

# Archaeological Excavations for the Golokodo Extension Trunk Sewer

For Durban metro Waste

By

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## INTRODUCTION

Durban Metro Waste approached the Institute for Cultural Resource Management to undertake archaeological excavations along the Golokodo Trunk Sewer in 2002. The archaeological sites were recorded in a prior survey as part of the EIA for the trunk sewer (Anderson 2002). Two sites were managed: GOL1 and GOL3. The management plan was to salvage as much of the site as possible prior to the beginning of the construction phase. This gave the ICRM a minimum of two months to undertake the work (a more than adequate time frame).

The mitigation for these sites has been completed and no further archaeological work is required.

## Method

The archaeological site extends over several hectares, however, the excavations were restricted to areas affected by the pipeline. At GOL1 a backactor was monitored as it excavated the trenches. Archaeological material was noted and the backactor was stopped when artefacts were observed. At GOL3, several squares were excavated in line with the pipeline, and unexcavated areas were monitored when the backactor cleared the area.

All excavations squares were undertaken in 2 m x 2 m squares, with the pipeline situated in the center of each square. Excavated squares were originally placed  $\pm 10$  m apart, except in areas with dense artefact concentrations. Excavation squares were thus placed along the line of the servitude (fig. 1). Additional squares were noted or excavated outside of the servitude line. These squares form part of the access roads towards the sewer line.

Each square was excavated in 10 cm spits, unless there was a visible stratigraphy. Sites were excavated to between depths of 40 cm and 60 cm.

## FINDS

### Pottery

Several sherds were recovered from the excavations. Most of the sherds are undecorated and vary in size and colour. Several thin-walled and red sherds were located throughout the site. Only a few decorated sherds were recorded. These

sherds belong to the Ndongondwane Phase of the Early Iron Age. The decorated sherds are mostly directly associated with the furnace areas.

At GOL1 a complete Mzonjani vessel was recovered in the pipeline servitude. Several other sherds were recovered during the monitoring of this phase of the development.

#### Stones

Two types of stones are associated with the site: those dating to the MSA, and those dating to the Iron Age. The MSA assemblage includes flakes, formal tools, blades and miscellaneous retouched pieces (MRP). A few unifacial and bifacial points were observed (and collected) at the site. All of the MSA material at this site is in a secondary context.

The stones associated with the Iron Age occupation include pestles and upper and lower grinding stones. Some of these grinding stones have the characteristic shapes of sorghum grinding stones. This suggests that these grinding stones are associated either with the EIA or the early Late Iron Age.

#### Tuyéres

Tuyéres tend to be restricted to specific squares/areas. These occur mostly in Square D14, which is the square with the most furnace fragments. The tuyéres have large internal bore diameters indicating that they were used for iron smelting. There is a distinctive lack of tuyéres in the excavations, however, they are probably located outside of the affected area. Tuyéres become congested with slag, thus one tends to find higher frequencies of these artefacts on a site.

#### Iron ore

Various types of iron ore were used at the site. Most of the iron is locally available from the river bed floor. Other types of iron ore have been imported to the site and these include shales and ferricretes.

#### Slag

Various types of slag were noted at the excavations. The differences in the types of slag are related to different processes during the smelt. The larger pieces of slag tend to be associated with areas of high furnace densities, while the smaller

fragments tend to occur in small pockets; for example, the slag feature in Square C50. The heaviest piece of slag weighs  $\pm 20$  kg.

## Features

### Slag Features

Several slag features occur on the site (fig. 2). These tend to be single layers of small broken fragments of slag, each not weighing more than 100g. The features vary between  $\pm 0.50$  m to 2 m in diameter, and are between 0.05 – 0.10 m thick. These slag features tend to be located just outside the main furnace areas.

### Furnaces

Several furnace areas were located throughout the affected area. There are two types of furnace areas: those on the edges of the main slag areas; and, those in the main slag areas.

The furnace fragments tend to be very thick and in large, almost rectangular-like, blocks. The thickest fragment was  $\pm 17$  cm, while the thinnest was  $\pm 5$  cm thick. The thinner furnace fragments were located along the eastern edges of the site, while the thicker fragments were along the western edges of the site. This may indicate different metallurgical process on the site.

Those features outside of the main slag area (in Sq A14 and marked with an 'F' in fig. 1), tend to be areas of ephemeral iron smelting. These furnace fragments are small, and not as dense as in those squares to the west (fig.'s 3 – 6). The slag and iron ore fragments tend to be as small as those in the slag-furnace features (fig.'s , 7 – 14).

The larger furnace features are either furnace rubbish dumps, or areas where furnaces have collapsed , or both. In some instances vague outlines of furnaces can be observed, with the furnace walls in the normal ovoid positions. However, apparent furnace wall debris also occurs besides these intact fragments.

The general pattern for these large furnace areas is that of a mixed rubble of collapsed furnace fragments and various sizes of slag fragments (with some iron ore). Outside of this furnace area is a small area of sand and then another furnace area. For example Sq. D14 possibly has four furnaces in one 2 m x 2 m area. Below

the furnace-slag area is an area of smaller fragments of slag in an ashy grey-black sand. This forms a small basin that would have been a base of the furnace (fig's 6,10, 12, 14). Most of the tuyéres were recorded in this lower area.

A different pattern from the above, is a concentration of iron ore and slag fragments above the concentration of furnace fragments. Below this furnace layer would be a brown-black sandy layer.

In general it appears that some of the furnaces are *in situ*, however, other furnaces have been broken and piled up against the former furnaces as they became non-useable. In this instance the furnace area becomes both an iron smelting area and a iron smelting rubbish dump.

#### Pits

One pit was recorded at GOL1. This pit contained a single Mzonjani vessel  $\pm 30$  cm below the surface. No other artefacts were observed in this pit.

## CONCLUSION AND FUTURE MANAGEMENT

The ICRM undertook archaeological excavations for the Golokodo Sewer extension pipeline, prior to the construction of the line. The excavations were limited to those areas to be affected by the sewer pipeline and its servitudes. A total of fifteen 2 m x 2 m excavations were excavated down to the archaeological sterile layer.

The archaeological excavations revealed an Early Iron Age site dating to  $\pm 1300$  years ago. This is part of the Ndongondwane Phase of the Early Iron Age. The site was regarded as having medium archaeological significance since no iron smelting sites of this age have been recorded south of Durban. The information recovered is thus valuable, even if only a fraction of the site was excavated. Few other sites have had iron smelting and iron smelting dumps on the same site (see the Ndongondwane site reported by Maggs 1984).

All of the excavations have been completed ahead of the contractors schedule and no further mitigation is required. Much of the area to the north and south of the pipeline still has *in situ* archaeological material. Any further development in this area would require assessment of these sites.

## References

Anderson, G. 2002. Archaeological survey for the Golokodo Extension Sewer Line. Report to GAEA.

Maggs, T. 1984. Ndongodwane: a preliminary report on an Early Iron Age site on the lower Tugela River. *Annals of the Natal Museum* **26(1)**: 71-94.