

# NEW NATURAL GAS TRANSMISSION SUPPLY PIPELINE TO SAB PTY LTD, ROSSLYN, TSHWANE METROPOLITAN MUNICIPALITY, GAUTENG

Construction of new natural gas pipeline on Erf 79, Erf 9 and Erf 66 Rosslyn, Akasia, City of Tshwane Metropolitan Municipality, Gauteng Province

# **Site Assessment and Heritage Screening Report**

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## **Declaration of Independence**

This report has been compiled by PGS Heritage (Pty) Ltd, an appointed Heritage Specialist for Environmental Impact Management Services (Pty) Ltd on behalf of South African Breweries (Pty) Ltd. The views stipulated in this report are purely objective and no other interests are displayed during the decision-making processes.

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## **ACKNOWLEDGEMENT OF RECEIPT**

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Report Title	New Natural Gas Transmission Supply Pipeline to SAB Pty Ltd on Erf 79,		
	Erf 9 and Erf	66 Rosslyn, Akasia, Tshwa	ane Metropolitan Municipality,
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#### **EXECUTIVE SUMMARY**

PGS Heritage (Pty) Ltd was appointed by Environmental Impact Management Services (Pty) Ltd, on behalf of South African Breweries (Pty) Ltd to undertake a Heritage Screening Assessment for the proposed construction of a new natural gas transmission supply pipeline to SAB Rosslyn, Akasia, Tshwane Metropolitan Municipality, Gauteng Province.

## Heritage

During the survey, no significant heritage features were located. The Heritage sensitivity of the pipeline route is LOW.

## Palaeontology

The SAHRIS database was used to assess the palaeontological sensitivity of the pipeline route. According to the SAHRIS palaeosensitivity map, the palaeontological sensitivity of the area is assessed as INSIGNIFICANT.

Indications are that the receiving environment is not a sensitive archaeological or historical landscape, and is in fact a heavily disturbed and transformed industrial landscape. Therefore, no negative impacts on heritage resources are foreseen and no mitigation is required.

#### *Recommendations*

With regard to the proposed pipeline route, the following recommendations are made:

- An application for the project to be exempted from the requirement of a full Phase 1 HIA, due to
  the properties being located in a previously disturbed industrial landscape, should be submitted
  to the South African Heritage Resources Agency (SAHRA).
- 2. In the unlikely event of any unmarked human burials, burial pits, potsherds or stone tools being uncovered during earthworks, these must be reported immediately to the South African Heritage Resources Agency (021 462-4502).

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#### 1 INTRODUCTION

PGS Heritage (Pty) Ltd (PGS) was appointed by Environmental Impact Management Services (Pty) Ltd (EIMS), on behalf of South African Breweries (Pty) Ltd, Rosslyn Brewery (SAB Rosslyn), to undertake a Heritage Screening Assessment for the proposed construction of a new natural gas transmission supply pipeline to SAB Rosslyn, Akasia, Tshwane Metropolitan Municipality, Gauteng Province.

Desktop historical research and a field survey were undertaken for the screening assessment. General site conditions and features on site were recorded by means of photos, coordinate locations, and descriptions. If applicable, management measures to be implemented during construction are supplied in this report.

## 1.1 Scope of the Study

The aim of the study is to identify all heritage sensitive areas, document, and assess their importance within the Local, Provincial and National context, as well as make recommendations based on the findings of the study. This assessment aims to assist the client in managing the discovered heritage resources in a responsible manner, so as to protect, preserve, and develop them within the framework provided by the National Heritage Resources Act of 1999 (Act 25 of 1999) (NHRA).

## 1.2 Specialist Qualifications

The staff at PGS Heritage has a combined experience of nearly 70 years in the heritage consulting industry. PGS Heritage and its staff have extensive experience in managing Heritage Assessment processes. PGS Heritage will only undertake heritage assessment work where the staff has the relevant expertise and experience to undertake that work competently.

Wouter Fourie, Project Sponsor for this project, is an Accredited Heritage Practitioner with the APHP (Association of Professional Heritage Practitioners – Western Cape) and is registered with the Association of Southern African Professional Archaeologists (ASAPA) and has CRM accreditation within the said organisation.

Jennifer Kitto, author of this report and Heritage Specialist, has 17 years' experience in the heritage sector, a large part of which involved working for a government department responsible for administering the National Heritage Resources Act, No 25 of 1999. She is therefore well-versed in

the legislative requirements of heritage management. She holds a BA in Archaeology and Social Anthropology and a BA (Hons) in Social Anthropology.

## 1.3 Legislative Requirements

The identification, evaluation and assessment of any cultural heritage site, artefact or find in the South African context is required and governed by the following legislation:

- i. National Environmental Management Act (NEMA), Act 107 of 1998
- ii. National Heritage Resources Act (NHRA), Act 25 of 1999
- iii. Mineral and Petroleum Resources Development Act (MPRDA), Act 28 of 2002

The following sections in each Act refer directly to the identification, evaluation and assessment of cultural heritage resources.

- i. GNR 982 of 2014 (Government Gazette 38282) promulgated under the (NEMA):
  - a. Basic Assessment Report (BAR) Regulations 19 and 23
  - b. Environmental Scoping Report (ESR) Regulation 21
  - c. Environmental Impacts Report (EIR) Regulation 23
  - d. Environmental Management Programme (EMPr) Regulations 19 and 23
- ii. NHRA:
  - a. Protection of Heritage Resources Sections 34 to 36; and
  - b. Heritage Resources Management Section 38
- iii. MPRDA Regulations of 2014:
  - a. Environmental reports to be compiled for application of mining right Regulation 48

# 1.4 Terminology and Abbreviations

Archaeological resources

This includes:

- i. material remains resulting from human activity which are in a state of disuse and are
  in or on land and which are older than 100 years including artefacts, human and
  hominid remains and artificial features and structures;
- ii. rock art, being any form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and which is older than 100 years, including any area within 10m of such representation;

- iii. wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the republic as defined in the Maritimes Zones Act, and any cargo, debris or artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation;
- iv. features, structures and artefacts associated with military history which are older than 75 years and the site on which they are found.

## Cultural significance

This means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance

## Development

This means any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of the heritage authority in any way result in a change to the nature, appearance or physical nature of a place or influence its stability and future well-being, including:

- i. construction, alteration, demolition, removal or change in use of a place or a structure at a place;
- ii. carrying out any works on or over or under a place;
- iii. subdivision or consolidation of land comprising a place, including the structures or airspace of a place;
- iv. constructing or putting up for display signs or boards;
- v. any change to the natural or existing condition or topography of land; and
- vi. any removal or destruction of trees, or removal of vegetation or topsoil

## Earlier Stone Age

The archaeology of the Stone Age between 700 000 and 2 500 000 years ago.

# Fossil

Mineralised bones of animals, shellfish, plants and marine animals. A trace fossil is the track or footprint of a fossil animal that is preserved in stone or consolidated sediment.

# Heritage

That which is inherited and forms part of the National Estate (historical places, objects, fossils as defined by the National Heritage Resources Act 25 of 1999).

## Heritage resources

This means any place or object of cultural significance

#### Holocene

The most recent geological time-period, which commenced 10 000 years ago.

### Later Stone Age

The archaeology of the last 30 000 years, associated with fully modern people.

## Late Iron Age (Early Farming Communities)

The archaeology of the last 1000 years up to the 1800's, associated with iron-working and farming activities such as herding and agriculture.

## Middle Stone Age

The archaeology of the Stone Age between 30 000-300 000 years ago, associated with early modern humans.

# Palaeontology

Any fossilised remains or fossil trace of animals or plants which lived in the geological past, other than fossil fuels or fossiliferous rock intended for industrial use, and any site which contains such fossilised remains or trace.

Table 1: Table of abbreviations

ABBREVIATIONS	DESCRIPTION	
AIA	Archaeological Impact Assessment	
ASAPA	Association of South African Professional Archaeologists	
CRM	Cultural Resource Management	
DEA	Department of Environmental Affairs	
EIA practitioner	Environmental Impact Assessment Practitioner	
EIA	Environmental Impact Assessment	
EIMS	Environmental Impact Management Services (Pty) Ltd	
ESA	Earlier Stone Age	
GPS	Global Positioning System	
HIA	Heritage Impact Assessment	
I&AP	Interested & Affected Party	
LSA	Later Stone Age	
LIA	Late Iron Age	
MSA	Middle Stone Age	
NEMA	National Environmental Management Act	
NHRA	National Heritage Resources Act	
PGS	PGS Heritage (Pty) Ltd	
PHRA	Provincial Heritage Resources Authority	
PSSA	Palaeontological Society of South Africa	
SAHRA	South African Heritage Resources Agency	

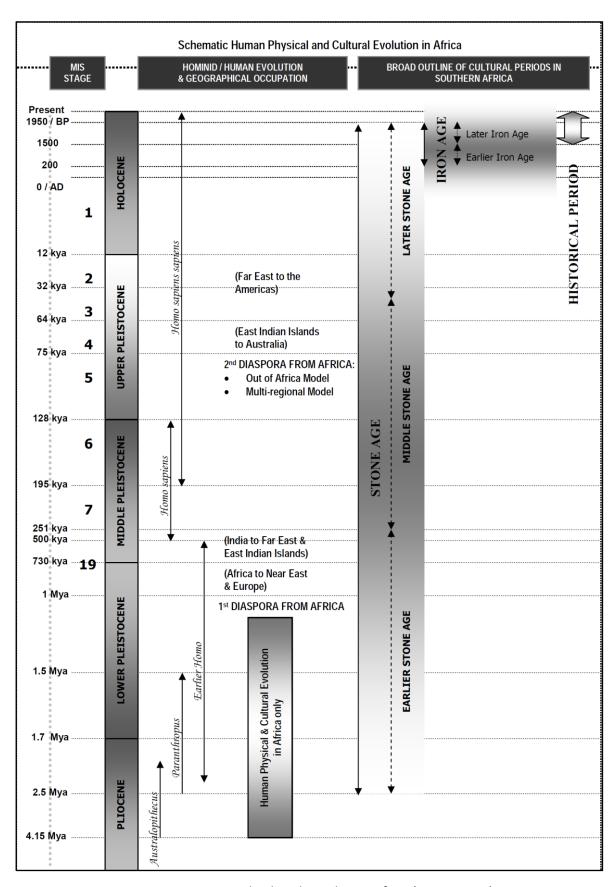


Figure 1: Human and Cultural Timeline in Africa (Morris 2008)

## 1.5 Site Significance

Site significance classification standards prescribed by the South African Heritage Resources Agency (2006) and approved by the Association for Southern African Professional Archaeologists (ASAPA) for the Southern African Development Community (SADC) region, were used for the purpose of this report (see **Table 2**).

Table 2: Site significance classification standards as prescribed by SAHRA

FIELD RATING	GRADE	SIGNIFICANCE	RECOMMENDED MITIGATION
National Significance (NS)	Grade 1	-	Conservation; National Site nomination
Provincial Significance (PS)	Grade 2	-	Conservation; Provincial Site nomination
Local Significance (LS)	Grade 3A	High	Conservation; Mitigation not advised
Local Significance (LS)	Grade 3B	High	Mitigation (Part of site should be retained)
Generally Protected A (GP.A)		High/Medium	Mitigation before destruction
Generally Protected B (GP.B)		Medium	Recording before destruction
Generally Protected C (GP.C)		Low	Destruction

## 2 PROJECT DESCRIPTION

# 2.1 General Description of the Site and Area Surveyed

The proposed pipeline route is located over the following three erfs: Erf 79 Rosslyn Ext1 (owned by South African Breweries Pty Ltd) Erf 9 Rosslyn (owned by Akasia Municipality) and Erf 66 Rosslyn (owned by South Northern Pretoria Metropolitan Substructure) in Akasia, City of Tshwane Metropolitan Municipality, Gauteng (**Figure 4**). The northern section of the pipeline will be located within the property of the SAB Rosslyn Brewery. The southern section of the pipeline will run south between the SAB Rosslyn Brewery premises and the existing Sasol Pressure Reducing Station (PRS), located to the south-east of the BMW plant.

The proposed servitude reserve for the southern section of the pipeline will affect an area of approximately 3 ha. The area is heavily disturbed with dumping of gravel, sand and refuse occurring throughout the area. The vegetation is also disturbed. A railway line runs along the western

boundary of the southern section of the pipeline route and a stream runs along the eastern boundary. An electrical overhead power line runs through the centre of the area affected by the pipeline route.

**Note:** The northern section of the pipeline route ( $\pm$ 318m) is located within the SAB Rosslyn operational premises and was not surveyed as the operational premises of the Rosslyn Brewery have been disturbed extensively by the construction and expansion of the Brewery since the 1970s (refer **Section 3.2**).



Figure 2 – Regional location of the pipeline route (indicated by orange arrow)



Figure 3 – Location of pipeline route within Rosslyn industrial area (red line)

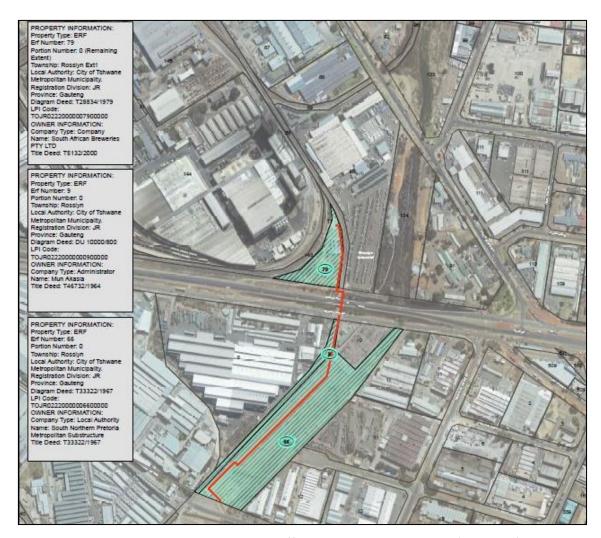


Figure 4 – Diagram showing the properties affected by the pipeline route (adapted from Hatch,

October 2017)

## 2.2 Project Description

SAB Pty Ltd intends to construct its own dedicated Sasol Gas Transmission pipeline to supply Sasol Natural Gas from the current main supply to the SAB Pty Ltd site in Rosslyn, Akasia. The pipeline is required to transport the gas to the proposed new Combined Heat and Power plant (CHP) that SAB intends constructing at its Rosslyn Brewery.

The pipeline route will run between the existing Sasol Pressure Reduction Station (PRS), which is located to the south of the SAB Rosslyn premises, and the Customer Metering Station (CMS) situated on the Rosslyn Brewery premises and then from the CMS to the new CHP.

SAB Pty Ltd will construct a 6" transmission pipeline which will operate at 35 Barg from the Sasol battery limit to the SAB Pty Ltd site. SAB will install a Customer Metering Station (CMS) inside the boundary of the brewery for customer metering purposes. The length of the pipeline between the Sasol Pressure Reduction Station (PRS) and the new CMS will be approximately 702 meters. SAB will extend the transmission line from the CMS all the way to the Combined Heat and Power (CHP) plant, which is approximately another 318 meters, giving a total length for the transmission line of approximately 1020 meters.

**Note:** The scope of work included in this heritage assessment was to undertake a survey of the pipeline route section located outside the SAB Rosslyn Brewery premises and did not assess the area for the pipeline route to be located within the SAB premises. The new pipeline will run on a similar route alongside the existing Sasol gas pipeline within the built-up area of the brewery and will cross the concrete wall at the same spot at the pipeline bridge (**Figure 5, Figure 6, Figure 7**).

Photographs of the section of the proposed pipeline route within the premises of the SAB Rosslyn Brewery (northern section) – photographs supplied by EIMS



Figure 5 – View showing the existing Sasol gas pipeline within the built-up area of the Rosslyn Brewery. The new pipeline will run on a similar route alongside the existing pipeline.



Figure 6 – View of the existing pipeline and pipeline bridge across the concrete wall. The new pipeline will cross the wall at the same spot.



Figure 7 – View of the pipeline route outside of the concrete wall, but still within the fenced-off area of SAB. The pipeline will run just on the inside of the fence, next to the fence line and will cross the fence at this point

Photographs of the section of the proposed pipeline route between the SAB Rosslyn premises and the Sasol PRS (southern section) – photographs taken by PGS Heritage



Figure 8 – View of the SAB Rosslyn premises at the point where the pipeline route enters the SAB premises



Figure 9 – View of test pit dug to confirm existing pipeline services, located at the entry point to the SAB premises



Figure 10 – View of another test pit confirming existing services, located at the point where the railway line and proposed pipeline cross Martinus Rass Avenue.



Figure 11 – View where the pipeline route and railway line pass under the R566 road (and cross Marthinus Rass Avenue), showing the test pit location



Figure 12 – View looking south along the western boundary of the pipeline route, showing the railway line and the BMW plant premises on the western side



Figure 13 - View of the middle section of the pipeline route, showing areas of dense acacia and open ground



Figure 14 - View of the stream that runs along the eastern boundary of the pipeline route, showing the dense reed growth



Figure 15 – View of the mid-section of the pipeline route showing the recent dumping of soil and rubble as well as the overhead powerline running along the route.



Figure 16- View of another test pit located in the middle of the southern section, which indicates the disturbed nature of the subsoil



Figure 17 - View looking north-west from the Sasol Pressure Reduction Station (PRS) located at the southern end of the pipeline route (BMW plant in the background)



Figure 18 – View of the end-point of the pipeline route, where it will tie in to the existing Sasol PRS

## 3 ASSESSMENT METHODOLOGY

This Heritage Screening Report was compiled for the proposed construction of a new Sasol Natural Gas transmission supply pipeline to SAB Rosslyn Brewery, Akasia, including applicable maps, tables and figures, as stipulated in the NHRA (no 25 of 1999) and the National Environmental Management Act (NEMA) (no 107 of 1998).

The process consisted of two steps:

- Step I Physical Survey: A physical survey was conducted on foot within the proposed pipeline route by a qualified archaeologist and a heritage specialist, aimed at locating and documenting sites falling within and adjacent to the proposed pipeline route. Note that this survey covered only the southern section of the pipeline route, which is located outside the premises of the SAB Rosslyn Brewery (as per the Scope of Work from the client).
- Step II The second and final step involved the recording and documentation of relevant heritage resources, report writing, as well as mapping and management recommendations.



Figure 19 - Track log of field work conducted (blue line), showing total pipeline route (red line)



Figure 20 – Survey tracklog, showing the southern section of the pipeline

## 3.1 Physical surveying

The estimated servitude for the project covers a proposed area of about 3 Ha. A surface survey was conducted over a period of one morning (20 October2017) on foot by an archaeologist and a heritage specialist from PGS. The PGS staff were accompanied by an engineer representing the client, who indicated the pipeline route. The fieldwork was documented and tracked through a track log generated by GPS. In addition, digital photographs were used to document the general area.

# 3.2 Historical Background

The examination of historical data and cartographic resources represents a critical additional tool for locating and identifying heritage resources and in determining the historical and cultural context of the study area. Relevant topographic maps and satellite imagery were studied to identify structures, possible burial grounds or archaeological sites present in the pipeline route.

## 3.2.1 Topographic Maps

Topographic maps for various years were assessed to observe the development of the area, as well as the location of possible historical sites and burial grounds. The maps were also used to assess the possible age of structures located, to determine whether they could be considered as heritage sites. Map overlays were created showing the possible heritage sites identified within the areas of concern, as can be seen below (Figure 21, Figure 22, Figure 23, Figure 24).

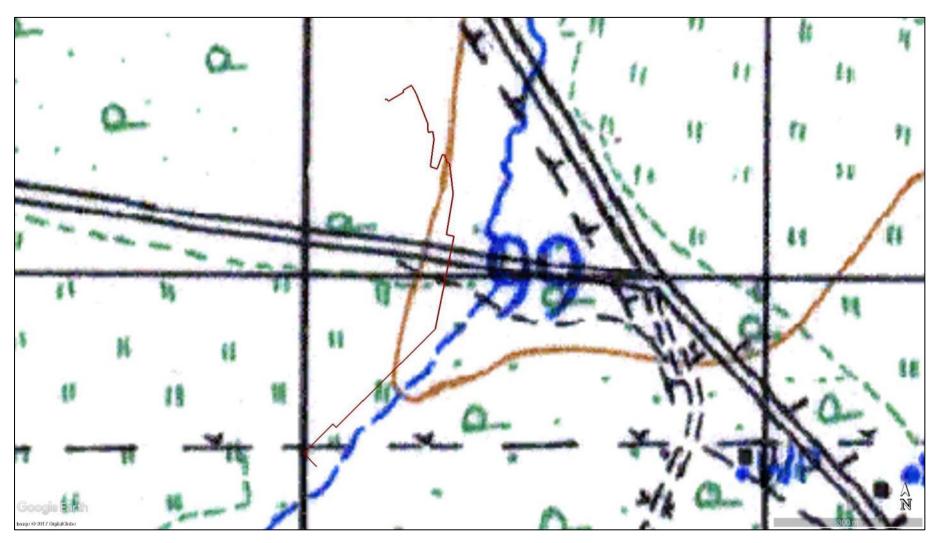


Figure 21 – Enlarged section of 1:50 000 map sheet 2528CA, Ed 1 1939, showing the pipeline route (red line). No heritage resources are depicted in the immediate vicinity, except for the road now named Martinus Rass Avenue.

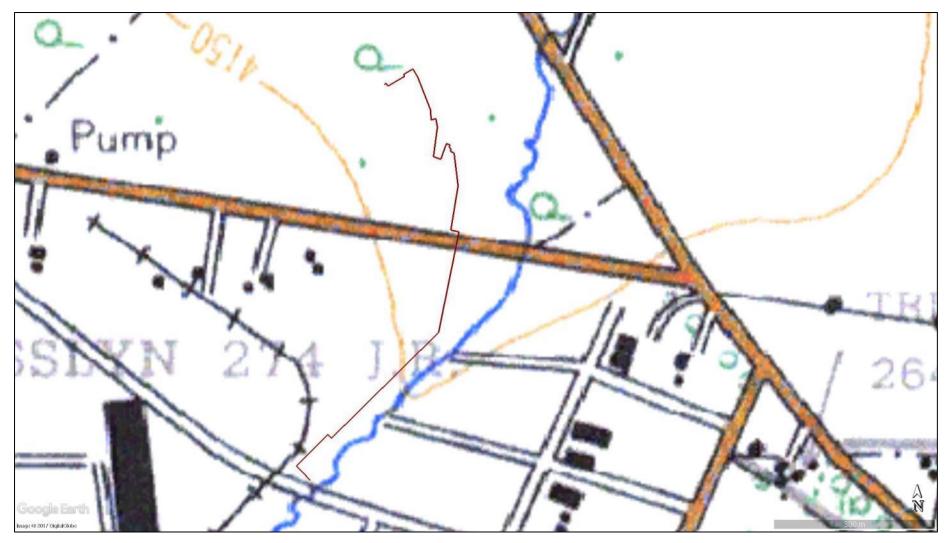


Figure 22 - Enlarged section of 1:50 000 map sheet 2528CA, Ed 3 1965, showing the pipeline route (red line). The railway line and Martinus Rass Avenue are depicted but no heritage resources are depicted in the immediate vicinity.



Figure 23 - Enlarged section of 1:50 000 map sheet 2528CA, Ed 4 1975, showing the pipeline route (red line). The railway line, power line and Martinus Rass Avenue are depicted. The buildings and structures depicted will date between 1965 and 1975 and be less than 60 years old.

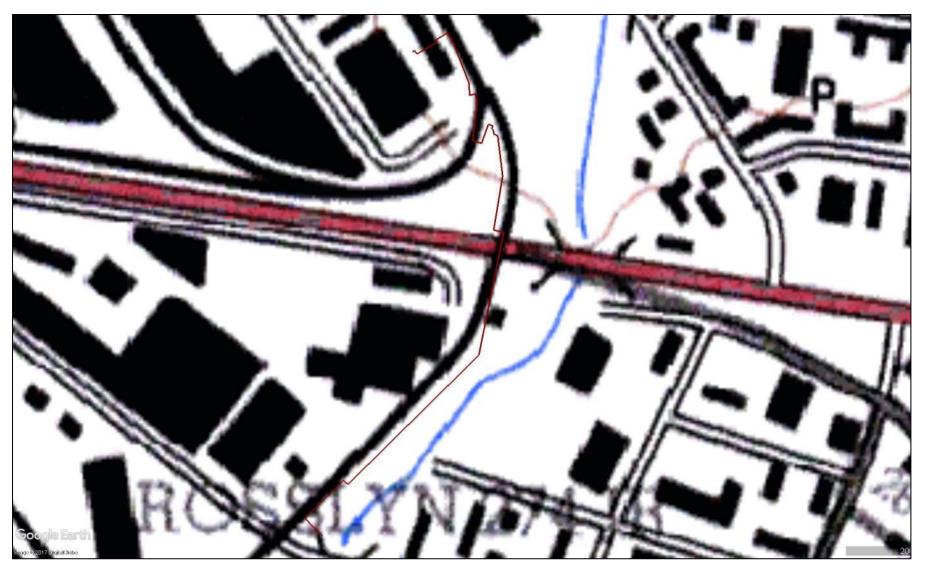


Figure 24- Enlarged section of 1:50 000 map sheet 2528CA, Ed 6 1995, showing the pipeline route (red line). The railway line and Martinus Rass Avenue and various contemporary buildings are shown.

## 3.2.2 Previous Heritage Impact Assessment (HIA) Reports from the Study Area and Surroundings

The South African Heritage Resources Agency Information System (SAHRIS) lists several previous archaeological and heritage studies from the surroundings of the present study area. None of these previous studies assessed the present study area, although several studies were undertaken in the near vicinity. A selection of these previous studies for the area is listed in ascending chronological order below:

These known archaeological and heritage studies are as follows:

 Van Schalkwyk, J. 2002. An Archaeological Investigation of Some Industrial Sites in the Rosslyn Industrial Area, Akasia, Gauteng Province. For PD Naidoo & Associates. By National Cultural History Museum

The National Cultural History Museum was contracted to survey an area which was proposed for the development of industrial sites in the Rosslyn Industrial Area. No sites of cultural significance were found in the area investigated. This study area is located roughly 1.70 km north-west of the SAB pipeline route.

 Van Schalkwyk, J 2002. A Survey of Cultural Resources in The Automotive Supplier Park, Rosslyn, Gauteng Province For: PD Naidoo & Associates. By National Cultural History Museum

The National Cultural History Museum was contracted to survey an area which was proposed for development of an industrial park. The area that was investigated is located on the farm Klipfontein 268JR in the Rosslyn area of Akasia. A few stone tools dating to the Middle Stone Age were identified throughout the area, however, these were surface occurrences. One Iron Age site was found, located on a norite outcrop. No sites of importance dating to the historical period were found in the survey area. The Iron Age site is located roughly 2 km north of the current pipeline route.

 Van Schalkwyk, J 2006. Heritage Impact Assessment: Rosslyn Ext 14. For Strategic Environmental Focus (SEF). By National Cultural History Museum

The National Cultural History Museum investigated the proposed Township to be established on Holding 124 Erand Agricultural Holdings, Extension 1 of the Wonderboom magisterial district. The site is located on a portion of the farm Randjiesfontein 405JR, west of the N1 and south of the R562 (Olifantsfontein Road). No obvious features, sites or artefacts of cultural significance were found. The township is located roughly 2.87 km north-west of the current pipeline route.

 Van Schalkwyk, J. 2009. Heritage Impact Survey Report for the Proposed Development On Portion 7 Of Strydfontein 306 JR, Wonderboom Magisterial District, Gauteng Province. For Bokamoso Landscape Architects.

Bokamoso Landscape Architects appointed Dr van Schalkwyk to investigate a study area for a proposed mixed-use development on Portion 7 of the farm Strydfontein 306JR located north of Pretoria. No sites, features or objects of cultural significance were identified in the study area during the survey. The study area is located roughly 2.90 km south-west of the current pipeline route.

Coetzee, F. 2008 (2006). Heritage Assessment of the Proposed Residential Development:
 Orchards Extension 25, Rosslyn, Tshwane Metropolitan Municipality, Gauteng. For Newtown
 Landscape Architects cc. By The Archaeology Contracts Unit, University of South Africa.

The Archaeology Contracts Unit (UNISA) conducted an investigation of Orchards Extensions 49-53 in Rosslyn, Tshwane Metropolitan Municipality. The proposed development is listed as Residential 1. No archaeological or historical artefacts, features or structures (including formal graves) were

recorded during the survey of the proposed area of development. The study area is located roughly 2.22 km south of the current pipeline route.

• Coetzee, F. 2008 (2006). Heritage Assessment of the Proposed Industrial Development: Platinum Park, Klerksoord, Tshwane Metropolitan Municipality, Gauteng. For Newtown Landscape Architects cc. By The Archaeology Contracts Unit, University of South Africa

The survey area consisted of Portions 146 and 147, and the remainder of Portions 145, 160 and 164 of the farm Witfontein 301JR. No archaeological artefacts, features or structures were recorded during the survey of the proposed area of development. The foundations of several brick and mortar structures were recorded, however, none of these structures were assessed to be older than 60 years. An informal cemetery, with approximately 20 graves, was recorded on the northern periphery of the area. This survey area is located approximately 4.50 km east of the pipeline route.

 Van Schalkwyk, J. 2014. Cultural heritage impact assessment for the Proposed Storm Water Pipeline Installation, Martinus Rass Avenue, Rosslyn, Gauteng. Interdesign Landscape Architects.

Dr van Schalkwyk was appointed to undertake an investigation of the route for the installation of a larger storm water pipeline in the Martinus Rass Avenue region of the Rosslyn industrial area north of Pretoria. No heritage sites were identified in that study area. This survey area is located along Martinus Rass Avenue for approximately 0.97 km west of the pipeline route.

#### 4 HERITAGE SITES

During the field survey conducted, by PGS, of the pipeline route located between the SAB Rosslyn Brewery premises and the Sasol PRS, no heritage sites were located within the area affected by the pipeline route and servitude. The section of the pipeline route which is located within the SAB premises (northern section) was not included in the scope of work for this heritage assessment. The new pipeline within the SAB premises will run a similar route alongside the existing Sasol gas pipeline within the built-up area.

## 4.1 Archaeological and heritage potential

Of the previous heritage studies undertaken in the immediate area surrounding the pipeline route, only one identified a few stone tools dating to the Middle Stone Age, which were surface occurrences. The same study also identified one Iron Age site. That study area was located in one of the few sections of the Rosslyn area that has not been disturbed by previous industrial development

(van Schalkwyk, 2002). The only other heritage resource identified by a previous heritage study was an informal burial ground located approximately 4.50 km east of the pipeline route (Coetzee, 2008). Most of the other studies did not record any heritage resources or material within the Rosslyn area, including the most recent study (van Schalkwyk, 2014) which examined a section of the Marthinus Rass Avenue located very close to the proposed SAB Rosslyn pipeline route.

Any heritage resources that did exist in the general area would have been destroyed by the previous urbanization and industrialization development activities occurring throughout the general area during the past 40-60 years or more.

## 4.2 Palaeontology

A basic palaeontological sensitivity was determined using the SAHRIS database palaeosensitivity map (http://www.sahra.org.za/sahris/map/palaeo). As can be seen in **Figure 25** and **Figure 26**, the proposed route occurs in a large area where palaeontology is assessed as being insignificant and no further palaeontological studies are required.

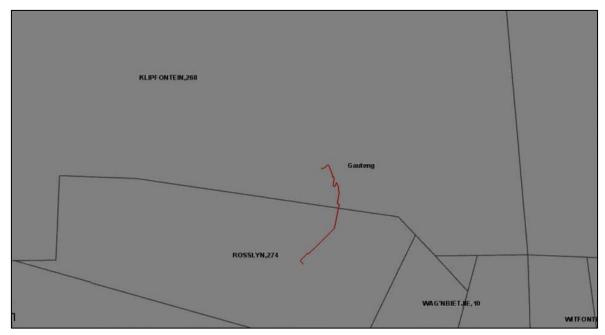


Figure 25: Overlay of the pipeline route (red line) on the palaeosensitivity map from the SAHRIS database (showing that the greater area is coloured grey, which is rated as Insignificant.

Colour	Sensitivity	Required Action
RED	VERY HIGH	field assessment and protocol for finds is required
ORANGE/YELLOW	HIGH	desktop study is required and based on the outcome of the desktop study, a field assessment is likely
GREEN	MODERATE	desktop study is required
BLUE	LOW	no palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO	no palaeontological studies are required
WHITE/CLEAR	UNKNOWN	these areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map.

Figure 26 - Sensitivity ratings from SAHRIS

#### 5 ASSUMPTIONS AND LIMITATIONS

As noted in the Project Description section (2.1), the northern section of the pipeline route (+318m) is located within the SAB Rosslyn operational premises and was not surveyed, as the operational premises of the Rosslyn Brewery have been disturbed extensively by the construction and expansion of the plant since the 1970s.

Not detracting in any way from the comprehensiveness of the fieldwork undertaken, it is necessary to realise that the heritage resources located during the fieldwork do not necessarily represent all the possible heritage resources present within the area. Various factors account for this, including the subterranean nature of some archaeological sites and the current dense vegetation cover in some areas. As such, should any heritage features and/or objects not included in the present inventory be located or observed, a heritage specialist must be contacted immediately. Such observed or located heritage features and/or objects may not be disturbed or removed in any way until the heritage specialist has been able to make an assessment as to the significance of the site (or material) in question. This applies to graves and burial grounds as well. If any additional graves or burial grounds are located during the rehabilitation work, the procedures and requirements pertaining to graves and burial grounds will apply, as set out below.

## 6 ASSESSMENT AND RECOMMENDATIONS

During the survey, no significant heritage sites were located within the study area. From a heritage perspective, the significance of the pipeline route is LOW.

Indications are that the receiving environment is not a sensitive archaeological or historical landscape, and is in fact a heavily disturbed and transformed industrial landscape. Therefore, no negative impacts on heritage resources are foreseen and no mitigation is required.

The SAHRIS database was used to assess the palaeontological sensitivity of the pipeline route. According to the SAHRIS palaeosensitivity map, the palaeontological sensitivity of the area is assessed as INSIGNIFICANT.

#### Recommendations

With regard to the proposed pipeline route, the following recommendations are made:

- 1. An application for the project to be exempted from the requirement of a full Phase 1 HIA, due to the route being located in a previously disturbed industrial landscape, should be submitted to the South African Heritage Resources Agency (SAHRA).
- 2. In the unlikely event of any unmarked human burials, burial pits, potsherds or stone tools being uncovered during earthworks, these must be reported immediately to the South African Heritage Resources Agency (021 462-4502).

#### 7 REFERENCES

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