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**2<sup>nd</sup> BASIC HERITAGE IMPACT ASSESSMENT REPORT  
FOR THE SALVOKOP TOWNSHIP ESTABLISHMENT  
ON THE REMAINDER OF PORTION 406 OF THE FARM  
PRETORIA TOWN AND TOWNLANDS 351JR,  
SALVOKOP, TSHWANE, GAUTENG**

For:

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**REPORT: APAC013/79**

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## SUMMARY

A Pelser Archaeological Consulting (APAC) was appointed by Seedcracker Environmental Consulting, in conjunction with Delta Built Environment Consultants, to conduct a Phase 1 HIA for the establishment of a township on the remainder of Portion 406 of the farm Pretoria Town & Townlands 351 JR (Salvokop). As part of this a Basic assessment of existing heritage resources, and the possible impact of such a development on these resources, had to be undertaken. This report is the result of this assessment and the preliminary fieldwork conducted in the area.

**It is clear that the area has High Cultural Heritage significance (and includes the so-called NZASM Village Precinct) and this needs to be taken into consideration when any development is planned and undertaken here. A number of recommendations on the way forward are provided at the end of this report.**

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## **1. INTRODUCTION**

A Pelser Archaeological Consulting (APAC) was appointed by Seedcracker Environmental Consulting, in conjunction with Delta Built Environment Consultants, to conduct a Phase 1 HIA for the establishment of a township on the remainder of Portion 406 of the farm Pretoria Town & Townlands 351 JR (Salvokop). As part of this a Basic assessment of existing heritage resources, and the possible impact of such a development on these resources, had to be undertaken. This report is the result of this assessment and the preliminary fieldwork conducted in the area.

It is clear that the area has High Cultural Heritage significance (and includes the so-called NZASM Village Precinct) and this needs to be taken into consideration when any development is planned and undertaken here. The client indicated the location of the study area and the extent of the planned development. A total of around 71ha of the Salvokop area is earmarked for the establishment of the township.

## **2. TERMS OF REFERENCE**

The Terms of Reference for the study is to:

1. Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the portions of land at Salvokop that will be impacted upon by the proposed township establishment;
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 on these resources. 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 000m<sup>2</sup> or involve three or more existing erven or subdivisions thereof**
- d. **Re-zoning of a site exceeding 10 000 m<sup>2</sup>**
- 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)**.

**Unidentified/unknown graves are also handled as older than 60 until proven otherwise.**

### **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 was undertaken in order to place the development area in an archaeological and historical context, while previous studies done in the larger geographical area were also consulted. The sources utilized in this regard are indicated in the bibliography.

### **4.2 Field survey**

The field assessment section of the study will be conducted according to generally accepted HIA practices and will aimed at locating all possible objects, sites and features of cultural heritage (archaeological and historical) 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.

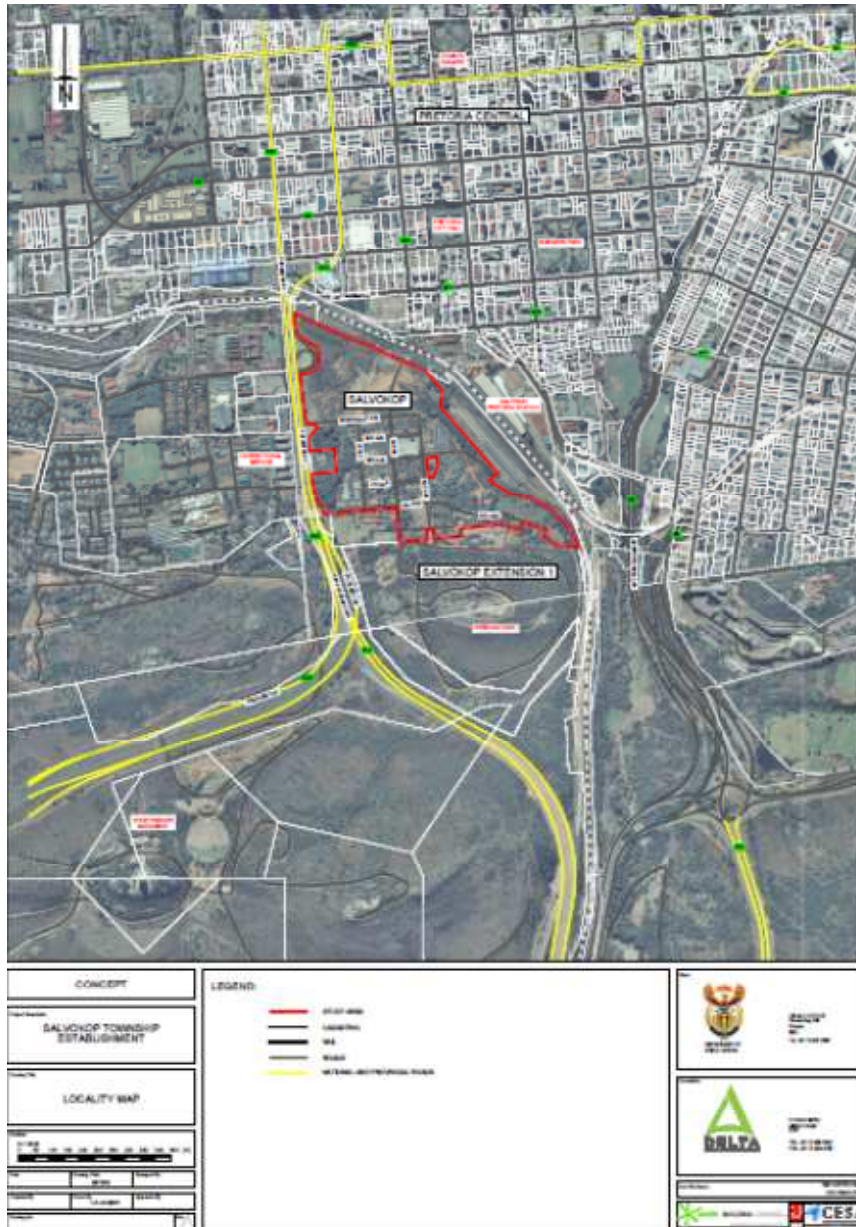
#### **4.4 Documentation**

All sites, objects, features and structures identified are documented according to the general minimum standards accepted by the archaeological profession. 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.

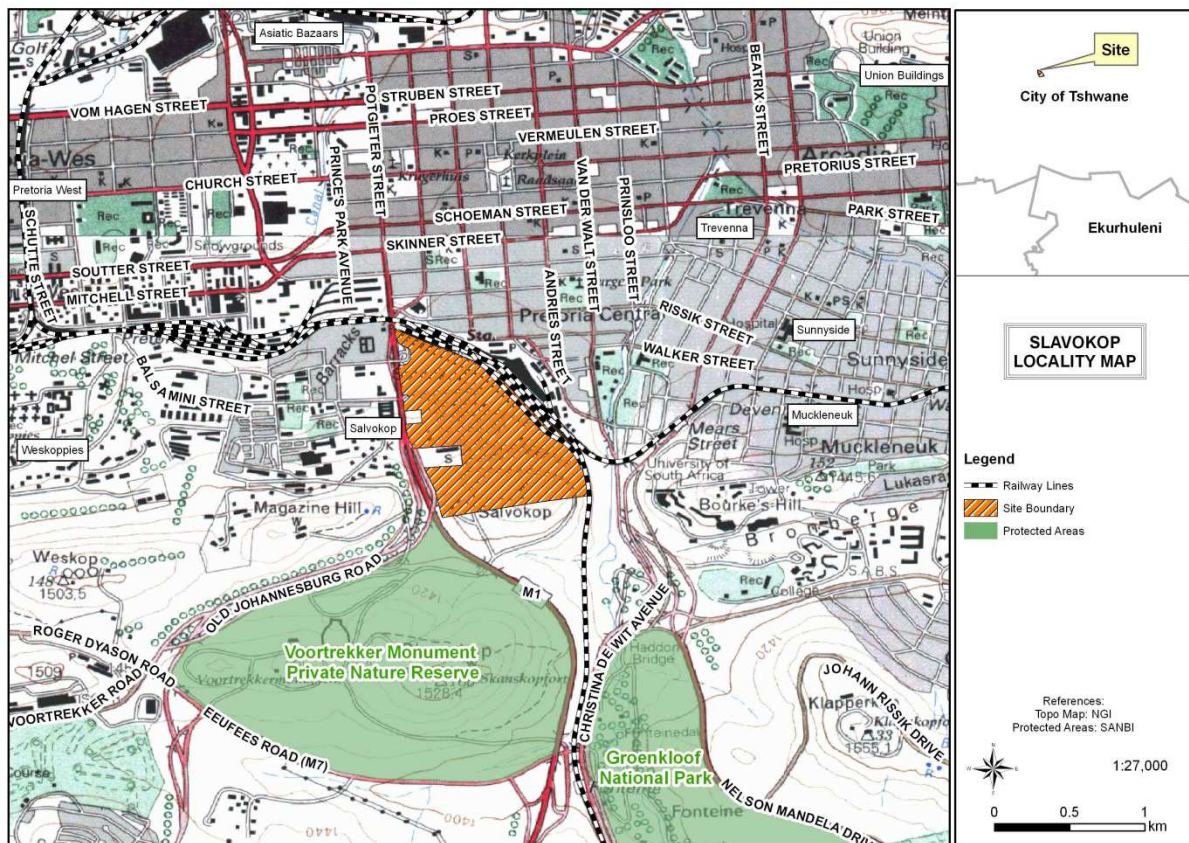
### **5. DESCRIPTION OF THE AREA**

The proposed township establishment area is located on the remaining extent of Portion 406 of the farm Pretoria Town & Townlands 351JR (known as the Salvokop precinct) and is roughly situated between Potgieter Street and the Pretoria Station and south of the CBD. The total area is approximately 79 hectares in size, with 71 ha of these earmarked for the township establishment. The larger area include the around 9 ha that will be used for the New Stats SA Head Office building.

The Salvokop Precinct has high cultural heritage significance and includes many structures that are older than 60 years of age and that are protected by the National Heritage Resources Act. This include the NZASM Heritage Village or NZASM Court. Any development in this area, such as the proposed township establishment, therefore needs to take these resources into consideration.



**Figure 1: Location of development (red block).  
 The smaller red block in the image indicates the location of  
 the proposed New Stats SA development  
 (Image @Delta Built Environment Consultants).**



**Figure 2: Topographic location of the study area  
(Map provided by Seedcracker Environmental Consulting).**

## 6. DISCUSSION

Various recent heritage impact studies in the Slavokop area have been completed, including one for the proposed new Stats SA Head Office Building development, and the information obtained through these studies are provided here in summary. The conclusions from these studies, as well as the recommendations made here, are also applicable to a large degree this study.

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 in 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).

There are no known Stone Age sites in the study area, while no sites or artifacts were identified during recent assessments. The entire area had been disturbed during past as well

as more recent development and earthmoving activities. The chances of locating archaeological sites on the surface are therefore fairly remote (Birkholtz et.al 2011: 32). The closest known Stone Age sites are the well-known Early Stone Age site at Wonderboompoort situated approximately 8 kilometers north-west of the subject property and a number of sites in the Magaliesberg area (Bergh 1999: 4).

If any Stone Age artifacts are to be found in the area, it would more likely be single, misplaced, stone tools of that period. Urbanization over the last 150 years would probably have destroyed any evidence if indeed it did exist in the area concerned.

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 to exist in the larger geographical area of Pretoria/Tshwane whilst Later Iron Age sites do occur (Bergh 1999: 7). The closest known LIA sites are at Silver Lakes and near Mamelodi on the farm Hatherley (Van Schalkwyk et.al 1996). These sites are related to the Manala Ndebele Tribe (Bergh 1999: 10) who resided in the area at the time when the first Europeans arrived during the mid 19th century. Once again no Iron Age sites, features or objects were identified in the study area.

The history of Salvokop, including the NZASM Heritage Village, is well known and researched. A Heritage Sensitivity Study for the Stats SA Building Project conducted in 2011 gives a detailed study of the area's history and the significance of the Salvokop area and the NZASM Village.

The oldest map related to the study area dates to 1877. No development within the study area is shown on this map, with the closest development the main wagon road from Potchefstroom leading into Pretoria from the south-west and another road passing through Elandspoort and turning along the foot of Salvokop into Pretoria. The closest structures appear to be the Du Preez and Smithers farmsteads east-by-northeast of Salvokop. During that time-period the area formed part of the farm known as Elandspoort. The first owner of the farm was J.G.S. Bronkhorst who settled there in around 1842. After his death in 1848 the farm became the property of Andries van der Walt. Van der Walt and his son-in-law Johannes Petrus du Preez already lived in an area directly north-east of Salvokop and west of the Apies River. This area became known as Du Preezhoek (Birkholtz et.al. 2011: 9).

A second map indicating the study area was produced on the 14<sup>th</sup> of November 1879. Titled 'Sketchplan of Pretoria', the map was compiled during the British occupation of Pretoria



between 1877 and 1881. The study area and surroundings at the time comprised open farm land with no evidence for any other form of development. The only sign of development at the time was the two aforementioned roads. A telegraph line is also shown to the west of the study area (Birkholtz et.al. 2011: 11).

### **NZASM Village**

The NZASM (Nederlandsche Zuid-Afrikaansche Spoorweg Maatschappij) was formed on the 21<sup>st</sup> of June 1887, but the planning and execution of Pretoria station as well as the structural and infrastructural development associated with it only commenced in 1891. A map probably dating to the mid 1890's shows the study area during the NZASM years. It shows the junction of the Eastern Line and Southern Line to the east of the study area, and depicts a large rectangular area (of which the study area forms part) as the 'Spoorweg Emplacement'. Another map depicting the study area during this period is a plan of the Pretoria station and surrounding vicinity as it appeared in 1901, and includes a section of the Salvokop area. The plan was drawn by the Imperial Railway Company (IMR). From this it is clear that a school, staff housing, skittle alley (and shooting gallery) as well as a recreation ground was located in the study area. Twenty-one individual staff houses can be seen on this map, as well as one unidentified building on its own to the west (Birkholtz et.al. 2011: 12).

Old photographs dating to the 1890's obtained for the same study shows the presence of historic structures in the study area, some of which still exists today and forms part of the NZASM Village and other historical developments. On a photo dating roughly to 1890 the NZASM staff quarters, the beginnings of a recreation ground and an unidentified building located to the east of the other buildings (both not in existence any more) are shown. A photograph taken around 1899 clearly shows additional developments that had taken place in the interim years. By this time the recreation ground had been established with a fence around it. The NZASM dwellings located in the north-western corner of the study area are also shown for the first time. Of interest as well is the open undeveloped land located between the various elements and clusters of elements, and especially so between the staff quarters located in the north-western corner of the study area and the other elements of the study area. Extensive undeveloped land is also shown to the south of NZASM staff quarters. These areas form part of the southern boundary of the present study area, and were later partially developed with the construction of houses (Birkholtz et.al 2011: 15).

With the end of the Anglo-Boer War in May 1902, the former railway network of the defeated ZAR, as well as that of the Orange Free State, was taken over by the Central South African Railways (CSAR) until 31 May 1910 with the establishment of the South African Railways and Harbours (SAR&H). A 1911 map shows that most of the buildings associated with the previous phase (1891 – 1902) still existed at the time. The so-called Skittle Alley and Shooting Gallery building and the recreation ground is not shown anymore and partially in its place a roundhouse (and/or turntable) for housing and turning locomotives around is shown. A total of 14 new buildings are shown on this map but it is known that the CSAR constructed a large number of staff quarters between 1902 and 1906 in the area (Birkholtz et.al. 2011: 18).

In 1981 the South African Transport Services (SATS) was established. A number of aerial photographs, dating between 1937 and this period show structures in the study area. The 1937 aerial photograph shows that most of the buildings associated with the 1891 – 1902 phase and

which were still depicted on the 1911 map, were still in existence at the time. Of the 14 buildings associated with the phase dating to between 1902 and 1910, 13 are shown on the image. Five new buildings are shown. Most significant of these are a cluster of buildings on the eastern end of the study area, one of which is very extensive and has the appearance of a workshop (Birkholtz et.al 2011: 20).

The second aerial photograph dates to 1948. It shows that of the 22 buildings associated with the phase dating between 1891 and 1902 which were still depicted on the 1937 map, only 21 still existed in 1948. Of the 13 buildings associated with the phase dating to between 1902 and 1910 and which appeared on the 1937 aerial photograph, 10 are shown on the image. All five the buildings depicted on the 1937 aerial photograph are again shown on the 1948 aerial photograph. Nine new buildings are depicted on the aerial photograph. Most significant of these are seven dwellings on the southern boundary of the study (Birkholtz et.al. 2011: 22).

The maps and photographs used in the 2011 sensitivity study clearly show that there are a large number of recent historical (late 19<sup>th</sup> to 20<sup>th</sup> century) cultural heritage resources in the study area. This includes the proclaimed National Heritage site of the NZASM Village or Court which currently houses Stats SA, as well as a number of other historical structures that form part of the historic fabric of Salvokop. The Birkholtz study identified 17 dwellings older than 60 years of age; 2 brick-constructed buildings associated with a hostel (age unknown), 1 recent office building (unused and redundant) and 11 structures associated with the NZASM Village (Birkholtz et.al. 2011: 24-31). The significance of the Village and other historical structures on Salvokop is clearly high and the impact of any proposed development on these needs to be mitigated.

The November 2013 field study aimed at determining the number of possible historical structures located in the Salvokop area, as well as the extent of the area covered by potential heritage structures, in order to provide an indication of areas that can be utilized for development purposes and to which extent certain mitigation measures will have to be employed before any township establishment and related developments can be undertaken. The fieldwork conducted included the recording of individual structures/houses and clusters of houses in the area photographically, while trying to determine the heritage significance of these. Finally, various mitigation measures are provided at the end of this report.

A large number of structures were recorded in the Salvokop area, with many (if not most) probably older than 60 years of age. This included the historical structures identified in earlier studies (Birkholtz et.al 2011) such as the row of houses between 5<sup>th</sup> and 6<sup>th</sup> Avenues and Koch Street that were built in 1948. Similar brick-constructed houses are also located in other streets and blocks of Salvokop. A large number of houses that are most likely even older (pre-dating 1948 and possibly similar in age to the NZASM Village structures) are also located in Salvokop. Very few houses are seemingly younger than 60 years of age, although many additions and changes have been made to them over recent years. The survey also revealed that there are very few open areas here that would be suitable for development.

It was very clear during the survey that it would be difficult to determine the exact number of properties and structures that are older than 60 years of age and what their heritage significance is without a detailed study being undertaken by an Architectural Historian. A superficial study such as the one carried out during November 2013 would not be able to do so.

It is therefore recommended that an Architectural Historian is consulted to undertake a detailed study on the structures and residences in Salvokop in order to determine their ages and heritage significance. This study will also determine what mitigation measures need to be undertaken (e.g. preservation or possible demolition) before the township establishment and any possible related development actions are undertaken. A preliminary recommendation could be that certain unique types and heritage nodes are preserved within the proposed township development and that the history of the area is memorialized through various Information Plaques.



**Figure 3: Aerial view of Salvokop. The areas indicated in red blocks are those with potential historical & heritage significant structures. The red circled area is the NZASM Village. It is clear from this that very few open areas are available for development at this stage and that most of the area contain historical buildings (Google Earth 2013 – Image date 2013/05/20).**





**Figure 4: One the many 1948 buildings in Salvokop.**



**Figure 5: Another of these residences.**





**Figure 6: More of the possible 1948 structures.**



**Figure 7: Many of the houses in Salvokop are brick built and similar to the known 1948 built structures.**



**Figure 8: Another type of old house in Salvokop.**



**Figure 9: One of the few open lots/erven in Salvokop.**



**Figure 10: A large number of the houses in Salvokop are subdivided into two separate residences.**



**Figure 11: This stone foundation is found at many of these & is similar to the structures found in the NZASM Village. This could be evidence of these being older than 60 years of age as well.**





**Figure 12: One of the many houses that could be more than 100 years of age originally.**



**Figure 13: A number of houses in the area contain these corrugated iron additions that could also be older than 60 years of age.**



**Figure 14: Another historical house in the area.**



**Figure 15: A corrugated iron building at one of the houses.**



**Figure 16: This is another house that is probably much older than 60 years of age.**



**Figure 17: Another of the historical houses.**





**Figure 18: The foundations of one of the historical structures.**



**Figure 19: Another of the few empty erven in Salvokop.**



**Figure 20: Another example of one of the 1948 brick-built houses in Salvokop.**

## **7. CONCLUSIONS AND RECOMMENDATIONS**

The study area has been extensively disturbed through various residential, industrial and other developments over the last 140 years or so. These developments include the railway line and station and other infrastructure related to the NZASM railway company and the various companies replacing it over the years, including the CSAR, Imperial Railway Company, SAR&H and South African Transport Services. Prior to the founding of NZASM the first European farmers in the area impacted on the area through agricultural and related activities. If any sites, features or objects dating to prehistoric (Stone Age or Iron) times existed here in the past it would have been extensively disturbed or destroyed to a large degree.

Based on various historical records (archival, photographic) it is clear that a large amount of development had taken place in the study area since 1887. Even though most of these would have been destroyed or replaced over the years, remnants could possibly still be uncovered during development activities. This could include foundations of historic structures, cultural material (from refuse dumps) and other remains that are hidden underground. Some of the historical structures from the late 19th and early 20th century is still present, and includes the NZASM Heritage Village or Court, houses built around 1948 and these need to be considered during any planned developments in the area.

The following is recommended:

1. An Architectural Historian must be appointed to conduct a detailed Heritage Impact Assessment in Salvokop. This study will include detailed documentation of the historical structures and residences in the area to determine which are older than 60 years of age; their heritage significance and the way forward in terms of mitigation measures. The significance of the structures will be based not only on age, but also on aspects such as state of



preservation; uniqueness; changes and additions to the buildings over the years and historical context.

2. this study will also recommend a range of mitigation measures to minimize the potential negative impacts of any future development in the area on these heritage resources. This could include possible preservation of structures and/or their demolition.

**No development should be undertaken prior to the above being conducted. In depth social consultation will also have to be undertaken with identified Interested & Affected Parties before any decision is made on the preservation or demolition of any structures in the area.**

## **8. REFERENCES**

Aerial Map of study area location: Courtesy Delta Built Environment Consultants.

Topographic Map Location: Courtesy Seedcracker Environmental Consulting.

Aerial view of study area: Google Earth 2013 – Image date 2013/05/20.

Bergh, J.S. (red.). 1999. **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies**. Pretoria: J.L. van Schaik.

Lombard, M., L. Wadley, J. Deacon, S. Wurz, I. Parsons, M. Mohapi, J. Swart & P. Mitchell. 2012. South African and Lesotho Stone Age Sequence Updated (I). **South African Archaeological Bulletin 67 (195): 120–144, 2012.**

Birkholtz, P.D. & M. Naude. 2011. **Heritage Sensitivity Study proposed development of the Stats SA Head Office, Salvokop, Tshwane Metropolitan Municipality, Gauteng Province**. Unpublished Report Vela VKE PGS Heritage & Grave Relocation Consultants Professional Grave Solutions (Pty) Ltd. Report Number VVKE-SK-HSR-2. January 2011.

Gaiger, S. 2013. **Heritage Conservation Management Plan: For the proposed STATS SA Salvokop Development as derived from the original HIA**. Prepared for Strategic Environmental Focus July 2013.

Huffman, T.N. 2007. Handbook to the Iron Age: **The Archaeology of Pre-Colonial Farming Societies in Southern Africa**. Scottsville: University of KwaZulu-Natal Press.

Republic of South Africa. 1999. **National Heritage Resources Act (No 25 of 1999)**. Pretoria: the Government Printer.

Republic of South Africa. 1998. **National Environmental Management Act (no 107 of 1998)**. Pretoria: The Government Printer.

Van Schalkwyk, J.A., A.J. Pelsler & C.J. van Vuuren. 1996. **Investigation of Late Iron Age Sites on the farm Hatherley 331 JR, Pretoria District**. Research by the National Cultural History Museum, Volume 5, p.45-56.

Chief Surveyor General Database: [www.csg.dla.gov.za](http://www.csg.dla.gov.za)

South African Heritage Resources Agency Database: [www.sahris.org.za](http://www.sahris.org.za)