

**ARCHAEOLOGICAL SURVEY OF THE
EMPANGENI SOUTHERN OUTFALL SEWER**

**FOR UWP CONSULTING CC & EXIGENT
ENVIRONMENTAL CC**

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INTRODUCTION

Umlando cc was contracted by UWP Consulting cc, via Exigent Environmental cc, to undertake a heritage survey of a proposed Empangeni Southern Outfall Sewer, KwaZulu-Natal.

The sewer runs along the eastern part of Empangeni, and follows the contours of a small river (fig. 1). The area tends to have shallow soils, especially along the hills, and is mostly under sugar cane farming. Stone Age and Iron Age sites have been previously recorded in the general vicinity of Empangeni. Four archaeological sites were recorded during the survey. These sites are of low significance and no further mitigation is required.

METHOD

The method for Heritage assessment consists of several steps.

The first step forms part of the desktop assessment. Here we consult the databases from both Umlando and the Natal Museum. These databases contain most of the known heritage sites in KwaZulu-Natal. This database does; however, tend to be restricted to archaeological and palaeontological sites. Consulting with the relevant authorities will also cover known battlefields and historical sites. We also consult with an historical architect and an historian where necessary.

The initial archaeological survey (i.e. fieldwork) will consists of a foot survey where the selected route will be covered. 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,

especially pottery. Sites of medium significance have diagnostic artefacts and these are 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. We attempt to recover as many artefacts from these sites by means of systematic sampling, as opposed to sampling diagnostic artefacts only.

Defining significance

Archaeological 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

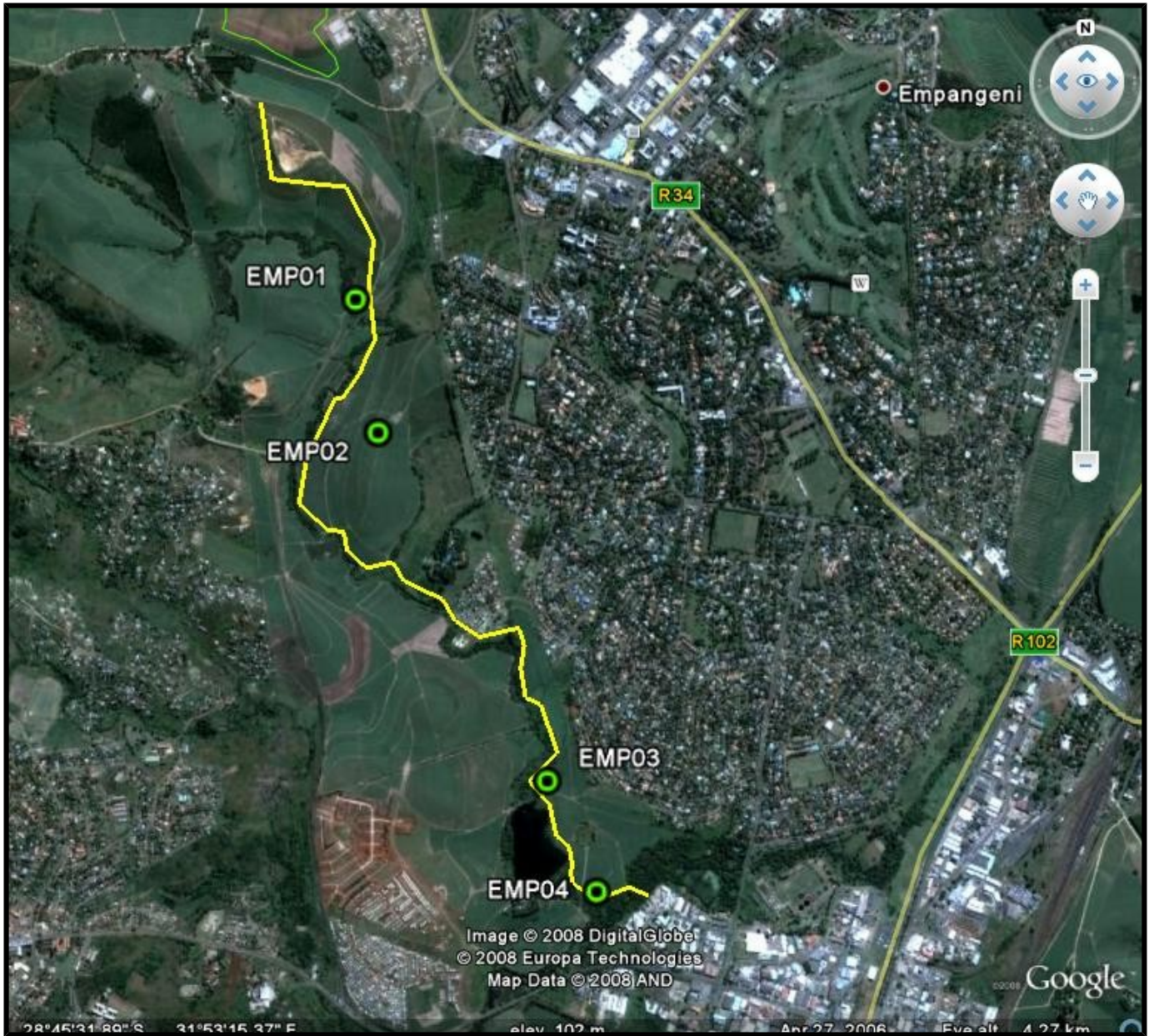
1.5.2. Graves

1.5.3. Middens

1.5.4. Cattle byres

1.5.5. Bedding and ash complexes

FIGURE 1: LOCATION OF THE PROPOSED SEWER OUTFALL AND ARCHAEOLOGICAL SITES



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 CRM 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. Historical buildings
- 8.2. Battlefields and general Anglo-Zulu and Anglo-Boer sites

8.3. Graves and/or community cemeteries

8.4. Living Heritage Sites

8.5. 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.

RESULTS

Four archaeological sites were recorded during the course of the survey. These are summarised in Table 1:

Table 1: Summary of recorded archaeological sites

Site Name	Type of Site ¹	Material	Significance	Type of Mitigation required
EMP01	LIA/HP	Daga floor fragments	Low	None
EMP02	LIA/HP	Pottery sherds	Low	None
EMP03	LIA/HP	Pottery sherds	Low	None
EMP04	MSA	Stone tools	Low	None

EMP01

¹ MSA = Middle Stone Age, LIA = Late Iron Age, HP = Historical Period

EMP01 is located near the northern part of the sewer, at the base of the hill. The site overlooks the river and consists of a few daga fragments. These fragments can be from a hut floor. One pottery sherd was observed. The daga was scattered over a wide area suggesting that it is not in tact.

Significance: The site is of low significance

Mitigation: No further mitigation is required

EMP02

EMP02 is located at the top of a hill overlooking the river, and sewer pipeline. It was recorded as it was in close proximity to the affected area. The site consists of an ephemeral scatter of pottery sherds.

Significance: The site is of low significance

Mitigation: No further mitigation is required

EMP03

EMP03 is located near the dam, along the riverbank. The site consists of a wide scatter of pottery sherds. One sherd appears to be patinated suggesting it may date to the Early Iron Age; however, the other sherds probably date to the Late Iron Age. The sherds probably originate further uphill where the current houses are located.

Significance: The site is of low significance

Mitigation: No further mitigation is required

EMP04

EMP04 is located near the southern end of the sewer pipeline. The site consists of an ephemeral scatter of stone tools. Some tools are heavily patinated, suggesting that they date to the Middle Stone Age, or Early Late Stone Age. The tools are in a secondary context.

Significance: The site is of low significance

Mitigation: No further mitigation is required

CONCLUSION

Umlando undertook the survey of the proposed Empangeni Southern Outfall Sewer pipeline. Four archaeological sites were recorded during the survey. These sites are of low significance and no further mitigation is required.

The developer would need to apply to Amafa KZN for a destruction permit for the four sites.

APPENDIX A
SITE REORD FORMS

UMLANDO ARCHAEOLOGICAL SITE RECORD FORM

SITE CATEGORY: (X where applicable)

Stone Age
Early Iron Age:
Late Iron Age x
Historical Period: x



Recorder's Site No.: EMP01

Official Name:

Map Reference: 28°45'0.05"S 31°52'41.70"E (alt = 90 m)

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

From R34 drive through Empangeni, near prison turnoff, & take left at Robots (road lead to R102). Travel for 1km and turn right along dirt road (that leads up a hill). Site is on left hand side.

SITE DESCRIPTION:

Type of Site: Surface.
Merits conservation: No
Threats: yes
What threats: Sewer pipeline

RECORDING:

Graphic record: None

Digital pictures:

Tracings :

Re-drawings:

Recorder/Informant

Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 15 October 2008

Owner:

References:

Description of site and artefactual content.

The site overlooks the river and consists of a few daga fragments. These fragments can be from a hut floor. One pottery sherd was observed. The daga was scattered over a wide area suggesting that it is not in tact.

UMLANDO ARCHAEOLOGICAL SITE RECORD FORM

SITE CATEGORY: (X where applicable)

Stone Age
Early Iron Age:
Late Iron Age X
Historical Period: X



Recorder's Site No.: EMP02

Map Sheet:

Map Reference: 28°45'18.31"S 31°52'44.66"E (alt = 102m)

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

From EMP01 backtrack 1km to the robots turn right onto R34, then first right along Pres. Swart Rd. Continue to the end of the road where you can access the hill via a grassed area.

SITE DESCRIPTION:

Type of Site: Surface
Merits conservation: No
Threats: yes
What threats: Sewer pipeline

RECORDING:

Graphic record: None

Digital pictures:

Tracings :

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 15 October 2008

Owner:

References:

Description of site and artefactual content.

Site consists of an ephemeral scatter of sherds.

UMLANDO ARCHAEOLOGICAL SITE RECORD FORM

SITE CATEGORY: (X where applicable)

Middle Stone Age X

Early Iron Age:

Late Iron Age

Historical Period:

Recorder's Site No.: EMP04

Map Sheet:

Map Reference: 28°46'20.85"S 31°53'15.71"E (alt = 50m)



DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

450m southeast of EMP03, near the Petronet line.

SITE DESCRIPTION:

Type of Site: Surface

Merits conservation: No

Threats: yes

What threats: Sewer pipeline

RECORDING:

Graphic record: None

Digital pictures:

Tracings :

Re-drawings:

Recorder/Informant: Name: Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Date: 15 October 2008

Owner:

References:

Description of site and artefactual content.

Site consists of an ephemeral scatter of stone tools. Tools are patinated and appear to date to the MSA. More may occur below