

HERITAGE ASSESSMENT REPORT
ZEUS SUBSTATION EXPANSION,
VLAKFONTEIN 328, GERT SIBANDE (DC 30)
DISTRICT, MPUMALANGA, SOUTH AFRICA

REPORT FOR PBA INTERNATIONAL

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EXECUTIVE SUMMARY

The area of the proposed Zeus substation expansion was surveyed on foot. No sites were discovered, apart from a graveyard, which appears to be on or just within the boundary of the proposed expansion. The graveyard consists of 56 graves. It is recommended that the graveyard be left undisturbed, but should it need to be moved, a set process as determined by the South African Heritage Resources Agency will have to be followed for the grave relocation.

Background information on the project

This report forms part of the environmental impact assessment commissioned by Eskom of the area of the proposed Zeus substation expansion.

Developer: Eskom

Consultant: PBA International

Terms of reference: To assess the area of the proposed expansion of the Zeus substation

Legislative requirements: The Heritage Impact Assessment was carried out in terms of the National Environmental Management Act no. 107 of 1998 and following the requirements of the National Heritage Resources Act no. 25 of 1999.

Details of the area of the proposed substation expansion:

Footprint: 466 m x 355 m to the south and west of the current substation

Current land use: agricultural land for grazing

The surveyed area is grassland, with a clayey sandy soil. Numerous dolerite rocks are evident on the surface, often in discrete outcrops.

Background to the Archaeology of the area

No sites in the vicinity have been recorded on the National Museum's database. However, various sites are noted from the literature to occur within 100 kilometers of the surveyed area.

The closest mentioned archaeological sites occur in the Standerton area, about 30 km south of the Zeus site. These are as follows:

- Rock engravings near the Vaal River close to Standerton, +-30 km S-SE of Zeus (Clark 1959: 254)
- Iron Age Type N, Type V and Elongated Type V sites near the Vaal River, +-40 km south of Zeus (Maggs 1976: 39)

There are also records of historical military or military-related sites in the Standerton area. During the First Boer War of 1880-1881, a British garrison was located at Standerton. Forts were built on the surrounding koppies and outworks constructed to the south of the town. The garrison attempted to occupy Stander's Kop and attacked a small fortification occupied by several Boers located about two miles away. Five people from the British forces died during the siege at Standerton (Duxbury et al 1980).

The other known site from the area is that of the Early Pleistocene Cornelia-Uitzoek fossil site, about 70 km south-west of Zeus. The site has yielded important fossil mammal remains (Cooke 1974, Brink & Rossouw 2000) and is the Type locality for the Cornelian Land Mammal Age. A human tooth, dated to about 800 000 years ago was discovered at the site during the recent excavations there (Brink 2002). Stone artefacts from the site have been characterised as early Upper Acheulian (Clark 1974) or Fauresmith (Sampson 1974).

Description of area surveyed

Locational Data:

Map reference: 2629CA Secunda
Province: Mpumalanga
Magisterial District: Gert Sibande (DC30)
Farm: Vlakfontein 328

Methodology:

The area was searched on foot by a team of two people on Friday 15 June 2007. All observations were recorded by means of a GPS. No sampling was undertaken, and the report is based on a visual inspection of the area. All animal burrows, cattle paths and any other ground disturbance, including the Eskom inspection pits, were examined for traces of subsurface material.

Restrictions encountered during the survey:

Visibility of the surface of the ground surface was low for most of the surveyed area as a result of the grass cover. However, there were areas where dolerite rocks and boulders were visible on the surface, and in these areas visibility was better.

Details of equipment used in the survey:

GPS: Garmin etrex Summit
Digital camera: Sony cybershot

Description of sites and material observed:

Location:

All readings were taken using the GPS as detailed above. Accuracy was to a level of 5m.

The area has been disturbed in the past, as evidenced by heaps of soil and rock, trenches and pits. Numerous pylons also occur in the area, and disturbance is related to the foundations of the pylons. Recent disturbance includes a new road along the eastern side of the expansion and the current substation, and a heavily disturbed area (possibly a pipe line) across the southern section of the surveyed area (see map). Further disturbance in the form of various inspection pits was noted in the area. The inspection pits appeared to have been dug with a back-actor and then refilled. All of the disturbed areas were also surveyed for subsurface material which had possibly been brought up to the surface. The inspection pits indicated that the surface soil layer was relatively thin (as would be consistent with the dolerite outcrops) and that the bedrock was decayed dolerite.

Description of sites:

No sites were found in the area surveyed. However, a graveyard was located in the western portion of the surveyed area. This graveyard lies either on the boundary of the area, or just within it. Three inspection pits were dug around the graveyard (see map),

so it was assumed during the survey that the area is included in the substation expansion.

Description of material:

The graveyard consists of 56 graves (see graveyard plan). The distribution of the graves is indicated on the plan, but is basically linear in a north-south direction. Two of the graves (at the 'head' of the graveyard) face north, while the rest of the graves face east. The graveyard is located on a hillside, which slopes downhill towards the north. Three of the graves have gravestones or plaques with names on (although only two can still be read), and these indicate that the graves are probably those of local farm workers. Two of the graves have dates: 1922 and 1968. The 1968 grave is one of the two graves at the 'head' of the graveyard, while the 1922 grave is located near to the middle of the graveyard. This would appear to indicate that most of the graves are older than 1968. All graves older than 60 years outside a formal burial ground are protected by the National Heritage Resources Act (Act no. 25 of 1999).

Distribution of other occurrences

A line of packed rocks was observed near to the graveyard. The purpose of these rocks is difficult to determine.

Two sets of hollows were observed near to the graveyard. These hollows (a set of three and a set of five) are circular, about 2 to 5 m in diameter, and appear to have been dug with the aid of a machine. Their purpose is unknown.

Various other indications of disturbance and digging in the ground were observed. Heaps of soil and rock were observed under the pylons on the eastern side of the surveyed area, and appear to relate to the digging of a ditch nearby.

No cultural material was found on the surface or in the vicinity of the dolerite outcrops.

Statement of Significance (Heritage Value)

The graveyard could be a place of significance to the descendants of the people buried there. It is assumed that these are the graves of local farm workers, who may no longer be in the vicinity. This would, however, have to be established through research and community consultation.

The only other cultural material observed is the line of packed rocks, but this would be deemed of low significance, as the line is not associated with any other structure or cultural material, and its purpose cannot be determined.

Field Rating

The field rating for the graveyard would be:

Generally Protected A (Field Rating IV A): this site should be mitigated before destruction (generally High/Medium significance);

See recommendations below.

Risk preventative measures associated with construction

Summary of the measures

Aspect	
Existing and newly discovered sites of archaeological interest	Graveyard recorded
Impact	
Damage to existing and newly discovered sites	Graveyard would have to be mitigated if it is to be disturbed or moved.
Mitigation	
Identify roles and responsibilities	If the graveyard is to be disturbed or moved, an archaeologist would be required to undertake such removal. Community or social consultation would have to take place. A management plan has to be set in place if the graveyard is to be left undisturbed.
Regulations and permits	Permit required from SAHRA

Recommendations

No further action is required for any of the occurrences observed apart from the graveyard.

There are two options that can be considered in relation to the graveyard:

1. The graveyard remains in situ:

A management plan for the graveyard during and after construction needs to be in place. This is to ensure that the graves are not damaged during the construction phase, and that they are not inadvertently damaged in the future.

The graveyard needs to be marked on all maps and plans of the substation.

An attempt should also be made to establish whether there are people who still have links with the graveyard, whether they visit the graves, and whether they wish to have access to the graves in future. Any management plan will have to include the results of this investigation and consultation with the relevant individuals. A mutually acceptable management plan will have to be adhered to, with responsibilities for the maintenance of the graveyard clearly outlined, as well as mechanisms for monitoring this. Should access be required to the graveyard by relatives, this must be clearly set out in the management plan.

2. The graveyard is relocated:

If the graveyard is to be relocated, a permit will have to be obtained from SAHRA for the purpose. Although one of the graves dates to 1968, and therefore technically falls outside the ambit of the Act, the probability is high that many of the graves will be older than 60 years. It may be possible to establish this through a process of community consultation and research.

The National Heritage Resources Act (Act No. 25 of 1999, see Appendix 1) and SAHRA permit regulations (*Government Gazette* Vol. 240, No. 21239) have strict guidelines, which must be followed during a grave relocation process

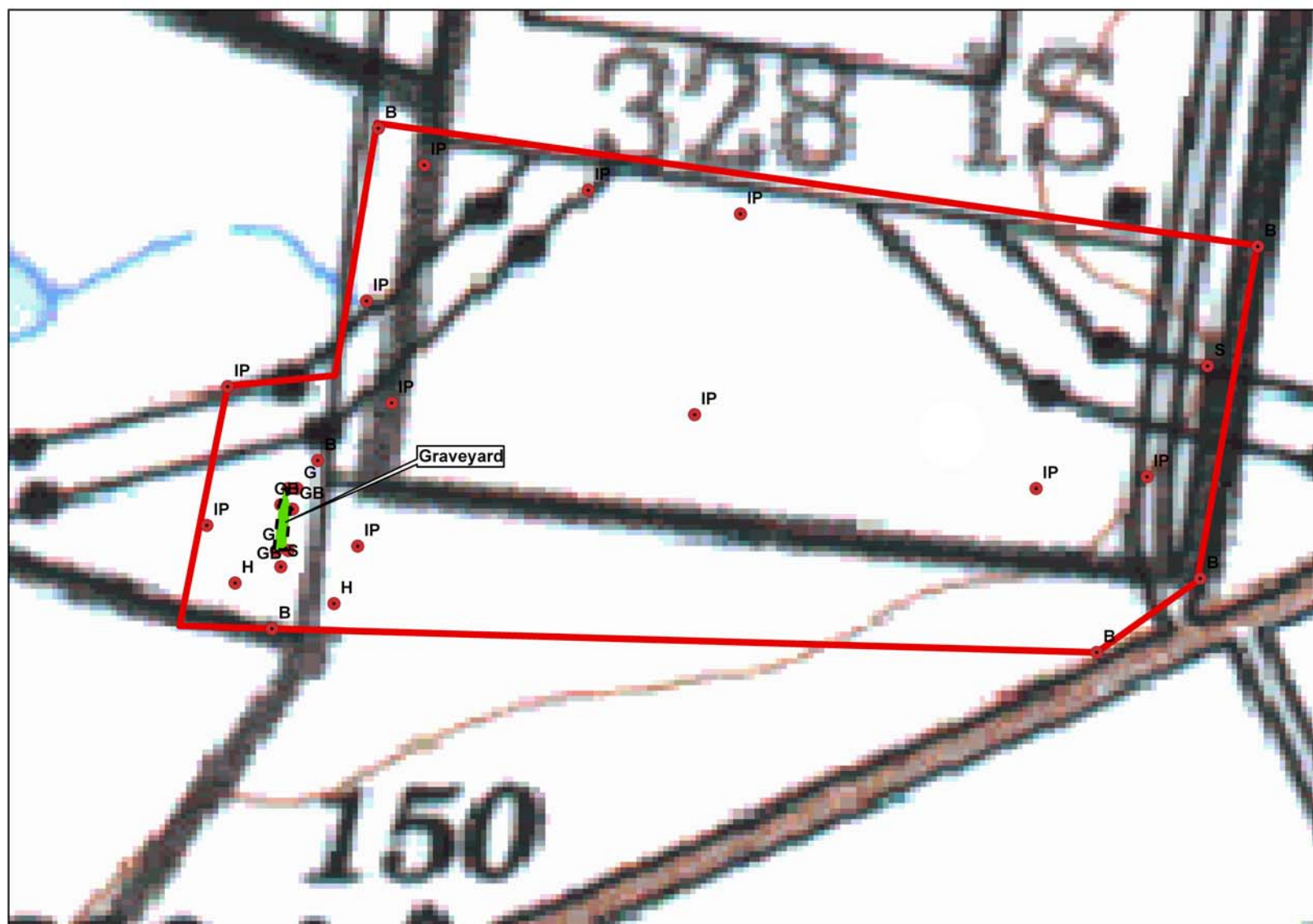
NOTE: Should the developer encounter any heritage resources, not reported on in this document, and as defined and protected by the NHRA (1999) during the course of development, the developer should immediately cease operation in the immediate vicinity and report the site to SAHRA or an ASAPA accredited CRM archaeologist.

References:

- Brink, J. S. 2002. *Human fossil material discovered at Cornelia-Uitzoek*. Culna Magazine of the National Museum, Bloemfontein. Desember 2002: 6-8.
- Brink, J.S. & Rossouw, L. 2000. *New trial excavations at the Cornelia-Uitzoek Type locality*. Navorsing van die Nasionale Museum, Bloemfontein. 16: 141-156. (Vol. 16 Part 6 October 2000:141-156)
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- Cooke, H.B.S. 1974. The fossil mammals of Cornelia, OFS, South Africa. In Butzer, K. W., Clark, J. D. & Cooke, H. B. S. 1974. *The Geology, Archaeology and Fossil Mammals of the Cornelia Beds, O. F. S.* Memoirs van die Nasionale Museum, Bloemfontein. Memoir 9: 63 - 84.
- Duxbury, G.R., Kinsey, H.W. & Tidy, D.P. December 1980. First War of Independence 1880-1881 (Centenary Issue). *Military History Journal*, Vol. 5 (2): 37-98.
- Maggs, T. M. O'C. 1976. *Iron Age Communities of the Southern Highveld*. Natal Museum, Pietermaritzburg.
- Sampson, C. G. 1974. *The Stone Age Archaeology of Southern Africa*. Academic Press. New York.

Maps:

Legend: Map 1 -3					
Zeus Substation Survey					
Map Signage	Notes	South	East	Latitude(Y)	Longitude(X)
B	Boundary point	26 41 48.1	29 05 33.1	-26.69669	29.09253
B	Boundary point	26 41 56.2	29 05 31.7	-26.69894	29.09214
B	Boundary point	26 41 53.3	29 05 10.2	-26.69814	29.08617
B	Boundary point	26 41 45.2	29 05 11.7	-26.69589	29.08658
B	Boundary point	26 41 57.4	29 05 09.1	-26.69928	29.08586
B	Boundary point	26 41 58.0	29 05 29.2	-26.69944	29.09144
IP	Inspection pits, no artefacts	26 41 46.1	29 05 12.8	-26.69614	29.08689
IP	Inspection pits, no artefacts	26 41 49.4	29 05 11.4	-26.69706	29.08650
IP	Inspection pits, no artefacts	26 41 51.9	29 05 12.0	-26.69775	29.08667
IP	Inspection pits, no artefacts	26 41 46.7	29 05 16.8	-26.69631	29.08800
IP	Inspection pits, no artefacts	26 41 52.2	29 05 19.4	-26.69783	29.08872
IP	Inspection pits, no artefacts	26 41 47.3	29 05 20.5	-26.69647	29.08903
IP	Inspection pits, no artefacts	26 41 54.9	29 05 07.5	-26.69858	29.08542
IP	Inspection pits, no artefacts	26 41 51.5	29 05 08.0	-26.69764	29.08556
IP	Inspection pits, no artefacts	26 41 55.4	29 05 11.2	-26.69872	29.08644
IP	Inspection pits, no artefacts	26 41 54.0	29 05 27.7	-26.69833	29.09103
IP	Inspection pits, no artefacts	26 41 53.7	29 05 30.4	-26.69825	29.09178
S	Packed stone line	26 41 55.9	29 05 09.3	-26.69886	29.08592
S	Stone heaps	26 41 51.0	29 05 31.9	-26.69750	29.09219
H	Hollows	26 41 56.3	29 05 08.2	-26.69897	29.08561
H	Hollows	26 41 56.8	29 05 10.6	-26.69911	29.08628
G	Grave	26 41 54.0	29 05 09.7	-26.69833	29.08603
GB	Graveyard boundary	26 41 54.0	29 05 09.5	-26.69833	29.08597
GB	Graveyard boundary	26 41 54.4	29 05 09.3	-26.69844	29.08592
GB	Graveyard boundary	26 41 54.5	29 05 09.6	-26.69847	29.08600
GB	Graveyard boundary	26 41 55.5	29 05 09.5	-26.69875	29.08597
GB	Graveyard boundary	26 41 55.5	29 05 09.2	-26.69875	29.08589



Legend
 Surveyed Area
 Surveyed Points

100 50 0 100 Meters

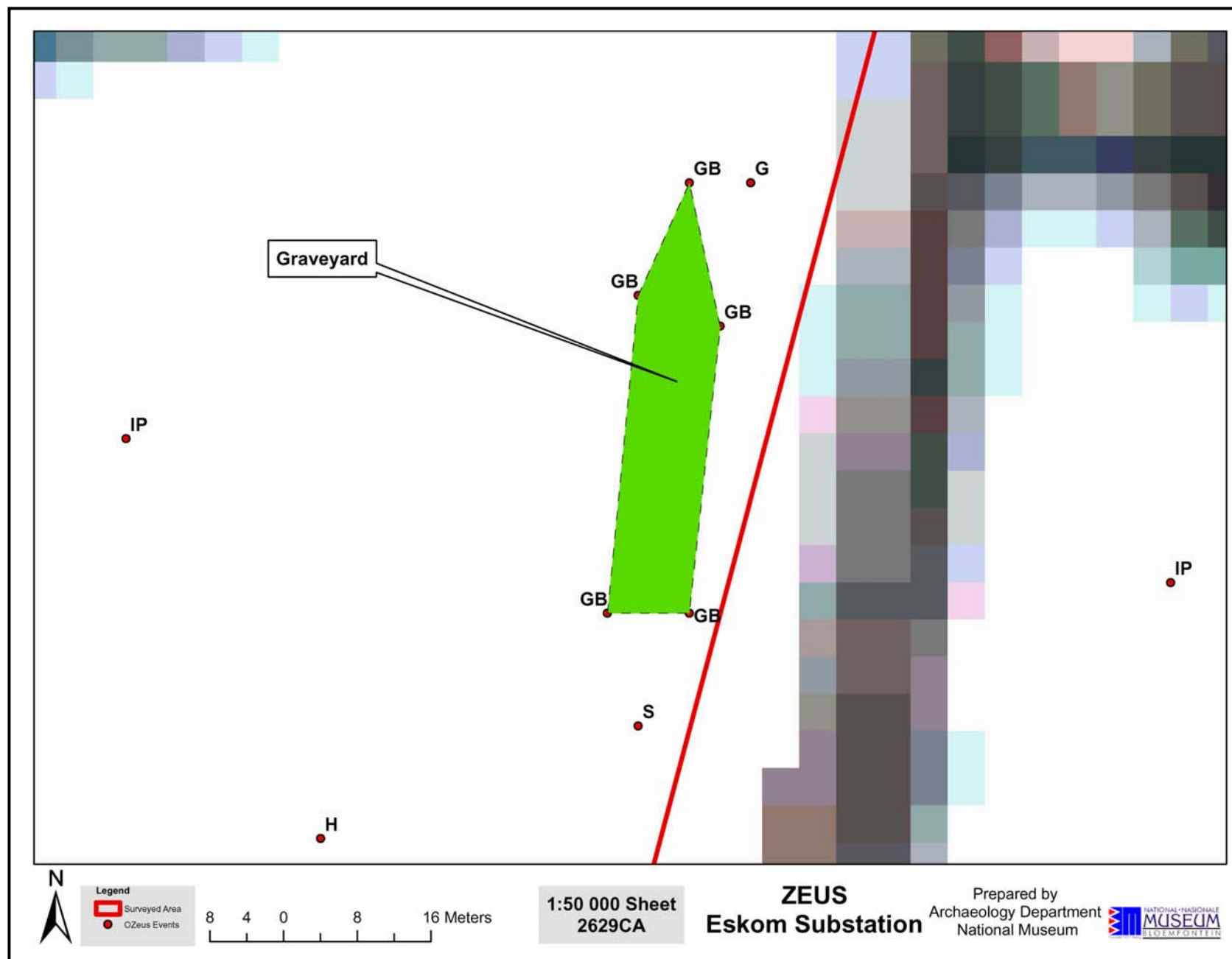
1:50 000 Sheet
2629CA

ZEUS
Eskom Substation

Prepared by
Archaeology Department
National Museum



Map 2: CLOSE UP OF SURVEYED AREA, VLAKFONTEIN 328, GERT SIBANDE (DC 30) DISTRICT, MPUMALANGA, SOUTH AFRICA



Map 3: CLOSE UP OF GRAVEYARD, VLAKFONTEIN 328, GERT SIBANDE (DC 30) DISTRICT, MPUMALANGA, SOUTH AFRICA

Sketch plan of Graveyard: Zeus

S26°41'54.0"
E29°05'09.7"

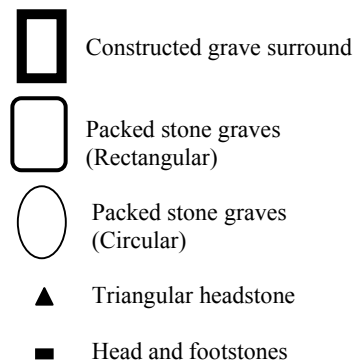
S26°41'54.5"
E29°05'09.6"

S26°41'55.5"
E29°05'09.5"

S26°41'54.0"
E29°05'09.5"

S26°41'54.4"
E29°05'09.3"

S26°41'55.5"
E29°05'09.2"



← **NORTHERLY DIRECTION**
 (Also down-slope)
 Not to scale

Palm tree

C. Koortzen National Museum

- 2- ABEL / KHANYE / 1968 MEI 2. Cement headstone, painted black. Name written in wet cement and then painted white on top of the black. Grave surround consists of two brick rows stacked on top of each other, plastered on top and on inside. Grave was fenced off originally, only 4 poles remain, 3 still standing, SW pole still has some barbwire attached (photo: 17,18)
- 17- Red granite-like headstone with cement on back, some white paint remains can be seen on top and on the back. Smoothed on sides (photo: 19)
- 19- Headstone missing. Grave surround consists of single brick row. Different types of bricks were used, some also had cement on them, indicating that the bricks were reused and collected from various sources. Inside of grave is covered with a roughly made cement slab. Grave diameters: +- 1.5mx0.8m. Possible child grave (photo:20)
- 29- II LOVING MEMORY OF / OUR LATE *OU PLAAITJIE* / MATHETSE MPATLANYANE / PASSED AWAY 1922 / EVER REMEMBERED BY OFFSPRING / REST IN PEACE. Rectangular gray granite headstone. Grave surround consists of 4 granite slabs. Grave covered with gravel embedded in cement. It appears that the headstone and grave surround was done afterwards, being placed on top of old grave cover (photo: 21)
- 32- Square sandstone-like headstone
- 39- Very neatly packed with stones in rectangular shape (photo: 22)
- 40- Two metal plaques. Same metal used. Names written in black paint on opposite sides of sheets. Possibly two individuals with same surname.
Plate 1: NAME: A M O S? / M H I A N g A Plate 2: NAME: P/M? A H/A? ? ? / M H I? A? N? g? A? (photo:23,24)

PHOTO ESSAY



Photo 1: General view looking north over surveyed area



Photo 2: General view looking west over surveyed area



Photo 3: Thick grass cover



Photo 4: Natural distribution of rocks in southern section of surveyed area



Photo 5: Evidence of previous disturbance



Photo 6: Evidence of previous disturbance



Photo 7: Hollows indicating previous disturbance



Photo 8: Hollows indicating previous disturbance



Photo 9: New road running north-south to the east of current substation and surveyed area - photo taken in a northerly direction



Photo 10: Heavy disturbance south of surveyed area



Photo 11: Inspection pit



Photo 12: Inspection pit



Photo 13: Inspection pits



Photo 14: Close up of inspection pit



Photo 15: View of northern section of graveyard – photograph taken in a NE direction



Photo 16: View of graveyard looking up slope to the south



Photo 17: Grave 2 – see graveyard plan



Photo 18: Grave 2 – see graveyard plan



Photo 19: Grave 17 – see graveyard plan



Photo 20: Grave 19 – see graveyard plan



Photo 21: Grave 29— see graveyard plan



Photo 22: Grave 39 – see graveyard plan



Photo 23: Grave 40 – see graveyard plan



Photo 24: Grave 40 – see graveyard plan



Photo 25: Line of packed rocks to the south of graveyard



Photo 26: Palm tree stump at base of grave 30 – see graveyard plan

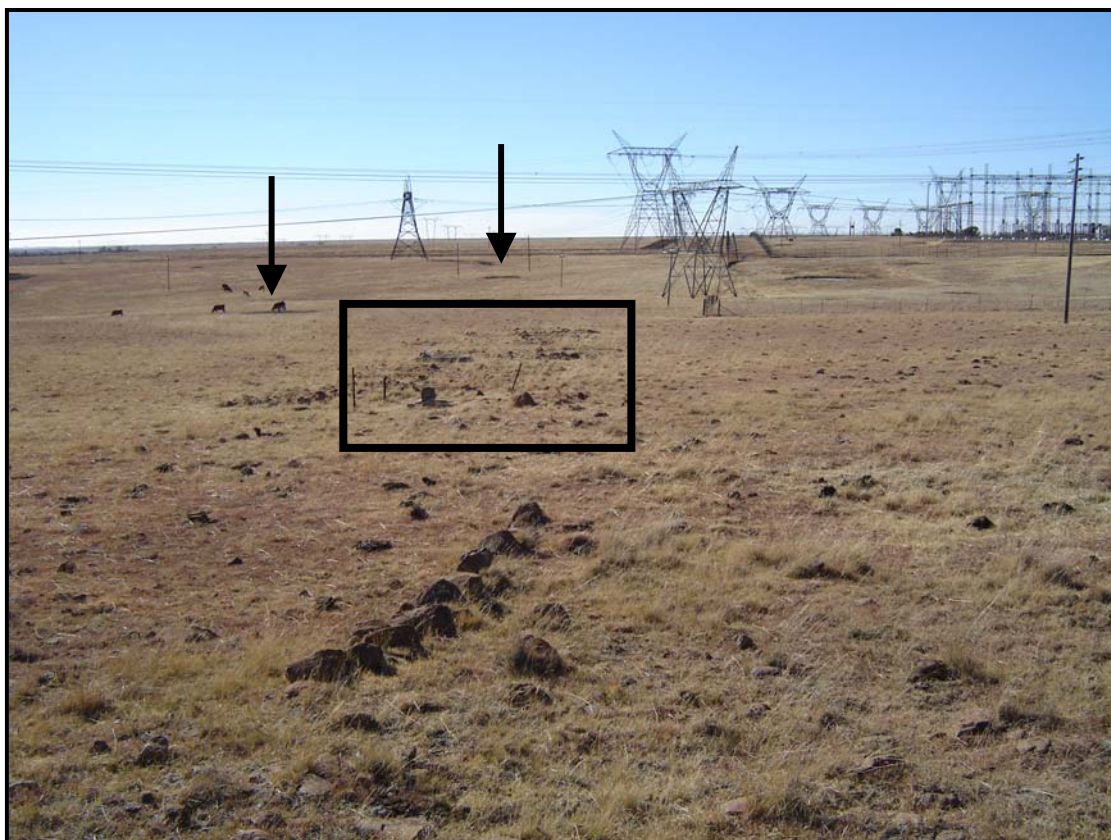


Photo 27: View of graveyard showing relationship to inspection pits to the north

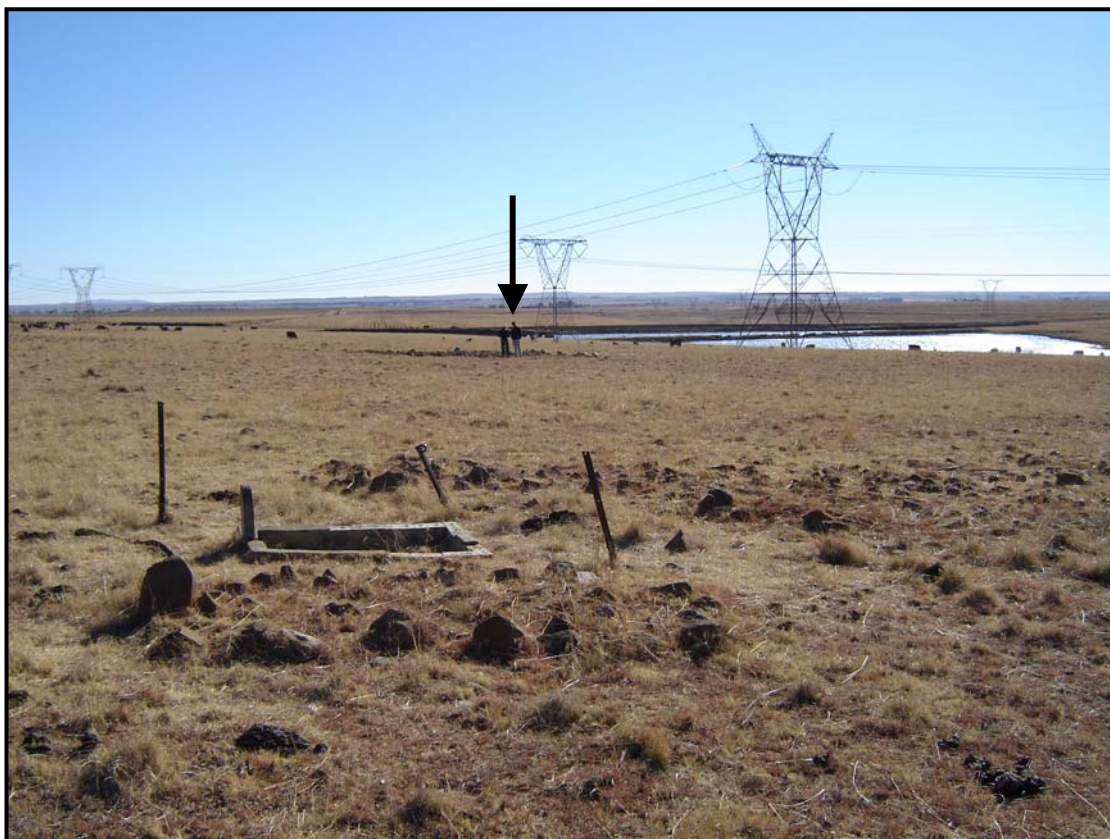


Photo 28: View of graveyard showing relationship to inspection pit to the west

APPENDIX 1

Extracts relevant to this report from the National Heritage Resources Act no. 25 of 1999, (Sections 5, 36 and 47):

General principles for heritage resources management

5. (1) All authorities, bodies and persons performing functions and exercising powers in terms of this Act for the management of heritage resources must recognise the following principles:

- (a) Heritage resources have lasting value in their own right and provide evidence of the origins of South African society and as they are valuable, finite, non-renewable and irreplaceable they must be carefully managed to ensure their survival;
- (b) every generation has a moral responsibility to act as trustee of the national heritage for succeeding generations and the State has an obligation to manage heritage resources in the interests of all South Africans;
- (c) heritage resources have the capacity to promote reconciliation, understanding and respect, and contribute to the development of a unifying South African identity; and
- (d) heritage resources management must guard against the use of heritage for sectarian purposes or political gain.

(2) To ensure that heritage resources are effectively managed—

- (a) the skills and capacities of persons and communities involved in heritage resources management must be developed; and
- (b) provision must be made for the ongoing education and training of existing and new heritage resources management workers.

(3) Laws, procedures and administrative practices must—

- (a) be clear and generally available to those affected thereby;
- (b) in addition to serving as regulatory measures, also provide guidance and information to those affected thereby; and
- (c) give further content to the fundamental rights set out in the Constitution.

(4) Heritage resources form an important part of the history and beliefs of communities and must be managed in a way that acknowledges the right of affected communities to be consulted and to participate in their management.

(5) Heritage resources contribute significantly to research, education and tourism and they must be developed and presented for these purposes in a way that ensures dignity and respect for cultural values.

(6) Policy, administrative practice and legislation must promote the integration of heritage resources conservation in urban and rural planning and social and economic development.

(7) The identification, assessment and management of the heritage resources of South Africa must—

- (a) take account of all relevant cultural values and indigenous knowledge systems;
- (b) take account of material or cultural heritage value and involve the least possible alteration or loss of it;
- (c) promote the use and enjoyment of and access to heritage resources, in a way consistent with their cultural significance and conservation needs;
- (d) contribute to social and economic development;
- (e) safeguard the options of present and future generations; and
- (f) be fully researched, documented and recorded.

Burial grounds and graves

36. (1) Where it is not the responsibility of any other authority, SAHRA must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit.

(2) SAHRA must identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with the grave referred to in subsection (1), and must maintain such memorials.

(3) (a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority—

(a) destroy, damage, alter, exhume or remove from its original position or 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, 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 equipment, or any equipment which assists in the detection or recovery of metals.

(4) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.

(5) SAHRA or a provincial heritage resources authority may not issue a permit for any activity under subsection (3)(b) unless it is satisfied that the applicant has, in accordance with regulations made by the responsible heritage resources authority—

(a) made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground; and

(b) reached agreements with such communities and individuals regarding the future of such grave or burial ground.

(6) Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority—

(a) carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and

(b) if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-interment of the contents of such grave or, in the absence of such person or community, make any such arrangements as it deems fit.

(7) (a) SAHRA must, over a period of five years from the commencement of this Act, submit to the Minister for his or her approval lists of graves and burial grounds of persons connected with the liberation struggle and who died in exile or as a result of

the action of State security forces or *agents provocateur* and which, after a process of public consultation, it believes should be included among those protected under this section.

(b) The Minister must publish such lists as he or she approves in the *Gazette*.

(8) Subject to section 56(2), SAHRA has the power, with respect to the graves of victims of conflict outside the Republic, to perform any function of a provincial heritage resources authority in terms of this section.

(9) SAHRA must assist other State Departments in identifying graves in a foreign country of victims of conflict connected with the liberation struggle and, following negotiations with the next of kin, or relevant authorities, it may re-inter the remains of that person in a prominent place in the capital of the Republic.

General policy

47. (1) SAHRA and a provincial heritage resources authority—

(a) must, within three years after the commencement of this Act, adopt statements of general policy for the management of all heritage resources owned or controlled by it or vested in it; and

(b) may from time to time amend such statements so that they are adapted to changing circumstances or in accordance with increased knowledge; and

(c) must review any such statement within 10 years after its adoption.

(2) Each heritage resources authority must adopt for any place which is protected in terms of this Act and is owned or controlled by it or vested in it, a plan for the management of such place in accordance with the best environmental, heritage conservation, scientific and educational principles that can reasonably be applied taking into account the location, size and nature of the place and the resources of the authority concerned, and may from time to time review any such plan.

(3) A conservation management plan may at the discretion of the heritage resources authority concerned and for a period not exceeding 10 years, be operated either solely by the heritage resources authority or in conjunction with an environmental or tourism authority or under contractual arrangements, on such terms and conditions as the heritage resources authority may determine.

(4) Regulations by the heritage resources authority concerned must provide for a process whereby, prior to the adoption or amendment of any statement of general policy or any conservation management plan, the public and interested organisations are notified of the availability of a draft statement or plan for inspection, and comment is invited and considered by the heritage resources authority concerned.

(5) A heritage resources authority may not act in any manner inconsistent with any statement of general policy or conservation management plan.

(6) All current statements of general policy and conservation management plans adopted by a heritage resources authority must be available for public inspection on request.