



Nsovo Environmental Consulting

PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT SPECIALIST STUDY REPORT FOR THE PROPOSED CONSTRUCTION OF REMAINDER OF T5 PIPELINE FROM ORANGE FARM TO ENNERDALE ON PORTIONS 37, 39, 41, 43, 108, 115, 122, 123, 145, 176 OF THE FARM ORANGE 371-IQ AND PORTION 63 OF THE FARM HARTEBEESTFONTEIN 312-IQ WITHIN THE JURISDICTION OF EMFULENI LOCAL MUNICIPALITY, SEDIBENG DISTRICT MUNICIPALITY, GAUTENG PROVINCE.

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DISCLAIMER

Even though all care is taken to identify sites of heritage significance during survey, it's important to mention that the scenery of sites in southern Africa, are often contextualised such that it often is possible that certain sites could be unnoticed during the survey. Accordingly, *Vhubvo Archaeo-Heritage Consultant Cc* and its employees will not be held accountable for such oversights or for costs incurred as a result thereof.

DECLARATION

ABILITY TO CONDUCT THE PROJECT

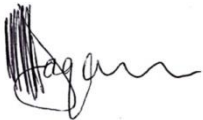
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INDEPENDENCE

I, Munyadziwa Magoma, declare that this report has been prepared independently of any influence as may be specified by all relevant department, institution and organisation.

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EXECUTIVE SUMMARY

Vhubvo Archaeo-Heritage Consultant Cc has been commissioned by Nsovo Environmental Consulting to conduct an Archaeological Impact Assessment (AIA) for the proposed establishment of T5 pipeline from Orange Farm to Ennerdale on Portions 37, 39, 41, 43, 108, 115, 122, 123, 145, 176 of the Farm Orange 371-IQ and Portion 63 of the Farm Hartebeestfontein 312-IQ within the jurisdiction of City of Johannesburg Metropolitan Municipality in the Gauteng Province. The pipeline measures approximately ± 12 km. The aim of the survey is to identify and document archaeological sites, cultural resources, sites associated with oral histories, graves, cultural landscapes, and any structure(s) of historical significance that may be affected by the proposed pipeline.

In order to familiarise with the area proposed for pipeline, a background study was undertaken and relevant institution were consulted. These studies entails review of archaeological and heritage impact assessments conducted around the proposed area thorough SAHRIS. Also examined are reviews of relevant publications, etc. Ultimately, a field study was conducted on the 29th of August and 24th of September 2014, as well as on the 08th April 2015 by an archaeologist from Vhubvo. The findings in this report have been informed by desktop data review, oral interview and field survey. Analysis of the archaeological, cultural heritage, environmental and historic contexts of the study area predicted that archaeological sites, cultural heritage sites and historic structures were not likely to be present on the affected landscape. However, isolated artefacts and burial grounds were likely to be encountered. The field survey was conducted to test this hypothesis and verify this forecast within the proposed construction area.

Survey Findings

The proposed area could be accessed with effortlessness. The area is generally disturbed to yield any archaeological materials, especially sections marked point B to J (see map, figure 1 and 2). These sections are located within an existing township and traverse Orange Farm township, taxi rank, local small scale agriculture, playing ground and is located adjacent to major roads such as the N1 and Golden Highway. The other section of the proposed area marked A to B traverse an area which is disturbed and illegally occupied. As such, no sites of heritage significance were identified within the study area during the survey. If such existed, it would have been destroyed due to past activities.

Restrictions and Assumptions

As with any survey, archaeological materials may be under the surface and therefore unidentifiable to the surveyor until they are exposed once development resume.

Stone Age

The first and longest part of human history is the Stone Age, which began with the appearance of early humans around 3 - 2 million years ago. Stone Age people were hunters, gatherers and scavengers who were nomadic. Their stone tools are found in most places in southern Africa.

- Early Stone Age 2 000 000 - 150 000
- Middle Stone Age 150 000 - 30 000 BP
- Late Stone Age 30 000 - until c. AD 200

The landscape of the proposed development is incompatible for rock art sites; as such no site was identified by this study.

Iron Age

Iron Age is the period covering the last 1800 years, when people brought a new way of life to southern Africa. They established settled villages, cultivated domestic crops such as sorghum, millet and beans, and they herded cattle as well as sheep and goats. This is the era in history where iron tools were produced hence archaeologists call this the Iron Age.

- Early Iron Age AD 200 - AD 900
- Middle Iron Age AD 900 - AD 1300
- Late Iron Age AD 1300 - AD 1830

The survey did not identify any Iron Age sites, this is synonymous with other Archaeological/ Heritage survey conducted in the area.

Historical period

This is a period of the arrival of the white settlers in this part of the country in c. AD 1840.

- No historical sites associated with early missionary activities were found in the project area. Moreover, there are no listed monuments and land marks in the project area. However, an open air church was noted adjacent the existing Ennerdale Reservoir, this area of worship is protected by Section 3 of the National Heritage Resources Act, 1999 (Act 25 of 1999). Nonetheless, this site is known by the developers and will not be negatively affected by this proposal.

Recommendations

The footprint of the area proposed for pipeline construction is disturbed and no sites of archaeological significance are expected on this area. Any archaeological/ heritage material that existed, may have been impacted by preceding activities and consequently destroyed. All construction staff must be appropriately inducted regarding archaeological finds, and steps that should be taken in the case of exposing archaeological materials. Although the area is highly disturbed, it should be noted that archaeological material may still be encountered during subsurface construction work.

If archaeological materials are uncovered, work should cease immediately and SAHRA should be notified, in the mean time activity should not resume until appropriate management provisions are in place.

Conclusions

The proposed development project can proceed without any further archaeological/ and or cultural heritage assessment.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	iv
ACRONYMS AND ABBREVIATIONS	- 8 -
GLOSSARY OF TERMS	- 9 -
2. Sites location and description.....	- 12 -
3. Nature of the proposed project	- 17 -
4. Purpose of the AIA study.....	- 17 -
5. Methodology	- 17 -
6. Applicable heritage legislation.....	- 18 -
7. Degree of significance	- 19 -
Table 1	- 21 -
8. Survey findings and discussions.....	- 21 -
9. Concluding remarks.....	- 22 -
APPENDIX 1: SITE SIGNIFICANCE	- 26 -
APPENDIX 2: GRAVE	- 26 -

ACRONYMS AND ABBREVIATIONS

AIA	Archaeological Impact Assessment
EMP	Environmental Management Plan
HIA	Heritage Impact Assessment
LIA	Late Iron Age
MIA	Middle Iron Age
EIA	Early Iron Age
HMP	Heritage Management Plan
LSA	Late Stone Age
MSA	Middle Stone Age
ESA	Early Stone Age
NASA	National Archives of South Africa
NHRA	National Heritage Resources Act
PHRA	Provincial Heritage Resources Authority
SAHRA	South African Heritage Resources Agency

GLOSSARY OF TERMS

The following terms used in this Archaeology are defined in the National Heritage Resources Act [NHRA], Act Nr. 25 of 1999, South African Heritage Resources Agency [SAHRA] Policies as well as the Australia ICOMOS Charter (*Burra Charter*):

Archaeological Material: remains resulting from human activities, which are in a state of disuse and are in, or on, land and which are older than 100 years, including artifacts, human and hominid remains, and artificial features and structures.

Chance Finds: means Archaeological artefacts, features, structures or historical cultural remains such as human burials that are found accidentally in context previously not identified during cultural heritage scoping, screening and assessment studies. Such finds are usually found during earth moving activities such as water pipeline trench excavations.

Compatible use: means a use, which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.

Conservation means all the processes of looking after a place so as to retain its cultural significance.

Cultural Heritage Resources (Same as **Heritage Resources** as defined and used in the National Heritage Resources Act, 1999 (Act No. 25 of 1999): Refer to physical cultural properties such as archaeological and palaeontological sites; historic and prehistoric places, buildings, structures and material remains; cultural sites such as places of ritual or religious importance and their associated materials; burial sites or graves and their associated materials; geological or natural features of cultural importance or scientific significance. **Cultural Heritage Resources** also include **intangible resources** such as religion practices, ritual ceremonies, oral histories, memories and indigenous knowledge.

Cultural significance: means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.

Cultural Significance: also encompasses the complexities of what makes a place, materials or intangible resources of value to society or part of, customarily assessed in terms of aesthetic, historical, scientific/research and social values.

Environment: The surroundings within which humans exist and that are made up of:

- i. the land, water and atmosphere of the earth;
- ii. micro-organisms, plant and animal life;

- iii. any part or combination of (i) and (ii) and the interrelationships among and between them; and,
- iv. the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being. This includes the economic, social, cultural, historical and political circumstances, conditions and objects that affect the existence and development of an individual, organism or group.

Environmental impact assessment: An Environmental Impact Assessment (EIA) refers to the process of identifying, predicting and assessing the potential positive and negative social, economic and biophysical impacts of any proposed project, plan, programme or policy which requires authorisation of permission by law and which may significantly affect the environment. The EIA includes an evaluation of alternatives. As well as recommendations for appropriate mitigation measures for minimising or avoiding negative impacts, measures enhancing the positive aspects of the proposal and environmental management and monitoring measures.

Expansion: means the modification, extension, alteration or upgrading of a facility, structure or infrastructure at which an activity takes place in such a manner that the capacity of the facility or the footprint of the activity is increased.

Fabric: means all the physical material of the place including components, fixtures, contents and objects.

Grave: A place of interment (variably referred to as burial), including the contents, headstone or other marker of such a place, and any other structure on or associated with such place. A grave may occur in isolation or in association with others where upon it is referred to as being situated in a cemetery (contemporary) or **Burial Ground**(historic).

Heritage impact assessment (HIA): refers to the process of identifying, predicting and assessing the potential positive and negative cultural, social, economic and biophysical impacts of any proposed project, plan, programme or policy which requires authorisation of permission by law and which may significantly affect the cultural and natural heritage resources. The HIA includes recommendations for appropriate mitigation measures for minimising or avoiding negative impacts, measures enhancing the positive aspects of the proposal and heritage management and monitoring measures.

Historic Material: remains resulting from human activities, which are younger than 100 years, but no longer in use, including artifacts, human remains and artificial features and structures.

Impact: the positive or negative effects on human well-being and / or on the environment.

In situ material culture and surrounding deposits in their original location and context, for example an archaeological site that has not been disturbed by farming.

Interested and affected parties Individuals: communities or groups, other than the proponent or the authorities, whose interests may be positively or negatively affected by the proposal or activity and/ or who are concerned with a proposal or activity and its consequences.

Interpretation: means all the ways of presenting the cultural significance of a place.

Late Iron Age: this period is associated with the development of complex societies and state systems in southern Africa.

Material culture means buildings, structure, features, tools and other artefacts that constitute the remains from past societies.

Mitigate: The implementation of practical measures to reduce adverse impacts or enhance beneficial impacts of an action.

Place: means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.

Protected area: means those protected areas contemplated in section 9 of the NEMPAA and the core area of a biosphere reserve and shall include their buffers.

Public participation process: A process of involving the public in order to identify issues and concerns, and obtain feedback on options and impacts associated with a proposed project, programme or development. Public Participation Process in terms of NEMA refers to: a process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to specific matters.

Setting: means the area around a place, which may include the visual catchment.

Significance: can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. intensity, duration and likelihood). Impact significance is the value placed on the change by different affected parties (i.e. level of significance and acceptability). It is an anthropocentric concept, which makes use of value judgments and science-based criteria (i.e. biophysical, physical cultural, social and economic).

Site: a distinct spatial cluster of artefacts, structures, organic and environmental remains, as residues of past human activity.

Use: means the functions of a place, as well as the activities and practices that may occur at the place.

1. Introduction

Vhubvo Archaeo-Heritage Consultant Cc has been commissioned by Nsovo Environmental Consulting to conduct the Archaeological Impact Assessment (AIA) Study for the proposed establishment of T5 pipeline from Orange Farm to Ennerdale on Portions 37, 39, 41, 43, 108, 115, 122, 123, 145 and 176 of the Farm Orange 371-IQ and Portion 63 of the Farm Hartebeestfontein 312-IQ within the jurisdiction of City of Johannesburg Metropolitan Municipality in the Gauteng Province. The pipeline measures approximately 12km. The main aim of the study was to investigate the potential and availability of archaeological sites, and cultural resources in the area proposed for pipeline.

2. Sites location and description

The proposed ± 12 km pipeline commences in the township of Ennerdale and ends in Orange Farm. The line traverse Portions 37, 39, 41, 43, 108, 115, 122, 123, 145 and 176 of the Farm Orange 371-IQ and Portion 63 of the Farm Hartebeestfontein 312-IQ which are located in Wards 4 and 5 within the jurisdiction of the City of Johannesburg Metropolitan Municipality in the Gauteng Province. The area's topography can be summarized as varied, and constitutes fairly flat plains towards Orange Farm, while it rises in distinct from the surrounding plains towards Ennerdale Township where the reservoir is located.

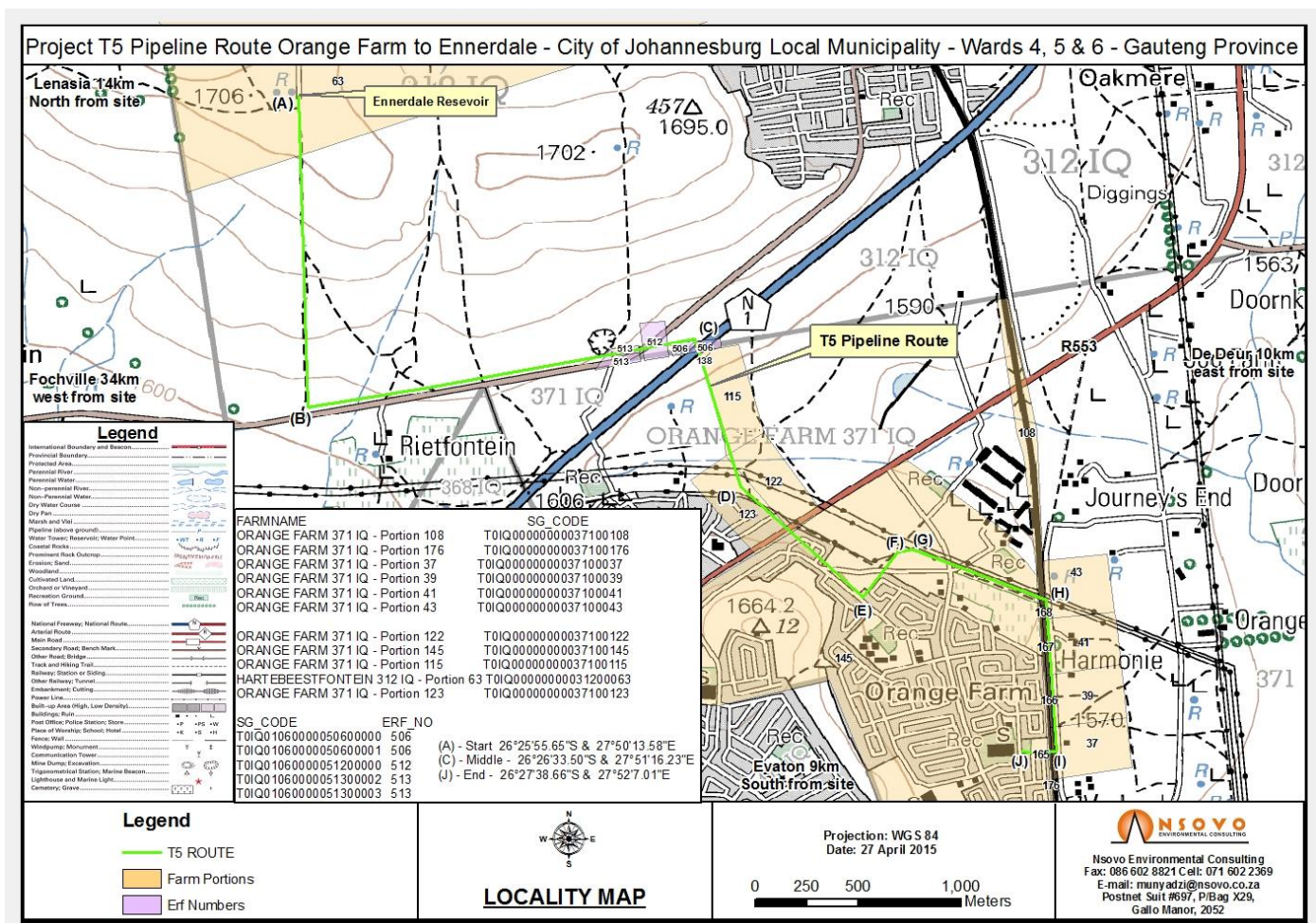


Figure 1: Topographical map detailing the proposed development (Courtesy Nsovo Environmental).

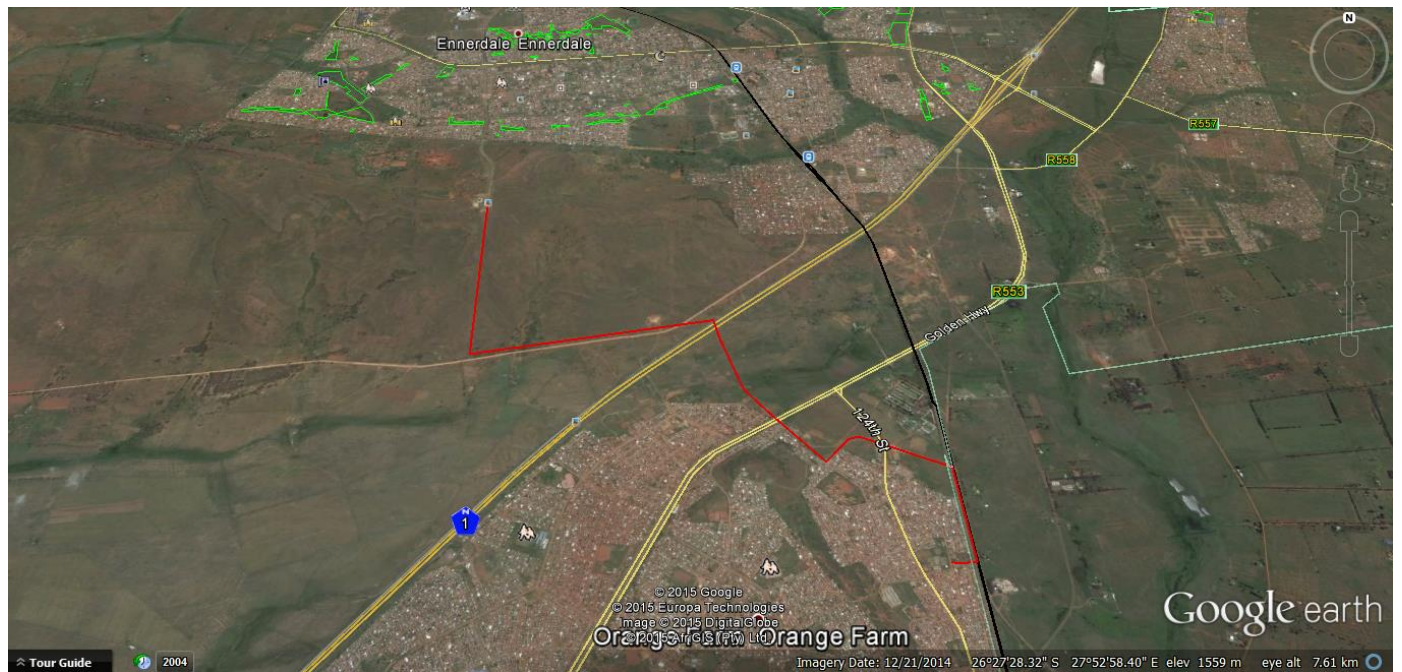


Figure 2: Google map detailing the proposed development (Courtesy Google Earth).



Figure 3: An overview of the area where the proposed pipeline traverses adjacent a road.



Figure 4: View of the area where the proposed pipeline will commence.



Figure 5: View of some of the major roads the pipeline will cross.



Figure 6: View of some of the developed area on which the pipeline will cross.



Figure 7: View of the gravel road wherein the proposed pipeline will contiguously transverse.



Figure 8: View of some of the section that will be impacted by the construction of the pipeline.



Figure 9: An overview of the area of worship, this area is adjacent the existing reservoir.

3. Nature of the proposed project

Due to operational limitations and the resultant abnormal pumping regime at Daleside pumping station, Rand Water proposes augmentation of the remaining +/- 12km T5 pipeline from Orange Farm to Ennerdale.

4. Purpose of the AIA study

The purpose of this study was to conduct a heritage survey, enabling us to have an understanding of the archaeological, cultural, and general heritage sensitivity of the area proposed for establishment of the T5 pipeline. Impact assessment identifies and assesses the significance of impacts of proposed developments within and on the surrounding environment. Therefore, this AIA involves the following:

- Identification and recording of heritage resources that maybe affected by the proposed development,
- Providing recommendations on how best to appropriately safeguard identified heritage sites. Mitigation is an important aspect of any development on areas where heritage sites have been identified.

5. Methodology

Desktop study and research

The methodological approach is informed by the 2012 SAHRA Policy Guidelines for impact assessment. As part of this AIA, the following tasks were conducted: 1), literature review, 2), consultations with relevant stakeholders 3) completion of a field survey and 5), analysis of the acquired data, leading to the production of this report.

To understand the archaeology of the proposed area, a background study was undertaken and relevant institutions were consulted. These studies entailed the review of archaeological and heritage impact assessment studies that have been conducted around the proposed area thorough SAHRIS. In addition, other knowledge distributors were considered, for example, published research articles, etc. These investigations were fundamental in shedding light about the archaeology of the proposed area.

Physical survey

A systemic survey of the area as indicated by Burke and Smith (2004) resulted in the maximum coverage of the area. This survey was conducted by an archaeologist from Vhubvo. The survey of the area proposed for the pipeline was surveyed on foot and also by a slow moving car were situation permits. The field survey did not include any form of subsurface inspection beyond the inspection of burrows, road cut sections, and the stream banks exposed by natural erosion forces.

Documentation

The general project area was documented. This documentation included taking photographs using cameras a 10.1 mega-pixel Sony Cybershort Digital Camera. Plotting of finds was done by a Garmin etrex Venture HC.

Oral interview

Oral interviews were conducted with local community members of Ennerdale and Orange Farm. The information provided was significant in detailing the history of the proposed area and subsequently compilation of this report.

Restrictions

As with any survey, archaeological materials may be under the surface and therefore unidentifiable to the surveyor until they are exposed once development resumes.

6. Applicable heritage legislation

Several legislations provide the legal basis for the protection and preservation of both cultural and natural resources. These include the National Environment Management Act (No. 107 of 1998); Mineral Amendment Act, 1993 (Act 103 of 1993); Tourism Act, 1993 (Act 72 of 1993); Cultural Institution Act, 1998 (Act 119 of 1998), and the National Heritage Resources Act, 1999 (Act 25 of 1999). Section 38 (1) of the National Heritage Resources Act requires that where relevant, an Impact Assessment is undertaken in case where a listed activity is triggered. Such activities include:

- (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;*
- (b) the construction of a bridge or similar structure exceeding 50 m in length; and*
- (c) any development or other activity which will change the character of an area of land, or water -*
 - (i) exceeding 5 000 m² in extent;*
 - (ii) involving three or more existing erven or subdivisions thereof; or*
 - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years;*
 - or*
 - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a Provincial Heritage Resources Authority;*
- (d) the re-zoning of a site exceeding 10 000 m² in extent; or*
- (e) any other category of development provided for in regulations by SAHRA or a Provincial Heritage Resources Authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.*

Section 3 of the National Heritage Resources Act, 1999 (Act 25 of 1999) lists a wide range of national resources protected under the act as they are deemed to be national estate. When conducting a Heritage Impact Assessment (HIA) the following heritage resources have to be identified:

- (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 by 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) moveable objects, including -*

- (i) objects recovered from the soil or waters of South Africa, including archaeological and paleontological 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 of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).

Section 3 of the National Heritage Resources Act (No. 25 of 1999) also distinguishes nine criteria for places and objects to qualify as 'part of the national estate if they have cultural significance or other special value ...' These criteria are the following:

- (a) Its importance in the community, or pattern of South Africa's history
- (b) Its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage
- (c) Its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage
- (d) Its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects
- (e) Its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group
- (f) Its importance in demonstrating a high degree of creative or technical achievement at particular period
- (g) Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons
- (h) Its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- (i) Sites of significance relating to the history of slavery in South Africa.

Other sections of the Act with a direct relevance to the AIA are the following:

Section 34(1) No person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

Section 35(4) No person may, without a permit issued by the responsible heritage resources authority:

- destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite

Section 36 (3) No person may, without a permit issued by SAHRA or a provincial heritage resources authority:

- destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside formal cemetery administered by a local authority; or
- bring onto or use at a burial ground or grave any excavation equipment, or any equipment which assists in detection or recovery of metals.

7. Degree of significance

This category requires a broad, but detailed knowledge of the various disciplines that might be involved. Large sites, for example, may not be very important, but a small site, on the other hand, may have great significance as it is unique for the region.

Significance rating of sites

(i) High

(ii) Medium

(iii) Low

This category relates to the actual artefact or site in terms of its actual value as it is found today, and refers more specifically to the condition that the item is in. For example, an archaeological site may be the only one of its kind in the region, thus its regional significance is high, but there is heavy erosion of the greater part of the site, therefore its significance rating would be medium to low. Generally speaking, the following are guidelines for the nature of the mitigation that must take place as Phase 2 of the project.

High

- This is a 'do not touch' situation, alternative must be sought for the project, examples would be natural and cultural landscapes like the Mapungubwe Cultural Landscape World Heritage Site, or the house in which John Langalibalele resided.
- Certain sites, or features may be exceptionally important, but do not warrant leaving entirely alone. In such cases, detailed mapping of the site and all its features is imperative, as is the collection of diagnostic artefactual material on the surface of the site. Extensive excavations must be done to retrieve as much information as possible before destruction. Such excavations might cover more than half the site and would be mandatory; it would also be advisable to negotiate with the client to see what mutual agreement in writing could be reached, whereby part of the site is left for future research.

Medium

- Sites of medium significance require detailed mapping of all the features and the collection of diagnostic artefactual material from the surface of the site. A series of test trenches and test pits should be excavated to retrieve basic information before destruction.

Low

- These sites require minimum or no mitigation. Minimum mitigation recommended could be a collection of all surface materials and/ or detailed site mapping and documentation. No excavations would be considered to be necessary.

In all the above scenarios, permits will be required from the South African Heritage Resources Agency (SAHRA) or the appropriate PHRA as per the requirement of the legislation (the National Heritage Resources Act, no. 25 of 1999). Destruction of any heritage site may only take place when a permit has been issued by the appropriate heritage authority. The following table is used to grade heritage resources.

Level	Significance	Possible action
National (Grade I)	Site of National Value	Nominated to be declared by SAHRA
Provincial (Grade II)	Site of Provincial Value	Nominated to be declared by PHRA
Local Grade (IIIA)	Site of High Value Locally	Retained as heritage
Local Grade (IIIB)	Site of High Value Locally	Mitigated and part retained as heritage
General Protected Area A	Site of High to Medium	Mitigation necessary before destruction
General Protected Area B	Medium Value	Recording before destruction
General Protected Area C	Low Value	No action required before destruction

Table 1: Grading systems for identified heritage resources in terms of National Heritage Resources Act (Act 25 of 1999).

8. Survey findings and discussions

The proposed development consists of establishment of T5 pipeline, this development may impacts significance archaeological objects, hence an AIA was warranted.

Discussion

Stone Age Period

There were no scatters of stone tools that we were observed in the area proposed study area. Moreover, no manufacturing camp or stratified sites were identified in the proposed area.

Iron Age

The survey did not identify any Iron Age sites; this is synonymous with other Archaeological/ Heritage survey undertaken previously in the immediate area.

Burial grounds and cemetery

Although no burial sites were identified on the larger sections of the proposed site, there is always the possibility of encountering previously unidentified burial sites in any landscape in South Africa. The construction team must watch out for possible chance finds in the project area. In the event that burial sites are encountered during construction, they are still protected by applicable legislations and they may not be disturbed. Nevertheless, the fact that there is an established graveyard in the neighbourhood may indicate that chances of encountering an isolated burial are very low. However, caution should be exercised at all times.

National/provincial heritage sites and landmarks

There are no listed monuments and land marks in the project area.

Historical period sites

No historical sites associated with early missionary activities were found in the project area.

Natural and contemporary cultural sites

No known sites of heritage significance will be affected by the proposed development. The noted area of worship is adjacent the proposed site, and will not be negatively affected.

9. Concluding remarks

In accordance with the requirements of the National Heritage Legislation, no development activity was conducted prior to this archaeological assessment.

In the absence of confirmable archaeological or physical cultural resources along the project receiving environment, and also confirmed by similar studies in the wider area, it is recommended that the project be exempted from any further archaeological assessment studies.

The Environmental Control Officer or any person responsible for site management should be aware of the indicators of sub-surface sites, this may include the following:

- Bone concentrations, either animal or human;
- Ash deposits (unnaturally grey appearance of soil compared to the surrounding substrate);
- Ceramic fragments, including potsherds;
- Bone concentrations;
- Stone concentrations that appear to be formally arranged (may indicate the presence of an underlying burial); and
- Fossilised remains of fauna and flora, including trees.

All construction within a radius of at least 10m of such indicator should cease and the area be demarcated by a danger tape. Accordingly, a professional archaeologist or SAHRA officer should be contacted immediately. In the mean time, it is the responsibility of the Environmental officer and the Contractor to protect the site from publicity (i.e., media) until a mutual agreement is reached. It is mandatory to report any incident of human remains encountered to the South African Police Services, SAHRA staff member and professional archaeologist.

Noteworthy that any measures to cover up the suspected archaeological material or to collect any resources is illegal and punishable by law. In the same manner, no person may exhume or collect such remains, whether of recent origin or not, without the endorsement by SAHRA or a professional archaeologist.

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APPENDIX 1: SITE SIGNIFICANCE

The following guidelines for determining site *significance* were developed by SAHRA in 2003. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.

(a) Historic value

- Is it important in the community, or pattern of history?
- Does it have strong or special association with the life or work of a person, group or organization of importance in history?
- Does it have significance relating to the history of slavery?

(b) Aesthetic value

- Is it important in exhibiting particular aesthetic characteristics valued by a community or cultural group?

(c) Scientific value

- Does it have potential to yield information that will contribute to an understanding of natural or cultural heritage?
- Is it important in demonstrating a high degree of creative or technical achievement at a particular period?

(d) Social value

- Does it have strong or special association with a particular community or cultural group for social, cultural or spiritual reasons?

(e) Rarity

- Does it possess uncommon, rare or endangered aspects of natural or cultural heritage?

(f) Representivity

- Is it important in demonstrating the principal characteristics of a particular class of natural or cultural places or objects?
- What is the importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as being characteristic of its class?
- Is it important in demonstrating the principal characteristics of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province, region or locality?

APPENDIX 2: GRAVE

A grave is a place of interment and includes all that is associated with such a place, and should be avoided by all means possible unless when totally impossible. If accidental found during construction, the constructor should immediately halt construction and notify SAHRA, the nearest Police Station and a Museum (preferably where there is an Archaeologist), or an independent Archaeologist, so that the discovery can be speedily investigated and facilitated. In the meantime a buffer of about ten meters from the grave should be maintained, and if the grave is to be relocated,

the correct procedure which involve, notification, consultation and permit application should be followed. If the grave is less than 60 years of age, it is subject to provision of the Human Tissue Act (Act 65 of 1983) and to local regulations. Exhumation of graves must conform to the standards set out in the ordinance on excavations (ordinance no. 12 of 1980) (replacing the old Transvaal Ordinance no. 7 of 1925). Permission must also be sought from the descendent (where known), the national department of health, provincial department of health, premier of the province and local police. Furthermore permission must also be sought from the landowners before exhumation can take place. Human remains can only be handled by a registered undertaker or an institution declared under the human tissues act (Act 65 of 1983 as amended). This act states that a survey and an evaluation of cultural resources should be undertaken in areas where development, which will change the face of the environment, is to be made.