



# AFRICAN HERITAGE CONSULTANTS CC

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**4 March 2013**

**BASIC ASSESSMENT OF THREE ALTERNATIVE POWER  
LINES ROUTES FOR THE CONSTRUCTION OF A NEW 132 kV  
KINGBIRD LINE FROM GUMENI MTS TO BOSLOOP S/S A  
DISTANCE APPROXIMATELY OF 26 KILOMETRE IN  
MPUMALANGA PROVINCE**

**A. BACKGROUND INFORMATION ON PROJECT:**

**(a) Whether the report is part of a scoping report/EIA/HIA or not**

*Report is part of a Basic Assessment*

**(b) Type of development (e.g. low cost housing project, mining etc).**

*Construction of a new 132kV Kingbird line*

**(c) Whether re-zoning and/or subdivision of land is involved.**

*No - Servitude will be registered once finality has been reached*

**(d) Developer and consultant and owner and name and contact details;**

Project applicant: Eskom Distribution Northern Region

Trading name: Eskom Holding Limited

Contact person: Marriam Ngwezi  
Physical address: Eskom Park, Main building, Jellicoe and Watermeyer Street  
Pretoria  
Postal address: P.O. Box 223 Witbank 1035  
Tel: 013 693 3034; Fax: 8221 3034  
E-mail: [Ngwezimg@eskom.co.za](mailto:Ngwezimg@eskom.co.za)

**Consultant:**

Royal HaskoningDHV Consultants Project Managers and Engineers  
P.O. Box 867, Gallo Manor, 2052  
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Tel: (011) 7986000  
E-mail: [Ntseketsi.lerotholi@rhdhv.com](mailto:Ntseketsi.lerotholi@rhdhv.com)

**Provincial Authority:**

Mpumalanga Department of Economic Development, Environment and Tourism  
P.O. Box 383, Witbank, 1035  
Tel: 013 690 2595; Fax: 013 690 3704

**Local authority in whose jurisdiction the proposed activity will fall:**

Emakhazeni Local Municipality  
Nearest town: Machadodorp  
P.O. Box 17, Belfast, 1100  
Tel: 013 253 1121; Fax: 013 253 2440

**Heritage Report prepared by:**

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**(e) Legislative requirements of Act 25 of 1999.**

**PROTECTED SITES IN TERMS OF THE NATIONAL HERITAGE  
RESOURCES ACT, ACT NO. 25 OF 1999**

The following are the most important sites and objects protected by the  
National Heritage Act:

- Structures or parts of structures older than 60 years.
- Archaeological sites and objects.
- Paleontological sites.

- Meteorites.
- Ship wrecks.
- Burial grounds.
- Graves of victims of conflict.
- Public monuments and memorials.
- Structures, places and objects protected through the publication of notices in the Gazette and Provincial Gazette.
- Any other places or objects, which are considered to be of interest or of historical or cultural significance.
- Geological sites of scientific or cultural importance.
- Sites of significance relating to the history of slavery in South Africa.
- Objects to which oral traditions are attached.
- Sites of cultural significance or other value to a community or pattern of South African history

## **Description of the Property of Affected Environment**

### **Details of area surveyed:**

- Full location Data for Province, Magisterial District/Local Authority and property (e.g. farm/erf) name and number etc.;

*Construction of a 26 kilometre 132kV Kingbird line from Bosloop Substation to Gumeni Main Transmission Station (MTS) and a 132kV feeder by at Gumeni MTS and Bosloop Substation.*

*Local Authority: Emakhazeni Local Municipality.*

*List of Farm names attached*

## **B. EXECUTIVE SUMMARY**

Three alternative power line routes have been investigated for the new Bosloop/Gumeni power line. The proposed routes are all on the Mpumalanga escarpment, an area well known for its many stonewalled sites.

Of the three routes investigated the yellow power line route crosses ten heritage sites, the blue power line crosses two sites and the pink power line only one site.

Therefore it is recommended that Eskom should decide on the pink route for the power line. Once a final decision has been taken on the specific route a walk through cultural heritage resources impact assessment has to be done.

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## **D. BACKGROUND INFORMATION ON THE PROJECT**

The purpose of the report is to evaluate three alternatives for a new 132kV Kingbird power line from Bosloop Substation to Gumeni Main Transmission Station in the Machadodorp area. The report is a basic assessment to determine which line will have the least effect on heritage sites of the area. Eskom Holding Limited intends to build a high voltage 132kV power line.

The project does not involve re-zoning or subdivision of land. Eskom will only register servitudes on the farms crossed by the power line.

This study is part of a study to determine which route will have the least impact on heritage sites. The proposed routes of the lines were visited mainly by vehicle. After this visit it was decided to reroute the lines as to minimize the impact. This report is on the new revised routes as recommended by the various consultants.

## **E. BACKGROUND TO THE ARCHAEOLOGY AND HISTORY OF THE AREA.**

The most recent publication on archaeological sites of the escarpment stretching from Badplaas to Lydenburg is the work by Delius, P. & Schoeman, M.A. 2008. pp135 – 181 and Maggs, T. 2008. pp169 - 183. Hundreds of stonewalled sites occur on the escarpment in the form of single family settlements to extended family sites, to headman sites and very large terraced sites most probably associated with tribal chiefs. Some of the larger sites towards Waterval Boven are several kilometres in diameter.

The sites are associated with the so-called Koni who originally were Ndebele speaking people but eventually became part of the Pedi kingdom.

The very first research on these sites was done as early as 1939 by E.C.N. van Hoepen former director of the National Museum in Bloemfontein. He also collected many examples of the strange Rock-art associated with these sites (1939 pp 47 -74)

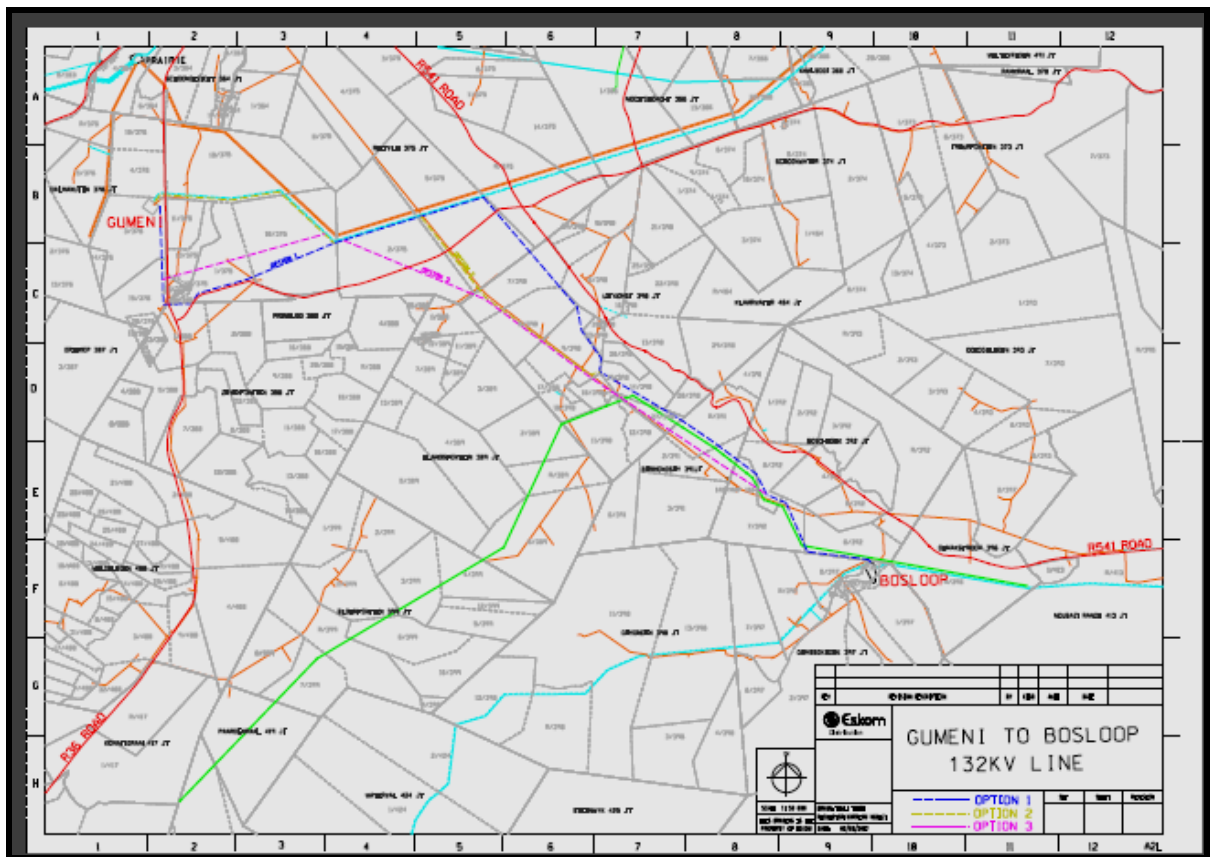
The author has recently done three heritage impact assessments on sites near the proposed power line routes (Küsel & Miller February 2010, 2011). Six of the sites have also been mitigated in a phase II heritage project by Polke Birkholtz of PGS. Interesting from the finds is that the sites are extremely poor in cultural material but they have two periods of occupation. The first settlement period dates to  $\pm$  1600 and has Eiland type pottery. The second period of occupation is  $\pm$  1800 and is associated with the Koni (Unpublished report 2013).

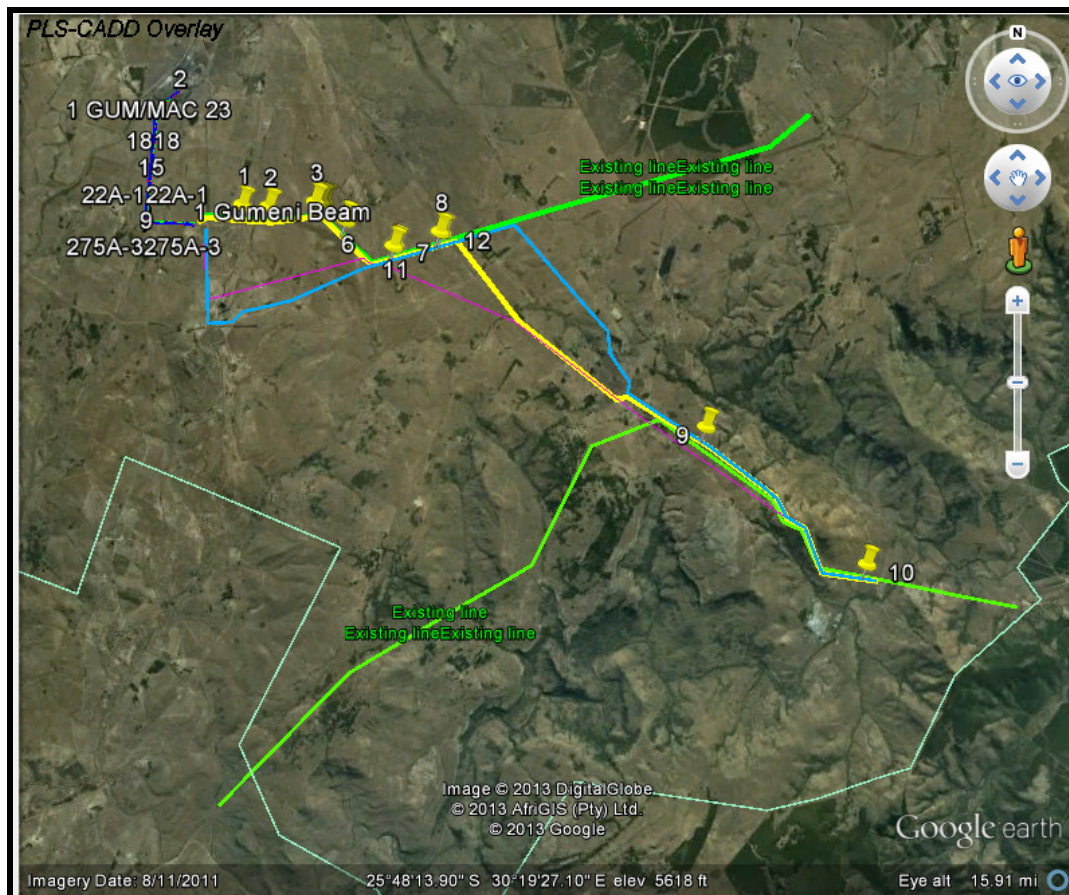
## **F. AFFECTED ENVIRONMENT**

The area under survey is part of the Mpumalanga escarpment near Machadodorp. The area is a mix of Highveld grassland and escarpment grassland with very little indigenous trees. At present there are patches of invasive wattle trees scattered

throughout the area. The escarpment area has a much higher rainfall than the rest of the Highveld.

- (a) **Detail of the area surveyed**
  - (i) Location data  
Mpumalanga Province; Machadodorp  
For farms and owners see attached list
  - (ii) Location Map  
1/50 000 Map 2530 Waterval Boven  
Google Map of affected area





**Google Map no. 1 Showing the yellow, blue and pink routes (The green power lines are existing lines)**

### **(b) Description of Methodology**

The area was visited for one day together with officials from Eskom, Royal HaskoningDHV and various consultants. The author has also surveyed the first section of the proposed yellow route in detail and has documented a number of sites on the route (Küsel U.S. March 2011). The area was also surveyed in detail with the Google. This was done because in grassland the sites are easily visible from satellite images. The disturbance by humans of grassland, changes the vegetation and even sites where farmers have re-used all the stones from archaeological sites it is visible on Google. These sites are difficult to see during a walk through especially if the grass is tall.

At present the vegetation is lush as the area has, had above average rainfall. The best time for a detail survey is in winter.

## **G. DESCRIPTION OF SITES**

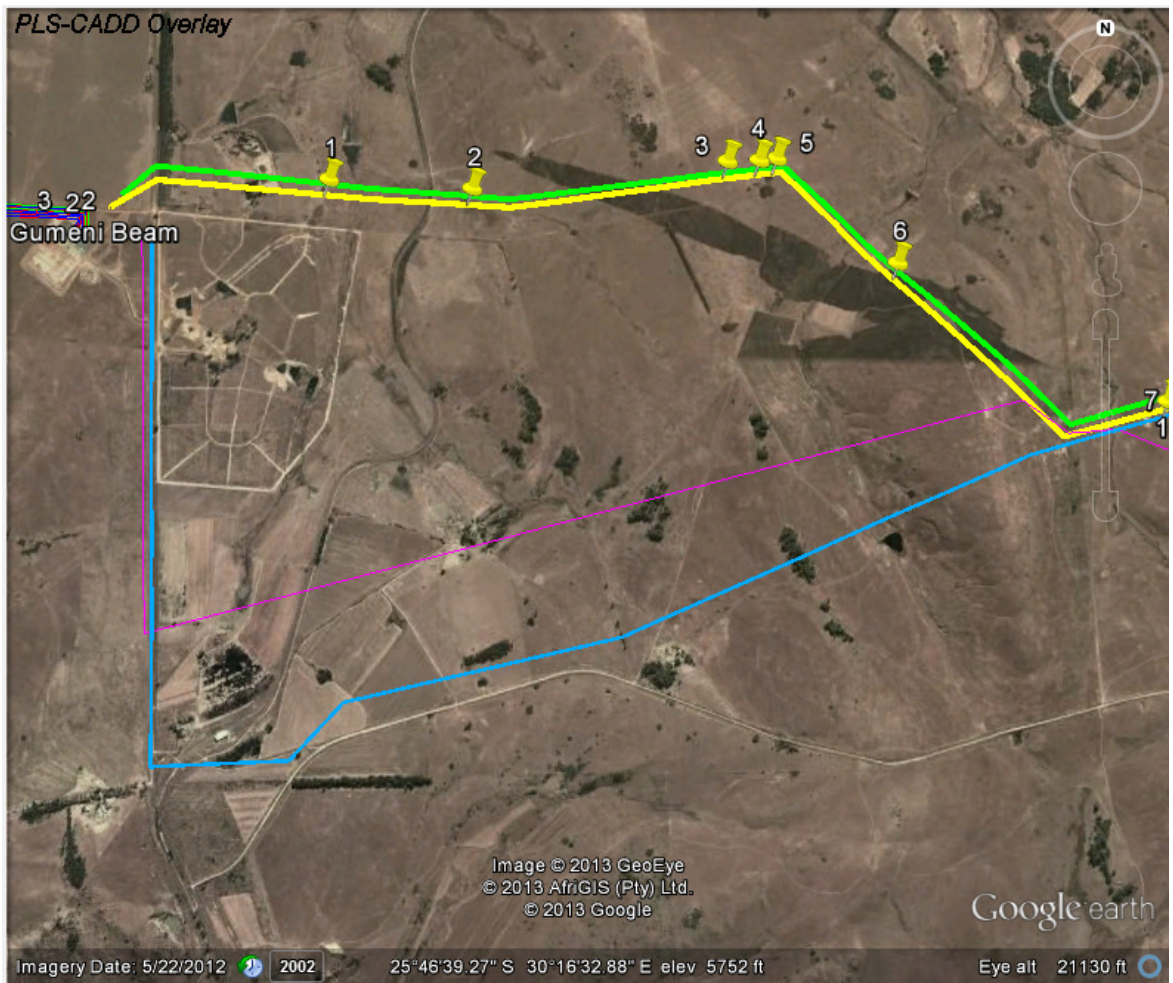
Eskom identified three alternative routes for the Gumeni - Bosloop power line. The lines identified are yellow, blue and pink. The green line is an existing power line.



- **YELLOW LINE ROUTE**

The first section of this line follows the same route as the Nkomati power line (Küsel March 2011). On the route of this line the following heritage site were identified:

**Site no 1.** Old farm water furrow at S25° 44' 53.86" & E30° 14' 35.59" is not in use anymore. This water furrow probably dates to the 19<sup>th</sup> century -See Google Map 2



**Google Map no. 2**



**Remains of water furrow**

**Site No 2.** Stone build farm ruin at S25° 44' 55.09" & E30° 14' 35.36" (see Google Map 2). This originally was a Late Iron Age site re-used as cattle enclosure, farm buildings and a cattle dip. Interesting is that one of the large stone plates which form part of the dip enclosure has some Late Iron Age rock art on it.



**Stone walling of cattle enclosure**



**Ruin of dressed stone house**

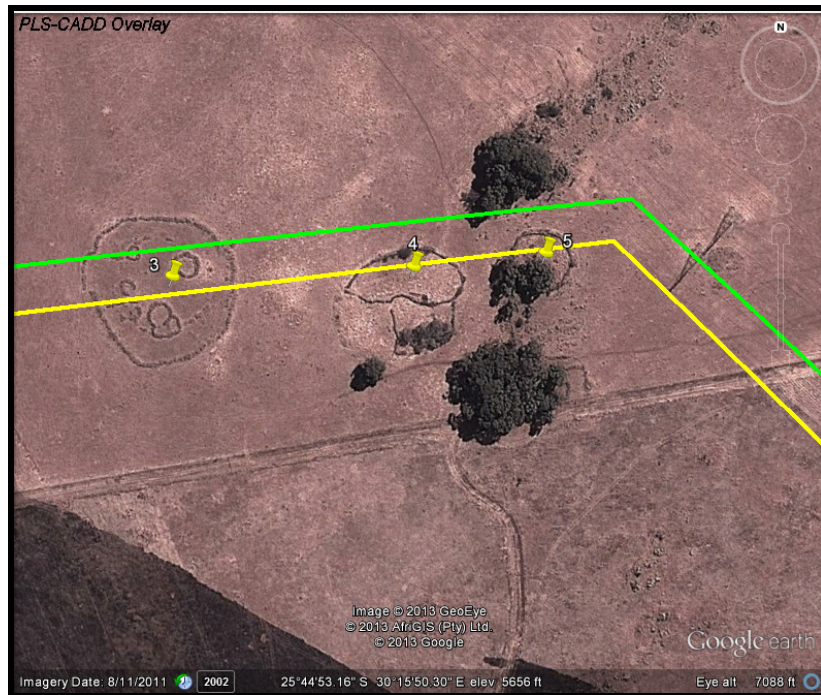


**Cattle dip**



**Rock art slab in the drying area of the dip**

**Site No. 3.** Late Iron Age Site S25° 44' 51.79 & E30° 15' 44.62" - This site is enclosed by a large circular stone circular wall. On the inside are smaller circular walls. The site was most probably built for an extended family – see Google map no 3



**Google Map 3**

**Site No 4.** Iron Age Site S25° 44' 51.62" & E30° 15' 50.09" Google Map No. 3 – This site has high stone walls on the northern section. On the south-western section the stones of the walls have most probably been re-used by farmers. In the south eastern section a farm workers settlement was built most probably in the 1940/50`s



**Large site with blue gum trees in the background**

**Site no. 5.** Late Iron Age Site S25° 44' 51.33" & E30° 15' 53.07" Google Map No. 3 – This site is overgrown by Eucalyptus trees. The site was re-used by farm workers as a cemetery 1940/50`s



**Late Iron Age site re-used as cemetery**

**Site No. 6.** Late Iron Age small site S25° 45' 07.64" & E30° 16' 13.62" Google Map no.4 – At this location is a small site visible and also a number of similar sites in the surrounding area. From Google it seems that the stones from walls have been re-used by modern farmers.



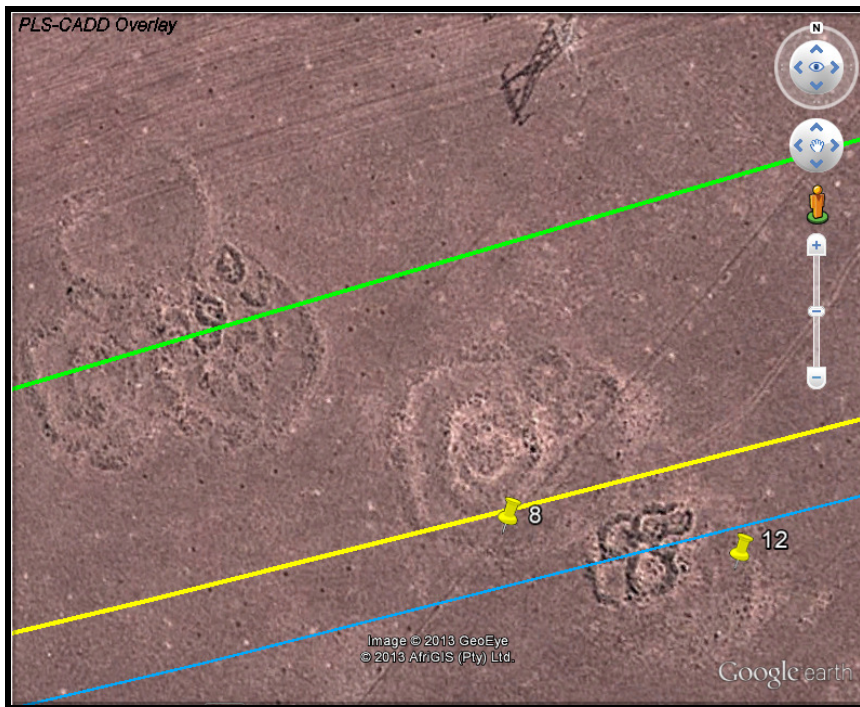
**Google Map No 4**

**Site No. 7.** Late Iron Age site S25° 45' 27.62" & E30° 16' 59.90" Google Map No. 5 – This circular stonewalled site lies just north-east of a much larger site (No 11) on the blue line on S25° 45' 27.62" & E30° 16' 59.90" Google Map no. 5.



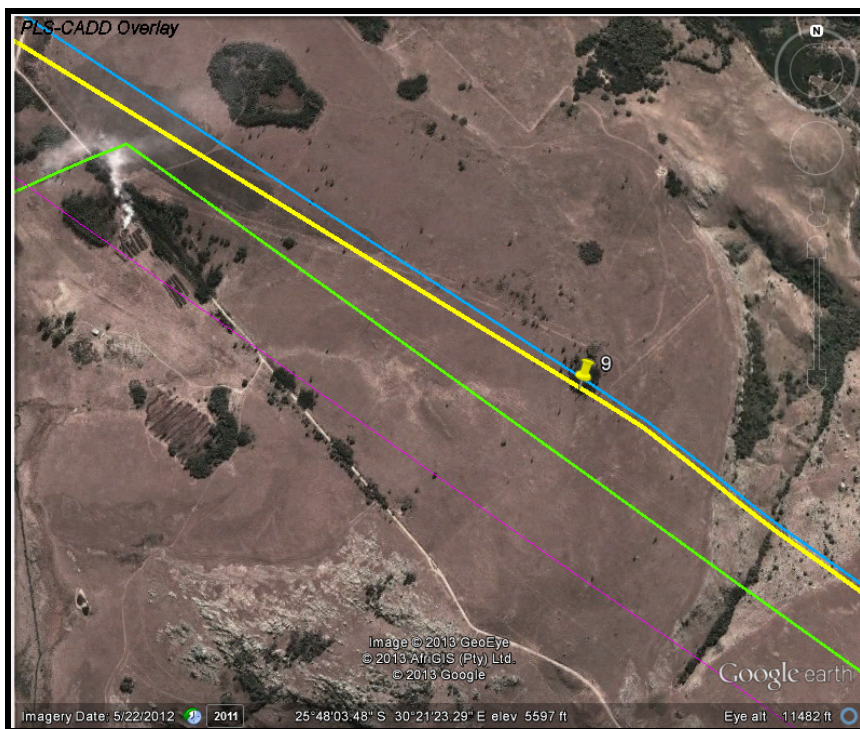
**Google Map No. 5**

**Site No. 8.** Late Iron Age site S25° 45' 17.47" & E30° 17' 41.71" Google Map no. 6 – The stone walls of this small site have been re-used by farmers but the site is still visible on Google. It is surrounded by similar sites.



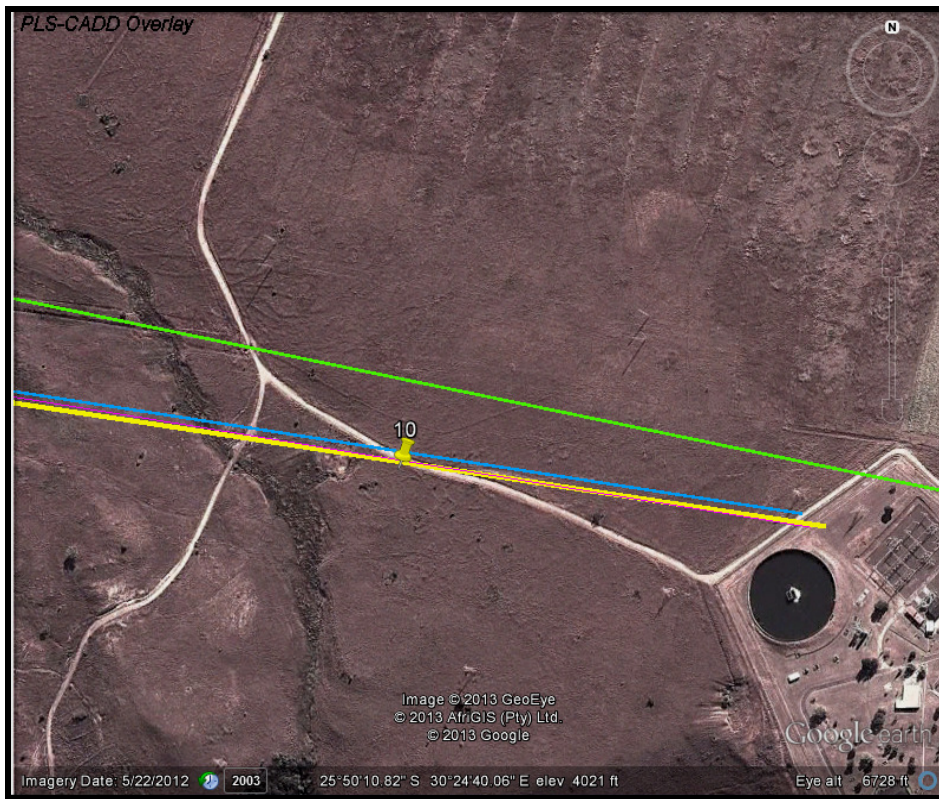
**Google Map No. 6**

**Site No. 9.** Possible site S25° 48' 02.30" & E30° 21' 51.46" Google Map No. 7 – This possible site is covered by dense tree growth, and has to be investigated in a Phase I study if this route is going to be used.



**Google Map No. 7**

**Site No. 10.** Late Iron Age site S25° 50' 00.19" & E30° 24' 27.17" Google Map No. 8 – This site is part of a large settlement of which most stones have been re-used. The dirt road also cuts through the site



**Google Map No. 8**



**All three lines will be crossing site no. 10 of which most stone walls have been re-used**



- **BLUE LINE ROUTE**

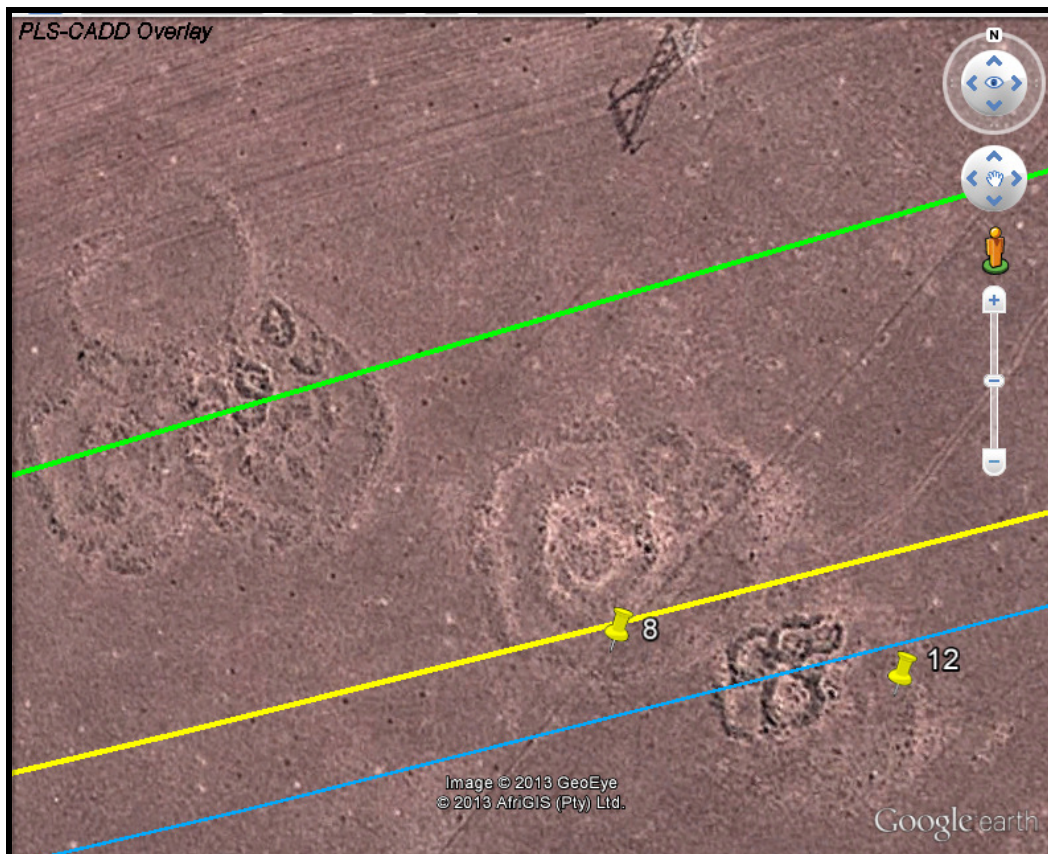
This proposed route only crosses two sites.

**Site No. 11** Late Iron Age stonewalled site S25° 45' 29.22" & E30° 16' 58.28" Google Map No. 9 – This site is most probably that of an extended family. The stone walls are still in place. It seems that the southern circle site section was the original settlement which was later extended to the north.



**Google Map No. 9**

**Site No. 12** Late Iron Age site S25° 45' 17.99" & E30° 17' 43.11" Google Map No. 10 – This site is just south of site 8 and has a section with stonewalls and a section where the stonewalls have been re-used



**Google Map No. 10**

- **PINK LINE ROUTE**

This site avoids most sites and only crosses site No. 10 at S25° 50' 0019" & E30° 24' 27.17 which is part of a large site of which the stone walls have been re-used – see Google Map No. 8

**Threads or Sources of Risk**

The main thread to these sites is the re-use of stones from the walls for building purposes. Fortunately this mainly happened in the early period of white farmers settling in the area. Trees growing in sites also damage stonewalls.

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**H. DESCRIPTION OF THE ARTEFACTS, FAUNA, BOTANICAL OR OTHER FINDS AND FEATURES**

The identified sites are all Late Iron Age stonewalled sites of which in some cases stonewall have been re-used by farmers.

More detail of findings will be done in a Phase I cultural heritage resources impact assessment survey once Eskom has decided on a specific route.

## **I. CLEAR DESCRIPTION OF BURIAL GROUNDS AND GRAVES**

Burial grounds and graves have being done in a Phase II report by P. Birkholtz from PGS

## **J. FIELD RATING**

This type of Late Iron Age sites has a wide distribution throughout Mpumalanga and is of Provincial importance.

## **K. STATEMENT OF SIGNIFICANCE**

These sites are important in that they can yield information that will help us to understand South African history and the settlement patterns of the Late Iron Age people of the Mpumalanga escarpment.

## **L. RECOMMENDATIONS**

From the three possible routes surveyed the pink route will have the least impact on archaeological sites as it will only cross one site. It is therefore recommended that the pink route should be followed to build the proposed Gumeni/Bosloop power line.

Once a decision has been taken on the specific power line a full cultural heritage resources impact assessment has to be done on the specific line.

If a specific archaeological site will be crossed by the new line most probably a phase II survey will be necessary.

## **M. CONCLUSION**

Of the three possible routes surveyed the yellow line crosses ten heritage sites. The blue line crosses two sites and the pink line only one site.

Therefore it is recommended that the pink route be taken for the new power line. A full walk through in a Phase I cultural heritage resources impact assessment must be undertaken on the final route of the Gumeni/Bosloop power line.

## **N. BIBLIOGRAPHY**

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- Pistorius, J.C.C. & Miller, S. 2012. The Archaeological documentation of a Late Iron Age Stone Walled site near Machadodorp in Mpumalanga
- Van Hoepen, E.C.N. 1939. Pre-European Bantu Culture in Lydenburg district. Argeologiese navorsing van die Nasionale Museum Bloemfontein

## **O. APPENDIX**

- List of farm owners and detail

<b>Farm Name</b>	<b>Farm Number</b>	<b>Registration</b>	<b>Portion Number</b>	<b>Windeed Search</b>	<b>CONTACT PERSON</b>
1. Schoongezicht	364	JT	3	Assmang Ltd	Assmang - 013 256 5000
2. Dalmanutha	376	JT	5	Ntuli Sidu and Nhlapo Trust	
3. Driekop	387	JT	3	Bruce Benn	
4. Welgelegen	400	JT	0 (No portion number)	Jan Adriaan Venter	
5. Komatidraai	417	JT	1	Unknown	
6. Paardekraal	419	JT	0 (No Portion number)	Gedeelte van die Plaas Nooitgedacht Pty Ltd	
7. Bloemfontein	399	JT	11	Ettiene Hefer	E Hefer - 083 310 8838
8. Waterval	424	JT	1	ACE Boerdery Pty Ltd	ACE Farming
9. Elandsfontein	389	JT	5	Albertus Stephanus Venter	
10. Zevenfontein	388	JT	22	Petrus Jacobus Smit	JP Smit
11. Prinsloo	382	JT	0 (No portion Number)	Petrus Jacob Davies	
12. Rietvlei	375	JT	5	Mgaduzana Communal Prop Association	B H Farming – 013 256 0195
13. Steenwyk	425	JT	0(No portion number)	Yellow Flame Prop 105 Pty Ltd	
14. Gevonden	398	JT	11	Hefer Familie Trust	
15. Bermondsey	391	JT	2	Five Assegais Country Estate Pty Ltd	
16. Uitkomst	390	JT	6	Petrus Schalk Izak Davies	

17. Nooitgedacht	366	JT	13	Unknown	
18. Kaalbooi	368	JT	18	QwaQwa Trout Pty Ltd	Qwa Qwa Trust
19. Schoonwater	374	JT	5	Abraham Potgieter	
20. Klaarwater	464	JT	0 (no portion number)	Klaarwater Inv Pty Ltd	
21. Boschhoek	391	JT	2	Unknown	
22. Gembokhoek	397	JT	3	Ncongwane Communal Prop Association	
23. Ndubazi Randh	413	JT	0 (No portion number)	Lereko Prop CO Pty Ltd	
24. Gemakstroom	396	JT	0 (No portion number)	Ncongwane Communal Prop Association	
25. Goedgelegen	393	JT	7	Matekula Landowners Association	
26. Treurfontein	373	JT	6	Best African Venue Pty Ltd	
27. Ramkraal	370	JT	0 (No portion number)	Tudor Estate Pty Ltd	
28. Weltevreden	491	JT	0 (No portion number)	Tudor Estates Pty Ltd	