

R101 TO MORETELE LOCAL MUNICIPALITY SOUTH BULK WATER SUPPLY SYSTEM

Heritage Impact Assessment

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EXECUTIVE SUMMARY

Nemai Consulting was appointed by Magalies Water to compile a Basic Assessment Report for the proposed construction of a new bulk water pipeline from the Klipdrift Water Treatment Works (WTW) which would allow Magalies Water to supply water to the Carousel View, Bosplaas West, CoT Babelegi, Mogogelo- and the Far Western systems of Moretele Local Municipality.

The proposed new bulk pipeline will be approx. 800mm in diameter and approximately 27km in length. As the length of the pipeline is more than 300m, it triggers Section 38 of the National Heritage Resources Act 1999 (Act No 25 of 1999) that states the following:

“(1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as—

(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length

must notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

This report encompasses the findings of a desktop survey as well as a site visit of sections of the proposed pipeline route that took place on 16 September 2014. The project was put on hold due to changes to the route determination which led to a few slight deviations to avoid, amongst others, cemeteries/graveyards, crossing of houses and the reduction in the number of river crossings.

The report will be submitted to the Provincial Heritage Resources Authority of Gauteng (PHRA-G) and the South African Heritage Resources Authority (SAHRA) for comment as per the requirements of the National Heritage Resources Act 1999 (Act No 25 of 1999).

There are no alternative routes for this project. The proposed pipeline route crosses both vacant and developed areas where there are existing roads, a railway line, small-holdings and residential areas.

No archaeological remains or sites were found during the site visit. In the areas that are disturbed by existing infrastructure and dwellings there is little possibility of finding significant intact archaeological remains.

However, it is possible that in the vacant or less developed areas of the pipeline archaeological remains may be found below the surface and may be exposed during the excavation for the trench for the pipeline.

The pipeline runs close to two cemeteries / graveyards. The pipeline must stay outside these sites and disturbance of any graves is strictly forbidden.

The SA Heritage Resources Agency's Fossil sensitivity map indicated that the pipeline crosses areas that have a high fossil sensitivity as well as areas in the western half of the route that has an insignificant or zero sensitivity rating.

It is recommended that a desktop assessment of that section of the pipeline that falls within the high fossil sensitivity zone to assess the potential impacts on the fossils of the area (if any).

It is also recommended that during the excavations for the pipeline in the western half of the route, an archaeologist is on stand-by in case the construction process exposes sub-surface archaeological remains or other heritage resources that could be destroyed by construction activities.

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AUTHOR DETAILS

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1. INTRODUCTION

Nemai Consulting was appointed by Magalies Water to compile a Basic Assessment Report for the proposed construction of a new bulk water pipeline from the Klipdrift Water Treatment Works (WTW) which would allow Magalies Water to supply water to the Carousel View, Bosplaas West, CoT Babelegi, Mogogelo- and the Far Western systems of Moretele Local Municipality (LM).

The proposed bulk water pipeline will be approximately 800mm in diameter and approximately 27km in length.

The length of the pipeline (approx. 27km) triggers Section 38 (1)(a) of the National Heritage Resources Act (NHRA) 1999 (Act No 25 of 1999) which states that:

“(1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-

- (a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length

must notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

The heritage impact assessment was undertaken to assess the route of the proposed pipeline to ascertain whether any heritage resources would be impacted by the proposed development. In terms of section 3 of the NHRA, heritage resources are described as follows:

- (a) places, buildings, structures and equipment of cultural significance;
- (b) places to which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features of cultural significance;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and paleontological sites;
- (g) graves and burial grounds, including—
 - (i) ancestral graves;

- (ii) royal graves and graves of traditional leaders;
 - (iii) graves of victims of conflict;
 - (iv) graves of individuals designated by the Minister by notice in the *Gazette*;
 - (v) historical graves and cemeteries; and
 - (vi) other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
- (h) sites of significance relating to the history of slavery in South Africa;
- (i) movable objects, including:
- (i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
 - (ii) objects to which oral traditions are attached or which are associated with living heritage;
 - (iii) ethnographic art and objects;
 - (iv) military objects;
 - (v) objects of decorative or fine art;
 - (vi) objects of scientific or technological interest; and
 - (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).

This report encompasses the findings of a desktop assessment as well as a site visit of the proposed pipeline route that took place on 16 September 2014.

The project was put on hold due to changes to the route determination which led to a few slight deviations to avoid, amongst others, cemeteries/graveyards, crossing of houses and reducing the number of river crossings.

2. TERMS OF REFERENCE (ToR)

- Undertake a Phase 1 Heritage Impact Assessment in order to determine the possible existence of heritage resources that could be impacted by the proposed construction of the pipeline.

- Provide mitigation measures where necessary and especially if the pipeline is going to impact on any heritage resources.

3. LOCATION AND DESCRIPTION OF THE STUDY AREA

The pipeline traverses the Moretele LM and the City of Tshwane Metropolitan Municipality and falls within both the Gauteng and North West Provinces. In Figure 1 below, the blue line indicates the final route alignment of the pipeline. See Appendix 1 for a larger copy of Figure 1.

The eastern section of the pipeline initially runs within the road reserve of the N1 highway before turning west and then north to run through residential areas and along roads, a railway line and a private game reserve.

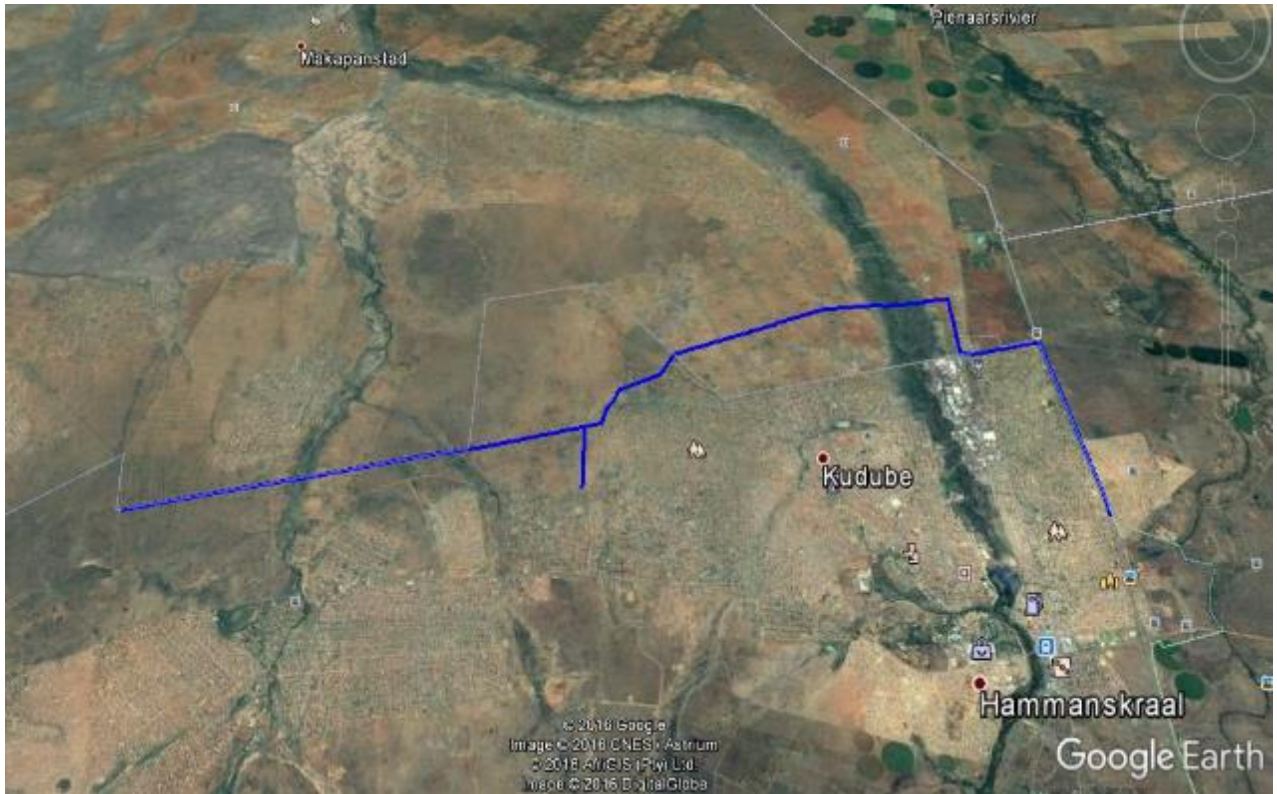


Figure 2: Aerial view of pipeline route



Figure 3: Road reserve of N1



Figure 4: Pipeline route along boundary of game reserve

At S 25°19'39.36 E28°16'48.69, the pipeline turns to run westwards where it initially crosses small-holdings where there has been recent farming activity (ploughed lands) and lands that are currently fallow having not been farmed for several years (see Fig. 7 below). Towards the western end of the pipeline, the route alignment crosses mostly vacant land and a watercourse.



Figure 5: Pipeline route along road and small-holdings



Figure 6: Ploughed lands

4. METHODOLOGY

The approach utilised for this report was:

- To undertake a desktop review of the study area in order to understand the history of the study area with a view to determining if any heritage resources (as listed above) could be impacted by the proposed development.
- Consult previous HIAs undertaken (if any) in the area surrounding the project area in order to understand the heritage context of the larger area.
- To undertake a site visit in order to identify any heritage sites (including archaeological and historical sites or features) in the project area that could be impacted by the project.

5. HISTORICAL BACKGROUND OF THE STUDY AREA

Archaeological

The archaeology of Gauteng, like that of most of southern Africa covers several archaeological periods including the Stone Age (Early, Middle & Late) and the Iron Age and more recent historic archaeology (the last 500 years).

The Stone Age is a time period that dates between 2 million years ago (ya) to 2000 ya. Due to the vast character found within stone tools of this period, it was then divided into three phases; Early Stone Age (ESA), Middle Stone Age (MSA) and the Late Stone Age (LSA). ESA dates between 2 million ya and 2 00 000 (Pelser: 2009).

The Iron Age marks the early evidence of farming community in southern Africa. Due to technological discrepancies and settlement pattern within this period, it was divided into three. The Early Iron Age (EIA) dates to AD 200 – 900, Middle Iron Age (MIA) dates to AD 900 – 1300, and the Late Iron Age (LIA) dates to AD 1300 – 1840 (Huffman 2007).

It is believed that Bantu peoples settled at the Soutpansberg Mountains in Limpopo, 400 kilometres north of Johannesburg, around 350 AD. In another wave of migration, people settled again in Limpopo, about 1 000 years ago. Another group reached the Soutpansberg in the Northern Province about 1300 AD and spread further into the Magaliesberg about 1400 AD. These settlements grew southwards to the Witwatersrand.¹

According to Küsel (2014), the name Hammanskraal literally means “Hammans stockade” and owes its name to a local nineteenth century farmer called Hamman, who built a stockade here to protect his cattle from lions.

The original village of Hammanskraal served a fairly large rural population. In the late 1950's in the heyday of the apartheid system, the township of Temba was built immediately west of Hammanskraal. The single railway line from Hammanskraal was doubled to move the people of Temba swiftly between their homes and places of work in Pretoria.

¹ http://www.joburg.org.za/index.php?option=com_content&task=view&id=292&Itemid=52

According to Küsel, the Springbok flats are poor in Stone Age sites. In eroded areas some scattered Stone Age material occur in small numbers. The nearest heritage site is Tswaing Meteorite Crater which lies west of Hammanskraal. The salt lake in the crater has been visited by Middle and Late Stone Age people. There is also an early Tswana stonewalled site near the rim of the crater. Salt was collected over hundreds of years in the Crater Lake.

The largest concentration of Iron Age sites occurs just north of Pretoria on the Swartkoppies granite hills. Thousands of Late Iron Age Tswana sites are found all along this mountain range (Küsel, 2014).

Historical

According to Jones and Jones (1999), Hammanskraal saw action during the Anglo-Boer War and this could be attributed to the fact that it was situated on the Pretoria-Nylstroom railway line. On 20 August 1900, a force from Col Paget's column skirmished with a retreating Boer commando in the vicinity of Hammanskraal and on 31 August 1901, a British train was blown up near Hammanskraal by the Boer forces.

In the late 1950's in the heyday of the apartheid system, the township of Temba was built immediately west of Hammanskraal. The single railway line from Hammanskraal was doubled to move the people of Temba swiftly between their homes and places of work in Pretoria.²

For the early period Hammanskraal stayed a small settlement with a few cash stores till the early 1960`s. Hereafter it started to become a major settlement area for Black people. Though it originally was intended for Tswana people it eventually became a mixed Black cultural area

According to Küsel, the Amandebele-Ba-Lebelo, under the leadership of Chieftainess Kekana, was forcefully removed from Majaneng in Hammanskraal by the

² www.gttp.org/docs/casestudies/2004/04SAPres.pdf

Bophuthatswana government which Hammanskraal fell into. Mangope and his regime gave the Majaneng community until 1979 to vacate the area, which they did.

Hammanskraal was instrumental in the struggle against apartheid and in the advancement of Black Consciousness. Between 1972 and 1983, Hammanskraal hosted some significant meetings in the history of the struggle against apartheid. For example, the first annual congress of the Black People's Convention (BPC) was held on 16 December 1972. In December 1974, a 4 day convention called the Black Renaissance Convention, organised by Smangaliso Mkhathshwa and Maurice Ngakane, called for sanctions on South Africa and declared a militant approach to the struggle against apartheid (Küsel).

Archaeological

No archaeological remains or sites were found during the site visit. In the areas that are disturbed by current infrastructure (roads, railway lines, etc.) and dwellings there is little possibility of finding significant intact archaeological remains.

However, it is possible that in the vacant or less developed areas of the pipeline archaeological remains may be found below the surface and may be exposed during the excavation for the trench for the pipeline.

Historical

The pipeline runs on the boundary of what appears to be a formal cemetery or graveyard, the position of which is depicted in Fig. 7 below. The pipeline must stay outside the cemetery and disturbance of the graves is strictly forbidden.

The pipeline also runs close to and north of another graveyard situated further west as depicted in Fig. 8 below. This site is situated at 25°20'36.06"S; 28°13'7.98"E.

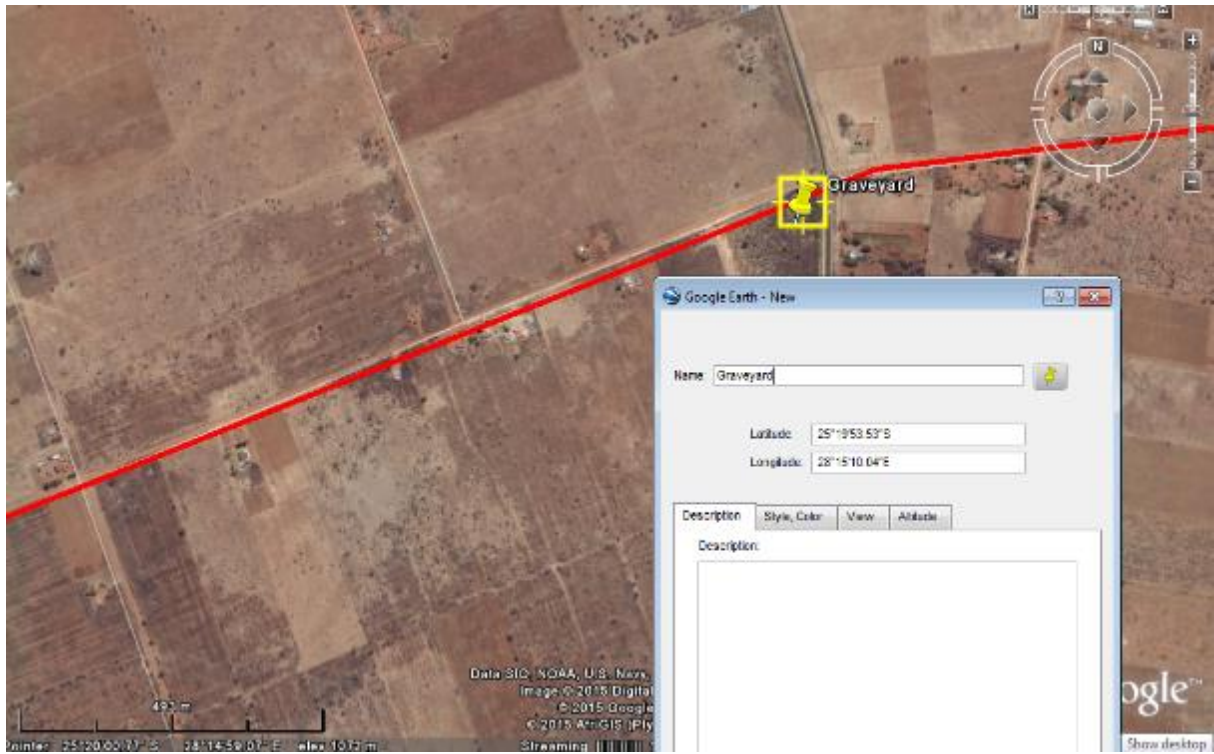


Figure 7: Position of formal cemetery or graveyard

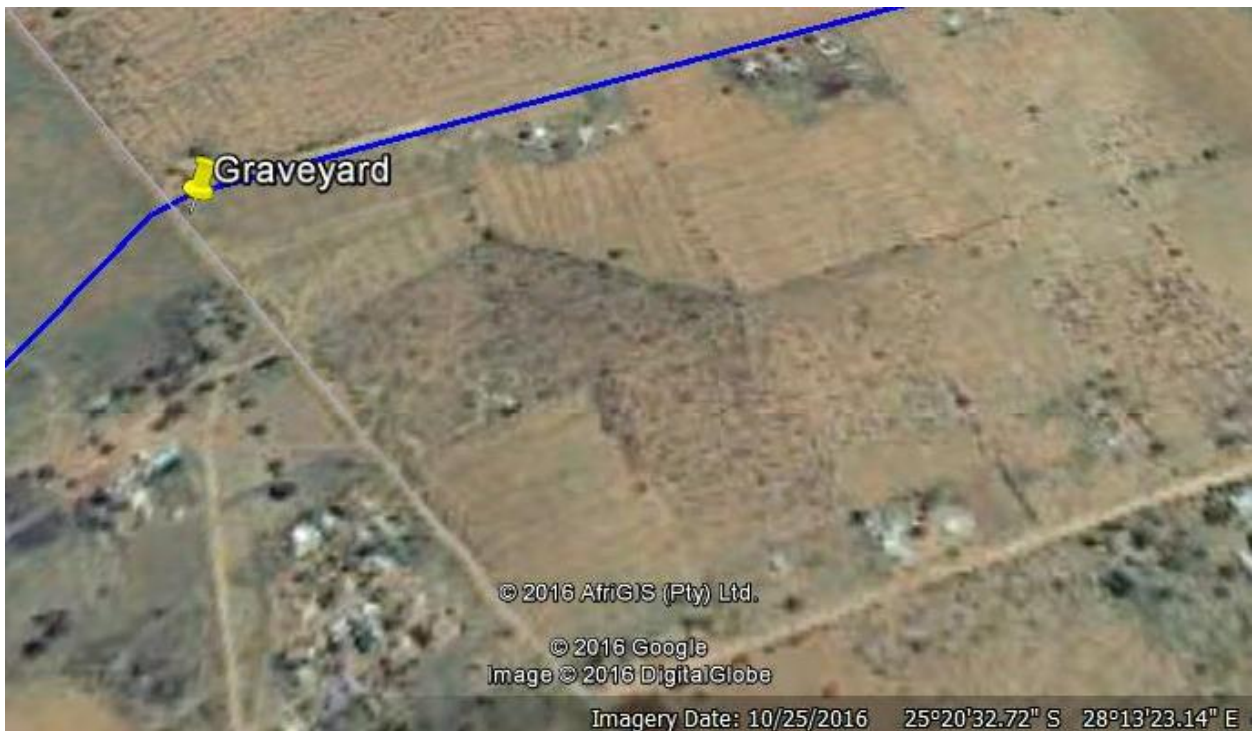


Figure 8: Location of second graveyard

No other heritage resources were discovered along the pipeline route.

Palaeontological

The South African Heritage Resources Agency's Fossil sensitivity map indicates that the pipeline crosses areas that have a high fossil sensitivity (orange shade in Fig. 9 below) as well as areas in the western half of its route that has an insignificant or zero sensitivity rating (grey colour).

It is recommended that a desktop assessment of that portion or section of the pipeline that falls within the high fossil sensitivity zone to assess the potential impacts on the fossils of the area.

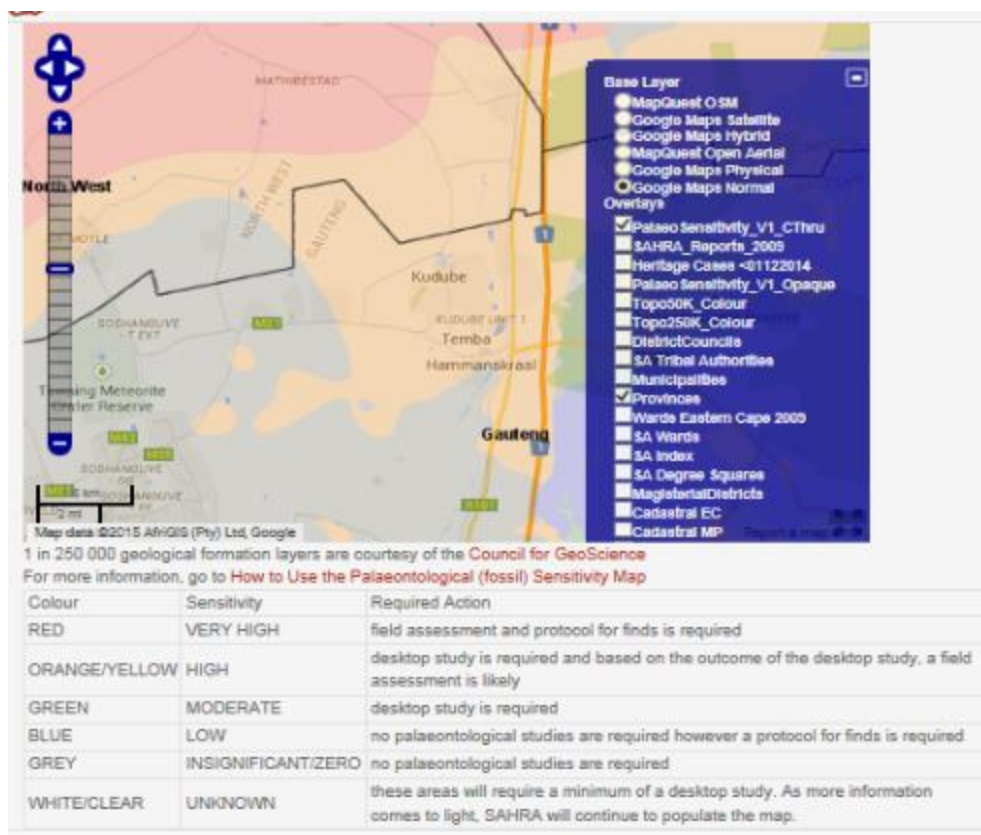


Figure 9: Fossil sensitivity map

During the site inspection, apart from the two graveyards mentioned above, no cultural heritage and archaeological sites were found. However, it should be noted that archaeological sites that may be currently undisturbed could be found beneath the surface if excavations take place hence care must be taken when the site is excavated. Recommendations and mitigation measures are listed below in this regard.

6. RECOMMENDATIONS

- Due to the fairly undisturbed nature of the western sections of the pipeline route, it is recommended that an accredited archaeologist is placed on stand-by during the excavation of the trench for the pipeline in case of archaeological material/sites or any other heritage resource (e.g. graves) been uncovered during the construction process.
- It is recommended that a desktop palaeontological assessment is undertaken to determine the presence or likelihood of significant fossils been impacted by the proposed pipeline. Depending on the outcome of the assessment, a Phase 1 Palaeontological Impact Assessment (PIA) may need to be undertaken.
- The pipeline must stay outside the two graveyards and disturbance of any graves is strictly forbidden

7. MITIGATION MEASURES

- For any chance finds, all work will cease in the area affected and the Contractor will immediately inform the Project Manager. A registered heritage specialist must be called to site for inspection. The relevant heritage resource agencies (PHRA-G) and SAHRA must be informed about the finding.
- The heritage specialist will assess the significance of the resource and provide guidance on the way forward.
- Permits to be obtained from PHRA-G if heritage resources are to removed, destroyed or altered that fall within Gauteng. Permits must be obtained from SAHRA if any heritage resources are found in the North West Province.
- All heritage resources found in close proximity to the construction area to be protected by a 10m buffer in which no construction can take place. The buffer to be highly visible to construction crews.
- Under no circumstances may any heritage material be destroyed or removed from site unless under direction of a heritage specialist.
- Should any remains be found on site that is potentially human remains, the South African Police Service should also be contacted.

8. CONCLUSION

This report must be submitted to the Provincial Heritage Resources Authority-Gauteng (PHRA-G) for comment as per the National Heritage Resources Act (25 of 1999).

In conclusion, the construction may proceed from a heritage perspective. However, if any heritage related resources are found during the construction phase, mitigation measures as recommended above must be undertaken.

9. REFERENCES

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APPENDIX 1
FINAL LAYOUT PLAN