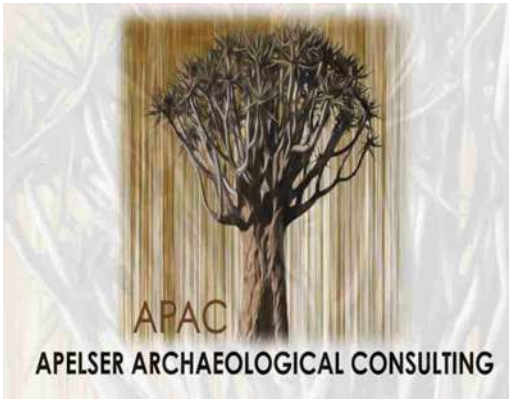


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# PHASE 1 HIA REPORT FOR THE PROPOSED UPGRADE OF THE COMET SEWER LINE IN THE BOKSBURG AREA OF THE EKURHULENI METROPOLITAN MUNICIPALITY, GAUTENG

For:

***Vulcano Engineering & Environmental Consulting***
***423 Cork Avenue, Ferndale***
***RANDBURG***
***2194***

REPORT: **APAC020/48**

by:

***A.J. Pelser***
***Accredited member of ASAPA***

***July 2020***

**P.O.BOX 73703**
**LYNNWOOD RIDGE**
**0040**
**Tel: 083 459 3091**
**Fax: 086 695 7247**
**Email: apac.heritage@gmail.com**

Member: AJ Pelser BA (UNISA), BA (Hons) (Archaeology), MA (Archaeology) [WITS]

**DISCLAIMER:**

**Although all efforts are made to identify all sites of cultural heritage (archaeological and historical) significance during an assessment of study areas, the nature of archaeological and historical sites are as such that it is always possible that hidden or subterranean sites, features or objects could be overlooked during the study. APELSER Archaeological Consulting can't be held liable for such oversights or for costs incurred as a result thereof.**

**Clients & Developers should not continue with any development actions until SAHRA or one of its subsidiary bodies has provided final comments on this report. Submitting the report to SAHRA is the responsibility of the Client unless required of the Heritage Specialist as part of their appointment and Terms of Reference**

**SUMMARY**

APelser Archaeological Consulting (APAC) was appointed by Vulcano Engineering & Environmental Engineering to conduct a Phase 1 HIA for the Proposed Comet Sewer Line Upgrade Project. The study area is located in the Boksburg area of the Ekurhuleni Metropolitan Municipality of Gauteng.

Background research indicates that there are some cultural heritage sites and features in the larger geographical area within which the study area falls. The assessment of the specific study area did not identify any sites, features or material of cultural heritage (archaeological and/or historical) origin or significance. This report discusses the results of both the background research and physical assessment.

**From a Cultural Heritage perspective it is recommended that the proposed development actions be allowed to continue, taking into consideration the recommendations put forward at the end of the report.**

**CONTENTS**

## 1. INTRODUCTION

APelser Archaeological Consulting (APAC) was appointed by Vulcano Engineering & Environmental Engineering to conduct a Phase 1 HIA for the Proposed Comet Sewer Line Upgrade Project. The study area is located in the Boksburg area of the Ekurhuleni Metropolitan Municipality of Gauteng.

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The client indicated the location and boundaries of the study area and the assessment concentrated on this area.

## 2. TERMS OF REFERENCE

The Terms of Reference for the study was to:

1. Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the portion of land that will be impacted upon by the proposed development;

2. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value;

3. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions;

4. Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources;

5. Review applicable legislative requirements;

## 3. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural resources are dealt with mainly in two acts. These are the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998).

### 3.1. The National Heritage Resources Act

According to the above-mentioned act the following is protected as cultural heritage resources:

a. Archaeological artifacts, structures and sites older than 100 years
b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography

c. Objects of decorative and visual arts
d. Military objects, structures and sites older than 75 years
e. Historical objects, structures and sites older than 60 years
f. Proclaimed heritage sites
g. Grave yards and graves older than 60 years
h. Meteorites and fossils
i. Objects, structures and sites of scientific or technological value.

The National Estate includes the following:

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 features of cultural significance
e. Geological sites of scientific or cultural importance
f. Sites of Archaeological and palaeontological importance
g. Graves and burial grounds
h. Sites of significance relating to the history of slavery
i. Movable objects (e.g. archaeological, palaeontological, meteorites, geological specimens, military, ethnographic, books etc.)

A Heritage Impact Assessment (HIA) is the process to be followed in order to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment (AIA) only looks at archaeological resources. An HIA must be done under the following circumstances:

a. The construction of a linear development (road, wall, power line, canal etc.) exceeding 300m in length

b. The construction of a bridge or similar structure exceeding 50m in length

c. Any development or other activity that will change the character of a site and exceed 5 000$m^2$ or involve three or more existing erven or subdivisions thereof

d. Re-zoning of a site exceeding 10 000 $m^2$

e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

***Structures***

Section 34 (1) of the mentioned act states that no person may demolish any structure or part thereof which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

A structure means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

Alter means any action affecting the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or the decoration or any other means.

***Archaeology, palaeontology and meteorites***

Section 35(4) of this act deals with archaeology, palaeontology and meteorites. The act states that no person may, without a permit issued by the responsible heritage resources authority (national or provincial)

a. destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;

b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;

c. trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or

d. bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.

e. alter or demolish any structure or part of a structure which is older than 60 years as protected.

**The above mentioned may only be disturbed or moved by an archaeologist, after receiving a permit from the South African Heritage Resources Agency (SAHRA). In order to demolish such a site or structure, a destruction permit from SAHRA will also be needed.**

***Human remains***

Graves and burial grounds are divided into the following:

a. ancestral graves
b. royal graves and graves of traditional leaders
c. graves of victims of conflict
d. graves designated by the Minister
e. historical graves and cemeteries
f. human remains

In terms of Section 36(3) of the National Heritage Resources Act, no person may, without a permit issued by the relevant heritage resources authority:

a. destroy, damage, alter, exhume or remove from its original position of otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;

b. destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or

c. bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation, or any equipment which assists in the detection or recovery of metals.

Human remains that are less than 60 years old are subject to provisions 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 gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (i.e. where the graves are located and where they are to be relocated to) 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**).

### 3.2. The National Environmental Management Act

This act states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

Environmental management should also take the cultural and social needs of people into account. Any disturbance of landscapes and sites that constitute the nation's cultural heritage should be avoided as far as possible and where this is not possible the disturbance should be minimized and remedied.

## 4. METHODOLOGY

### 4.1. Survey of literature

A survey of available literature is undertaken in order to place the development area in an archaeological and historical context. The sources utilized in this regard are indicated in the bibliography.

### 4.2. Field survey

The field assessment section of any study is conducted according to generally accepted HIA practices and aims at locating all possible objects, sites and features of heritage significance in the area of the proposed development. The location/position of all sites, features and objects is determined by means of a Global Positioning System (GPS) where possible, while detail photographs are also taken where needed.

### 4.3. Oral histories

People from local communities are sometimes interviewed in order to obtain information relating to the surveyed area. It needs to be stated that this is not applicable under all circumstances. When applicable, the information is included in the text and referred to in the bibliography.

### 4.4. Documentation

All sites, objects, features and structures identified are documented according to a general set of minimum standards. Co-ordinates of individual localities are determined by means of the Global Positioning System (GPS). The information is added to the description in order to facilitate the identification of each locality.

## 5. DESCRIPTION OF THE AREA

As indicated the study area is located in the Boksburg area of the Ekhurhuleni Metropolitan Municipality of the Gauteng Province. It is situated in a mostly urban, industrial and mining developed setting and as such the original natural landscape has been significantly disturbed and altered in recent historical times. The development includes the upgrade of the Comet Sewer Line and follows to a large extent existing servitudes. Boksburg Lake & Cinderella Dam is situated in the study area, with the sewer line skirting the boundaries of both features as well.

The topography of the study area is in general flat and open, with no rocky ridges or outcrops present. Visibility during the assessment was fairly good, although in some sections grass, shrub, weeds/alien plant and tree cover made visibility and access difficult. The area (and surrounds) has been developed in the recent past through urban residential developments such as housing, roads and related infrastructure as well as industrial and mining development. If any sites of archaeological and/or historical significance did occur

here in the past it would have been disturbed or destroyed as a result of these recent activities to a large degree.


**Figure 1: General location of study area and Comet Sewer Line Upgrade route (Google Earth 2020).**


**Figure 2: Section of the Sewer Line route close to Farrar Park & Cinderela Dam (Google Earth 2020).**


**Figure 3: Another section of the line close to Cinderella Dam.**

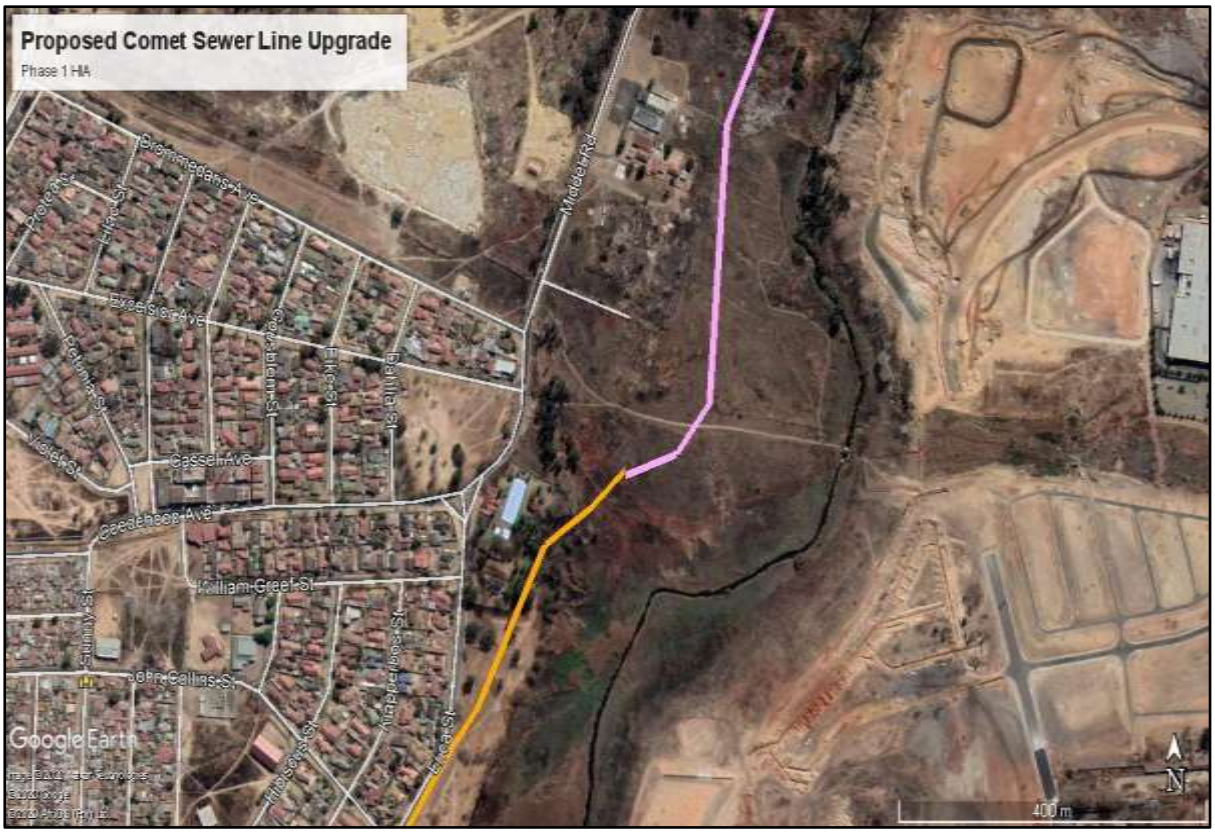


**Figure 4: A section of the line close to Reiger Park (Google Earth 2020).**

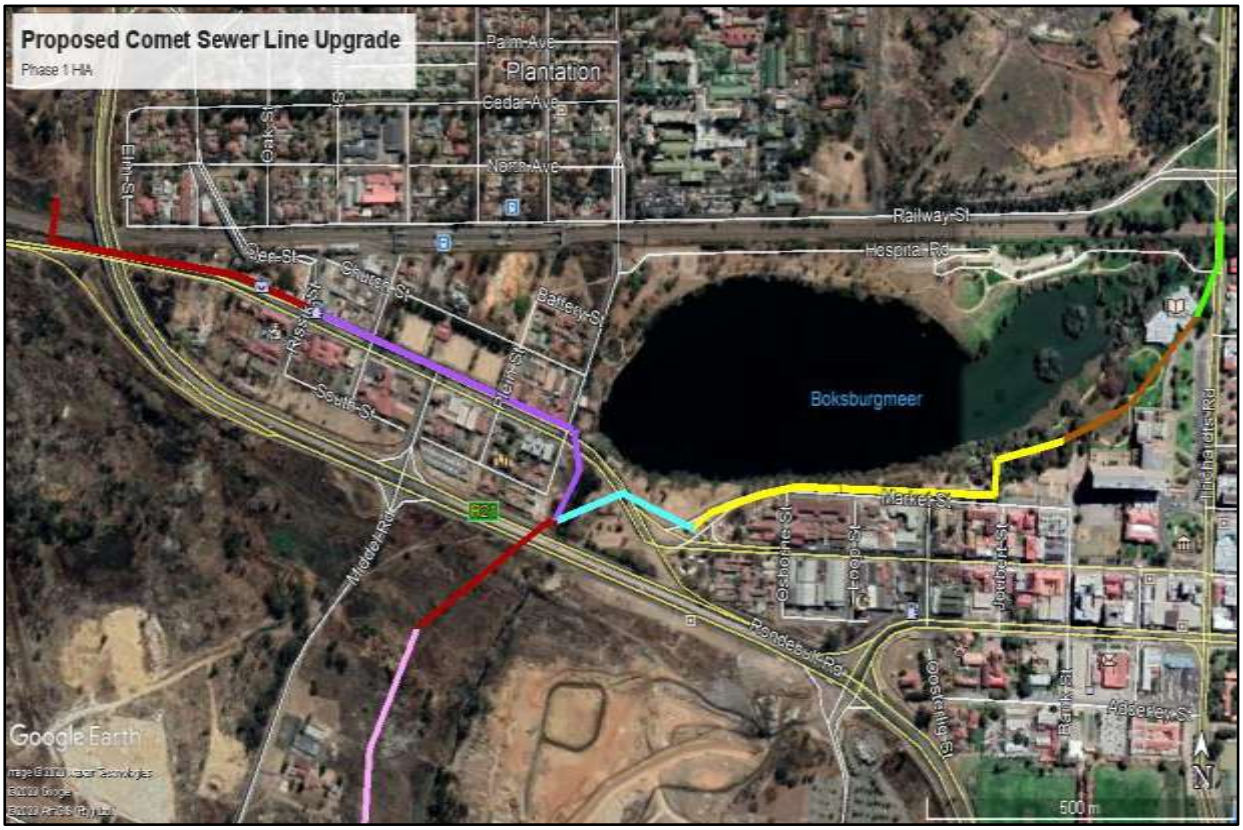


**Figure 5: Closer view of the Comet Sewer Line sections around Boksburg Lake (Google Earth 2020).**

## 6. DISCUSSION

The Stone Age is the period in human history when lithic (stone) material was mainly used to produce tools. In South Africa the Stone Age can be divided basically into three periods. It is however important to note that dates are relative and only provide a broad framework for interpretation. A basic sequence for the South African Stone Age (Lombard et.al 2012) is as follows:

Earlier Stone Age (ESA) up to 2 million – more than 200 000 years ago
Middle Stone Age (MSA) less than 300 000 – 20 000 years ago
Later Stone Age (LSA) 40 000 years ago – 2000 years ago

It should also be noted that these dates are not a neat fit because of variability and overlapping ages between sites (Lombard et.al 2012: 125).

No known Stone Age sites or artifacts are present in the area. The closest known Stone Age sites are those at Aasvoelkop, Melvillekoppies, Linksfield and Primrose (Bergh 1999: 4). Records indicate that stone tools dating to the Early and Middle Stone Age occurred all over, for example in the Primrose Ridge area in adjacent Germiston, as well as to the south at Henley-On-Klip (Van Schalkwyk 2014: 9). Fourie (2006) reported on a large Earlier (ESA) and Middle Stone Age (MSA) deposit at Albertsdal, Palmietfontein, while Huffman (2000) commented on the widespread presence of surface MSA occurrences at Roodekop, Germiston, with at least 1 significant MSA site with fairly substantial stratigraphic depth recorded. In addition the Roodekop survey yielded 2 ESA sites as well as mixed MSA / Later Stone Age (LSA) occurrences. MSA and LSA lithic occurrences were also reported on from the Klipriviersberg Nature Reserve (Van Ryneveld 2015: 14). If any Stone Age artifacts are to be found in the area then it would more than likely be single, out of context, stone tools.

***No Stone Age sites or material (stone tools) were identified in the study area during the July 2020 field work.***

The Iron Age is the name given to the period of human history when metal was mainly used to produce artifacts. In South Africa it can be divided in two separate phases (Bergh 1999: 96-98), namely:

Early Iron Age (EIA) 200 – 1000 A.D.
Late Iron Age (LIA) 1000 – 1850 A.D.

Huffman (2007: xiii) indicates that a Middle Iron Age should be included. His dates, which are widely accepted in archaeological circles, are:

Early Iron Age (EIA) 250 – 900 A.D.
Middle Iron Age (MIA) 900 – 1300 A.D.
Late Iron Age (LIA) 1300 – 1840 A.D.

No Early Iron Age sites are known in the area (Bergh 1999: 6). The closest known LIA sites are at Melvillekoppies and Bruma Lake (Bergh 1999: 7). The occupation of the larger geographical area (including the study area) did not start much before the 1500s. By the 16th century things changed, with the climate becoming warmer and wetter, creating condition that allowed Late Iron Age (LIA) farmers to occupy areas previously unsuitable, for example the Witwatersrand in the region of Klipriviersberg. Here, a large number of settlements dating to the Later Iron Age occur and, according to Huffman et al (2006/2007) these sites can be related to the Bafokeng people (Van Schalkwyk 2014: 10).

***No Iron Age occurrences were identified in the study area during the assessment.***

The historical age started with the first recorded oral histories in the area. It includes the moving into the area of people that were able to read and write. The first Europeans to move through and into the area were the group of Cornwallis Harris in 1836 (Bergh 1999: 13). These groups were closely followed by the Voortrekkers after 1844 (Bergh 1999: 14). White settlers moved into the area during the first half of the 19th century. They were largely self-sufficient, basing their survival on cattle/sheep farming and hunting. Few towns were established and it remained an undeveloped area until the discovery of gold and later of coal. From early days this region was subjected to intense gold mining activities. The result is that most sites and features of heritage significance in the larger region derive from this development (Van Schalkwyk 2014: 10).

**Information from Wikipedia**

East Rand Proprietary Mines (ERPM) is a 120-year-old underground gold mining operation on the Witwatersrand Basin at Boksburg, to the east of Johannesburg. The mine employed 2,740 people. It was the deepest mine in the world until 2008 at 3,585 meters depth, slightly more than the Tau Tona mine, also in South Africa, which was 3,581 meters at the time (in 2008 the Tau Tona mine completed a digging project that extended the depth of the mine by several hundred meters. The mine closed in 2008.

The Cason mine dump was once the world's highest man made mountain. This dump is currently being recycled. It is a shadow of itself and will probably disappear in the near future. The Mining Commissioner Montague White built a large dam which, empty for years, was dubbed White's Folly until a flashflood in 1889 silenced detractors. The 150,000 square meter dam is now the Boksburg Lake, and is surrounded by lawns, trees, and terraces. Prior to 1860, the present municipal area of Boksburg and its immediate environs comprised mainly the Highveld farms called Leeuwpoort, Klippoortje, Klipfontein and Driefontein. Carl Ziervogel bought the farm Leeuwpoort in 1875 and for 300 morgen of barren, rocky veld he paid £75. In September 1886 Pieter Killian, a young prospector, discovered quartz reefs on Leeuwpoort. He also discovered quartz reefs on the farm Vogelfontein, named after Adolf Vogel. Samples of the quartz were sent to Pretoria for assaying which confirmed the presence of gold. Killian advised Dr. W.E. Bok, Secretary of State for the Transvaal Republic, of the results of the assay. The result was the proclamation, on 10 March 1887, of the two farms as public diggings. Carl Ziervogel, who had been trying to sell Leeuwpoort, now opened the first gold mine on the East Rand, the Ziervogel Gold Mining Company.

Cornish miners were brought out to work the diggings. Unfortunately, it soon transpired that heavy expenditure was necessary for development, and as the Directors were unable to finance this, the mine closed down. Mr. Abe Bailey of the Barnato Group, which owned the Johannesburg Consolidated Investment Company (JCI), bought the farm Leeuwpoort in 1894 for £100,000. The mining rights were controlled by JCI, who established E.R.P.M. Ltd, which is still carrying on mining operations after 120 years. JCI also developed many residential suburbs over the years.

Gold was also found at Elsburg, 8 km to the southwest. Elsburg was a recognized stopping point for coaches and wagon traffic. The first Government offices were at Elsburg and what was to become Boksburg was but a suburb of Elsburg. With the real center of mining being centered on Boksburg, however, soon President Paul Kruger ordered that a new town be laid out to accommodate the miners. Land for the new town was released by having the boundaries of the farms Leeuwpoort, Driefontein and Klipfontein moved back from where they met. The newly created farm was called Vogelfontein, on which 1000 stands of 50x50 feet each were created. The new town of Boksburg was named after Dr. Bok. In1887 the first auction sale of stands took place, at which prices of £5 to £25 were realized. Also in 1887 the Republican Government built the Post Office and the Mining Commissioner's office. Business and residential properties began to be built in the fledgling town in its first year of existence.

In 1888 coal deposits were discovered right on the boundary of the new town, and here coal was first mined in the Transvaal. This started an era of company promotion and syndicate formation, with ground fetching high prices. Enterprises of all kinds were set up and Boksburg began to emerge from a mining camp atmosphere to a fully-fledged town. Coal ensured that the gold mining industry would grow to a formidable size. Originally, Boksburg was laid out in 1887 to serve the surrounding gold mines, and named after the State Secretary of the South African Republic, Eduard Bok. The Main Reef Road linked Boksburg to all the other major mining towns on the Witwatersrand and the Angelo Hotel was used as a production post. A railway was built by the Netherlands-South African Railway Company (NZASM) to link Boksburg to Johannesburg in 1890.

The first coal mine was called Gauf's Mine after the Manager Mr. J.L. Gauf. Others were the Good Hope, Ferndale and many more. There now arose a pressing need for a more sophisticated coal distribution system than using teams of ox wagons. The mine owners strongly advocated a railway line between Johannesburg and Boksburg, but this was opposed by the waggoneers. President Kruger managed to persuade the Volksraad to approve the building of a "tram" line, ostensibly to transport passengers only. The Rand Tram (so named as to appease the transport riders) opened in 1890, between Johannesburg's Park station and Boksburg station. The line was subsequently extended to Brakpan and Springs where large deposits of superior quality coal had been discovered. Also, deposits of high grade fireclay were discovered in Boksburg, which gave impetus to development of a fireclay manufacturing industry. All this helped the importance of the gold mining industry. Coal mining came to an end in 1895 after underground fires broke out, rendering the entire mining area unsafe.

Immediately to the north of Boksburg Township was a large muddy marsh fed by a small stream from the North-East. This marsh was the only watering place for stock between Middelburg and Johannesburg and the government received strong representations from transport riders and others for improved watering facilities near the public outspan west of the town. It was accordingly decided to build a small dam at the outlet of the marsh. Work on the dam was not proceeding satisfactorily, so Montague White, appointed Mining Commissioner of the Boksburg Goldfields in 1888, was asked by President Kruger to look into the matter. White said soon after arriving in Boksburg that the place was one of the "most uninviting spots" he had ever seen. Two things dear to him were needed: a stream or well-ordered sheet of water and trees, instead of the barren area of muddy pools which he found.

White was able to persuade a reluctant President to build a larger dam than was originally envisaged, because he visualized the ugly marsh being transformed into a beautiful lake fringed with trees. However, after completion, the new lake stood empty for nearly two years and became known as "White's folly". In 1891 the rains came, there was a cloudburst north of the dam one night and the next morning the citizens awoke to find a large lake filled and running over. Ever since then, it has been a popular and attractive feature of Boksburg and an integral part of its central area.

After the discovery of gold in the late 1800s, people of all races flocked to Boksburg - some hoped to get rich, others just wanted employment. Most workers initially resided in the Boksburg North area but another area was later established for all mine workers dubbed, Julewe, the Zulu word for Place of Work. The Government of the time declared that all Colored, Asian and Black people should live in Julewe, which was situated between two wetlands and close to the mines (Cinderella and Hercules Mine Shafts). Julewe was divided in two by the main road, Church Road, running through it, with Black mine workers on the one side, and Coloreds, who moved to the Transvaal from the Eastern Cape, on the other. Close to the entrance of the township, was the Asian trading market known as Kalamazoo.

The Hercules Mine Shaft, (the headgear and structures have been demolished some years ago - [from 2007]) was the deepest shaft in the world. The Julewe community soon started schools and churches, and the Boksburg Colored School, now known as Goedehoop Primary, is the oldest school in Boksburg, as it opened in 1905, with Mr. G. W. Van Rooyen as the principal. By 1911, the township was renamed Stirtonville, after the superintendent of the area. As a precaution, and to monitor the amount of residents in the area, residents of Stirtonville each received a residential permit, while people who wanted to visit family or friends residing in the township, had to obtain a temporary day-pass, in order to enter the township.

But even the strict control of the "Black Jack" officers who patrolled the township, failed to detect a few people creeping in and hiding away in the dense township. One of the people who did this, is one of the most iconic people in the world, the Nobel prize-winner and former President Nelson Mandela. It is rumoured that Mandela hid in Stirtonville, with authorities hot on his heels. Years later, Mandela returned to this area, where he was given the Freedom of the City. During the 1960s, all the black residents were moved to a new

township on the border of Boksburg and Germiston, called Vosloorus and the Asian residents to Actonville, and Stirtonville became the sole residential area of the Colored community. The community decided to rename their suburb to Reiger Park, in 1962. Two years later, town council agreed to change the street names, which were mainly African words. The Reiger Park Stadium was built upon a cemetery, mainly used for Chinese mine workers - the remains were never removed. Reiger Park has developed a fearful reputation, mainly due to gang violence. Today it is a community focused on change and remaining positive to build a bright future. The township has over 100 formal and informal churches, four primary schools, two high schools, and some community facilities, including a public library and swimming pool. The oldest mosque in the Gauteng area was also to be found in this suburb, but a fire in 2003 destroyed it completely. In 2003 a new shiny mosque, Masjid Al-Noor, was erected.

**Sir George Farrar**

George Herbert Farrar was born in England and brought up by his mother and grandfather in the village of Kempston. He attended Bedford Modern School. He then went to work at his grandfather's business, the Britannia Iron and Steel Works, where he received a background in engineering. He came to South Africa in 1879 to join his brothers Sidney and Percy, with the aim of selling agricultural machinery. At an agricultural show in Johannesburg, Farrar realized that a water drilling machine made by Britannia could be used to discover gold reefs far below the surface. Farrar apparently took a drilling machine to the East Rand and drilled to the south of where the ERPM and Kleinfontein mines were already operating.

He then pegged out claims and went into partnership with Carl Hanau. Farrar earned the nickname "Foxy Farrar" by reputedly going out on Boksburg Lake in the middle of the night in a rowing boat with long wooden poles, and using the poles to peg claims under the Lake! When the gold reefs to the north of Boksburg Lake near Comet were found to continue southwards under Boksburg Lake, towards the areas now known as Parkdene, Freeway Park and Sunward Park, Farrar became very wealthy in 1893 by selling 1,300 claims to ERPM. Farrar received ERPM shares to the value of £705,000 for his claims in the south of Boksburg, excluding Boksburg Lake. Farrar later received more ERPM shares for his claims over Boksburg Lake, and became effectively the controlling shareholder in ERPM.

In 1895 Farrar was a member of the so-called "Reform Committee" which plotted to overthrow the government of Paul Kruger, by organizing an uprising of new immigrant non-citizens ("Uitlanders") on the Reef and by inviting armed men led by Leander Starr Jameson to invade the Transvaal (Zuid-Afrikaansche Republiek) from Mafikeng. Farrar was convicted of High Treason and was sentenced to death in 1896, but the death sentence was later commuted to a fine of £25,000. Farrar's brother Sidney paid this fine by cheque. During the Anglo-Boer war Farrar helped to raise an irregular corps and fought for the British. He was awarded a D.S.O. and was knighted in 1902. After the war, Farrar laid out the township of Benoni. Farrar was not only involved with ERPM, but also with the New Kleinfontein mine in Benoni. Many of the original streets in Benoni are named after places in Farrar's home town

in England. Farrar built a large house on Bedford Farm, east of Johannesburg; the township of Bedfordview is named after Farrar's farm.

Farrar became president of the Chamber of Mines in 1902 and agitated for Chinese workers to be imported to work on the Gold Mines to reduce labor costs. Legislation to allow Chinese labor to be brought into the Transvaal was passed in 1904; Farrar was directly responsible for this. Farrar then entered politics and became president of the imperialistic Transvaal Progressive Association. Farrar hoped to become Prime Minister of the Transvaal Colony. In February 1907 elections were held for the Transvaal Legislative Assembly. Farrar was elected to the Assembly for the Boksburg East constituency which included Benoni, but "Het Volk" party of Louis Botha won the elections and Farrar had to be content with becoming Leader of the Opposition.

Farrar was one of the Transvaal delegates to the National Convention in 1908. Farrar was on the Transvaal inner Committee together with Jan Smuts, but Farrar had deep suspicions regarding Botha and Smuts, and distrusted the motivations of "Het Volk" party. Farrar was elected to the first Union Parliament in 1910 as member for Georgetown in Germiston. However, his stay in Parliament was short. In 1911 the Government Mining Engineer ordered an enquiry into irregularities and mismanagement at ERPM. Farrar resigned from Parliament to try to sort out the situation at ERPM. Mining company shareholders of ERPM wanted to oust Farrar from his chairmanship of ERPM, but eventually he was allowed to remain as Chairman, provided that there was a complete re-organization of the mine. W.T. Anderson was appointed as supervising engineer at ERPM towards the end of 1911.

In 1913 Farrar was indirectly involved in a confrontation with mineworkers. A newly appointed manager at the New Kleinfontein Mine in Benoni unilaterally changed the working conditions of miners, and miners then came out on strike. Considerable damage occurred during this strike and a number of people were killed. Farrar visited Benoni often during the strike, but refused to meet with the strikers. When the First World War broke out in August 1914 Farrar was on holiday in England. He returned to South Africa and volunteered to serve against Germany. He was appointed assistant quartermaster-general to the South African forces that landed at Luderitz in Namibia (then occupied by Germany). He was charged with clearing the Luderitz-Keetmanshoop railway line that had been damaged by German colonial soldiers, as they retreated into the interior. Farrar got damaged boreholes at Garub between Luderitz and Kubis working to provide 150,000 gallons of water a day for South African troops. Farrar was killed on 19 May 1915 when his railway inspection car collided head first with a train.

Although Farrar lived at Bedford Farm he travelled to ERPM daily, first on horseback, then later by car. He regularly attended functions and meetings in Boksburg and had a very paternal relationship with ERPM employees and with other Boksburg residents. Every year Farrar ran a Children's Day for ERPM employees, thanking all helpers personally. He would allow Boksburg residents to organize picnics at Bedford Farm. When Farrar was killed, businesses in Boksburg closed as a mark of respect and several thousand people attended a memorial service at Boksburg Lake. The ERPM band led the cortege when Farrar was later buried at Bedford.

In 2011 PGS Heritage conducted an HIA for the proposed Farrar Park Extension 2 development on Leeuwpoort 113IR for Marsh (Pty), with the proponent being DRD Gold Limited. An archival and historical study was undertaken which has revealed various aspects of the area's history. It showed that no significant heritage features can be associated with the study area during the period before June 1947. During the period 1947 to 1952 some mining-related development in the form of a railway line, loading platform and mine dump was undertaken. A field survey of the proposed footprint revealed two poorly preserved structures. Site 1 was a reasonably large concrete structure which is associated with a railway line linking it to the South East Vertical shaft further to the north-east. Site 2 was a smaller rectangular concrete foundation. With the information obtained through the desktop study it became clear that Site 1 was constructed between 1947 and 1952, whereas Site 2 was constructed between 1952 and 1970 (PGS 2011: 28).

According to PGS the period 1947 – 1952 can be considered the height of mining development within the study area. From the mining features constructed within the site at the time it is evident that it was earmarked for the establishment of a mine dump by ERPM‟s South East Vertical shaft. A railway line was constructed from the shaft and ended within the north-eastern section of the study area. At this point a railway loading platform was constructed. It is evident that material from the South East Vertical shaft was now transported via the railway line to the loading platform, where it was offloaded. The end result was the formation of a mine dump a short distance west of the loading platform. In the south-western corner of the study area a pipeline was also built. Between 1952 and 1970 the expansion of the existing mine dump is shown. A conveyor belt construction was also built (2011: 23).

During a 2017 assessment for proposed residential development in Farrar Park, remains identified by APAC cc included some of those identified and reported on by PGS in 2011, including remains of the East Rand Yacht Club Clubhouse and other structures.

***No significant historical sites, structures or remains were identified during the July 2020 assessment for the Comet Sewer Line Upgrade.***

**Results of the study area assessment**

As indicated earlier no sites, features or material of cultural heritage (archaeological and/or historical) origin or significance were identified in the study area during the physical assessment. The study area and area where the proposed development will take place is located in a mainly urban, industrial and mining developed set-up and as a result the original natural and cultural heritage landscape has been extensively and permanently altered over recent years.

Furthermore, the sewer line follows mostly existing servitudes and the impact of the upgrade of the line will therefore be minimal in terms of the surrounding landscape and any possible historical sites or structures (such as buildings). In some of the open areas where the line route is running recent development has also had an impact and if any sites or material did exist here it would have been demolished or disturbed to a large degree. In

many of the areas impacted by mining structures have been demolished and very little remains of them.

**Figure 6: A view of a section of the Comet sewer line route start close to Boksburg Lake.**

**Figure 7: Another view of the line route close to Boksburg Lake showing the general environment.**

**Figure 8: Another view of a section of the line route.**

**Figure 9: This section of the sewer line route follows existing servitudes.**

**Figure 10: Another section of the line.**

**Figure 11: The line follows existing sewer line routes.**

**Figure 12: In sections the area has been completely disturbed through recent developments. This section is close to Reiger Park.**

**Figure 13: Another view of the generally disturbed nature of the area close to Reiger Park.**

**Figure 14: Another section of the Comet Sewer Line route.**

**Figure 15: Part of the line route will run past these old railway-type houses but will not impact them (close to Reiger Park).**

**Figure 16: A view of a section of the line route adjacent to the structures in Figure 15.**

**Figure 17: A view of the Comet Line route in Reiger Park.**
**The existing water/sewer line connection points and servitude is visible.**

**Figure 18: Another section of the line in Reiger Park.**

**Figure 19: The sewer line route follows existing servitudes in most sections.**

**Figure 20: Another view of a section of the line route.**

**Figure 21: Portions of the line route goes through areas that were previously mined & where structures have been recently demolished.**

**Figure 22: An old sewer connection point in the area seen in Figure 21.**

**Figure 23: Sections of the line follows exiting roads and routes in urban settings such as in Farrar Park.**

**Figure 24: A view of the area around Farrar Park where sections of the line runs. The structural remains seen here will not be impacted and have been recorded in earlier assessments by APAC cc.**

**Figure 25: Another section of the line close to the N17 connection. The line traverses mainly disturbed mining area here.**

**Figure 26: Other impacts in the area include Powerlines and their servitudes.**

***Finally, it should be noted that although all efforts are made to cover a total area during any assessment and therefore to identify all possible sites or features of cultural (archaeological and/or historical) heritage origin and significance, that there is always the possibility of something being missed. This will include low stone-packed or unmarked graves. This aspect should be kept in mind when development work commences and if any sites (including graves) are identified then an expert should be called in to investigate and recommend on the best way forward.***

## 7. CONCLUSIONS AND RECOMMENDATIONS

In conclusion it is possible to say that the Phase 1 HIA for the Proposed Comet Sewer Line Upgrade Project was conducted successfully. The study area is located in the Boksburg area of the Ekurhuleni Metropolitan Municipality of Gauteng.

Background research indicates that there are some cultural heritage sites and features in the larger geographical area within which the study area falls. The assessment of the specific study area did not identify any sites, features or material of cultural heritage (archaeological and/or historical) origin or significance.

No sites, features or material of cultural heritage (archaeological and/or historical) origin or significance were identified in the study area during the physical assessment. The study area and area where the proposed development will take place is located in a mainly urban, industrial and mining developed set-up and as a result the original natural and cultural heritage landscape has been extensively and permanently altered over recent years.

Furthermore, the sewer line follows mostly existing servitudes and the impact of the upgrade of the line will therefore be minimal in terms of the surrounding landscape and any possible historical sites or structures (such as buildings). In some of the open areas where the line route is running recent development has also had an impact and if any sites or material did exist here it would have been demolished or disturbed to a large degree. In many of the areas impacted by mining structures have been demolished and very little remains of them.

Although all efforts are made to locate, identify and record all possible cultural heritage sites and features (including archaeological remains) there is always a possibility that some might have been missed as a result of grass cover and other factors. The subterranean nature of these resources (including low stone-packed or unmarked graves) should also be taken into consideration. Should any previously unknown or invisible sites, features or material be uncovered during any development actions then an expert should be contacted to investigate and provide recommendations on the way forward.

**Finally, from a Cultural Heritage point of view the proposed Comet Sewer Line Upgrade Project should be allowed to continue taking into consideration the recommended measures above.**

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**APPENDIX A: DEFINITION OF TERMS:**

**Site**: A large place with extensive structures and related cultural objects. It can also be a large assemblage of cultural artifacts, found on a single location.

**Structure**: A permanent building found in isolation or which forms a site in conjunction with other structures.

**Feature**: A coincidental find of movable cultural objects.

**Object**: Artifact (cultural object).

(Also see Knudson 1978: 20).

**APPENDIX B: DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE**

**Historic value**: Important in the community or pattern of history or has an association with the life or work of a person, group or organization of importance in history.

**Aestetic value**: Important in exhibiting particular aesthetic characteristics valued by a community or cultural group.

**Scientific value**: Potential to yield information that will contribute to an understanding of natural or cultural history or is important in demonstrating a high degree of creative or technical achievement of a particular period

**Social value**: Have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

**Rarity**: Does it possess uncommon, rare or endangered aspects of natural or cultural heritage.

**Representivity**: Important in demonstrating the principal characteristics of a particular class of natural or cultural places or object or a range of landscapes or environments characteristic of its class or 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 C: SIGNIFICANCE AND FIELD RATING:**

**Cultural significance:**

- Low: A cultural object being found out of context, not being part of a site or without any related feature/structure in its surroundings.

- Medium: Any site, structure or feature being regarded less important due to a number of factors, such as date and frequency. Also any important object found out of context.

- High: Any site, structure or feature regarded as important because of its age or uniqueness. Graves are always categorized as of a high importance. Also any important object found within a specific context.

**Heritage significance:**

**-** Grade I: Heritage resources with exceptional qualities to the extent that they are of national significance

- Grade II: Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate

- Grade III: Other heritage resources of local importance and therefore worthy of conservation

**Field ratings:**

i. National Grade I significance: should be managed as part of the national estate

ii. Provincial Grade II significance: should be managed as part of the provincial estate

iii. Local Grade IIIA: should be included in the heritage register and not be mitigated (high significance)

iv. Local Grade IIIB: should be included in the heritage register and may be mitigated (high/ medium significance)

v. General protection A (IV A): site should be mitigated before destruction (high/medium significance)

vi. General protection B (IV B): site should be recorded before destruction (medium significance)

vii. General protection C (IV C): phase 1 is seen as sufficient recording and it may be demolished (low significance)

**APPENDIX D: PROTECTION OF HERITAGE RESOURCES:**

**Formal protection:**

National heritage sites and Provincial heritage sites – Grade I and II
Protected areas - An area surrounding a heritage site
Provisional protection – For a maximum period of two years
Heritage registers – Listing Grades II and III
Heritage areas – Areas with more than one heritage site included
Heritage objects – e.g. Archaeological, palaeontological, meteorites, geological specimens, visual art, military, numismatic, books, etc.

**General protection:**

Objects protected by the laws of foreign states
Structures – Older than 60 years
Archaeology, palaeontology and meteorites
Burial grounds and graves
Public monuments and memorials

**APPENDIX E: HERITAGE IMPACT ASSESSMENT PHASES**

1. Pre-assessment or Scoping Phase – Establishment of the scope of the project and terms of reference.

2. Baseline Assessment – Establishment of a broad framework of the potential heritage of an area.

3. Phase I Impact Assessment – Identifying sites, assess their significance, make comments on the impact of the development and makes recommendations for mitigation or conservation.

4. Letter of recommendation for exemption – If there is no likelihood that any sites will be impacted.

5. Phase II Mitigation or Rescue – Planning for the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.

6. Phase III Management Plan – For rare cases where sites are so important that development cannot be allowed.