

# PHASE 1 HERITAGE MITIGATION FOR THE NMPPP PIPELINE

FOR TRANSNET

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## INTRODUCTION

Umlando cc was contracted by Transnet to undertake the mitigation for heritage sites identified in the Heritage Impact Assessment (Anderson and Anderson, 2008). The initial survey noted that several sites needed some form of mitigation or management prior to the construction of the pipeline.

The mitigation has been broken down to several phases and the types of mitigation include the following:

Phase 1. Photography, mapping, and demarcation

- a. Historical houses were photographed and mapped
- b. Farm labourers' houses were photographed and mapped
- c. Graves were demarcated
- d. Historical boundaries were photographed
- e. Two Battlefields were surveyed

Phase 2. Archaeological Mapping

- a. Mapping of Late Iron Age and Historical Period stone walled settlements
- b. Consult with land surveyor to undertake the mapping using high resolution aerial photography
- c. Undertake field survey to 'fine tune' the high resolution aerial photography maps.

Phase 3. Archaeological excavations

- a. Test-pit excavations of selected sites directly affected by the pipeline.
- b. Excavations to occur in the area the pipeline

Phase 4. Survey selected 2<sup>nd</sup> Anglo-Boer War areas with a metal detector prior to construction

Phase 5. Palaeontological desktop surveys and monitoring during construction.

Phase 6. Monitoring of selected areas noted in the interim reports.

Phase 7. Emergency callouts

This report deals with Phase 1.

## METHOD

The initial report broke down the area of impact into two main distances:

1. Direct Impact: 0-10m each side from centre point of the line
2. Indirect impact: 10m – 100m from the centre point of the line.

The closer the indirect impact occurs to the line the more relevant the mitigation becomes. We chose 10m as the margin for direct impact as this includes the excavation trench, excavation deposits, and additional pipeline activities beside the trench. The 100m width was chosen as an indirect impact as there was a chance of some sites being affected by unscheduled construction activity. At least these sites would have had basic mitigation before potential damage, and thus there would be minimal loss. There is, however, no reason for these sites to be affected.

All human graves have a “no impact” policy, and the route was rerouted accordingly.

We began the Phase 1 mitigation with a “rule” that anything within the 100m zone will be mitigated. However, we realised that in some instances this ‘rule’ needed to be reviewed. For example, sites may occur on the top of a hill within the 100m margin; however the pipeline could only occur at the base of a hill, e.g. GLK056. Sites such as GLK105 were heavily vegetated, making mapping a futile activity. This area will be monitored in any case, and we can ensure that the area is not affected. Buildings older than 60 years that were still occupied were also omitted from Phase 1.

Some areas were resurveyed as much of the grass had died down: the original survey was in summer when the vegetation was very dense. This was a positive exercise as two new cemeteries were recorded nearby sites.

### **Photography and mapping**

Historical and farm labourers' houses were photographed in as much detail as possible. They were then mapped to scale and the important features were noted. The areas related to farm labourers were resurveyed for graves.

### **Grave demarcation**

Most of the graves within 100m of the centre line were demarcated, if there was no clear demarcation already in existence. This relates specifically to the graves of farm labourers. These graves had four fence droppers placed near the grave. The fence dropper was then spray painted in red and white to make it easily visible. The graves themselves were not affected in any manner. All graves have a 10m boundary line as per the survey report.

### **Historical boundaries**

Historical boundaries consist of trees that form part of the cultural landscape. These areas were considered as 'no-go' areas for construction activity and the line was rerouted accordingly.

### **Battlefields**

The edges of two battlefields were surveyed with a metal detector. We used a GPS to demarcate a walk-path of the pipeline, and then walked down the line using wide sweeps with the metal detector. We also set the GPS to note if we strayed more than 3m from the course. The battlefield areas will be monitored again during construction phase, in case some artefacts occur below 50cm.

## **RESULTS**

The results first give the original survey results (in smaller font), followed by the mitigation that was undertaken.

## HOUSES

### GLK008

The site is located on the northern slope, near the top of a small hill. The site consists of single circular stone walled kraal, similar to those observed at GLK009.

**Location:** In buffer

**Significance:** Low

**Current mitigation:** Site is not directly affected

**Mitigation if affected:** Photograph, map and measure the features

#### **Mitigation undertaken:**

GLK008 was divided into two areas: on top of the hill, and below the hill (fig. 1). The lower part of the site consists of two small kraals (fig. 2) approximately 80m southeast (and upslope) from the two houses. These kraals are at right angles to each other and are 5m x 3m in diameter. The pipeline passes between these two kraals and the house. The houses consist of two rectangular houses and a long low stone wall. The smaller house is a mud-brick construction with some mud plaster on both sides of the wall. The main house is a built from sandstone blocks with a mud plaster on both sides of the wall (fig. 3). The interior dividing walls do not appear to have plaster, although this may have disintegrated. Only two exterior walls, and a small section of one interior wall, of the main building, remain. The rest of the building has collapsed. The main entrance has been filled in, and presumably relocated to another part of the building. Figure 4 illustrates the site.

The upper part of GLK008 consists of stone foundations, where there were presumably wattle and daub walls. There is no visible evidence for mud-brick structures. There are four rectangular features of various sizes (fig. 5), and a larger central foundation. There is a stone circle foundation and a stone cairn to the north of the main buildings (fig. 6).

FIG. 1: SITE MAP OF GLK008

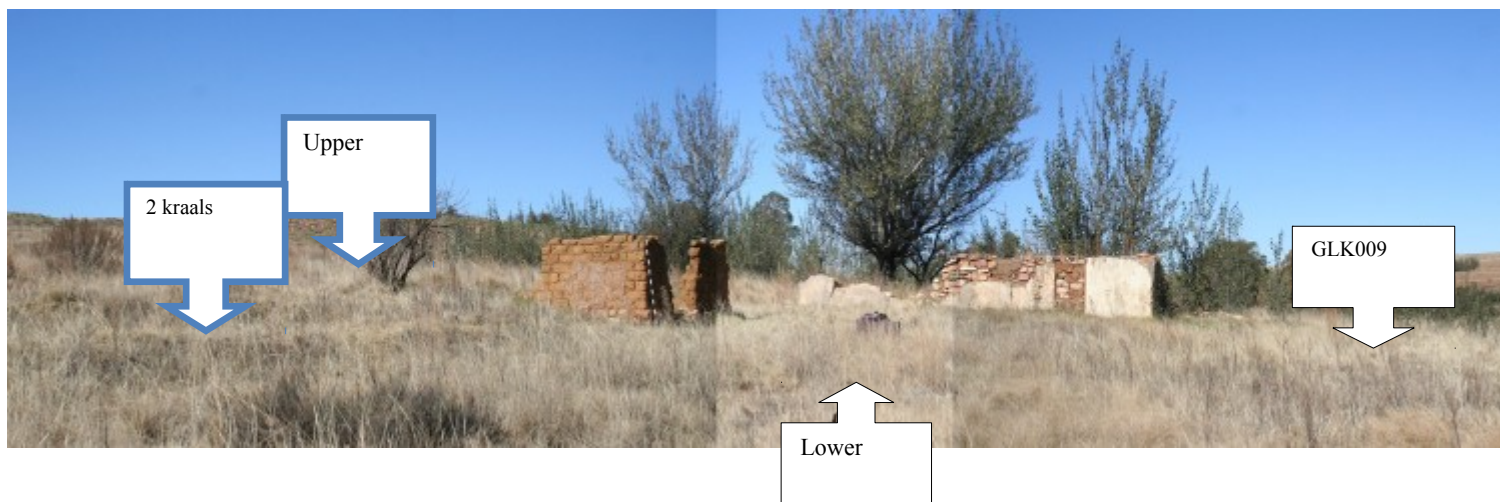


FIG. 2: SMALL KRAAL UPSLOPE OF GLK008

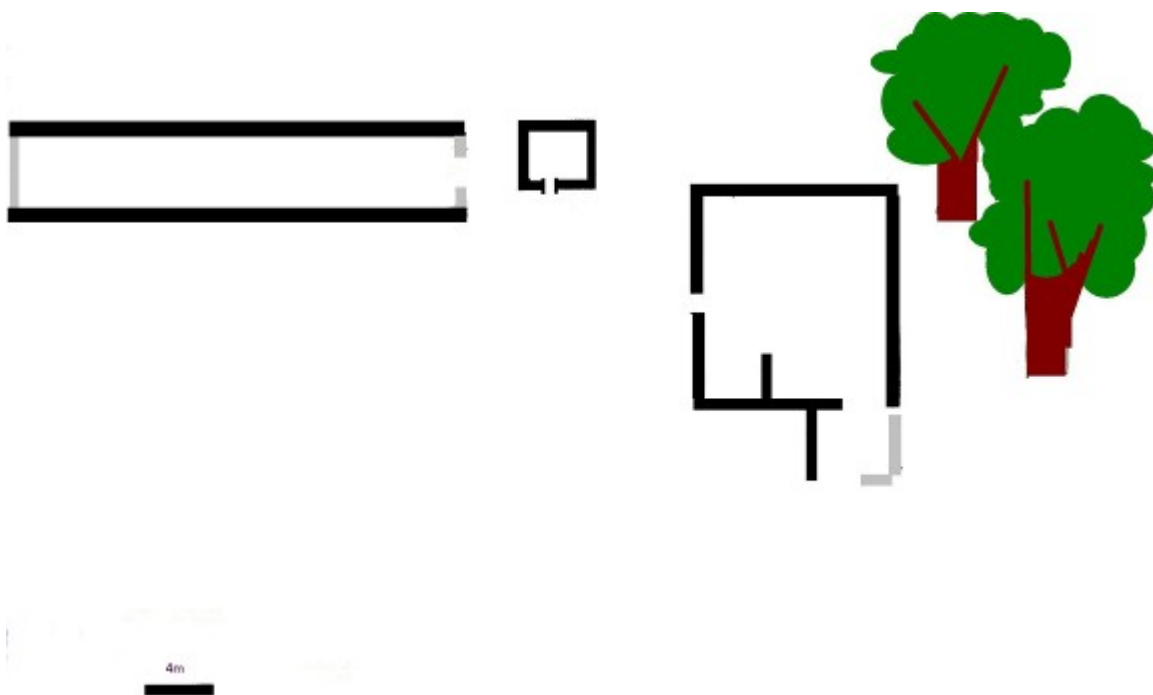


FIG. 3: TWO TYPES OF STRUCTURES AT GLK008





FIG. 4: PLAN OF LOWER HOUSES AT GLK008



A cemetery occurs ~120m north-northwest from the low stone walls of lower GLK008<sup>1</sup>. This cemetery was omitted from the original survey, but the pipeline does not affect it, as the nearest point to the pipeline is ~120m.

**FIG. 5: STONE FOUNDATIONS AT UPPER GLK008**



**FIG. 6: STONE CIRCLE & CAIRN AT UPPER GLK008**



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<sup>1</sup> S26°33'2.68", E28°27'57.23" to S26°33'4.15", E28°27'57.72"

### GLK009

GLK009 is located at the base of the koppie on the south-western slope, and northeast of the stream in front of it. The site consists of three stone walled houses and one kraal. Some of the stone walling is amongst the blue gum trees. There are normally graves associated with these types of settlements, as in GLK010, but we did not observe any. The house probably dates to the historical period.

**Location:** In buffer

**Significance:** Low, but high if graves occur.

**Current mitigation:** Site is not directly affected

**Mitigation if affected:** Photograph, map and measure the features. Graves should not be affected and interviews with landowners and labourers would need to be undertaken.

#### **Mitigation undertaken:**

The site has been mapped and photographed. The site consists of several buildings and features. The “entrance” to GLK009 appears to have been from the northwest (towards GLK008), and is marked by two stone plinths (fig. 7). The plinths are about halfway between GLK008 and GLK009, and ~2m away from the centre of the pipeline and may be affected. While the plinths are not significant, there should be little impact on them. If they are knocked over, or removed, for the pipeline, then they should be erected in the same position afterwards.

**FIG. 7: TWO STONE PLINTHS AT UPPER GLK009**





GLK009 consists of two houses and a few kraals. The first is a rectangular stone-walled house 11m x 5m in size (fig. 8). There is an internal dividing wall with a door, along the southern part of the house. The main door and two windows are southwest facing, while another window is south facing.

**FIG. 8: NORTH & SOUTH FACING WALL OF GLK009**



The main part of GLK009 consists of a house with several rooms and stone walled kraals. This is ~100m southeast of the other house. The main house is ~7m x 5m in size (fig. 8). The windows are southwest facing, while the main door is east facing. There is a dividing wall in the interior of the house with a presumed

doorway. There are two stone cairns outside the windows of the house. These initially appear to be small graves; however, they are probably related to some other activity<sup>2</sup>. The house has had three rooms added on at a later stage: these are at the northeast, southeast and southern sides of the house. Only the southern room is mostly intact. All rooms, or houses, have plastering on the inside and outside walls.

**FIG. 9: SOUTHERN ROOM EXTENSION AND PLASTERING AT GLK009**



To the east of the house, and against the rocky hill, are several kraals. The first two kraals are small (3m x 2m) kraals that abut a natural rock outcrop. To the southeast of these two small kraals is a large (17m x 6m) with three smaller kraals attached to it (fig. 10). These smaller kraals are 2m x 3.5m, and 4m x 5m

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<sup>2</sup> The settlement pattern would have graves placed elsewhere, and not in front of the windows of the house.

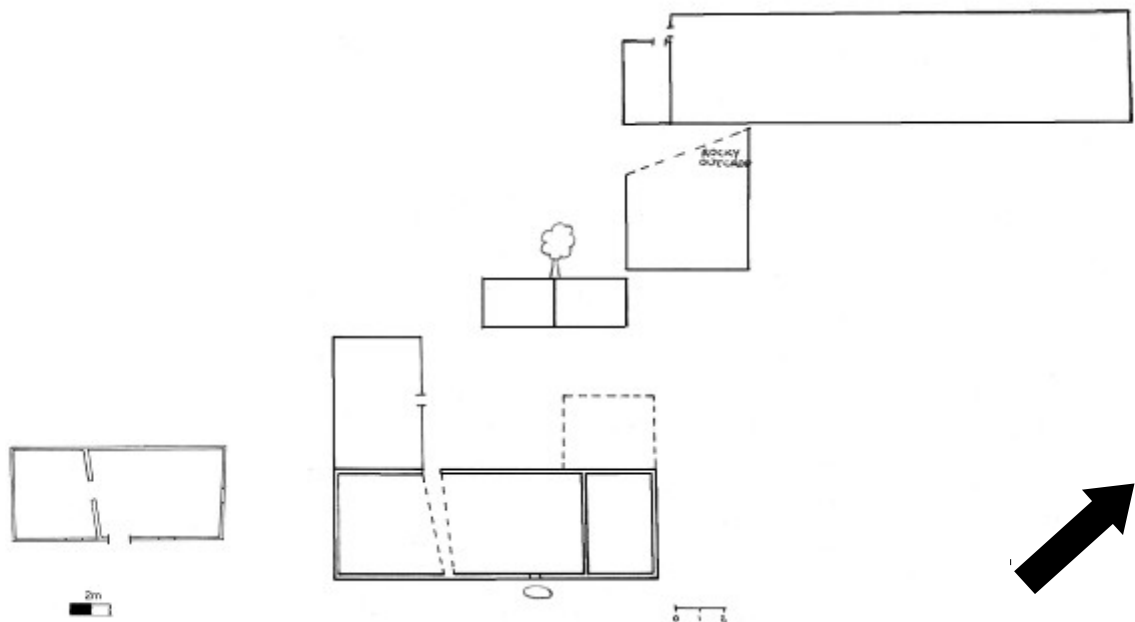


in size. All of these use the natural rock outcrop as part of the walling. Figure 11 illustrates these houses.

**FIG. 10: LARGE KRAAL AT GLK009**



**FIG. 11: SITE PLAN OF GLK009**



**GLK0010**

GLK010 is located ~450m south of GLK009, and on the western bank of the stream. The site consists of four stone walled houses and two kraals. These are grouped together

as two houses and one kraal (GLK010). There is a long stone wall between the two houses. The house further southeast may have a grave.

**Location:** In buffer

**Significance:** Low, but high if the one feature is a grave

**Current mitigation:** Site is not directly affected

**Mitigation if affected:** Photograph, map and measure the features. Graves should not be affected and interviews with landowners and labourers would need to be undertaken

### **Mitigation undertaken:**

GLK0010 was mapped and photographed. The site consists of two stone walled houses ~120m apart (fig's 12 - 13). There is a low wall, or terrace that connects the two houses (fig. 14). The northern house consists of a main house with a dividing wall. There are two rooms added to the north eastern and southeastern part of the house. Only parts of the main house are intact, while the other rooms have collapsed. There is a small stone cairn to the north of the extended room: this is unlikely to be a grave.

**FIG. 12: NORTHERN HOUSE AT GLK0010**



**FIG. 13: SOUTHERN HOUSE AT GLK0010**



The southern house (fig. 13) consists of two buildings and a large area of basal foundations. The two rooms have doors that face each other. Figure 15 illustrates GLK0010.

**FIG. 14: CONNECTING WALL BETWEEN THE HOUSES AT GLK0010<sup>3</sup>**

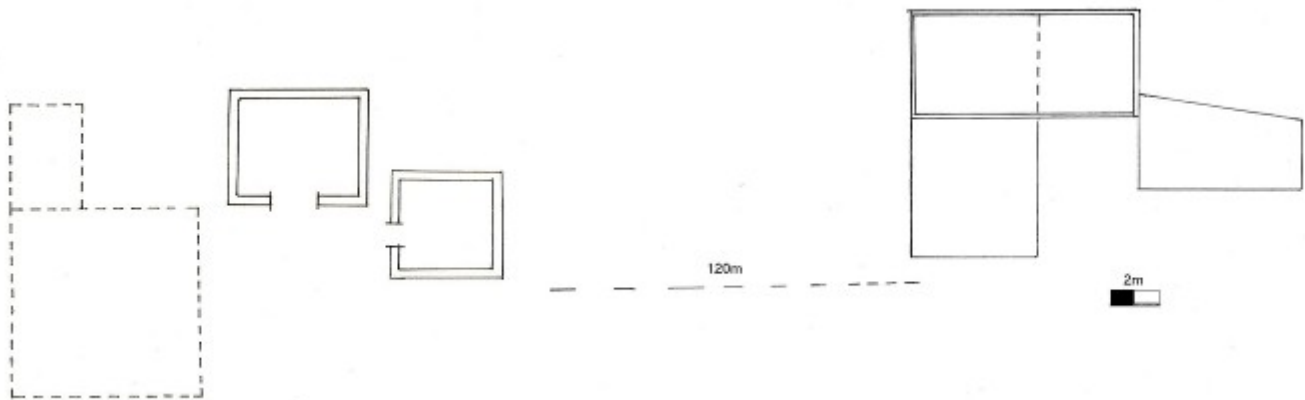


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3 Facing north



FIG. 15: SITE PLAN OF GLK0010

**GLK0012**

GLK012 is situated along the eastern side of the Cornelia Road from Vrede towards Seven Oaks Farm. The site consists of an old school (?) building and one possible grave. The building is made with old red bricks and the lintels are made from wood. The building is indicated as a school on the 1:50 000 map. The bricks and cadastral map suggest that the building is older than 60 years.

**Location:** Near line

**Significance:** Medium

**Current mitigation:** Site is indirectly affected. Photograph, map and measure the features. The potential grave needs to be demarcated

**Mitigation if affected:** Photograph, map and measure the features. The potential grave needs to be investigated in terms of interviews and/or excavations.

**Mitigation undertaken:**

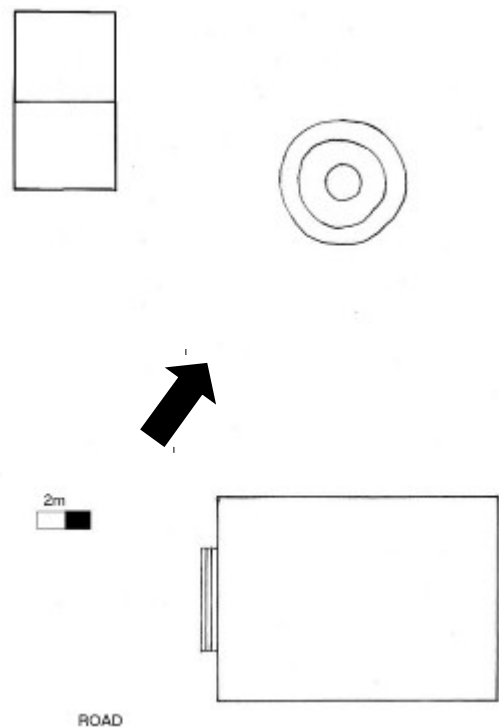
The site was mapped and photographed. The area was densely vegetated during mitigation, making photography difficult. The site is on the opposite side of the road of the proposed pipeline, and is thus unlikely to be directly affected. More of the walling has collapsed since our original recording in 2008 (fig. 16). The site consists of a school building (11m x 8m) in size, with steps along the

northern wall. The building consists of a stone foundation and a double row of bricks in an English Bond for the wall. To the northeast of the buildings stairs, are the foundations of two rooms and these are possible toilets. Between these two buildings is a three-tiered circle that was presumably a flowerbed. There is a small stone cairn ~16m northwest of the school building. Figure 17 illustrates this site.

**FIG. 16: REMAINING WALL OF GLK0012**



**FIG. 17: SITE PLAN OF GLK0012**



### **GLK0013**

GLK013 is located on the western side of the road. The site consists of several farm labourers' houses in various stages of abandonment. These houses are mud-brick construction, and conform to the general Sotho architecture. We did not observe any graves at this site. The abandoned houses appear to be less than 60 years in age.

**Location:** In buffer

**Significance:** Low

**Current mitigation:** Site is not directly affected

**Mitigation if affected:** Photograph, map and measure the features

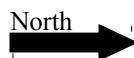
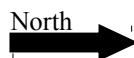
**Mitigation undertaken:**

Only the most eastern house at GLK0013 was photographed and mapped (fig. 18), as this was the only feature that fell within the 100m boundary. I did however photograph nearby houses that still had *ilemba* designs on their walls<sup>4</sup>. The eastern house consists of a mud-brick house with five connecting rooms in an L-shape (fig. 19). There are two smaller mud-brick buildings on each side of the main building, and are not attached to it. The rooms varied in size, but were consistently 3m wide. We surveyed the immediate area for graves, and did not locate any.

**FIG. 18: WEST VIEW OF GLK0013**



**FIG. 19: SITE PLAN OF GLK0013**



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<sup>4</sup> These photographs form part of the general photographs that will be submitted with the final report to SAHRA and Amafa KZN.

### **GLK0015**

GLK0015 is located at the base of a hill on the north-eastern side of the road (or pipeline). It consists of two mud-brick households, one more recent than the other. No graves were observed at either homestead. The homesteads are Sotho in architecture, with the more northern homestead being the oldest.

**Location:** On line

**Significance:** Low

**Current mitigation:** Photograph, map and measure the features. Resurvey for potential graves. Interview people possibly related to the houses.

**Mitigation if affected:** As above

#### **Mitigation undertaken:**

GLK0015 was photographed and mapped, and the area was resurveyed. The pipeline will not directly affect the site. The site consists of two households with similar architectural designs. The southern household is built in the 'wattle and daub' style, with some mud-bricks (fig. 20). Several items have been placed within the daub to strengthen the structure. This includes, glass, wire, metal rods and plastic. The main doors face north, although one faces west. Some of the rooms have interconnecting doors, while others can only be entered via the outside. There is a separate house next to the main house. The interior and exterior walls are plastered and decorated with *ilemba*. It is interesting to note that the plaster consists of several coats, and each coat has *ilemba* on it. This suggests that the plaster is not pasted in one episode, but repeatedly over several years. The plaster in fig. 21 has at least six layers.

The northern household is much older than the southern house, and only the foundations are visible. This house is made from mud-bricks. The walls have collapsed and nearly disintegrated. This household consists of a double row of rooms with extended rooms at the east and western sides of the house. No entrances were visible. The entire settlement is illustrated in figure 23.

There is a family cemetery to the 20m southeast of the southern house. There are ~40 graves at the cemetery and many of these predate the 1960s. The cemetery is about 100m long and 20m wide.

**FIG. 20: VIEW OF RECENT HOUSE AT GLK0015**



**FIG. 21: CLOSE UP OF PLASTER LAYERS SHOWING DIFFERENT ILEMBA**

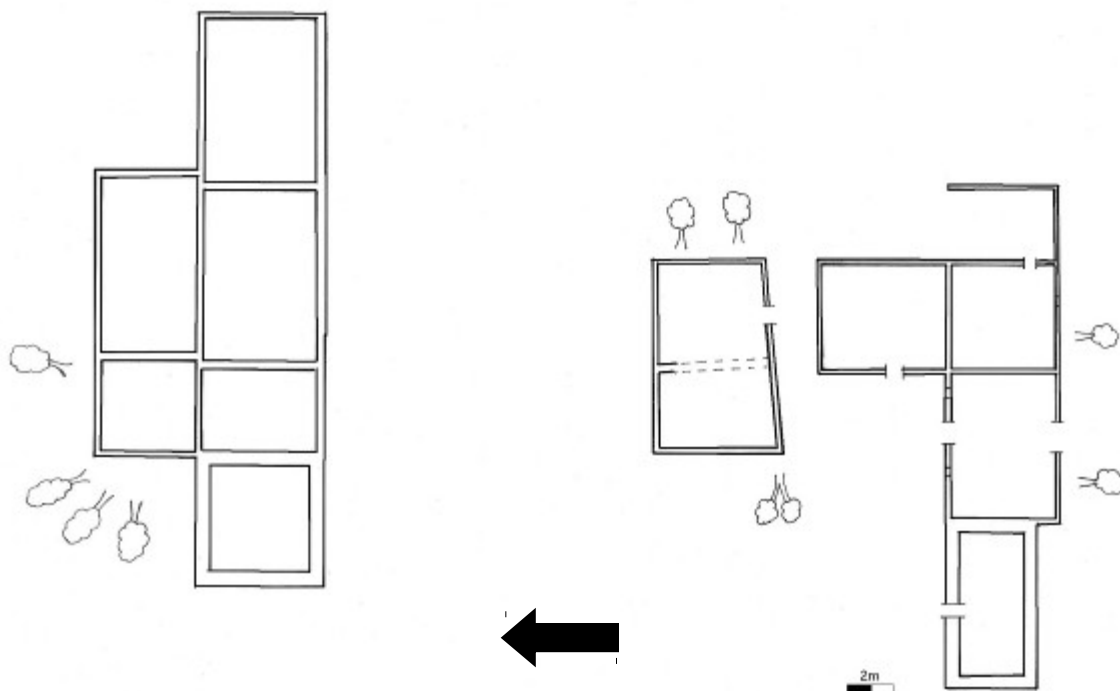




FIG.22: VIEW OF THE NORTHERN HOUSE AT GLK0015



FIG. 23: SITE PLAN OF GLK0015



### GLK0019

GLK019 may be part of the original Deelkuil farmhouse. The site consists of the farmhouse and outbuildings. The farmhouse is currently occupied. The farmhouse is built from sandstone blocks and has a red corrugated roof.

**Location:** In buffer

**Significance:** Low

**Current mitigation:** Site is not directly affected

**Mitigation if affected:** Photograph, map and measure the features

#### **Mitigation undertaken:**

The pipeline will not affect Deelkuil and it is outside of the 100m boundary, however an access road will be made to the west of the farmhouse. The access road occurs outside the farmhouse perimeter and will not affect the farmhouse. No further mitigation was undertaken. People still inhabit Deelkuil.

### GLK0022

GLK022 is located ~200m north of GLK021; below the rocky outcrop. The site consists of stone walling foundations and mud-brick ruins. The landowner stated that people were staying here until 1996, although he was unsure as to when they built their houses. There may also be older foundations below these 1960's foundations.

**Location:** In buffer

**Significance:** Low

**Current mitigation:** Site is not directly affected

**Mitigation if affected:** Photograph, map and measure the features

#### **Mitigation undertaken:**

GLK0022 is located on the border of the 100m mark. Since the settlement is fairly recent and unlikely to be affected by the pipeline, we only photographed it. The settlement consists of four unattached mud-brick houses that have collapsed and are now covered with grass (fig. 24). There is a small stone walled kraal at the northeastern part of the settlement. The kraal consists of a double row large stones that have a "rubble" infill.

**FIG. 24: HOUSE REMAINS AT GLK0022**



**FIG. 25: KRAAL REMAINS AT GLK0022**



**GLK0035a**

GLK035a is located on the old Verkykerskop dirt road. The site consists of a small rectangular kraal 10m x 15m ~10m from the road (fig. 33). No other stone walling was



observed in the area. There is a very recent abandoned settlement to the east. This was not recorded as it was too recent.

**Location:** in buffer

**Significance:** Low

**Current mitigation:** Site is not directly affected

**Mitigation if affected:** Photograph, map and measure the features

**Mitigation undertaken:**

GLK035a was mapped and photographed. Our original co-ordinates placed the site ~70m to the west of the pipeline. However, the site is now located on the pipeline (27°57'9.90"S, 29°12'45.02"E). While the original GPS co-ordinates were incorrect, the pipeline has also moved more to the east, and thus it affects directly on the kraal. The kraal is still of low significance and requires no further mitigation, and may thus be damaged if needs be.

The kraal is a large rectangular kraal (21m x 17m), with a small secondary kraal (5m x 7m) attached to it (fig. 26). There is a small semi-circular kraal within the main wall and abutting the northern wall. This small kraal is ~1.7m in diameter (fig. 27). The main kraal consists of a double row of large boulders with a small stone infill (fig. 28). The kraal probably relates to the colonial occupation of the area; however, it will be difficult to date. Figure 29 illustrates the site.

FIG. 26: OUTLINE OF KRAAL AT GLK0035A



FIG.  
27:

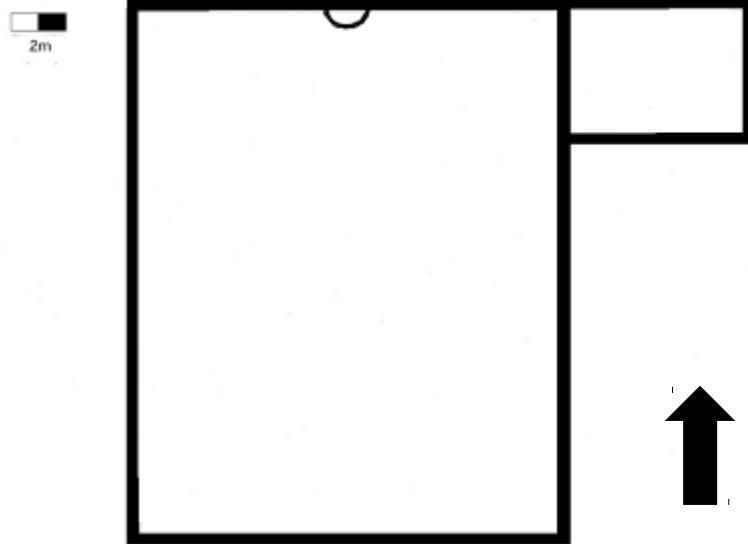


OUTLINE OF SMALL KRAAL AT GLK0035A

**FIG. 28: OUTLINE OF SMALL KRAAL AT GLK0035A**



**FIG. 29: SITE MAP AT GLK0035A**



#### **GLK0041**

GLK041 is to the southwest of GLK40 and consists of demolished buildings and possible labourers' houses

**Location:** near line

**Significance:** Low

**Current mitigation:** Site is not directly affected

**Mitigation if affected:** Photograph, map and measure the features

#### **Mitigation undertaken:**

The main part of GLK0041 is more than 100m from the pipeline. Only the boundary of the farm settlement occurs within the 100m boundary, and since there are no features in this area, no further mitigation was undertaken. Most of the buildings within the settlement are in ruins and appear to be younger than 60 years in age.

### GLK0074

GLK074 occurs on the top of a hill and is first noticeable by the large and old Acacia tree (fig 65). There is possible walling under the large Acacia tree; however, the dense vegetation made it difficult to locate exact features.

**Location:** near line

**Significance:** Low

**Current mitigation:** Photograph, map and measure the features. If there is definite stone walling then the tree should not be affected as it would have been a focal point of the site. Area needs to be cleared of vegetation before mitigation.

**Mitigation if affected:** as above.

#### **Mitigation undertaken:**

The pipeline was originally ~160m to the west of the site whilst undertaking the fieldwork. The pipeline has since now moved to ~40 west of the site. The walling around the site is ephemeral and of low significance. We will photograph the walling at a later stage, i.e. this area has been noted for site monitoring during construction, and can be photographed and mapped then.

### GLK0076a

GLK076a/b consists of several abandoned mud-brick houses and stone walled kraals in a small valley. We observed three possible graves in the area. The walling is circular and rectangular. The grass was very dense and tall (over 6ft) making for very poor visibility. We also consulted aerial photographs to establish if sites did exist in the area.

**Location:** near line

**Significance:** Low- High

**Current mitigation:** The line currently goes between sites 'a' and 'b'. We need to ensure that the route affects no graves, and thus the site will need to be resurveyed after the final route has been chosen. The site will also need to be photographed, mapped and measured.

**Mitigation if affected:** Photograph, map and measure the features. Mitigate for graves if they exist.

#### **Mitigation undertaken:**



The first buildings of the site are ~60m east of the latest pipeline re-alignment. The buildings are at the top of a small hill, while the pipeline is at the base of the hill. It is thus highly unlikely that the site will be affected by the pipeline, and was thus omitted for mitigation.

#### **GLK0082**

GLK082 consists of an old house, an old church, and a more recent school (fig. 73). All buildings are currently in use.

**Location:** in buffer

**Significance:** Medium-High

**Current mitigation:** The site is not directly affected by the pipeline.

**Mitigation if affected:** Photograph, map and measure the features

#### **Mitigation undertaken:**

The three buildings related to the site are still in use, and will thus not be affected by the pipeline. No further mitigation was taken, beyond the photographs from the original survey.

#### **GLK0111**

GLK111 is located near the Tala Game Reserve entrance. The site consists of an old ruin of a house on the line

**Location:** In buffer

**Significance:** low

**Current Mitigation:** Site is directly affected.

**Mitigation if affected:** No further mitigation is required.

#### **Mitigation undertaken:**

The structure is younger than 60 years in age, and is of low significance. It appears to be a storage room with an office. Since law does not protect it, we

briefly photographed the buildings, but did not map it (fig. 30). No further mitigation is required.

**FIG. 30: BUILDING AT GLK0111**



## **GRAVES**

### **GLK0025**

GLK025 is located ~250m west of GLK024. The main visible feature of the site is a group of peach trees near the top of the hill. The site consists of several house floors and very broken walls. There is a small stone walled kraal abutting the koppie, and three possible graves between the koppie and the kraal.

**Location:** On/near line

**Significance:** Medium

**Current mitigation:** Site is directly affected by the pipeline. Photograph, map and measure the features. Selective excavation along the line should occur. The potential graves should not be disturbed unless necessary. The people, or the relatives, who lived at this site should be consulted to confirm if graves do occur. If no one can be interviewed then archaeological excavations should be undertaken at the graves.

**Mitigation if affected:** as above

### **Mitigation undertaken:**

The site consists of several stone features that are now more visible due to the shortened grass. The pipeline occurs ~50m away from these features, and on the western side of the rocky outcrop. We re-assessed the area for graves, and concluded that there is only one possible grave (fig. 31), while the other two

possible graves are related to collapsed walling. The possible grave was demarcated with coloured fence droppers (fig. 32).

**FIG. 31: POSSIBLE GRAVE AT GLK0025**



**FIG. 32:**

**DEMARCATED**

**POSSIBLE GRAVE AT GLK0025**



**GLK00027b**

GLK027b is a cemetery near the corner of a boundary fence and the road. The site consists of ~15 graves of presumed local labourers in a ~100m<sup>2</sup> area. One grave dates to the 1950s: it has a legible headstone and appears to be better preserved than the others are. One large burrowing animal (aardvark?) has burrowed into the one grave.



**Location:** GLK027a - in buffer; GLK027b on line

**Significance:** GLK027a – Low; GLK027b - High

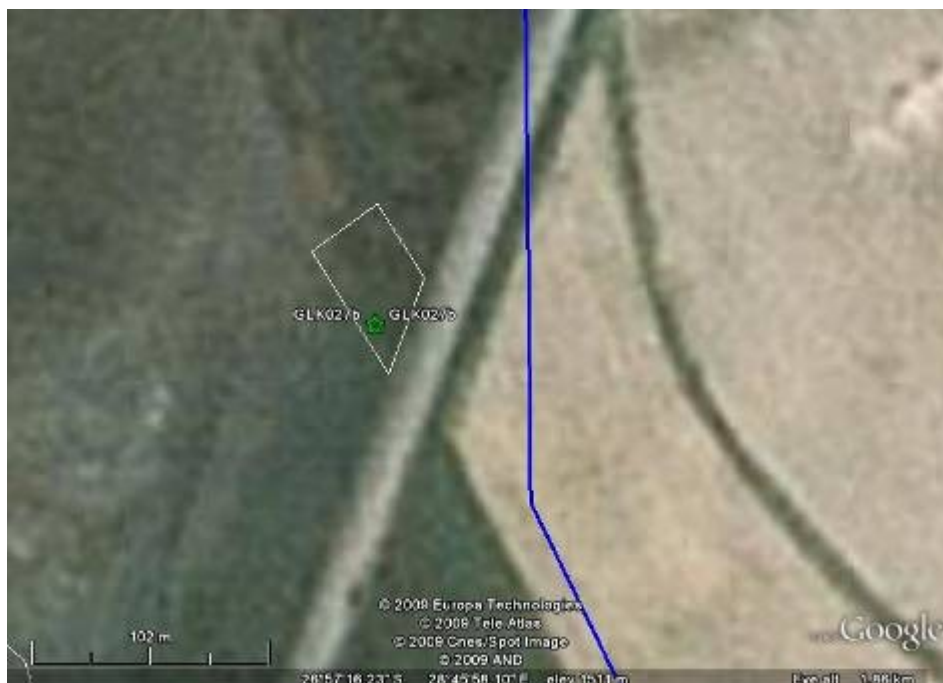
**Current mitigation:** GLK027a is not directly affected. GLK027b – reroute the line to the opposite fence – pipeline must be 10m away from the cemetery. The living relatives of the deceased should be consulted regarding the proximity of the pipeline to their ancestors.

**Mitigation if affected:** GLK027a - Photograph, map and measure the features. GLK027b – reroute the line to the opposite fence – pipeline must be 10m away from the cemetery. The living relatives of the deceased should be consulted regarding the proximity of the pipeline to their ancestors.

#### **Mitigation undertaken:**

We contacted the landowner to gain access to the land; however, we were not well received during the conversation. We decided that since the pipeline passes the cemetery on the opposite side of the road, then it would not be affected and would not require demarcation. Furthermore, the cemetery is already demarcated with fencing. Figure 33 indicates the location of the pipeline in relation to the cemetery.

**FIG. 33: EXTENT OF CEMETERY AT GLK0027B AND THE PIPELINE**



### **GLK0039**

GLK039 consists of three recent graves and current settlement. The graves and the settlement are probably related.

**Location:** On line

**Significance:** High

**Current mitigation:** Border of the servitude should be diverted at least 10m away from the graves.

**Mitigation if affected:** Border of the servitude should be diverted at least 10m away from the graves.

**Mitigation undertaken:**

The graves are demarcated with fencing and form part of the settlement. They are also more than 100m from the line since the line was realigned in 2008 after our initial survey. The site was not demarcated and no further mitigation is required.

### **GLK0040b**

This site was originally recorded (Anderson 1998: 4 - 5) and was described as follows:

“The graveyard belongs to the Wessels family who lived on the farm Somersvlakte before and after 1890 AD. Some buildings of the nearby farmhouse appear to be older than 100 years old and coincide with the dates of the graves.

There are two rows of graves in a north-south orientation surrounded by a fence and blue gum trees. The northern row of four graves has no headstones, nor any other identifying features, and appears to predate the southern row of graves. The southern row of four graves has marble headstones and epitaphs. These are in various stages of preservation.”

GLK40b consists of two cemeteries and a stone sheep dip. The main cemetery was recorded in 1998; however, the second cemetery is probably more recent as I did not observe it in 1998. This consists of two small graves and probably belongs to the people now living where the Somersvlakte ruins occur. These graves are situated between the Wessels' graves and the stone sheep dip. The sheep dip is older than 60 years and consists of a sandstone outer wall that has two exits. In the middle of the enclosure is a dip in a keyhole shape. This dip has been cut into the rock and appears to be a unique feature.

**Location:** 'a' is in the buffer, while 'b' is on the line

**Significance:** 'a' is of low significance; 'b' is high of high significance

**Current mitigation:** 'a' is not directly affected. 'b' is directly affected and the border of the servitude must move at least 10m west from the edges of the site. The site may not be disturbed.

**Mitigation if affected:** 'a': photographed, measure the features. 'b' may not be affected.

**Mitigation undertaken:**

The pipeline passes the main cemetery by ~20m to the west. The main cemetery belonging to the Wessels family is clearly demarcated with a large fence and poles (even if it is in disrepair). The more recent possible graves occur ~70m to the east of the pipeline. These were not clearly visible and we have demarcated the area of the two graves with coloured fence droppers (fig. 34). We also re-photographed the Wessels' graves and the sheep dip.

**GLK0059**

GLK059 is located just outside Van Reenen near the existing Transnet line and two rundown houses. The site consists of two graves (fig. 53). According to an informant, the graves are ~15 years old and a Mr Hlatwayo is buried there.

**Location:** near line

**Significance:** High

**Current mitigation:** Site is not directly affected by the current line.

**Mitigation if affected:** The graves should not be disturbed.

**Mitigation undertaken:**

The graves were demarcated with coloured fence droppers (fig. 35)

### GLK0075

GLK0075 consists of two mud-brick houses and one broken mud-brick structure. The one house has a windbreak wall at the (western) front of the entrance (fig. 66a). This is an unusual design for standard Zulu houses. The graves are near the Acacia tree under dense bush and weeds.

**Location:** Near line (currently), although it may become on the line.

**Significance:** The graves are of high significance, but the houses are of low significance.

**Current mitigation:** Photograph, map and measure the features. The graves should not be affected, however the line location has few options in this area and they graves may be affected. The correct procedures for grave removals need to be followed.

**Mitigation if affected:** as above.

**FIG. 34: EXTENT OF UNAMRKED GRAVES AT GLK0040B**

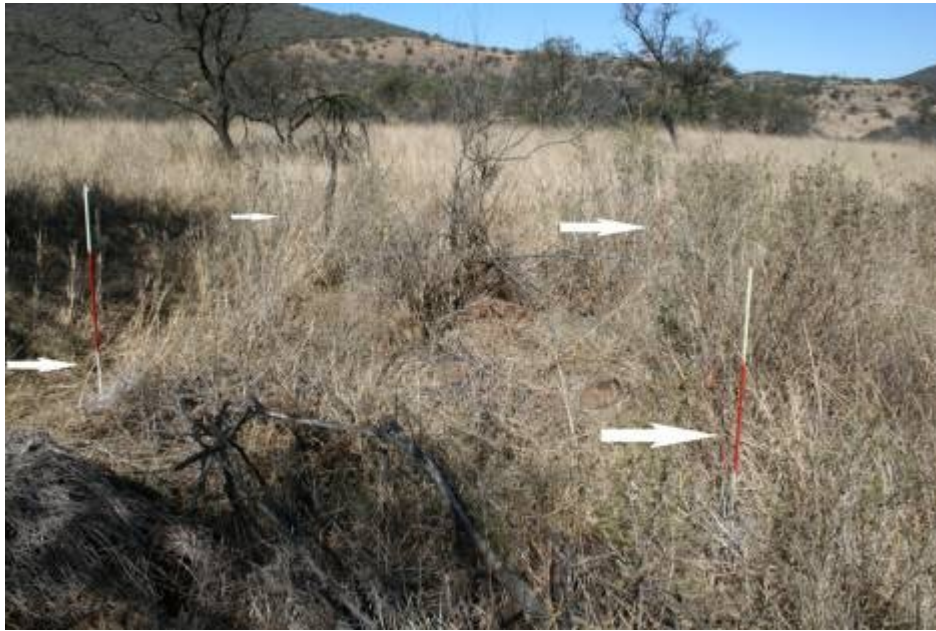


**FIG. 35: EXTENT OF GRAVES AT GLK0040B****Mitigation undertaken:**

The site was photographed and the grave was demarcated (fig. 36). The vegetation was less dense during this field trip and we noted two stone walled kraals to the northeast and southeast of the two houses. The houses and kraals were photographed. The houses are made in the 'wattle and daub' design and are both ~ in diameter. The kraals are large (~12m in diameter) and consist of two large stone rows with small pebbles used as infill. The latest route re-alignment (i.e. after the site was photographed and demarcated) places the pipeline within 2m of the graves. The pipeline will need to be moved either to the west (i.e. closer to the fence), or between the stone walled kraals and 'wattle and daub houses'. Figure 37 indicates the locations of these structures.



**FIG. 36: EXTENT OF UNAMRKED GRAVES AT GLK075**



**GLK0126**

GLK126 consists of a single fenced grave. The grave appears to be recent in age.

**Location:** Near line

**Significance:** High

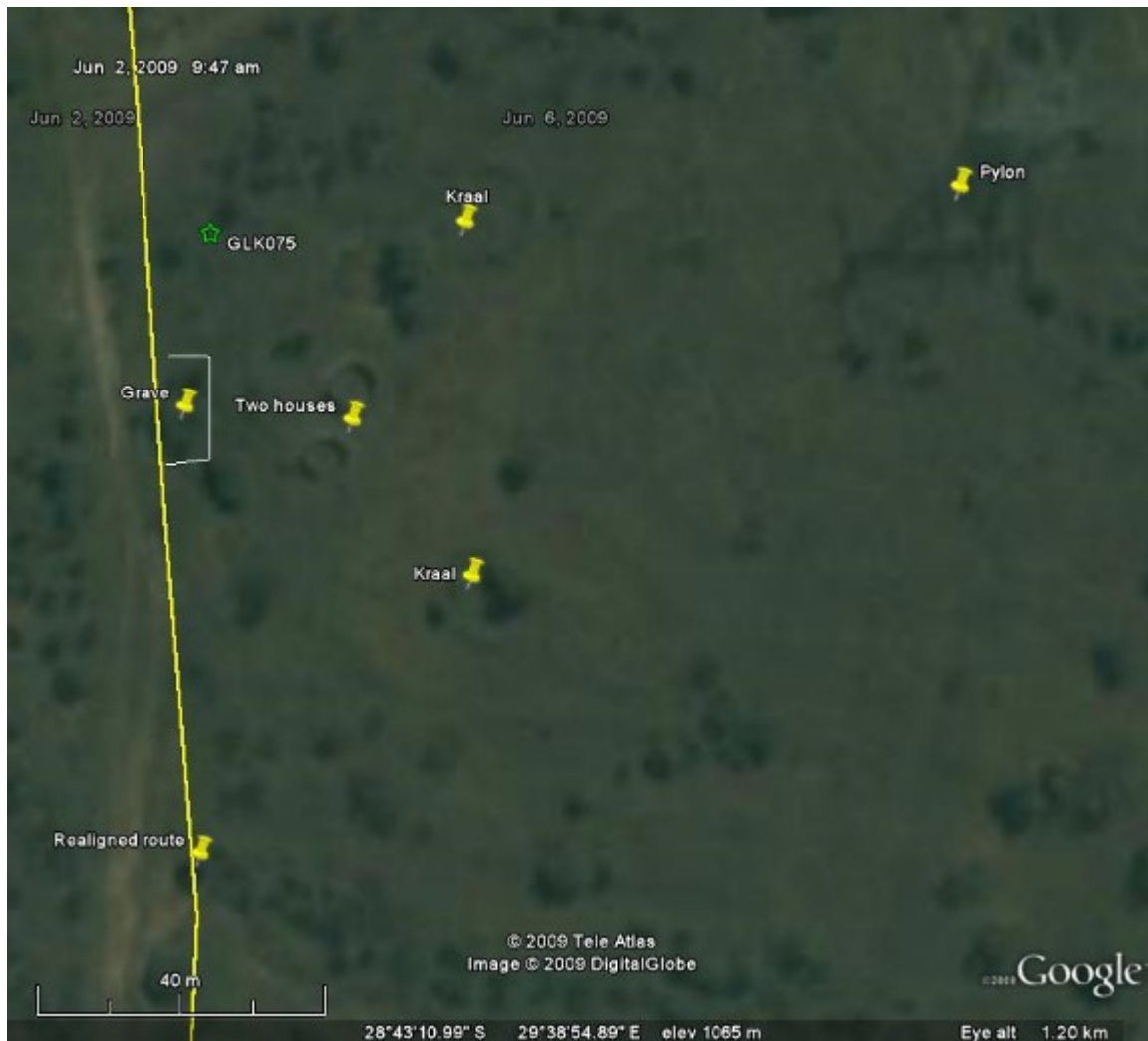
**Current mitigation:** Line should be moved to at least 10m away from the grave. Community participation should occur to locate the living relatives of the deceased. The living relatives should be make comments about the proximity of the pipeline to their ancestors.

**Mitigation if affected:** As above

**Mitigation undertaken:**

We were denied access to the site by the landowner, and thus could not demarcate the grave. This will need to occur at a later stage.

FIG. 37: EXTENT OF UNAMRKED GRAVES AT GLK075

**GLK0127**

GLK127 consists of a modern grave, probably associated with nearby homesteads.

**Location:** On line

**Significance:** High

**Current mitigation:** Line should be moved to at least 10m away from the grave. Community participation should occur to locate the living relatives of the deceased. The living relatives should be make comments about the proximity of the pipeline to their ancestors.

**Mitigation if affected:** As above

**Mitigation undertaken:**

The grave was demarcated with coloured fence droppers (fig. 38).

**FIG. 38: EXTENT OF UNAMRKED GRAVES AT GLK0127**



Other graves noted in the survey are archaeological and/or historical graves and will be dealt with in Phase 2.

Three cemeteries were recorded since the initial survey. We recorded two of these, and they occur at GLK008 and GLK015. These two cemeteries are outside of the 100m boundary and will not be affected. A small cemetery was recorded by the surveyors at KP541.19<sup>5</sup>. This site is ~2.05km southeast of GLK0010 and near the farm Blinkpoort. The graves have been demarcated and the route has been slightly re-aligned so as not to disturb the graves. There are apparent graves<sup>6</sup> on the Farm Vlaktefontein (near KP528.5), but these are ~120m east of the line.

## **BATTLEFIELDS**

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5 26°34'27.99"S 28°28'53.39"E

6 26°39'29.34"S 28°33'15.18"E



### GLK0055a

GLK0055a consists of the original stone walling and buildings of the farm Herbstfontein that predates the 20<sup>th</sup> century. The farm was part of a skirmish between the Boer and British forces, and was rebuilt in 1908. The stone walling outside of the main farm buildings is substantial and includes cattle and sheep kraals and pigpens. There are two graves near the house. The local oral history states that it may be the remains of two Voortrekkers who died at the outspan nearby. However, we inspected the graves and concluded that they were unlikely to be Voortrekker as there are no headstones. These graves are probably related to the settlement near GLK0055b, that is they are of African origin.

The skirmish at Herbstfontein is relatively unknown, or unrecorded, as one of the major battles. According to Mr. G. Torlage (pers. comm.), minor skirmishes such as these occur all over southern Africa and the accounts of the battles would only be located at the national archives in Pretoria. The 'Skirmish of Herbstfontein' resulted in several rifle and cannon shots being fired. The house was partially burnt down by the British in 1899 (A. Ramos pers comm.). The shells and bullet heads (and in some cases unfired bullets) occur in the fields northwest of the farm. One bullet is of interest in that the cartridge has been re-used and fired several times.

The current landowner was given photographs (by the previous landowners) of the people who used to live on the farm. These photographs were taken at the local school (GLK0057), are dated, and some have the names of the teachers or schoolchildren. Some of these people are to be found buried in the family cemetery. This type of site-specific history (placing faces to schools, graves, homes, battles, etc.) is not common.

**Location:** on line and in buffer

**Significance:** High.

**Current mitigation:** Parts of the site are directly affected by the pipeline. The cemetery and battlefield may not be affected by the pipeline. The pipeline will need to move northeast towards the road – preferably next to the road. The alternative is to move the line further west through the hills. If this were the case, then we would need to undertake a more detailed archival search to obtain more information about the locations of various forces during the 'skirmish' at this site, and then reroute accordingly. If the pipeline moves next to the road, it is unlikely to disturb *in situ* material.

The final location of the line will need to be resurveyed if it is out of the buffer zone. This will need to be surveyed with a metal detector for any possible Anglo-Boer War

artefacts. A qualified heritage assessor will need to be present during the construction phase in this area.

**Mitigation if affected:** Site may not to be effected

**Mitigation undertaken:**

The pipeline does not directly affect the battlefield area; rather it is located just outside of the main battlefield. The pipeline position was entered into the GPS and the line was walked with a metal detector. We surveyed for 'chance occurrences' of artefacts. No artefacts were recovered during the survey, although one area has been noted that may have a metal artefact – it was in a wetland. This area will be monitored during the construction phase.

**GLK0115**

GLK115 is located near the battle of Langverwacht. The site consists of various historical farm buildings, of which some are older than 60 years.

**Location:** Near line

**Significance:** Medium

**Current mitigation:** None required

**Mitigation if affected:** Not applicable as people currently use the farm buildings.

**Mitigation undertaken:**

The area of survey began at GLK0115, and followed the pipeline route to the road. As with GLK055a, the pipeline is not on the battlefield *per se*, but was used as a "chance occurrence" as the Boer forces passed through this area on their way through Langverwacht. The main battlefield is ~1.3km from the pipeline. Only two areas indicated metal objects below the surface. The first was directly beside a (occupied) porcupine or aardvark burrow. After 30cm of digging, I could still not locate the object, and did not want to disturb the resident animal. The area was noted for further investigation during the construction phase. The other object was a recent axe head.

This are will need to be monitored during the construction phase of the project.

## ENGRAVINGS

### GLK0077

GLK077 is located ~300m north-northwest from GLK074. The site consists of a possible settlement and engravings. The grass obscures the settlement, but there are suggestions of walling. There is one lower grinding stone. The main part of the site consists of two engraved dolerite boulders: a large and a small boulder.

The engravings are mostly circles with a single '+' in the inside, while others have multiple '+' inside. These are not classic Iron Age engravings (see 2829DC016) and look similar to the images painted in rock shelters done by Zionists (or the Prophet Milliont) in the Mweni area of the Drakensberg in the 1930s and 1940s (Anderson 2007).

**Location:** In buffer

**Significance:** High

**Current mitigation:** The site is not directly affected. The engravings should be demarcated before construction phase so that they are not inadvertently used for a resting area.

**Mitigation if affected:** Engravings should not be affected. Area should be surveyed and the walling mapped and photographed.

### Mitigation undertaken:

The original pipeline at the time of the Phase 1 placed the pipeline ~120m to the west of the engravings. The route realignment now brings the pipeline to 60m to the west of the engravings. I visited the engraving site to obtain a better GPS reading, or to confirm the previous reading. The latest reading places the engraving site 20m northeast (28°43'45.38"S 29°38'53.64"E). The discrepancy may relate to interference from the power lines directly above the site.

The engraving area was not demarcated as it was outside of the 100m boundary at the time of the Phase 1. I will demarcate the site at a later stage, as nearby areas need to be monitored during construction phase, while other sites need to be mapped.

## CULTURAL LANDSCAPE

### GLK0103

GLK103 consists of several lines of trees forming part of land boundaries. These occur all over the Weston property, and this is one example. The trees are historical landmarks, even if they are an alien species.

**Location:** On the line

**Significance:** low

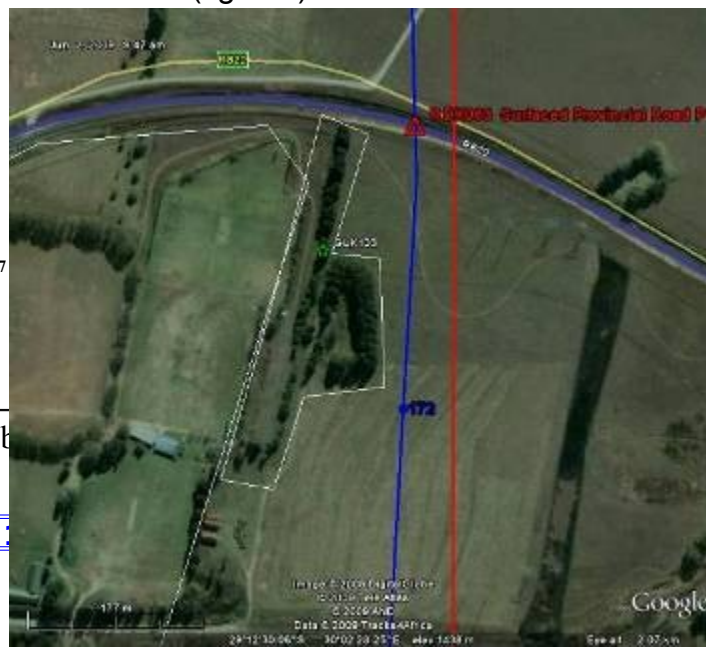
**Current Mitigation:** The general location of the trees is directly affected by the line. The line can miss the trees if it goes through areas where there are large gaps between the trees. The line will need to be moved at least 35m east at chainage 169.8, at the road crossing, as it will damage the trees. The area should be revisited once the final line has been marked on the ground before construction phase to ensure that these markers will not be damaged.

**Mitigation if affected:** As above

### Mitigation undertaken:

The pipeline was re-aligned to have no impact on the trees, and is now 30m – 120m east of the trees (fig. 39). The tree boundaries were photographed (fig.40).

**FIG. 39: TREE MARKERS IN THE PIPELINE<sup>7</sup>**



**BOUNDARY RELATION TO**

<sup>7</sup> Pipeline is the b



**FIG. 40: WIDE ANGLE VIEW OF THE TREE BOUNDARY**



**GLK0104**

GLK104 is located on Shackleton Farm, near the Mooi River. The site consists of a row of trees that form part of the boundary. An older Transnet line runs besides these trees.

**Location:** Near line

**Significance:** low

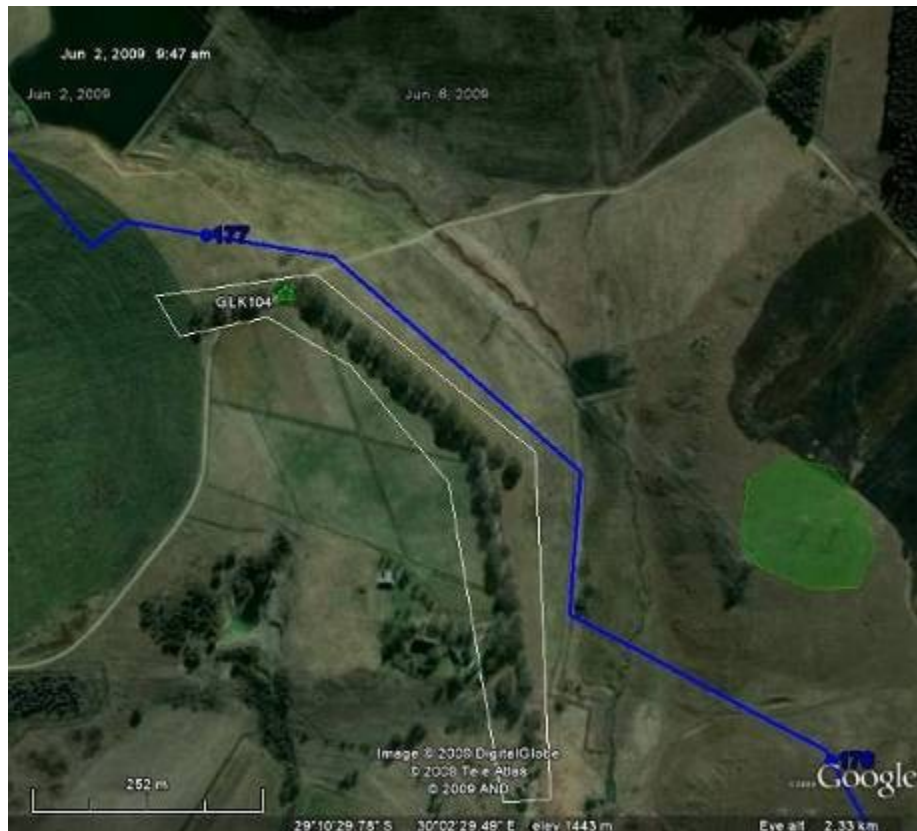
**Current Mitigation:** Site is not directly affected.

**Mitigation if affected:** The trees should not be affected.

**Mitigation undertaken:**

The pipeline was re-aligned to have no impact on the trees, and is now 30m – 90m away from the trees. The rows of trees were photographed from various angles. Fig. 41 show the line of trees in relation to the pipeline, while fig. 42 indicates the row of trees

**FIG. 41: AERIAL VIEW OF THE FARM BOUNDARY IN RELATION TO THE PIPELINE**



**FIG. 42:  
THE TREE**



**VIEW OF  
BOUNDARY**

## CONCLUSION

The Phase 1 of the heritage management has noted several areas that would need some form of management. This occurred as the line had been rerouted after the Phase 1 work had been undertaken. This work can be undertaken later in conjunction with Phase 2 or 4.

The following areas will require monitoring during the construction phase<sup>8</sup>:

- KP093 – KP094
- KP096 - KP097
- KP131 – KP134
- KP170 – KP173
- KP220 – KP225
- KP240 - KP258
- KP384 - KP388
- KP481 - KP 483
- KP501 – KP503

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<sup>8</sup> The KP number refers to the KP readings on PL1\_CL\_030209, and not the most recent re-alignment for which I do not have KP numbers.

This monitoring excludes those areas that will be mapped and/or excavated  
These areas are as follows:

- KP217 – KP218
- KP237 - KP239
- KP216 – KP218
- KP263 – KP265
- KP268 – KP270
- KP154 – KP155
- KP272 – KP276

Many of the areas to be excavated and/or mapped are in a cluster between the Tugela River and the Sand River, although some are also located just north of Estcourt. The old Van Reenen-Wyford wagon tracks were scheduled for monitoring; however, the pipeline has now been moved to a hill to the east.

We are waiting for the results of the palaeontological desktop study. This desktop study will not sensitive areas along the route and will refer to the KP numbers as provided. The construction phase then needs to indicate when these areas will be affected to Umlando who will liaise with the palaeontologist.