

**SUMMARY OF THE HERITAGE SITES DAMAGED ALONG  
THE TRANSNET NMPP**

**FOR KZN HERITAGE AND TRANSNET**

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## INTRODUCTION

Umlando cc was contracted by Transnet to undertake the mitigation and management for several heritage sites along the New Multi Purpose Pipeline (NMPP). The line begins in Durban and ends in Heidelberg, Gauteng.

The EIA for the project was initiated in 2007, and has undergone various stages within the EIA process. The NMPP is currently at the construction phase with various types of monitoring being undertaken for the project.

The independent environmental company requested Umlando, to undertake a site visit in June 2010. The ECO noted that there had been some disturbances and needed to verify this. Umlando undertook the site visit in early July 2010, and noted that some stone walled features and graves had been disturbed. Umlando visited other sites ~5km along the line and noted that several other graves had been affected in some manner. Umlando phoned the Environmental officer for Transnet to report these findings. A meeting with the relevant people was arranged two days later and included a site inspection. The entire area was closed off for further construction activity until the meeting. A further site inspection was undertaken along 80km of the NMPP where highly sensitive sites occurred.

This report aims to:

- identify the specific impacts on various sites along the NMPP
- Identify at what general stage the impact occurred
- discuss the mitigation undertaken
- assess the level of impact

It is not the aim of this report to identify who is responsible for the impacts, as Transnet and Group 5 Spiecapag JV are undertaking this.

**KWAZULU-NATAL HERITAGE ACT NO. 4 OF 2008**

**“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.

**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.

**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.

**36. General protection: Battlefield sites, archaeological sites, rock art sites, palaeontological sites, historic fortifications, meteorite or meteorite impact sites.—**

a) 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)

### **TERMINOLOGY USED OFR THE PROJECT**

**ECO:** Environmental control officer – a range of people who undertake environmental monitoring and in some cases heritage monitoring

**HIA:** Heritage Impact Assessment/Assessor

**HP:** Historical Period – in Kwazulu-Natal the Historical Period post dates 1829, and consists of indigenous and colonial people.

**KP:** Kilometre Point – every kilometre along the line is given a KP number and used by every person as a reference point. The KP is then subdivided by the meters within the KP, e.g. KP500+500 would be at 500km from the start, and then another 500m north (or positive) towards KP600.

**JV:** Joint Venture between Group 5 (South Africa) and Spiecapag (International). This is the construction company

**LIA:** Late Iron Age – Iron Age farmers dating from c AD1100 – AD 1820.

**NMPP:** New Multi Purpose Pipeline – the pipeline for the project

**RoW:** Right of Way - This is a 30m wide strip from start to finish where the impact zone of the pipeline will occur. The RoW is levelled by removing the upper 30cm of topsoil.

**Significance of impact (in this instance all are negative impacts):**

- High negative: site is destroyed and cannot be fixed.

- Medium negative: site is partially damaged or affected and may be mitigated and salvaged
- Low negative: the site has been minimally affected, and for this report, it refers to the fact that the heritage area has been affected, and not the site.

## **STAGES OF HERITAGE MANAGEMENT FOR THE PROJECT**

The heritage management for this pipeline has various stages and these have been undertaken in mostly conjunction with the construction phases. The process is as follows:

### **1. Initial survey**

- 1.1. This survey was undertaken at a desktop level and a field survey from 2007 to 2008
- 1.2. Approximately 200 sites were observed within a 400m corridor of the proposed line
- 1.3. The line was rerouted at various stages for various factors, of which heritage was one factor.
- 1.4. Management plans for each site were submitted and formed part of the general EIA

### **2. Site mitigation**

- 2.1. Each site that was impacted, or had the potential to be impacted had some form of mitigation
- 2.2. The mitigation included, photography, mapping, collections and/or excavations
- 2.3. Several sites were mapped by a surveyor and these were given XY co-ordinates and submitted to the NMPP. All of these sites have a double reference, e.g. GLK0122b\_4 refers to the heritage site GLK0122b, and while the suffix refers to the specific feature (number reference used by the surveyor and is on the CAD files). Each CAD file feature reference has a further sub-division that refers to specific points. These are the near precise locations of specific points of the features.



## 2.4. Excavations

- 2.4.1. Some sites were excavated. Excavations occurred along the direct impact zone of the pipeline within 5m of each side of the line.
- 2.4.2. At this stage we were informed that the impact zone would be a 30m wide strip, where the upper 30cm of topsoil would be removed.
- 2.4.3. All structures and features within this 30m zone, but not in the 10m centre line corridor, were demarcated and designated as 'no-impact' zones.
- 2.4.4. These sites and features were submitted to Transnet and line reroutes were undertaken

## 2.5. Pre-RoW reconnaissance

- 2.5.1. The ECOs and someone from the construction company undertaking the RoW clearance surveyed ahead of the starting position to make notes of possible features etc. These included ones that were known and unknown.
- 2.5.2. It is at this stage that the 30m RoW had been finalized.
- 2.5.3. The ECOs and construction company reported any features or graves to Umlando and Transnet, and site management decisions were made via electronic media and site visits. At least 25 new sites were reported to Umlando, in this manner.<sup>1</sup>
- 2.5.4. All reported sites were demarcated as a matter of course until Umlando had made a final decision.
- 2.5.5. The email correspondences between the various people are available if needed.

## 2.6. Monitoring and RoW clearance

- 2.6.1. All sensitive areas were noted and one or more heritage practitioners, or archaeologists, had to be on site during RoW clearance.
- 2.6.2. Sensitive sites in the RoW had been demarcated with red-white metal poles, wooden poles that had been painted blue and marked "Heritage site"
- 2.6.3. The fencing team was given instructions to fence off sensitive areas, and this happened either before, during, or after RoW monitoring. Instructions for RoW fencing came from the foreman or the ECO, who were instructed by Umlando.

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<sup>1</sup> The original survey was undertaken in February to April where the vegetation was very dense in places. The dense vegetation made it impossible to see small structures that were ~20-40cm above ground in some areas. In some areas the grass was over 2m tall.

2.6.4. During RoW clearance, the HIA was on site to ensure that no unknown features or graves were uncovered beneath the topsoil, that any significant artefacts were collected, and that the demarcated areas were not damaged.

2.6.5. There are a few exceptions where the HIA was not on site, and this is because the mitigation had already been undertaken and instructions for fencing had been given. For example, on the Vaalkranz Battlefield we had surveyed the area with metal detectors before the ROW clearance team arrived, in order to get better artifact provenience. All graves in the Battlefield were demarcated by Umlando and instructions were given to have them fenced off.

### **2.7. Line reroutes**

2.7.1. All graves that appeared to be less than 60 years in age, or those that may have living relatives, were not excavated, and were thus not given permission to be destroyed.

2.7.2. After a meeting in February 2010, the positions of all known graves were submitted to the JV, after a site visit for every, then, known grave. This was to ensure that there was agreement as to the locality of the graves in relation to the pipeline.

2.7.3. The pipeline was rerouted accordingly away from the graves.

### **3. Post-RoW monitoring**

3.1.1. After the above steps had been undertaken, Umlando and the JV, with Transnet, did not see the need to have further on-site monitoring, as all sensitive areas were in the system and had been demarcated.

3.1.2. Umlando was satisfied that reroutes had been made and that the instructions had been given for sensitive areas to be fenced off.

## ASSESSMENT OF DAMAGED SITES

The following is a list of sites that have been impacted in some manner by the pipeline. I need to clearly state that all of these impacts occurred **after** the RoW clearance had occurred, with the possible exception of one site. The Transnet investigation will confirm this as all work activity is logged.

All areas that were demarcated with fencing and/or poles were considered to be heritage sites, and thus were not allowed to be damaged, regardless of its significance and/or content. An important point to note is that all 'possible graves' were given the status of being 'graves' for this project. This is especially the case for graves that are less than 60 years in age, as they would require a social impact assessment if they were to be disturbed. Given the time limitations to this project, we decided that a demarcation and reroute would be more feasible than a social impact assessment. Only archaeological graves in the direct line of the pipeline, i.e. 5m each side of centre point, were excavated. These excavations occurred in 2009 – 2010.

Umlando (Gavin Anderson) and Transnet (Tim Liversage) visited each site listed below to confirm whether it has been damaged. Each site will be (re-)plotted onto the JV system to determine its exact location in relation to the pipeline. All affected areas were closed off from construction activity until further notice. A formal memorandum was sent out stating this, just after the July meeting. This was disregarded in three areas and is discussed below.

Before (2008 - 2009) and after (2010) photographs exist for most of the sites. Those features that do not have before photos have been surveyed with XY co-ordinates. The scale in all photos is 1m or 2m that have been broken into 10cm black or white sections.

It was not my aim to excavate graves for human remains, rather to assess the damage to the cairns themselves. If no cairn remained then by assumption we should find human remains. If that was the scenario, then I would cease excavations immediately and cover up the remains with the associated soil, and build a new cairn.

The sites and their damage is summarised in Table 1. The names for each site are listed as named in the spreadsheet submitted to the JV that included all sites within the RoW and their co-ordinates.

### **GLK066\_75**

This is site located on the top of a hill at KP269. The site extends over the entire hill and consists of many stone walled features and graves. These features date from the LIA to the more recent past. The affected area consisted of one bilobial kraal with two possible graves: one within the kraal and the other to the west. Figures 1 – 3 indicate there are no settlements near this site from 1937 – 2000, although settlements do occur to the south and southwest. This suggests that part of the site appears to date to the LIA.

The site was originally outside of the RoW and was not fenced off, however it was demarcated with metal and wooden poles. After the original RoW was cleared (and monitored), it was extended again, without heritage approval. The second clearance caused the damage to the site. The cleared stone walling can be seen in the pile of sand and rocks near the *Acacia spp* tree.

A nearby similar site (feature 73), in the RoW, was excavated and mapped, and was a “sacrifice site”, since GLK066\_75 was not going to be damaged.

**Significance of site:** The kraal is of low significance

**Significance of impact:** High negative

**Previous mitigation:** The kraal was photographed (fig. 4) and mapped (fig. 5) in 2009 and thus some record of the site exists.

**Occurrence of damage:** The site was monitored during the RoW clearance. The RoW was extended after monitoring.

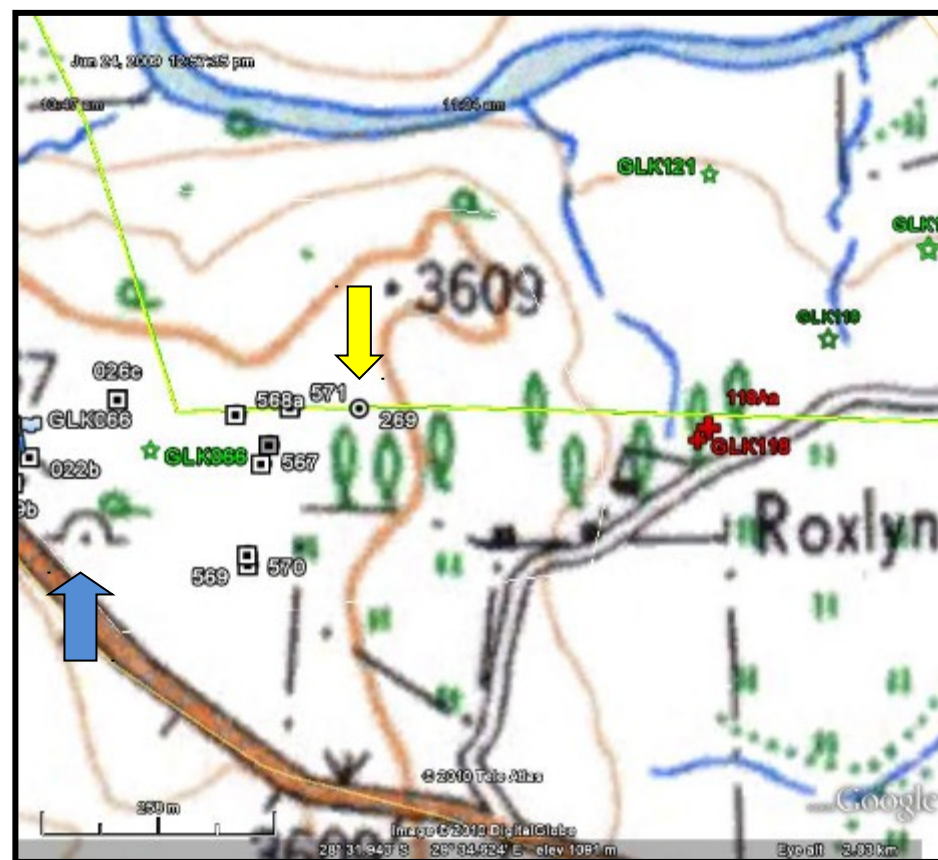
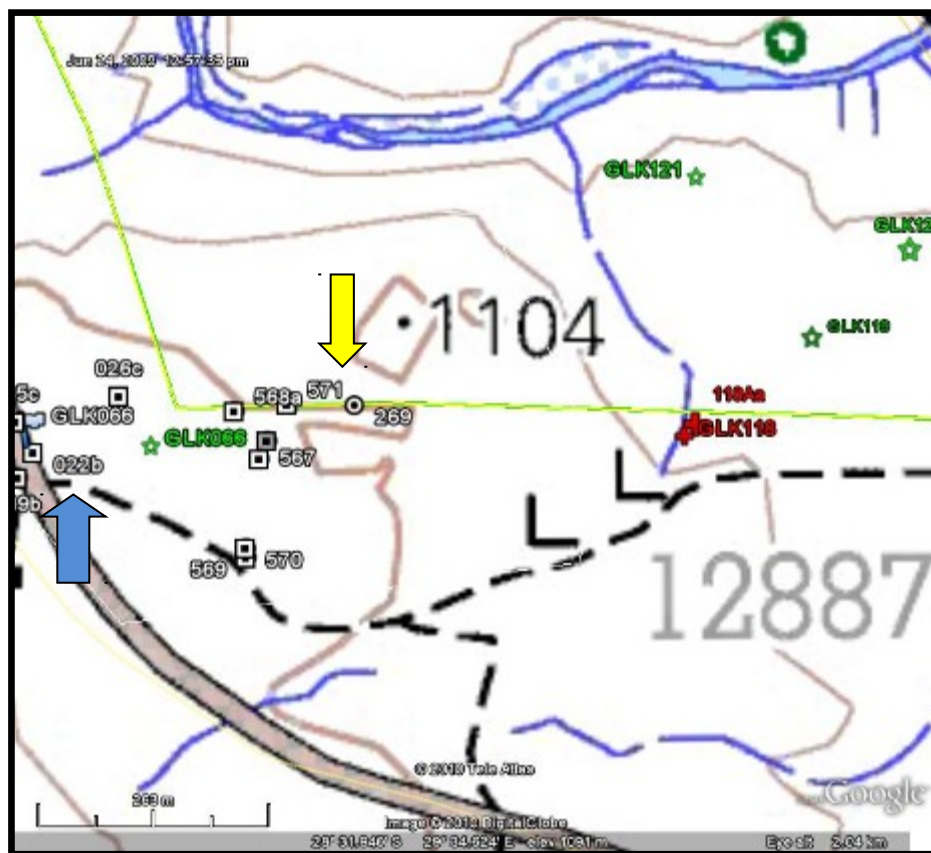
**Assessment of Damage:** The initial assessment suggested that the entire stone wall had been removed by RoW clearance and then topsoil was deposited on top of the site (fig. 6). The stone wall was originally ~10cm – 20cm above ground level and with a similar depth. The southern part of the kraal still exists and was used as a comparison.

I placed several excavation lines in a wheel spoke alignment from the middle of the kraal, for the assessment (fig. 7 - 8). The excavations used the site map (fig. 5) to determine where the walling would occur. The excavations went down to the original surface – visible by the layer of grass. If the stone wall existed, then the excavation lines would locate an *in situ* wall. If no walling was observed, then it implies that it has been removed by the RoW clearance.

The excavations located parts of the primary wall. These remains were the basal stone layer. Most of the secondary wall has been cleared and I only located isolated stones. It appears that at least 75% of the site has been damaged in some manner. Figure 8b shows parts of the undamaged wall.

FIG. 1: FEATURES GLK066 ON THE 2000 TOPOGRAPICAL MAP<sup>2</sup>

FIG. 2: FEATURES GLK066 ON THE 1954 TOPOGRAPICAL MAP



<sup>2</sup> Green star = site; red = recent graves; white square, yellow arrow = affected area; blue arrow = 20<sup>th</sup> century settlement





**FIG. 3: FEATURES GLK066 ON THE 1937 AERIAL MAP**

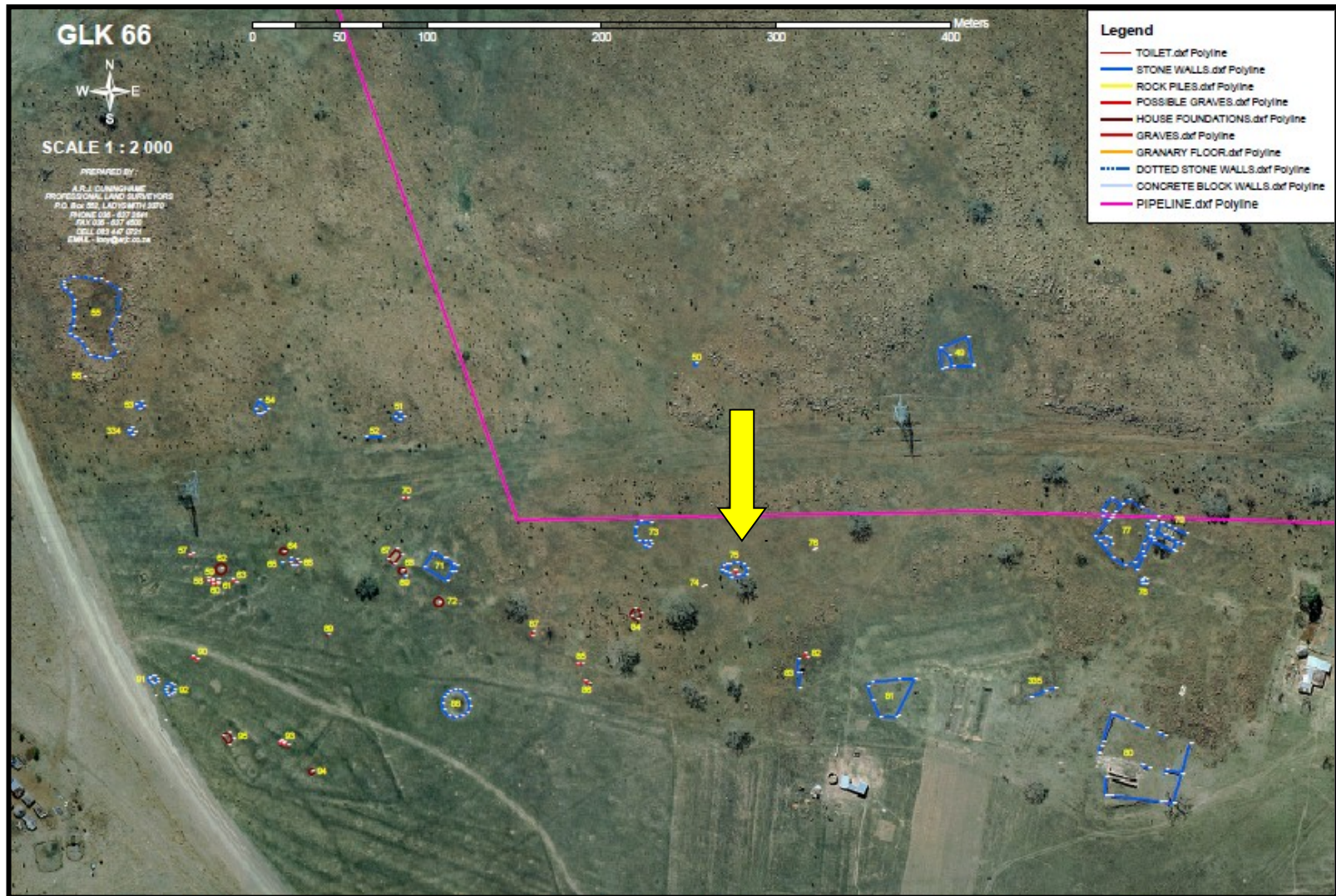


**FIG. 4: PHOTOGRAPH OF GLK066\_75 IN 2009**





FIG. 5: FEATURES GLK066<sup>3</sup>

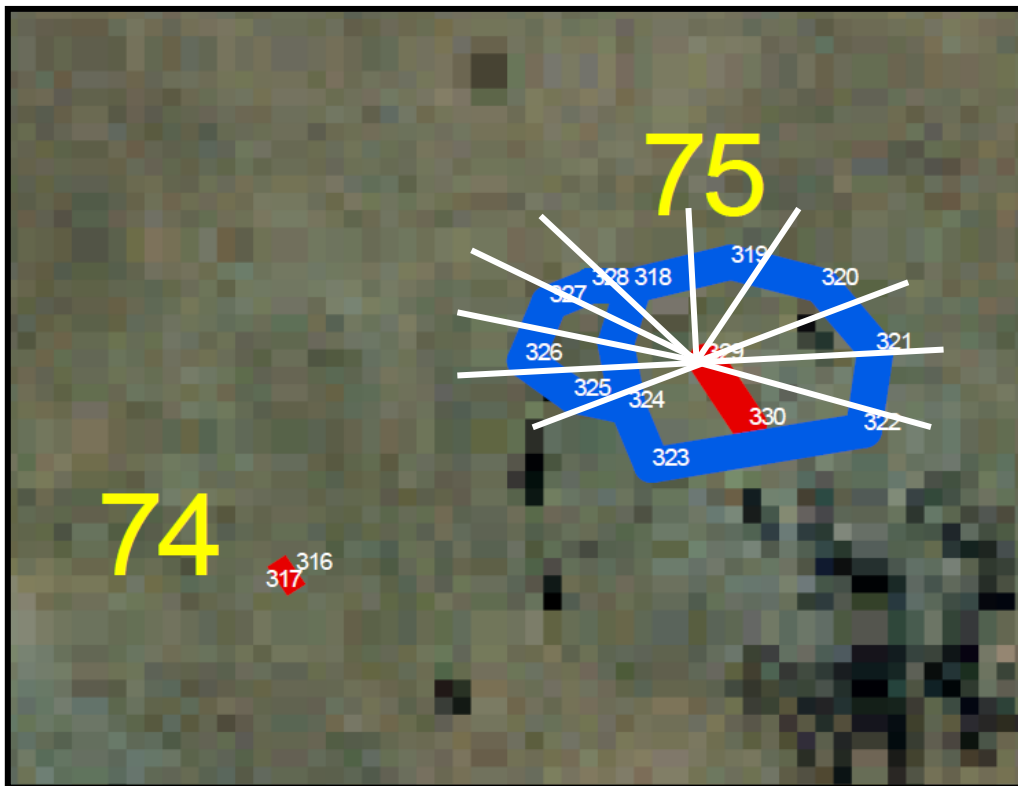


<sup>3</sup> Blue = stone wall; red = grave; pink = pipeline; yellow arrow = feature 75

FIGURE 6: FEATURE 75 AT GLK066\_75 AFTER 2ND ROW CLEARANCE<sup>4</sup>



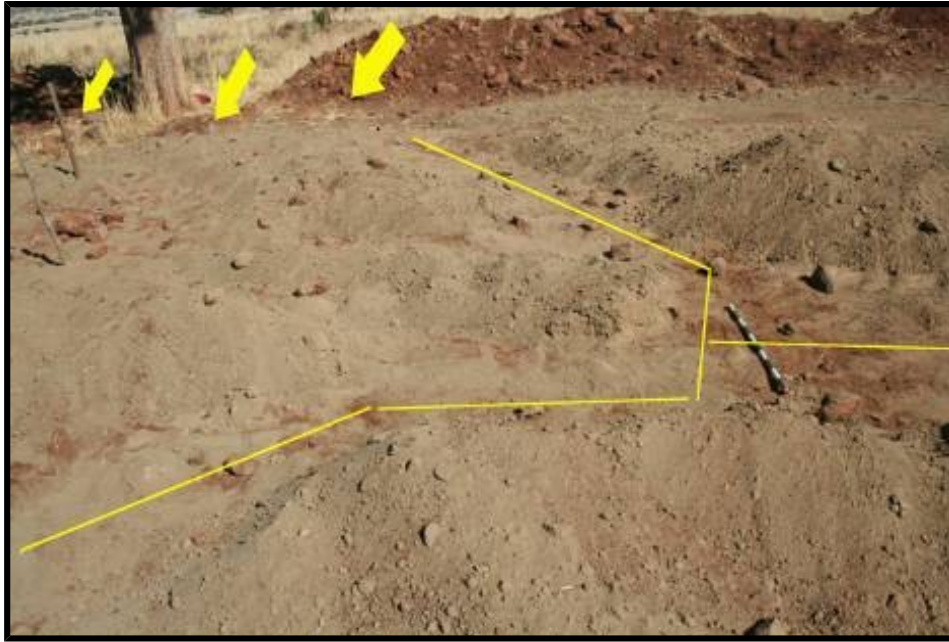
FIG. 7: EXCAVATION LINES AT GLK066\_75



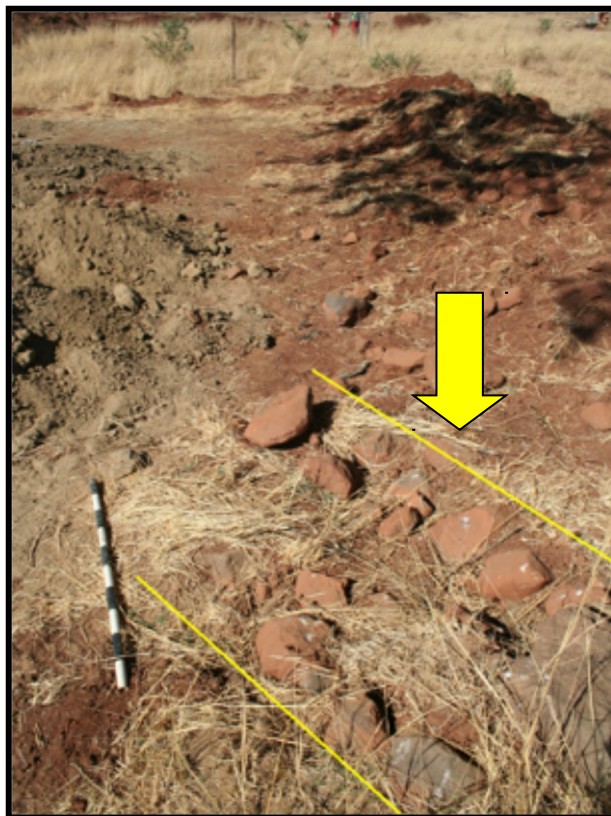
<sup>4</sup> Yellow arrows indicate probably location of grave, blue arrow indicates location of the kraal.



**FIG. 8a: EXCAVATION AT GLK066\_75<sup>5</sup>**



**FIG. 8B: EXCAVATIONS AND REMAINING PART OF STONE WALL AT GLK066\_75**



<sup>5</sup> Yellow line = location of stone wall; yellow arrow = undamaged stone wall

## **GLK066\_74 AND 75 GRAVES**

GLK066\_74 is located ~13m west of GLK066\_75 (fig. 7), and it does not have any related stone walling. GLK066\_75 is located inside the kraal discussed above. The graves consisted of stone cairns and date to the LIA. The graves were demarcated with metal and wooden poles, but were out of the original RoW so they were not fenced off. The topsoil has been removed and thus the upper part of the grave has been removed as well.

**Significance of site:** The features are of high significance

**Significance of impact:** Medium to high negative.

**Previous mitigation:** The graves were photographed (fig. 9 - 10) and mapped (fig. 5) in 2009 and thus some record of the site exists.

**Occurrence of damage:** The site was monitored during the RoW clearance. The RoW was extended after monitoring.

**Assessment of Damage:** The end points of both graves were surveyed in 2009. I used these XY co-ordinates to relocate both graves. I excavated between these two points and a width of ~1m to locate the stone cairns (fig. 9 - 10). \

The cairn at GLK066\_74 has been mostly removed and only a few *in situ* rocks remain. The cairn at GLK066\_75 has been partially affected, and minimally damaged.

**FIG. 9: BEFORE AND AFTER PHOTOGRAPHS OF GRAVE AT GLK066\_74<sup>6</sup>**



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<sup>6</sup> Note the change in the size of the stone cairn



**FIG. 10: BEFORE AND AFTER PHOTOGRAPHS OF GRAVE AT GLK066\_75**





## **GLK118\_96**

This site is located near KP268 and consists of one (recent) historical grave (fig. 1 – 3). The local community does not acknowledge these graves as being theirs, as they have been recently relocated to the area. The grave is probably related to farm labourers who worked on this farm prior to the land settlement. The graves either predate 1937 or between 1955 and 2000, and I would choose the latter date as it is in association with square, or rectangular foundations.

The grave was originally demarcated with blue poles and danger tape and an instruction was given for it to be fenced off. The grave also occurred outside of the original RoW. There was no HIA on site during this part of the RoW clearance.

The initial site inspection could not locate the graves, or their markers, however, the grave was later located with the surveyors using our previous survey data. The grave was covered with the topsoil (fig. 11). The graves were located and the topsoil was removed to expose the graves.

**FIG. 11: LOCATION OF GLK118\_96**





**Significance of site:** The site is of high significance

**Significance of impact:** Medium negative if affected.

**Previous mitigation:** There was no previous mitigation. The graves were supposed to be fenced off if they were in the RoW,

**Occurrence of damage:** The graves were probably affected during the RoW clearance when the topsoil was moved.

**Assessment of Damage:** The graves were technically not damaged and have been cleaned. The associated walling was also cleaned. There was however an infringement on the site and this forms part of the pattern of demarcated heritage sites being ignored by the contractor.

**FIG. 12: LOCATION OF GLK118\_96**



**FIG. 13: GLK118\_96 GRAVE AFTER CLEANING**



**FIG. 13: GLK118\_96 GENERAL AFTER CLEANING**



## **GLK118a**

This site is located at KP268 and consists of two graves that probably date to the recent past and GLK118 (fig. 1 – 3). The area was originally surveyed in as being possible remains of house foundations. We resurveyed the site at a later stage (after notification by the ECO) when the grass had been burnt, and reclassified the site to being possible graves with house foundations. The ECO demarcated the site with blue wooden poles and instructions were given for the site to be fenced off. The co-ordinates for the graves were submitted to the JV in March 2010. The line originally went through the graves, but was then rerouted. No HIA was on site during the RoW clearance, as the graves were out of the RoW.

The local community does not acknowledge these graves as being theirs, as they have been recently relocated to the area. The grave is probably related to farm labourers who worked on this farm prior to the land settlement. The graves either predate 1937 or between 1955 and 2000, and I would choose the latter date as it is in association with square, or rectangular foundations.

The graves were located with our survey data. The graves were outside of the RoW, but one had been covered by rocks during the trenching phase( fig. 15). The rocks were removed and the grave was cleaned up (fig. 16).

**Significance of site:** The site is of high significance

**Significance of impact:** Low negative

**Previous mitigation:** Area was demarcated and the line was rerouted to avoid the graves.

**Occurrence of damage:** During the trenching phase.

**Assessment of Damage:** The graves were technically not damaged and have been cleaned. The associated walling was also cleaned. There was however an infringement on the site and this forms part of the pattern of demarcated heritage sites being ignored by the contractor.



**FIG. 15: STOCK PILE OF ROCKS OVER ONE GRAVE AT GLK118A<sup>7</sup>**



**FIG. 16: CLEANED GRAVES AT GLK118A**



**N3: KP265.300**

<sup>7</sup> Top arrow indicates the covered grave

This site is located at KP265+286 and consists of one possible grave. The possible grave probably dates to the HP or more recent past. Figures 17 – 19 indicate that there is no human occupation in this immediate area in 1937, 1954 nor 2000. The site was located by the ECO during pre-RoW clearance and demarcated with blue wooden poles (fig. 20). I visited the site and confirmed that it is a possible grave, and the area was fenced off and marked off by the RoW supervisor. The landowner recently stated that these features are related to the construction of the N3. This statement has no bearing on the site, as the area was demarcated as a heritage site, regardless of its content, and should have been treated as such.

The grave has been affected in several ways. The fenced off area has been ignored and damaged. The stone cairns are missing due to trenching spoil material being placed on top of it (fig. 21). Site instructions were given for the grave to be covered with protective material during blasting activity; however, I am not sure if this was undertaken. All work activity in the area of the grave had to cease until further notice as from June and a site directive for this was given from Transnet. This meant that the pipe could not be placed into the trench, nor could any backfilling occur.

The site was visited in early July with the surveyors to demarcate its extent. At this stage the pipe had not been placed into the trench. When I visited the site in mid-September, the pipe had been placed into the trench and the trench had been backfilled (fig. 22). This was undertaken without my permission as I had not yet mitigated the site. There was thus a disregard for Transnet's and my directives. One reason for closing the area off was that human remains may be scattered and construction work would further impact on these remains.

The poles demarcating the outer edges of the grave have been removed by the trenching team. The demarcated area was cleaned of the stockpile and the original cairns were exposed (fig. 23). Some of the rocks are missing. I placed some stones to indicate the position of the possible grave (fig. 24).

**Significance of site:** Unless proven otherwise, the site is a grave, and it is of high significance.

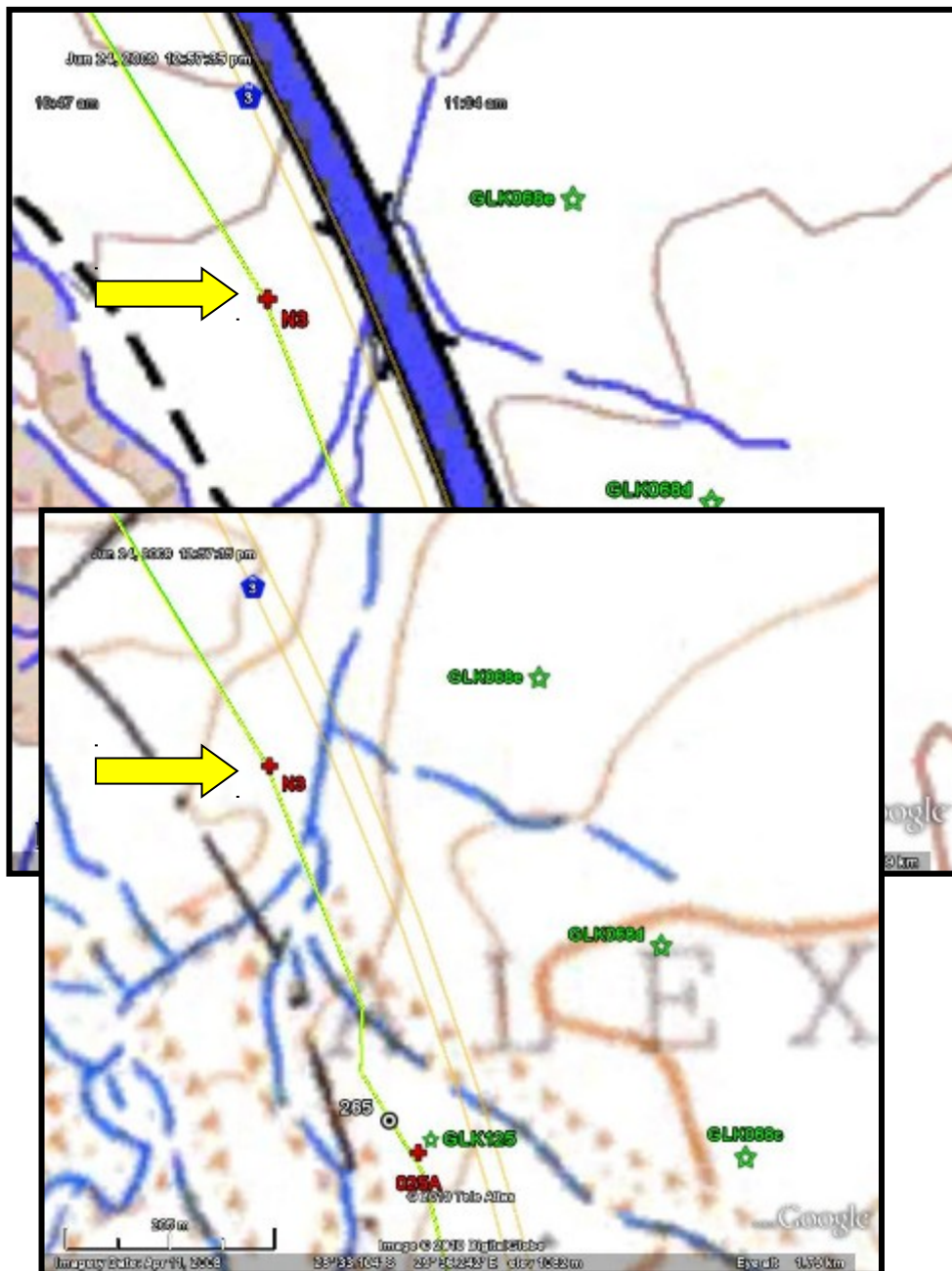
**Significance of impact:** Low negative

**Previous mitigation:** Site was fenced off

**Occurrence of damage:** During trenching and later when the trench was backfilled.

**Assessment of Damage:** The area was cleaned and the outline of the possible grave was demarcated. A few of the rocks from the cairn are missing.

FIG. 17: LOCATION OF POSSIBLE GRAVE IN 2000



**FIG. 19: LOCATION OF POSSIBLE GRAVE IN 1937**





**FIG. 20: PHOTOGRAPH OF POSSIBLE GRAVE SUBMITTED BY THE ECO IN 2009**



**FIG. 21: STOCKPILE OVER DEMARCATED FENCING**





**FIG. 22: BACKFILLING AFTER THE AREA HAD BEEN CLOSED<sup>8</sup>**



**FIG. 23: POSSIBLE GRAVE IS EXPOSED<sup>9</sup>**



**FIG. 24: POSSIBLE GRAVE WITH STONES DEMARACTING THE AREA**

<sup>8</sup> Red arrow indicate the location of the possible grave.

<sup>9</sup> Yellow arrows indicate the original fencing poles



#### **GLK122b\_4**

This site is located at KP264+500 and consists of one grave. The grave was in the RoW, and near the centre point, and the line was rerouted. There is a stone walled kraal ~5m of the grave and the two features are probably related. The site dates to the recent past. The site is noticeable as the blue gum tree is visible in the recent aerial photographs. I could not locate the tree in the 1937 aerial photographs, but then the tree would have been much smaller. Settlements are indicated in this area in the 1954 topographical map, but not on the 2000 map. Figures 24 – 26 indicate this. The grave probably dates between 1937 – 1954. There are several graves and settlements on the hill just above this grave, and some would be contemporary with this grave, while others are much older. For example some stone walling and settlements can be seen uphill of this grave in the 1937 aerial photograph.

The kraal and grave was demarcated with metal and wooden poles and danger tape, and was fenced off. Two HIAs were on site during the RoW clearance to ensure that the grave and walling was not damaged.

The stonewalling has had topsoil placed over the walls since RoW clearance. The cairn (fig. 27) does not exist anymore and we had to relocate the ends of the grave with our survey data. I placed several trenches in the area of the poles to determine if any form of stone cairn or burial could be seen (fig. 28). It appears that the entire cairn has been removed and we could not locate a burial. There was no change in soil colours to indicate a burial however this is expected as the bedrock is near the surface. We could not observe any soil colour changes for the archaeological graves that were excavated in this area in 2009. I did observe one bone fragment from the excavation, but could not determine if it was human or animal. The fragment was kept in case it needs to be analysed. The area was fenced off after the excavations.

**Significance of site:** The grave is of high significance.

**Significance of impact:** The impact is high negative.

**Previous mitigation:** The area was demarcated and fenced off.

**Occurrence of damage:** After RoW clearance

**Assessment of Damage:** The entire cairn has been removed and presumably the grave itself.

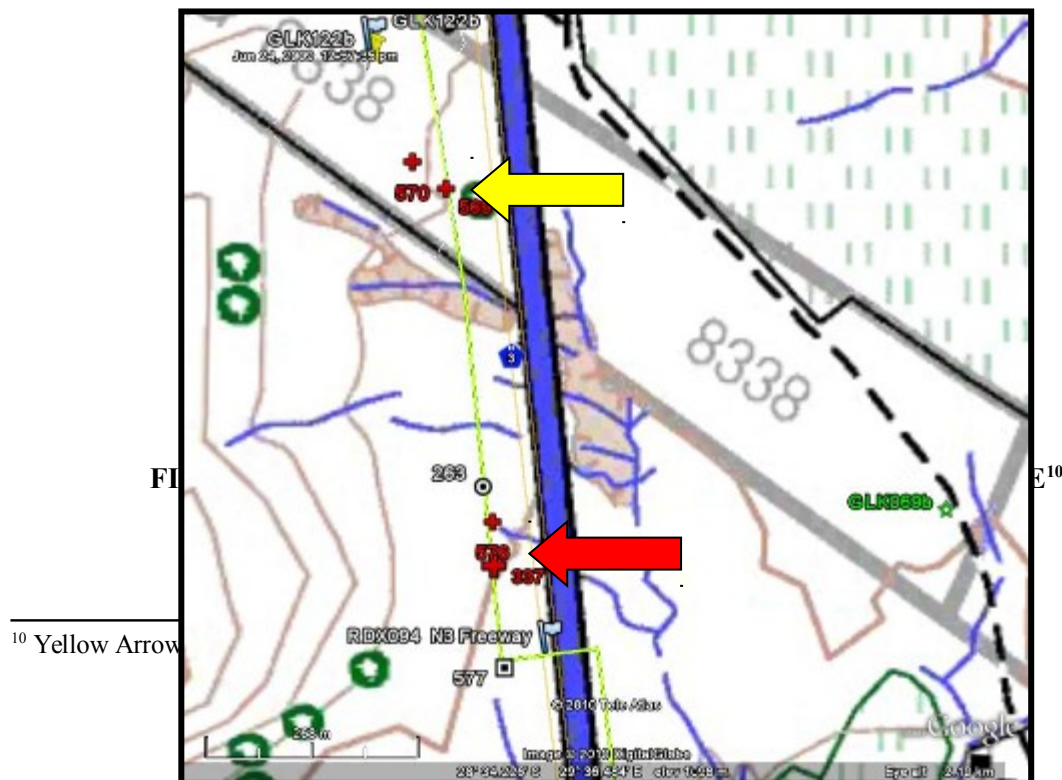
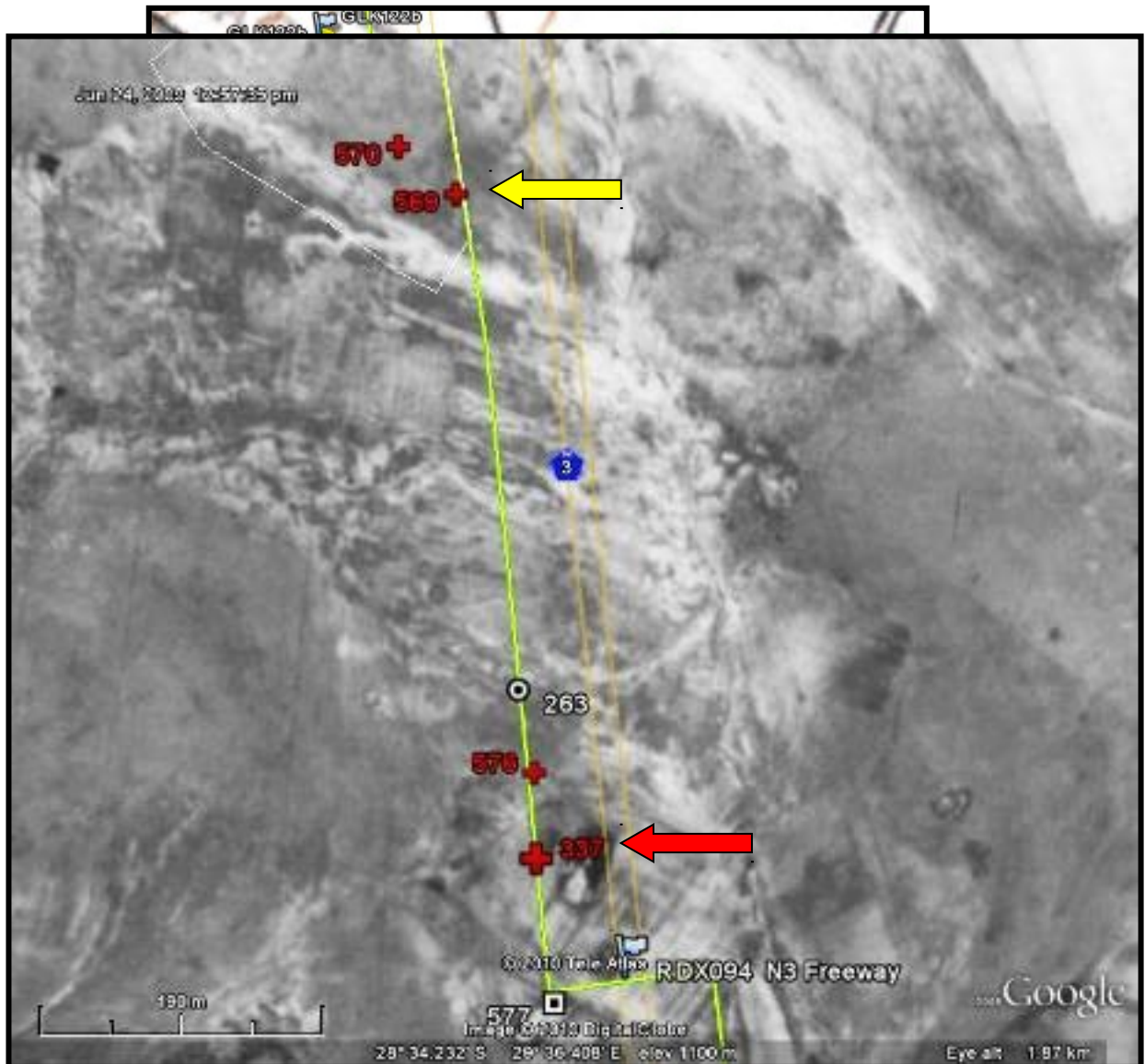




FIGURE 25: 1954 TOPOGRAPHICAL MAP INDICATING THE SITE





**FIGURE 27: POSITION OF GRAVE IN JULY 2009**

**FIGURE 28: POLES INDICATING THE EXTENT OF THE GRAVE AND THE  
EXCAVATION TRENCHES**



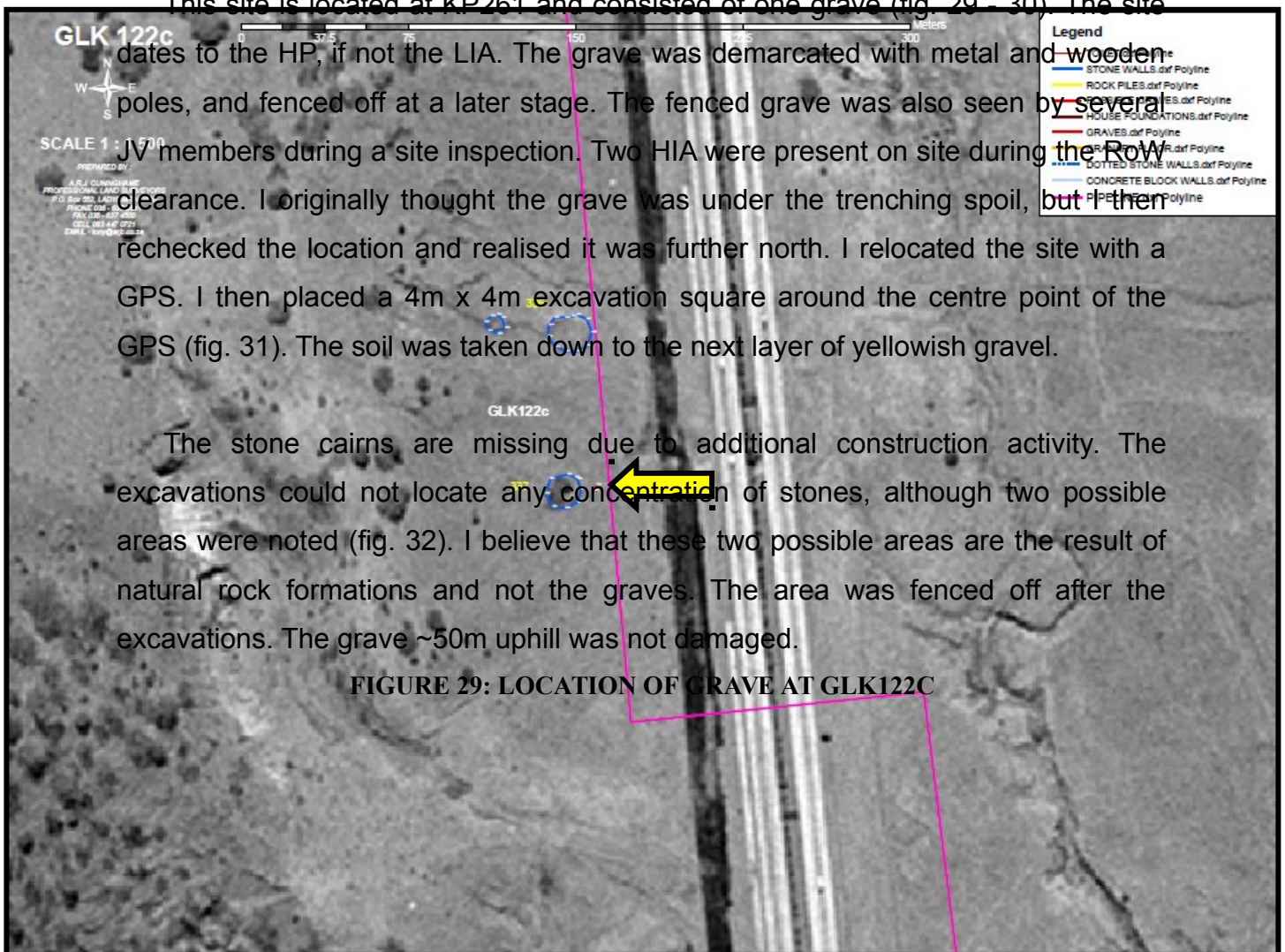


### GLK122c grave 031a

This site is located at KP261 and consisted of one grave (fig. 29 - 30). The site dates to the HP, if not the LIA. The grave was demarcated with metal and wooden poles, and fenced off at a later stage. The fenced grave was also seen by several JV members during a site inspection. Two HIA were present on site during the Row clearance. I originally thought the grave was under the trenching spoil, but I then rechecked the location and realised it was further north. I relocated the site with a GPS. I then placed a 4m x 4m excavation square around the centre point of the GPS (fig. 31). The soil was taken down to the next layer of yellowish gravel.

The stone cairns are missing due to additional construction activity. The excavations could not locate any concentration of stones, although two possible areas were noted (fig. 32). I believe that these two possible areas are the result of natural rock formations and not the graves. The area was fenced off after the excavations. The grave ~50m uphill was not damaged.

**FIGURE 29: LOCATION OF GRAVE AT GLK122C**



**Significance of site:** The site is of high significance  
**Significance of impact:** High negative  
**Previous mitigation:** Area was fenced off.  
**Occurrence of damage:** After RoW clearance.  
**Assessment of Damage:** The entire cairn has been removed and presumably the grave itself.

**FIGURE 30: GRAVE AT GLK122C**



**FIGURE 31: CLEARED AREA WHERE THE GRAVE OCCURRED**



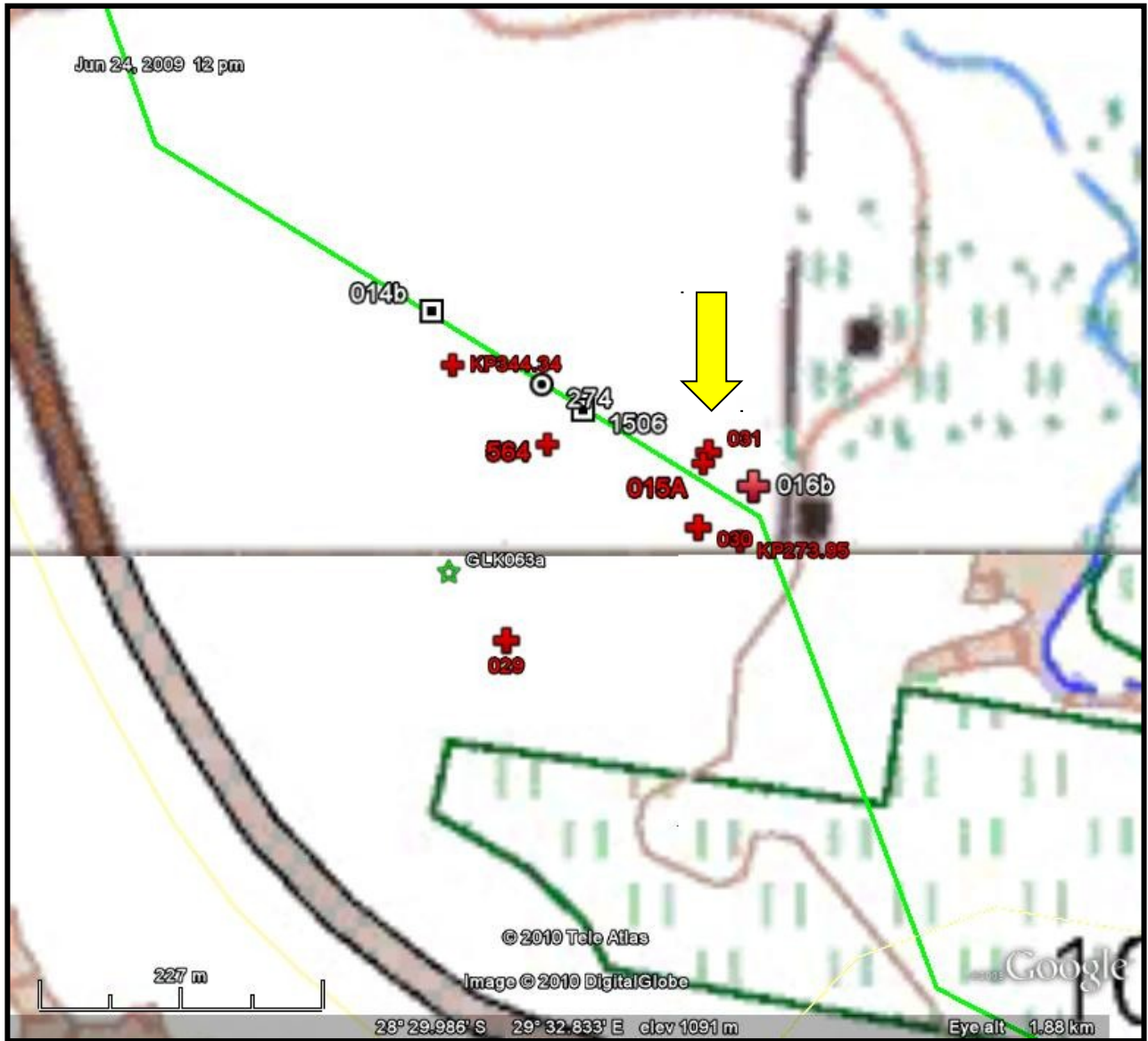
**FIGURE 32: GRAVE AT GLK122C**



**GLK063a grave 16b**

This site is located at KP273.800 and consists of several graves. The grave, and the rest of the site, are younger than 60 years in age, and living relatives may claim this graves. An informant told me, in July 2009, that people still visit the graves just outside the RoW, and these are probably related to the damaged sites. The houses of the living ancestors are shown on the 1986 topographical map, but not the 1963 topographical map, nor on the 1937 aerial photograph (fig. 33 -35). The artefacts near the houses suggest a 1970 onwards occupation.

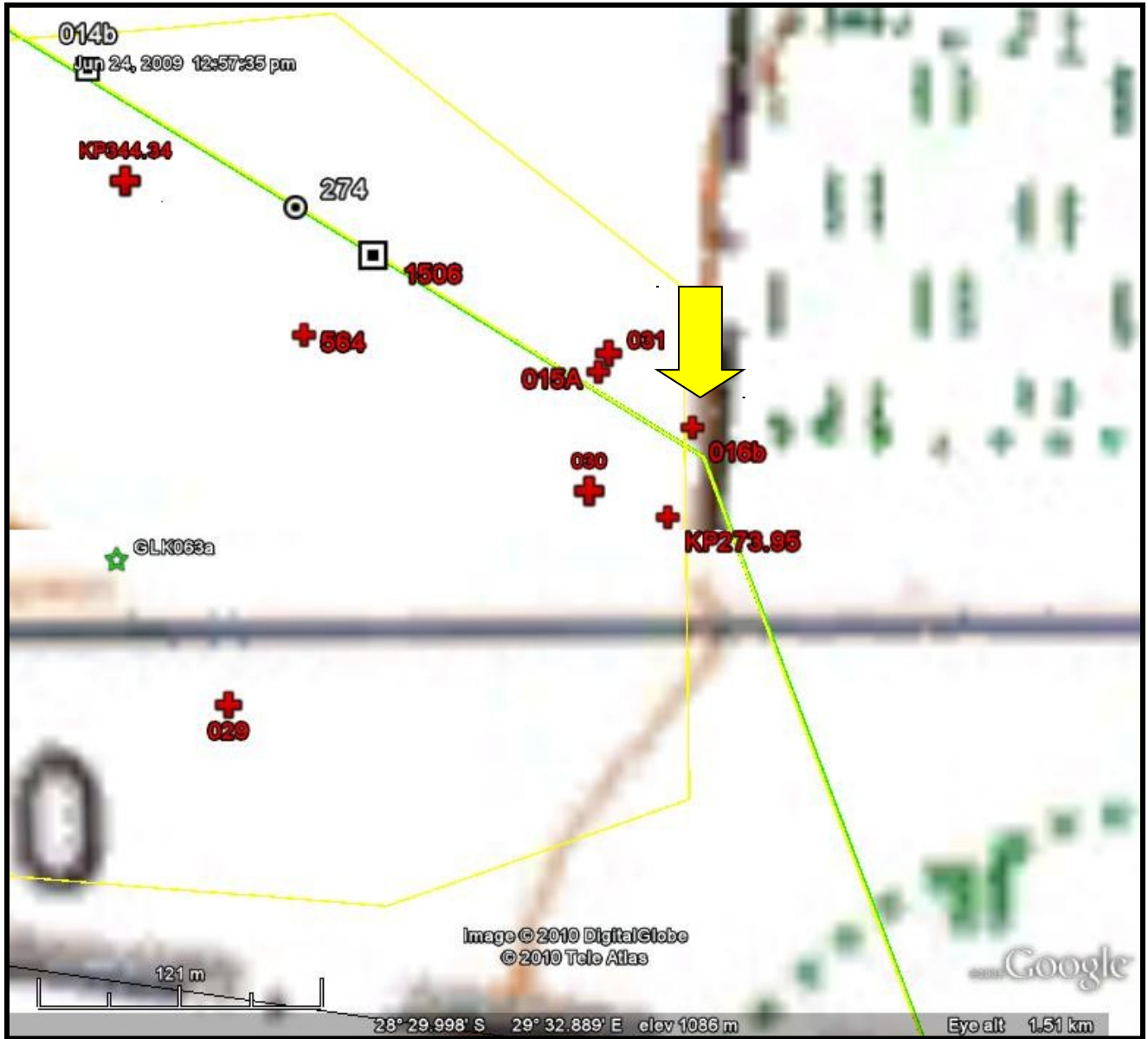
FIGURE 33: 1986 TOPOGRAPHICAL MAP INDICATING THE GRAVES AT GLK063A<sup>11</sup>



<sup>11</sup> The upper part of the map is 1986, while the lower part is 2000

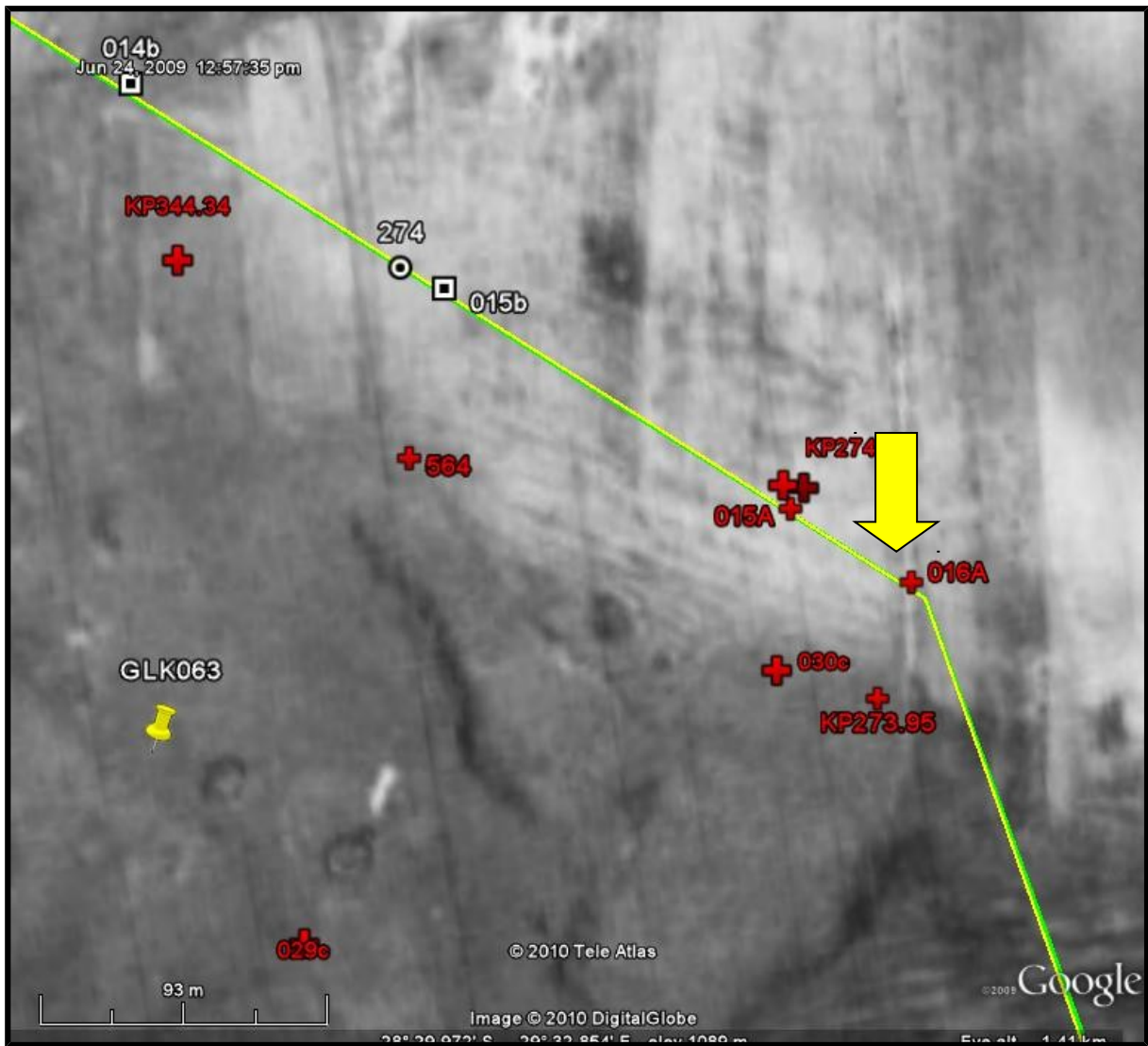


FIGURE 34: 1963/1954 TOPOGRAPHICAL MAP INDICATING THE GRAVES AT GLK063A<sup>12</sup>



<sup>12</sup> The upper part of the map is 1963, while the lower part is 1954

**FIGURE 35: 1937 AERIAL PHOTOGRAPH INDICATING THE LOCATION OF THE GRAVES**



The grave was demarcated with metal and wooden poles and was fenced off before the RoW clearance (fig. 36 shows the grave IN 2009). Two HIA were on site during RoW clearance. Subsequent to RoW clearance the grave was covered by trenching spoil (fig. 37). This is the first grave of the damaged sites that has definite living descendents. Transnet may need to compensate the descendents.

**Significance of site:** The site is of high significance

**Significance of impact:** The impact on the grave is low

**Previous mitigation:** The graves were fenced off and clearly demarcated.



**Occurrence of damage:** After RoW clearance.

**Assessment of Damage:** The graves are technically not damaged and they have been cleaned. There was however an infringement on the site and this forms part of the pattern of demarcated heritage sites being ignored by the contractor. The living descendents may claim that the ancestral spirit needs to be appeased.

**FIGURE 36: 2009 PHOTOGRAPH OF THE GRAVE**



**FIGURE 37: TRENCHING SPOIL OVER GRAVES AT GLK063A GRAVE 16A**





**FIGURE 38: CLEANED GRAVE AT GLK063A GRAVE 16A**



Continued on page 11

This entire site is located at KP273.800 and consists of several graves. The specific grave is younger than 60 years in age, and living relatives may claim this grave. I originally thought the grave was covered by trenching spoil, but it occurs outside of the RoW. It is thus not affected.

I note this grave for a specific reason. This area was demarcated as a 'no working area' in the Transnet directive. When I came back to the site in September, the pipe had been placed into the trench and the area had been rehabilitated. This should not have occurred.

**Significance of site:** The site is of high significance

**Significance of impact:** There is no impact

**Previous mitigation:** None

**Occurrence of damage:** None

**Assessment of Damage:** No damage

### **KP189.130**

This site is located at KP189.130 and consisted of two graves that date to the recent past (probably within the last 60 years). The site was first reported on 24 February 2010, and visited in early March 2010. The graves were confirmed and I requested them to be demarcated. We are attempting to find out what happened thereafter. The top cairns have been removed, possibly by the RoW team.

**Significance of site:**

**Significance of impact:**

**Previous mitigation:**

**Occurrence of damage:**

**Assessment of Damage:**

Significance of site: The site is of high significance

Significance of impact: medium negative

Proposed mitigation: Survey in the graves, and undertake minimal excavations to locate the graves. The cairns to be rebuilt and the area fenced off. Living descendants may claim these graves, and the same process as above may be required.

Comment: We are determining why these graves were damaged and if they had been demarcated.

### **GLK 078 Engraving 020**

This site is located at KP238+101. The site consists of LIA and HP engravings and is a part of a larger engraving area. The general area has ~100 engravings and the hills, and the base of the hills, were considered sensitive.

The engraving sites that were in the ROW were demarcated with metal and wooden poles and were fenced off before the RoW clearance began. Two HIA were on site during the RoW clearance.

An email was sent to various people within the NMPP, in early 2010, to inform them of blasting that will be undertaken in this area. I specifically denied blasting activity at this area, as it would be affected. I requested information regarding the blasting and to be on site when blasting was to occur.

The engravings are covered with blast material from blasting activity, and with material from the trenching spoil (fig. 7). That is, the blasting occurred at the site without an HIA on site, nor with permission, and the trenching team has deposited spoil material over the fenced off engraving area.

**Significance of site:**

**Significance of impact:**

**Previous mitigation:**

**Occurrence of damage:**

**Assessment of Damage:**



Significance of site: The site is of medium significance

Significance of impact: Medium negative

Proposed mitigation: Survey in the engravings and manually remove topsoil to locate and clean up the engravings.

Comment: There has been a disregard for site instructions regarding blasting in this area, as well as by the trenching team.

**FIGURE 7: ENGRAVINGS UNDER BLASTING AND TRENCH SPOIL AT GLK078  
ENGRAVINGS 20<sup>13</sup>**



<sup>13</sup> Yellow arrows indicate location of pole markers

### **GLK 078 Engraving 615**

This site is located at KP238+101 and ~20m north of the previous engraving site. The site consists of LIA and HP engravings and is a part of a larger engraving area. The general area has ~100 engravings and the hills, and the base of the hills, were considered sensitive.

The engraving sites that were in the ROW were demarcated with metal and wooden poles and were fenced off before the RoW clearance began. Two HIA were on site during the RoW clearance.

An email was sent to various people within the NMPP, in early 2010, to inform them of blasting that will be undertaken in this area. I specifically denied blasting activity at this area, as it would be affected. I requested information regarding the blasting and to be on site when blasting was to occur.

The engravings are covered with blast material from blasting activity, and with material from the trenching spoil (fig. 8). That is, the blasting occurred at the site without an HIA on site, nor with permission, and the trenching team has deposited spoil material over the fenced off engraving area.

**Significance of site:**

**Significance of impact:**

**Previous mitigation:**

**Occurrence of damage:**

**Assessment of Damage:**

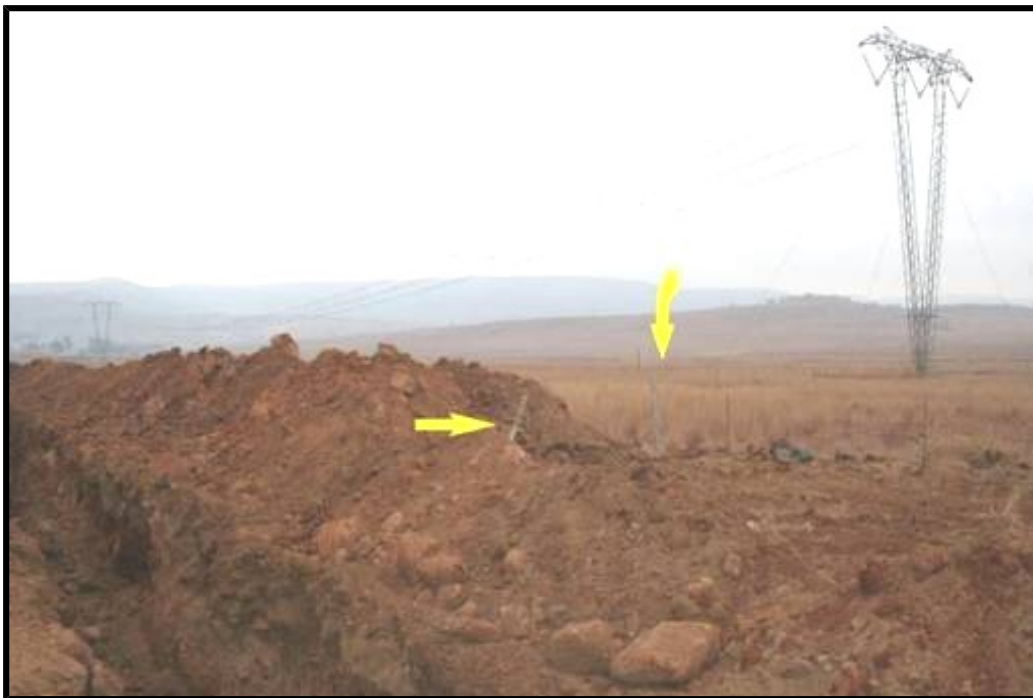
Significance of site: The site is of medium significance

Significance of impact: Medium negative

Proposed mitigation: Survey in the engravings and manually remove topsoil to locate and clean up the engravings.

Comment: There has been a disregard for site instructions regarding blasting in this area, as well as by the trenching team.

**FIGURE 8: ENGRAVINGS UNDER BLASTING AND TRENCH SPOIL AT GLK078 ENGRAVINGS 615<sup>14</sup>**



### **GLK078**

This site is located at KP239 and consists of a stone walled kraal. The site dates to the LIA. The site was demarcated with wooden poles and danger tape during the RoW clearance, and was supposed to be fenced off. There were two HIA on site during RoW clearance.

The kraal wall has been slightly damaged by excavator driving over it (fig. 9).

**Significance of site:**

**Significance of impact:**

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<sup>14</sup> Yellow arrows indicate location of pole markers

**Previous mitigation:**

**Occurrence of damage:**

**Assessment of Damage:**

Significance of site: The site is of low significance

Significance of impact: Medium negative

Proposed mitigation: Rocks related to the kraal need to be replaced by HIA.

Comment: The tracks over and through the edge of the kraal occurred within one week of our site visit.

**FIGURE 9: DAMAGED KRAAL AT GLK078<sup>15</sup>**



## **GENERAL SITES WITH LOW NEGATIVE IMPACTS**

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<sup>15</sup> Yellow arrows indicate the damaged area of the kraal.



Several grave sites have had low negative impacts. These consist of the pipeline being placed above the grave. The impact is thus not on the grave itself but on the heritage zone (fig. 12). All of these sites have been noted and no work may occur near the site unless an ECO or HIA is on site to monitor. The graves may not be affected in any manner. Instructions for the fencing of two graves were given; however, this was not followed through.

**FIGURE 11: EXAMPLE OF LOW NEGATIVE IMPACT**



**TABLE 1: LIST OF AFFECTED SITES**

<b>KP</b>	<b>Heritage Specialist No:</b>	<b>Type of Heritage Structure:</b>	<b>Type of Impact</b>	<b>Permission granted for the impact</b>	<b>Demarcation</b>	<b>Short Term Impact Mitigations:</b>	<b>Long Term Impact Mitigation:</b>	<b>Assumed Intensity of impact</b>
KP269	GLK066_75	Kraal	Bilobial kraal walling has been removed by clearance of the topsoil.	No	Features were demarcated with blue poles, but were out of the impact zone (RoW)	Kraal has been removed. Area will be a no-go area until mitigation completed	Kraal cannot be mitigated	High negative
KP269	GLK066_75	2 Graves	stone cairns missing due to clearing of topsoil	No	Features were demarcated with blue poles, but were out of the RoW	Surveyor to relocate the 2 grave points. Area will be a no-go area until mitigation completed	Minimal excavations will be undertaken to determine if grave still exists, and extent of impact	Medium negative
KP268	GLK118_96	1 Grave	stone cairns missing, grave thought to be under the topsoil stockpile	No	Grave was demarcated with blue poles and danger tape. Fell out of the RoW	Surveyor to relocate the 2 grave points. Area will be a no-go area until mitigation completed	Top soil to be manually removed. Minimal excavations will be undertaken to determine if grave still exists, and extent of impact+J4	Need to confirm that this grave has actually been impacted on through surveying. Otherwise High negative
KP268	GLK118a	2 Graves	Indications are that these graves have been excavated as the positions indicate that they fell in the middle of the pipe trench	No	Grave was demarcated with blue poles and danger tape	RoW has been barricaded until further notice and until the graves are surveyed	If graves have been permanently removed then no further mitigation can be undertaken. If graves still occur then the need to be located and semi-excavated	Need to confirm that this grave has actually been impacted on through surveying. Otherwise high negative

<b>KP</b>	<b>Heritage Specialist No:</b>	<b>Type of Heritage Structure:</b>	<b>Type of Impact</b>	<b>Permission granted for the impact</b>	<b>Demarcation</b>	<b>Short Term Impact Mitigations:</b>	<b>Long Term Impact Mitigation:</b>	<b>Assumed Intensity of impact</b>
KP 265+286	N3	1 Grave	stone cairns missing due to trenching spoil material being placed on top of them	No	Grave was demarcated with blue poles and were fenced in to the RoW by the fencing crew	Fence off the RoW until heritage specialist has provided the way forward. In the interim re-survey the position of the graves	Top soil will need to be manually removed, and then the grave will need to be located and cleaned up	Low negative
KP264+500	GLK122b_4	1 Grave	stone cairns missing due to clearing of topsoil	No	Grave was demarcated with blue poles and was fenced in to the RoW by the fencing crew	Fence off the RoW until heritage specialist has provided the way forward. In the interim re-survey the position of the graves	Need to survey in the grave position, and minimal excavate to determine if the rest of the grave is still there. Cairn needs to be rebuilt of grave is there	Medium negative
KP261	GLK122c grave 031a	1 Grave	stone cairns missing due to trenching spoil material for the auger bore being placed on top of them	No	Grave was demarcated with blue poles and was fenced in to the RoW by the fencing crew	Fence off the RoW until heritage specialist has provided the way forward. In the interim re-survey the position of the graves	Top spoil heap will need to be mechanically then manually removed, and then the grave will need to be located and cleaned up	Low negative
KP238+101	GLK 078 Engraving 020	N/A	Engravings are covered with blast material from blasting activity, and trenching spoil	No. Specifically denied	Engravings were demarcated with blue poles and were fenced in to the RoW by the fencing crew	Fence off the RoW until heritage specialist has provided the way forward.	Survey in the engravings, manually remove topsoil	Low negative

<b>KP</b>	<b>Heritage Specialist No:</b>	<b>Type of Heritage Structure:</b>	<b>Type of Impact</b>	<b>Permission granted for the impact</b>	<b>Demarcation</b>	<b>Short Term Impact Mitigations:</b>	<b>Long Term Impact Mitigation:</b>	<b>Assumed Intensity of impact</b>
KP238+101	GLK 078 Engraving 615	N/A	Engravings are covered with blast material from blasting activity, and trenching spoil	No. Specifically denied	Engravings were demarcated with blue poles and were fenced in to the RoW by the fencing crew	Fence off the RoW until heritage specialist has provided the way forward.	Survey in the engravings, manually remove topsoil	Low negative
KP239	GLK078	Kraal	Slightly damaged the outskirts of kraal by excavator driving over it	No	Kraal was demarcated with blue poles and danger tape and or fencing	Fence off the RoW until heritage specialist has provided the way forward.	Loose boulders should be replaced and cleared	Medium negative
KP273.800	GLK063a grave 16a	Graves	Graves covered by trenching spoil	No	Grave was demarcated with blue poles and danger tape and fencing	Fence off the RoW until heritage specialist has provided the way forward.	Survey in each grave, then manually clear the area and rebuild the graves	Low negative
KP273.850	GLK063a grave 17a	Graves	Graves covered by trenching spoil	No	Grave was demarcated with blue poles and danger tape and fencing	Fence off the RoW until heritage specialist has provided the way forward.	Survey in each grave, then manually clear the area and rebuild the graves	Low negative
KP189.130	KP189.130	2 graves	top cairns removed by RoW team	No	Unsure. Demarcation was requested. I am checking emails	Fence off the RoW until heritage specialist has provided the way forward.	survey in the graves and minimal excavations to determine the location of the graves	Medium negative



**ALL the below heritage features although not impacted as yet will need to be re-fenced and more awareness raised to ensure that they also are not impacted. Their fences are currently being damaged or have been removed**

<b>KP Number</b>	<b>Site number</b>
<b>KP249</b>	<b>046</b>
<b>KP249</b>	<b>047</b>
<b>KP249</b>	<b>023</b>
<b>KP247+948</b>	<b>055</b>
<b>KP245</b>	<b>GLK 075</b>
<b>KP244</b>	<b>009</b>
<b>KP244</b>	<b>009 A</b>
<b>KP239</b>	<b>Kraal</b>
<b>KP238+600</b>	<b>GLK 078 Engravings</b>
<b>KP228</b>	<b>TBA</b>
<b>KP221+500</b>	<b>GLK 090</b>
<b>KP220</b>	<b>321</b>
<b>KP220</b>	<b>322</b>

## **FUTURE MANAGEMENT PLAN AND CONCLUSION**

Several sites have been negatively affected by the NMPP. These sites include human graves, engravings, and kraals. In all of the cases, with the exception of one, these sites were clearly demarcated and most had been fenced off. Furthermore, the sensitive areas had HIA on site during the RoW clearance on most of the sites. Some sites did not have an HIA present as most of the mitigation had occurred and the sites had been fenced off.

Umlando, Transnet and the independent ECOs have gone at great lengths to ensure that the sensitive sites were not damaged during NMPP construction. The construction activities that were thought to have the greatest impact were monitored, and sites were demarcated. The ECOs went to great length to ensure that sites ahead of the line were known. In general, there has been good communication between Transnet, JV, ECOs and Umlando regarding the heritage management, and the various emails between parties can attest to this.

It is not yet possible to lay blame at any specific person at this stage, and Transnet is investigating this at the time. There is however, a consistent pattern when it comes to the damage to the sites. All sites that are on the trenching team's side have been negatively affected in some manner. The trenching teams (and related activities) appear to have disregarded all heritage sites, and have merely gone though and/or covered sites.

The current management plan has been to stop all activity in the areas where sites have had a medium to high negative impact until further notice. Those sites with a low negative impact will be fenced off again and no activity may be allowed near the site unless an HIA or ECO is on site.

I suggest the following should happen:

1. All damaged sites need to be plotted on the systems maps, and a surveyor should relocate these sites, graves or features. Fortunately, we have XY co-ordinates for most of the sites and we can relocate them with some accuracy. This should be undertaken with an HIA on site, who should demarcate the graves or features.

2. The graves should have minimal excavations to determine if the grave still exists, and the extent of the damage. I propose that small trench is excavated across the grave to determine its exact location, and then an additional excavation is undertaken to find the ends of the grave.
3. The cairns of the graves should be rebuilt as per photograph, and the site must be demarcated with fencing.
4. No construction activity should be allowed on the site until the graves have been relocated (via the survey) and an ECO is on site.
5. A similar scenario should occur for the engravings and the damaged kraals.
6. We need to establish and verify those sites I believe to be completely damaged.
7. Costs for this work should be covered by the company responsible for the damage
8. Amafa KZN to verify and approve of this management plan and further work
9. The company responsible for the damages, and disregard for heritage sites, should be penalised in some form. I believe this should be the case where there was blatant disregard for sites and site instructions. Amafa KZN should be able to assist in this regard and suggest the penalty. While Amafa KZN may impose fines, it may be easier for Transnet to impose the penalty and re-allocate the money under the approval of Amafa KZN.