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TO:

ESKOM NELSPRUIT

A HERITAGE IMPACT ASSESSMENT STUDY FOR ESKOM'S
PROPOSED NEW POWER LINE ON THE FARMS OHRIGSTAD
443KT, STRYDFONTEIN 422KT AND RIETFontein 440KT
NEAR OHRIGSTAD IN THE MPUMALANGA PROVINCE OF
SOUTH AFRICA

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EXECUTIVE SUMMARY

Stone Age artefacts dating from the Late Acheul (200 000 years ago) and from the Middle Stone Age (200 000 to 40 000 years ago) (Site STR01 and site STR02); remains dating from the relatively recent past (Site RRP01 and Site RRP02), and two cemeteries (GY01 and GY02) were observed along various parts of the proposed new power line corridor between the connecting pole on Strydfontein 442KT/Ohrigstad 443KT and the multipurpose centre on Rietfontein 440KT in the Mpumalanga Province of South Africa. These resources and sensitive remains were mapped (Figure 1).

Eskom's proposed development will affect the remains dating from the relatively recent past (Site RRP01 and RRP02) as the power line will run along the edge of Site RRP01 and through Site RRP02. However, these sites do not contain remains (except Graveyard 01) that can be considered to be of outstanding historical significance. Nor do these sites have to be studied further. The graveyard (GY01) that is associated with Site RRP01 is of outstanding significance but will not be affected by the power line.

The stone artefacts associated with Site STR01 may be affected when the new power line is built. However, the development will not destroy these artefacts, some of which may merely be buried when the poles are buried in the ground. It is expected that stone tools may occur on both sides of Part CD2 and that those located in the proposed power line corridor are in the minority. Eskom's development therefore will not destroy or diminish these resources (tools), which are out of context.

The modern graveyard (GY02) in Part KL will not be affected by Eskom's development project.

As Sites RRP01 and RRP02 will be affected (damaged) when the new power line is built, it is suggested that construction are cautiously undertaken where these villages are located in order not to totally destroy of what have remained of these degraded villages. People living in Kgautswane village may have occupied these villages in the past. An over vigorous construction team with several vehicles may cause unnecessary damage to these remains. Vehicles should be limited in these areas and ordered to strictly follow the power line corridor. A cautious and sensitive construction process is therefore advised.

The cemetery associated with Site RRP01 must be marked with brightly coloured tape in order to prevent accidental damage to the graves.

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1 INTRODUCTION

Eskoms' project area, located on the farms Ohrigstad 443KT, Strydfontein 442KT and Rietfontein 440KT north of Ohrigstad is situated in the Mpumalanga Province of South Africa which is renowned for its culturally and historically rich and diversified range of heritage resources. The following ranges of heritage resources have been recorded in the Mpumalanga Province in the past:

- limestone caves and underground dwelling sites of the earliest hominids (ape-man creatures) who lived in Southern Africa 2 to 3 million years ago (near Mokopane or Potgietersrus, just outside the Mpumalanga Province);
- Stone Age sites which may be associated with the San people and which date back hundreds of thousands of years;
- rock engraving sites located along rocky outcrops and dating from the last 20 000 years;
- rock painting sites which date from the last 10 000 years;
- Early Iron Age sites occupied by Bantu-Negroid agriculturists and possibly cattle herders and dating back 1 500 years;
- Late Iron Age sites dating from the last 500 years;
- remains dating from the previous century, when the first Immigrant Boers settled in places such as Botšabelo, Pelgrimsrust, Baberton, Lydenburg, Ohrigstad and Roossenekal (from the 1840's onwards);
- block houses built on mountain ranges by British troops during the Anglo-Boer War (1899-1900);

- old mines and mining activities dating from the latter half of the 19th century and from the early 20th century when the first European mining activities commenced; and
- numerous other formal historical features (the Pelgrimrust Museum, the reconstructed historical Nederlandsch Zuid-Afrikaansche Spoorweg Maatschappij (NZASM) tunnel near Waterval-Boven, the Middelburg Museum with a Ndebele *umuzi* as one of its satellite museums, the Mapoch's Caves near Roossenekal, etc.).

Cultural resources in the Mpumalanga Province therefore constitute a rich heritage that represents a record of most groups living in South Africa today.

2 AIMS WITH THIS REPORT

Eskom intends to establish a 11kV power line, approximately twelve kilometres long, between a residential house on the farm Ohrigstad 443KT (in the south-east) and a multipurpose centre in the Kgautswane residential area on the farm Rietfontein 440KT (in the north-west). The Eskom study area is located near the town of Ohrigstad in the Mpumalanga Province of South Africa (1: 50 000 topographical map, 2430DA Mogaba).

In order to comply with legislation, Eskom requires knowledge of the presence, relevance and the significance of any significant heritage resources or sensitive remains (graves and graveyards) that may occur in or near a critical area (the new power line corridor). Eskom needs this information in order to take proactive measures with regard to any heritage resources or sensitive remains that may be affected, damaged or destroyed by the proposed new development. Eskom therefore commissioned me to undertake a heritage impact assessment study of the critical area (the power line corridor) with the aim:

- to establish whether any heritage resources do occur in or near the proposed new power line corridor and, if so, what the nature, the extent and the significance of these remains are;
- to determine whether such remains will be affected by the building of the new power line; and
- to evaluate what appropriate actions could be taken to reduce the impact of the development on such remains.

3 THE STUDY AREA, METHODOLOGY AND TERMINOLOGY

3.1 The study area

Eskom's proposed new power line is to be established on the farms Ohrigstad 443KT, Strydfontein 442KT and Rietfontein 440KT to the north of Ohrigstad in the Mpumalanga Province of South Africa (see Figure 1 and the 1:50 000 topographical map, 2430DA).

3.2 Brief historical context

The Eskom study area is situated to the north of the town of Ohrigstad, which is the second oldest white occupied town north of the Vaal River. Andries Hendrik Potgieter moved his followers from Potchefstroom beyond British influence closer to Delagoa Bay where he could establish international trade relations. He established Andries-Ohrigstad in 1845, so named after himself and Georgius Gerardus Ohrig, a merchant from Amsterdam who was well disposed towards the Voortrekkers. The town was to be the seat of the Volksraad and was abbreviated to Ohrigstad.

When many of the inhabitants died of malaria during the summer of 1849-49 the place was abandoned. Potgieter moved to the Soutpansberg and his followers founded the town of Lydenburg on a high-lying site further to the south. In 1923 a new township was established south-west of the old site. Tobacco, wheat and citrus are cultivated under irrigation. Some ruins of the Voortrekker fort of 1845 are preserved. The remains of the Voortrekkers who died there between 1845 and 1850 were interred under a concrete replica of an ox-wagon tilt on 10 October 1942. On 16 October 1950 the Andries Hendrik Potgieter Memorial was inaugurated in honour of Potgieter and the other founders.

3.3 Method

The cultural heritage impact assessment study was limited to a brief scoping of appropriate literature to provide the historical context outlined above (see Bibliography Part 8).

The heritage impact assessment was conducted with a vehicle where accessible routes existed; otherwise parts of the proposed new corridor were surveyed on foot.

This survey does not claim to have uncovered all the heritage resources in the project area as heritage remains may occur beneath the surface.

The location of sites, graves, structures and features discovered during the survey are indicated on the map provided by Eskom of the proposed new power line corridor (Figure 1).

3.4 Assumptions and limitations

It must be kept in mind that cultural heritage surveys may not detect all heritage resources in any given study area. While certain remains may simply be missed during surveys (observations), others may occur below the surface of the earth and may only be exposed once development (such as the digging of holes for pylons) commences.

3.5 Terminology

The cultural heritage assessment referred to in the title of this report includes a survey of heritage resources as outlined in the National Heritage Resources Act (Act No 25 of 1999).

Cultural heritage (or cultural resources) includes all human-made phenomena and intangible products that are the result of the human mind. Natural,

technological or industrial features may also be part of heritage resources, as places that have made an outstanding contribution to the cultures, traditions and lifestyles of the people or groups of people of South Africa.

The term 'pre-historic' generally refers to the time before any historical documents were written or any written language developed in a particular area or region of the world. The historical period and historical remains refer, for the study area, to the first appearance or use of 'modern' Western writing brought to Lydenburg and Ohrigstad by the first Colonists who settled in this area c. 1840. The historical period for Lydenburg/Ohrigstad therefore dates from c. 1840.

The term 'relatively recent past' refers to the 20th century. Remains from this period are not necessarily older than sixty years and therefore may not qualify as archaeological or historical remains. Some of these remains, however, may be close to sixty years of age and may, in the near future, qualify as heritage resources.

It is not always possible, based on observations alone, to distinguish clearly between archaeological remains and historical remains, or between historical remains and remains from the relatively recent past. Although certain criteria may help to make this distinction possible, these criteria are not always present, or, when they are present, they are not always clear enough to interpret with great accuracy. Criteria such as square floor plans (a historical feature) may serve as a guideline. However, circular and square floors may occur together on the same site.

The term 'sensitive remains' is sometimes used to distinguish graves and cemeteries as well as ideologically significant features such as holy mountains, initiation sites or other sacred places. Graves in particular are not necessarily heritage resources if they date from the recent past and do not have tombstones that are older than sixty years.

The term 'Stone Age' refers to the prehistoric past, although Late Stone Age peoples lived in the area well into the historical period. The Stone Age is divided

into an Earlier Stone Age (3 million years to 150 000 thousand years ago) the Middle Stone Age (150 000 years to 40 000 years ago) and the Late Stone Age (40 000 years to 200 years ago).

The term 'Late Iron Age' refers to the period between the 17th century and the 19th century and can therefore include the historical period.

The term 'study area' or 'project area' refers to the area where Eskom wants to focus its development activities.

The 'critical areas' refer to the areas (or corridors) that will be affected by Eskom's proposed development project.

The 'peripheral area' refers to the area where Eskom does not intend to focus its development activities, but which are in close proximity to the critical areas (or corridors).

Phase I studies refer to surveys using various sources of data in order to establish the presence of all possible types of heritage resources in any given area.

Phase II studies include in-depth cultural heritage studies such as archaeological mapping and excavating work, the documenting of rock art sites, engraving sites or historical dwellings and other architectural features and structures, the sampling of archaeological sites or shipwrecks, etc. Phase II work requires the co-operation and approval of SAHRA.

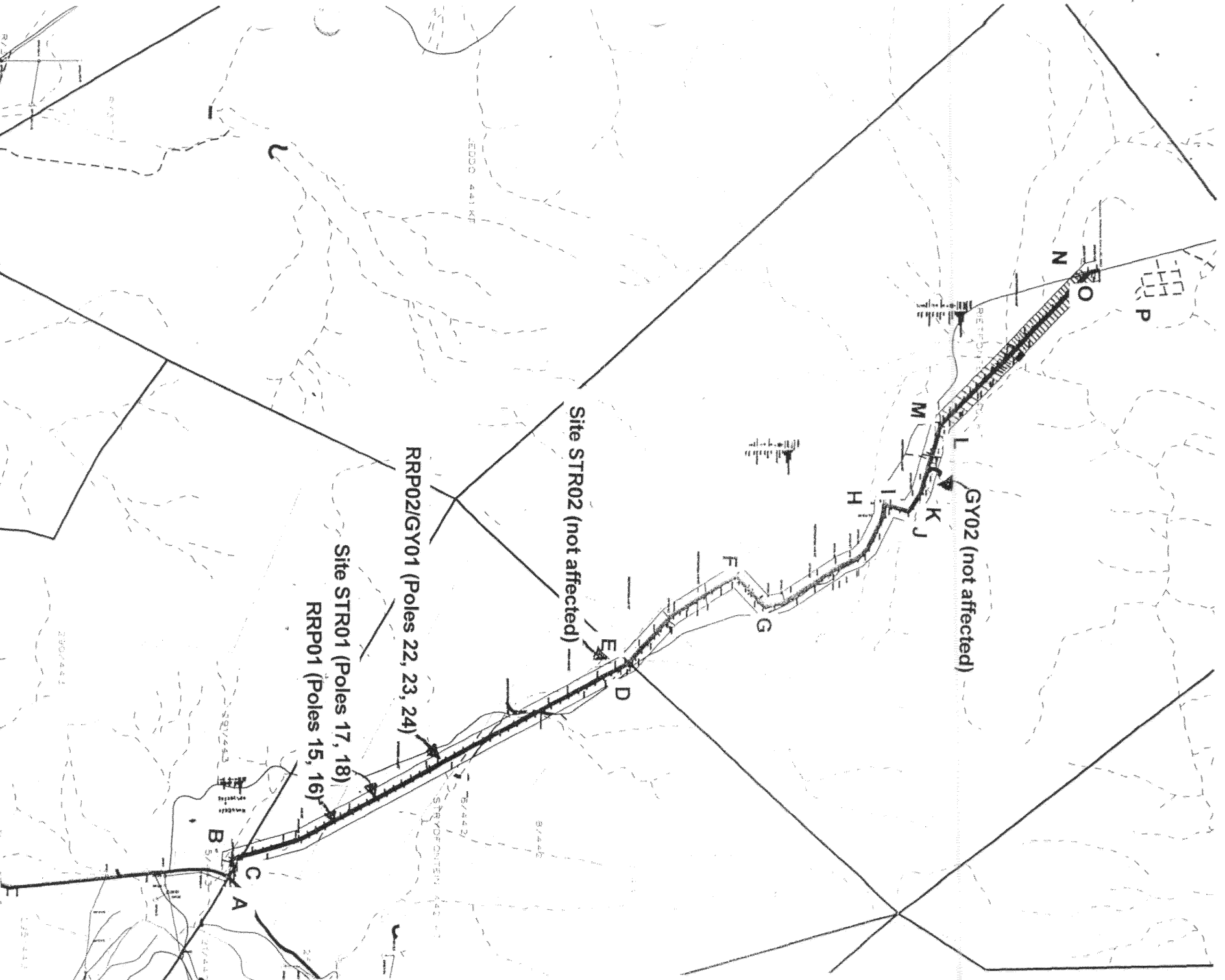


Figure 1: The Eskom study area is situated on the farms Rietfontein 440KT, Strydfontein 442KT and Ohrigstad 443KT, north of the town of Ohrigstad in the Mpumalanga Province of South Africa. Note the artefacts dating from the Stone Age, remains dating from the relatively recent past and graves in the critical and peripheral areas of the proposed new power line corridor.

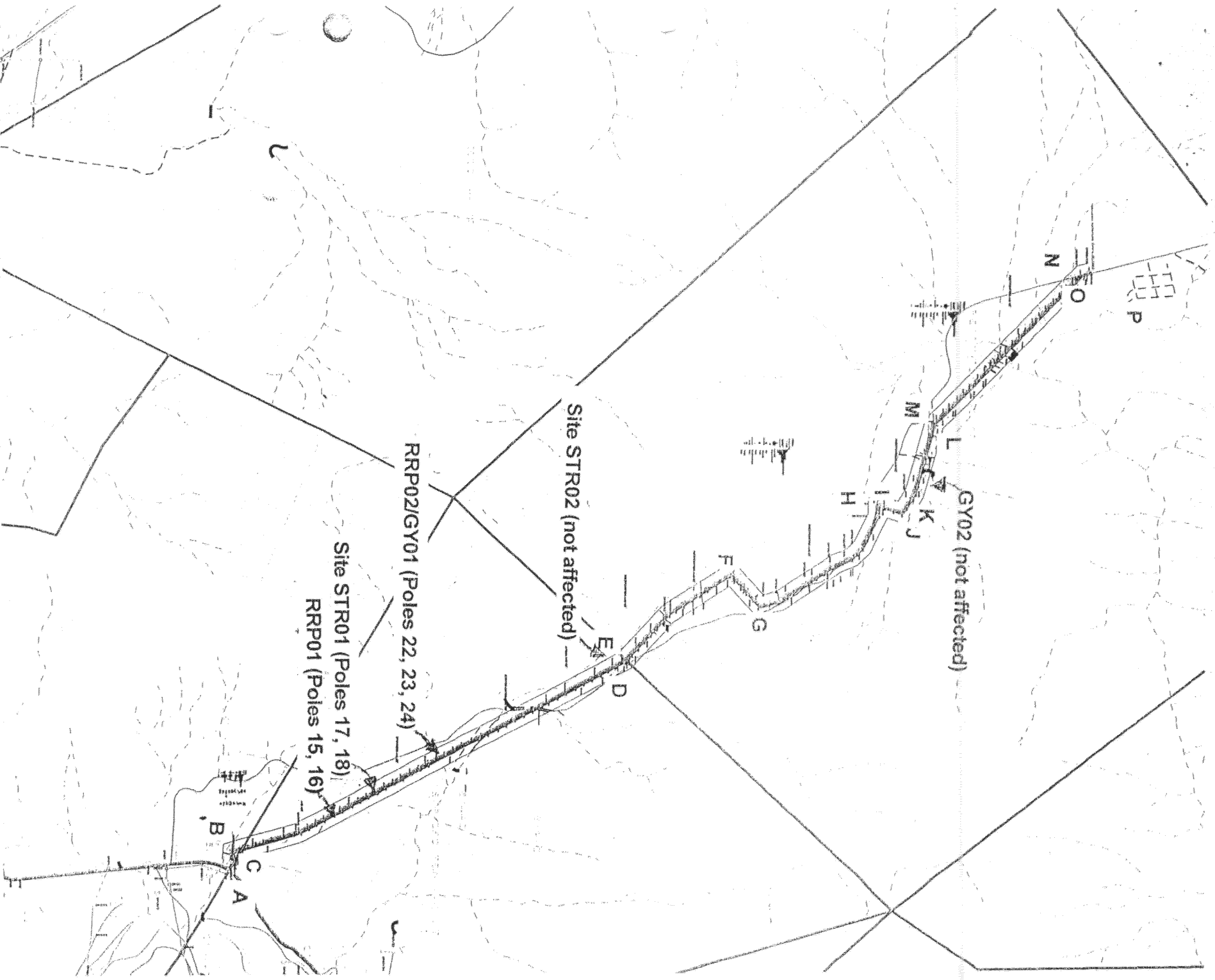


Figure 1: The Eskom study area is situated on the farms Rietfontein 440KT, Strydfontein 442KT and Ohrigstad 443KT, north of the town of Ohrigstad in the Mpumalanga Province of South Africa. Note the artefacts dating from the Stone Age, remains dating from the relatively recent past and graves in the critical and peripheral areas of the proposed new power line corridor

4 THE HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED NEW POWER LINE CORRIDOR

The proposed new power line corridor between the residential house on the farm Ohrigstad 443KT and the multipurpose centre on Rietfontein 440KT was divided into the following stretches that were subjected to a heritage impact assessment. The proposed new power line corridor is marked by a large number of bends and turns. These have been minimized in order to simplify the following description. The proposed new power line corridor was divided into the following parts (Figure 1):

- Part AB runs from the connection pole at the residential house on the boundary between Ohrigstad 443KT and Strydfontein 442KT to the 1st bend, approximately 80 meters further to the north-west.
- Part CD runs from the 1st turning point to a sisal bush, approximately 4,5 km to the north-west, near the boundary between Strydfontein 442KT and Rietfontein 440KT.
- Part EF runs for approximately 2 km from the sisal bush along the western perimeter of the Kgautswane village to a bend where the power lines turns towards the east running for approximately 500m between residential houses to the main dirt road.
- Part GH runs for approximately 1,25 kilometres on the western shoulder of the main dirt road that passes through part of the Kgautswane village.
- Part IJ turns, before reaching the telephone lines, towards the east and follows a dirt road for approximately 350metres between residential houses.

- Part KL runs across dongas and past a cemetery and old dams for approximately one kilometre to a primary school's western boundary.
- Part MN runs from the school across old agricultural fields until it reaches the main dirt road between Kgautswane village and the multipurpose centre on Rietfontein 440KT.
- Part OP runs from the dirt road into the multipurpose centre's premises.

The heritage impact assessment study of these various stretches is discussed below and illustrated with photographs.

4.1 Part AB: From the connecting pole to the 1st bend

Part AB runs from the connection pole at the residential house on the border between Ohrigstad 443KT and Strydfontein 442KT to the 1st bend, approximately 80 meters further to the north-west.

Part AB stretches through part of the garden skirting the house followed by a rubbish dump and a piece of veld.

Open patches in the piece of veld reveal the typical rock of the area, namely shale. No heritage resources of significance were observed in Part AB.

4.2 Part CD: From the 1st turning point to a sisal bush

Part CD runs from the 1st turning point to a sisal bush, approximately 4,5 km further to the north-west, near the border between Strydfontein 442KT and Rietfontein 440KT. Part CD can be divided into various stretches, namely a first stretch that runs uphill to the 2nd bend (CD1); a second stretch that crosses relatively flat open veld until it crosses a dry donga (CD2); a third stretch running across open veld with little vegetation to the main dirt road

(CD3); and a fourth piece running across old cultivated fields (CD4) until it reaches a sisal bush (CD4).

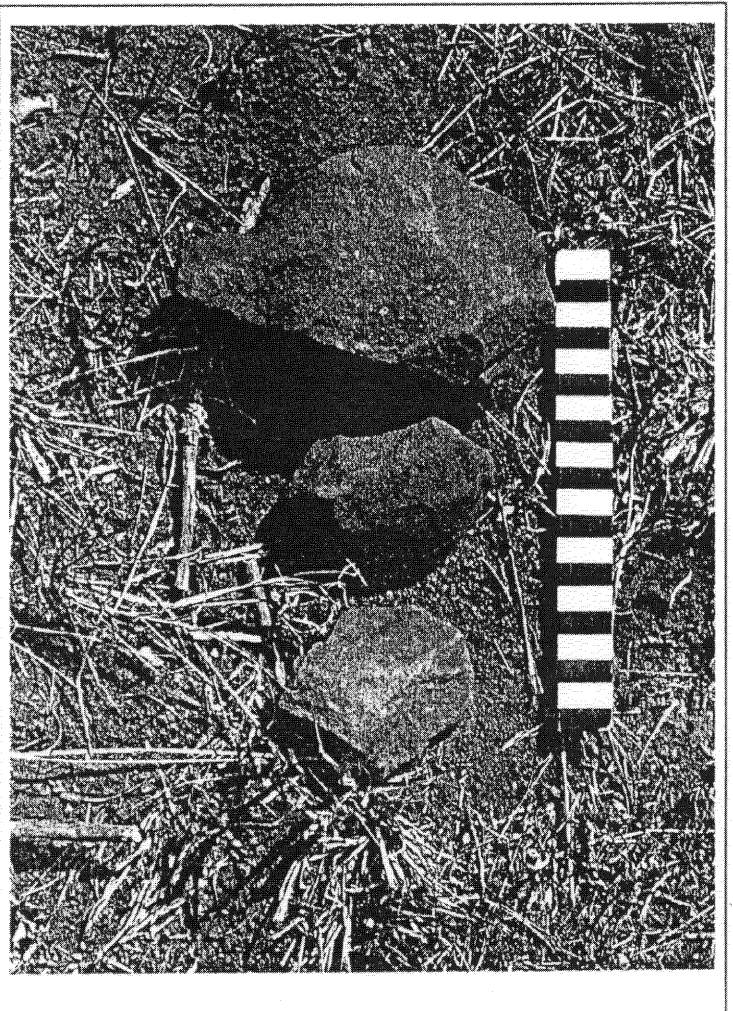
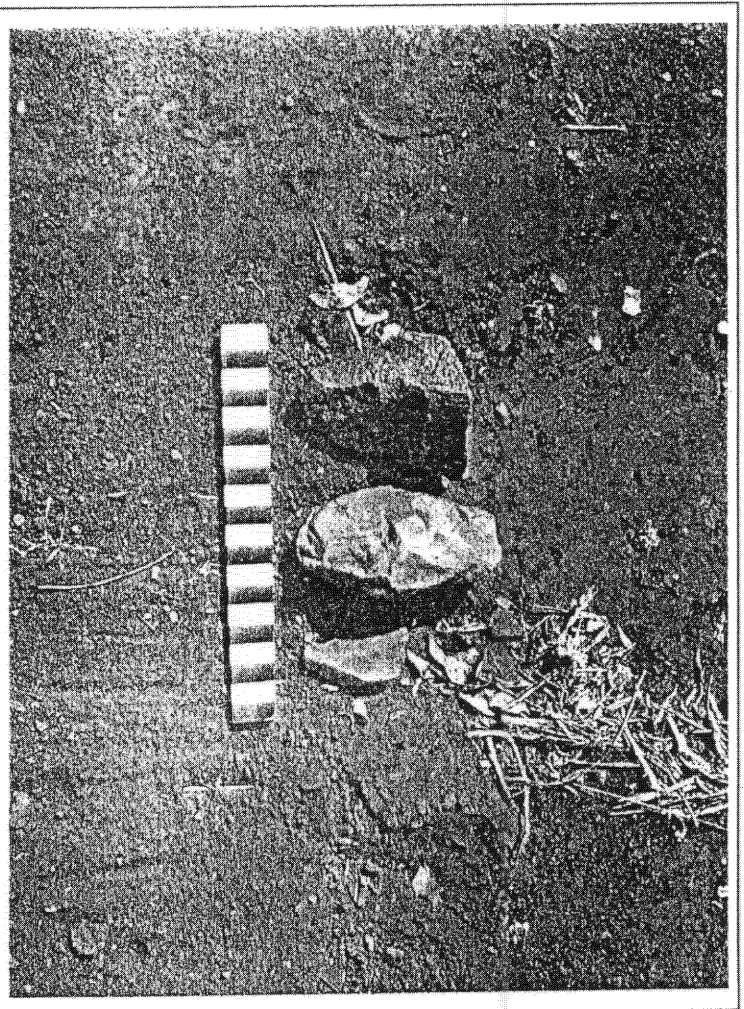
Part CD1 runs uphill across indigenous bush on plates of weathered shale. This undulating part of the proposed new power line corridor contains no heritage resources of significance.

Part CD2 runs across veld with open patches between trees and dense clumps of prickly pears until it reaches a dry donga that is crossed by the main dirt road to Kgautswane village. Part CD2 contains the following heritage resources:

Heritage resources and sensitive remains along PartCD2

Late Acheulian stone tools (Site STR01)

Scattered stone tools occur along Part CD2 and may represent activity areas such as tool manufacturing sites or rudimentary camping sites. Stone tools include small hand axes and cleavers as well as points. These stone tools date from the Late Acheul (Early Stone) and are probably 200 000 thousand years old, but possibly older. The points date from the Middle Stone Age and are younger than the hand axes and cleavers and date between 200 000 to 40 000 years ago (see below).



Figures 2 & 3. Stone tools observed along Part CD2 of the proposed new power line corridor (above and below).

Villages from the relatively recent past (Sites RRP01 and RRP02)

Remains from villages dating from the relatively recent past occur along and in the proposed new power line corridor. These sites include the remains of clay structures (dwellings) that have deteriorated to such an extent that they are barely visible. Other features include a limited number of lower grinding stones; zinc objects scattered over the sites; upright stones indicating the foundations of walls and a cemetery. These villages date from the last few decades and are not of great historical significance.

The cemetery (GY01)

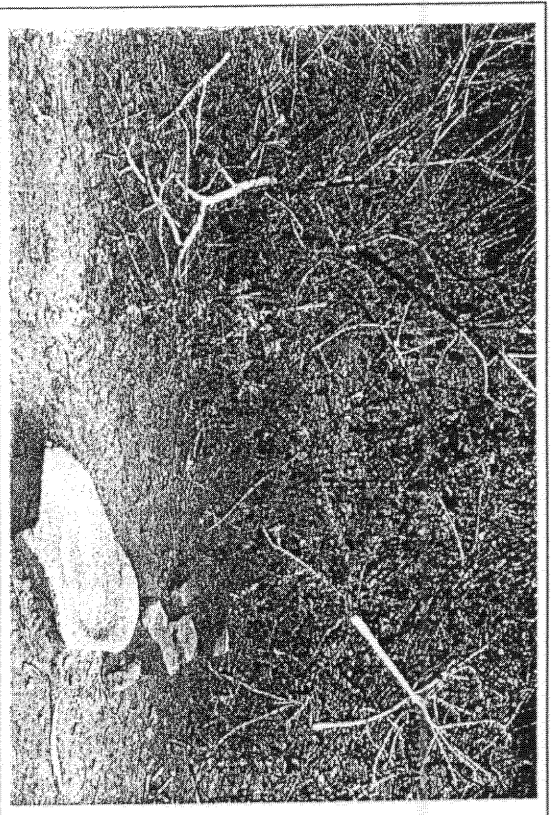
The cemetery contains four graves, two belonging to the Mashigo family. Both graves date from the 1960's. All the graves are edged with upright pieces of slate. These features are located approximately 5 metres outside the proposed power line corridor and can be regarded as being of outstanding significance.

Part CD3 runs from the dry donga across open veld, crosses the main dirt road to Kgautswane village and continuous as Part CD4 while crossing old agricultural fields. No heritage resources of significance were observed along Part CD3.

Heritage resources along Part CD4

Late Acheulian stone tools (Site STR02)

Late Acheulian stone tools were observed close to the sisal bush along Part CD4. These artefacts will not be affected when the proposed power line is built.



Figures 4 & 5. A lower grinding stone (above) and village dating from the relatively recent past (Site RRP02) (below).

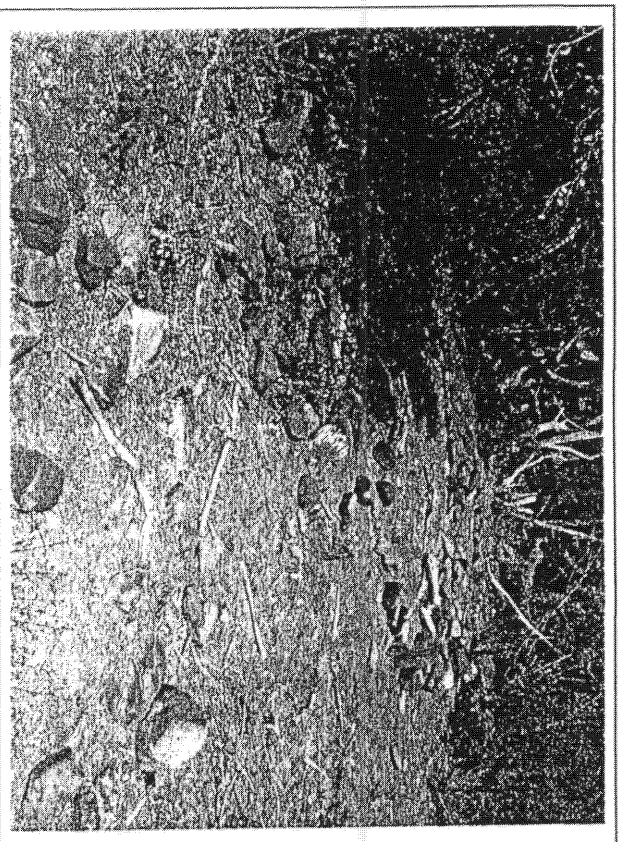


Figure 6. The graveyard (GY01) near the remains dating from the relatively recent past (Site RRP02) contains four graves that are edged with upright pieces of slate.

4.3 Part EF: From the sisal bush along Kgautswane village's western boundary

Part EF runs for approximately 2 km from the sisal bush along the western border of the Kgautswane village to a turning point where the power lines turns towards the east running for approximately 500metres between residential houses to the main dirt road

Part EF runs across old agricultural fields and between the crèche and a school. Part EF is degraded and contains no heritage resources of significance.

4.4 Part GH: Along the main dirt road running through Kgautswane village

Part GH has several bends and runs for approximately 1,25 kilometres on the western shoulder of the main dirt road through part of Kgautswane village.

Part GH contains no heritage resources of significance.

4.5 Part IJ: Along a dirt road in Kgautswane village

Before reaching a telephone line that runs along the western shoulder of the main dirt road running through Kgautswane village, Part IJ turns from the main dirt road towards the east running between residential houses for approximately 350metres before turning to the north again.

Part IJ contains no heritage resources of significance.

4.6 Part KL: Across dongas, past a cemetery and old dams

Part KL runs across dongas, past a cemetery (GY02) and old dams for approximately one kilometre before reaching the north-western border of a primary school. Part KL contains the following sensitive remains:

Sensitive remains in Part KL

Part KL runs past a new cemetery that will not be affected by the new power line (GY02). The cemetery must be regarded as of high significance.

4.7 Part MN: Across agricultural fields

Part MN runs for approximately 2.5 km across agricultural fields until it reaches the main dirt road between Kgautswane village and the multipurpose centre.

This part of the proposed power line contains no heritage resources.

4.8 Part OP: From the dirt road into the multipurpose centre

Part OP runs from the dirt road for approximately 300 meters into the premises of the multipurpose centre.

Part OP contains no heritage resources of significance.

**5 POSSIBLE IMPACT OF THE PROPOSED NEW POWER LINE ON
HERITAGE RESOURCES AND SENSITIVE REMAINS**

Stone Age artefacts dating from the Late Acheul (200 000 years ago) and from the Middle Stone Age (200 000 to 40 000 years ago) (Site STR01 and STR02); remains dating from the relatively recent past (Site RRP01 and RRP02), and two cemeteries (GY01 and GY02) were observed along the various parts of the proposed new power line corridor between the farm house on Strydfontein 442KT and the multipurpose centre on Rietfontein 440KT. These resources and sensitive remains were mapped (Figure 1).

Eskom's proposed development will affect the remains dating from the relatively recent past (Site RRP01 and RRP02) as the power line will run along the edge of Site RRP01 and through Site RRP02. However, these sites do not contain remains (except a graveyard) that can be considered to be of outstanding historical significance. Nor do these sites have to be researched further. The graveyard (GY01) that is associated with Site RRP01 is of outstanding significance but will not be affected by the power line.

The stone artefacts associated with Site STR01 may be affected when the new power line is built. However, the development will not destroy these artefacts, some of which may merely be buried when the poles are buried in the ground. It is expected that stone tools may occur on both sides of Part CD2 and that those in the proposed power line corridor may be in the minority. Eskom's development therefore will not damage or diminish these resources.

The modern graveyard (GY02) in Part KL will not be affected by Eskom's development project.

6 MANAGING ANY POSSIBLE IMPACTS ON HERITAGE RESOURCES AND SENSITIVE REMAINS

As Sites RRP01 and RRP02 will be affected (damaged) when the new power line is built, it is suggested that construction is cautiously undertaken where these villages are located in order not to disturb what have remained of these villages. As these villages (and the cemetery) may be associated with people living in Kgautswane village today, a cautious construction approach is advised. An over vigorous construction team with several vehicles may cause unnecessary damage to these remains. Vehicles should be limited in these areas and ordered to follow the power line corridor.

The cemetery associated with Site RRP01 must be marked with brightly coloured tape in order to prevent accidental damage to the graves.

7 RECOMMENDATIONS

All the heritage resources and sensitive remains identified in the Eskom study area is situated in either the critical or the peripheral areas where some of these remains will be affected by Eskom's proposed development. However, the remains dating from the relatively recent past cannot be considered to be of outstanding significance. Damage to these remains can be controlled (limited) during the construction process. Shifting of Part CD (towards the west or towards the east) may exacerbate the impact on villages from the relatively recent past as several of these villages have been established along this stretch of the proposed new power line corridor.

Stone artefacts may also be affected by the development process but this will not lead to the destruction or loss of these resources which are already scattered over the area and therefore out of context.

Both graveyards need not to be affected by the proposed development, especially when they are marked or highlighted with colouring tape.

Consequently, there is no reason from a cultural heritage point of view why Eskom should not undertake the proposed new development.



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