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**A REPORT ON ARCHAEOLOGICAL TEST EXCAVATIONS:
PROPOSED SOVENTIX SOLAR PV PLANT
ON PORTIONS 127 & 128 OF VOGELFONTEIN 84IR (ERF 757)
BOKSBURG, CITY OF EKURHULENI, GAUTENG**

For:

*Ecoleges Environmental Consultants
P.O. Box 516
Machadodorp
1170*

REPORT: APAC022/45

by:

*A.J. Pelser
Accredited member of ASAPA*

June 2022

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]

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APELSER ARCHAEOLOGICAL CONSULTING

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SUMMARY

APelser Archaeological Consulting cc (APAC cc) was appointed by Ecoleges Environmental Consultants to undertake the Phase 2 Archaeological Mitigation of a Historical Refuse Midden that might be impacted by the proposed development of a Solar PV Plant by Soventix South Africa (Pty) Ltd on Unilever's Boksburg East property. The sites and study area is located on a portion of the original farm Vogelfontein 84IR (Erf 757) and in the Alternative 3 footprint area of the proposed development.

APelser Archaeological Consulting (APAC) was initially appointed by Ecoleges Environmental Consultants cc, on behalf of Soventix South Africa (Pty) Ltd, to conduct a Basic Heritage Assessment (including Cultural Heritage, Archaeological & Paleontological assessments) for a proposed 3.6MWp Solar PV Plant on Unilever's Boksburg property in Boksburg East. The study and proposed development area is located on Erven 757 & 758, Portions 127 & 189 of Vogelfontein 84IR, in the Ekurhuleni Metropolitan Municipality of Gauteng. The proposed PV Plant will comprise approximately 3.8ha of land and 3 Alternative locations are being looked at for the development. This assessment formed part of the Application for Environmental Authorization by way of Basic Assessment (BA).

Background research indicated that there are some cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area fall. The October 2021 assessment furthermore identified some sites, features or material of cultural heritage (archaeological and/or historical) significance in the study area, and included mainly a Historical Ash Dump and related cultural material on a portion of the study and proposed development area footprint (**See Report APAC021/87**). It was recommended that the Historical Midden be archaeologically investigated prior to any proposed development actions taking place and APAC cc was then subsequently appointed to undertake the archaeological mitigation work. A permit application to SAHRA's APM Unit was submitted, with SAHRA then issuing a Test Excavation Permit on the 28th of April 2022 (**Case ID#18278 & Permit ID#3467**). Fieldwork was then conducted during the 2nd last week of May 2022.

This report focuses on the results of the fieldwork phase of the Archaeological Mitigation work that was conducted during May 2022 with the results of the work provided in this report. The Ditsong: National Museum of Cultural History's Archaeological Department will curate the cultural material recovered during the Test Excavation work.

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1. INTRODUCTION

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The October 2021 assessment furthermore identified some sites, features or material of cultural heritage (archaeological and/or historical) significance in the study area, and included mainly a Historical Ash Dump and related cultural material on a portion of the study and proposed development area footprint. It was then recommended that the Historical Midden be archaeologically investigated prior to any proposed development actions taking place and APAC cc was then subsequently appointed to undertake the archaeological mitigation work. A permit application to SAHRA's APM Unit was submitted, with SAHRA then issuing a Test Excavation Permit on the 28th of April 2022. Fieldwork was then conducted during the 2nd last week of May 2022.

2. TERMS OF REFERENCE

The Terms of Reference for the Soventix Solar PV Alternative 2 Footprint (Erf 757 Boksburg East) Phase 2 Archaeological Mitigation were to:

- 1. Archaeological excavations through test trenches and squares in various locations on the midden in order to recover as much historical-archaeological material as possible (ceramics [porcelain; stoneware], glass objects, metal objects and other related material) in order to assist with determining the extent of the midden, cultural material deposit and significance of the site.*
- 2. All the test excavation trenches & squares and material from these to be photographed, mapped and described in detail and a detailed map of each trench & square and the site produced.*
- 3. The detailed mapping with dumpy level/theodolite and/or GPS to be done, with the trenches and squares included on a final map of the site.*

4. *The results of the Test Excavations and the analysis of the cultural material recovered during the test excavations will be reported on in a Final Test Excavation Archaeological Permit Report and will be submitted to SAHRA, the Ditsong National Museum of Cultural History and the client.*
5. *The curation of the collected material in a recognized Institution (in this case the Ditsong: National Museum of Cultural History's Archaeological Department).*

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 paleontological importance
- g. Graves and burial grounds
- h. Sites of significance relating to the history of slavery
- i. Movable objects (e.g. archaeological, paleontological, 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 000m² or involve three or more existing erven or subdivisions thereof
- d. Re-zoning of a site exceeding 10 000 m²
- e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

Structures

Section 34 (1) of the 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 the 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 paleontological site or any meteorite;
- b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or paleontological 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 paleontological material or object, or any meteorite; or
- d. bring onto or use at an archaeological or paleontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and paleontological 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 was 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. Test Excavations

Five (5) test blocks/trenches were excavated in various locations on the midden in order to cover as much of the midden as possible. It needs to be noted here that dense grass and vegetation cover at the time of the fieldwork hampered access and visibility and more open areas were chosen for practical reasons in this case.

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

The proposed Soventix Solar PV Plant development area is located on Erven 757 & 758 & on Portions 127 & 189 of the farm Vogelfontein 84IR, Boksburg East and in the Ekurhuleni Metropolitan Municipality of Gauteng. The proposed PV Plant will comprise approximately 3.8ha of Unilever Boksburg's property here. Three (3) Alternative locations for the plant had to be assessed during the initial study.

The Alternative 2 development footprint is situated on Erf 757 and contains the historical midden identified during the October 2021 field assessment. The focus of the May 2022 archaeological mitigation work (Test Excavations) focused on this area only.

The general topography of the study & development area is flat and open, with no rocky ridges or outcrops present. The area is surrounded by various urban residential, business and industrial developments, while the area itself has been impacted in the recent past through powerlines, water and gas pipelines and servitudes. The informal dumping of building material and other refuse also occurs in the area. During the May 2022 mitigation work the

vegetation (grass, weeds) cover in the area was extremely dense, limiting visibility and movement. Areas with cultural material originally identified and recorded could not be traced as a result and the focus of the Test Excavations was therefore to a large degree on “new” areas that were more open and where visibility was not hampered to such a degree.



Figure 1: General location of the study & proposed development area in red polygons (Google Earth 2021).



Figure 2: Closer view of the study & development area showing the 3 Alternatives, Erf 757 (green polygon), the approximate midden extent (white polygon) and the May 2022 test excavation locations (Google Earth 2022).



Figure 3: A view of the Alternative 2 Area & midden in May 2022.



Figure 4: Another view showing the very dense vegetation in the area.

6. DISCUSSION

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. The town of Boksburg was started in August 1887 with the sale of the first stands, but was created as municipality only in 1903. During the early years, the principal mining property was the East Rand Proprietary Mines, Ltd., while other mines were the Witwatersrand Deep, Ltd., Ginsberg, Driefontein Deep, Balmoral, Anglo Deep, Cinderella Deep, Boksburg Global Mines, and East Rand Extensions (Van Schalkwyk 2013).

"Prior to 1860, the present municipal area of Boksburg and its immediate environs comprised mainly the highveld farms called Leeuwpoot, Klippoortje, Klipfontein and Driefontein. Carl Ziervogel bought the farm Leeuwpoot in 1875 and for 300 morgen of barren, rocky veld he paid £75. In September 1886 Pieter Killian, a young Afrikaans prospector, discovered quartz reefs on Leeuwpoot. 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 the 10th March 1887, of the two farms as public diggings. Carl Ziervogel, who had been trying to sell Leeuwpoot, 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 Leeuwpoot in 1894 for £100,000. The mynpacht was controlled by JCI who established E.R.P.M. Ltd. JCI also developed many residential suburbs over the years. Gold was also found at Elsburg, 8km 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 centre of mining being centred 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 Leeuwpoot, 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. In 1887 the first auction sale of stands took place, at which prices of £5 to £25 were realized".

The above section is taken from a 2016 article on the Early History of Boksburg by the Boksburg Historical Society on the Heritage Portal platform (www.heritageportal.co.za).

The midden investigated on Erf 757 (in the Alternative 2 footprint) dates to the recent historical time-period.

Results of the May 2022 Fieldwork

With the site so densely overgrown with grass and other vegetation the material originally recorded on the surface of the site could not be traced again. Analysis and interpretation of this material will therefore be based on the observations made during the October 2021 assessment and included in the HIA report. During the May 2022 Test Excavation work some material was also sampled from the surface as part of the mitigation process.

Surface Material

The artifacts recorded on the surface of the site during the October 2021 assessment included pieces of glass bottles, fragments of porcelain/ceramic plates & other vessels and a medicine bottle. Some of the porcelain pieces are decorated with the so-called Willow Pattern motif that is typical of late 19th/early 20th century and that has been found by the author at other historical midden excavations such as Minnaar Street in Pretoria, Crown Mines and the Modderfontein Dynamite Factory (Pelser 1998; 2011 & 2013).

A ceramic ginger beer bottle top, bakelite beer bottle stopper and pieces of glass found on the surface also dates to around the late 19th to early 20th centuries. One piece of glass has a partial trade name on it that identifies it as a mineral water bottle that most likely belonged to the Benoni Mineral Water Works. This company operated between the late 19th to early 20th centuries (Lastovica & Lastovica 1990: 93). A complete glass medicine bottle with no trade name/makers mark was also recorded.

A total of 15 artifacts were also sampled from the surface during May 2022. This included fragments of glass bottles and pieces of porcelain and ceramic vessels. The glass represents medicine bottles (probably castor oil) from the late 19th century as well as liquor bottles such as rum, wine and whisky (both historical and modern). The porcelain and ceramics represent cups, plates/saucers and other vessels. One of the porcelain pieces have Willow Pattern decoration on it as well and most likely dates to between the late 19th and early 20th centuries.



Figure 5: Some of the cultural material found in the area in October 2021.



Figure 6: Close up of a mineral water bottle glass fragment. This bottle probably belonged to the Benoni Mineral Water Works.



Figure 7: Medicine bottle from the surface of the site.



Figure 8: Bakelite beer bottle stopper, ceramic ginger beer bottle top and fragments of porcelain with Willow Pattern decoration.



Figure 9: The cultural material sampled from the surface of the site in May 2022.



Figure 10: Close-up of the Willow Pattern decoration on a piece of porcelain.

Test Excavations

Five (5) Test Pits were dug in and on the midden area. This included the area originally recorded as the approximate extent of the midden, as well as around this to include a wider area. Based on observations in the field during the test excavation work it is evident that the area where midden/refuse material is located is larger than originally estimated. This does not however increase the significance of the site. The results of the Test Pit excavations are discussed below.

Test Pit 1 (TP 1)

Test Pit 1 was a 1m x 1m square, located at **S26 13 12.30 E28 16 03.10**.

A total of 15 objects were recovered from this Test Pit, comprising of plastic, leather, metal, glass, building material and porcelain. The material is mixed in terms of age, with some possibly dating to the late 19th/early 20th century with others from more recent times (modern-day plastic bag and other fragments).

The stratigraphy in the Test Pit consists of around 30cm of grass and top soil (dark brown) overlaying an ashy deposit at 0.30m depth. The cultural material is found on top of this ashy layer, with the ashy layer only about 5 to 10 cm in thickness. The cultural material deposit is not very rich, with only small fragments found mostly. The metal objects represents nails, wire and possible food tin fragments, as well as a lead bottle seal with the partial wording of London England visible. This is possibly from a liquor bottle and could also date to the late 19th/early 20th century. A piece of a leather shoe was also recovered, while the glass fragments represent liquor and possibly mineral water bottles. The porcelain pieces represent plates, saucers and cups.



Figure 11: Test Pit 1.



Figure 12: Closer view of Test Pit 1 with the ashy layer at the bottom visible.



Figure 13: Modern plastic bag from Test Pit 1.



Figure 14: More modern plastic fragments from TP1.



Figure 15: Nails, wire and food tin fragments.



Figure 16: A lead bottle seal from Test Pit 1.



Figure 17: An old battery rod.



Figure 18: A piece of leather from a shoe.



Figure 19: Glass bottle fragments.



Figure 20: Porcelain tile fragment.



Figure 21: Porcelain plate, saucer and cup fragments.

Test Pit 2 (TP2)

Test Pit 2 measured 0.50m x 0.50m in size and was located at **S26 13 11.10 E28 16 02.50**.

As with Test Pit 1 an ashy deposit was encountered at approximately 30cm below the Present Surface Level (PSL), continuing up to depth of about 50cm below the PSL. Some cultural material was found, including pieces of modern plastic bags, plastic bottles, fragments of animal bone, nails, glass bottle pieces, porcelain and building rubble (bricks). Again the material seems to represent a mix of modern and earlier (late 19th century) periods. The material deposit is not rich and highly fragmented as well. A total of 18 objects were recovered from the Test Pit, with the brick fragments found here not removed from site.

One of the bottle fragments (part of a bottle top and neck) is typical of a mineral/sodawater bottle dating to the late 19th/early 20th century. It was marble-stoppered and the bottles are sometimes known as Codd-type bottles after Hiram Codd who invented the marble-stoppered bottle and patented it first in 1870 (Lastovica & Lastovica 1990: 26).



Figure 22: Test Pit 2.

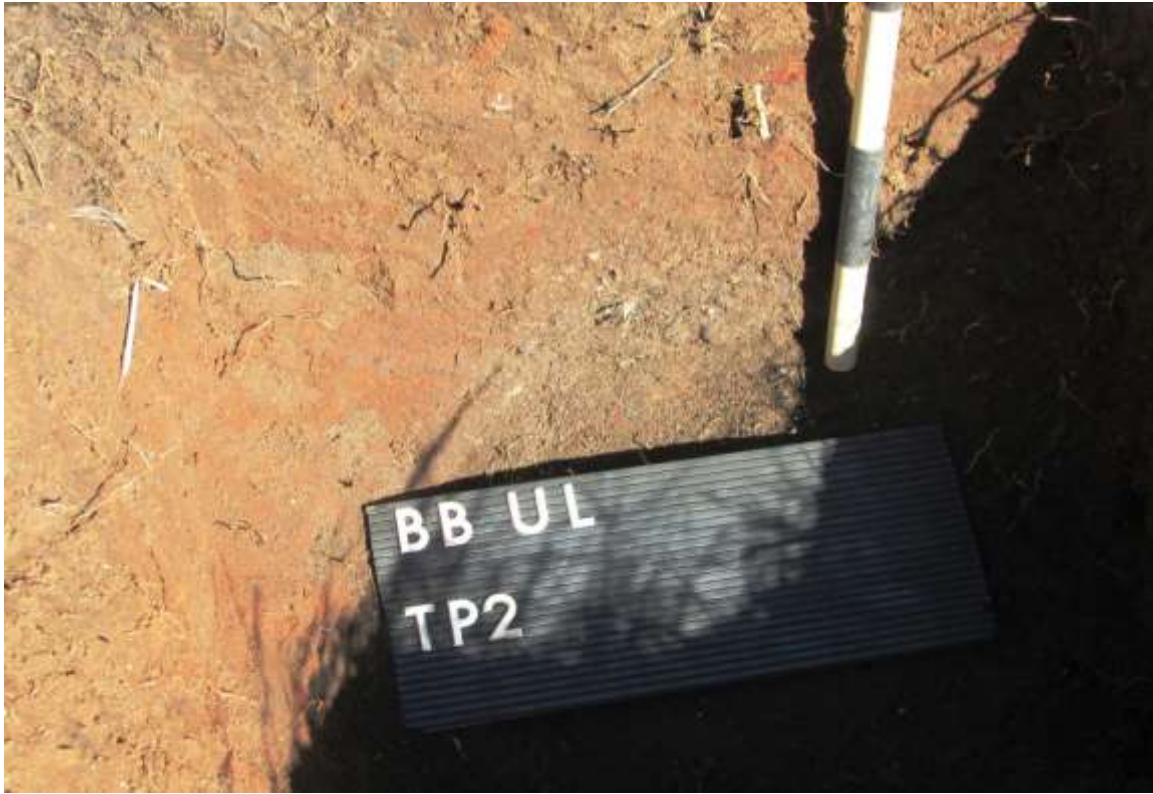


Figure 23: Close-up of Test Pit 2 showing the ashy layer below the PSL.



Figure 24: Bricks from Test Pit 2.



Figure 25: Modern-day plastic objects from Test Pit 2.



Figure 26: Faunal remains from the Test Pit.



Figure 27: Nails from TP2.



Figure 28: Glass bottle fragments. The bottle neck top right is from a late 19th century mineral/sodawater bottle.



Figure 29: Pieces of porcelain from the test pit.

Test Pit 3 (TP3)

Test Pit 3 also measures 0.50m x 0.50m in size. The GPS location for TP3 is **S26 13 11.70 E28 16 06.70**.

Very little material was found in this Test Pit, with only 10 objects recovered in total. Most of these were fragments of building material (porcelain/ceramic tiles), with a piece of burnt rubber pipe, a nail and one piece of porcelain plate making up the rest of the sample. Besides the porcelain plate fragment that possibly dates to the late 19th/early 20th century, the other material is modern.

A thin layer of ash/charcoal was found at a depth of around 25cm below the PSL in this Test Pit, continuing for approximately 5cm to a sterile depth of 30cm below the PSL.



Figure 30: Test Pit 3.



Figure 31: Ceramic and porcelain tile fragments from TP3.



Figure 32: Piece of burnt rubber pipe/hose.



Figure 33: Metal nail.



Figure 34: Piece of porcelain plate.

Test Pit 4 (TP4)

This was another 0.50m x 0.50m pit on the midden, located at **S26 13 10.30 E28 16 06.30**.

The pit was fairly shallow with some ash and material found at a depth of around 20cm below the PSL. A number of rocks were encountered in the pit (waste rock from building material?) with no cultural material below this level. Very little cultural material was found in the pit (only 6 objects). This included a porcelain/ceramic tile fragment, 3 nails, one piece of a porcelain plate and an unidentified metal object. Last mentioned is possibly part of a mouth-organ.



Figure 35: Test Pit 4.



Figure 36: Fragment of a porcelain/ceramic tile.



Figure 37: The nails from TP4.



Figure 38: Piece of porcelain plate.



Figure 39: The unidentified metal object from TP4.

Test Pit 5 (TP5)

Test Pit 5 was approximately 0.80m x 0.80m in size and located at **S26 13 11.60 E28 16 04.80**.

This was a very shallow test pit of around 20cm in depth, at which level sterile soil was reached. Only a small thin section of ashy deposit was present and nearly no cultural material was present in this test pit. The only object recovered was a single nail.



Figure 40: Test Pit 5.



Figure 41: Close-up of the remnants of a thin layer of ash in the Test Pit.



Figure 42: The only object found here was a single metal nail.



Figure 43: Closer view of the Alternative 2 footprint on Erf 757, with the original midden extent and location of the Test Pit excavations indicated (Google Earth 2022).



Figure 44: Closer view of area with new approximate extent of the midden area indicated based on the May 2022 mitigation work (Google Earth 2022).

It can be concluded that the Test Excavations on the historical midden located in the Alternative 2 footprint area of the proposed Soventix Solar PV Plant in Boksburg East was conducted successfully. The aims of the test excavations were to determine the significance of the historical midden, the extent and depth of the cultural material deposit as well as the age of the midden and the material it contains.

Although the extent of the area covered by the midden on Erf 757 and the Alternative 2 footprint is fairly large, it is clear that the cultural material deposit is fairly limited in terms of its extent and depth, as well as the density and range of material present. The cultural material and ashy deposit across most of the site (based on the results of the Test Pits) is fairly shallow, occurring between 20cm and 30cm below the Present Surface Level of vegetation and top soil, and only between 10cm and 20cm thick at the most. Very few objects were recovered in total from the 5 test pits, most of these fragmented and small with few complete objects found. A large percentage of these comprise of remnants of building rubble (ceramic/porcelain tiles and bricks). And although there are a few objects that clearly date to between the late 19th and early 20th centuries, much of the material have a modern origin (within the last 60 years or so) and include plastic bags and other plastic objects.

Based on the results of the Test Pit excavations on the site the following can be concluded:

1. the original midden has been significantly leveled and material removed over recent years with only a shallow deposit still remaining. The fact that mostly fragmented remains and very few complete objects are present could be indicative of this.

OR

2. the material found here has another origin and have been dumped here over recent years informally by local residents using the open space for this purpose. This was therefore never a formal refuse midden with a build-up of masses of material with an historical industrial/mining or residential origin.
3. the cultural material ranges in age from the late 19th to mid-20th centuries, although some might date to even later (late 20th and more recent).

The historical midden on the Alternative 2 development footprint area is concluded to not be of High Heritage Significance and does not represent a fatal flaw from this point of view in regards to the proposed development. Should the decision be to undertake the development in the Alternative 2 Area, from a Cultural Heritage point of view, there would be no objections. However, with the dense vegetation on the site hampering visibility and access to some degree, there is of course always the possibility that areas with intact and deep cultural material deposits could have been missed. If any significant in situ cultural material deposits be uncovered during any actions related to the proposed Solar PV Plant development a Heritage Specialist should be called in to investigate and provide recommendations on the way forward.

7. CONCLUSIONS AND RECOMMENDATIONS

APelser Archaeological Consulting cc was appointed by Ecoleges Environmental Consultants to undertake the Phase 2 Archaeological Mitigation of a Historical Refuse Midden that might

be impacted by the proposed development of a Solar PV Plant by Soventix South Africa (Pty) Ltd on Unilever's Boksburg East property. The sites and study area is located on a portion of the original farm Vogelfontein 84IR (Erf 757) and in the Alternative 3 footprint area of the proposed development.

APAC cc was initially appointed by Ecoleges Environmental Consultants cc, on behalf of Soventix South Africa (Pty) Ltd, to conduct a Basic Heritage Assessment (including Cultural Heritage, Archaeological & Paleontological assessments) for a proposed 3.6MWp Solar PV Plant on Unilever's Boksburg property in Boksburg East. The study and proposed development area is located on Erven 757 & 758, Portions 127 & 189 of Vogelfontein 84IR, in the Ekurhuleni Metropolitan Municipality of Gauteng. The proposed PV Plant will comprise approximately 3.8ha of land and 3 Alternative locations are being looked at for the development. This assessment formed part of the Application for Environmental Authorization by way of Basic Assessment (BA).

Background research indicated that there are some cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area fall. The October 2021 assessment identified a Historical Ash Dump and related cultural material on a portion of the study and proposed development area footprint. It was recommended that the Historical Midden be archaeologically investigated prior to any proposed development actions taking place and APAC cc was then subsequently appointed to undertake the archaeological mitigation work. A permit application to SAHRA's APM Unit was submitted, with SAHRA then issuing a Test Excavation Permit for these purposes. Fieldwork was conducted during May 2022.

Together with some sampling of material from the surface of the site, Five (5) Test Pit excavations were conducted on the site. It can be concluded that the Test Excavations was conducted successfully. The aims of the test excavations were to determine the significance of the historical midden, the extent and depth of the cultural material deposit as well as the age of the midden and the material it contains. Although the extent of the area covered by the midden on Erf 757 and the Alternative 2 footprint is fairly large, the cultural material deposit is fairly limited in terms of its extent and depth, as well as the density and range of material present. The cultural material and ashy deposit across most of the site is fairly shallow, occurring between 20cm and 30cm below the Present Surface Level of vegetation and top soil, and only between 10cm and 20cm thick at the most. Very few objects were recovered in total from the 5 test pits, most of these fragmented and small with few complete objects found. A large percentage of these comprise of remnants of building rubble. There are a few objects that date to between the late 19th and early 20th centuries, with a significant amount of objects having a modern origin (within the last 60 years or so) that include plastic bags and other plastic objects.

The historical midden on the Alternative 2 development footprint area is concluded to not be of High Heritage Significance and does not represent a fatal flaw from this point of view in regards to the proposed development. Should the decision be to undertake the development in the Alternative 2 Area, from a Cultural Heritage point of view, there would be no objections.

However, with the dense vegetation on the site hampering visibility and access to some degree, there is of course always the possibility that areas with intact and deep cultural

material deposits could have been missed. If any significant in situ cultural material deposits be uncovered during any actions related to the proposed Solar PV Plant development a Heritage Specialist should be called in to investigate and provide recommendations on the way forward.

8. REFERENCES

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