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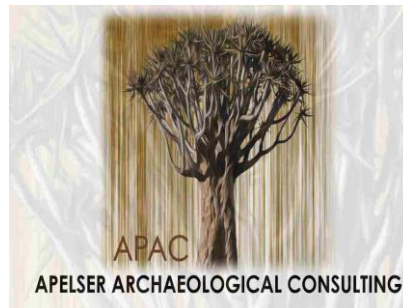
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Comprehensive and Professional Solutions for all Heritage Related Matters
CK 2006/014630/23 **VAT NO.: 4360226270**

APAC023/06

2023-01-20

To: Mr. Andrew Salomon

**South African Heritage Resource Agency
P O Box 4637
Cape Town
8000**

RE: Motivation for Exemption from a full Phase I Heritage Impact Assessment - Proposed development by Soventix SA of a 1.8MWp solar PV for Element Six, Nuffield, Springs, City of Ekurhuleni, Gauteng Province

APelsers Archaeological Consulting cc (APAC cc) was appointed by Ecoleges Environmental Consultants cc, in conjunction with Soventix South Africa (Pty) Ltd, to provide a motivation for Exemption from a Full Phase 1 HIA, related to the proposed Element Six Solar PV development by Soventix SA. The study and development area are located in Springs in Gauteng, and on Erf 266 Nuffield and Portion 20 of the original farm Daggafontein 125IR. A Palaeontological study forms part of the cultural heritage work, and will be presented in a separate report.

Background to the Project

Ecoleges Environmental Consultants cc was appointed by Soventix South Africa (Pty) Ltd to undertake an Application for Environmental & Water Use Authorisation for the proposed development of a 1.8 MWp Solar PV Facility at the Element Six facility, Springs, Ekurhuleni Metropolitan Municipality, Gauteng Province. As part of this APAC cc was appointed to undertake a Phase 1 HIA assessment comprising a Cultural Heritage, Archaeology & Palaeontology Compliance Statement and SAHRA Exemption Letter. Dr Heidi Fourie will provide the Palaeontological component of this study.

"In terms of the National Heritage Resources Act, no 25 of 1999, heritage resources, including archaeological or palaeontological sites over 100 years old, graves older than 60 years, structures older than 60 years are protected. They may not be disturbed without a permit from the relevant heritage resources authority. This means that prior to development it is incumbent on the developer to ensure that a Heritage Impact Assessment is done. This must include the archaeological component (Phase 1) and any other applicable heritage components. Appropriate (Phase 2) mitigation, which involves recording, sampling and dating sites that are to be destroyed, must be done as required.

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

Beatrix Bed & Breakfast Trading as A Pelser Archaeological Consulting

The quickest process to follow for the archaeological component is to contract an accredited specialist (see the web site of the Association of Southern African Professional Archaeologists www.asapa.org.za) to provide a Phase 1 Archaeological Impact Assessment Report. This must be done before any large development takes place. The Phase 1 Impact Assessment Report will identify the archaeological sites and assess their significance. It should also make recommendations (as indicated in section 38) about the process to be followed. For example, there may need to be a mitigation phase (Phase 2) where the specialist will collect or excavate material and date the site. At the end of the process the heritage authority may give permission for destruction of the sites.

Where bedrock is to be affected, or where there are coastal sediments, or marine or river terraces and in potentially fossiliferous superficial deposits, a Palaeontological Desk Top study must be undertaken to assess whether or not the development will impact upon palaeontological resources - or at least a letter of exemption from a Palaeontologist is needed to indicate that this is unnecessary. If the area is deemed sensitive, a full Phase 1 Palaeontological Impact Assessment will be required and if necessary, a Phase 2 rescue operation might be necessary. Please note that a nationwide fossil sensitivity map is available on SAHRIS to assist applicants with determining the fossil sensitivity of a study area.

If the property is small or disturbed and there is no significant site the heritage specialist may choose to send a letter to the heritage authority motivating for exemption from having to undertake further heritage assessments. Any other heritage resources that may be impacted such as built structures over 60 years old, sites of cultural significance associated with oral histories, burial grounds and graves, graves of victims of conflict, and cultural landscapes or viewsapes must also be assessed."

Last mentioned option was decided on for this project which entailed desktop research as part of the assessment.

Relevant Legalisation

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).

The National Heritage Resources Act

According to the Act the following is protected as cultural heritage resources:

- a. Archaeological artefacts, 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; and
- 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; and

- 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. According to Section 38 (1) of the Act 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 000m².
- e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority.

Results of Desktop Heritage Assessment: Motivation for Exemption from a full Phase I Heritage Impact Assessment for the proposed Soventix (SA) Element Six 1.8MWp Solar PV Development in Nuffield, Springs

The study and proposed development area is situated on Erf 266 Nuffield and on Portion 20 of the original farm Daggafontein 1251R. This is located in in the town of Springs in the City of Ekurhuleni, Gauteng.

The proposed development site is located within an Industrial Context and is surrounded by various industrial, commercial and residential developments. The development & study area itself has been extensively disturbed in the recent past by urban residential and industrial activities, and the original natural and historical landscape nearly completely altered as a result. If any cultural heritage (archaeological and/or historical) sites or features existed here in the past it would have been fairly extensively disturbed or even destroyed as a result and the possibility of any being present here is highly unlikely.

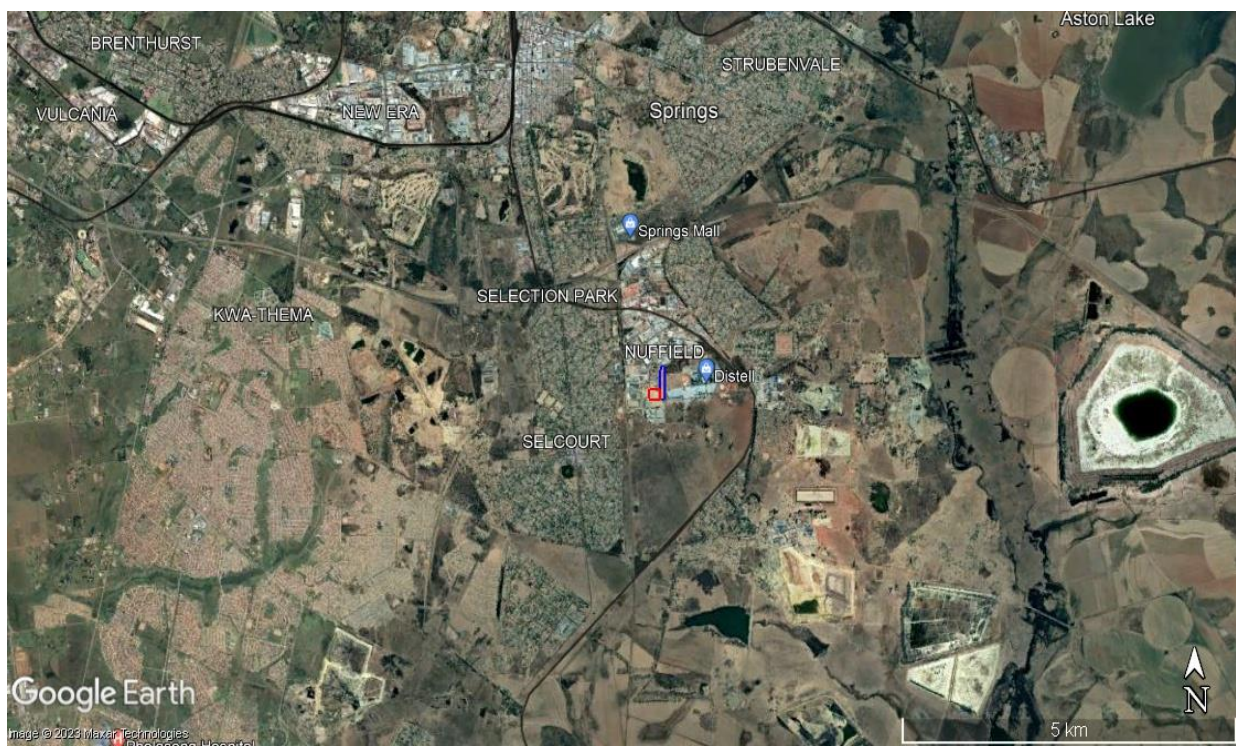


Figure 1: General location of study & development area in red & blue polygons (Google Earth 2023).



Figure 2: Closer view of study & development area location and footprint (Google Earth 2023). The blue area denotes an erroneously identified wetland section and the red polygon the proposed Solar PV area.



Figure 3: View of the proposed development site. Note the flat and open nature of the area. The rectangularly tree-demarkated area denotes an area where a demolished structure used to be located (image provided by Ecoleges).

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 study area. The closest known Stone Age sites are those of Linksfield, Primrose, Waldrif and others (Bergh 1999: 4). 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.

The Iron Age is the name given to the period of human history when metal was mainly used to produce metal artefacts. 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) however indicates that a Middle Iron Age should be included. His dates, which now seem to be 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 larger geographical area, while LIA sites such as those at Melvillekoppies, Bruma and Klipriviersberg are the closest known ones (Bergh 1999: 7).

No Iron Age sites, features or objects are known to exist in the study & development area. If any did exist the extensive disturbances of the recent past would have destroyed all evidence.

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 groups of Cornwallis Harris (1836) and David Livingstone in 1847 (Bergh 1999: 13). These groups were closely followed by the Voortrekkers after 1844 (Bergh 1999: 15). White settlers started to occupy huge tracts of land, claiming it as farms after the late 1840s. Springs also played a role during the Anglo-Boer War (1899-1902), with a Black Concentration Camp also established in the town during the War (Bergh 1999: 51; 54).

The city of Springs was founded as a coal and gold mining town in 1904, but its history can be traced back to the second half of the 19th century. From about 1840 farmers moved into the area and declared farms for themselves, especially after the Zuid-Afrikaansche Republiek (South African Republic, later Transvaal) became an independent republic with the signing of the Sand River Convention in 1852. These initial farms were large, but the measurements of the borders were inaccurate and later, when the correct borders of the farms had to be documented, there were several extra or odd pieces of land that did not belong to any farm. These odd pieces of land then became state property. Such an odd piece existed between three neighbouring farms on the Witwatersrand, namely Geduld (meaning 'patience'), De Rietfontein ('the reed fountain') and Brakpan (literally, 'small, brackish lake'). The 685ha odd piece was given the name 'The Springs' by the land surveyor James Brooks, probably because of all the fountains on the land (www.wikipedia.co.za).

On 16 September 1884 the official map of The Springs was registered in Pretoria. Initially, the land's value was equal to R20, but the discovery of coal and gold and its subsequent mining increased the value

considerably. The coal discovered in The Springs was of a good quality and in 1888 the first contract was signed to mine coal there. Initially mining was on a small scale, but rose when the Great Eastern mine was established. There were a number of corrugated iron houses around the mine and, although there were a few small hotels and general dealers, it was not a town yet. The settlement grew and in 1902 a health committee was appointed to look after the building and location of structures and also the hygiene in the growing township. In 1904 the Grootvlei Proprietary Mines were registered and shafts were sunk. This followed the discovery in 1899 of gold on the farm Geduld and the further discovery of the main reef in 1902. In April 1904 The Springs was proclaimed a town, called Springs, the health committee was replaced by a town council, and it flourished as a mining town (www.wikipedia.co.za).

The original 7km² farm on which the city of Springs was later to be built, The Springs, was surveyed in 1883. Coal was discovered in the area in 1887 and three years later in 1890-1891, the Transvaal Republic's first railway, the Randtram Line, was built by the Netherlands-South African Railway Company (NZASM) to carry coal from the East Rand coalfields to the gold mines of the Witwatersrand. Gradually, especially after coal was discovered further east in South Africa in Witbank, the Springs collieries were closed. In the meanwhile, however, gold had also been discovered in the area. A village was laid out in 1904 and in 1908 the first gold mining began. Historically Springs was known as a mining center for two major types of minerals (gold and coal). Springs is still one of the gold mining centers in South Africa, which includes Gold One, Modder East Operation, the Geduld Mine and East Geduld Mine and also the Daggafontein and East Daggafontein mines. Besides gold, new coal mines towards the east of the city are being developed. Springs was granted municipal status in 1912. By the late 1930s, there were eight gold mines near Springs, making it the largest single gold-producing area in the world. Springs is currently one of the industrial centers of the Witwatersrand and also the Eastern Gateway of Gauteng towards Mpumalanga and Northern KwaZulu Natal. Mining has been replaced by manufacturing and engineering industries of economic importance; products of the region include processed metals, chemicals, paper and foodstuffs (www.wikipedia.co.za).

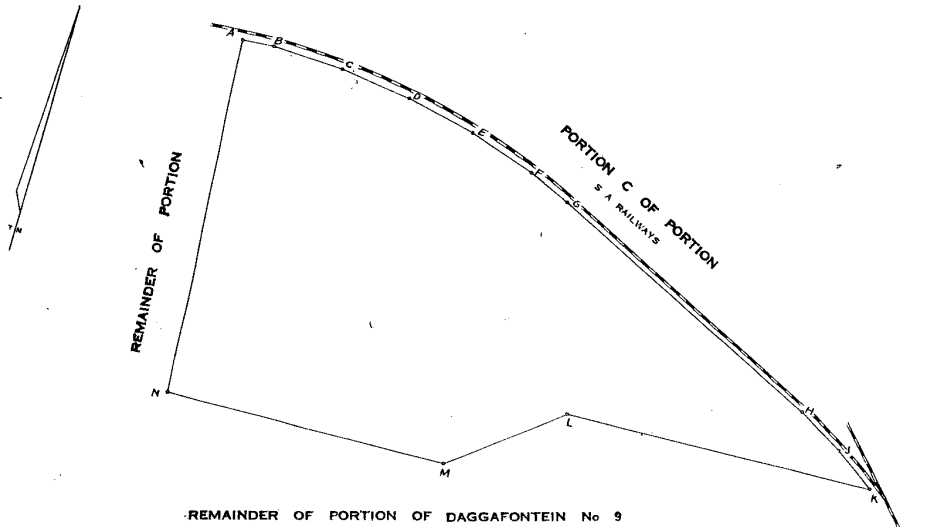
The Portion 20 map for the farm Daggafontein 1251R obtained from the database of the Chief Surveyor General (www.csg.dla.gov.za – **CSG Document: 10178M01**) dates to 1937 & indicates that the farm was then numbered as No.9 and was located in the District of Springs in the Province of Transvaal. This portion (a remainder of Portion 9) was surveyed in December 1937 and formed part of the Township of Nuffield.

Approved *M. Wessels*
Surveyor-General.
- 1-2-1938

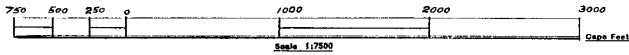
DESCRIPTION OF BEACONS

ALMN 1" Diam. iron pipe in concrete
BCDEFGHJK 2" Diam. boiler tubes in concrete

SIDES Case Feet	ANGLES OF DIRECTION		GOLDFIELDS SYSTEM COORDINATES	
			Y	X
AB	238.7	178 34 00	A +25420.2	-1104.2
BC	480.4	183 53 30	B +25426.2	-1342.8
CD	480.5	189 38 00	C +25393.6	-1822.1
DE	480.0	195 23 30	D +25313.2	-2295.8
EF	480.3	201 08 10	E +25185.8	-2758.6
FG	319.2	205 56 20	F +25012.6	-3206.6
GH	2122.8	207 50 00	G +24893.0	-3493.6
HJ	358.5	211 35 20	H +23881.9	-5370.8
JK	334.5	218 50 50	J +23694.1	-5676.2
KL	2068.3	0 00 00	K +23484.3	-5936.7
LM	906.8	322 00 00	L +23484.3	-3868.4
MN	1880.0	0 00 00	M +22926.0	-3153.8
NA	2500.0	86 06 40	N +22926.0	-1273.8



This generaliteer onder:
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No. 125
REINIGINGS- en
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The figure ABCDEFGHIJKLMN

represents 82-8578 MORGEN
PORTION ~~M~~ OF PORTION OF THE FARM

of land being *18. 15/100*

DAGGAFONTEIN No 9

situate in the DISTRICT of SPRINGS.

PROVINCE OF TRANSVAAL

Surveyed in DECEMBER 1937 by me

W. W. Wand.
Land Surveyor.

Small State Diagram of Portion of Nuffield Township

This diagram relates to Deed of
No. *2205/95* dated *1937*
in favour of
Registrar of Deeds.

The original diagram is No. *A4328/19*
relating to Deed of *Transfer*
No. *2205/95* dated *1937*
in favour of
D. L. 30/19

S.G. File No. *5788/13939/34*
Survey Records No. *1955-37*
Compilation No. *13/225 1R 38410*
Lat. South *26° 18'* Long. East *28° 28'*
Degree Sheet No. *Heidelberg R. 18.*

Figure 4: 1937 map of Portion 20 of the farm Daggafontein 125IR (www.csg.dla.gov.za).

Aerial images (Google Earth) of the study and proposed development area footprint show the fairly heavily disturbed nature of the area (due to urban related residential and industrial activities), while no real sites, structures or any remains of cultural heritage significance are visible on these images, except some structures that has been demolished somewhere between 2002 & 2008. The Screening Report was

generated using the “National Web Based Environmental Screening Tool”. According to the Screening tool, the Archaeological and Cultural sensitivity of the site is considered to be low in nature.

As mentioned, some structures are visible in the development footprint on a 2002 aerial image (Google Earth) of the area. The age and nature/function of these structures are not known, but these likely existed before this image (the earliest Google Earth view available) was taken. Whether or not these structures are older than 60 years of age can not be determined with certainty, but if they were then their near completed demolition between 2002 and 2008 (as seen on later aerial images) have totally diminished any possible cultural heritage significance if indeed it existed. No real traces of remain and an on-site assessment is not recommended.



Figure 5: A 2002 aerial image of the development area showing the existence of some structures here (Google Earth 2023).



Figure 6: By 2008 the structures had all but disappeared (Google Earth 2023).



Figure 7: The area in 2012 (Google Earth 2023).



Figure 8: By 2022 the area where the structures used to be located were demarcated by a lane of trees (Google Earth 2023).



Figure 9: The remainder of a structure in the study & development area. These foundations are not of any heritage significance and likely less than 60 years of age (courtesy Eco Leges).

Based on the aerial images of the area, and the heritage desktop study, it is therefore deemed unlikely that any significant sites, features or material of cultural heritage (archaeological and/or historical) origin and/or significance will exist in the study area & proposed development area. Recent historical activities (mainly urban related residential and industrial) would have impacted on any if they did exist here in the past and would have disturbed or destroyed these to a large degree. Known archaeological and historical sites, features and material have been identified in the larger geographical area and this needs to be taken into consideration during actions related to the proposed future development.

It is therefore recommended that Motivation for Exemption from a full Phase I Heritage Impact Assessment as part of the proposed Soventix Element Six Solar PV development on Erf 266 Nuffield & Portion 20 of the farm Daggafontein 125IR, Nuffield, Springs, City of Ekurhuleni in the province of Gauteng, be granted to the applicants taking into consideration the following:

The subterranean nature of cultural heritage (archaeological and/or historical) resources must always be kept in mind. 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. This could include previously unknown and unmarked graves and/or cemeteries.

Should there be any questions or comments on the contents of this document please contact the author as soon as possible.

Kind regards,



Anton Pelsler

References

1. General & Closer Views of Study Area location and Proposed development footprint: Google Earth 2023.
2. Development Site Images: Provided by Ecoleges.
3. Bergh, J.S. (red.). 1999. **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies.** Pretoria: J.L. van Schaik.
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8. Chief Surveyor General Database (www.csg.dla.gov.za): Document 10I78M01.
9. Wikipedia – History of Springs (www.wikipedia.co.za).