PHASE 1
HERITAGE RESOURCES SCOPING REPORT

BAKONE SUBSTATION & POWERLINE
POLOKWANE
LIMPOPO

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1. INTRODUCTION AND TERMS OF REFERENCE

The application constitutes an activity, which may potentially be harmful to heritage resources that may occur in the demarcated area. The National Heritage Resources Act (NHRA - Act No. 25 of 1999) protects all structures and features older than 60 years (section 34), archaeological sites and material (section 35) and graves and burial sites (section 36). In order to comply with the legislation, the Applicant requires information on the heritage resources, and their significance that may occur in the demarcated area. This will enable the Applicant to take pro-active measures to limit the adverse effects that the development could have on such heritage resources.

In terms of the National Heritage Resources Act (1999) the following is of relevance:

Historical remains

Section 34(1) No person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

Archaeological remains

Section 35(4) No person may, without a permit issued by the responsible heritage resources authority-

> **(a)** destroy, damage, excavate, alter, deface, or otherwise disturb any archaeological or palaeontological site or any meteorite

Burial grounds and graves

Section 36 (3)(a) No person may, without a permit issued by SAHRA or a provincial heritage resources authority-

(c) 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

(b) 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 detection or recovery of metals.

Culture resource management

Section **38(1)** Subject to the provisions of subsection (7), (8) and (9), any person who intends to undertake a development* …

> must at the very earliest stages of initiating such development notify the responsible heritage resources authority and furnish it with details regarding the location, nature, and extent of the proposed development.

***'development'** means any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of the heritage authority in any way result in a change to the nature, appearance or physical nature of a place, or influence its stability and future well-being, including-

(a) construction, alteration, demolition, removal or change of use of a place or a structure at a place;
(b) carry out any works on or over or under a place*****;
(e) any change to the natural or existing condition or topography of land, and

(f) any removal or destruction of trees, or removal of vegetation or topsoil;

"place** means a site, area or region, a building or other structure** ..."

***"structure** means any building, works, device or other facility made by people and which is fixed to the ground, …"

The author was contracted by EnviroXellence to undertake a heritage scoping survey of the development of the new substation and power line (Refer to map, South Africa 1:50 000 2429 AB and 2329 CD). The aim was to determine the presence or not of heritage resources such as archaeological and historical sites and features, graves and places of religious and cultural significance, and to submit appropriate recommendations with regard to the cultural resources management measures that may be required at affected sites / features.

The report thus provides an overview of the heritage resources that may occur in the demarcated area where development is intended. The significance of the heritage resources was assessed in terms of criteria defined in the methodology section. The impact of the proposed development on these resources is indicated and the report recommends mitigation measures that should be implemented to minimize the adverse impact of the proposed development on these heritage resources.

2. METHOD

2.1 Sources of information

The source of information was primarily the field reconnaissance and referenced literary sources.

A scoping survey of the demarcated route was undertaken on foot and by vehicle. Standard archaeological practices for observation were followed. As most archaeological material occur in single or multiple stratified layers beneath the soil surface, special attention was given to disturbances, both man-made such as roads and clearings, as well as those made by natural agents such as burrowing animals and erosion. Locations of heritage remains were recorded by means of a GPS (Garmin 60). Heritage material and the general conditions along the route were photographed with a Panasonic Lumix Digital camera.

2.2 Limitations

The scoping survey was thorough, but limitations were experienced due to dense vegetation cover in some areas, and the fact that archaeological sites are often subterranean and only visible when disturbed. It is thus possible that heritage remains may have been overlooked.

2.3 Categories of significance

The significance of archaeological sites is ranked into the following categories.

- No significance: sites that do not require mitigation.
- Low significance: sites, which *may* require mitigation.
- Medium significance: sites, which require mitigation.
- High significance: sites, which must not be disturbed at all.

The significance of an archaeological site is based on the amount of deposit, the integrity of the context, the kind of deposit and the potential to help answer present research questions. Historical structures are defined by Section 34 of the National Heritage Resources Act, 1999, while other historical and cultural significant sites, places and features, are generally determined by community preferences.

A crucial aspect in determining the significance and protection status of a heritage resource is often whether or not the sustainable social and economic benefits of a proposed development outweigh the conservation issues at stake. Many aspects must be taken into consideration when determining significance, such as rarity, national significance, scientific importance, cultural and religious significance, and not least, community preferences. When, for whatever reason the protection of a heritage site is not deemed necessary or practical, its research potential must be assessed and mitigated in order to gain data / information which would otherwise be lost. Such sites must be adequately recorded and sampled before being destroyed. These are generally sites graded as of low or medium significance.

2.4 Terminology

Early Stone Age: Predominantly the Acheulean hand axe industry complex dating to + 1Myr yrs – 250 000 yrs. before present.

Middle Stone Age: Various lithic industries in SA dating from ± 250 000 yr. - 30 000 yrs. before present.

Late Stone Age: The period from ± 30 000-yr. to contact period with either Iron Age farmers or European colonists.

Early Iron Age: Most of the first millennium AD

Middle Iron Age: 10^{th} to 13^{th} centuries AD

Late Iron Age: 14^{th} century to colonial period. *The entire Iron Age represents the spread of Bantu speaking peoples.*

Historical: Mainly cultural remains of western influence and settlement from AD1652 onwards – mostly structures older than 60 years in terms of Section 34 of the NHRA.

Phase 1 assessment: Scoping surveys to establish the presence of and to evaluate heritage resources in a given area

Phase 2 assessments: In depth culture resources management studies which could include major archaeological excavations, detailed site surveys and mapping / plans of sites, including historical / architectural structures and features. Alternatively, the sampling of sites by collecting material, small test pit excavations or auger sampling is required.

Sensitive: Often refers to graves and burial sites although not necessarily a heritage place, as well as ideologically significant sites such as ritual / religious places. *Sensitive* may also refer to an entire landscape / area known for its significant heritage remains.

3. DESCRIPTION OF THE PROPOSED DEVELOPMENT AND TERRAIN

The project consists of a power line from the Witkop Substation linked to the new Bakone Substation. The proposed new substation is situated opposite the Polokwane Brickyard, along the Roodepoort gravel road (D1534). The proposed new power line commences at the Witkop Substation from where it crosses old disturbed agricultural fields to link up with road D 1534 and then follows a route along this road to the new Bakone Substation. The entire route follows existing power lines and roads where the area had already been severely disturbed.

Fig 1. Proposed area for new substation at the foot of a small hill.

Fig 2. Existing power lines.

4. RESULTS OF THE SCOPING SURVEY

4.1 RECENT HISTORICAL PERIOD

Site 1: Co-ordinates: *S23º 59' 03.9" E29º 25' 42.3"*

One recent historical stone built structure was noted along the route. It is situated close to the proposed area for the new substation. The walls are thick and rectangular; it could possibly be the remains of an old farm building or farm worker's dwelling (1 on locality map).

Fig 3. Historical stonewall at Site 1.

Fig 4. Wider view of the stone structures – Site 1.

4.2 GRAVES

No formal graves were noted along the route, however the probability is high that unmarked graves exist at the Iron Age sites along the route.

4.3 IRON AGE REMAINS

A number of Iron Age sites were noted along the route, however most have been severely disturbed by the existing power lines and roads. Both stone walled sites and a site with no walling was noted.

Site 2: Co-ordinates: *S23º 59' 12.8" E29º 25' 38.2"*

This site is situated close to the recent historical site and opposite the brickyard; it has been severely disturbed in the past and very little walling remains. The stones from which the mentioned historical structure had been built were probably robbed from here. The site has two large flat rocks that contain shallow communal grinders, they are however not visible on a photo.

Significance: low.

Site 3: Co-ordinates: *S24º 00' 07.5" E29º 24' 59.7"*

This site is another stone walled complex and it is as severely disturbed as the previous site.

Significance: low.

Site 4: Co-ordinates: *S24º 00' 34.0" E29º 24' 44.0"*

This is a stone walled site, but it is very severely disturbed and almost not visible. Only one wall is clearly visible, with possible dung deposits. It is situated adjacent the road which explains why it has been so severely disturbed.

Significance: low.

Site 5: Co-ordinates: *S24º 00' 46.7" E29º 23' 52.6"*

This site is situated at the junction of two gravel roads. It is a stonewalled site that has been disturbed by the road and by the existing power lines.

Significance: low.

Site 6: Co-ordinates: *S24º 01' 33.1" E29º 23' 15.5"*

This site is situated next to the river underneath existing power lines. There is no stonewalling, and only a small scattering of non-diagnostic pottery fragments, and possible hut rubble was noted. The area has been under cultivation in the past.

Significance: low.

Fig 5. View of Iron Age Site 2.

Fig 6. Iron Age Site 2, Stone Walled Site.

Fig 7. Large Rock with communal grinders at Site 2.

Fig 8. Iron Age Site 3, note wall.

Fig 9. Iron Age Site 3, most walling not visible.

Fig 10. Iron Age Site 6.

4.4 STONE AGE REMAINS

Some isolated and scattered Middle Stone Age flakes were noted along most of the route, but the concentration is very low and it is of no significance.

5. DISCUSSION

Research undertook in 1980 by Loubser (1981) in the area immediately south of Polokwane/Pietersburg established that successive layers of Ndebele speaking groups dominated the Pietersburg plateau from the 17th century up to the Voortrekker period of the mid 19th century.

Loubser identified three types or groups of stone walled sites. Group I sites are situated only on hilltops. Each site consists of a multiplicity of discontinuous walls, forming terraces, which surround an area of relatively large enclosures in the centre. Group II sites are located at the base of hills, or on gradual rises between valleys, and they generally face north. Each unit consists of a perimeter wall around a corridor, which leads to a central enclosure surrounded by smaller ones. Loubser also notes that vast areas of ash deposit and dense patches of vegetation are diagnostic of Group II sites. Group III sites are imploded and haphazard versions of Group II sites. The perimeter walls of Group III sites are scalloped and linked by straight walls to a series of central enclosures.

Although Loubser did not mention these particular sites, it seems that the stonewalled sites located in the study area are Group II sites. Loubser's informants could relate Ndebele and Koni people with Group II sites, but were vague about Group I and Group III sites.

The Group II sites are now know as *Badfontein*-type walling because they are similar to those that occur on the Mpumalanga escarpment south of Lydenburg where the Type-site is located.

6. EVALUATION

The recent historical site (Site 1) is rated as low in significance. The power line should however span over it with no pylon placed on top of the remains. No further action would then be required.

The Late Iron Age stonewalled sites (Sites 2 – 5) form part of the *Badfontein*-type walling that occurs on the Pietersburg plateau. These date from the 17th – 19th century AD and were inhabited by Koni and Ndbele speakers. The significance of these sites is rated as low because of their poor state of preservation. Monitoring of earthwork is required where power pylons are placed and constructed.

Site 6, which only contains fragmented remains, is probably either an *Eiland* (10th –13th century AD) or an *Icon* (14th – 16th century AD) archaeological site. It is also rated as low because of its destruction and only requires monitoring should a power pylon be placed directly on it.

7. MITIGATION AND MANAGEMENT MEASURES

The following culture resources management and mitigation measures are recommended:

1. When the surveying of the power line had been concluded and the line pegged, an archaeologist must inspect the survey points to ensure that the pylons are place in the least sensitive places across the archaeological sites. Where necessary, adjustments must be made as recommended by the archaeologist.

2. Where sensitive positioning of pylons cannot be avoided, an archaeologist must monitor the positions when earthworks are carried out during construction.

3. Monitoring may result in the necessity to conduct a further assessment of a site pending the nature of the deposit or the discovery of an unmarked burial.

From a heritage resources management point of view, we have no objection with regard to the development on condition that the above management measures are implemented.

8. BIBLIOGRAPHY

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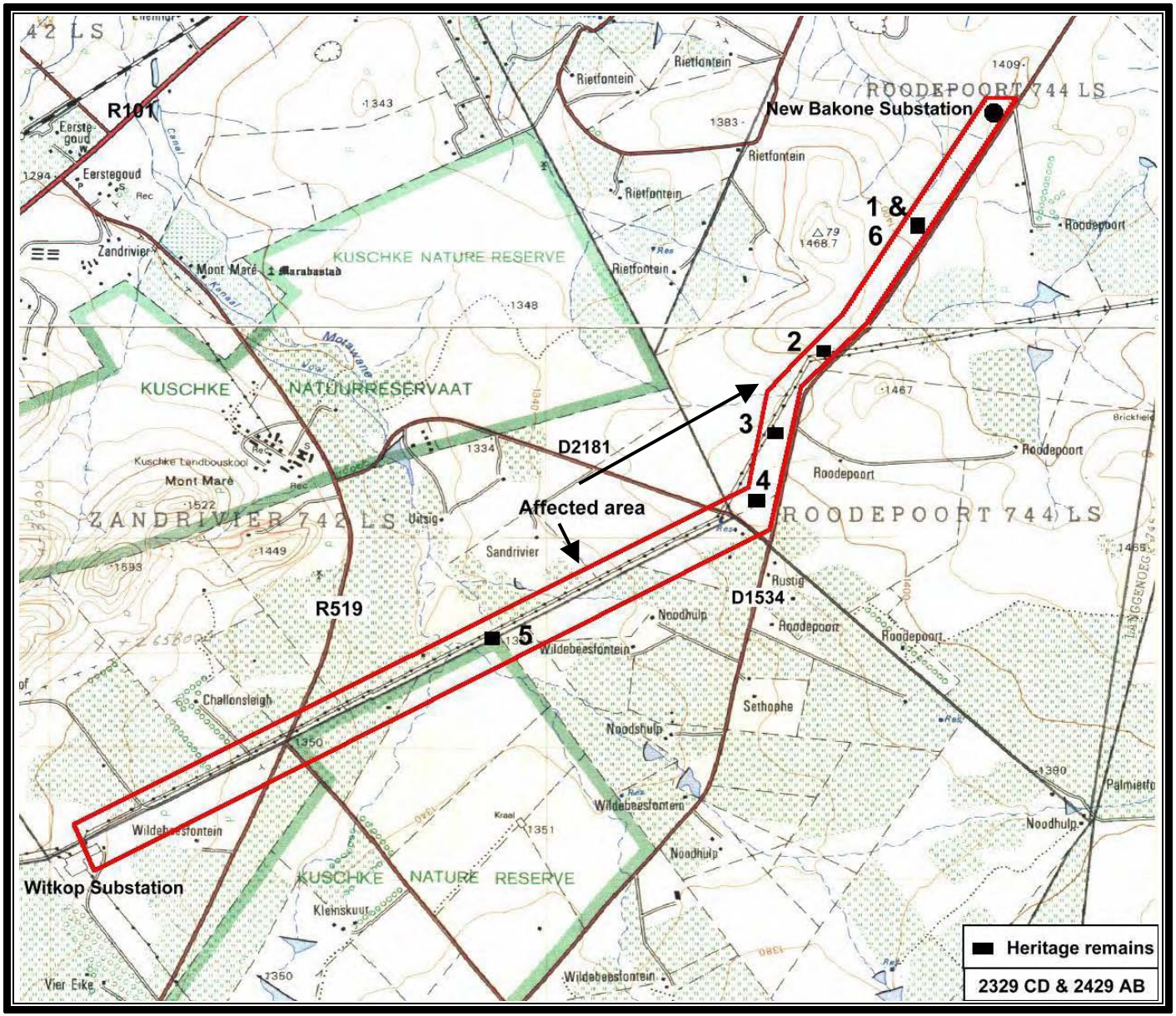

Locality Map