various features and artefacts?
- 5.2. Can this particular site yield information about a community's social relationships within itself, or between other communities?

6. Archaeological Experience:

6.1. The personal experience and expertise of the heritage practitioner should not be ignored. Experience can indicate sites that have potentially significant aspects, but need to be tested prior to any conclusions.

7. Educational:

7.1. Does the site have the potential to be used as an educational instrument?

7.2. Does the site have the potential to become a tourist attraction?

7.3. The educational value of a site can only be fully determined after initial test-pit excavations and/or full excavations.

8. Other Heritage Significance:

8.1. Palaeontological sites

8.2. Historical buildings

8.3. Battlefields and general Anglo-Zulu and Anglo-Boer sites

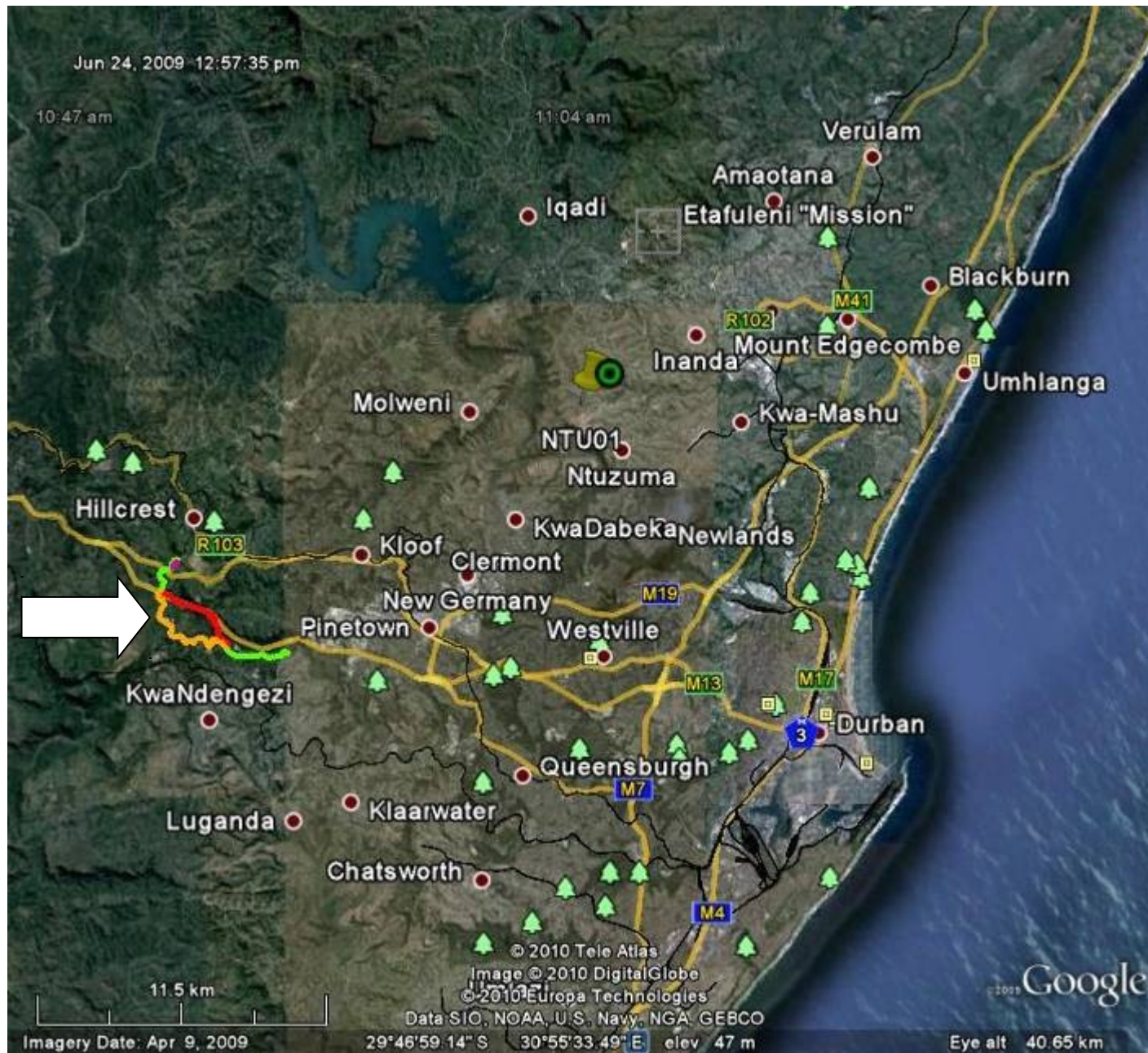
8.4. Graves and/or community cemeteries

8.5. Living Heritage Sites

8.6. Cultural Landscapes, that includes old trees, hills, mountains, rivers, etc related to cultural or historical experiences.

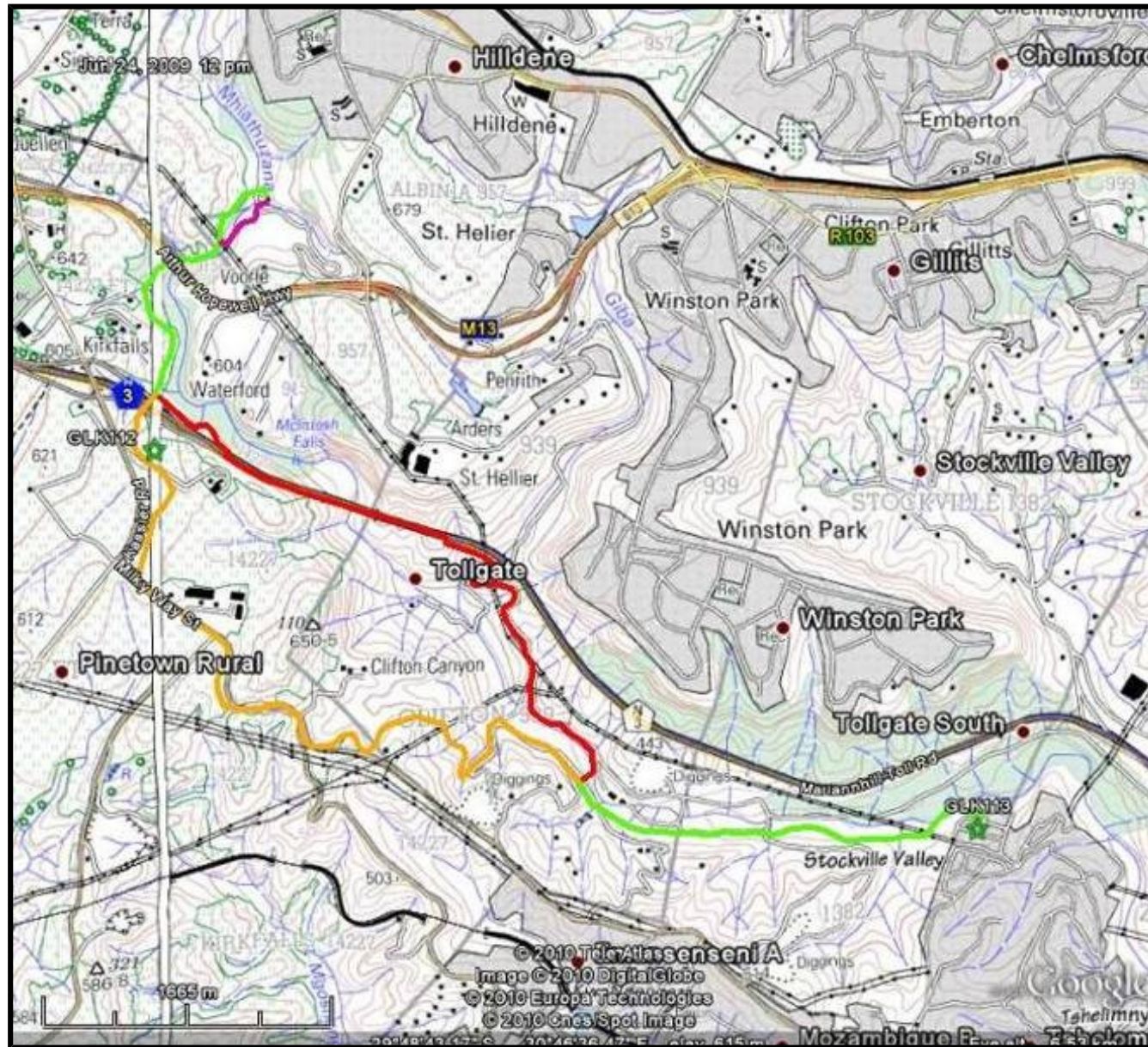
The more a site can fulfill the above criteria, the more significant it becomes. Test-pit excavations are used to test the full potential of an archaeological deposit. This occurs in Phase 2. These test-pit excavations may require further excavations if the site is of significance (Phase 3). Sites may also be mapped and/or have artefacts sampled as a form of mitigation. Sampling normally occurs when the artefacts may be good examples of their type, but are not in a primary archaeological context. Mapping records the spatial relationship between features and artefacts.

FIG. 1 GENERAL LOCATION OF THE UMHLATUZANA TRUNK SEWER¹



¹ Three options are in Orange, Green, Red below Hillcrest

FIG. 2: 2000 TOPOGRAPHICAL MAP AND LOCATION OF THE UMHLATUZANA TRUNK SEWER²



² 2930DC Hammarsdale, 2930DD_2931CC_2000_Durban

FIG. 3: VIEWS OF THE UMHLATUZANA TRUNK LINE SEWER



RESULTS

DESKTOP SURVEY

I used the 1940 topographical and 1937 aerial maps to determine if any settlements and/or features existed along the line. This also enables us to give an estimated date to these features. Both sets of maps indicated that settlements did occur near the line (fig.'s 4-5). I surveyed these areas but could not locate any identifiable features. This is probably due to the increase in (uncontrolled) afforestation. The desktop survey also noted that three sites exist near the line (discussed below). These sites were recorded during previous surveys or general research (Anderson and Anderson 2008; Kaplan 1990).

FIELD SURVEY

No new sites were observed during the course of the survey.

GLK113

I first noted GLK113 in the late 1990s during an informal survey, and then again in 2008 (Anderson and Anderson 2008). The site is located near the base of the hill. First informal settlements and then low cost housing have heavily disturbed the hill and immediate area. GLK113 consists of an ephemeral scatter of LIA pottery. All of the sherds are in a secondary context and presumably originate from higher up the hill.

Significance: Low

Mitigation: No mitigation required.

GLK112

GLK112 is located on a small hill currently under sugar cane. The site was first recorded in 2008 (Anderson and Anderson). The site consists of a scatter of LIA or Historical Period pottery. We did not observe any deposit.

Significance: Low

Mitigation: No mitigation required.

UMHLATUZANA ROCK SHELTER

Umhlatuzana Rock Shelter (National site number: 2930DD 098) was first recorded in 1982, and then excavated in 1985 (Kaplan 1990). The shelter is north facing and is 43m long, 6.5m deep and 17m high. Six 1m x 1m squares were excavated, of which four squares had an archaeological deposit of 2.5m deep. The shelter is one of the more important archaeological sites in KZN. It has an archaeological sequence that spans the last 100 000 years of human history in KZN (and southern Africa). The long archaeological sequence at the site has enabled it to place periods such as the Howiesons Poort into a better regional context. A total of 1 250 000 stone tools were recovered from the excavations. The shelter has a well-defined transition sequence between the Middle Stone Age and the Late Stone Age. The shelter also yielded organic remains (seeds, worked bone, ostrich and *Achatina* spp. Beads) that date from the Late Pleistocene and into the recent Holocene.

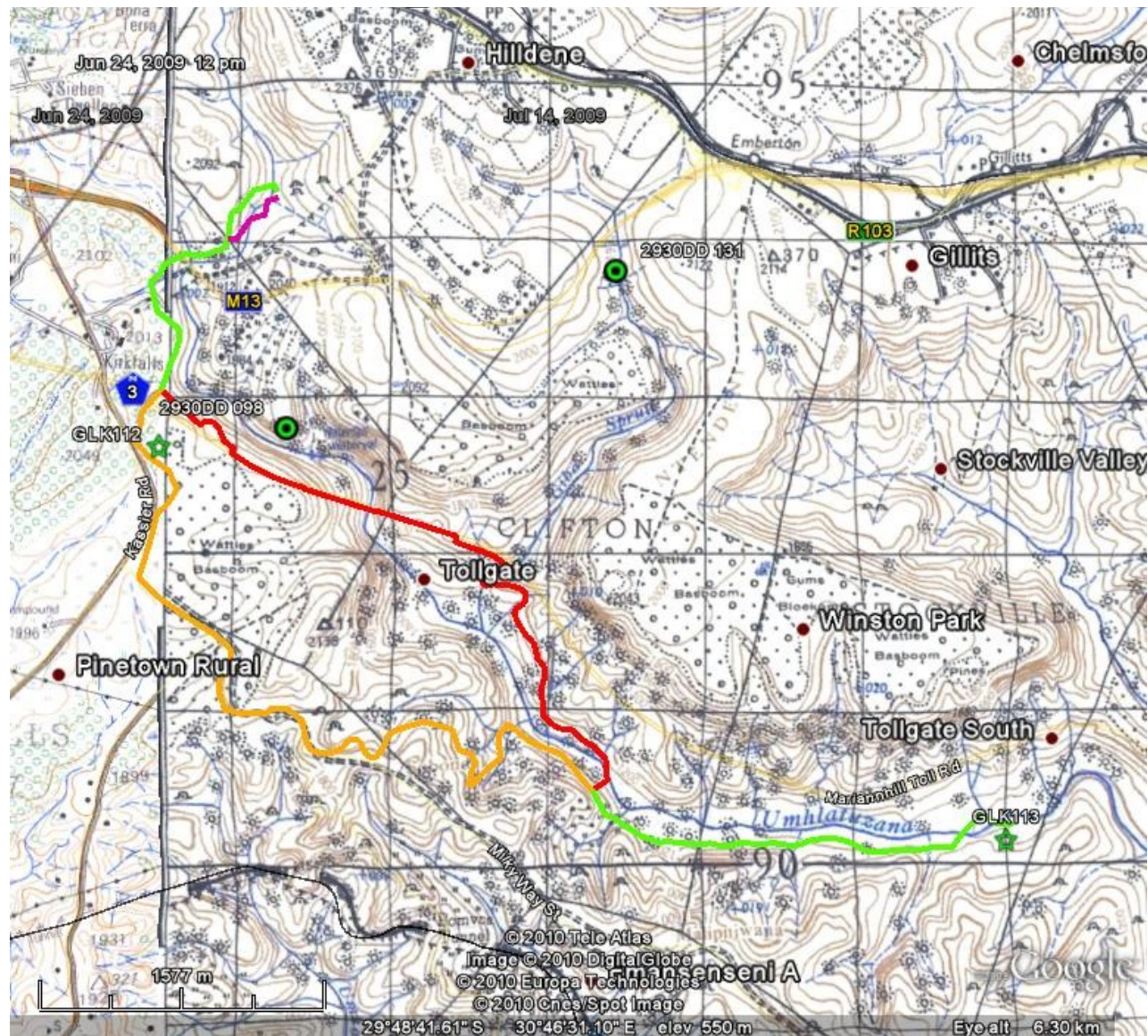
In summary, the small excavations at Umhlatuzana Rock Shelter have yielded valuable information relating to the last 100 000 years of southern African prehistory. Much of the deposit still exists in the shelter and any disturbance would be negative.

Option 1 will occur ~110m – 170m away, and above, the shelter.

Significance: High (red flag)

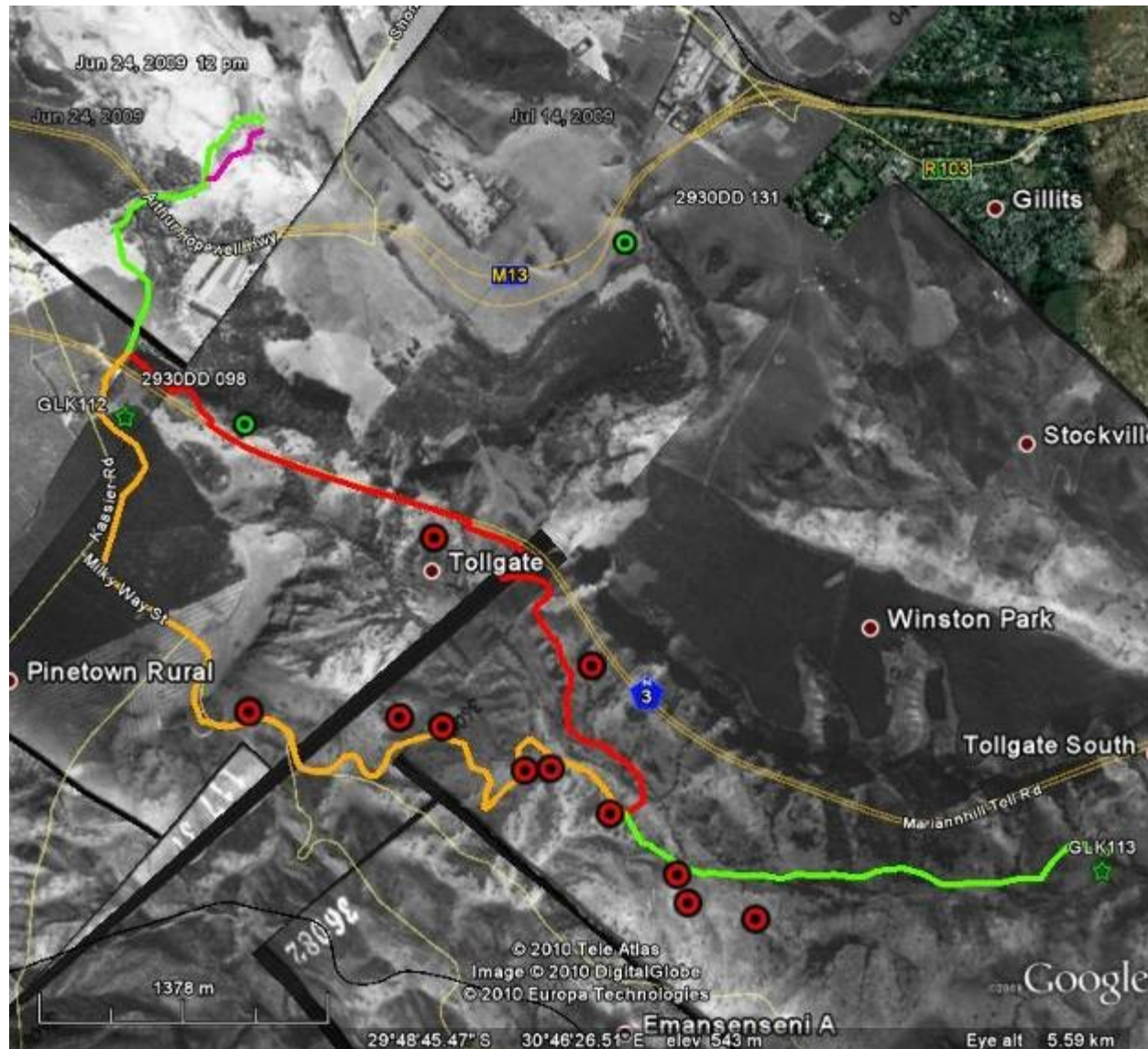
Mitigation: The site should not be affected unless further mitigation is undertaken. If blasting occurs above the shelter, then it should not affect the structural integrity of the shelter. If blasting does damage the site, then the main client may be liable to pay for the costs of salvaging the site. I suggest that this

route option is not taken unless the client is 100% certain that the site will not be affected.

FIG. 4: 1943 TOPOGRAPHICAL MAP OF THE UMHLATUZANA TRUNK SEWER³

³ The map is marginally out probably due to different reference systems. Main map dates to 1940

FIG. 5: 1937 AERIAL PHOTOGRAPH OVERLAY WITH THE UMHLATUZANA TRUNK SEWER⁴



⁴ Green circle & star = recorded archaeological sites; red circle = settlements at 1937

MANAGEMENT PLAN

Only one site requires a management plan: Umhlatuzana Rock Shelter. This site is of high archaeological significance and should not be disturbed. If blasting does occur in the general, then the blasting should not affect the site in the immediate or foreseeable future. That is, blasting should not weaken the geological structure above the shelter, so that the shelter collapses or that heavy material falls onto the deposit of the shelter. The client may be liable to pay for salvage costs if the site is disturbed. Given that precision blasting is possible, Option 2 is still viable. However, if the integrity of the site cannot be guaranteed, then Option 2 should be discarded.

The client will need to apply to Amafa KZN for a permit to destroy GLK112.

The client, or construction company, should be made aware of graves possibly along Option 1. While we did not observe any graves, some may occur under dense foliage. Much of Option 1 does however follow closely to existing tracks, roads, or the river, and graves are thus unlikely to still occur.

CONCLUSION

Umlando undertook a heritage survey of the three proposed Umhlatuzana Trunk Sewer options. Several heritage sites were noted during the desktop and fieldwork phases. Some of these more recent heritage sites date to 1937 – 1940, however, they do not exist anymore. The trunk sewer does not directly affect these areas.

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